Medical Student and Faculty Attitudes Toward Translanguaging with Spanish-Speaking Patients

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ABSTRACT

Background: Spanish is the second most common US language, and Spanish speakers commonly *translanguage*—spontaneously integrate multiple languages. Medical language courses have proliferated, yet learner and faculty attitudes about translanguaging with patients remain unexplored. Also, it is unclear whether medical Spanish courses address real-world patient linguistic practices, such as translanguaging.

Methods: We applied a community cultural wealth framework to identify translanguaging practices relevant to patient-physician communication: regionalisms, Spanglish, and non-standard language usage. From January 2020 to May 2021, we surveyed students (n=355) and faculty (n=14) in a standardized medical Spanish course at 14 sites on their attitudes toward translanguaging practices.

Results: Regionalisms were the most widely accepted translanguaging practice by both students and faculty, and this opinion was reinforced by the course (94% pre vs. 95% post-course agreement; p=0.045). Student agreement with Spanglish was moderate and declined post-course (58% vs. 55%; p<0.001). Faculty were likelier than students to be accepting of non-standard language usage (57% faculty vs. 5% students; p<0.001).

Conclusion: Medical students and faculty reported mixed attitudes about translanguaging practices in healthcare, and taking a medical Spanish course had variable effects on student responses. Future work should focus on developing and evaluating medical Spanish educational pedagogies that explicitly incorporate real-world patient perspectives and promote flexible language use that prioritizes mutual respect and understanding.

Keywords: translanguaging, non-English language preference, patient-centered communication, language concordance, medical Spanish, heritage Spanish

1. Introduction

Courses that teach language skills for clinicians with the goal of enhancing language-concordant communication with minoritized linguistic groups are termed medical language courses. According to the most recent national survey published in 2021, 78% of US allopathic medical schools offer medical Spanish courses in response to population need.[1] The 2020 US Census estimated that 40.5 million people spoke Spanish at home. Of that group, 15.9 million reported speaking English "less than very well."[2] Given that medical Spanish courses aim to teach practical skills that enhance clinicians' patient-centered communication through language-concordant care,[1,3] it is essential that they incorporate Spanish speakers' real-world linguistic practices. Language-concordant care results in improved outcomes, patient satisfaction, and health care utilization for populations that are linguistically marginalized[4] How patients, families, and communities from linguistic minority groups best understand and actualize their health may not be within the traditional bounds of a named language (e.g., English, Spanish, Russian) and may instead fluidly integrate influences from multiple languages and cultures. In particular, the immigrant experience commonly involves varied linguistic exposures that can, over time, shape the dynamic and often hybrid linguistic practices that a person, family, and community may use for different aspects of their lives, such as home, school, work, and health care.[5]

Translanguaging offers a way to understand real-world linguistic practices by focusing on how multilingual individuals use language to create meaning by re-combining, arranging, and deploying features from multiple languages, depending on audience, context, and ability.[6-7] By contrast, language courses may reinforce static monolingual models that may not accurately reflect the real, every day, spontaneous, and hybrid linguistic practices of multilingual populations.[7-8] Furthermore, much of the existing literature about translanguaging in education is from the K-12 stage, with a dearth in

tertiary education and professional education. [9]Research evaluating medical Spanish teaching practices has found a greater emphasis on terminology memorization and knowledge-related competencies and a gap in teaching patient-centered and culturally informed communication strategies.[10-11] Medical educational materials, such as medical Spanish textbooks[10] and online resources[11] often portray an *idealized* linguistic standard and lack representation of multiple varieties of Spanish.[12] To our knowledge, no studies to date have evaluated the attitudes of medical students toward translanguaging, nor the degree to which medical Spanish courses might influence student attitudes toward translanguaging. There are also no existing recommendations for whether or how translanguaging should be incorporated into medical language education.

Given the potentially competing forces driving the content and pedagogy of medical Spanish education, it is unclear whether students who complete medical Spanish courses leave the classroom with more or less flexible views about language than before they started. We sought to explore medical student and faculty attitudes toward translanguaging in the context of an existing medical Spanish course being implemented at multiple medical schools.

Figure 1. Flowchart demonstrating the use of the Community Cultural Wealth framework to identify categories of translanguaging practices relevant to patient-physician communication.
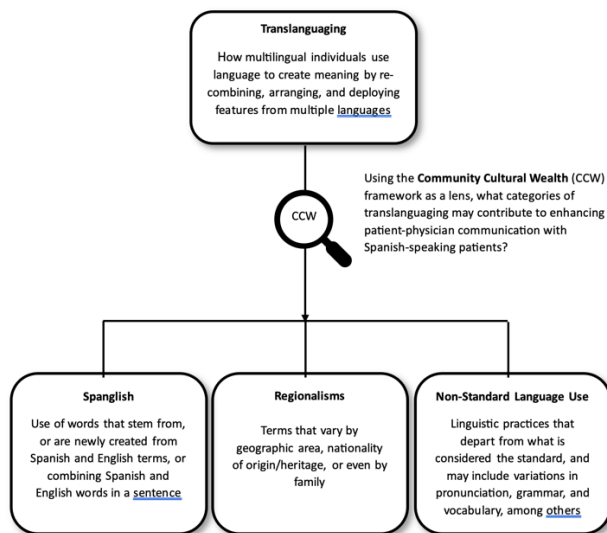
2. Methods

Theory

To center multilingual perspectives, we approached our study of translanguaging in a standardized medical Spanish curriculum through the lens of community cultural wealth.[13] Based on social capital theory, the conceptual framework of community cultural wealth posits that individuals' cultural—including linguistic—assets are potential sources of power and social mobility. The day-to-day use of language by patients, communities, students, and faculty not only enriches the classroom but also healthcare interactions. Using this framework, the research team identified three general categories of translanguaging practices relevant to patient-physician communication with Spanish-speaking patients (Figure 1): Spanglish, regionalisms, and non-standard language use, which were then used to develop the translanguaging questionnaire. The translanguaging category descriptions and questionnaire items are detailed in Table 1.

Study Context: A Multi-Site Medical Spanish Curriculum

In 2019, a multidisciplinary team of experts including linguists, educators, and physicians developed the curriculum as part of a national effort to create and evaluate a standardized approach to teaching medical Spanish in US medical schools.[14] Participating schools adhered to predefined requirements pertaining to time commitment, faculty supervision,

and learning objectives.[14] The course involved an 80-hour minimum learner time commitment, at least 25% of activities were faculty-supervised, and the learning objectives followed those detailed by Ortega et al.[14] In the context of this national curriculum, the research team was interested in exploring what role, if any, translanguaging played in the medical Spanish classroom. To begin this line of inquiry, the following research questions emerged: What attitudes about translanguaging do medical students who enroll in medical Spanish courses report before and after the course? What is the association, if any, between faculty attitudes about translanguaging and those of their students?

Table 1. Translanguaging attitudes questionnaire, rationale for each statement, and relevance to medical Spanish course learning objectives

Translanguaging topic	Statement from translanguaging questionnaire*	Description of relevance to medical Spanish	How the survey item maps to medical Spanish course learning objective/s from Ortega et al.[11]
Spanglish	Use of Spanglish and anglicisms (words borrowed from English) is appropriate when speaking with patients.	Using words that stem from, or are newly created as a hybrid term from, multiple languages, such as Spanish and English, is a common translanguaging practice. Another way to use Spanglish involves borrowing a word from English while speaking in Spanish, or vice versa, and is also a common translanguaging practice for US Spanish speakers. Examples relevant to healthcare include the following: - *Checar, chequear* (variants meaning "to check") - *Emarai* (verbal pronunciation of the English acronym MRI)	**Learning objective**: Upon completion of the course, the learner should be able to orally communicate the treatment plan to the patient, adjusted for cultural, emotional, and literacy needs. **Explanation of relevance**: When describing the treatment plan, such as medications or home care instructions, Clinicians should be mindful of using words that patients and their caregivers understand. (e.g. *chequear* is more commonly used in US Spanish than *revisar* or *monitorizar*)
Regionalisms	Medical Spanish should involve learning regional words or phrases.	Spanish terms that are used to describe symptoms, parts of the body, or other health-related concepts may vary by geographic area, nationality of origin/heritage, or even by family. Examples include the following: - The phrase "*Parece café*" would mean "It looks brown" for many Latin American persons but would mean "It looks like coffee" to those of Spanish origin. Medically, these have very different meanings and could lead to different diagnoses and plans of care (e.g., when evaluating a patient with possible hematemesis) - *Ictus, embolia, derrame* (words for stroke that vary geographically with the first two being more common in Spain and *derrame* being more common in US Spanish)	**Learning objective**: Upon completion of the course, the learner should be able to obtain an accurate, age-appropriate complete medical history and orally communicate findings of the medical evaluation to the patient, adjusted for cultural, emotional, and literacy needs. **Explanation of relevance**: Patient may use regional word to describe a symptom (e.g., *café*). Clinicians must use words that the patient understands in describing the diagnosis (e.g., words for stroke vary regionally).
Standard Spanish	Standard Spanish is needed to develop relationships with Spanish-speaking patients.	The term *standard Spanish* refers to the concept that there is a standard set of rules and lexicon that define the bounds of the Spanish language. Some forms of translanguaging are typically considered non-standard. Hence, the item is intended to present a less flexible perspective on language use with patients compared to the attitude reflected in the previous two statements. Specifically, the statement asks whether remaining within the bounds of *standard Spanish* is important for developing a relationship with Spanish-speaking patients. Examples of non-standard Spanish may include regionalisms and Spanglish but may also include the application of grammar rules from other languages that affect verb conjugation, syntax, and other components of speech; the incorporation of varied linguistic practices that depart from what is considered the standard pronunciation; among others.	**Learning objective**: Upon completion of the course, the learner should be able to assess patient comprehension of the information provided and address gaps in the patient's knowledge. They should also be able to recognize when their own language limitations are reached, and a medical interpreter is needed. **Explanation of relevance**: Establishing a relationship with the patient is important for accurately assessing the extent to which the patient has understood the healthcare visit and for establishing trust. To this end, the clinician must be able to adapt to the linguistic needs of the patient rather than rigidly adhere to an idealized linguistic standard.

* Respondents were asked to indicate the extent to which they agreed or disagreed with each statement on a 4-point Likert scale (Strongly Agree, Agree, Disagree, Strongly Disagree)

Note: For brevity, the three statements are abbreviated by topic as Spanglish, Regionalisms, and Standard Spanish, respectively, throughout the manuscript.

Translanguaging Questionnaire

To address the research questions, we designed a survey of medical student and faculty attitudes toward translanguaging practices prevalent among US Spanish speakers. PO, a medical Spanish educator, bilingual physician, and language concordance researcher, and JP, a bilingual applied linguist and Spanish language professor with expertise in translanguaging pedagogy, developed the survey. Since there were no published questionnaires that elicited student/clinician attitudes about translanguaging, survey development followed guidance from Artino and colleagues.[15] The items (Table 1) were developed to evaluate participant translanguaging attitudes in healthcare, reviewed by content experts, and piloted prior to administration. To facilitate readability and avoid biasing respondents, the statements were written in plain, neutral language.

Table 2. Student respondent characteristics that were evaluated as potential cofounding variables and their definitions.

Self-reported feature	*Definition*
Demographics	
Age	Age in years
Gender	Self-reported gender with answer choices including Female, Male, Non-binary
Hispanic ethnicity	Hispanic, Latino, Latina, Latinx, or of Spanish origin
Nationality of origin or heritage	Students had the option of indicating nationality of origin or heritage, which was a variable of interest since Spanish linguistic practices may differ by country, region, and community
Level of training	
Clinical	Third and fourth-year medical students
Pre-clinical	First and second-year medical students
Spanish clinical experiences	
Frequency of clinical Spanish use	We asked students how often they used Spanish in a clinical setting (directly communicating with patients or patients' caregivers in Spanish). Likert scale answer choices included Always, Frequently, Sometimes, Rarely, and Never. Those who reported Sometimes or more often were classified as "Clinical Spanish Use Sometimes+."
Frequency of ad hoc interpreter requests	We asked students how often they were asked to serve as an ad hoc, untrained medical interpreter. Likert scale answer choices included Always, Frequently, Sometimes, Rarely, and Never. Those who reported Sometimes or more often were classified as "Ad Hoc Interpreter Sometimes+."
Spanish learning opportunities	
Heritage Spanish speaker	Students who indicated that their informal childhood experiences included one or more parents or caregivers using Spanish regularly
Prior advanced Spanish education	Students who indicated completing advanced level Spanish classes at the college/university level or a Spanish major or minor
Prior study abroad	Students who had taken a Spanish course in a Spanish-speaking country during their higher education
Prior medical Spanish	Students who reported having completed a different medical Spanish course in addition to the one in which they were currently enrolled during the time of the study
Language skills	
Baseline proficiency in Spanish	Spanish proficiency was rated using the ILR-H, which uses a 5-point scale with level options of Excellent, Very Good, Good, Fair, and Poor. To dichotomize for analysis, we classified students as "Good+" if they indicated an ILR-H level of Good or greater, which corresponds with a mid-intermediate level and above.
Number of languages spoken	Students were asked to indicate any languages they spoke besides English or Spanish. For students who reported skills in languages besides English and Spanish, we classified them as "Trilingual+."

Note: ILR-H, Interagency Language Roundtable for healthcare

Population Studied

There were two populations of interest. One was students at any point in their medical school training who were enrolled in a medical Spanish course. The other was faculty members that taught these courses.

To be eligible for this study, students had to be enrolled in a medical Spanish course at any participating institution. All courses had a pre-requisite that students must self-report a Spanish proficiency level of "fair" or higher on the Interagency Language Roundtable for healthcare (ILR-H).[16] The ILR-H is a validated language self-assessment tool specific for healthcare contexts[17] that has been recommended as a screening tool for entry into medical language courses.[14] Faculty were also invited to complete the same translanguaging attitudes survey. Study participation by students and faculty was voluntary, and this study met exemption criteria by the University of Illinois Institutional Review Board as the lead study site and at 13 additional sites. Sites spanned all US regions (southern, northeastern, central, and western).

Study Design

In this prospective, observational cohort study, faculty from each site electronically received the student and faculty questionnaire links; each faculty member distributed the link to their students and followed their respective IRB policies to obtain informed consent from participants. Survey data were collected using Qualtrics. When completing the questionnaire, the first item instructed participants in generating a unique identification code, which would permit matching pre- and post-course survey responses while maintaining anonymity.

Statistical Analysis

Our analysis focused on whether students' translanguaging attitudes changed post-intervention. To prepare the data for analysis, we grouped the responses to each of the three translanguaging items into two discrete groups: agreement and disagreement. We used Chi-squared tests and logistic regression analyses to evaluate multivariate effects controlling for mediating demographic and experiential factors such as nation of origin, baseline Spanish ability, and ethnicity (further detailed in Table 2 and Results) and faculty translanguaging attitudes.

3. Results

Description of Students

Across 14 sites, all four US geographic regions of the Association of American Medical Colleges were represented, including 3 schools in the southern region, 4 in the northeast region, 3 in the central region, and 4 in the western region. Of these schools, 355 students participated in the course between January 2020 and May 2021; 307 and 165 completed the pre- and post-course surveys, respectively. Eighty-nine students (25%) identified as Hispanic, reporting 19 nationalities (Argentina, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, México, Nicaragua, Panamá, Paraguay, Perú, Puerto Rico, Spain, and Venezuela). Most were women (77%, 243/317), half were younger than 25 years (152/307), and 32% were in their clinical training years of medical school (100/316).

Description of Faculty

We received 14 faculty responses from 11 (79%) of the 14 sites. Some sites had more than one faculty response if the course was taught multiple times during the study period. Most faculty were Hispanic (12/14), women (10/14), and all were clinicians (13 physicians). Among faculty who identified as Hispanic, reported nationalities included Chile, Colombia, El Salvador, Nicaragua, and Spain. Physician specialties included Emergency Medicine, Family Medicine, and Internal Medicine. Most faculty self-rated as "excellent" on the ILR-H (12/14) and two as "very good." All had taught medical Spanish for at least four (mean of eight) years.

Student Translanguaging Attitudes

Most students agreed with all three translanguaging-related statements both before and after the course (Table 3). The Spanglish statement was more controversial, with approximately half indicating agreement vs. disagreement, whereas over 90% agreed with Regionalisms and Standard Spanish. These trends remained true across Hispanic ethnicity, gender, age, and training level subgroups. Following the course, there was a decrease in agreement with Spanglish (pre- 58% to post-course 55%; $p<0.001$), an increase in agreement with Regionalisms (pre- 94% to post-course 95%; $p=0.045$), and an increase in agreement with Standard Spanish (pre- 93% to post-course 95%; $p<0.001$). The results of confounding

factor analyses are shown in Table 4. Post-course, students who had taken a prior medical Spanish course were less likely to agree with Regionalisms (p=0.036). No other factors were significant.

Table 3. Changes in student attitudes toward translanguaging statements before and after completing a medical Spanish course: Descriptive Statistics and Tests of Proportions

Translanguaging Statement	Phase	Race/Ethnicity				Gender				Age				Training Level				Overall**		
		Non-Hispanic		Hispanic		Male		Female		Age < 25		Age 25+		Pre-Clinical		Clinical				
		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	p-value
1. Spanglish	Pre-Course	220	57%	87	60%	111	64%	196	54%	148	57%	150*	59%	210	58%	97*	58%	307	58%	< 0.001
	Post-Course	100	57%	30	53%	51	59%	79	54%	53	47%	73*	64%	55	45%	75*	64%	165	55%	
2. Regionalisms	Pre-Course	220	95%	87	94%	111	94%	196	95%	148	95%	150	95%	210	96%	97	92%	307	94%	0.045
	Post-Course	100	94%	30	100%	51	92%	79	97%	53	96%	73	95%	55	96%	75	95%	165	95%	
3. Standard Spanish	Pre-Course	220	95%	87	89%	111	96%	196	91%	148	93%	150	93%	210	94%	97	92%	307	93%	< 0.001
	Post-Course	100	97%	30	90%	51	96%	79	95%	53	92%	73	97%	55	96%	75	95%	165	95%	

Note: Number of students (n) and percentage (%) represent the respondents who indicated agreement (Agree/Strongly Agree) with each translanguaging statement. Statements 1 and 2 describe more flexible attitudes toward aspects of translanguaging, and statement 3 describes a less flexible attitude.

 *Pre vs. post-course change in attitude toward use of Spanglish/anglicisms was significant in sub analyses based on logistic regression for by Age, p = 0.033, and Training Level, p = 0.008

**P-value for "Overall" indicates significant pre-post differences in the translanguaging statement based on chi-squared tests.

Faculty Translanguaging Attitudes

Comparing attitude trends for students versus faculty as a whole, post-course agreement rates with Spanglish and Regionalisms were similar for both groups (55% of students and 57% of faculty agreed with Spanglish, p=0.886; 95% of students and 92% of faculty agreed with Regionalisms, p=0.706). By contrast, student and faculty attitudes toward Standard Spanish differed; 95% of students and 43% of faculty agreed with use of standard Spanish, p<0.001. There was no consistent relationship between faculty translanguaging attitudes and their own students' survey responses (Table 5).

4. Discussion

This study presents a novel exploration of translanguaging attitudes among medical students and faculty in a medical Spanish course and is strengthened by its broad geographic reach across 14 schools and all US regions. Our findings show that current medical Spanish educational practices fall short of addressing the real-world linguistic practices of US Spanish speakers. Faculty reported openness toward incorporating Spanglish, regional words, and non-standard uses of Spanish in healthcare communication. However, these messages may not be effectively transmitted to students.

Drawing from our findings, we summarize several lessons learned on how a translanguaging lens can inform medical Spanish education. First, multiple varieties of Spanish should be represented in the teaching materials and among faculty, teaching assistants, guest speakers, and standardized patients. This can expose students to the variety of dialects, sounds/accents, regional words,[18] and the different practices and conceptualizations that exist therein.[19] Training for medical Spanish faculty should also incorporate these ideas, reinforcing that all varieties of the language should be equally valued in order to appropriately reflect the linguistic realities of everyday people and marginalized communities.[20-21]

Table 4. Analysis of factors potentially affecting student translanguaging attitudes

Factor	Statistic	Spanglish statement			Regionalisms statement			Standard Spanish statement		
		Pre-Course	Post-Course	p-value	Pre-Course	Post-Course	p-value	Pre-Course	Post-Course	p-value
Spanish Formal Education										
Prior Advanced Spanish Education	No — n	190	88	0.152	190	88	0.358	190	88	0.434
	No — %	58%	61%		94%	97%		94%	97%	
	Yes — n	117	40		117	40		117	40	
	Yes — %	57%	43%		96%	93%		92%	93%	
Prior Study Abroad in Spanish-Speaking Country	No — n	191	84	0.839	191	84	0.155	191	84	0.205
	No — %	60%	58%		93%	98%		94%	98%	
	Yes — n	116	44		116	44		116	44	
	Yes — %	53%	50%		97%	91%		92%	91%	
Prior Medical Spanish	No — n	248	110	0.313	248	110	**0.036**	248	110	0.648
	No — %	60%	58%		94%	97%		93%	95%	
	Yes — n	59	18		59	18		59	18	
	Yes — %	49%	39%		97%	83%		95%	94%	
Spanish Informal Education										
Heritage Spanish Speaker	No — n	230	100	0.408	230	100	0.999	230	100	0.168
	No — %	57%	57%		94%	94%		94%	96%	
	Yes — n	77	28		77	28		77	28	
	Yes — %	61%	50%		96%	100%		91%	93%	
Language Skills										
Good+ Spanish Proficiency Level on ILR-H	No — n	142	68	0.314	142	68	0.256	142	68	0.180
	No — %	56%	59%		92%	97%		96%	97%	
	Yes — n	165	60		165	60		165	60	
	Yes — %	59%	52%		97%	93%		91%	93%	
Trilingual+ (Reports skills in Spanish, English, and at least one other language)	No — n	193	79	0.225	193	79	0.526	193	79	0.723
	No — %	55%	49%		96%	95%		93%	95%	
	Yes — n	113	49		113	49		113	49	
	Yes — %	62%	65%		92%	96%		93%	96%	
Spanish Clinical Experiences										
Clinical Spanish Use Sometimes or More Often	No — n	48	23	0.607	48	23	0.792	48	23	0.999
	No — %	52%	57%		90%	96%		94%	100%	
	Yes — n	96	59		96	59		96	59	
	Yes — %	59%	61%		95%	95%		94%	95%	
Asked to Serve as Ad-hoc Untrained Interpreter Sometimes or More Often	No — n	201	79	0.255	201	79	0.403	201	79	0.131
	No — %	57%	52%		94%	96%		95%	97%	
	Yes — n	104	49		104	49		104	49	
	Yes — %	59%	61%		97%	94%		90%	92%	

Note: Student number (n) and percentage (%) represent the those indicating agreement (Agree/Strongly Agree). Good+ represents students with ILR-H Spanish level of "good," "very good," or "excellent." Bold indicates p-value<0.05.

Second, faculty should empower students who are heritage speakers to share their lived experiences with language in the classroom. Our study participants included 25% heritage Spanish students. Data show that heritage Spanish students may sometimes feel discouraged, self-conscious, or embarrassed about their language skills in the traditional language classroom.[22] Medical Spanish courses in our study seemed to reinforce the notion that the "standard" use of language is important for building relationships with patients (most students agreed with the Standard Spanish statement, and agreement increased post-course), which may not necessarily be the most effective way to communicate with patients and may also reinforce linguistic hierarchies that can discourage and minoritize heritage speakers. Furthermore, when underrepresented students experience discrimination and racism, their intent to practice in underserved areas decreases.[23] By endorsing a flexible approach to language, translanguaging in the medical Spanish classroom may help heritage students feel empowered to use their cultural and linguistic capital to participate in class and eventually to communicate with patients and advocate for language equity in the healthcare system.

Third, students should reflect on their linguistic biases. For example, while regionalisms and Spanglish are both common examples of translanguaging, students placed a greater value on the former. This is consistent with published literature that affirms that not all varieties or usages of a language are equally well-respected or considered to have the same level of prestige.[18] Spanglish is an example of non-standard Spanish which, popularly, is sometimes viewed as corroded. Recognizing such hierarchies is important to providing equitable medical care because valuing some linguistic features over others is a form of bias and may result in health disparities.[18] Future research should explore the perceived challenges to translanguaging in medical interactions to better understand why medical Spanish learners or faculty would be hesitant to translanguage in patient care. This could be done by observing medical interactions and identifying translanguaging moments, or through qualitative study of the experiences of medical students, clinicians, and patients about the use of translanguaging in clinical encounters. Understanding translanguaging barriers may then inform the development of effective strategies to enhance, person-centered patient-physician communication through medical Spanish education. Incorporating translanguaging concepts in medical Spanish teaching may help mitigate language bias in healthcare.

Table 5. Associations between Faculty Translanguaging Attitudes with Student Translanguaging Attitudes Following a Medical Spanish Course

Student Post-Course Attitudes	Faculty Attitudes					
	Use of Spanglish and anglicisms is appropriate when speaking with patients		Medical Spanish should involve teaching regional words/phrases		Standard Spanish is needed to develop relationship with Spanish-speaking patients	
	Correlation	p-value	Correlation	p-value	Correlation	p-value
Use of Spanglish and anglicisms is appropriate when speaking with patients	0.13	0.142	0.23	**0.009**	0.23	**0.008**
Medical Spanish should involve regional words / phrases	-0.10	0.249	0.10	0.234	-0.01	0.883
Standard Spanish is needed to develop relationship with Spanish-speaking patients	0.03	0.730	-0.03	0.727	-0.04	0.642

Note: Bold indicates p-values<0.05

Our study has some limitations. Participating schools may have differed in their course implementation in ways that could have impacted student attitudes about translanguaging, and these differences were not evaluated. Also, while a large number of students participated in the study, there was notable pre to post-survey attrition, which may contribute to sampling bias and limit generalizability. The faculty sample size was small, and all had over four years of medical Spanish teaching experience; it would be important to include newer faculty in future research.

The translanguaging framework offers viable strategies for teaching equitable, effective communication by centering the diverse, dynamic, real-world linguistic practices of patients rather than a static linguistic standard. Engaging patients and community members in the identification of medical Spanish content that reflects translanguaging practices would be an important way to ensure that the materials developed align with real-world communication strategies and usable, comprehensible content. Given the dynamic nature of language, community engagement should be longitudinally incorporated into quality assurance and improvement processes in the medical Spanish field. Future studies should consider qualitative approaches to evaluating learner and faculty attitudes, develop validated instruments to evaluate use

of translanguaging in medical encounters, explore translanguaging among other linguistic groups, and gather perspectives from clinicians and patients.

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Compliance with Ethical Standards

Conflicts of Interest: Dr. Ortega receives author royalties from Elsevier. The authors report no other conflicts of interest.

Ethical Approval: This study was determined to meet criteria for exemption by the University of Illinois Institutional Review Board (IRB) on September 13, 2019 (Protocol # 2019-0945) as the lead study site and at 13 additional medical schools: Duke University Health System IRB (exempt on December 3, 2019, protocol #Pro00104351), Harvard IRB (exempt on December 2, 2019, protocol #IRB19-1883), Hofstra University IRB (exempt on January 8, 2020, protocol #20200108-SOM-FAR-1), Michigan University IRB (exempt on July 22, 2020, protocol #HUM00176607), Northwestern University IRB (exempt on November 17, 2020, protocol #STU00212479), Temple University IRB (exempt on September 10, 2020, protocol #27484), University of Arizona IRB (approved on March 18, 2020, protocol #2003463183), University of California Davis IRB (exempt on May 29, 2020, protocol #1530138-1), University of California San Diego IRB (exempt on August 3, 2020, protocol #1530138-1), University of California San Francisco IRB (exempt on 1/12/21, protocol# 300952), University of Maryland IRB (determined not to represent human research on October 30, 2019, protocol #HP-00088657), University of North Carolina-Chapel Hill IRB (exempt on August 14, 2020, protocol #20-1725), and Wake Forest University IRB (exempt on August 25, 2020, protocol #IRB00060253).

Informed Consent: Enrollment of study participants complied with the informed consent protocol at each study site.

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