

Rapid #: -17750673

CROSS REF ID: 401655

LENDER: LYC :: Electronic

BORROWER: DVP :: Main

TYPE: Article CC:CCG

JOURNAL TITLE: Journal of racial and ethnic health disparities

USER JOURNAL TITLE: Journal of Racial and Ethnic Health Disparities

ARTICLE TITLE: Latinx patients' perception of culturally sensitive health care and their association with treatment outcomes

ARTICLE AUTHOR: Roncoroni, J., Frank, M.G., Hudson, A. , Whitaker,

VOLUME:

ISSUE:

MONTH: March

YEAR: 2021

PAGES: published online

ISSN: 2196-8837

OCLC #: 882616392

Processed by RapidX: 7/8/2021 7:13:54 AM

This material may be protected by copyright law (Title 17 U.S. Code)



Latinx Patients' Perceptions of Culturally Sensitive Health Care and their Association with Patient Satisfaction, Patient-Provider Communication, and Therapeutic Alliance

J. Roncoroni¹ · Maria Frank² · Amy Hudson¹ · S. Whitaker³ · A. Edelman¹ · P. Garcia⁴ · E. Leeper⁵ · V. Carrasco¹ · D. Melendez⁶ · J. Ratchford¹

Received: 27 October 2020 / Revised: 6 February 2021 / Accepted: 7 February 2021
© W. Montague Cobb-NMA Health Institute 2021

Abstract

Latinx in the USA experience disparities in morbidity and mortality when compared to their non-Hispanic White counterparts. Patient-centered culturally sensitive health care (PC-CSHC) has been deemed a best practice approach to alleviate and eliminate these disparities. However, literature on how Latinx patients perceive their care and what indicators of PC-CSHC may be most related to treatment outcomes is limited. This study collected data from 81 adult Latinx participants who had been admitted to an inpatient care unit to understand the following: (a) their perception of their providers' PC-CSHC in three different areas: Competence/Confidence, Sensitivity/Interpersonal, and Respect/Communication; (b) whether there are differences between English- and Spanish-speaking Latinx patients in their perception of their providers' PC-CSHC; and (c) whether these PC-CSHC indicators were associated to patient satisfaction, patient-provider communication, and therapeutic alliance. Participants were mostly male, older than 55 years of age, and working or lower class, with English as their primary language. Results showed that patients rated their providers' Competence ($M = 3.57$, $SD = .46$) higher than both Sensitivity, $t(68) = .04$, $p = .04$, ($M = 3.49$, $SD = .54$), and Respect, $t(53) = 2.765$, $p = .008$, ($M = 3.38$, $SD = .57$). English-speaking Latinx were overall less satisfied with their providers than Spanish-speaking Latinx, in particular in their communication. Finally, higher provider cultural sensitivity appears to be a predictor of patient satisfaction, patient-provider communication, and working alliance. Implications for refining provider trainings to treat this vulnerable and understudied (i.e., Latinx) population are discussed.

Keywords Latinx health · Patient-centered care · Culturally competent care · Culturally sensitive care · Provider bias · Latinx health disparities

Despite advances in the US healthcare system, the Latinx community continues to experience significant health disparities when compared to non-Hispanic Whites [1]. Latinx patients are (1) about 50% more likely to die from

diabetes or liver disease than non-Hispanic White patients, (2) 22% less likely to have controlled high blood pressure than non-Hispanic Whites, (3) 66% more likely to be diagnosed with diabetes than non-Hispanic Whites, and (4) 20% more likely to be obese than non-Hispanic Whites [1, 2]. Additionally, Latinx experience higher mortality rates due to diabetes, stomach cancer, liver cancer, cervical cancer, human immunodeficiency virus/acquired immunodeficiency syndrome, liver disease, homicide, and work-related injury than non-Hispanic Whites [3–6]. These health disparities are linked, in part, to social determinants of health (e.g., poverty, low literacy) and also to structural and political factors such as immigration health care insurance policies [7, 8] and structural racism [9–11] experienced by Latinx patients [1, 12–17]. They can also be explained by the limited access to and lower likelihood of seeking health care services as well as the poor quality of healthcare Latinx receive [1, 5].

✉ J. Roncoroni
juliaroncoroni@gmail.com

¹ Department of Counseling Psychology, University of Denver, Denver, CO, USA

² Department of Medicine, Denver Health Hospital Authority, Denver, CO, USA

³ Department of Research Methods and Statistics, University of Denver, Denver, CO, USA

⁴ Discovering Greatness, LLC, Rio Rancho, NM, USA

⁵ Pathways Transition Programs, Inc., Decatur, GA, USA

⁶ First Year Advising Center, Utah Valley University, Orem, UT, USA

Patient-centered culturally sensitive health care (PC-CSHC) has been recommended as a best practice approach to address health disparities in Latinx [3, 18, 20]. PC-CSHC encompasses and goes beyond cultural competence, which is used to describe the provision of healthcare that recognizes and accommodates cultural differences in health-related values and beliefs [21]. Culturally sensitive health care has been defined as health 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” [22]. Tucker and colleagues [23, 24] introduced the concept of patient-centered culturally sensitive health care to describe care that (a) enables culturally diverse patients to feel comfortable with, trusting of, and respected by their health care providers; (b) understands the patient-provider relationship as a partnership emerging from patient-centeredness; and (c) is patient empowerment oriented [25].

Yet, literature on what indicators of PC-CSHC may be most related to treatment outcomes is scarce. This study aimed to understand (a) Latinx patients’ perception of their providers’ PC-CSHC (in three different areas: Competence/Confidence, Sensitivity/Interpersonal, and Respect/Communication); (b) whether there are differences between English- and Spanish-speaking Latinx patients in their perception of their providers’ PC-CSHC; and (c) whether these PC-CSHC indicators were associated to patient satisfaction with their physician, patient-provider communication, and therapeutic alliance. This study is novel in that it investigated the perspective on patient-centered culturally sensitive health care of low-SES Latinx patients, who are often underrepresented in health care quality research and highly impacted by health disparities.

Methods

Participants

Participants in this study were patients ($N=81$) who had been admitted to an inpatient care unit at Denver Health Medical Center, an urban hospital located in a mid-sized city in the Rocky Mountain region. This hospital serves more than one-third of the city’s population and is the state’s primary safety net institution. A total of three inpatient units at the hospital participated in the study. Using targeted convenience sampling, potential Latinx participants were approached based on their self-reported ethnicity, as reflected in their medical records. To participate, patients had to (a) be at least 18 years old, (b) have received outpatient services at one of the safety net offices in the last year, (c) be able to communicate either verbally or in writing in English and/or Spanish, and (d) sign an informed consent form that documented agreement to

participate in the study. Additionally, all participants had spent at least 24 h at the hospital’s inpatient unit for a physical health condition prior to participating in the study. Data from 2 participants (one who was discharged not having completed any survey measures, and one who only partially completed one survey measure) were excluded. Therefore, only data from 79 participants were included in the analysis.

Participants were mostly male (65.8%), older than 55 years of age (58.0%), and self-identified as working or lower class (66.6%). Participants generally had less than a high school education (77.8%) and cited English (46.9%; Spanish: 39.5%) as their primary language. For additional demographic information (see Table 1).

Procedure

This project was part of an emerging collaboration between the University of Denver, where the first author of this paper (co-PI in this study) is based, and Denver Health, where the second author of this study is based. Several meetings took place to establish this collaboration; these meetings served to define the scope of this initial project. Once this was set, approval to conduct this study was obtained through the Institutional Review Board (IRB) at Denver Health (COMIRB at the University of Colorado Denver).

Prior to the launch of the study, the two PIs trained graduate research assistants at the university on the specifics of study implementation. This training lasted 1 h. The study implementation training covered the following topics: (a) the purpose of the study, (b) potential benefits of the study for patients, (c) culturally sensitive strategies for recruiting low-income Latinx individuals, who may or may not speak English (e.g., politely but assertively asking for permission to enter patients’ rooms), (d) culturally sensitive strategies for collecting data from Latinx adults (e.g., administering the language-appropriate assessment battery, assisting with reading and completing questionnaires as needed), and (e) the use of tablets, and how to support patients in their use, for data collection. Some graduate assistants (~40%) were bilingual, and they were the ones to approach Spanish-speaking participants (based on patients’ stated language preference in their medical record); monolingual English-speaking graduate assistants only worked with English-speaking patients. During the study, the research team (including the co-PI, a safety net-based project coordinator, and graduate assistants at the university) met weekly to discuss study progress, barriers, and strategies for success.

Participant Recruitment

Once graduate assistants’ training was complete, the trained research assistants conducted preliminary screenings of electronic medical records at the hospital to identify patients who met participation criteria. Patients were then additionally

Table 1 Participants' demographic information

		Frequency	Percent
Gender	Man	52	65.8
	Woman	27	34.2
Sex	Male	52	65.8
	Female	26	32.9
Sexual orientation	Hetero/straight	64	81.0
	Other (asexual, bisexual, gay, lesbian, same-gender loving, pansexual, queer, other)	10	12.7
Relationship status	No partner	34	43.0
	Living with partner	22	27.8
	Not living with partner	15	19.0
Age	18–34 years	3	3.8
	35–44	16	20.3
	45–54	14	17.7
	55–64	19	24.1
	65+ years	26	32.9
Household income	Less than 10K	32	40.5
	10–49.9K	23	29.1
	50K +	5	6.3
Education	Elementary–high school	61	77.2
	Some college/2 year/trade school	11	13.9
	4-year college or more	3	3.8
Social class	Lower	28	35.4
	Working	24	30.4
	Middle	25	31.6
General health	Excellent/very good	23	29.1
	Good/fair	34	43.0
	Poor	18	22.8
Primary language	English	37	46.8
	Spanish	31	39.2
	Other	11	13.9
No. in household	1–2	46	58.2
	3–5	19	24.1
	>5	13	16.5
Disrespected/mistreated by doctor	Yes	25	31.6
	No	53	67.1

screened by medical staff to determine appropriateness for participation (e.g., mental status, updated health condition). This review of medical records and consultation with medical staff happened every time RAs went to the hospital for data collection. Data collection lasted 12 months. After screening procedures, eligible participants were approached by research assistants in their rooms, given verbal explanations about the nature of the study, and invited to participate.

Participant Enrollment

During enrollment, an informed consent form (ICF) was provided and explained to potential participants, in English or

Spanish, based on patients' preference. The ICF included the following: objectives of the study, duration and timeline of the study, participation requirements, potential risks and benefits, costs and compensation, and the collection, use, and sharing of protected health information. Following the informed consent process, participants who agreed to participate signed the informed consent form. Each patient received a blank copy of the informed consent form to keep.

Data Collection

Data collection took place in patients' hospital rooms. After consenting to participate, patients were asked to complete the

assessment battery, available in Spanish or English, by using either the touch screen capability of electronic tablets or a paper-pencil format. During data collection, research assistants were available to assist patients, as needed, with completing questionnaires, including verbally reading the assessment battery to patients who desired this support. Electronically completed questionnaires were stored on a password-protected, HIPAA-compliant QUALTRICS account and deleted from the tablets. Paper and pencil questionnaires were collected and immediately stored in an envelope, separate from informed consent form documents. During the data collection period, all data collection materials were stored in a padlocked locker in a hospital room only accessible with a badge. Later, all informed consent forms and paper-pencil questionnaires were transferred to a locked file cabinet at the University of Denver. Participants received a \$15 gift card as compensation after completing the assessment battery.

Measures

The assessment battery used in the present study took approximately 45 min to complete, including filling out the informed consent form. It contained the following instruments: (a) a demographic data questionnaire, (b) the Tucker-Culturally Sensitive Health Care Provider Inventory-Patient Form (*T-CSHCP-PPF*) [36], (c) the Patient Satisfaction Questionnaire Short-Form (*PSQ-18*) [37], (d) the Patient-Provider Communication (*PPC*) Subscale of the Kim Alliance Scale [38], and (e) the Working Alliance Inventory-Short Form (*WAI-SF*) [39].

Demographic Data Questionnaire

This instrument, which included 14 questions, was designed by the research team to obtain participant basic demographic information, (i.e., race/ethnicity, level of education, age, gender identity, sex assigned at birth, sexual orientation, relationship status, people living in the hold, annual household income, social class, and language(s) spoken most often). Additionally, the demographic data questionnaire included the following health-focused questions: “Would you say that in general your health is... [excellent, very good, good, fair, poor]?” and “Was there a time in the past 12 months when you needed to see a doctor but did not because you thought you would be disrespected or mistreated?”.

Tucker-Culturally Sensitive Health Care Provider Inventory-Patient Form [36]

This inventory was designed for culturally diverse patients to assess the extent to which their providers display behaviors, attitudes, and types of knowledge that enable patients to feel comfortable with, trusting of, and respected by their providers

(i.e., provider cultural sensitivity indicators). This 26-item patient-reported questionnaire (Cronbach's $\alpha = .97$) [36] comprises three subscales: Competence/Confidence with 9 items (Cronbach's $\alpha = .96$) [36], Sensitivity/Interpersonal Skill with 8 items (Cronbach's $\alpha = .94$) [36], and Respect/Communication with 9 items (Cronbach's $\alpha = .94$) [36]. All items are rated on a 4-point Likert scale, ranging from 1= strongly disagree to 4= strongly agree. Total summed scores can range from 26 to 104. Sample items included: “The health care provider I see most often when I visit my health care center or office... is honest and direct with me” (Competence/Confidence), “The health care provider I see most often when I visit my health care center or office... follows up on my visits” (Sensitivity/Interpersonal Skill), and “The health care provider I see most often when I visit my health care center or office... tries to educate me” (Respect/Communication).

Patient Satisfaction Questionnaire-Short Form [37]

This 18-item instrument assesses patients' attitudes toward their health care providers, and their satisfaction with the health care they receive. The PSQ-18 assesses 7 dimensions of satisfaction with care: General Satisfaction (2 items), Technical Quality (4 items), Interpersonal Manner (2 items), Accessibility of Care (4 items), Communication (2 items), Financial Aspects of Care (2 items), and Time Spent with the Doctor (2 items). The Technical Quality, Interpersonal Manner, Communication, and Time Spent with Doctor dimensions can be combined to produce the Satisfaction with Physician subscale [36]. Given the focus of this study, we used both an overall PSQ score and a score on this subscale (i.e., Satisfaction with Physician PSQ). The PSQ-18 has demonstrated high internal consistency (Cronbach's alpha greater than .90) in samples with ethnically/racially diverse groups [37]. Participants rate how strongly they agree or disagree with a list of statements, including, “The medical care I have been receiving is just about perfect,” and “Those who provide my medical care sometimes hurry too much when they treat me.” Items are scored on a 5-point Likert scale (1 = strongly disagree and 5 = strongly agree). Negatively worded items were reverse scored. Item scores were summed with higher scores indicating higher satisfaction with the provider and health care received.

Kim Alliance Scale [38]

The 30-item KAS measure was developed to assess the quality of the therapeutic alliance between the doctor and patient as well as patient empowerment from the patient's perspective. The KAS has high internal consistency (Cronbach's $\alpha = .94$) [38]. It has four theoretical dimensions: collaboration, communication, integration, and empowerment. Only the

patient-provider communication dimension (PPC) was used in this study. This PPC subscale contains 11 items and has a Cronbach's α of .87 [38]. Participants were asked to rate, on a 4-point Likert scale (1= never to 4= always), the quality of the therapeutic alliance between them and their providers. Sample items included "I can express negative feelings freely to my provider," and "It is easy to understand my provider's instructions." Two items were reverse coded (i.e., "I feel my provider criticizes me too much" and "My provider does not allow me to state my opinion"). Summed scores could range from 11–44, with higher scores indicating higher PPC.

Working Alliance Inventory-Short Form [39, 40]

This instrument was developed based on the theory that a working alliance between the patient and clinician grows on the basis of a strong relational bond and an agreement of goals and tasks related to patient treatment [41, 26]. The WAI-SF (Cronbach's α = .91) [26] comprises three primary factors: task, bond, and goal, with 4 items per factor (12 items total). Participants were asked to describe their relationship with their health care provider. Items are scored on a 7-point Likert scale (1 = never to 7 = always). Sample items include the following: "My provider and I agree about the things I will need to do in a treatment to help my situation," and "My provider does not understand what I am trying to accomplish in treatment." Two negatively worded items were reverse-scored. Possible scores ranged from 12 to 84, with higher scores indicating higher therapeutic alliance.

Statistical Analyses

SPSS (v. 26) was used to conduct the statistical analyses. Prior to analysis, a missing data assessment was conducted using Little's [27] MCAR test and *t*-tests to assess whether there were differences between cases with complete and missing data. To address our research questions, single and multiple linear regression was used to understand Latinx patients' views of their providers patient-centered cultural sensitivity in 3 areas (Competence/Confidence, Respect/Communication, and Sensitivity/Interpersonal), to assess differences between English- and Spanish-speaking patients in their perceptions, and to explore the relationship of PC-CSHC in these three areas (i.e., 3 T-CSHCPI-PF subscales) to three treatment outcomes (patient satisfaction with provider care [PSQ], patient-provider communication [PPC], and working alliance [WAI]). Analysis of variance (ANOVA) was conducted for each scale to ascertain demographic group differences.

Results

A total of 51 (64.5%) participants elected to complete the English version of the assessment battery. The remaining participants ($n = 28$; 35.4%) elected to complete the assessment battery in Spanish.

For the missing data analysis, medium levels of missingness (16.9%) in the variables of interest (specifically, T-CSHCPI-PF, PSQ, PPC, and WAI) were found. Little's [27] MCAR test was not statistically significant, $\chi^2(96) = 110.66, p = .15$, indicating that the data was missing completely at random. There were 24 cases with one or more missing variables. Since SPSS uses listwise deletion, *t*-tests were run to determine if there were group differences between cases with complete data and those with missing data. The *t*-test resulted in no statistically significant differences between the two (i.e., complete vs. incomplete data) groups ($p = .08$), thereby reducing concerns about possible bias with listwise deletion. Therefore, the analysis proceeded with the entire set of participant data ($N = 79$). See descriptive statistics in Table 2 and measure correlations in Table 3.

Patients' Perception of Their Providers' PC-CSHC

First, using paired sample *t*-tests, an assessment of responses in the T-CSHCPI-PF was conducted to understand patients' perspectives of their providers, overall. Generally, patients rated highest (i.e., had their highest average item score on) their providers' Competence ($M = 3.57, SD = .46$). Scores of providers' Competence were higher than scores of both Sensitivity, $t(68) = .04, p = .04, (M = 3.49, SD = .54)$, and Respect, $t(53) = 2.765, p = .008, (M = 3.38, SD = .57)$. There was no statistically significant difference between average item scores on Sensitivity and Respect ($p = .28$). Over 60% of respondents strongly agree(d) that their provider "[was] knowledgeable about medicine," "[was] confident in his or her abilities," and "[did] not embarrass [them] in private or public." Over 96% of respondents agree/strongly agreed that their provider "[was] well educated," "prescribe[d] medicine only when [they were] sure of [patient's] illness," as well as "[was] knowledgeable about medicine" and "confident in his or her abilities." Over 21% of participants disagreed/strongly disagreed that their provider "[let them] know about illness and diseases common among people of [their] race/ethnicity."

Approximately 19.7% of those that had needed to see a doctor but deferred for concerns of disrespect or mistreatment disagreed/strongly disagreed with the statement that the care provider "shows care and concern for my children." Fifteen percent of the respondents also disagreed/strongly disagreed with the statements that their provider "tries to educate [them]" and "does not try to diagnose all [their] problems as psychological or 'in my mind.'"

Table 2 T-CSHCPI, WAI, PSQ, and PPC descriptive statistics

Scale	Factor	<i>N</i>	Min	Max	<i>M</i>	<i>SD</i>
T-CSHCPI	Competence	74	11.00	36.00	31.66	4.81
	Sensitivity	73	16.00	32.00	27.59	4.40
	Respect	55	9.00	36.00	30.49	5.78
	Sum	47	56.00	108.00	94.64	13.09
WAI	Task	73	4.00	28.00	23.95	5.03
	Goal	77	4.00	28.00	22.09	5.54
	Bond	73	5.00	28.00	23.52	5.63
	Sum	69	16.00	84.00	39.93	4.73
PSQ	Satisfaction with Physician	75	22.00	48.00	37.68	5.56
	PSQ_Sum	72	30.00	81.00	63.49	9.84
PPC	PPC_Sum	69	16.00	44.00	39.93	4.73

Differences between English- and Spanish-Speaking Patients on Perceptions of PC-CSHC

No statistically significant differences between English- and Spanish-speaking participants were found on the total T-CSHCPI-PF score ($p = .37$). Additionally, no significant differences by language were found on ratings of the T-CSHCPI-PF subscales (Competence, $p = .58$; Sensitivity, $p = .50$; and Respect, $p = .88$).

Differences in Variables of Interest Based on Patients' Demographics

In the analysis of variance (ANOVA), no group differences between the total scores of the PSQ, PPC, and WAI and the explanatory factors education, age, gender, sex, sexual

orientation, number in household, or household income were found.

There was, however, a statistically significant difference by language on the overall PSQ, $F(2, 71) = 3.76, p = .03$, where English speakers rated their satisfaction with their provider lower ($M = 61.03, SD = 2.00$) than Spanish speakers ($M = 68.18, SD = 67.32$). Of the seven dimensions measured by the overall PSQ (i.e., Communication, Technical Quality, General Satisfaction, Financial Aspects, Interpersonal, Accessibility of Care, and Time Spent with the Doctor), there were significant differences by language in patients' rating of patient-provider Communication, $F(2, 75) = 4.79, p = .01$, between English ($M = 7.36, SD = 1.96$) and Spanish speakers ($M = 8.64, SD = 1.47$). Specifically, in the two items comprising the Communication subscale, Spanish speakers were (1) more likely than English speakers to agree/strongly agree with the

Table 3 Correlations of T-CSHCPI, WAI, PPC, and PSQ

Variable	T-CSHCPI				WAI	PPC	PSQ
	Respect	Competence	Sensitivity	Sum	Sum	Sum	Satisfaction with physician
T-CSHCPI							
Respect	1						
Competence	.83**	1					
Sensitivity	.91**	.78**	1				
Sum	.96**	.89**	.96**	1			
WAI							
Sum	.68**	.52**	.59**	.57**	1		
PPC							
Sum	.66**	.51**	.55**	.69**	.71**	1	
PSQ							
Sat with Phys	.72**	.61**	.57**	.67**	.63**	.62**	1
PSQ Sum		.64**	.62**	.70**	.65**	.67**	.90**

**All statistically significant at .01 level (2-tailed)

statement, “Doctors [health care providers] are good about explaining the reasons for medical tests” (90.3% vs 56.7%, respectively, $p < .001$); and (2) and more likely to disagree/strongly disagree with the statement, “Doctors [health care providers] sometimes ignore what I tell them” than English speakers (83.9% vs 75.6%, respectively, $p < .001$). There were no differences between either English or Spanish speakers to those who specified “Other” as the language they spoke most often. No language-related differences were found in Satisfaction with the Physician PSQ, PPC, or WAI.

Finally, there were also statistically significant differences in the WAI between those who responded that they had deferred seeing a doctor in the past 12 months because they thought they would be disrespected or mistreated ($M = 64.60$, $SD = 18.34$) and those who had not ($M = 72.00$, $SD = 11.79$), $F(1, 68) = 3.99$, $p = .05$. Similar results were found for the PPC, $F(1, 67) = 10.83$, $p = .002$; the overall PSQ, $F(1, 67) = 8.56$, $p = .005$, with respective means of 37.41 ($SD = 6.08$) and 59.38 ($SD = 11.14$) for those that had deferred a doctor’s visit and means of 41.20 ($SD = 3.42$) and 66.04 ($SD = 7.85$) for those who had not. Similar results were found for the Satisfaction with Physician PSQ, $F(1, 73) = 6.45$, $p = .013$, where participants who had not deferred a doctor’s visit ($M = 38.92$, $SD = 4.91$) had higher satisfaction scores than those that did defer ($M = 35.54$, $SD = 6.21$).

Association of PC-CSHC to Treatment Outcomes

Linear regression was run to assess T-CSHCPI-PF total score as a predictor of overall PSQ, Satisfaction with Physician PSQ, PPC, and WAI. There was a statistically significant positive relationship between the overall T-CSHCPI-PF score and patient ratings on each of the outcome measures: overall PSQ, $B = .490$, $t(44) = 6.37$, $p < .001$; Satisfaction with Physician PSQ, $B = .279$, $t(46) = 6.117$,

$p < .001$; PPC, $B = .189$, $t(41) = 6.088$, $p < .001$; and the WAI, $B = .565$, $t(43) = 4.472$, $p < .001$.

Multiple regression was conducted to assess the total predictive ability of each of the T-CSHCPI-PF subscales (Competence/Confidence, Respect/Communication, and Sensitivity/Interpersonal) on the overall PSQ, the Satisfaction with Physician subscale of the PSQ, PPC, and WAI. The overall regressions were statistically significant in predicting all measures: PSQ, $F(3, 45) = 12.98$, $p < .001$, adj. $R^2 = .44$; Satisfaction with Physician PSQ, $F(3, 47) = 13.36$, $p < .001$, adj. $R^2 = .44$; PPC, $F(3, 42) = 14.69$, $p < .001$, adj. $R^2 = .49$; and the WAI, $F(3, 45) = 9.65$, $p < .001$, adj. $R^2 = .37$. The subscale Competence/Confidence only predicted the PPC, $B = .39$, $SE = .15$, $t(42) = 2.58$, $p = .01$, and Respect predicted both the WAI, $B = 2.05$, $t(45) = 2.55$, $p = .02$, and Satisfaction with Physician subscale of the PSQ, $B = .75$, $t(47) = 2.33$, $p = .02$. Sensitivity/Interpersonal was not a significant predictor of the overall PSQ ($p = .44$), Satisfaction with Physician PSQ ($p = .68$), PPC ($p = .48$), or WAI ($p = .93$). See Table 4 for multiple regression summary results.

Discussion

This paper sought to understand (a) Latinx patients’ perception of their providers’ PC-CSHC (in three different areas: Competence/Confidence, Sensitivity/Interpersonal, and Respect/Communication); (b) whether there are differences between English- and Spanish-speaking Latinx patients in their perception of their providers’ PC-CSHC; and (c) whether these PC-CSHC indicators were associated to patient satisfaction with their physician, patient-provider communication, and therapeutic alliance. This study is unique in that it

Table 4 Multiple regression summary results

T-CSHCPI	treatment Outcomes	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>
T-CSHCPI sum	PPC_sum	.19	.03	.69	6.09	< .001
	WAI_sum	.57	.13	.57	4.47	< .001
	PSQ_sum	.49	.08	.70	6.37	< .001
Competence	Satisfaction w/physician	.37	.39	.18	.97	.34
Sensitivity		.50	.65	.24	.77	.44
Respect		.58	.55	.32	1.05	.30
Competence	PPC_sum	.17	.22	.13	.77	.45
Sensitivity		-.15	.37	-.12	-.41	.68
Respect		.75	.32	.70	2.34	.02
Competence	WAI_sum	.39	.15	.46	2.58	.01
Sensitivity		-.17	.24	-.21	-.71	.48
Respect		.36	.21	.52	1.76	.09
Competence	PSQ_sum	-.59	.58	-.20	-1.03	.31
Sensitivity		-.08	.95	-.03	-.09	.93
Respect		2.05	.81	.80	2.55	.02

involved an understudied community, i.e., low-SES Latinx, and in that the measure utilized to assess provider patient-centered cultural sensitivity consists of items that a national sample of culturally diverse patients identified as indicators of patient-centered cultural sensitivity. The perceptions of low-SES Latinx patients on how their health care providers are doing on these indicators has been underexplored.

Of the three patient-centered cultural sensitivity subscales used in this study (i.e., Competence, Respect, Sensitivity), patients rated their providers Competence higher than both Respect and Sensitivity. Results show no statistically significant differences by language (i.e., Spanish vs. English speaking) in ratings of providers' overall PC-CSHC or in ratings of the three subscales. In treating Latinx patients, providers may have great skill but lack time [28]. Based on the existing literature, time may be a constraint that leads providers to treat culture as an important but not critical issue [29]. In addition, while patients may perceive providers as rushed, the perspective of providers may be that they lack enough information in their efforts to be culturally sensitive [30]. Some research shows that Latinx patients may prefer that providers make decisions for them [31]; yet, they also give high importance to their providers' display of concern, courtesy, and respect [32].

In addition, results of this study show that English-speaking Latinx were overall less satisfied with their providers than Spanish-speaking Latinx. Specifically, Spanish-speaking patients appeared more satisfied with their provider's communication (i.e., more content with providers' explanation of the reason for medical tests and with the attention given to patients) than English-speaking patients. It is hard to interpret these results without information on providers' ethnic background or Spanish proficiency. While prior research shows that generally Spanish-speaking Latinx are more dissatisfied with their communication with providers than English-speaking Latinx [33, 34, 42], research also shows that Spanish-speaking patients report low communication difficulties with their providers when their providers are ethnically concordant (i.e., Latinx) or are fluent in Spanish [33].

Per the results of this study, higher provider cultural sensitivity is a predictor of patient satisfaction, patient-provider communication, and working alliance. These findings highlight the importance of providing culturally sensitive health care to Latinx patients, as PC-CSHC is associated with treatment outcomes, and are consistent with prior literature showing the need for health care that is responsive to patients' needs and cultural background [21, 43–45].

Limitations

Despite its methodological strengths, this study has a few limitations. First, participants were not randomly selected.

While participants were initially identified via preliminary screenings of electronic medical records at the hospital, patients were then screened by medical staff. While this screening could be biased, it also minimized burden on participants who may have been too ill to participate. Second, the instruments used in this study to assess the variables of interest were self-report studies. Self-report measures could encourage socially desirable responses, leading to under- or over-reporting of the occurrence of attitudes and behaviors being measured. However, self-report measures are frequently used and valued in behavioral and health care quality studies [46, 47]. Third, this study did not explore what language patients spoke with providers or racial/ethnic concordance between patients and providers, which, in some research, have been identified as drivers of patient satisfaction [33, 48]. Finally, the study's small sample size limited statistical power and increased the possibility of type 1 error. Further research should both (1) inquire about Latinx patients' perspective of PC-CSHC and other treatment outcomes, and (2) incorporate information on providers, or even the providers' perspective, if at all possible.

Implications

There is a major need for cultural adaptations in the context of health care delivery as these could lead to improved treatment outcomes [35]. Benuto and colleagues [35] advocate for health care provider cultural competence training to ensure providers understand when cultural adaptations may be warranted and how to implement them. PC-CSHC can be promoted through targeted trainings that increase patient empowerment and the display of cultural sensitivity exhibited by health care providers [21].

Results from this study could be used to refine trainings for providers working with Latinx patients, which should focus on the development mainly of Sensitivity and Respect. Providers are certainly constrained in the care they can provide by barriers such as time or lack of resources (e.g., interpreters). However, embedding results from this study, i.e., the perspective of Latinx patients on their providers' delivery of PC-CSHC and where growth may be needed (i.e., Respect and Sensitivity), may increase the usefulness of these trainings for providers caring for Latinx patients, who are very often different demographically from providers themselves (statistically, majority NHW).

In addition, further research could test interventions that focus on the three subscales of PC-CSHC (i.e., Competence/Confidence, Sensitivity/Interpersonal, and Respect/Communication), as well as how and how much these interventions impact patient treatment outcomes, like satisfaction or working alliance [35]. In these studies, client outcomes could be evaluated as training outcomes [35].

Author Contribution Conceptualization: Julia Roncoroni, PhD. Methodology: Julia Roncoroni, PhD, and Maria Frank, MD. Formal analysis and investigation: Julia Roncoroni, PhD, Maria Frank, MD, Amy Hudson, MA, Salina Whitaker, MBA, Anna Edelman, MS, Patricia Garcia, MA, Emily Leeper, MA, Victor Carrasco, MA, Daniel Melendez, MA, and Julia Ratchford, MA. Writing—original draft preparation: Julia Roncoroni, PhD. Writing—review and editing: Julia Roncoroni, PhD, Amy Hudson, MA, and Salina Whitaker, MBA. Funding acquisition: Julia Roncoroni, PhD. Resources: Julia Roncoroni, PhD.

Funding This study was funded by a Flowback Opportunity Grant from the Morgridge College of Education, at the University of Denver.

Data Availability Not applicable.

Code Availability Not applicable.

Declarations

Ethics Approval Approval was obtained from the Colorado Multiple Institutional Review Board (COMIRB). The procedures used in this study adhere to the tenets of the Declaration of Helsinki.

Consent to Participate Informed consent was obtained from all individual participants included in the study.

Conflict of Interest The authors declare no competing interests.

References

- Agency for Healthcare Research and Quality. 2014 National Healthcare Quality and Disparities Report Chartbook on Health Care for Hispanics. U.S. Department of Health and Human Services; 2015. <https://www.ahrq.gov/sites/default/files/wysiwyg/research/findings/nhqrdr/2014chartbooks/hispanichealth/2014nhqdr-hispanichealth.pdf>. Accessed October 19, 2020.
- Centers for Disease Control and Prevention. Hispanic Heritage. Centers for Disease Control and Prevention. Published March 29, 2019. <https://www.cdc.gov/nccdphp/dnpao/features/hispanic-heritage-month/index.html>. Accessed October 19, 2020.
- Centers for Disease Control and Prevention. ¡A la Buena Salud! – To Good Health! Centers for Disease Control and Prevention. Published May 5, 2015. <https://www.cdc.gov/vitalsigns/hispanic-health/index.html>. Accessed October 19, 2020.
- Office of Minority Health. Cancer and Hispanic Americans. U.S. Department of Health and Human Services. Published 2018. <https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlid=61>. Accessed October 19, 2020.
- Vega WA, Rodriguez MA, Gruskin E. Health disparities in the Latino population. *Epidemiol Rev*. 2009;31:99–112. <https://doi.org/10.1093/epirev/mxp008>.
- Velasco-Mondragon E, Jimenez A, Palladino-Davis AG, Davis D, Escamilla-Cejudo JA. Hispanic health in the USA: a scoping review of the literature. *Public Health Rev*. 2016;37(1):31. <https://doi.org/10.1186/s40985-016-0043-2>.
- Perreira KM, Pedroza JM. Policies of exclusion: implications for the health of immigrants and their children. *Annu Rev Public Health*. 2019;40:147–66. <https://doi.org/10.1146/annurev-publhealth-040218-044115>.
- Philbin M, Flake M, Hatzenbuehler M, Hirsch J. State-level immigration and immigrant-focused policies as drivers of Latino health disparities in the United States. *Soc Sci Med*. 2018;199:29–38. <https://doi.org/10.1016/j.socscimed.2017.04.007>.
- Churchwell K, Elkind M, Benjamin R, et al. Call to Action: Structural Racism as a Fundamental Driver of Health Disparities: A Presidential Advisory From the American Heart Association. 2020;142(24):454–68. <https://doi.org/10.1161/CIR.0000000000000936>.
- Gee GC, Ford CL. Structural racism and health inequities. *Du Bois Rev*. 2011;8(1):115–32. <https://doi.org/10.1017/S1742058X11000130>.
- Shavers VL, Fagan P, Jones D, Klein WMP, Boyington J, Moten C, et al. The state of research on racial/ethnic discrimination in the receipt of health care. *Am J Public Health*. 2012;102(5):953–66. <https://doi.org/10.2105/AJPH.2012.300773>.
- Calo WA. Reaching the Hispanic community about COVID-19 through existing chronic disease prevention programs. *Prev Chronic Dis*. 2020;17. <https://doi.org/10.5888/pcd17.200165>.
- Centers for Disease Control and Prevention. Health equity considerations and racial and ethnic minority groups. Centers for Disease Control and Prevention. Published July 24, 2020. <https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/race-ethnicity.html>. Accessed October 19, 2020.
- Krisberg K. Many Hispanics lack access to key community determinants of health. *Nations Health*. 2019;49(6):5–5.
- Bailey ZD, Krieger N, Agénor M, Graves J, Linos N, Bassett MT. Structural racism and health inequities in the USA: evidence and Interventions. *Lancet*. 2017;389(10077):1453–63. [https://doi.org/10.1016/S0140-6736\(17\)30569-X](https://doi.org/10.1016/S0140-6736(17)30569-X).
- National Academies of Sciences, Engineering, & Medicine. Communities in action: pathways to health equity. National Academies Press (US); 2017. https://www.ncbi.nlm.nih.gov/books/NBK425848/pdf/Bookshelf_NBK425848.pdf. Accessed January 23, 2021.
- Williams DR, Lawrence JA, Davis BA. Racism and health: evidence and needed research. *Annu Rev Public Health*. 2019;40(1):105–25. <https://doi.org/10.1146/annurev-publhealth-040218-043750>.
- Andrulis DP, Siddiqui NG, Purtle JP, Duchon L. Patient protection and affordable act of 2010: advancing health equity for racially and ethnically diverse populations. *Joint Center for Political and Economic Studies*; 2010:40. https://drum.lib.umd.edu/bitstream/handle/1903/24679/ACA_Advancing_Health_Equity.pdf?sequence=1&isAllowed=y. Accessed 5 Feb 2020.
- Centers for Disease Control and Prevention. Cultural competence in health and human services. Published 2020. <https://npi.cdc.gov/pages/cultural-competence>. Accessed October 19, 2020.
- National Institutes of Health. Cultural Respect. U.S. Department of Health and Human Services. Published 2017. <https://www.nih.gov/institutes-nih/nih-office-director/office-communications-public-liaison/clear-communication/cultural-respect>. Accessed October 19, 2020.
- Tucker CM, Arthur TM, Roncoroni J, Wall W, Sanchez J. Patient-centered, culturally sensitive health care. *Am J Lifestyle Med*. 2013;9(1):63–77. <https://doi.org/10.1177/1559827613498065>.
- Tucker CM, Marsiske M, Rice KG, Nielson JJ, Herman K. Patient-centered culturally sensitive health care: model testing and refinement. *Health Psychol*. 2011;30(3):342–50. <https://doi.org/10.1037/a0022967>.
- Tucker CM, Herman KC, Pedersen TR, Higley B, Montrichard M, Ivery P. Cultural sensitivity in physician-patient relationships: perspectives of an ethnically diverse sample of low-income primary care patients. *Med Care*. 2003;41(7):859–70. <https://doi.org/10.1097/00005650-200307000-00010>.

24. Tucker CM, Herman KC, Ferdinand LA, Bailey TR, Lopez MT, Beato C, et al. Providing patient-centered culturally sensitive health care: a formative model. *Couns Psychol.* 2007;35(5):679–705. <https://doi.org/10.1177/0011000007301689>.
25. Office of Minority Health. HHS action plan to reduce racial and ethnic health disparities. Published online 2011. <https://doi.org/10.1037/e553842012-001>
26. Busseri MA, Tyler JD. Interchangeability of the working alliance inventory and working alliance inventory, short form. *Psychol Assess.* 2003;15(2):193–7. <https://doi.org/10.1037/1040-3590.15.2.193>.
27. Little RJA. A test of missing completely at random for multivariate data with missing values. *J Am Stat Assoc.* 1988;83(404):1198–202. <https://doi.org/10.2307/2290157>.
28. Park ER, Betancourt JR, Miller E, Nathan M, MacDonald E, Ananeh-Firempong O, et al. Internal medicine residents' perceptions of cross-cultural training. *J Gen Intern Med.* 2006;21(5):476–80. <https://doi.org/10.1111/j.1525-1497.2006.00430.x>.
29. Weissman JS, Betancourt J, Campbell EG, et al. Resident Physicians' Preparedness to Provide Cross-Cultural Care. *JAMA.* 2005;294(9):1058. <https://doi.org/10.1001/jama.294.9.1058>.
30. Hunt LM, de Voogd KB. Clinical myths of the cultural “other”: implications for Latino patient care. *Acad Med.* 2005;80(10):918–24.
31. Levinson W, Kao A, Kuby A, Thisted RA. Not all patients want to participate in decision making: a national study of public preferences. *J Gen Intern Med.* 2005;20(6):531–5. <https://doi.org/10.1111/j.1525-1497.2005.04101.x>.
32. Murray-Garcia JL, Selby JV, Schmittdiel J, Grumbach K, Quesenberry CP. Racial and ethnic differences in a patient survey: patients' values, ratings, and reports regarding physician primary care performance in a large health maintenance organization. *Med Care.* 2000;38(3):300–10.
33. Abraido-Lanza AF, Cespedes A, Daya S, Florez KR, White K. Satisfaction with health care among Latinas. *J Health Care Poor Underserved.* 2011;22(2):491–505. <https://doi.org/10.1353/hpu.2011.0042>.
34. Flower KB, Skinner AC, Yin HS, Rothman RL, Sanders LM, Delamater A, et al. Satisfaction with communication in primary care for Spanish-speaking and English-speaking parents. *Acad Pediatr.* 2017;17(4):416–23. <https://doi.org/10.1016/j.acap.2017.01.005>.
35. Benuto LT, Gonzalez FR, Singer J. *Handbook of cultural factors in behavioral health: a guide for the helping professional*: Springer International Publishing; 2020. <https://doi.org/10.1007/978-3-030-32229-8>.
36. Tucker CM, Nghiem KN, Marsiske M, Robinson AC. Validation of a patient-centered culturally sensitive health care provider inventory using a national sample of adult patients. *Patient Educ Couns.* 2013;91(3):344–9. <https://doi.org/10.1016/j.pec.2013.01.003>.
37. Marshall GN, Hayes RD. The Patient Satisfaction Questionnaire, Short-Form (PSQ-18). RAND Corp. Published online 1994. <https://doi.org/10.7249/P7865>
38. Kim SC, Boren D, Solem SL. The Kim Alliance Scale: development and preliminary testing. *Clin Nurs Res.* 2001;10(3):314–31. <https://doi.org/10.1177/c10n3r7>.
39. Horvath AO, Greenburg LS. Development and validation of the Working Alliance Inventory. *J Couns Psychol.* 1989;36:223–33. <https://doi.org/10.1037/0022-0167.36.2.223>.
40. Tracey TJ, Kokotovic AM. Factor structure of the working alliance inventory. *Psychol Assess J Consult Clin Psychol.* 1989;1(3):207–10. <https://doi.org/10.1037/1040-3590.1.3.207>.
41. Bordin ES. The generalizability of the psychoanalytic concept of the working alliance. *Psychother Theory Res Pract.* 1979;16(3):252–60. <https://doi.org/10.1037/h0085885>.
42. Morales LS, Cunningham WE, Brown JA, Liu H, Hays RD. Are Latinos less satisfied with communication by health care providers? *J Gen Intern Med.* 1999;14(7):409–17. <https://doi.org/10.1046/j.1525-1497.1999.06198.x>.
43. Betancourt JR, Green AR, Carrillo JE. Cultural competence in health care: emerging frameworks and practical approaches. The Commonwealth Fund; 2002:40. https://www.commonwealthfund.org/sites/default/files/documents/___media_files_publications_fund_report_2002_oct_cultural_competence_in_health_care___emerging_frameworks_and_practical_approaches_betancourt_culturalcompetence_576_pdf.pdf. Accessed 5 Feb 2020.
44. Office of Minority Health. National standards for culturally and linguistically appropriate services in health care: executive summary. U.S. Department of Health and Human Services; 2001. <https://minorityhealth.hhs.gov/assets/pdf/checked/executive.pdf>. Accessed 5 Feb 2020.
45. Thom DH, Tirado MD. Development and validation of a patient-reported measure of physician cultural competency. *Med Care Res Rev.* 2006;63(5):636–55. <https://doi.org/10.1177/1077558706290946>.
46. DiMatteo MR. Variations in patients' adherence to medical recommendations: a quantitative review of 50 years of research. *Med Care.* 2004;42(3):200–9.
47. Hays RD, Kravitz RL, Mazel RM, Sherbourne CD, DiMatteo MR, Rogers WH, et al. The impact of patient adherence on health outcomes for patients with chronic disease in the medical outcomes study. *J Behav Med.* 1994;17(4):347–60. <https://doi.org/10.1007/BF01858007>.
48. Traylor AH, Subramanian U, Uratsu CS, Mangione CM, Selby JV, Schmittdiel JA. Patient race/ethnicity and patient-physician race/ethnicity concordance in the management of cardiovascular disease risk factors for patients with diabetes. *Diabetes Care.* 2010;33(3):520–5. <https://doi.org/10.2337/dc09-0760>.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.