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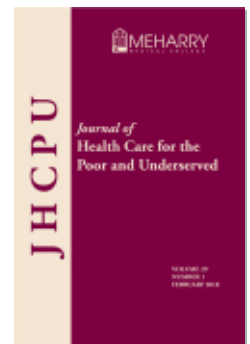
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Patient-Centered Care for Socially At-Risk Populations

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Provider Perceptions of the Organization's Cultural Competence Climate and Their Skills and Behaviors Targeting Patient-Centered Care for Socially At-Risk Populations

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Abstract: As part of a cultural competence needs assessment study at a large academic health care system, we conducted a survey among 1,220 practicing physicians to assess their perceptions of the organization's cultural competence climate and their skills and behaviors targeting patient-centered care for culturally and socially diverse patients. Less than half of providers reported engaging in behaviors to address cultural and social barriers more than 75% of the time. In multivariable logistic regression models, providers who reported moderate or major structural problems were more likely to report low skillfulness in identifying patient mistrust (aOR: 2.01; 95% CI: 1.23–3.28, $p < 0.01$), how well patients read and write English (aOR: 1.63; 95% CI: 1.03–2.57, $p = 0.03$), and socioeconomic barriers (aOR: 2.14; 95% CI: 1.14–4.01, $p = 0.01$), than providers who reported only small or

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no structural problems. Improved structural support for socially and culturally complex medical encounters is needed to enhance care for socially at-risk patients.

Key words: Cultural competence, health care equity, organization, providers, social risk factors.

In its landmark report, *Unequal Treatment*, the Institute of Medicine (now known as the National Academy of Medicine) called for urgent changes to improve the U.S. health care system's capacity to deliver high-quality and patient-centered care for underserved populations.¹ The Association of American Medical Colleges (AAMC) has also called on the nation's medical schools and teaching hospitals to lead efforts to address persistent inequalities in care delivery and acknowledged that cultural competence is an important mechanism for reducing health care disparities.² The U.S. Department of Health and Human Services defines cultural competence as, "a set of congruent behaviors, attitudes, and policies that come together in a system, agency or among professionals and enable that system, agency or those professionals to work effectively in cross-cultural situations."³ Domains of interpersonal cultural competence include cultural sensitivity and cultural humility. The National Academy of Medicine has also broadened the notion of cultural competence to one that encompasses health system practices to improve care for socially at-risk populations.⁴⁻⁸ In prior studies, culturally competent care has been associated with improved patient satisfaction and clinical outcomes for patients from socially and culturally diverse populations.⁴⁻⁸

In recent years, health care organizations across the nation have embraced the idea of improved cultural competence to enhance quality of care for underserved populations. We present a conceptual model that we adapted from the work of Brach and Fraser⁵ and the National Academy of Medicine's Committee on Accounting for Socioeconomic Status in Medicare Payment Programs⁴⁻⁸ to contextualize how health care systems could target factors at multiple levels of care delivery to improve health care interactions and patient outcomes for socially and culturally diverse patient populations. (Figure 1) As highlighted in the model, potential cultural competence targets at the organizational and health system level (Level 1) may be human factors (e.g., workforce recruitment and retention policies, climate/motivation, and attitudes) and structural factors (e.g., decision support, accessibility of services, access to medical interpreters, and cultural, literacy, and linguistically-appropriate written materials). Cultural competence techniques could also target factors at the provider and staff level (Level 2), such as cultural and social skills, understanding, and behaviors, and preparedness to deliver high-quality care to diverse patient groups. Finally, potential targets at the patient and family level (Level 3) may include illness understanding, family dynamics, medical trust, health literacy, and linguistic factors. Interventions that target cultural competence at multiple levels of the model may help to address social risk factors influencing care and outcomes (e.g., socioeconomic position, cultural and religious beliefs, social relationships, and community context) and help to achieve equity in the receipt of appropriate care and patient outcomes (e.g., activation and engagement, experiences of care, adherence, self-care behaviors, and health status).^{5,6,9-14}

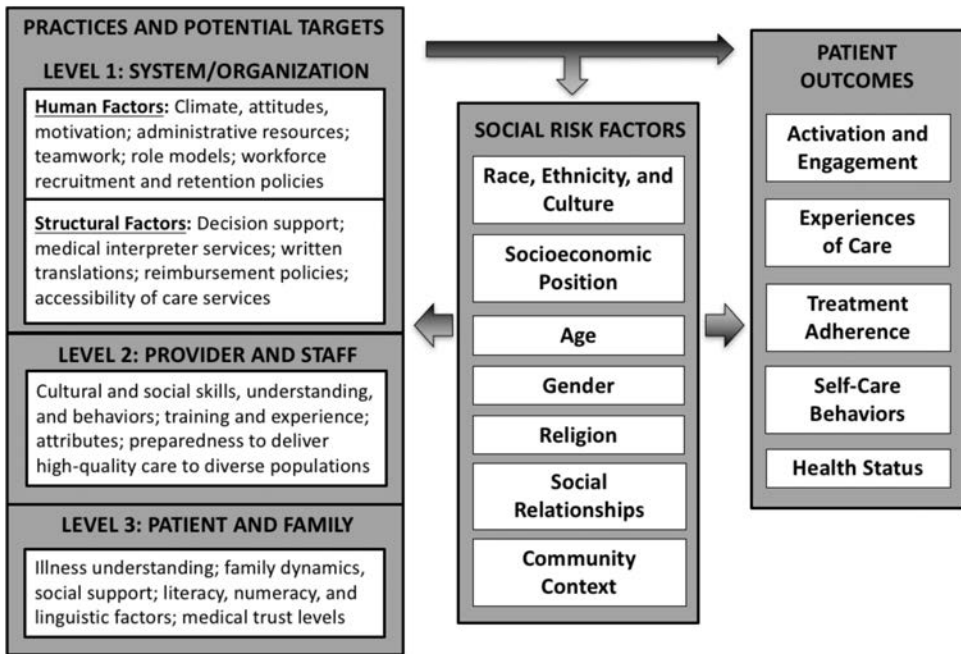


Figure 1. Health system targets to improve patient-centered care and outcomes for socially and culturally diverse populations.

As illustrated in our model, organizational and provider cultural competence may be synergistic forces for improving patient-centered care and reducing health care disparities. Policymakers, clinicians, and researchers suggest that organizational climate is important in enabling health systems to function effectively and facilitate providers’ abilities to deliver patient-centered care that is respectful of and responsive to the social, cultural, and linguistic needs of diverse patients.¹⁵⁻¹⁹ Providers’ social and cultural skills and behaviors are critical components of their abilities to make accurate medical diagnoses, minimize unnecessary or duplicative diagnostic procedures, and encourage patients to be active participants in shared treatment decision-making.^{2,15} There has been little empirical evidence, however, to demonstrate a direct link between organizational cultural competence climate and providers’ self-rated social and cultural skills and behaviors.

The purpose of this study was to assess whether providers’ perceptions about their organization’s cultural competence climate are independently associated with their self-rated skill levels in delivering care to diverse patients and their behaviors targeting cultural and social factors in clinical practice. We hypothesized that providers who viewed their organization’s cultural competence climate more favorably would report higher skills and behaviors related to addressing cultural and social factors in clinical practice. Consistent with our conceptual model, this study aims to provide needed empirical evidence demonstrating a direct link between organizational cultural competence and providers’ cultural and social skills and behaviors.

Methods

Study procedures and population. As part of the Johns Hopkins University School of Medicine's Cultural Competence Needs Assessment Study (JHU-CCNA), we assessed providers' perceptions of the organization's climate and their self-rated skills and behaviors related to addressing cultural and social issues for diverse patients in clinical practice. The Institutional Review Board at the Johns Hopkins University School of Medicine approved the protocol and materials. Completion times for the cross-sectional JHU-CCNA survey averaged 15–30 minutes. The primary goal of the JHU-CCNA was to ascertain the perceived need for additional cultural competence training among faculty members, fellows, and residents across major clinical departments at the Johns Hopkins School of Medicine in order to enhance the delivery of patient-centered and socially and culturally appropriate care to diverse patient populations. As an integrated global health enterprise, Johns Hopkins Medicine handles more than 2.8 million outpatient encounters, 115,000 inpatient admissions, and 350,000 emergency visits annually; this includes more than 4,500 international patients with over 100 languages spoken.²⁰

Ten departments representing major clinical specialties at our institution (Medicine, Surgery, Pediatrics, Psychiatry, Neurology, OB/GYN, Dermatology, Anesthesiology, Radiology, and Emergency Medicine) were included in the study. We used data from the Johns Hopkins University Office of the Registrar to identify potential study participants and obtain their email addresses. All faculty, fellows, and residents in the 10 departments were sent emails asking them to participate in an online survey to assess their cultural competence needs. Emails to faculty, fellows, and residents were preceded by an email from their Department Chair informing them that their participation was voluntary while also encouraging them to complete the survey. To increase participation, program directors were also asked to send out reminder emails about the survey to their residents and fellows. All participants had the ability to opt out of the survey and remove themselves from our email list.

Among 2614 potential respondents, a total of 1220 (47%) completed the survey. We obtained additional demographic data from the Registrar's Office about potential respondents who chose not to participate. These data were used to help determine whether survey respondents were significantly different from non-respondents. Based upon these data, there was a higher proportion of males among respondents who completed our survey versus non-respondents who did not complete the survey. There was also a higher proportion of faculty members among respondents who completed the survey versus non-respondents. Personal identifiers of non-respondents were discarded following data analysis for the study.

Study measures. We used previously validated measures to assess providers' perceptions of their 1) organizational cultural competence climate, 2) skills in addressing cultural and social factors, and 3) behaviors in clinical practice. To assess their *perceptions of the organizational cultural competence climate*, we used an 11-item measure¹⁹ asking providers to report how much of a problem each of the following factors posed when delivering care: lack of time; poor access to medical interpreters; poor access to written materials in other languages; lack of practical experience; absence of good role models; and dismissive attitudes among colleagues, superiors, departmental leadership,

hospital leadership, or staff. Possible responses were *no problem*, *small problem*, *moderate problem*, or *big problem*. (Appendix Table 1)

To assess their *skills in addressing cultural and social factors*, we used an 11-item measure¹⁹ asking providers to self-rate how skillful they are at each of the following: working with a medical interpreter; determining how to address the patient; taking a social history; identifying medical mistrust, socioeconomic issues, cultural barriers, religious barriers, dynamics of family decision making, and how well patients read/write English; assessing patients' illness understanding; and negotiating a treatment plan. Possible responses were *not skillful at all*, *slightly skillful*, *somewhat skillful*, *fairly skillful*, or *very skillful*. (Materials available from the authors upon request.)

To assess their *social and cultural behaviors*, we used a 5-item measure²¹ asking providers how often they do the following things when seeing patients: ask patients and families about their explanations of health and illness and their expectations for care; recognize and act to remove potential barriers to care; and find ways to adapt care services to patients and family cultural practices. Possible responses were 0–25%, 26–50%, 51–75%, or 76–100%. Additional questions were used to assess providers' demographic characteristics, including race, ethnicity, age, gender, medical school training, professional status, primary department, linguistic skills, and prior cultural competence training.

Statistical analysis. The primary explanatory variable, perceptions of the organizational cultural competence climate, was categorized into two composite measures: human factors and structural factors. Using data obtained from the original 11-item measure, we used principal components analysis and common factor analysis to assess whether we could present a composite measure. We calculated the Pearson's rank correlation coefficients and matrix. We examined screeplots and correlation measures, and we used the criteria of eigenvalues greater than 1 and factor loadings greater than 0.5 to determine the number of underlying factors. We performed varimax rotation to aid the interpretations of the factor solutions.

As a result of the exploratory factor analysis, we found as the best fit for our data was two-factor solution reflecting two different types of organizational factors: human factors and structural factors. The six survey items assessing attitudes among staff, leaders, superiors, colleagues, and mentors loaded strongly onto the first (human) factor, while the remaining five items loaded more strongly onto the second (structural) factor. Thus, we averaged survey responses across the first six items to create a composite measure reflecting human factors, and we averaged responses across the remaining five items to create a composite measure reflecting structural factors. We then dichotomized the composite scores into "*no or small problem vs. moderate or big problem*" based on the distribution of the data.

The measures assessing our outcome variables—social and cultural skills and behaviors—were positively skewed with fewer responses in the lower categories; so we dichotomized the skill level responses into "*not skillful at all or slightly skillful*" versus "*somewhat, fairly, or very skillful*." Providers' behaviors were dichotomized into "*greater than 50% of the time*" versus "*50% or less of the time*" based upon the data distribution.

We described provider demographic characteristics in descriptive analysis. In multi-variable logistic regression models, we assessed the independent associations of provider

perceptions of the organizational cultural competence climate with their self-rated skills and behaviors, while adjusting for differences in provider demographic factors. We considered a two-sided p -value $<.05$ as statistically significant. All analyses were conducted using Stata Statistical Software (Stata SE version 13.0, Stata Corp, College Station, Texas).

Results

Participant characteristics. Among the 1,220 total study participants, the mean age was 39.8 years (standard deviation: 10.7 years) with 45% male, 3% of Hispanic ethnicity, 53% White, 8% Black, and 17% Asian. Nearly a third of participants had primary appointments in the Department of Medicine, and a majority were born in the U.S., graduated from a U.S.-based medical school, and are able to speak at least one other language in addition to English. Other languages spoken by at least one provider include American Sign, Amharic, Arabic, Bambara, Bengali, Burmese, Cantonese, Chinese Mandarin, Czech, Dutch, Filipino, French, French Creole, German, Greek, Hausa, Hebrew, Hindi, Igbo, Italian, Jamaican Patois, Japanese, Korean, Lamnso, Luba-Kasai, Malayalam, Marathi, Norwegian, Pashto, Persian, Polish, Portuguese, Russian, Serbo-Croatian, Slovak, Spanish, Swahili, Swedish, Tamil, Thai, Turkish, Urdu, Vietnamese, Yiddish, and Yoruba. Roughly half (49%) of providers also received prior cultural competence training. (Table 1)

Perceptions of the organizational cultural competence climate. Overall, a higher proportion of providers reported moderate or major problems with structural versus human factors associated with the organizational climate. For instance, many respondents reported that poor access to written materials in other languages (45%) and lack of time to address cultural issues (42%) were moderate or major problems when delivering care. Approximately one quarter (21%) of respondents reported poor access to interpreters as a moderate or major problem. In general, participants reported small to no problems with human factors associated with the organizational climate. One exception, absence of good mentors for cross-cultural care, was reported as a moderate or major problem by 21% of respondents. (Figure 2)

Providers' self-rated social and cultural skills and behaviors. With the exception of one skill (taking a social history), less than a quarter of providers rated themselves as very skillful in most areas of care for diverse groups. Although most rated themselves as at least fairly skillful in many areas, some reported low skill levels in identifying cultural barriers (10%), identifying religious barriers (14%), or assessing how well patients read and write English (12%). (Figure 3) A majority reported that they perform most social and cultural behaviors at least half of the time. However, 22% reported that they infrequently ask patients and families about their expectations for care, and 27% reported they infrequently ask patients and families about their own explanations of health and illness. (Figure 4)

Associations of the organizational climate with providers' social and cultural skills and behaviors. In multivariable models adjusting for demographic characteristics, providers' perceptions of structural problems in the organizational climate were independently associated with their reported social and cultural skills and behaviors.

Table 1.
PROVIDER DEMOGRAPHIC CHARACTERISTICS (N=1,220)

Characteristics	n	(%) ^a
Age		
18–44 years	728	60
45+ years	290	24
Gender		
Female	497	41
Male	548	45
Ethnicity		
Hispanic	42	3
Non-Hispanic	994	81
Race		
White	643	53
Black	102	8
American Indian/Alaska Native (AI/AN)	2	0
Asian	212	17
Native Hawaiian/Other Pacific (NH/PI)	4	0
Professional Status		
Resident	226	18
Fellow	250	20
Faculty	565	46
Primary Department		
Medicine	356	29
Surgery	123	10
Other Specialty	728	60
Medical School Training		
US medical school graduate	728	60
Non-US medical school graduate	317	26
Additional Medical Training or Experience Providing Care Outside of the US		
Yes	454	37
No	589	48
Participant Born Outside of the US		
Yes	355	29
No	690	56
Parent(s) Born Outside of the US		
Yes	518	42
No	523	43
Able to Speak a Non-English Language		
Yes	650	53
No	398	33
Prior Cultural Competence Training		
Yes	604	49
No	308	25

Notes:

^aTotals may not add up to 100% due to missing values.

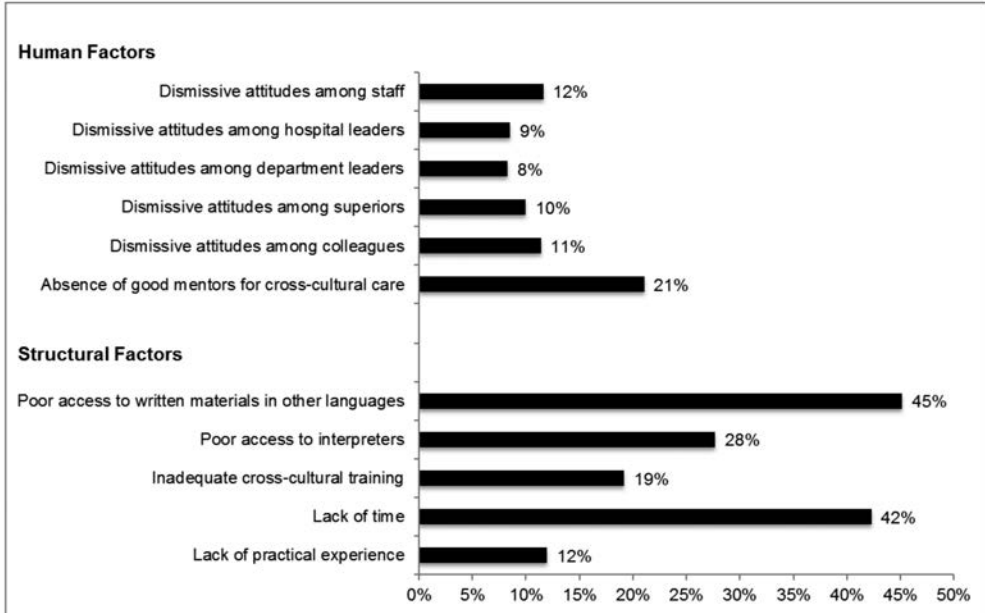


Figure 2. Providers reporting moderate or major problems when delivering care to socially and culturally diverse populations.

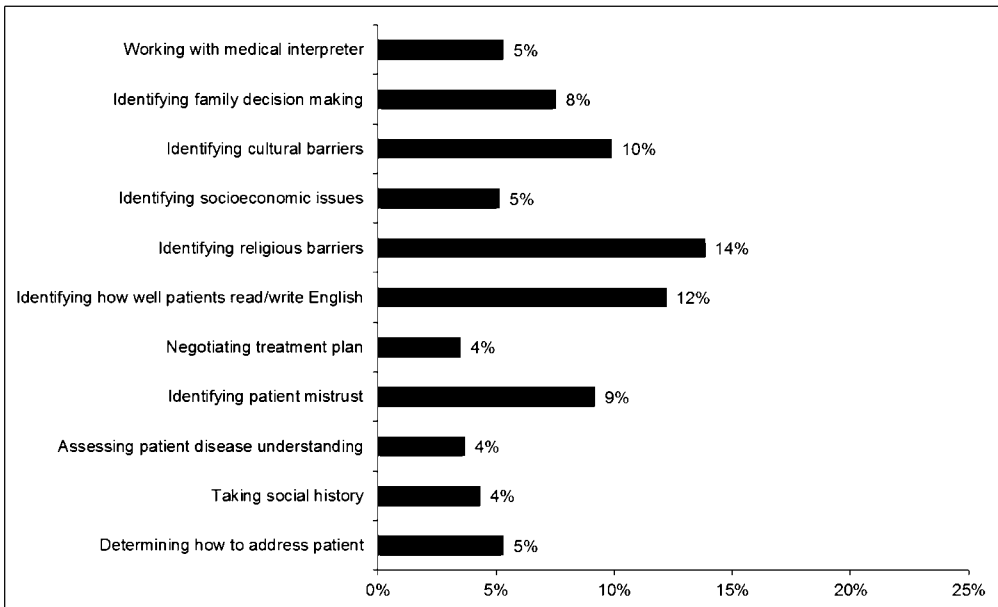


Figure 3. Providers reporting low skillfulness in delivering care to socially and culturally diverse populations.

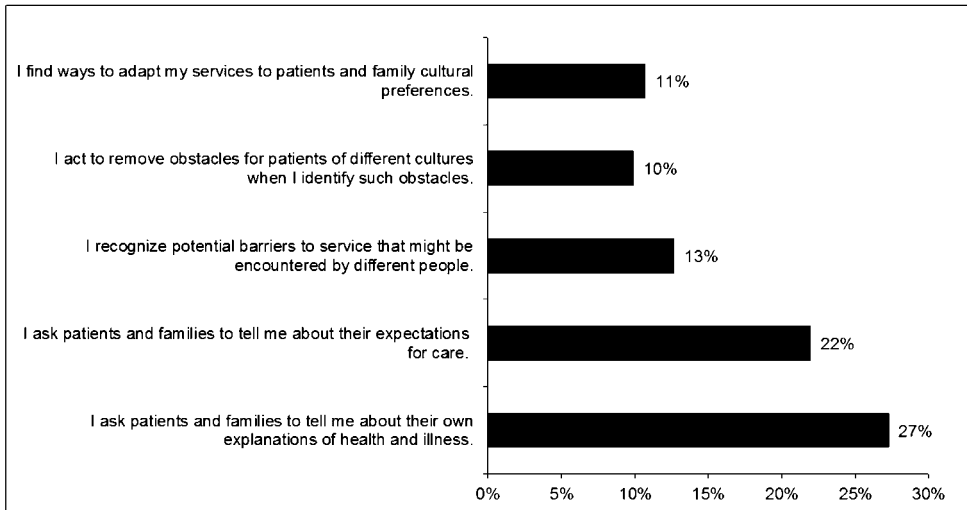


Figure 4. Providers reporting that they perform social and cultural behaviors infrequently (< 51% of the time).

Providers who reported moderate or major structural problems were more likely to report low skillfulness in determining how to address a patient (adjusted odds ratio [aOR]: 3.24; 95% CI: 1.78–5.92, $p < .001$), identifying patient mistrust (aOR: 2.01; 95% CI: 1.23–3.28, $p < .01$), identifying how well patients read and write English (aOR: 1.63; 95% CI: 1.03–2.57, $p = .03$), identifying religious barriers (aOR: 1.64; 95% CI: 1.06–2.53, $p = .02$), identifying socioeconomic barriers (aOR: 2.14; 95% CI: 1.14–4.01, $p = .01$), and identifying family decision making (aOR: 1.88; 95% CI: 1.10–3.20, $p = .02$), compared with providers who reported only small or no structural problems. (Table 2) Providers who reported moderate or major structural problems were also more likely to report that they infrequently act to remove obstacles when they find them (aOR: 1.75; 95% CI: 1.05–2.91, $p = .03$) or find ways to adapt services to patient and family cultural preferences (aOR: 2.00; 95% CI: 1.21–3.31, $p < .01$), than providers who reported small or no structural problems. (Table 3)

Discussion

In this study of more than 1,200 providers, less than a quarter rated themselves as very skillful in many areas of delivering patient-centered care for culturally and socially diverse populations. Many providers also reported moderate or major problems with structural aspects, such as poor access to written materials in other languages and lack of time to address cultural issues when delivering care. Providers' perceptions of moderate or major structural problems were inversely associated with their self-rated skillfulness in determining how to address patients; identifying patient mistrust, how well patients read and write English, religious barriers, socioeconomic issues, and patient/family decision making; acting to remove obstacles; and finding ways to tailor clinical services to patient and family cultural preferences. In further analysis, we also observed a similar

Table 2.
PROVIDERS' PERCEPTIONS OF ORGANIZATIONAL PROBLEMS AND THEIR SELF-RATINGS OF LOW SKILLFULNESS IN THE CARE OF SOCIALLY AND CULTURALLY DIVERSE PATIENT POPULATIONS: ADJUSTED ODDS RATIOS (95% CI) FROM MULTIVARIABLE LOGISTIC REGRESSION MODELS^a

	Determining how to address patient aOR (95%CI)	Identifying patient mistrust aOR (95%CI)	Identifying how well patients read and write English aOR (95%CI)	Identifying religious barriers aOR (95%CI)	Identifying socioeconomic barriers aOR (95%CI)	Identifying cultural barriers aOR (95%CI)	Identifying family decision making aOR (95%CI)	Working with a medical interpreter aOR (95%CI)
Human Factors								
No or small problem	reference	reference	reference	reference	reference	reference	reference	reference
Moderate or big problem	1.24 (0.55-2.77)	1.16 (0.62-2.20)	1.16 (0.64-2.09)	0.99 (0.56-1.74)	1.52 (0.70-3.30)	1.23 (0.65-2.32)	0.96 (0.47-1.99)	2.66* (1.26-5.63)
Structural Factors								
No or small problem	reference	reference	reference	reference	reference	reference	reference	reference
Moderate or big problem	3.24* (1.78-5.92)	2.01* (1.23-3.28)	1.63* (1.03-2.57)	1.64* (1.06-2.53)	2.14* (1.14-4.01)	1.56 (0.94-2.60)	1.88* (1.10-3.20)	1.63 (0.83-3.20)

Note: *statistically significant association at level $p < .05$

Table 3.

ASSOCIATION OF PROVIDERS' PERCEPTIONS OF ORGANIZATIONAL PROBLEMS WITH THEIR SELF-RATED INFREQUENT SOCIAL AND CULTURAL BEHAVIORS: ADJUSTED ODDS RATIOS (95% CI) FROM MULTIVARIABLE LOGISTIC REGRESSION MODELS^a

	Asking patients and families to explain health and illness aOR (95% CI)	Asking patients and families about their care expectations aOR (95% CI)	Recognizing potential barriers encountered by different people aOR (95% CI)	Acting to remove obstacles when I identify them aOR (95% CI)	Finding ways to adapt services to patient and family preferences aOR (95% CI)
Human Factors					
No or small problem	reference	reference	reference	reference	reference
Moderate or big problem	0.78 (0.48–1.25)	0.63 (0.37–1.07)	0.96 (0.53–1.78)	0.68 (0.32–1.45)	0.81 (0.40–1.64)
Structural Factors					
No or small problem	reference	reference	reference	reference	reference
Moderate or big problem	1.39 (0.95–2.02)	0.99 (0.66–1.28)	1.20 (0.74–1.93)	1.75* (1.05–2.91)	2.00* (1.21–3.31)

Notes: ^astatistically significant association at level $p < .05$

inverse association between perceptions of moderate or major structural problems and providers' reported skills and behaviors when comparing providers who did (and those who did not) report that they had received prior cultural competency training.

Our findings build on what has been reported in previous studies of cultural competence among U.S. health care providers.^{19,21-23} In a prior study of cultural competence in primary care, physicians who reported that they were not well-prepared to deliver culturally competent care were more likely to work at clinics that were deficient in several structural tools, including culturally and linguistically appropriate educational materials and interpreters.²¹ Consistent with our findings, a national study of U.S. medical residents reported that a significant percentage of residents perceived lack of time, lack of good role models, and poor access to interpreters and appropriate educational materials as barriers to providing culturally competent care.¹⁹

Our study extends prior work by demonstrating that provider perceptions about structural barriers within the organizational climate are associated with their self-reported skills and behaviors related to the clinical care of patients from socially at-risk populations. While our study was not designed to assess causality, we did observe statistically significant associations suggesting that providers' perceptions of more favorable structural environments may positively associate with their reported behaviors and perceptions of preparedness to provide care to culturally and socially diverse patients. Therefore, organizational efforts to enhance structural aspects, such as cross-cultural training, access to written translations, and medical interpreter services, may be beneficial to providers' abilities to deliver care that effectively addresses the needs of socially at-risk and culturally diverse patient populations.

This study provides great insight into potential targets for organizational efforts to improve delivery of care to socially and culturally diverse populations. We shared our findings with the institutional leadership at the Johns Hopkins School of Medicine, including several department chairs. Through the Office of the Vice President for Health Care Equity and the Office of Diversity and Inclusion, our institution is working to support the equitable care of all patients through the development and support of high-quality reliable, data-informed clinical systems and processes that allow providers and staff to meet the needs of our socially and culturally diverse patient populations. Part of this support involves the design and implementation of cultural competence education modules that are available in person and online. We are also working to improve structural support for accessibility of care services and communication with patients and families with varying needs. Our study provides a replicable model of institutional needs assessment that could be employed at other institutions with similar missions, goals, and visions with respect to addressing the needs of socially and culturally diverse patient populations and communities.

Limitations. The study was conducted within a single health care system, which may limit the generalizability of our findings. However, our respondents included more than 1,200 providers from diverse backgrounds at varying levels of academic rank and across 10 major clinical departments. Notably, our survey respondents included a greater proportion of racial and ethnic minorities and women than their representation in the general Johns Hopkins School of Medicine faculty pool. It is possible that people who chose to participate in our questionnaire had stronger opinions about diversity

and about the importance of addressing cultural and social issues in clinical care than those who chose not to participate. Finally, our study was cross-sectional in design and relied on self-reported data from providers. Thus, reported skills and behaviors may not perfectly correlate with actual provider behaviors in clinical practice.²⁴

Conclusion. Our findings reinforce the urgent need to improve the capacity of health systems and providers' abilities to provide high-quality care to patients of all social and cultural backgrounds. Efforts to improve structural support for culturally and socially complex encounters are important strategies to enhance delivery of care for diverse patients.

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Supplementary Material

Appendix Table 1.

PROVIDER PERCEPTIONS OF ORGANIZATIONAL CULTURAL COMPETENCE CLIMATE MEASURE

How much of a problem is each of the following when you are delivering cross-cultural care?

1. Lack of practical experience in caring for diverse patient populations
2. Lack of time to adequately address cultural issues
3. Inadequate cross-cultural training during residency
4. Poor access to medical interpreters when they are needed
5. Poor access to written materials in other languages, including health education pamphlets, consent forms, etc.
6. Absence of good role models or mentors for cross-cultural care among the faculty
7. Dismissive attitudes about cross-cultural care among colleagues at your level
8. Dismissive attitudes about cross-cultural care among superiors
9. Dismissive attitudes about cross-cultural care among departmental leadership
10. Dismissive attitudes about cross-cultural care among hospital leadership
11. Dismissive attitudes about cross-cultural care among staff

Possible Responses: No problem, Small problem, Moderate problem, Big problem

Source: Weissman J et al, JAMA, 2005¹⁹

Appendix Table 2.

PROVIDER SELF-RATED CROSS-CULTURAL SKILL LEVELS MEASURE

Please rate how skillful you are at each of the following as you deliver cross-cultural care:

1. Identifying whether a patient is mistrustful of the health care system
2. Determining how a patient wants to be addressed and interacted with
3. Taking a social history
4. Assessing the patient's understanding of the cause of his or her illness
5. Negotiating with the patient about key aspects of the treatment plan
6. Identifying how well a patient can read or write English
7. Identifying religious beliefs that might affect clinical care
8. Identifying cultural (non-religious) customs that might affect clinical care
9. Identifying how a patient makes decisions with other family members
10. Working effectively through a medical interpreter

Possible Responses: Not skillful at all, Slightly skillful, Somewhat skillful, Fairly skillful, Very skillful
Source: Weissman J et al, JAMA, 2005¹⁹

Appendix Table 3.

PROVIDER SELF-RATED CROSS-CULTURAL BEHAVIORS MEASURE

How often do you do the following things when seeing your patients?

1. I ask patients and families to tell me about their own explanations of health and illness.
2. I ask patients and families to tell me about their expectations for care.
3. I recognize potential barriers to service that might be encountered by different people.
4. I act to remove obstacles (e.g., lack of insurance, need for interpreter) for patients of different cultures when I identify obstacles.
5. I find ways to adapt my services to patients and family cultural practices.

Possible Responses: 0–25%, 26–50%, 51–75%, 76–100%
Source: Paez K et al, Soc Sci Med, 2008²¹

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