International Journal of Language, Translation and Intercultural Communication
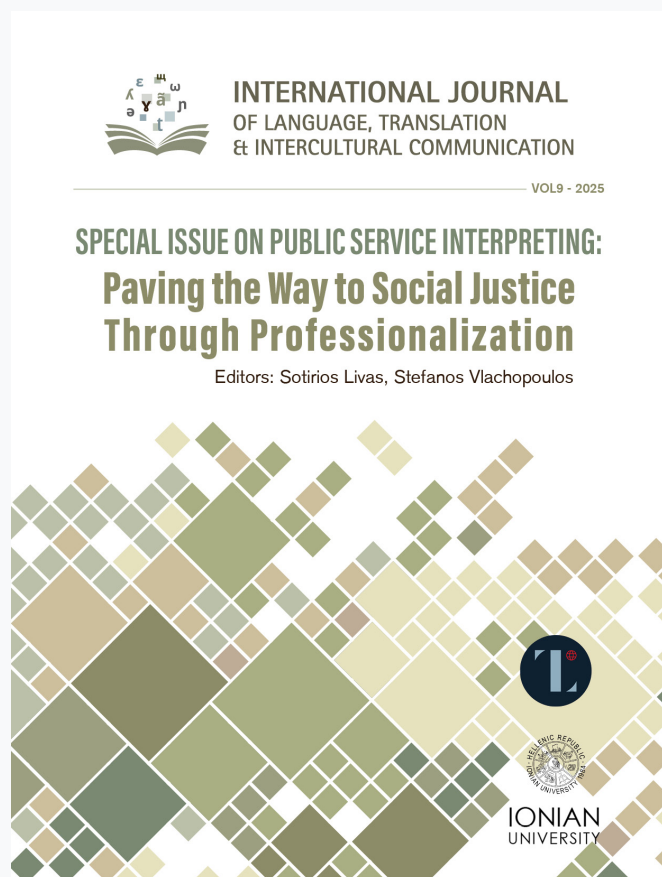
Public Service Interpreting: Paving the Way to Social Justice Through Professionalization (Special Issue)

INTERNATIONAL JOURNAL
OF LANGUAGE, TRANSLATION
& INTERCULTURAL COMMUNICATION

VOL9 - 2025

SPECIAL ISSUE ON PUBLIC SERVICE INTERPRETING:
Paving the Way to Social Justice Through Professionalization

Editors: Sotirios Livas, Stefanos Vlachopoulos

IONIAN UNIVERSITY

Improving Health Equity Through Team Observed Structured Clinical Encounters with LEP Standardized Patients and Healthcare Interpreter Trainees.

Laura Ramirez-Polo, Stephanie A. Rodriguez, Julie Blumenfield, Kathleen Horan, Marisa Merrigan Robertazzi, Jennifer Short

doi: 10.12681/ijltic.38841

To cite this article:

Improving Health Equity Through Interprofessional Education: Conducting Team-Observed Structured Clinical Encounters with LEP Standardized Patients and Healthcare Interpreter Trainees

Laura Ramírez-Polo[a], Stephanie Rodriguez[b], Julie Blumenfeld[c], Kathleen Horan[c], Marisa Merrigan Robertazzi[c], Jennifer Short[c]

[a]Department of Spanish and Portuguese, Rutgers University, New Brunswick, United States;

[b]Department of Spanish and Portuguese Studies, Rutgers University, Newark, United States;

[c]School of Nursing, Rutgers University, Newark, United States

ramirez.laura@rutgers.edu

Abstract

When language barriers exist, patients who do not share a language with their providers are at risk of poorer medical outcomes, adherence, trust, and follow-up care (Sentell et al., 2016; Eslier et al., 2023; Luton et al,. 2022; Nadakuditi, 2023). These barriers drive the need for Translation and Interpreting programs that prepare students for healthcare settings. This study examines interpreter-mediated communication in midwife consultations within New Jersey, where 12.4% of residents are LEP (New Jersey Department of Community Affairs 2022). An interprofessional simulation was piloted, engaging Translation and Interpreting students alongside Women's Health/Nurse Midwifery students, providing specialized training in bilingual health communication. Pre- and post-intervention surveys collected data, revealing that the educational intervention effectively boosted interpreting students' confidence, improved their terminology knowledge, and enhanced their understanding of providing equitable, quality care to LEP patients in their native language.

Keywords: *language interpreting, interpreter-mediated encounters, Limited English Proficiency, LEP, TOSCE, midwife, bilingual healthcare communication, interprofessional education*

1 Introduction

The United States is a country of immigrants, where diverse populations from different origins bring together an array of languages and cultures. According to the most recent census data, in 2020, 22% of the population spoke a language other than English at home, with Spanish being the most common. A total of 8% of the population is Limited English Proficient (LEP), representing around 25 million people (U.S. Census Bureau, 2022).

In New Jersey, where the present study occurred, approximately 12.4% of persons over the age of 5 (1 in 8) have LEP (New Jersey Department of Community Affairs, 2022). According to the New Jersey Hospital Association and their Vulnerable Communities Database (New Jersey Hospital Association, 2021), Newark is one of the most vulnerable cities in the state, with zip codes ranking 5th, 9th, and 10th on the list of most vulnerable communities. Some of the factors measured in this database relate directly to maternal health and pediatrics, including low birthweight babies, teen birth, mothers with no prenatal care, fetal deaths, and premature deaths. A common trait of these vulnerable communities is the presence of individuals with LEP, who face challenges when accessing public services, including healthcare.

There are varied approaches to bridge the language gap between populations with LEP and the majority population, including in public and private institutions. These challenges may be addressed in healthcare settings using a Language Access Plan (LAP). Strategies in the LAP include regularly assessing language needs, providing staff training on cultural competence, establishing clear policies that guarantee free language services to LEP individuals, and providing timely and effective language assistance services, such as interpretation and translation, ensuring that all communication is accessible in various languages (Alvarado-Little, 2022). Research demonstrates that using interpreters in maternity care settings significantly enhances communication and quality of care for non-English speaking women. According to Bonakdar Tehrani et al. (2023), the inclusion of interpreters in sustained nurse home visiting programs plays a crucial role in improving the delivery of child and family health services to culturally and linguistically diverse communities. The study highlights that effective interpreter involvement, including pre- and post-briefing sessions with nurses, supports better healthcare access and quality for these populations. Other studies demonstrate numerous negative outcomes due to a lack of interpretation services, including a higher risk of obstetric trauma in vaginal deliveries (Sentell et al., 2016), less adherence to medication (Nadakuditi, 2023), and inadequate prenatal care utilization (Eslier et al., 2023). Therefore, interpreters are instrumental in bridging the gap between healthcare providers and expectant women and birthing people, ensuring that care is both accessible and culturally sensitive.

1.1 Community Interpreting

Community Interpreting (CI) is defined as oral and signed communication between the service provider and those accessing such services (Falbo, 2013). This form of interpreting enables people who are not fluent speakers of the official language(s) of a country to communicate with providers of public services. Community interpreters regularly use consecutive modes, for example, for medical consultations or parent-teacher conferences, and sight translation to provide oral translation of patient consent forms or government assistance applications. CI settings include schools, government agencies or offices, medical clinics, or police stations. The interpreter must not only be fluent in the specialized terminology and communication style but also know various interpreting modes and strategies that align with the format of the conversation. The role of a community interpreter is multifaceted, encompassing cultural mediation and understanding differences in social norms and practices. It requires a deep knowledge of the cultures involved and the ability to make ethical decisions that balance impartiality with the need to ensure clear and effective communication.

Healthcare interpreting is a branch of CI, also called public service interpreting or liaison interpreting (Angelelli, 2019: 4). According to the National Council on Interpreting in Health Care, a professional medical interpreter is any individual paid and provided by a hospital or health system to interpret.

1.2 Challenges in Interpreter-mediated Communication

The US Department of Health and Human Services Office for Civil Rights holds the responsibility for establishing and maintaining requirements and regulations related to the provision of language and communication services in health care settings. These regulations apply to any entity receiving government funding, such as from Medicaid or Medicare (Kasten et al., 2020). Furthermore, the National Standards for Culturally and Linguistically Appropriate

Services in Health and Health Care (The National CLAS Standards) provide clear and comprehensive guidelines for providers and interpreters to understand the general responsibilities required for their role. These standards ensure timely access to healthcare and services for individuals with LEP or other communication needs by offering free language assistance, informing them clearly about these services in their preferred language, using competent interpreters, and providing easy-to-understand materials and signage in the language commonly used by the local population.

CI specialized training holds the National CLAS Standards at its core and focuses on specific foundational concepts and models in this discipline to prepare interpreters for complex communicative practices that serve both patients and providers (Angelelli, 2019). By following these standards, professional healthcare interpreters build rapport and trust between patients and providers. Beyond understanding and accurately facilitating communication that is equivalent in the target text, interpreters are responsible for being the cultural experts of two or more languages, placing themselves in the position to understand and deliver culturally appropriate communication and enhancing the quality of the patient-clinician conversation.

Specifically in Spanish, the language most spoken after English in the USA (U.S. Census Bureau, 2022), linguistic differences exist due to the variations spoken in different regions, social groups, and even individual speakers (Shin & Potowski, 2018). Spanish linguistic variation can present challenges in healthcare terminology as terminology varies across Spanish-speaking communities, resulting in the possibility of misinterpreted cultural nuances and idiomatic expressions if the interpreter is not familiar with the specific variety of Spanish being used. Therefore, it is essential for healthcare interpreters to have a broad understanding of Spanish dialects and regional variations to ensure accurate and culturally sensitive communication.

According to the National Standards of Practice for Interpreters in Health Care, impartiality is the third standard, intending to eliminate the effect of interpreter bias or preference. However, various factors may impact interpreters' performance, pushing them into difficult positions in having to determine if to advocate for the patient or remain impartial (Hsieh, 2022). Since various professional groups coexist in a healthcare setting and each bring their own perspective based on their professional ethics, healthcare interpreters at times engage in provider education to ensure that they understand their role and responsibilities and patient advocacy to empower patients to ask questions and understand their patient rights (Angelelli, 2019). Specialized training in CI equips students of Interpreting with the tools needed to facilitate patient-provider communicative competence to ensure appropriate and effective communication (Hsieh, 2016).

Building a solid training system that includes interprofessional simulation and situated learning is key to providing qualified interpreters to the market and promoting the development of the profession (Wang, X. & Lázaro Gutiérrez, 2021). Beyond cultural and linguistic knowledge, students in specialized interpreter training programs acquire discipline-specific skills such as note-taking, content analysis techniques, and identifying and understanding extralinguistic factors. As the role of interpreters continues to evolve, so do the training principles, which increasingly build upon multidimensional models to develop the subcompetencies needed to prepare students for diverse healthcare settings and scenarios.

1.3 Training Healthcare Interpreters

While interpreters receive basic training in different common primary and specialized health care topics, and sometimes even in the sensitive skills of labor support, lactation support, perinatal bereavement care, and postpartum education (Maher et al., 2012), in many curricula there is limited or no training where real-life situations are part of the curriculum. Exceptions include Coetzee et al. (2020), who created an interactive workshop led by professionally trained interpreters and faculty facilitators for medical students in their clinical years.

As such, opportunities for interpreting students to practice in real-life scenarios are limited, with mock scenarios, role-plays, and project-based learning through simulation (Falbo, 2019) being the most common, as well as internships. Though trying to replicate an authentic scenario, the former might lack real-world problems and the social interactions that naturally unfold in specialized contexts. In internships, learners usually only receive direct feedback from their supervisors, who might be specialists in the clinical aspects but not necessarily on multilingual communication and interpreting protocols.

For this reason, Interprofessional education (IPE) plays a critical role in preparing healthcare interpreters to work effectively within interdisciplinary healthcare teams. IPE involves structured, situation-based training where students from different professions learn together to optimize collaboration and improve patient outcomes (Hlavac & Harrison, 2021). Research indicates that IPE fosters a deeper understanding of each professional's role, enhancing communication and teamwork between interpreters and clinicians. For example, Zhang et al. (2021) found that interprofessional training improved knowledge, confidence, and collaborative attitudes among interpreters and healthcare professionals. Moreover, Krystallidou (2023) emphasizes that IPE provides interpreters with hands-on opportunities to negotiate meaning both at the linguistic and interprofessional levels, ensuring smoother communication between healthcare providers and patients with limited English proficiency.

At Rutgers University, programs such as The Community Interpreter Project[1] provide bilingual students currently studying sciences, screening, and training based on a model of professional interpreting standards and protocols adapted to fit a low-risk, outpatient setting; once student candidates demonstrate appropriate fluency in Spanish and aptitude for interpreting accurately, they progress to the on-site training phase, the final step to becoming a paraprofessional student-interpreter. However, this initiative runs outside an academic program and does not specifically address the needs of interpreting students. Further, no published research has been conducted on the methods and experiences of this program, so the results remain unknown.

2 Research Participants and Materials

To address this gap, the Department of Spanish and Portuguese at Rutgers New Brunswick, and the Women's Health/Nurse-Midwifery (WHNM) Program at Rutgers School of Nursing in Newark developed a quality improvement (QI) project for interpreters to introduce them to how to best work with WHNM students. This is a preliminary intervention to assess an innovative pilot interprofessional simulation collaboration intended to increase WHNM students and interpreter students' awareness of, comfort with, and competence in collaborating while using interpretation services for LEP patients in the perinatal care setting.

---

[1] https://rwjms.rutgers.edu/community-global-health/community-interpreter

This type of intervention aligns with the principles of situated learning (Gonzalez-Davis & Enríquez-Raído, 2018; Miner & Nicodemus, 2021). Situated learning, a concept deeply embedded in translation and interpreter education, emphasizes the importance of learning within authentic contexts. As González-Davies and Enríquez-Raído (2016: 1) discuss, situated learning involves exposing students to real-life or highly simulated work environments, allowing them to develop professional competence through experiential learning. This approach moves beyond traditional classroom-based education by incorporating real-world professional demands, institutional practices, and community beliefs into the learning process. Such an approach prepares students to think and act like professionals and bridges the gap between theoretical knowledge and practical application, making the learning experience more relevant and impactful. Miner and Nicodemus (2021) further highlight the effectiveness of situated learning in interpreter education by demonstrating how it allows students to transition from the classroom to the community, helping them to "transition from the relatively safe, sterile, and idealized environment of the classroom into challenging, messy, and complicated real-world environments within the community". (p. 3). This engagement not only enhances the students' interpreting skills but also helps them become active participants in a community of practice where learning is continuously shaped by the interactions and challenges encountered in the field.

In our study, students from the Spanish Translation and Interpreting program at Rutgers New Brunswick took a 1.5 credit course titled *Hospital and Community Interpreting* during the spring 2024 semester. The curriculum is aligned with the requirements for the National Standards for Healthcare Interpreter Training Programs and includes knowledge in different aspects such as the healthcare interpreting profession; language and communication; professional practice including ethical principles and standards; the health system; culture; and resources; as well as practical training in interpreting skills, which includes message conversion strategies; modes of interpreting; interpreting protocols; cultural brokering; and decision making. The course is also based on Angelelli's Interpreter Education Model (2006), which covers six main areas:

- The cognitive processing domain focuses on developing and refining specific skills essential to interpreting, such as active listening, enhancing memory, multitasking, and note-taking.

- The interpersonal domain involves exploring the concept of role, helping students understand the spectrum of visibility and neutrality, and recognizing their power, agency, and associated responsibilities and duties.

- The linguistic domain necessitates continuous improvement in the students' two languages, including vocabulary expansion and the ability to switch between formal and informal registers.

- The professional domain addresses issues like job ethics, certification processes, and the rules and regulations of professional associations.

- At the level of specific settings, students must learn the communication styles of various discourse communities, as well as the core content and terminology. For instance, this could involve studying anatomy and physiology to comprehend medical

interviews and mastering common expressions and terms used in specific speech events.

- Lastly, at the sociocultural level, healthcare interpreting students must (a) be aware of the influence of both the institution and society on the interactions they facilitate and (b) understand its constraints and cultural nuances.

As part of the course activities, two interpreting students developed an online module addressed to healthcare professionals to train them on how to work with interpreters. As part of the collaboration with the Nursing Advanced Practice Division in Newark, another group of four interpreting students participated in a pilot interprofessional simulation activity that consisted in a short presentation on how interpreters work and some basic protocols such as role boundaries or positioning, as well as their code of ethics, etc., and an outlined Teaching Observed Structured Clinical Encounter (TOSCE) to perform a routine 6-week postpartum exam with a standardized Spanish-speaking patient an interpretation student as the interpreter.

Five nursing and four interpreting students participated. Three nursing students observed, and two actively participated in the simulation, while the four interpreting students took turns interpreting two simulated encounters and interpreting about 15 minutes each. To prepare for this encounter, interpreting students curated and studied terminology associated with labor and post-partum, and different post-partum dialogues were prepared and practiced in class in the consecutive mode, both in the lab and in groups, with each student playing one role as patient, provider, or interpreter.

The learning goals of the simulation for interpreting students were defined as follows:

- Effectively prepare for an interpreting assignment (cognitive, professional, interpersonal)

- Effectively manage the flow of communication during a medical encounter (cognitive, interpersonal)

- Interpret accurately and effectively a 15-minute medical encounter (cognitive and linguistics)

2.1 Data Collection

Following Drugan (2017) in a similar study where social workers were trained on how to work with interpreters, a pre-intervention and a post-intervention survey was developed to measure the effectiveness of this intervention. The surveys were reviewed by a four faculty members from the Department of Spanish and Portuguese and the School of Nursing for content validity prior to the day of the simulation. Both groups of students accessed the pre- and post-activity surveys via a QR code. Then they completed them on their mobile devices before and after the pilot simulation activity while in the simulation lab.

The pre-survey for interpreter students included three open questions to assess the previous experience of students interpreting in a health care setting, what might make the TOSCE challenging, and what did students expect to gain from participating in the TOSCE, followed by two statements students had to evaluate with a Likert scale with 4-point values –Extremely High, Very High, High, Medium:

- My current level of understanding of the medical terminology used in perinatal care including by nurse-midwives is:
- My current level of confidence in my ability to accurately interpret in a perinatal clinical setting is:

The post-survey for interpreters included the following questions: two Likert scale questions with 5-point values –*Strongly Agree*, *Agree*, *Undecided*, *Disagree*,, *Strongly Disagree*, that measured if the student's understanding of medical terminology, specifically in the perinatal care setting, improved after the simulation, and if their confidence in interpreting in a clinical setting improved after participating in the simulation. There were also five open-ended questions covering topics such as the knowledge, strategies, and techniques learned in class that were most useful, a reflection on the challenges, the positives and the negatives of the experience, and how it helped students to work better with a provider.

The pre-intervention data for interpreting and WHNM students included two Likert scale questions about their understanding and confidence related to the use of medical interpreters and how to communicate with patients through an interpreter, as well as open-ended questions about expectations. Post-test data measured improvements in these areas following the simulation.

To appropriately plan for its future offerings of simulation activities focused on care for LEP, an analysis and evaluation of this pilot is presented here.

2.2 Data Analysis

A series of within-group and between-group analyses was conducted to evaluate the impact of our simulation-based intervention on both interpreting and WHNM students. The data consisted of pre- and post-test surveys from both groups. Before coding the data, Likert value points were reset to numerical scales, and analysis categories were renamed for clarity. To evaluate results, statistical analyses were carried out using RStudio for Statistical Computing (R Core Team, 2022), with tidyverse (Wickham et al., 2019) packages.

Pre- and post-intervention scores were compared within each group for the within-group analysis using paired t-tests. Specifically, the changes in interpreters' understanding of medical terminology and their confidence in interpreting were assessed. For nursing students, changes in their understanding of interpreter use and their confidence in using an interpreter were evaluated.

Independent t-tests were conducted to examine between-group differences in understanding and confidence scores between interpreting and nursing students. Pre- and post-test scores were calculated for each participant to determine the degree of change within each group. The resulting differences were then compared between the two groups to identify whether interpreting and nursing students exhibited statistically significant differences in their improvements, thereby assessing the relative effectiveness of the intervention on each group.

In addition to the quantitative analysis, qualitative data from open-ended survey responses were analyzed to gain deeper insights into the participants' experiences and perceptions. Specifically, responses about the challenges faced, useful strategies learned, and positive aspects of the simulation were examined through manual discourse analysis. Further, the four interpreting

students also provided extensive narratives about their experiences one week after the simulation, comprising a corpus of 2,143 tokens in total.

Qualitative responses were systematically reviewed, and key themes were identified. This process involved coding the data, where each response was tagged with relevant keywords or phrases representing core ideas. Once all responses were coded, the codes were grouped into broader themes. Further, sentiment analysis was carried out with the tool Lingmotif, a multi-language, powerful text analytics suite that calculates accurate text metrics that reflect the opinion expressed in a text[2]. This dual approach provided both thematic clarity and nuanced insights into participants' attitudes and perceptions, ensuring a comprehensive understanding of the qualitative data.

3 Results

3.1 Quantitative Analysis

The paired t-tests for interpreting students revealed significant improvements in their understanding of medical terminology and confidence after the simulation-based intervention. Specifically, the t-test for understanding of medical terminology showed a significant increase, with a t-statistic of -9.00 and a p-value of 0.0029, indicating that the interpreters' understanding of medical terminology improved notably post-intervention. Similarly, the paired t-test for confidence in interpreting also demonstrated a significant enhancement, yielding a t-statistic of -9.00 and a p-value of 0.0029, suggesting that the intervention had a statistically significant positive impact on the interpreters' confidence levels.

For WHNM students, the paired t-tests also revealed statistically significant improvements. The analysis showed a significant improvement in their understanding of interpreter use, with a t-statistic of -3.21 and a p-value of 0.0327. Moreover, a significant increase in confidence was revealed, indicated by a t-statistic of -4.00 and a p-value of 0.0161. These findings suggest that the intervention positively impacted the WHNM students' interpreter-related understanding of use.

In the between-group analysis, however, the independent t-tests aimed at comparing the changes in understanding and confidence between interpreting and WHNM students were unable to yield reliable results. Due to issues with data distribution, particularly the identical post-intervention scores in the WHNM group, the t-statistics and p-values were not available. This limitation suggests that a detailed between-group comparison could not be made with the current data. The small sample size and the nature of the data likely contributed to this issue, indicating that further exploration or a larger sample size might be needed for a more reliable between-group analysis.

3.2 Qualitative Analysis

Due to the small sample size, qualitative analysis of open-ended responses was done manually using discourse analysis methods. This analysis revealed several common themes, including

---

[2] Accessible through https://ltl.uma.es/ (Last accessed on September 9, 2024).

terminology challenges, practical strategies learned, and overall satisfaction with the simulation experience.

Prior to the simulation, interpreting students anticipated challenges related to advanced medical terminology and the fast-paced nature of clinical encounters. One student shared, "Being able to respond quickly enough since it might be a fast-paced encounter" was a concern. They hoped to gain practical experience, build confidence, and improve their interpreting skills. After the simulation, many found the strategies learned in class, such as interpreter positioning, note-taking, and managing distractions, to be particularly helpful. One student stated, "Placement of the interpreter, introductions to the patient and provider, navigating when the patient wants to have a side conversation, and most of all, understanding how an interpreter is part of this very personal interaction, but to stay out of the spotlight" were key takeaways. Overall, they valued the realistic scenario and reported increased confidence in their abilities. Another student reflected, "I got a real-life scenario of what it will be like to interpret in the medical field which is crucial for me since I don't have the experience doing so professionally."

Before the simulation, WHNM students expressed concerns about ensuring accurate information transfer and effectively communicating with patients through an interpreter. One student simply stated, "Making sure information is being translated correctly" as their main challenge. They aimed to learn strategies for optimizing interpreter services and building rapport with patients in interpreted encounters. Post-simulation, students highlighted the importance of eye contact, positioning, and clear communication. Reflecting on the experience, one student noted, "The importance of positioning when having a physical interpreter and speaking to the patient directly despite the person being there." They found the simulation valuable for experiencing real-time interpretation and identifying areas for improvement in their communication skills. Some students found the timing challenging, as one mentioned, "Timing was difficult to manage, but the smooth transition of information exchange was impressive." The simulation was overall well-received, with one student remarking, "This was a fun and useful exercise, and I think it should be included in future courses." The experience of working with interpreters in person, rather than through technology, was particularly valued, as another student stated, "It was nice to get experience in real-time, and these students did a fantastic job. I'm very impressed by their skills." Another student commented, "Though intimidating having the observers and getting feedback through debriefing was valuable since it shows areas of improvement."

3.2.1 Student Narratives

The topic analysis of the interpreting students' narratives revealed rich insights, emphasizing both the challenges and the learning experiences gained from this real-world practice. A strong theme throughout the narratives was the excitement and appreciation for engaging in "real-life" interpreting, particularly within the perinatal field, which grounded many students' interests in pursuing careers in medical or community interpreting. This hands-on experience allowed students to apply theoretical knowledge in a practical setting, confirming their commitment to advancing their skills and exploring relevant career paths.

However, the reflections also highlighted significant challenges, particularly in managing vocabulary and memory during the simulations. Students mentioned difficulties in recalling

specific medical terms, such as "redness" or "puckering her lips," which underscored the need for further study and preparation to enhance their basic medical vocabulary in both languages. Memory retention posed another challenge, with students struggling to balance notetaking with active listening, leading to moments where they felt they could have performed better in accurately interpreting all the information. The experience thus led to important realizations about areas for improvement and the necessity of continuous practice.

Preparation emerged as a crucial factor in the students' confidence and performance during the simulations. Many reflected on the value of the classwork, including terminology drills, skits, and discussions, which equipped them with essential tools to handle the challenges they faced. This preparation not only boosted their confidence but also helped them feel more capable and less anxious during the sessions. Collaboration with peers and the group nature of the simulation was another key element of the experience, as students observed and learned from each other's strengths—whether it was confidence, vocabulary mastery, or precision in interpretation. This peer learning fostered a sense of community and reinforced the idea that each interpreter could contribute unique skills to the team.

The importance of teamwork and professionalism in healthcare settings was also a theme in the reflections. Students valued the opportunity to work alongside future medical providers, noting the mutual support and collaboration between interpreters and healthcare professionals. This experience underscored the necessity of effective teamwork to ensure that patients receive the best possible care. Exposure to the realities of medical practice, such as the limited time allotted for LEP patients, further motivated students to sharpen their skills to contribute positively to patient outcomes.

Regarding the sentiment analysis performed with Lingmotif, students perceived the experience as highly beneficial, with a 78% positive text sentiment score and 75% text sentiment intensity. A total of 97 positive items were identified against 26 negatives. Among the positive items, the most frequent were "were able to", which indicates students' perception of their capacity to perform the task at hand; "help", which highlights their sense of service; "good", "do well", "accurately", and "collaborate", all of which highlight aspects of professional conduct and attitudes towards their role as interpreters. As for the negative items, "nervous" and "nerves" were the most frequent, indicating the psychological pressure students suffer when facing this type of situation, as well as "error" as one of their biggest fears.

4 Discussion

In alignment with Molina and Kasper (2019) and the principles of situated learning (González-Davies, M., & Enríquez-Raído, 2018 and Miner & Nicodemus, 2021), our results show the importance of increasing opportunities for curricular interventions that address how to work in language-discordant encounters with interpreters and other modalities and substantiates the need for including the simulation as part of both programs' ongoing learning activities.

In summary, the analysis revealed a statistically significant improvement in WHNM student *understanding* of interpreter use following the simulation-based intervention and their *confidence* in using interpreters. For interpreter students, data revealed significant improvements in their *understanding* of medical terminology and their *confidence* in interpreting after the simulation-

based intervention. However, their narratives, which they wrote one week later, revealed a more nuanced evaluation of their learning outcomes as well as the realization of learning gaps. The between-group comparisons showed no significant differences in the improvements between interpreters and midwives. Further research with larger sample sizes and complete paired responses would help to confirm these findings and provide more robust conclusions.

These findings highlight the value of practical, immersive training experiences in improving the skills and confidence of interpreters in healthcare environments. Such training helps student interpreters identify possible learning gaps and explore future career aspirations while allowing trainers direct observation and the ability to give feedback in real time or immediately after the session.

References

Alvarado Little, W. (2022). Language Access Plan for Limited English Proficient Individuals. New York State Department of Health. Available at: https://ogs.ny.gov/system/files/documents/2022/09/doh-lap-2022.pdf (Accessed: 03/09/2025).

Angelelli, C.V. (2006) 'Designing curriculum for healthcare interpreting education: A principles approach', in New approaches to interpreter education. Washington D.C.: Gallaudet University Press, (pp. 23–46).

Angelelli, C. (2019). *Healthcare interpreting explained*. London: Routledge.

Bonakdar Tehrani, M., Baird, K., Trajkovski, S., Kaplun, C., Bruce, T., and Kemp, L. (2023) 'Interpreter use in sustained nurse home visiting: interpreter experience and support', BMC Health Services Research, 23:143, (pp. 1-10).

Boyd, R.L. (n.d.) MEH: Meaning Extraction Helper (Version 2.3.02).

Coetzee, D., Pereira, A.G., Scheurer, J.M., and Olson, A.P. (2020). 'Medical student workshop improves student confidence in working with trained medical interpreters', Journal of Medical Education and Curriculum Development, 7, (pp. 1-5).

Drugan, J. (2017). 'Ethics and social responsibility in practice: Interpreters and translators engaging with and beyond the professions', The Translator, 23, (pp. 126–142).

Eslier, M. et al. (2023). 'Association between language barrier and inadequate prenatal care utilization among migrant women in the PreCARE prospective cohort study', European Journal of Public Health, 33, (pp. 403–410).

Falbo, C. (2013). La comunicazione interlinguistica in ambito giuridico. Temi, problemi e prospettive di ricerca. Trieste: EUT Edizioni Università di Trieste.

Falbo, C. (2020). 'Project-based learning through simulation: how to run a training session using role-play as a learning tool', in Teacher education for community interpreting and intercultural mediation. (pp. 156–174).

González-Davies, M. and Enríquez-Raído, V.E. (2018). 'Situated learning in translator and interpreter training: Bridging research and good practice', in Situated Learning in Translator and Interpreter Training. London: Routledge, (pp. 1–11).

Hlavac, J., & Harrison, C. (2021). Interpreter-mediated doctor-patient interactions: interprofessional education in the training of future interpreters and doctors. *Perspectives*, *29*(4), (pp. 572-590).

Hsieh, E. (2016). Bilingual health communication: Working with interpreters in cross-cultural care. London: Routledge.

Hsieh, E. (2021). Intercultural health communication: Rethinking culture in health communication. In *The Routledge Handbook of Health Communication* (pp. 441-455). London: Routledge.

Howes, L. (2022) 'Ethical dilemmas in community interpreting: interpreters' experiences and guidance from the code of ethics', Interpreter and Translator Trainer, 17) (pp. 1-18).

Kasten, M. J., Berman, A. C., Ebright, A. B., Mitchell, J. D., & Quirindongo-Cedeno, O. (2020). Interpreters in health care: a concise review for clinicians. *The American Journal of Medicine*, *133*(4), (pp. 424-428).

Khaw, S.M.L. et al. (2023). 'A qualitative study on community-based doulas' roles in providing culturally-responsive care to migrant women in Australia', Women and Birth, 36, (pp. e527–e535).

Krystallidou, D. (2023). Interprofessional education… Interpreter education, in or and: Taking stock and moving forward. In *The Routledge Handbook of Public Service Interpreting* (pp. 383-398). Routledge.

Lai, M. and Heydon, G. (2015). 'Vicarious Trauma Among Interpreters', International Journal of Interpreter Education, 7, (pp. 3-22)

Le Neveu, M., Berger, Z. and Gross, M. (2020). 'Lost in translation: the role of interpreters on labor and delivery', Health Equity, 4, (pp. 406–409).

Luton, M., Allan, H.T. and Kaur, H. (2022). 'Deaf women's experiences of maternity and primary care: An integrative review', Midwifery, 104: 103190, (pp. 1-6).

Maher, S., Crawford-Carr, A. and Neidigh, K. (2012). 'The role of the interpreter/doula in the maternity setting', Nursing for Women's Health, 16, (pp. 472–481).

Korpal, P., & Mellinger, C. D. (2022). Self-care strategies of professional community interpreters: An interview-based study. *Translation, Cognition & Behavior*, *5*(2),(pp. 275-299).

Miner, A. and Nicodemus, B. (2021). Situated learning in interpreter education: From the classroom to the community. Berlin: Springer.

Molina, R.L. and Kasper, J. (2019). 'The power of language-concordant care: a call to action for medical schools', BMC Medical Education, 19:378, (p.1-5).

Nadakuditi, S. (2023). 'Impact of Language Barrier on Medication Adherence among Non-English-Speaking Patients', Journal of Technology Innovation, 4, [pp. 1-5].

New Jersey Department of Community Affairs (2022). Language Access Plan (LAP). Trenton: New Jersey Department of Community Affairs.

New Jersey Hospital Association (2021). 'Chart - vulnerable communities', New Jersey's Vulnerable Communities Database. Available at: https://www.njha.com/Vulnerable-communities (Accessed: 03/09/2025).

Oscarsson, M.G. and Stevenson-Ågren, J. (2020). 'Midwives experiences of caring for immigrant women at antenatal care', Sexual and Reproductive Healthcare, 24, (p. 1-6).

Riggs, E., Brown, S., Szwarc, J., Nesvadba, N. and Yelland, J. (2021). 'Teach-back in interpreter-mediated consultations: reflections from a case study', Health Literacy Research and Practice, 5, (pp. e256–e261).

Sentell, T., Chang, A., Ahn, H.J. and Miyamura, J. (2016). 'Maternal language and adverse birth outcomes in a statewide analysis', Women's Health, 56, (pp. 257–280).

Potowski, K., & Shin, N. (2018). *Gramática española: variación social*. London: Routledge.

U.S. Census Bureau (2022). Detailed Household Language by Household Limited English Speaking Status. American Community Survey, ACS 1-Year Estimates Detailed Tables, Table B16002.

Wang, Xi and Lázaro Gutiérrez, R. (2021). 'Healthcare interpreting: filling the training gap to achieve required competences', Current Trends in Translation Teaching and Learning E, 8, (pp. 124–153).

Zhang, C. X., Crawford, E., Marshall, J., Bernard, A., & Walker-Smith, K. (2021). Developing interprofessional collaboration between clinicians, interpreters, and translators in healthcare settings: outcomes from face-to-face training. *Journal of interprofessional care*, *35*(4), (pp. 521-531).