
2023

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Recommended Citation

Tabatabai MA, Matthews-Juarez P, Bahri N, Cooper R, Alcendor D, Ramesh A, Wilus D, Singh K, Juarez P. The role of patient-centered communication scale in patients' satisfaction of healthcare providers before and during the COVID-19 pandemic. *Patient Experience Journal*. 2023; 10(2):113-123. doi: 10.35680/2372-0247.1784.

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Cover Page Footnote

The project has been supported by Meharry Medical College Research Centers in Minority Institutions (RCMI) grant (National Institutes of Health (NIH) grant MD007586) and the Tennessee Community Engaged Alliance against COVID-19 (NIH Agreement 1OT2HL156812-01). This project has also been partially supported by Health Resources and Services Administration (HRSA) under grant number UH1HP30348. This information or content and conclusions are those of the authors and should not be construed as the official position or policy of, nor should any endorsements be inferred by NIH, RCMI, or HRSA.

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Abstract

Assess the effect of patient-centered communication (PCC) scale on the patient satisfaction of healthcare providers (HCPs). The 2020 Health Information National Trends Survey (HINTS) was used to analyze the patient's satisfaction of HCPs. This survey includes 2466 patients' responses and were analyzed using the multivariable binary Hyperbolic regression model of type II. The study examines the effects of PCC scale on patients' satisfaction of HCPs while controlling for pandemic status, employment, education, marital status, race, political views, waiting time status, sex, income, and age. PCC scale was the most significant predictor of patients' satisfaction of their HCPs (P-value < 0.001) followed by waiting time status (P-value < 0.001), and age (P-value = 0.016). The odds of patient satisfaction with the healthcare provider services were approximately 20% higher prior to the pandemic than during the pandemic (P-value = 0.415). The odds of satisfaction for patients earning \$100k+ was approximately three times more than those making less than \$35,000 (P-value = 0.003). PCC scale is a powerful measure that may be used as a metric for patients' satisfaction of HCPs. Taking steps to improve communication between HCPs and patients is a key factor in patient satisfaction. Concentrating on the seven domains of PCC will result in higher patient satisfaction of HCPs. The improvement in PCC will encourage each patient to disclose vital information about his or her health. This may increase the accuracy of diagnosis, quality of care, and health outcomes.

Keywords

Patient-centered communication Scale (PCC scale), COVID-19 pandemic, healthcare providers (HPCS), waiting time, patient satisfaction.

Introduction

Patient satisfaction of healthcare providers (HCPs) measures the degree to which a patient is satisfied with the quality of health care he or she received. Patient satisfaction has increasingly been used as an important metric to assess the performance of HCPs and the quality of care they provide. Understanding and knowledge of the patients' opinion regarding the HCPs can assist the provider to identify ways of improving their medical services. This will eventually translate into cost-efficient high-quality care that will enrich patient satisfaction. Although there is an indication that patient satisfaction is linked to their opportunity to communicate with the HCPs, several characteristics that influence patients' satisfaction have been extensively studied. Communications between HCPs and patients are vital tools in the construction of helpful HCP-patient

relationships when the ultimate goal is establishing a high-quality healthcare delivery system.¹ For instance, PCC was found to play a significant dual mediating role in the relationship between quality and satisfaction with medical care, physical health, and emotional well-being, especially in men.² PCC is considered as a type of care which respects and is responsive to patient needs and values and gives patient the power or opportunity of choosing and ensuring that patient values are considered and guide clinical decisions.

Understanding a patient's viewpoint of a diagnosed disease and expressing sympathy as well as exploring patient fears, anxieties, sensations, and knowledge regarding an illness are essential parts of communication.³ Patient-centered communication (PCC), which includes empathy and clear communication, was a factor to alleviate the fear caused by the COVID-19 pandemic and was shown to serve as a

defense to mitigate such hardships.⁴ PCC is considered to be a significant factor in enhancing the quality of healthcare delivery and a pathway between communication and health.^{5,6} A psychometric examination of colorectal cancer patients showed the validity of the PCC measure and its high association with the PCC scale used by the Health Information National Trends Survey (HINTS).⁷ The role and quality of patient communication with their healthcare providers are key elements that can improve patient satisfaction.⁸ The provider-patient relationship and PCC scale are essential components in improving health outcomes.⁹ Patient satisfaction is an important indicator of healthcare quality, which improves patient retention and clinical outcomes.¹⁰ Healthcare providers are a vital source of reliable information relayed through PCC. The communication between patient and healthcare provider results in trust, building a healing relationship that leads to better healthcare outcomes and patient satisfaction.¹¹

PCC plays a significant mediating role between patient satisfaction of healthcare providers and the emotional well-being of patients as well as between patient satisfaction of health care providers and physical health.¹² In a study regarding patient-satisfaction in a primary care setting, it is found that patients with a higher level of education expressed higher levels of satisfaction, when compared with patients with less than high school education.¹³ Young patients, Blacks, males, and economically disadvantaged patients were more likely to report poor satisfaction of services received from their HCPs.¹⁴

The relationship between patient trust in the HCPs and health outcomes showed that patients were more satisfied with the treatment they received when they had higher levels of trust in their HCP.¹⁵ Patients meeting HCPs virtually via telehealth platforms were just as satisfied as patients meeting with HCPs in-person.¹⁶ Impact of patients' negative rating of HCPs may promote dissatisfaction, attrition, and inappropriate clinical care among some HCPs.¹⁷ A systematic review between telehealth and patient satisfaction found that improved communication was a key indicator of patient satisfaction.¹⁸ Post consultation experiences of patients also influences patient satisfaction.¹⁹ The objective of our study was to assess the role of the PCC scale, a scale that evaluates the quality of healthcare service,²⁰ on patient satisfaction of HCPs and whether or not patient satisfaction was significantly affected by the COVID-19 pandemic.

Methods

Patient's satisfaction of HCPs was provided by the Health Information National Trends Survey (HINTS). Since 2003, HINTS has frequently collected nation-wide data on adults aged 18 or older to help understand the public's

knowledge, perceptions, and attitudes toward health-related topics, using a self-administered mailed questionnaire in the United States. The HINTS 5, Cycle 4, conducted in 2020, consisted of 3,865 respondents. Data underwent rigorous validation by HINTS prior to publication of their data. If a data value violated a validation rule (such as selecting multiple choices in a single-answer question, etc.), the discrepancy is resolved by a reviewer via a thorough examination of the disputed data value. For the control of survey questionnaire's quality, a random sample of 10 percent was selected to be examined.²¹ HINTS data are used to screen changes in the fields of health information, technology, and communications with the purpose of creating more reliable and effective health communications that can be accessed by a variety of populations. The binary outcome of interest used in this study is patient satisfaction of HCPs (dissatisfied if the patient responses to the survey were poor or fair, and satisfied if the responses were good, very good or excellent). After data curation, the 2020 survey of patient satisfaction reduced to 2466 patient responses. The study population consisted of 1447 (58.7%) females and 1019 (41.3%) males and were analyzed using a multivariable binary Hyperbolic regression model of type II.²²⁻²⁴ The study examined the effect of PCC scale on patient satisfaction of HCPs while controlling for pandemic status (before and during the pandemic). The date used to classify pandemic status was March 11, 2020. Patient employment (employed or other, unemployed only, homemaker only, student only, retired only, disabled only, and multiple occupation statuses), education (high school or less, post high school training other than college, some college, college graduate, and postgraduate), marital status (single, never married, married living as married or living with a romantic partner, divorced, widowed, separated), race (White, Asian, Black, American Indian or Alaska native, multiple races), income (0 – 34,999k, 35-74,999k, 75-99,999k, 100k+) political view (moderate, liberal, conservative), waiting time (reasonable, unreasonable), sex (male, female), health insurance (covered, not covered) and age were examined. The HINTS PCC scale takes into consideration the following seven domains²⁵:

1. Fostering healing relationships
2. Recognizing and responding to patients' emotions
3. Making decisions
4. Enabling self-management and patient navigation
5. Exchanging information
6. Cross-cutting
7. Managing uncertainty.

Each of the seven survey questions, which were used to create PCC scale, would address one of the seven domains. The questions are as follows:

During the past 12 months,

1. how often did they give you the chance to ask all the health-related questions you had?
2. how often did they give the attention you needed to your feelings and emotions?
3. how often did they involve you in decisions about your health care as much as you wanted?
4. how often did they make sure you understood the things you needed to do to take care of your health?
5. how often did they explain things in a way you could understand?
6. how often did they spend enough time with you?
7. how often did they help you deal with feelings of uncertainty about your health or health care?

The questions address fostering healing relationships, recognizing and responding to patients' emotions, making decisions, enabling self-management and patient navigation, exchanging information, cross-cutting, and managing uncertainty, respectively.

The response to each of the seven questions were (always, usually, sometimes, never). If at least half of the questions had valid responses, then the values of the seven questions were reversed and the mean values of these seven questions were linearly transformed to a 0-100 scale. The abovementioned procedure was used by HINTS to create the PCC scale.

Results

The distribution of characteristics of our categorical variables is presented in Table 1. Among the 2466 individuals who completed the survey, 2234 (95%) were satisfied with the services of their HCPs, and only 132 (5%) were dissatisfied. Figure 1 illustrates the PCC scale scores for satisfied and dissatisfied patients. The mean PCC scale score for dissatisfied patients was 50.83 with a standard deviation of 23.15 and a median score of 47.6. For the satisfied patients, the mean PCC scale score was 82.49 with a standard deviation of 19.32 and a median of 90.50. There was a significant difference between the mean PCC scale score between satisfied and dissatisfied groups (P-value < 0.001; effect size = 1.62).

The mean PCC scale score for patients prior to COVID-19 was 81.15 with a standard deviation of 21.22 and the median of 90.5 but during COVID-19 pandemic it slightly reduced to 80.57 with a standard deviation of 20.52 and median of 85.70. There was no significant difference in PCC scale scores before and during the pandemic using the Mann-Whitney U test (P-value = 0.316, effect size = 0.028). For those patients who thought they waited unreasonably long to get their test results, the mean PCC scale score was 67.75 with a standard deviation of 24.41 and median of 66.70. For those who thought their waiting time was reasonable, the mean PCC scale was 82.82 and

standard deviation of 19.41 and median PCC scale score of 90.50. The mean PCC scale score for employed patients was 79.39 with a standard deviation of 21.31 and median of 85.70. Among racial groups and on average, the highest PCC scale score belonged to Blacks (mean = 83.39, SD = 20.388, Median = 90.5) and the lowest score were among American Indian/ Alaskan (mean = 75.44, SD = 23.87, median = 76.20). There was not a significant difference in the mean PCC scale score among different categories of income.

Table 1 gives the frequency and percentage of individuals who were satisfied or dissatisfied with the services of their HCPs. Those individuals making \$100,000 or more had the highest overall satisfaction rate (97.2%) among all categories of all variables. Women had slightly higher rate of satisfaction than men 95.2% and 93.9% respectively. The satisfaction rate before COVID-19 pandemic was slightly higher than during pandemic. Among employment categories, students had the highest rate of dissatisfaction of HCPs (15.0 %). Those who had post graduate degrees had the highest rate of satisfaction among all categories of education (96.8%). The dissatisfaction rate for single individuals was 9.7% which was the highest among marital status categories. Alternatively, people living as married with a romantic partner had the highest satisfaction rate (96.3%). Whites and Asians tied for the highest satisfaction rate (95.3%) among all racial groups. Conservatives had the highest satisfaction rate (96.0%) among political view categories. Those who had short waiting times for receiving their test or lab results had a satisfaction rate of 96.5% while others who believed their waiting times were long had a satisfaction rate of only 82.8%. Individuals with no healthcare coverage had a dissatisfaction rate of 8.6% while the dissatisfaction rate for people covered by insurance was 5.3%.

As shown in Table 2 and illustrated in Figure 2, the results of the multivariable binary Hyperbolic regression of type II revealed that individuals who had shorter waiting times on their test results were 3.07 times as likely to be satisfied as those who had a long waiting time (AOR: 3.07; 95% CI:1.91–4.94; P-value < 0.001). The adjusted odds ratio, an odds ratio that adjusts for other predictor variables in the model, for satisfaction of HCPs during the COVID-19 pandemic compared to before the pandemic was 0.83 (AOR: 0.83; 95% CI:0.52–1.31; P-value = 0.415). Patients with high-school or less than high-school education had an adjusted odds ratio of 0.44, when compared to those who had a post-graduate education (AOR: 0.44; 95% CI:0.20–0.97; P-value = 0.043). The adjusted odds of satisfaction of HCPs for Blacks, when compared to Whites, was 0.76 (AOR: 0.76; 95% CI:0.42–1.39; P-value = 0.377); whereas the adjusted odds of satisfaction for Asians, compared to Whites, was 1.22 (AOR: 1.22; 95% CI:0.41–3.10; P-value = 0.824). The

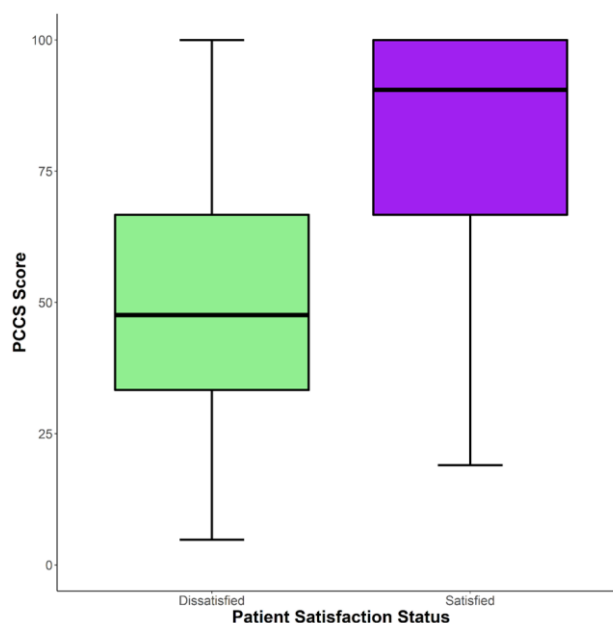
Table 1. Frequency status for satisfied and unsatisfied patients

Factor	Satisfied (n = 2334)		Dissatisfied (n = 132)		Total (n = 2466)	
	Frequency	%	Frequency	%	Frequency	%
Pandemic Status						
During Pandemic	1414	94.4	84	5.6	1498	60.7
Before Pandemic	920	95.0	48	5.0	968	39.3
Employment Status						
Unemployed	94	94.9	5	5.1	99	4.0
Homemaker	84	92.3	7	7.7	91	3.7
Student	17	85.0	3	15.0	20	0.8
Retired	690	96.0	29	4.0	719	29.2
Disabled	107	87.7	15	12.3	122	4.9
Multiple Occupations	227	93.0	17	7.0	244	9.9
Employed	1115	95.2	56	4.8	1171	47.5
Education						
HS or less	475	93.1	35	6.9	510	20.7
Post HS other than college	163	94.2	10	5.8	173	7.0
Some College	506	92.7	40	7.3	546	22.1
College	678	95.8	30	4.2	708	28.7
Post Graduate	512	96.8	17	3.2	529	21.5
Marital Status						
Married	1209	96.0	51	4.0	1260	51.1
Living as married	103	96.3	4	3.7	107	4.3
Divorced	378	94.3	23	5.7	401	16.3
Widowed	228	95.4	11	4.6	239	9.7
Separated	45	93.8	3	6.3	48	1.9
Single	371	90.3	40	9.7	411	16.7
Race						
Asian	123	95.3	6	4.7	129	5.2
Black	333	93.0	25	7.0	358	14.5
American Indian/Alaskan	17	89.5	2	10.5	19	0.8
Multiple Races	88	88.9	11	11.1	99	4.0
White	1773	95.3	88	4.7	1861	75.5
Income						
100k+	732	97.2	21	2.8	753	30.5
35,000-74,999	711	94.7	40	5.3	751	30.5
75,000-99,999	301	97.1	9	2.9	310	12.6
0-34,999	590	90.5	62	9.5	652	26.4
Political View						
Liberal	739	94.7	41	5.3	780	31.6
Conservative	823	96.0	34	4.0	857	34.8
Moderate	772	93.1	57	6.9	829	33.6
Waiting Time Status						
Short Wait	2060	96.5	75	3.5	2135	86.6
Long Wait	274	82.8	57	17.2	331	13.4
Insurance Status						
Healthcare coverage	2270	94.7	126	5.3	2396	97.2
No Healthcare Coverage	64	91.4	6	8.6	70	2.8
Sex						
Female	1377	95.2	70	4.8	1447	58.7
Male	957	93.9	62	6.1	1019	41.3

adjusted odds of satisfaction of HCPs for married patients were 22% higher when compared to single patients (AOR: 1.22; 95% CI:0.66–2.25; P-value = 0.537) but the adjusted odds of satisfaction of HCPs for patients living as married with a romantic partner was 239% higher than single patients (AOR: 3.39; 95% CI:0.92–12.54; P-value = 0.068). The adjusted odds of satisfaction of HCPs for retired

patients, compared to those who were employed, was 0.69 (AOR: 0.69; 95% CI:0.33-1.43; P-value = 0.317).

For every year increase in age, the likelihood of satisfaction increases by approximately 1.02 times (AOR: 1.02; 95% CI:1.00–1.04; P-value = 0.016). For every unit increase in the PCC scale score, the likelihood of satisfaction increases

Figure 1. PCC scale score for patient satisfaction of HCPs

by approximately 1.06 times (AOR: 1.06; 95% CI:1.05–1.07; P-value < 0.001).

The Receiver Operating Characteristic (ROC) curve was used to measure the performance of our multivariable binary Hyperbolic Regression of Type II. As shown in Figure 3, this ROC curve shows the trade-off between sensitivity and 1-specificity. The area under the ROC curve (AUC) for our model was approximately 0.89. As shown in Table 3, the overall correct percentage of patient satisfaction of HCPs was 95.05% indicating the percentage of cases that have been correctly classified by our model. The sensitivity, specificity, positive predictive value, and negative predictive value were 99.4%, 18.9%, 95.6%, and 62.5% respectively.

Discussion

This analysis of the 2020 HINTS survey using the multivariable binary Hyperbolic regression of Type II, revealed that PCC scale, age, waiting time to receive care, and income were all significantly related to patient satisfaction of healthcare providers. The results indicated that by far, PCC scale, which has been found to positively relate to various emotional health outcomes,²⁶ was the most significant predictor of patient satisfaction with HCPs.

Other significant variables were waiting time, age, and income. Patient satisfaction has a positive association with patient trust and communication and is inversely associated with patients' waiting time. Shorter waiting

times can contribute to better patient satisfaction of HCPs.²⁷ HCPs should make every effort to optimally allocate time and show more empathy based on patients' needs.^{28,29} Those who had a shorter waiting time for their appointment, test, or lab results were over three times more likely to be satisfied when compared to those who had a long waiting time. Waiting a longer period of time to receive diagnostic test results or see HCPs may increase the anxiety level of patients, especially in vital situations. Longer wait times are negatively associated with patient's satisfaction of HCPs and will reduce patient's confidence in the quality of healthcare they receive.³⁰

Patients with an income level of \$100,000 or higher expressed the most satisfaction. This would suggest that financial well-being and being able to afford private insurance may correlate with enhanced services that positively impact patient satisfaction. Interpersonal communications skills of doctors are one of the main indicators of patients' satisfaction towards HCPs, especially among low-income groups.³¹

Other studies found the influence of age on patient satisfaction was monotonically increasing until age 65 to 80, after which it took a downward trend. It suggests that age should be considered when analyzing patient satisfaction data.³² Patient communication with health care providers differs with age. Understanding this relationship could be useful to develop health policies that improve healthcare delivery and outcomes.³³ In another study of patient satisfaction age was found to be the strongest predictor of patient satisfaction.³⁴

Table 2. Parameter estimates and adjusted odds ratios

	Parameter	S.E.	t-Value	P-value	Adjusted Odds Ratio	Upper
Constant	-3.445	0.890	-3.870	0.000	0.032	0.006
Pandemic Status						
After Pandemic	-0.191	0.235	-0.816	0.415	0.826	0.521
Before Pandemic	<i>Ref</i>					
Employment						
Unemployed	0.431	0.623	0.692	0.489	1.539	0.454
Homemaker	-0.200	0.563	-0.356	0.722	0.818	0.272
Student	0.054	0.952	0.057	0.954	1.056	0.164
Retired	-0.372	0.371	-1.001	0.317	0.689	0.333
Disabled	-0.569	0.444	-1.281	0.200	0.566	0.237
Multiple Occupations	-0.192	0.374	-0.512	0.608	0.825	0.396
Employed	<i>Ref</i>					
Education						
High School or less	-0.818	0.404	-2.026	0.043	0.441	0.200
Post High school other than college	-0.944	0.519	-1.819	0.069	0.389	0.141
Some College	-0.889	0.383	-2.321	0.020	0.411	0.194
College	-0.466	0.377	-1.236	0.217	0.627	0.299
Post Graduate	<i>Ref</i>					
Marital Status						
Married	0.194	0.315	0.618	0.537	1.215	0.655
Living as married	1.221	0.667	1.829	0.068	3.389	0.916
Divorced	0.349	0.372	0.939	0.348	1.418	0.684
Widowed	0.133	0.487	0.273	0.785	1.142	0.439
Separated	-0.201	0.712	-0.282	0.778	0.818	0.203
Single	<i>Ref</i>					
Race						
Asian	0.115	0.517	0.222	0.824	1.122	0.407
Black	-0.272	0.308	-0.884	0.377	0.762	0.416
American Indian/Alaskan	0.092	1.028	0.090	0.929	1.097	0.146
Multiple Races	-0.517	0.475	-1.090	0.276	0.596	0.235
White	<i>Ref</i>					
Income						
100k+	1.123	0.384	2.925	0.003	3.074	1.448
75,000-99,999	1.105	0.452	2.448	0.014	3.021	1.247
35,000-74,999	0.522	0.287	1.818	0.069	1.686	0.960
0-34,999	<i>Ref</i>					
Political View						
Liberal	0.445	0.273	1.630	0.103	1.561	0.914
Conservative	0.576	0.275	2.098	0.036	1.779	1.039
Moderate	<i>Ref</i>					
Waiting Time Status						
Short Wait	1.123	0.242	4.642	0.000	3.074	1.913
Long Wait	<i>Ref</i>					
Insurance Status						
Healthcare coverage	-0.209	0.582	-0.359	0.720	0.812	0.259
No Healthcare Coverage	<i>Ref</i>					
Sex						
Female	0.437	0.230	1.899	0.058	1.548	0.986
Male	<i>Ref</i>					
Age	0.024	0.010	2.402	0.016	1.024	1.004
PCC scale	0.060	0.005	10.995	< 0.001	1.062	1.051

Patient-centered care that encompasses informed decision making can improve treatment choice, quality of care, and outcomes.³⁵ Some HCPs have inadequate communicative skills that may affect patient participation, leading to unsatisfied patients.³⁶ On the other hand, patients with low literacy require more attention by their HCPs.^{37,38} It is essential that HCPs be more attentive to encourage patients, especially those with low literacy, to ask questions related to their health.³⁹ In addition, it is of utmost importance that HCPs are adequately trained in PCC and build strong patient-provider relationships to improve patient satisfaction.⁴⁰

Females had about 55% higher odds of satisfaction when compared to males. This could be due to men having higher expectations from HCPs than women.⁴¹ The odds of satisfaction with HCP services before the COVID-19 pandemic was 20% higher than during pandemic. The rise may be partially attributed to the fact that the healthcare system was overwhelmed by pandemic patients and patients with other medical needs could not get adequate care during those difficult times. Hospital staff shortages due to COVID infections, PPE supply shortages, limited ICU bed capacity, limited hospital space to accommodate

patients, as well as limited therapeutic interventions in the early days of the pandemic may have increased dissatisfaction.^{42,43} Whites had a 32% higher odds of satisfaction when compared to Blacks.^{44,45} This may reflect the distrust and implicit bias experienced by African American populations engaging primary care providers. The odds of satisfaction for patients living as married with a romantic partner was 239% higher than single patients. Employed patients were 45% more likely to be satisfied with services of their HCPs when compared with retired ones.

Our results indicated that overall, patients were very satisfied with their HCPs for each demographic and socioeconomic category considered in this study. The use of patient satisfaction surveys may encourage clinicians to establish an equitable culture of care that can support patient satisfaction metrics. Long standing health inequities that contribute to health disparities among populations with poor social determinants of health can compromise healthcare outcomes and increase mortality among these populations. In addition, negative survey data that include low rates of patient satisfaction could reflect a poor image on all primary care providers that could greatly

Figure 2. Circular bar chart for adjusted odds ratios of patient satisfaction

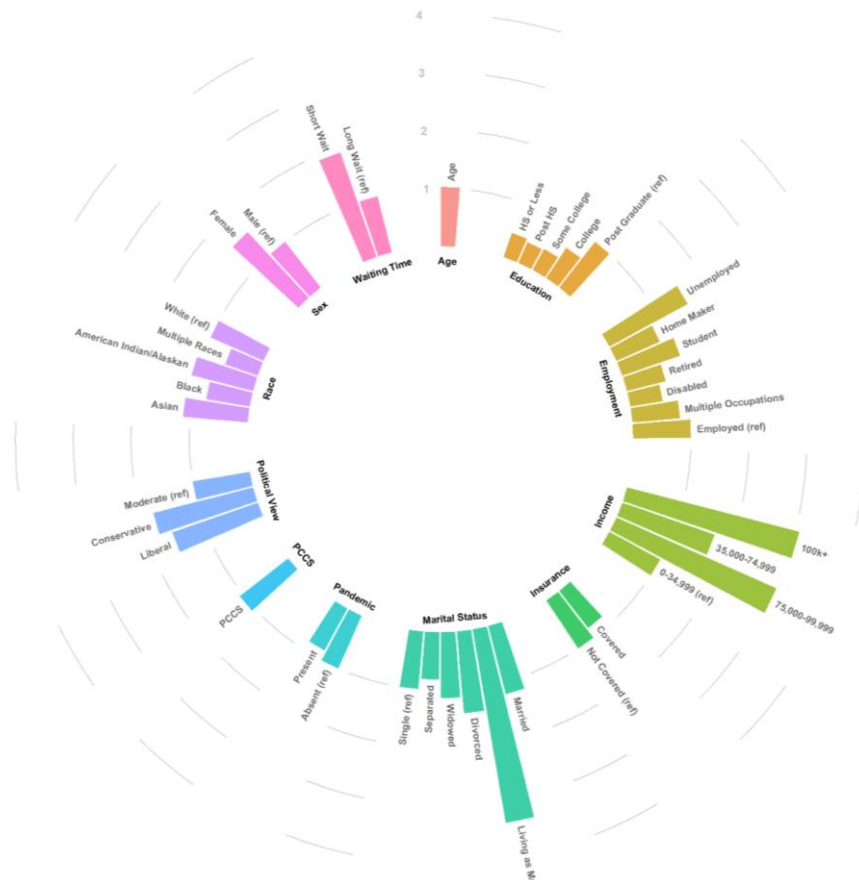
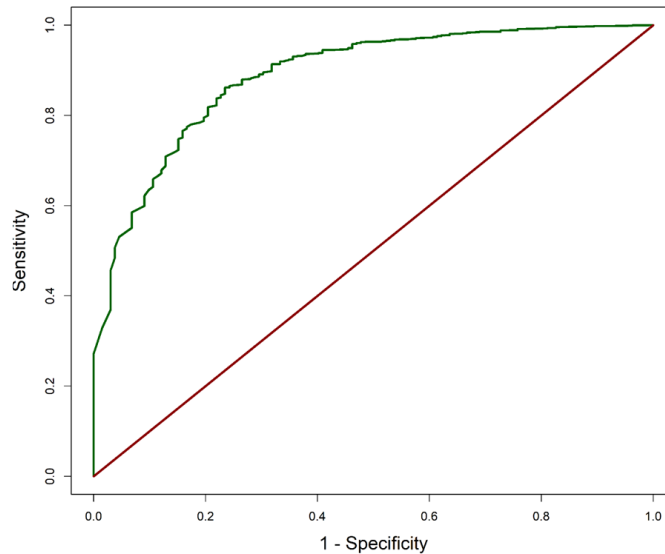


Figure 3 ROC curve using the binary Hyperbolastic regression model of Type II



effect professional integrity and result in dissatisfaction among HCPs.¹⁷ The authors believe it is in the interest of all HCPs to meet their patients’ needs by providing evidenced-based care.

Patient satisfaction has increasingly been used to assess physician performance and quality of care. Although there is evidence that patient satisfaction is associated with patient-reported health outcomes and communication-related measures, patient characteristics that influence satisfaction have been studied, but the effects of personal and demographic characteristics of physicians on patient satisfaction requires further study.

More research is necessary before using patient satisfaction metrics to evaluate the performance of HCPs in relation to their interaction with their patients. Individuals from different racial and ethnic groups, cultures, and genders have different opinions about health care satisfaction. The mindfulness about these differences, may help us understand the complexities of doctor patient relationships that influence patient satisfaction.⁴⁸ However, there is

much to learn about the notion of patient influence and experience on how satisfaction is measured, reported, and used across the healthcare industry.⁴⁹ It is strongly recommended that HCPs enhance their communication skills by encouraging patients to ask questions.⁵⁰

Our study has some limitations as it did not capture the perceptions of sexual and gender minorities who most often do not receive optimal care due to implicit bias.^{51,52} Other vulnerable groups who are affected by lack of access to care are people experiencing homelessness, who do not come forward to seek medical help and/or fail to keep follow-up visits,⁵³ and migrant farm workers, some of them being non-English speakers and thus are unable to express their experiences with health care providers.⁵⁴

The authors have conducted several systematic reviews and reported a variety of educational interventions to improve communication skills between healthcare providers and students. Though these interventions were aimed at improving communication skills for treating vulnerable populations,^{55–58} some of those interventions

Table 3: Classification Table using Multivariable Binary Hyperbolastic Regression of Type II Model

		Predicted Response		Percentage Correct
		Yes	No	
Observed Response	Yes	2319	15	99.357
	No	107	25	18.939
Overall Correct Percentage:				95.053

could be applied for larger patient groups. Other models of training such as using quality improvement audits, the patient-centered medical home, and linking mission-based medical education with a Communities of Practice approach⁵⁹ will be of great help in transforming primary care into a culturally competent patient-centered care. There is always a need for improved communication between HCPs and patients through communication skill training for medical school students and residents. In addition, programs should be established to assist in training patients to better describe their medical problems when they communicate with their HCPs.⁶⁰ PCC is not only about the transfer of information, but the intimate relationship between the patient and the HCP, that can be felt by the patient.⁶¹

Conclusion

Taking steps to improve communication between HCPs and patients is a key factor in patient satisfaction. Better communication enables patients to disclose vital information about their health, which may result in an improvement in the quality of care and health outcomes. Concentrating on the seven domains of PCC will result in higher patient satisfaction of HCPs. The improvement in PCC will encourage each patient to disclose vital information about his or her health. This may increase the accuracy of diagnosis, quality of care, and health outcomes.

Each patient has different needs. HCPs should take into consideration patients' demographic and socioeconomic factors when caring for patients. Communication between healthcare providers and patients is a two-way street. On one hand, it can potentially be enhanced through training during medical school and residency programs; while on the other hand, patients need to learn how to describe their complications plainly and be willing to ask appropriate questions, seek clarification, and ensure that they understand what has been conveyed.

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