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Student Physical Therapists' Reflections on A Module Intended to Develop Knowledge and Skills Germane to Delivering Culturally and Linguistically Informed Care

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Abstract

Background: Individuals in the United States of America with limited English proficiency (LEP) are at risk for poorer healthcare experiences and outcomes. Faculty in a university's Doctor of Physical Therapy program (DPT) developed a two-session module to advance student physical therapists' cultural and linguistic awareness in the care of patients. This exploratory study assesses students' perceptions of this teaching module's effectiveness in developing skills germane to delivering culturally and linguistically informed care. **Methods:** A mixed-methods post-intervention design was used to evaluate DPT students' perceptions of the module, implemented over two consecutive years. The first session included Hofstede's six dimensions of culture, linguistic challenges, and strategies to address them. The second session consisted of DPT students (n=76) performing mock history-taking interviews with individuals with LEP. Upon completion, DPT students completed a survey on the value of the module and responded to reflection questions on lessons learned and application to clinical practice. Quantitative data were considered using measures of central tendency; qualitative data were analyzed using a phenomenological approach. **Results:** Per survey responses, students affirmed value in the module advancing their cultural and linguistic awareness and skills for clinical application. Four themes emerged from their reflections related to their role as a future healthcare provider: Awareness, Connection, Responsibility, and Humility. **Conclusion:** The results of this study could prove valuable to other health education programs in providing future practitioners with tools to consider more comprehensive cultural implications and strategies for enhancing a patient's understanding and experiences during their healthcare encounter.

Keywords: Healthcare disparities; Communication barriers; Language; Medical history-taking; Interpersonal skills

Background

Culture and language impact the way we interact with others, including interactions in healthcare. Optimal healthcare interactions are founded on cultural understanding and language literacy [1,2]. Part of language literacy is health literacy, defined by the Health Resources & Services Administration as the degree to which people can obtain, process, and understand basic health information needed to make appropriate health decisions [3]. Among native English speakers, low health literacy is more prevalent among those of lower socioeconomic status, members of minority populations, those who are older, and the medically underserved [4]. Additionally, cultural barriers and limited English proficiency (LEP) contribute to lower health literacy [3,4]. Individuals with LEP who live in the United States (US) are at greater risk for experiencing health disparities and physically harmful adverse medical events than their native English-speaking counterparts, including higher rates of activity limitations and disability; poorer overall outcomes; less access to preventive, ambulatory, and acute healthcare; increased medical costs; and decreased satisfaction with healthcare [5-13].

Recognizing this disparity, in 2000, the U.S. Department of Health & Human Services disseminated 15 standards to support the delivery of culturally and linguistically appropriate services (CLAS) [14]. The CLAS standards are intended to advance health equity, improve quality, and help eliminate healthcare disparities by establishing a blueprint for health and healthcare organizations [14]. However, a greater understanding of healthcare providers' (HCP) knowledge and application of these standards is needed. A recent study found that only 35.5% of physicians had heard of the standards [15]. Additionally, as of 2010, the Affordable Care Act (ACA) includes directives that federally-funded healthcare organizations must utilize qualified interpreters and bilingual staff and identifies expectations for in-person and remote interpreting services [16,17].

A Multidimensional Cultural Model

Dutch social psychologist Dr. Geert Hofstede and colleagues developed a multidimensional model to describe fundamental aspects and features of national culture [18]. Originally, the model included four dimensions: Collectivism-Individualism (the extent to which people feel independent),

Power Distance (the extent to which inequality and power are tolerated), Masculinity–Femininity (the extent to which the use of force is endorsed socially), and Uncertainty Avoidance (a society's tolerance for uncertainty and ambiguity). Two additional dimensions were later added: Long-Term–Short-Term Orientation (a society's response to dealing with change) and Indulgence–Restraint (the extent and tendency for a society to fulfill its desires) [19,20] (Refer to Table 1). These six dimensions provide a framework to better understand how societies organize themselves. Hofstede's cultural dimensions can be applied to the society's healthcare environment and the communications that occur therein [21,22]. Miscommunications, misunderstandings, and disconnections can occur between patients and providers, especially between those interacting from differing ends of each dimension's continuum.

Individualistic *vs.* Collectivistic the degree to which societies are integrated into groups and their perceived obligations and dependence on groups	
Individualistic cultures prefer a "loosely-knit social framework" where individuals' needs and goals are prioritized over the collective needs of society.	Collectivistic cultures prefer a "tightly-knit" social framework where the groups' needs and goals are prioritized over individual needs.
Power Distance the extent to which inequality and power are tolerated	
Low power distance cultures work to equalize the distribution of power in society and embrace egalitarianism.	High power distance cultures accept that less powerful members of a society have less power and that it is distributed unequally.
Masculinity *vs.* Femininity the extent to which force is tolerated	
Societies considered more masculine focus on achievement, heroism, assertiveness, power, and material rewards for success.	Societies considered more feminine, prefer cooperation, caring for the weak, are nurturing, and view quality of life as signs of success.
Uncertainty Avoidance Index the extent to which uncertainty and ambiguity are tolerated	
Low uncertainty avoidance cultures have a higher tolerance level for ambiguity. The unknown is more accepted and change is not intimidating.	High uncertainty avoidance cultures are uncomfortable with uncertainty and ambiguity. The unknown is minimized through strict rules and regulations.
Long-term Orientation *vs.* Short-term Orientation the extent to which society views its time horizon	
Long-term orientation cultures focus on the future and long-term success and emphasize persistence and perseverance.	Short-term orientation cultures focus on the present and maintain links with the past and respect for tradition.
Indulgence *vs.* Restraint the extent and tendency for a society to fulfill its desires	
Indulgent societies allow relatively free gratification of basic and natural human drives related to enjoying life and having fun.	Restrained societies suppress gratification of needs and have strict social norms.

Table 1: Hofstede's 6-D Model of National Culture [18-21].

Linguistic Awareness

Per the 2022 US Census, approximately 68 million people in the US (one in five) reported speaking a language other than English at home [23]. The top five languages include Spanish, Chinese (including Mandarin and Cantonese), Tagalog (including Filipino), Vietnamese, and Arabic [24]. This creates contemporary challenges in providing equitable care to a multilingual landscape of individuals in a primarily monolingual health system [25].

Language differences in healthcare interactions are often managed through web-based, remote, or in-person translation/interpretation services. Qualified interpreters are essential collaborators who empower patients and clinicians [26]. The use of untrained individuals and/or minors as interpreters should be avoided [27]. While ad hoc interpreters such as friends or family members who offer or are requested in the moment can facilitate consultation and discussion of treatment, partial or incorrect interpretations are a significant risk.

Conversational English is complex, and in the US, regularly includes synonyms, similies, and contractions. US regional dialects also differ significantly. Native English speakers regularly incorporate code-switching, or moving between regional dialects, colloquial phrases and idioms, and phrasal verbs which can hamper communication [28-30]. HCPs may misinterpret a patient's reticence to speak as indifference toward their health or unintentionally disenfranchise a patient from engaging secondary to their reactions to a patient who speaks English as a secondary language [31]. The patient's reluctance to speak may be related to negative prior experiences using English or unfavorable responses to cultural differences rather than their ability to use the language. HCPs can facilitate patients' communication and understanding through reflection on their own cultural awareness and sensitivity.

It is important to note that two paradigm shifts are occuring. First, there is an impetus to move from deficit-oriented terminology (patients with LEP) toward capability-oriented terminology (patients with a non-English language preference) [26,32]. Second, there is a greater emphasis on HCPs' responsibility to cultivate knowledge and skills to support the delivery of equitable care. As Showstack states, "patients don't have language barriers; the healthcare system does." [32, pg 580].

Significance and Purpose

The ability to deliver healthcare in culturally and linguistically appropriate ways must be founded on providers' knowledge and application abilities. Given that individuals with LEP face poorer healthcare experiences and outcomes, future HCPs must be prepared to consider a more comprehensive assessment of culture and be equipped with strategies to support and enhance language comprehension. Programs for health professions agree that diversity education is critical to prepare future providers for an increasingly multicultural population [33]. Instructional delivery about cultural awareness is often truncated. A superficial understanding of cultural awareness can inadvertently support overgeneralizations, reaffirm individual biases, and increase health disparities for patients if not used mindfully [30,34,35]. The degree to which healthcare education programs include instruction regarding the assessment of a patient's linguistic competence and strategies to provide equitable care is less clear [30,36]. As a result, HCPs likely engage in patient encounters without due consideration of the patient's level of English language comprehension [37].

Previously, this Doctor of Physical Therapy (DPT) program had introduced the topic of cultural competence during one 2-hour class session in a course addressing communication. Instruction primarily focused on individualist versus collectivist cultures, demographic changes in the US, broad cultural norms, and health disparities and inequalities [38-40]. Upon reflection, the course faculty determined that the didactic instruction related to cultural awareness was limited in breadth and scope. Students were not adequately prepared to consider more complex cultural implications, and strategies for addressing language barriers were essentially absent.

To address these deficits, we developed an enhanced two-session learning module, totaling 4 hours, to begin developing student physical therapists' linguistic and cultural awareness and skills in the care of patients with LEP. This exploratory study assesses students' perceptions of this teaching module regarding its effectiveness in developing foundational skills germane to delivering culturally and linguistically informed care.

Method

Ethical Approval

Upon review, an exemption waiver for this study was granted by the University's Institutional Review Board (IRB). Students provided consent for their data to be analyzed.

Participants

Participants included two consecutive DPT cohorts of 38 students each year, for a total of 76 students enrolled over two years.

Module Design

Faculty in the DPT program worked with a linguistics faculty member to develop the two-session module. The sessions occurred one week apart.

Session One: DPT students completed pre-class readings that had been required in previous years [38-40]. The objectives of the first session were that students would be able to 1) identify multiple aspects of culture, 2) identify how cultural features can affect communication in healthcare, 3) present strategies for working with individuals from different cultures, 4) identify potential barriers in communicating with patients with LEP, and 5) discuss strategies for overcoming language barriers. The lecture was framed around Hofstede's model of cultural dimensions and language appraisal with activities interspersed to reinforce and apply content [18-22]. CLAS standards were interwoven into the activities [14]. Activities included 1) reading medical scenarios and identifying what cultural categories could be factors in that situation, 2) reviewing transcripts of medical encounters, noting the colloquial and informal language, and rewording it in an accessible way, 3) discussing online resources that could be used to facilitate communication, and 4) considering commonly used physical therapy phrases and terminology that might require explanation or visualization (e.g., "pulled muscle," "twisted ankle"). In both years, the first session of didactic instruction occurred in a classroom.

Session Two: The objectives of the second session, which included two mock history-taking experiences, were to 1) apply appropriate linguistic and cultural communication strategies with individuals from other countries with LEP, and 2) self-reflect on their performance. Visiting students from a variety of countries of origin (e.g., China, Columbia, India, Japan, Saudi Arabia, South Korea, Taiwan, Venezuela, and Vietnam) attending the university's English Language Institute (ELI) served as volunteers for the mock history-taking experiences and had varying levels of English proficiency. In session two, the interactive interviews occurred in large classrooms (year 1) and individual library study rooms (year 2).

Data Collection and Analysis

This exploratory study used a mixed-methods post-intervention design with a collection of quantitative and qualitative data. DPT students completed a 10-question investigator-developed survey on the perceived value of the two-session module at its conclusion. Eight questions (See Table 2) used a 4-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree); two open-ended questions asked about the most and least helpful aspects of the module. The survey link was distributed anonymously via Qualtrics. DPT students provided written reflections on their performances related to the quality of their own verbal and non-verbal interactions with their mock patients and application to future clinical practice. Students posted their written reflections on the electronic learning management system (LMS) course page. Survey data were exported from Qualtrics to SPSS version 27 for analysis [41]. Students' reflections were

downloaded from the LMS for review. One DPT faculty investigator read and analyzed the reflections for themes using a phenomenological approach including a consensus codebook with themes and categories [42].

Results

Participants included 76 student physical therapists (69% female, 31% male, mean age 22). 93.4% of the DPT students (n=71; 37 of 38 from Class of 2021, 34 of 38 from Class of 2022) completed the 10-question survey on the perceived value of the experience. Measure of central tendency are displayed in Table 2. Aggregate means for the eight Likert questions (ranking of 1-4) ranged from 2.58 – 3.62, indicating agreement with the statements. The highest-rated statement was about the usefulness of the mock history-taking interactions with individuals with LEP (Median 4, Mean = 3.62, Mode 4). The lowest-rated statement referenced the ability to incorporate the use of an interpreter during a patient care session (Median 3, Mean 2.58, Mode 2).

How helpful were the sessions in preparing you to:	**N**	**Min**	**Max**	**Mean**	**Median**	**Mode**
Communicate in clinical environments with individuals with limited English proficiency.	71	2	4	3.18	3	3
Initiate and respond with sensitivity to cultural differences among your patients.	71	2	4	3.07	3	3
Respond to cultural differences such as power distance, long-term orientation, and indulgence among your patients.	71	2	4	2.68	3	3
Incorporate language strategies such as managing the pace of communication, using aids to help patients communicate, and addressing patients' reluctance to speak.	71	2	4	2.94	3	3
Limit small talk during interviews or intervention sessions, movement between formal and informal language, and use of colloquial language.	71	1	4	2.69	3	2
Incorporate the use of an interpreter during a patient care session.	71	1	4	2.58	3	2
How useful was:						
The interaction with students from the ELI in preparing you to interact with patients with limited English proficiency.	71	2	4	3.62	4	4
The self-assessment of your mock interviews with the students from ELI in preparing you to interact with patients with limited English proficiency.	71	2	4	3.15	3	4

(1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree)

Table 2: DPT student responses to the post-module assessment.

In responding to the open-ended questions about the most useful component of the module, DPT students identified 1) in-class activities and 2) the mock history-taking interview experiences.

Students noted the value of the application of the lecture content. Working through paragraphs detailing patient encounters, identifying confusing language, and replacing it with more appropriate language helped students understand how often-used phrases and terms in healthcare encounters could be unclear or puzzling to patient with LEP. Students stated that Hofstede's model expanded their understanding of how different cultural influences might impact a healthcare visit. Having the opportunity to perform two mock history-taking interviews with visiting students from a variety of countries with varying levels of English proficiency the week after the first session allowed for practical application of the knowledge and skills. Students identified the close timing of the second session to the first as advantageous in reinforcing their learning as it allowed for the timely application of concepts. Students also reported the benefit of finding the application of the strategies more challenging to apply than they previously thought.

The least useful component of the module occurred in the first year of implementation. In year 1 the mock interviews took place in large classrooms with multiple interviews occurring in the same physical space. Students noted that the noise levels detracted from their communication effectiveness. In year 2, the interviews were held in private study rooms in the library which eliminated the noise concerns.

Reflections

Four themes emerged from the DPT students' reflections related to their performance and application to clinical practice: Awareness, Connection, Reliability, and Humility. Awareness was defined as the students' enhanced cognizance of their own communication habits that confounded patient understanding. Students became conscious of their own use of habitual speech patterns, such as code-switching, use of contractions, and colloquial verbiage. Connection was defined as students' recognition of and respect for differing cultural presentations and their role in ensuring a positive environment. Students noted the value of being observant of their mock patients and becoming more aware of the facilitatory and nonfaciliatory impacts of their own non-verbal communication. Responsibility was defined as the students' acknowledgment of their role to ensure the integrity of the healthcare encounter and accuracy of communication. Students identified a newfound

respect for the role of qualified interpreters and the value of having access to them to support accuracy and ensure equity in care. Humility was defined as students' appreciation of the complexity of cultural and language differences and their desire to more fully embrace continued exploration and engagement in ongoing self-reflection. Examples of students' responses are provided in Table 3.

Theme	Examples
Awareness	• "Growing up in the South, code-switching has integrated itself within my speech. I caught myself saying 'Y'all' or 'gotcha' on several occasions. I need to be aware of this and consciously use formal conversation to maximize my patient's ability to understand and engage". • "I found myself using contractions which can sound very confusing when said fast." • "I had a questioning lilt in my voice at the end of most statements which I now see as confusing." • "My first patient seemed very proficient in English and I could see myself in a clinic with someone of her English-speaking skill and getting carried away with my general way of talking, forgetting that she is not fluent. This is something I'll need to watch as I continue to practice."
Connection	• "Paying attention to their non-verbal communication allowed me to know when they understood and when were ready to respond." • "Although communicating verbally was not easy and took extra effort to overcome, non-verbal communication is universal. It was fascinating to experience how powerful non-verbal communication is across all cultures." • "Some of the cultural cues that I picked up on had to do with less direct eye contact and the lack of consistent eye contact was not taken as disrespectful. If anything, they were only trying to be polite. Had I not known this prior to our interaction, I would translate this behavior as disinterest on my client's part." • "I felt like awareness of nonverbal communication allowed for me to know when they understood and wanted to respond."
Reliability	• "I felt that the most difficult part of the mock interview was trying not to complete the thoughts of the person when they couldn't find the words they wanted to say. I felt that I needed to fill the silence of their struggling by helping them think of the right words. I realized afterward that I had no idea if what I said was what they were actually trying to say or if they just agreed with me because they were not sure." • "I was not sure how reliable Google translate was. I definitely would feel more comfortable with a translator because I think there were some things we could have elaborated more on had it not been for the language barrier. • "Had this been a real patient, I would have really questioned my understanding and requested an interpreter. " • "I asked follow-up questions to not only see if my clients understood what I was trying to communicate but also to make sure that I was understanding what my clients were attempting to communicate with me."
Humility	• "To be honest, I thought cultural and language competence would come easily to me because I have extended family who do not speak English very well. I realized it's a different language and, completely different setting, so it obviously was not a comparable situation." • "Listening to the strategies of communication in class sounds so easy, but it is very hard to do in practice and in the moment." • "Having the background lecture prior to the experience was helpful, but actually having the face-to face interaction was invaluable." • "I learned so much about my areas of communication that need improvement. I feel privileged to have had this experience before going into a clinic."

Table 3: Narrative data aligning with themes.

Discussion

Inclusion of Hofstede's 6-D cultural awareness model with clear application to healthcare examples was pivotal in providing a more comprehensive view of culture, and how a patient and their family may present in a healthcare environment [18-22]. Activities to apply strategies to bridge cultural differences were deemed useful by students. Language and communication instruction and strategies, not explicitly addressed prior to this module, were equally essential in students' abilities to identify faciliatory and non-faciliatory communication habits. The mock interviews provided real-life opportunities for students to reflect-in-action, reflect-on-action, and make real-time adjustments while interacting with individuals with non-English language preferences that are representative of those seen in the US [24].

Related to the theme of Awareness, students' reflections highlighted their new knowledge of the pitfalls of using certain

commonly used medical terms or expressions. Students saw that excessive use of synonyms (e.g., there, their, they're; here, hear; two, to, too) challenged understanding, as were contractions (e.g., can't *vs.* can), where students noted how easily the word could be misinterpreted. They gained an understanding of how code-switching, or moving between regional dialects, also hindered communication. Students identified that they had never considered the confusion one might encounter when hearing colloquialisms or phrasal verbs often used in healthcare encounters, which, when considered separately, include words with opposite or contradictory meanings (e.g., "come on back," "back on your feet," "keep going"). Students identified their desire to engage in ongoing monitoring of their own use of slang, idioms, colloquial language, and phrasal verbs throughout their didactic and clinical education [30-32].

Related to the theme of Connection, students felt empowered to create safe spaces for communication to occur. They found that giving their mock patients agency in the selection of communication formats increased the amount of information they received in their history-taking interviews, and that allowing choice in the medium of communication when appropriate (e.g., writing, drawing) enhanced communication and rapport. Within a healthcare encounter, HCPs often erroneously equate a patient's rudimentary conversational skills in a secondary language with the ability to navigate complex communication. Students reflected on unintended disconnections they experienced when trying to build rapport through "small talk" which resulted in the interviewee's confusion and increased reticence to speak. Developing rapport, a cornerstone of healthcare, is often enhanced through "small talk" or informal speech meant to put the patient at ease [34,35]. These learning moments reinforced their awareness that this well-intended interaction can have the opposite effect when working with a patient with LEP as this initial conversation may be confusing to the patient who misinterprets these unrelated questions with questions about their health.

Related to the theme of Responsibility, the students embraced the focus on ensuring the reliability of communication and identifying language proficiencies of their patients rather than their deficiencies, a key component of language-appropriate healthcare [25,26]. Students recognized that use of visual aids like anatomical models may help activate vocabulary, facilitate engagement, and verify understanding. Students agreed that creating a visual aid library demonstrating often-used terminology and incorporating these aids early in a patient encounter could facilitate communication and be a tool to assess health literacy [43]. As discussed in session 1 and experienced in session 2, students saw the value of having interpreters and services to provide equitable care.

Related to the theme of Humility, students gained awareness of their own cultural and linquistic biases and limitations. Threading the concept of cultural humility throughout a health professions education program can provide students opportunities to consider the 5 Rs of cultural humility (reflection, respect, regard, relevance, and resiliency) and facilitate their future patients' healthcare experiences through reflection on their own cultural awareness and sensitivity [44,45].

Strengths, Limitations, and Suggestions

A strength of this educational intervention was the inclusion of the module introducing more comprehensive cultural and linguistic considerations in the first semester of the DPT program which allowed for emphasizing and reinforcing these concepts across the remainder of the curriculum. Including interactive sessions was enlightening and empowering [30]. This module consisted of only two class sessions, but as Diamond and Jacobs identified, the quality and reinforcement of the content is more important than the quantity [30]. Threading concepts of cultural and linguistic diversity, cultural humility, and collaborative training models throughout the curriculum supports students' personal and professional development.

A limitation of this study is that the module only addressed why interpreters are needed, but did not provide an opportunity for students to experience an interaction with an interpreter and apply this skill. Collaboration with interpreters would be useful in subsequent semesters to add depth and breadth to the students' experiences and skills. Another limitation is that we only used post-test assessments. Future iterations would benefit from separate assessments for linguistic and cultural knowledge, awareness, and skills, and the use of a validated scale for cultural humility.

Conclusion

DPT students perceived that the module helped prepare them for actions germane to providing culturally and linguistically informed care. Fostering didactic and clinical environments that support the exploration of cultural and linguistic humility through supporting a continuum of learning, self-reflection, and critique, will enhance connections between DPT providers and their patients. Ongoing monitoring of the impact of these sessions on students' performance with patients during full-time clinical experiences is warranted to assess long-term benefits.

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