Physician Language Ability and Cultural Competence

An Exploratory Study of Communication with Spanish-speaking Patients

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OBJECTIVE: **We studied physician–patient dyads to determine how physician self-rated Spanish-language ability and cultural competence affect Spanish-speaking patients' reports of interpersonal processes of care.**

SETTING/PARTICIPANTS: **Questionnaire study of 116 Spanish-speaking patients with diabetes and 48 primary care physicians (PCPs) at a public hospital with interpreter services.**

MEASURES: **Primary care physicians rated their Spanish ability on a 5-point scale and cultural competence by rating: 1) their understanding of the health-related cultural beliefs of their Spanish-speaking patients; and 2) their effectiveness with Latino patients, each on a 4-point scale. We assessed patients' experiences using the interpersonal processes of care (IPC) in diverse populations instrument. Primary care physician responses were dichotomized, as were IPC scale scores (optimal vs nonoptimal). We analyzed the relationship between language and two cultural competence items and IPC, and a summary scale and IPC, using multivariate models to adjust for known confounders of communication.**

RESULTS: **Greater language fluency was strongly associated with optimal IPC scores in the domain of elicitation of and responsiveness to patients, problems and concerns [Adjusted Odds Ratio [AOR], 5.25; 95% confidence interval [CI], 1.59 to 17.27]. Higher score on a language-culture summary scale was associated with three IPC domains – elicitation/responsiveness (AOR, 6.34; 95% CI, 2.1 to 19.3), explanation of condition (AOR, 2.7; 95% CI, 1.0 to 7.34), and patient empowerment (AOR, 3.13; 95% CI, 1.2 to 8.19)—and not associated with two more-technical communication domains.**

CONCLUSION: **Physician self-rated language ability and cultural competence are independently associated with patients' reports of interpersonal process of care in patient-centered domains. Our study provides empiric support for the importance of language and cultural competence in the primary care of Spanish-speaking patients.**

KEY WORDS: **cultural competence; Latino; health disparities; language barriers; communication; Hispanic; interpretation.**
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Language and cultural barriers to health communication among non–English-speaking patients may partly explain racial and ethnic disparities in processes and outcomes of health care.[1–3] However, surprisingly little is known about how language and cultural barriers affect communication.

Latinos are the largest ethnic minority in the US, but even for Latinos there are few data on health communication. Latinos with limited English proficiency have been shown to be less satisfied with their care compared with English-speaking Latinos or whites in primary care settings,[4] and are less willing to return for a subsequent medical problem in emergency department settings.[5] Studies that have examined the use and effect of interpreters reveal that patients with limited English proficiency often believe that interpreters should be used more than they are currently.[6] However, even when interpreters are used, Spanish-speaking Latinos are less satisfied with their care than their English-speaking counterparts and are less likely to rate their provider as respectful and concerned about them.[7]

These studies and others[8,9] suggest that language barriers have a negative impact on Spanish-speaking patients' experiences of care. Yet, to date, studies have focused primarily on patients' global ratings of satisfaction, either with clinical encounters or with interpreters. While satisfaction ratings are useful as a crude indicator of patient experience, what is lost in the communication process across a language barrier remains unclear. In addition, most of the empiric literature on communication with non–English-speaking patients has focused only on language barriers, and has not included considerations of cultural barriers.

Cultural assumptions and expectations shape the doctor–patient relationship and may present a formidable barrier to effective care.[10] Cultural competence has been defined as "the ability of health care providers and institutions to deliver effective services to racially, ethnically, and culturally diverse patient populations."[11] While much has been written about the need for culturally competent care, empiric evidence that cultural competence affects communication and the physician–patient relationship is lacking.[2,12] Nor is it clear if cultural competence adds additional value to the clinical encounter for a language-proficient clinician.

We investigated the association between primary care physicians' self-rated language ability and self-rated cultural competence with reports of communication-related aspects of interpersonal processes of care of their

Spanish-speaking patients with diabetes. The purpose of our study was twofold: 1) to explore the specific ways in which language ability affects health communication for Spanish speakers; and 2) to determine whether aspects of physicians' self-rated cultural competence—other than Spanish language skill—affect health communication.

METHODS

Setting

The study took place in two primary care clinics (a family practice and a general medical clinic) at San Francisco General Hospital, the public hospital of the city and county of San Francisco, as part of a larger study of physician–patient communication in diabetes care. Patients in these clinics receive care from the University of California, San Francisco, attending faculty and residents. Professional interpreter services are available on site from the hospital's interpreter service department.

Participants

Physician–patient dyads were selected for the study by querying the hospital systems' computerized clinical and administrative database for eligible patients and then recruiting their physicians. Patients were eligible for the larger study if they were over age 30 years, had type 2 diabetes (ICD-9 codes of 250), and spoke English or Spanish fluently, though our study includes only those patients who answered the study questionnaire in Spanish. Participants had to have a primary care physician in one of the clinics for at least 12 months and to have made at least one visit to this physician within the prior 6 months. We excluded patients with any diagnosis in the database of end-stage renal disease, psychotic disorder, dementia, or blindness. To ensure that our list of patients met eligibility criteria, we also provided primary care physicians with a list of eligible patients generated from the database and asked them to indicate patients meeting criteria for exclusion. Once patient eligiblity was established, we recruited physicians if they had at least one patient in the Spanish-speaking patient study sample. All eligible physicians agreed to participate.

Between June 2000 and December 2000, bilingual research assistants attempted to enroll all eligible patients who attended a clinic appointment. Patients were offered $5.00 for their participation; physicians were offered no inducement. The protocol was approved by the UCSF institutional review board.

Physician Questionnaire

We measured physician language ability and cultural competence through a self-administered, written questionnaire. Language ability was assessed with a single question: How would you rate your level of fluency in Spanish? (5-point Likert response scale ranging from excellent to none.)

There is no one accepted definition of cultural competence, and the concept has not previously been empirically tested. By one definition, "cultural competence includes several key components: personal self-awareness, cultural knowledge, ability to perform a cultural assessment, understanding and recognition of the dynamics of difference, effective communication, and cultural desire (internal motivation)."[11] Most definitions of cultural competence for clinicians include an enhanced professional awareness of patients' cultural background and health beliefs, as well as a set of skills and attitudes that promote effective patient care.[2,12,13] Thus, we asked physicians to assess their cultural competence with two questions: 1) How well do you understand the health-related cultural beliefs of your Spanish-speaking patients? (4-point Likert scale; very well to not at all); and 2) How effective are you in caring for Latino/Hispanic patients? (4-point Likert scale; extremely effective to not effective). Respondents also rated their effectiveness in the care of white patients, Asian-American patients, and African-American patients using the same question. We used each of these two items as a separate measure and also created a 3-item summary scale.

The physician questionnaire also included items on their use of interpreter services, and their perceptions of the availability and quality of interpreter services as well as physician demographic information.

Patient Measures

Bilingual research assistants administered all patient questionnaires in face-to-face interviews. We assessed patients' experiences using scales from the interpersonal processes of care (IPC) in diverse populations instrument.[14] Interpersonal processes, in contrast to technical processes, encompass the social-psychological aspects of the physician–patient interaction, including communication and being caring and sensitive to patients' needs. The IPC was developed with ethnically diverse patients of low socioeconomic status in mind, in an attempt to capture elements of provider–patient interactions that have been hypothesized to have particular relevance in facilitating successful health outcomes in these populations.[14] The IPC, in its entirety, is a 40-item questionnaire that asks patients to report their experience with interactions with their provider in the prior 6 months across three major areas: communication, decision-making, and interpersonal style. Its assessment of patients' reports, i.e., how often something occurred, distinguishes it from patient ratings of satisfaction with these aspects of care.

For the purposes of our study, we included the 22 communication items, which are grouped into the following 6 scales of: 1) general clarity; 2) elicitation of and responsiveness to patient problems and concerns; 3) explanations of condition, progress, and prognosis; 4) explanations of processes of care; 5) explanations of self-care; and 6) patient empowerment. Patients responded to IPC items by reporting the frequency of specific behaviors using a 5-point Likert

scale ranging from always to never. For example, in the domain of elicitation of and responsiveness to patient problems and concerns, patients were asked, Over the last 6 months, how often did your doctor give you enough time to say what you thought was important?, and How often did your doctor listen carefully to what you had to say? In the domain of explanations of condition and prognosis, patients were asked how often their doctor gave them enough information about their health problems and how often their doctor made sure they understood their health problems. The domain of explanations of processes of care focused on physician explanation of tests, while in the domain of self-care, patients were asked how often the physician explained to them when and why to return for care, and how to take medication. The domain of empowerment included two questions asking how often the physician made the patient feel that following the treatment plan would make a difference in her/his health and that everyday activities such as diet and lifestyle make a difference in her/his health.

The IPC was developed in English and Spanish simultaneously to assure comparability of all items, and the Spanish version was used in this study.[14] The IPC items used in the study are included in Appendix A. The questionnaire also included items regarding demographic information, current diabetes treatment strategy (use of diet, oral hypoglycemic agents, insulin), and length of time in the care of the primary care physician.

STATISTICAL ANALYSIS

As IPC scale scores were skewed, with 60% to 70% of patients (depending on the specific IPC scale: See Table 3) consistently reporting the best possible rating for their interactions with physicians (i.e., my doctor always checks to see if I understand my medications; "I never have trouble understanding my doctor because he/she speaks too fast") we dichotomized IPC responses into optimal (a score of 5) and nonoptimal (a score less than 5) categories. Language ability was dichotomized as "excellent/good ability" versus "fair/poor/no ability;" understanding of health related cultural beliefs was dichotomized as "very/somewhat well," versus "not very/not at all well." Self-rated efficacy in caring for Latino/Hispanic patients was dichotomized as "extremely/very effective" versus "somewhat/not effective."

Because our measures of physician-rated language ability and cultural competence have not been used previously and are likely to be overlapping constructs, we examined Spearman correlation coefficients to determine the level of independence of the three items, and used Cronbach's α to examine their internal reliability when combined into a 3-item summary scale of language-cultural competence. In order to differentiate population-specific competence from communication or interpersonal competence in general, we examined correlations between physicians' rating of their efficacy with Latino patients and their rating of efficacy with white, Chinese, and African-American patients. We analyzed the relationship between the language fluency and cultural competence items and the IPC scale scores using generalized estimating equations that adjust for clustering by physician.[15] We then created multivariate models for each of the three language and cultural competence items, adjusting for variables hypothesized to influence communication, such as physician gender,[16] and all covariates that had at least borderline statistically significant ($P < .15$) associations in bivariate analyses in at least two of the six IPC domains. Specifically, we controlled for patients' age, sex, education, length of time in the physician's care, and years with diabetes, and physician ethnicity, gender, and level of training. We also assessed interactions between significant variables, although none was significant at $P < .05$. We then repeated these analyses using the 3 items combined in a single language–cultural competence summary score that was transformed to a 0 to 100 scale. Because the summary scale had a threshold effect in its association with IPC domains, in that the very top of the scale had similar association with IPC domains as the near top, we dichotomized the scale: ≤ 50 points versus > 50 points.

RESULTS

We identified 858 patients as potentially eligible for the larger study. Of this number, 142 were ineligible because their primary care physicians informed us that the patients were not in their panel ($n = 10$), did not have type 2 diabetes ($n = 25$), did not speak English or Spanish fluently ($n = 28$), had moved out of the area ($n = 35$), had a psychiatric condition, e.g., dementia, psychosis, or mental retardation ($n = 23$), or had died ($n = 1$). An additional 20 patients were identified as ineligible by physicians with no stated reason. Of the 716 remaining eligible patients, 261 did not make a primary care visit during the enrollment period and were excluded. We approached the remaining 455 patients at a clinic appointment to discuss enrollment in the study. Of these, 36 refused to participate. Seventeen patients were excluded because they were either too ill to participate ($n = 9$), were acutely intoxicated ($n = 2$), or had poor visual acuity ($\leq 20/50$; $n = 6$). The questionnaire was completed by 413 patients, for a participation rate of 94% (413/438 eligible patients). One hundred and sixteen patients completed the questionnaire in Spanish and these patients composed our study sample. Patients who refused to participate and patients who were not interviewed by virtue of not attending a clinic appointment during the enrollment period were more likely than study participants to be younger and male, but did not differ in other characteristics.

Patients had a mean age of 59 years (SD = 12), little formal education, low incomes, and were predominantly uninsured or publicly insured (Table 1). The majority (70%) were women. Most were treated with oral hypoglycemic agents, either alone or in combination with insulin, and most were in well-established physician–patient relationships: 55 (47%) were between 1 and 3 years in duration and 37 (32%) had relationships of greater than 3 years.

Table 1. Characteristics of Patients in the Study

	N = 116
Mean age, y (SD)	59 (12.1)
Women, *n* (%)	81 (70)
Men, *n* (%)	35 (30)
Education, *n* (%)	
> 8th grade	49 (42)
= 8th grade	67 (58)
Income, *n* (%)	
= 20K/year	113 (97)
> 20K/year	3 (3)
Insurance status, *n* (%)	
Uninsured	42 (36)
Medicare	38 (33)
Medi-Cal	24 (21)
Manage care/commercial	12 (10)
Using insulin, *n* (%)	
No	70 (62)
Yes	43 (38)
Years with diabetes, mean (SD)	10 (8.8)
Physician speaks Spanish in visit, *n* (%)	
Yes	87 (75)
No	29 (25)
Years with this physician, *n* (%)	
< 1 y	24 (21)
1–3 y	55 (47)
> 3 y	37 (32)

Study physicians (*N* = 48) were family physicians or internal medicine residents and faculty. Most study physicians were women (60%), and nine self-identified as Hispanic/Latino. (Table 2) Of physicians, 26 (54%) reported excellent or good Spanish fluency. These "fluent" physicians cared for 66% of the study patients. Most physicians (83%) rated themselves as understanding their patients health related cultural beliefs well or very well; 8 physicians rated their understanding as not very or not at all well. Of the 48 physicians, 39 (82%) rated themselves as extremely or very effective at caring for Latino patients while 9 (18%) reported they were somewhat or not effective at this care. Latino physicians were much more likely than non-Latino physicians to rate their language fluency as excellent or good (odds ratio [OR], 9.33; confidence interval [CI], 1.04 to 43.4). They were also much more likely to rate themselves as understanding their Spanish-speaking patients' health-related cultural beliefs very or somewhat well (OR, 15; 95% CI, 1.89 to 126) and as being extremely or very effective with their Latino patients (OR, 6.67; 95% CI, 1.10 to 47.4).

Of the 26 physicians who reported excellent or good Spanish fluency, 21 reported that they never or rarely used the interpreter service (81%), while of the 22 physicians whose Spanish fluency was fair, poor, or none, 17 used interpreter services always or usually (77%), and 2 used them occasionally. Of the 32 physicians who ever used interpreter services, 25 (78%) rated them as always or usually available for Spanish language clinical encounters. All rated the quality of the interpreter services as excellent (16/32) or very good (16/32).

Spanish language fluency was moderately correlated with both cultural competence items: understanding of Spanish-speaking patients' health-related cultural beliefs (R = .55) and self-rated efficacy caring for Spanish-speaking patients (R = .56). The two cultural competence items were moderately associated with each other (R = .46). When ratings of efficacy with Latino patients was compared with ratings of efficacy with other populations of patients (white, Chinese, and African-American), the correlations ranged from 0.02 to 0.46. These low to moderate correlations suggest that respondents were rating population-specific skills. The Cronbach's α for the 3-item language-cultural competence summary score, combining physician self-rating of Spanish fluency, understanding of health-related cultural beliefs, and efficacy of caring for Latino patients, was 0.75, indicating good internal consistency. This summary scale was transformed so that the lowest possible score was 0 and the highest possible score was 100. Of the 48 physicians, 17 (35%) had scores of 50 or less for the language-cultural competence scale, and 31 (65%) had scores of greater than 50.

The number of patients reporting optimal IPC scores on each domain is shown in Table 3, stratified by physicians' self-rated Spanish language ability, the two cultural competence items, and the 3-item summary scale. In

Table 2. Physician Demographic Characteristics and Self-Rated Spanish Fluency and Cultural Competence

	N = 48
Mean age, y (SD)	36 (7.9)
Gender, *n* (%)	
Women	29 (60)
Men	19 (40)
Profession, *n* (%)	
Resident	30 (63)
Attending	18 (37)
Specialty, *n* (%)	
Internal medicine	29 (60)
Family medicine	19 (40)
Ethnicity, *n* (%)	
Asian	4 (8)
African-American	2 (4)
Hispanic	9 (19)
White	33 (69)
Fluency in Spanish, *n* (%)	
Excellent	12 (25)
Good	14 (29)
Fair	8 (17)
Poor	6 (13)
None	8 (17)
Understand health related cultural beliefs, *n* (%)	
Very well	8 (17)
Somewhat well	32 (67)
Not very well	6 (13)
Not at all well	2 (4)
Effective caring for Latino patients, *n* (%)	
Extremely effective	15 (31)
Very effective	24 (50)
Somewhat effective	8 (17)
Not effective	1 (2)

Table 3. Relationship between Physician Self-Report of Language Ability and Cultural Competence and Patient Interpersonal Processes of Care Subscale Optimal Report

	General Clarity		Elicitation Problems and Concerns		Explanation of Condition & Prognosis		Explanation of Process of Care		Explanation Self-Care		Patient Empowerment	
	Optimal	Not Optimal	Optimal	Not Optimal	Optimal	Not Optimal	Optimal	Not Optimal	Optimal	Not Optimal	Optimal	Not Optimal
Language Ability item												
Patients reporting optimal IPC scores when physician answers Excellent/Good	54	27	65	16	61	20	42	38	51	30	18	63
Fair/Poor/None	17	18	17	18	21	14	17	18	16	19	9	26
Odds ratio (95% CI)	1.87 (0.86 to 4.07)		4.3 (1.75 to 10.56)		1.96 (0.9 to 4.26)		1.23 (0.73 to 2.05)		0.83 (0.34 to 2.03)		2.02 (0.9 to 4.53)	
Adjusted odds ratio* (95% CI)	1.42 (0.57 to 3.55)		5.25 (1.59 to 17.27)		1.76 (0.65 to 4.81)		1.23 (0.63 to 2.4)		0.89 (0.35 to 2.26)		2.31 (0.88 to 6.06)	
Understand health-related cultural beliefs (cultural competence item)												
Patients reporting optimal	66	33	76	25	76	25	52	48	61	40	23	78
IPC scores when physician answers very well/somewhat well/ not very well/not at all	5	10	6	9	6	9	7	8	6	9	4	11
Odds ratio (95% CI)	3.98 (1.43 to 11.05)		4.56 (1.67 to 12.46)		4.52 (1.73 to 11.79)		1.31 (0.63 to 2.71)		0.82 (0.27 to 2.51)		2.32 (0.77 to 6.97)	
Adjusted odds ratio (95% CI)*	3.06 (0.96 to 10.96)		10.57 (3.24 to 34.24)		12.53 (3.76 to 41.71)		1.24 (0.48 to 3.21)		0.69 (0.21 to 2.23)		3.81 (0.98 to 14.75)	
Effectiveness with Latino patients (cultural competence item)												
Patients reporting optimal	65	35	78	23	74	27	55	45	62	39	23	78
IPC scores when physician answers: extremely/very effective somewhat/not effective	6	8	4	11	8	6	4	11	5	10	4	11
Odds ratio (95% CI)	2.59 (0.75 to 8.98)		9.44 (2.42 to 36.9)		2.28 (0.85 to 6.13)		3.14 (1.34 to 7.36)		0.81 (0.27 to 2.46)		3.18 (1.13 to 8.99)	
Adjusted odds ratio (95% CI)*	2.21 (0.6 to 8.14)		13.69 (3.35 to 65.62)		2.32 (0.69 to 7.78)		3.98 (1.48 to 10.66)		0.83 (0.22 to 3.19)		2.51 (0.57 to 11.01)	
Language-cultural competence summary score (3-item scale)												
Score > 50	51	25	62	14	59	17	39	36	16	60	50	26
Score = 50 (100 scale)	20	18	20	20	23	17	20	20	11	29	17	23
Odds ratio (95% CI)	1.84 (0.87 to 3.87)		4.37 (1.82 to 10.5)		2.22 (1.15 to 5.64)		1.16 (0.74 to 1.84)		0.71 (0.3 to 1.67)		2.62 (1.19 to 5.78)	
Adjusted odds ratio* (95% CI)	1.41 (0.57 to 3.39)		6.34 (2.1 to 19.3)		2.7 (1.0 to 7.34)		1.16 (0.59 to 2.28)		0.67 (0.27 to 1.65)		3.13 (1.2 to 8.19)	

** Generalized estimating equations adjusting for physician ethnicity, gender, and level of training and patient age, gender, years with diabetes, and years with that physician.*
CI, confidence interval; IPC, interpersonal processes of care.

bivariate analyses, physician self-rated Spanish language fluency was significantly associated with elicitation of and responsiveness to patient problems and concerns (OR, 4.3; 95% CI, 1.75 to 10.56), and approached statistically significant associations with two of the other IPC domains. Physician self-rated understanding of patients' health-related cultural beliefs (first cultural competency item) was associated with optimal IPC reports in the domains of general clarity (OR, 3.98; 95% CI, 1.43 to 11.05), elicitation/responsiveness (OR, 4.56; 95% CI, 1.67 to 12.46), and explanation of condition and prognosis (OR, 4.52; 95% CI, 1.73 to 11.79). Self-rated effectiveness caring for Latino patients (second cultural competence item) was associated with optimal reports in the domains of elicitation/responsiveness (OR, 9.44; 95% CI, 2.42 to 36.9), explanation of process of care (OR, 3.14; 95% CI, 1.34 to 7.36), and empowerment (OR, 3.18; 95% CI, 1.13 to 8.99).

In multivariate analyses separately examining each of the three language and cultural competence items, the association between language and the domain of elicitation of and responsiveness to problems and concerns persisted (adjusted odds ratio [AOR], 5.25; 95% CI, 1.59 to 17.27). Understanding patients' health-related cultural beliefs remained associated with elicitation/responsiveness (AOR, 10.57; 95% CI, 3.24, 34.24) and an explanation of the condition (AOR, 12.53; 95% CI, 3.76 to 41.71). The association with general clarity and empowerment was of borderline statistical significance. Higher self-rated effectiveness remained associated with elicitation/responsiveness (AOR, 13.69; 95% CI, 3.35 to 65.62) and an explanation of the process of care (AOR, 3.98; 95% CI, 1.48 to 10.66).

When the three language and cultural competence items were combined into a single language and cultural competence score, physicians with scores at the higher end of the scale (above 50) were much more likely to have patients report optimal IPC ratings in the following domains: elicitation of and responsiveness to patients' problem and concerns (AOR, 6.34; 95% CI, 2.1 to 19.3), explanation of condition and prognosis (AOR, 2.7; 95% CI, 1.0 to 7.34), and patient empowerment (AOR, 3.13; 95% CI, 1.2 to 8.19).

DISCUSSION

Our study shows that Spanish-speaking diabetic patients at a public hospital outpatient department are more likely to report better interpersonal processes of care when their primary care physician has a higher self-rated language ability and cultural competence. This finding provides a window into previous reports that Spanish-speaking patients are less satisfied with their care when cared for by non–Spanish-speaking physicians. We found that physicians who are fluent in Spanish are more likely than their less fluent colleagues to elicit their patients' problems and concerns. In the study setting, language discordant encounters were largely mediated through the help of readily available, high-quality professional interpreters. Nevertheless, even use of professional interpreters did not enable physicians with limited or no Spanish ability to elicit patients' problems and concerns as well as their Spanish-speaking colleagues. This finding is consistent with a previous study that demonstrated that in interpreter-mediated encounters, physicians made fewer facilitative remarks and were more likely to ignore patients' questions, and patients were less likely to ask questions or to express their concerns compared with patients speaking directly to their physician.[17]

In our study, the two domains that might reasonably be considered more technical and less patient-centered—the domain of explanation of process of care, that focuses on how and why a test is done, and the domain of self-care that focuses on when to return for care—were not associated with clinicians' language ability. These technical domains may be an area of communication particularly amenable to professional interpreters. A recent study lends support to the idea that when discrete, problem-focused and technical information is exchanged, use of professional interpreters results in high-quality communication. Lee et al. found no difference in patient satisfaction between Spanish-speaking patients cared for by Spanish-speaking providers and those patients who used professional interpreters provided by telephone at an urgent care site, where technical exchanges of information may be the predominant form of communication.[18]

We found that cultural competence, as measured by physicians' self-rated understanding of patients' health-related cultural beliefs and by self-rated effectiveness in caring for Latino patients, was also associated with elicitation of and responsiveness to patients concerns. However, each of these items was associated with different aspects of IPC and was not associated with the more-technical domains of explanation of process of care or self-care. When exploring the associations with the 3-item language and cultural competence scale, clear associations were found with three IPC subscales (elicitation of and responsiveness to patient's problems and concerns, explanation of condition and prognosis, and patient empowerment), suggesting that these patient-centered domains are particularly sensitive to language and cultural barriers.

To our knowledge, this is the first published study that operationalizes the concept of cultural competence, tests its association with reports of patients' experiences, and incorporates these measures into a summary score. Consequently, this study has several implications. First, it provides empiric support to theories and models that posit the importance of cultural competence, in addition to language skills, in the care of non–English-speaking patients.[11,19] Second, it provides insight into which aspects of communication are most affected by language and cultural barriers. Recognizing the communication domains that are affected by language and cultural barriers may enable clinicians to pay particular attention to these areas when working across these barriers. Finally, physicians appear to be able to accurately rate their own effectiveness in the care of

diverse populations, at least as experienced by the patients. This finding should be replicated in other clinical settings, as it could become an effective way to target interventions aimed at improving the care of diverse populations.

Our study has several limitations. First, the size of our sample did not provide adequate power to determine with confidence small associations between physician language ability, cultural competence, and several of the IPC domains. As such, our study may best be regarded as exploratory. Second, the study was conducted at two sites in one public hospital, albeit one representative of the health care experience of many low-income Latino immigrants. Results may not generalize to a more affluent and more educated Spanish-speaking population, to other non–English-speaking patients, to nonacademic physicians, or to sites without access to professional interpretation. Third, in a cross-sectional study, causality cannot be determined and unmeasured confounders are always possible. While we attempted to control for variables known to affect health communication, it is still possible that second-language acquisition or better self-rated understanding of patients' health-related beliefs are markers for some other characteristic of a physician that engenders better health communication. Even though physician respondents did appear to rate their efficacy with specific populations differently, suggesting a population-specific competence, this competence could still be a marker of better general communication skills. Fourth, our selection criteria biased the sample toward longer-term physician–patient relationships. As patients who rate the interpersonal process poorly would be more likely to switch physicians, leading to small degrees of variations in the outcome measure and making it harder to detect differences associated with language and cultural competence, this likely strengthens the main finding that greater self-rated language and cultural competence is associated with better interpersonal processes of care. Fifth, our two questions may not be ideal measures of cultural competence. They were chosen because they focus on key elements found in most definitions of cultural competence. How well the items capture cultural competence, and how this concept should best be operationalized, remains an important research question. Finally, it is important to note that this is a study of patients' experience of care. While an important outcome in itself, the extent of the relationship between physician language ability or cultural competence and clinical outcomes is yet to be elucidated.

Despite its limitations, our study has several policy implications. Patient centeredness in the clinical encounter has been recommended by the Institute of Medicine as one of six key methods to improve the quality of care,[20] and patient-centered communication style in the clinical encounter has been associated with improved outcomes in chronic disease.[21] The association between language, cultural competence, patient-centered communication, and disease outcomes warrants further investigation. Second, Latino physician ethnicity was strongly correlated with both language and cultural competence. Increasing the number of Latino physicians would increase the pool of linguistically and culturally competent clinicians available to care for Spanish-speaking patients. It also appears that non-Latino physicians can achieve sufficiently high levels of language and cultural competence to achieve optimal reports in communication from their Spanish-speaking patients. Medical education should emphasize the development of language skills in Spanish or another major US language in applicants, and skills in cross-cultural communication for all students and residents. Research is needed to identify whether curricula can effectively enhance the types of skills measured in our cultural competence items that are associated with better interpersonal processes of care.

In conclusion, our study demonstrates that language—and cultural competence skills distinct from language—matter in health communication. As the third great wave of U.S. immigration continues, the U.S. health system will need to ensure that physicians have the appropriate skills for effective communication and patient-physician relationships with the nation's diverse population of patients.

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APPENDIX A

Selected Interpersonal Processes of Care Scales and Associated Items[4]

Scale: Item*: Over the Past 6 Months		
I.	General clarity	How often did your regular doctor use medical words that you did not understand? How often did you have trouble understanding your doctor because he/she spoke too fast?
II.	Elicitation of and responsiveness to patient problems, concerns, and expectations	How often did your doctor give you enough time to say what you thought was important? How often did your doctor listen carefully to what you had to say?
III.	Explanations of condition	How often did your doctor give you enough information about your health problems? How often did your doctor make sure you understood your health problems?
IV.	Explanations of processes of care	How often did your doctor explain why a test was being done? How often did your doctor explain how the test is done? How often did you feel confused about what was going on with your medical care because your doctor did not explain things well?
V.	Explanations of self-care	How often did your doctor tell you what you could do to take care of yourself at home? How often did your doctor tell you how to pay attention to your symptoms and when to call him/her? How often did your doctor explain clearly to you how to take the medicine (i.e., when, how much, and for how long)? How often did your doctor go over all of the medicines you were taking?
VI.	Empowerment	How often did your doctor make you feel that following your treatment (care) plan would make a difference in your health? How often did your doctor make you feel that your everyday activities such as your diet and lifestyle would make a difference in your health?

* *Response categories (1–5 Likert scale): Always, often, sometimes, rarely, never.*