Simulation-Based Approach in Enhancing Cultural Competence of Nursing Students

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ABSTRACT

Background: Cultural competence is an important skill among nursing students in providing safe, respectful, and effective patient-centered care in diverse healthcare settings. However, most nursing students have limited exposure to patients from different cultural backgrounds, which may affect their readiness to apply cultural knowledge in actual clinical practice. Most studies focus on traditional teaching methods such as lectures and discussions, while experiential approaches remain less explored. Simulation-based learning provides an interactive and controlled environment where students can practice communication, decision-making, and culturally-sensitive care.

Objective: This study aimed to determine how a simulation-based approach contributes to the enhancement of cultural competence among nursing students.

Methods: The study used a quasi-experimental pre- and post-test design to examine the effect of a simulation-based approach on the cultural competence of twenty-five nursing students who were selected through purposive sampling. A three-station simulation involving culturally diverse patient scenarios using standardized patients (SPs) was conducted. Pre- and post-test assessments were administered using the adopted Better and Effective Nursing Education for Improving Transcultural Nursing Skills, Cultural Competence, and Cultural Sensitivity Tool (BENEFITS - CCCSAT) to measure the changes in knowledge, skills, and attitudes. Data were analyzed using descriptive statistics, such as weighted mean and standard deviation, and inferential statistics to determine significant differences between pre-test and post-test results.

Results: The simulation-based approach positively enhanced the cultural competence of nursing students across all five domains. Three domains showed statistically significant improvement after the intervention: Challenges and Barriers to Providing Culturally Competent Care ($t = -4{,}21$, $p = 0.0003$), Culturally Sensitive Communication ($t = -2.54$, $p = 0.0178$), and Perceived Meaning of Cultural Care ($t = -3.30$, $p = 0.0030$). The remaining two domains, Respect for Cultural Diversity and Achieving Cultural Competence, showed positive but non-significant increases ($p > 0.05$), attributed to the participants' already high baseline competence prior to the intervention.

Conclusion: This study demonstrated that the simulation based approach using standardized patients significantly enhanced the cultural competence of nursing students, particularly in recognizing challenges and barriers, improving culturally sensitive communication, and deepening the perceived meaning of cultural care, highlighting its potential for integration into nursing curricula.

Key words: Cultural competence, simulation-based learning, nursing students, culturally sensitive communication, cultural diversity, quantitative research, nursing education

The increasingly diverse patient population in healthcare, particularly in multicultural countries such as the Philippines, highlights the demand to develop culturally competent nurses, which involves the ability to understand one's own beliefs and practices while effectively interacting with individuals from different backgrounds. Cultural competence is deemed important in ensuring safe, respectful, and high-quality healthcare delivery. Studies have shown

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that cultural competence among nursing students is often only at a moderate level. In 2024, a multicenter European study involving 168 nursing students by Sagarra-Romero et al. (2024) found that students demonstrated high cultural awareness but only moderate overall cultural competence. Similarly, a study conducted among 332 nursing students in the Philippines reported an average cultural competence score of 68.98 out of 100, suggesting that students still need further training to improve their skills. However, despite its importance, many nursing students have limited opportunities to translate theoretical learning into actual clinical practice.

Various teaching strategies, such as lectures or classroom-based discussions, help cultivate cultural knowledge and awareness but often fall short in developing practical skills and sensitivity. Research indicates that nearly 48.4% of nursing students report only moderate confidence in providing culturally competent care, highlighting the limitations of purely theoretical instruction, highlighting the need for more experiential approaches, such as simulation-based learning. Through simulation, students can engage in realistic, culturally diverse scenarios to practice communication, decision-making, and culturally sensitive care in a controlled, safe environment.

This study aims to assess the level of cultural competence of fourth-year nursing students through a simulation-based approach. It seeks to evaluate how simulation-based learning affects students' cultural awareness, knowledge, and responsiveness.

MATERIALS AND METHODS

Research Design

This quantitative study utilized a quasi-experimental pre-test and post-test design to determine the level of cultural competence among fourth-year nursing students after exposure to a simulation-based approach. This research design allowed the researchers to assess the potential causal relationship between variables without the use of randomization (Hassan, 2022). Guided by this design, the study tested the null hypothesis (H_0) that there is no significant difference in the level of cultural competence of fourth-year nursing students before and after exposure to a simulation-based approach.

Study Population and Site

The study included fourth-year nursing students of academic year 2025- 2026 who were willing to participate due to their advanced clinical knowledge and extensive clinical exposure. Participants were excluded if they had prior cultural training, participated in pilot testing, or belonged to the specific cultural groups of the study to ensure the consistency of results. Withdrawal was allowed at any time without penalty, and those who failed to complete or follow simulation instructions and assessments. The study was conducted at a university in Fairview, Quezon City, because of its holistic and innovative education along with their supportive research environment and resources suitable for execution and grounds for simulation-based training. The same university offered a newly opened Objective Structured Clinical Examination (OSCE) hub, where students were able to perform their return demonstration, which was utilized for the simulation assessments.

Sampling Technique and Methodology

The study utilized a purposive sampling, a non-probability method where participants were selected based on the given inclusion and exclusion criteria, focusing on fourth-year nursing students with prior exposure to medical, surgical, and palliative care, from which 25 participants were chosen.

Research Instrument

The study used the adopted BENEFITS Cultural Competence and Culturally Sensitive Assessment Tool (BENEFITS-CCCSAT) by Yava et al. (2023). The tool consists of 26 items across five dimensions: Respect for Cultural Diversity (6 items), Challenges and Barriers Providing Culturally Competent Care (4 items), Achieving Cultural Competence (3 items), Culturally Sensitive Communication (5 items), and Perceived Meaning of Cultural Care (8 items) and uses a Likert Scale. Permission to use the instrument was obtained, and it took approximately 10-15 minutes to complete.

Validity

Content validity was obtained through expert review by a psychometrician, statistician, and nurse educator. The developers of the study established the

tool's content validity using the Davis Method, with a Content Validity Index above 0.80. Construct validity was supported through factor analysis, confirming five dimensions, along with strong statistical indicators (e.g., KMO = 0.8883, significant Bartlett's Test of Sphericity = $\chi^2 = 9683.68$, $p < 0.01$, Average Variance Extracted (AVE) = > 0.50, and Composite Reliability (CR) = 0.82 to 0.94)

Reliability

The tool demonstrated an overall Cronbach's alpha of 0.828 and strong subscale values. Test–retest results showed excellent stability (ICC = 0.951). Additionally, pilot testing was done to further confirm the tool's reliability, having a high internal consistency ($\alpha = 0.883–0.961$).

Study Procedure

Securing Approvals

Formal letters of approval were requested from the Dean of Nursing, the Data Protection Officer, and the Academic Coordinator of Nursing. These approvals guaranteed the ethical and appropriate conduct of the study, adhering to the priorities established by the National Unified Health Research Agenda (NUHRA), as well as compliance with academic and data protection requirements.

Recruitment of Participants and Informed Consent Forms

The researchers formally requested the masterlist of each section of level four from the research adviser. Assistance from the research adviser, co-investigator, and level four representative was requested to recruit possible participants following the inclusion and exclusion criteria of the study.

Formal messages of invitation and informed consent forms via Google Forms were forwarded to the class presidents of each section and were disseminated through Telegram. This was done to ensure that every participant fully understands the study before giving consent.

Scheduling of the Simulation

The schedule for the simulation was prepared by the researchers and submitted to the co-investigator for approval to ensure the availability of the OSCE Training Hub. After it was approved, the finalized schedule, which included both morning and afternoon sessions, was sent via email.

Data Collection

Data were collected through a process involving briefing, pre-test, simulation proper, debriefing, and post-test.

Briefing

A briefing session was conducted before the simulation to orient the participants on the simulation process, objectives, roles, time allocation, and guidelines to be followed. This ensured that the participants were prepared and understood what was expected of them during the simulation.

Pre-test

Before the simulation began, the participants completed a pre-test using the adopted Better and Effective Nursing Education for Improving Transcultural Nursing Skills, Cultural Competence, and Cultural Sensitivity Tool (BENEFITS - CCCSAT) to assess their baseline knowledge and competence.

Simulation Proper

The simulation consisted of three stations. Station 1 featured a Badjao patient in a medical scenario that focused on establishing culturally sensitive communication, respect, and rebuilding trust with the patient. Station 2 involved a Tausug patient in a surgical scenario, emphasizing respect for religious beliefs, modesty, and family involvement in the care process. Station 3 presented a T'boli patient in a palliative care scenario, which focused on providing culturally appropriate end-of-life care and empathy towards indigenous practices and beliefs.

These scenarios were validated by a faculty member from the institution and the University of the Philippines - Institute of Islamic Studies.

Each participant rotated across the three stations, with 10 minutes allotted per station, for a total duration of 30 minutes. Standardized patients (SPs) were used to ensure a realistic portrayal of the culture and clinical scenarios. The simulation was conducted during the third week of February.

Debriefing

Following the simulation, a debriefing session was conducted by the co-investigator. It lasted approximately five minutes and was conducted individually after the last station. The purpose of debriefing was to evaluate the responses, performance, and understanding of each scenario of the participants.

Post-test

A post-test using the adopted Better and Effective Nursing Education for Improving Transcultural Nursing Skills, Cultural Competence, and Cultural Sensitivity Tool (BENEFITS - CCCSAT) was administered to determine the improvement in their cultural competence following the intervention.

Data Processing

All data obtained from the pre-test and post-test were compiled and encoded by the researchers. The data were then forwarded to the statistician for statistical analysis to ensure accuracy and objectivity in interpreting the results.

Data Management and Analysis

Each participant was assigned an identification code to ensure anonymity. Responses from the BENEFITS - CCCSAT questionnaire were encoded and consolidated using Google Sheets. Data from Google Forms were automatically stored in a Google Drive, accessible only to the researchers and statistician. The consolidated data were used for statistical analysis and interpretation.

Statistical Treatment

Data were analyzed using both descriptive and inferential statistics. The weighted mean and standard deviation were used to determine the level and consistency of the responses of the participants based on their pre-test and post-test.

The mean difference was computed to compare the pre-test and post-test results. A paired t-test was used to determine whether there was a significant difference between the scores before and after the intervention. A p-value of 0.05 was used as the level of significance. Results with a p-value less than 0.05 were considered statistically insignificant.

Ethical Considerations

The study ensured ethical compliance by confirming that researchers had no conflicts of interest. Participants were fourth-year nursing students who were considered capable of providing informed consent. Risks were minimal, mainly mild stress during simulations, which were addressed through proper briefing and debriefing. Although no monetary compensation was given, participants gained professional learning and experience. Confidentiality was maintained according to the Data Privacy Act of 2012 by anonymizing data and using it only for academic purposes. Participation was voluntary with the option to withdraw at any time. Recruitment was conducted ethically through coordination with academic personnel, and the study upheld respect, dignity, and cultural sensitivity while preparing students for inclusive patient care.

RESULTS AND DISCUSSION

Level of Cultural Competence Among Nursing Students Before and After the Simulation-Based Intervention in Terms of:

Table 1 shows that nursing students already demonstrate a high level of Respect for Cultural Diversity before yielding an overall pre-mean of 3.80 (SD = 0.44) and a post-mean of 3.97 (SD = 0.73), both interpreted as High, with a mean difference of 0.17. While the increase was not statistically significant, it reflects a positive reinforcing effect of simulation on students' existing knowledge base.

The item "I know the steps to resolve conflict between a patient's cultural practices and unit routines while maintaining safety" recorded the highest mean difference (pre: 3.56, post: 4.04; difference: 0.48), suggesting that simulation effectively addressed practical gaps that traditional lecture-based teaching could not fully cover, as supported by Qin and Chaimongkol (2021) and Walkowska et al. (2023). The item "I know when and how to arrange a trained medical interpreter instead of relying on companions or staff ad-hoc interpreting" showed the most notable individual shift, moving from Moderate (3.36) to High (3.80), an increase of 0.44 points, suggesting that students gained practical awareness of interpreter use that classroom instruction alone does not adequately address (Sinclair, 2020; Johnson, 2020). Overall, the results are consistent with Balucas et al. (2025), who found that nursing students in the Philippines possess

Table 1. Weight mean and standard deviation of respect for cultural diversity.

Item	Pre WMean	Pre SD	Interpretation	Post WMean	Post SD	Interpretation	Difference
I know common cultural and religious practices in our patient population that can affect care (e.g., diet, fasting, modesty, prayer times)	3.88	0.53	*High*	3.84	0.90	*High*	-0.04
I know how to incorporate a patient's cultural or religious preferences into the nursing care plan and orders	3.88	0.60	*High*	3.88	1.01	*High*	0
I know the core elements of culturally appropriate care used in our facility (assessment, communication, respect, adaptation)	4.08	0.49	*High*	4.08	0.81	*High*	0
I know the steps to resolve conflicts between a patient's cultural practices and unit routines while maintaining safety (e.g., timing of procedures, visiting rules)	3.56	0.65	*High*	4.04	0.89	*High*	0.48
I know what culturally relevant information should be documented and communicated during handover (e.g., language, beliefs, decision makers)	4.04	0.68	*High*	4.16	0.75	*High*	0.12
I know when and how to arrange a trained medical interpreter instead of relying on companions or staff ad-hoc interpreting	3.36	0.70	*Moderate*	3.80	1.04	*High*	0.44
Overall:	**3.80**	**0.44**	***High***	**3.97**	**0.73**	***High***	**0.17**

1.00 - 1.80 (Very Low), 1.81 - 2.60 (Low), 2.61 - 3.40 (Moderate), 3.41 - 4.20 (High), 4.21 - 5.00 (Very High)

a strong understanding of how ethnicity and health traditions influence patient outcomes.

The simulation served primarily to reinforce rather than expand this domain, with the most meaningful gains occurring in items requiring practical application.

Table 2 presents the domain with the most substantial improvement across all five dimensions. The pre-mean of 2.75 (SD = 0.76), interpreted as Moderate, increased to a post-mean of 3.58 (SD = 0.81), interpreted as High, with a mean difference of 0.83. The shift from Moderate to High indicates that students moved from unconscious incompetence to conscious awareness of the complexities involved in culturally diverse patient care, the primary purpose of simulation-based interventions in developing cultural competence.

The item "It is challenging for me to provide care to a patient from a different ethnic group" recorded the greatest increase ($\Delta = 0.96$), followed by "It is challenging for me to provide care to a patient from a different religion" ($\Delta = 0.92$). These gains support Johnson (2020), who emphasized how simulation-based learning provides students with the opportunity to immersively experience and practice communication and empathy in realistic, diverse cultural settings, allowing them to become more aware of complexities that cannot be fully appreciated through reading alone. The increase also suggests that reflective debriefing allowed students to confront preconceived notions and stereotypes, strengthening their openness toward culturally diverse patients (Lucktar-Flude et al., 2022).

The item "I have concerns about culturally competent care" and item on caring for patients from different cultural backgrounds recorded relatively lower increases ($\Delta = 0.80$ and $\Delta = 0.64$, respectively), possibly due to students having some prior baseline knowledge with cultural diversity before the simulation. However, the continued

Table 2. Weighted mean and standard deviation of challenges and barriers providing cultural competent care.

Item	Pre WMean	Pre SD	Interpretation	Post WMean	Post SD	Interpretation	Difference
I have concerns about culturally competent care	2.88	0.83	*Moderate*	3.68	0.75	*High*	0.8
It is challenging for me to provide care to a patient from a different cultural background.	2.88	0.93	*Moderate*	3.52	0.87	*High*	0.64
It is challenging for me to provide care to a patient from a different ethnic group	2.72	1.06	*Moderate*	3.68	0.95	*High*	0.96
It is challenging for me to provide care to a patient from a different religion	2.52	0.87	*Low*	3.44	1.04	*High*	0.92
Overall:	**2.75**	**0.76**	***Moderate***	**3.58**	**0.81**	***High***	**0.83**

1.00 - 1.80 (Very Low), 1.81 - 2.60 (Low), 2.61 - 3.40 (Moderate), 3.41 - 4.20 (High), 4.21 - 5.00 (Very High)

presence of concerns may also reflect persistent structural barriers such as language differences and limited resources, consistent with findings by Barral (2023) and Ilarde et al. (2023), which suggest that cultural competence requires ongoing exposure and reinforcement rather than a single intervention. These findings align with Leininger's Transcultural Nursing Theory, which shows the importance of awareness, attitude, knowledge, and skills in achieving culturally congruent care.

Table 3 shows a pre-mean of 3.84 (SD = 0.46) and a post-mean of 4.04 (SD = 0.80) for Achieving Cultural Competence, both interpreted as High, with a mean difference of 0.20. The increase under this domain may be attributed to students' preexisting knowledge of competence, suggesting that the simulation served as reinforcement rather than initial exposure to these concepts.

The items "I am capable of using cultural competence in the nursing process" and "I understand the concept of cultural competence" each increased by 0.28 points, indicating that the simulation was effective in strengthening students' ability to translate prior knowledge into practical application. This aligns with Johnson (2020), who stated that simulation-based learning enables bridging the gap between theory and practice, and with Qin and Chaimongkol (2021), who found that simulation enhances critical thinking, communication, and clinical reasoning when students apply knowledge to actual scenarios.

The items "I understand the concept of transcultural nursing" recorded the smallest increase ($\Delta = 0.04$), which is attributed to students' prior familiarity with the concept through their nursing curriculum. Despite the minimal increase, the item maintained a High interpretation, supporting Licen and Prosen (2023), who noted that nursing students may demonstrate high levels of cultural knowledge but vary in application and sensitivity, suggesting that simulations have greater impact on developing practical understanding than on reinforcing basic conceptual knowledge. These results support Leininger's Transcultural Nursing Theory, which emphasizes that knowledge, skills, and attitude must be collectively developed to deliver culturally congruent care.

The domain of Culturally Sensitive Communication showed a significant overall improvement, with the pre-mean of 3.05 (SD = 0.65), interpreted as Moderate, increasing to a post-mean of 3.43 (SD = 0.75), interpreted as High, with a mean difference of 0.38 ($p = 0.178$). This shift from Moderate to High indicates that the simulation-based approach effectively improved students' confidence and perceived ability in cross-cultural communication, moving them from foundational awareness to a more practical informed understanding of culturally sensitive communication in clinical practice.

The item "I think it is important to find an interpreter for a patient who is unable to speak my language" recorded the highest post-mean of 4.80

Table 3. Weighted mean and standard deviation of achieving cultural competence

Item	Pre WMean	Pre SD	Interpretation	Post WMean	Post SD	Interpretation	Difference
I am capable of using cultural competence in the nursing process	3.60	0.58	*High*	3.88	0.78	*High*	0.28
I understand the concept of "cultural competence"	3.92	0.57	*High*	4.20	0.82	*High*	0.28
I understand the concept of "transcultural nursing"	4.00	0.50	*High*	4.04	0.93	*High*	0.04
Overall:	**3.84**	**0.46**	***High***	**4.04**	**0.80**	***High***	**0.20**

1.00 - 1.80 (Very Low), 1.81 - 2.60 (Low), 2.61 - 3.40 (Moderate), 3.41 - 4.20 (High), 4.21 - 5.00 (Very High)

Table 4. Weighted mean and standard deviation of culturally sensitive communication

Item	Pre WMean	Pre SD	Interpretation	Post WMean	Post SD	Interpretation	Difference
I have concerns about communicating with the family of a patient from a different cultural background	2.68	0.80	*Moderate*	3.12	1.05	*Moderate*	0.44
I have concerns about communicating with the family of a patient of a different religion	2.68	0.85	*Moderate*	3.04	1.17	*Moderate*	0.36
I have concerns about integrating the family of a patient from a different culture into the overall process of care provision	2.96	1.06	*Moderate*	3.12	1.17	*Moderate*	0.16
I have concerns about integrating the family of a patient of a different religion into the overall process of care provision	2.76	1.05	*Moderate*	3.08	1.12	*Moderate*	0.32
I think it is important to find an interpreter for a patient who is unable to speak my language	4.16	0.62	*High*	4.80	0.50	*Very High*	0.64
Overall:	**3.05**	**0.65**	***Moderate***	**3.43**	**0.75**	***High***	**0.38**

1.00 - 1.80 (Very Low), 1.81 - 2.60 (Low), 2.61 - 3.40 (Moderate), 3.41 - 4.20 (High), 4.21 - 5.00 (Very High)

(SD = 0.50), interpreted as Very High, and the most substantial improvement (Δ = 0.64; pre: 4.16). The Badjao station, involving a patient with limited proficiency in the dominant language, and the Tausug surgical station, where language barriers complicate pre-operative education, placed students in direct encounters where communication breakdowns had real consequences for patient safety. These experiences reinforced the insufficiency and potential danger of relying on family members for translation. As Agga (2022) discussed, language barriers are among the primary challenges experienced by nurses in culturally diverse settings, which can obstruct effective communication and limit appropriate healthcare delivery.

Items related to communicating with and integrating families from different cultural or religious backgrounds remained within the Moderate range post-intervention (post-means: 3.04-3.12), indicating that while students became more aware of

these challenges through simulation, they still lack practical strategies for managing the emotionally and culturally complex dynamics of multicultural family interactions.

The T'boli palliative care scenario, which required students to navigate conflicting wishes between the patient and her daughter, illustrated the difficulty of balancing individual patient autonomy and collective family decision-making on culturally sensitive care. As Sinclair (2020) emphasized, lecture-based training alone does not adequately prepare students for such real-world situations. These findings highlight the need for sustained varied experiential learning beyond a single simulation exposure consistent with Ilarde et al. (2023).

Table 5 shows that Perceived Meaning of Cultural Care already registered Very High before the simulation (pre-M = 4.35, SD = 0.40) and further increased significantly to post-M = 4.62 (SD = 0.40), with a mean difference of 0.27 ($t = -3.30$, $p = 0.0030$). Students entered the simulation with a strong disposition toward cultural care, and the intervention deepened their appreciation for its clinical and ethical significance. The most improved item involved multidisciplinary team (MDT) involvement for patients from different religions ($\Delta = 0.52$), indicating that the simulation highlighted the value of collaborative, culturally informed care. These findings strongly support Leininger's Transcultural Nursing Theory, which emphasizes the centrality of cultural values to meaningful nursing care (Nuuyoma et al., 2024). The statistically significant improvement in this domain aligns with Walkowska et al. (2023), who found that SP-based simulations enhance students' attitudes, empathy, and cultural awareness beyond technical skills alone.

Table 5. Weighted mean and standard deviation of perceived meaning of cultural care

Item	Pre WMean	Pre SD	Interpretation	Post WMean	Post SD	Interpretation	Difference
I consider meeting people of different religions important for gaining of cultural competence	4.48	0.51	Very High	4.72	0.46	*Very High*	0.24
I consider the involvement of individual members of a multidisciplinary team in the care for a patient from a different culture important	4.32	0.48	Very High	4.80	0.41	*Very High*	0.48
I consider the involvement of individual members of a multidisciplinary team in the care for a patient from a different ethnic group important	4.36	0.57	Very High	4.76	0.44	*Very High*	0.40
I consider the involvement of individual members of a multidisciplinary team in the care of a patient of a different religion important	4.28	0.46	Very High	4.80	0.41	*Very High*	0.52
I consider trying to communicate with the patients in their mother language important	4.08	0.64	High	4.24	0.72	*Very High*	0.16
I perceive meeting a person from a different culture (even during care provision) as an opportunity to develop my cultural competence	4.48	0.51	Very High	4.52	0.59	*Very High*	0.04
I perceive meeting a person of a different religion (even during care provision) as an opportunity to develop my cultural competence	4.52	0.51	Very High	4.52	0.59	*Very High*	0
I try to perceive the requirements and particularities related to the protection of privacy during the provision of care to persons of a different religion.	4.24	0.66	Very High	4.56	0.51	*Very High*	0.32
Overall:	**4.35**	**0.40**	***Very High***	**4.62**	**0.40**	***Very High***	**0.27**

1.00 - 1.80 (Very Low), 1.81 - 2.60 (Low), 2.61 - 3.40 (Moderate), 3.41 - 4.20 (High), 4.21 - 5.00 (Very High)

Significant Difference in the Cultural Competence of Nursing Students Before And After Exposure to a Simulation-Based Approach

Table 6 shows the paired t-test results for all five areas. Three areas showed clear improvement ($p < 0.05$): Challenges and Barriers ($p = 0.0003$), Culturally Sensitive Communication ($p = 0.0178$), and Perceived Meaning of Cultural Care ($p = 0.0030$), so the null hypothesis was rejected for these. Two areas, Respect for Cultural Diversity ($p = 0.2565$), and Achieving Cultural Competence ($p = 0.1923$), did not show significant change, so the null hypothesis was accepted. The improvements in the three areas show that the simulation helped address the gap between theory and real-life practice. Through interaction with Tausug, Badjao, and T'boli standardized patients, students experienced real cultural challenges, such as language differences, religious practices (like Ramadan fasting), and traditional health beliefs. This helped them achieve conscious competence, using the simulation as an essential cultural encounter in the Model of Campinha-Bacote to develop confidence in interaction (Walkowska et al., 2023; Ton et al., 2024). On the other hand, Achieving Competence and Respect for Diversity demonstrated non-significant improvement, indicating a ceiling effect among senior FEU-NRMF students who already had a high ethical baseline based on the Theory of Leininger. According to the Experiential Learning Theory by Kolb, the simulation was more of a stimulus to Reflective Observation than simple value-shifting, which implies that although the intervention was effective in closing the theory-practice gap in skills, more value-based qualities need to be reinforced in the curriculum over the long term.

Simulation-Based Approach for Cultural Competence

The findings of the study show that the simulation-based approach positively affects the cultural competence of nursing students according to the overall increase in post-intervention scores, indicating that students demonstrated a strong level of cultural competence after exposure to simulation-based approach. This suggests that simulation was effective in enhancing students' ability to provide culturally appropriate care in clinical settings. As to changes within each domain, indicators significantly increased

Table 6. Pre-test and post-test latent-level descriptive statistics and paired t-test results

Domain	Pre Mean	Pre SD	Post Mean	Post SD	Difference	t	p	H_0	Interpretation
Respect for Cultural Diversity	3.80	0.44	3.97	0.73	0.17	-1.16	0.2565	Accept	Not Significant
Challenges and Barriers to Providing Culturally Competent Care	2.75	0.76	3.58	0.81	0.83	-4.21	0.0003	Reject	Significant
Achieving Cultural Competence	3.84	0.46	4.04	0.80	0.20	-1.34	0.1923	Accept	Not Significant
Culturally Sensitive Communication	3.05	0.65	3.43	0.75	0.38	-2.54	0.0178	Reject	Significant
Perceived Meaning of Cultural Care	4.35	0.40	4.62	0.40	0.27	-3.30	0.0030	Reject	Significant

and some of them slightly changed positively. The domain on Challenges and Barriers to Providing Culturally Competent Care showed a significant shift from Moderate to High. The two other domains related to communicating and comprehending cultural care demonstrated statistically significant improvements. However, domains such as respect for cultural diversity and achieving cultural competence showed minimal changes. These advancements are directly attributable to the three simulation scenarios, which immersed students in culturally detailed ethical dilemmas encountered within diverse healthcare environments. The cases effectively use barriers corresponding to the specified domains, which requires active student participation, decision-making, and analysis on culturally sensitive scenarios. As it follows from the data obtained during the process of research, simulation-based approach is effective mostly in those domains that include practical actions and situational understanding. This approach allows students to identify cultural barriers, apply communication strategies, and contextualize patients' cultural characteristics when providing care. This is supported by literature, which highlights that simulation enhances communication skills, empathy, and clinical decision-making and helps bridge the theoretical-practical gap (Ton et al., 2024; Qin & Chaimongkol, 2021; Johnson, 2020; Ilarde et al., 2023).

CONCLUSION & RECOMMENDATIONS

This study demonstrated that the simulation based approach using standardized patients significantly enhanced the cultural competence of fourth year nursing students. The intervention showed statistically significant enhancements in three domains: Challenges and Barriers to Providing Culturally Competent Care ($p = 0.0003$), Culturally Sensitive Communication ($p = 0.0178$), and Perceived Meaning of Cultural Care ($p = 0.0030$). These findings indicate that simulation effectively addresses gaps that traditional lecture based teaching cannot fully cover, particularly in developing practical skills for real-world clinical encounters. The use of standardized patients representing Badjao, Tausug, and T'boli cultures exposed students to realistic barriers including language differences, religious obligations such as Ramadan fasting, and indigenous health beliefs. This immersive, experiential learning enabled students to move beyond theoretical knowledge into active application, bridging the gap between classroom instruction and clinical practice.

While Respect for Cultural Diversity and Achieving Cultural Competence showed no statistically significant change due to high baseline scores, the overall results confirm that simulation based approach is a valuable educational strategy for developing culturally responsive healthcare professionals. This research highlights the importance of integrating culturally specific standardized patient simulations into nursing curricula, particularly in the Philippine context where nurses encounter diverse ethnolinguistic groups.

Despite these positive findings, this study is limited by its small sample size, purposive sampling, single institution setting, reliance on self-reported data which may be subject to response bias, and lack of long-term follow-up to assess retention of cultural competence, which may affect generalizability. Future research should utilize larger sample sizes and incorporate nursing students from other institutions to improve generalizability. Studies may also explore other cultural groups beyond Badjao, Tausug, and T'boli, as well as alternative simulation conditions. Additionally, future researchers may explore alternative designs, such as a qualitative approach that explores participants' personal experiences and actual encounters. This would provide deeper insights into their perceptions, attitudes, and culturally influenced interactions in real-life settings.

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