

# Competency Development of Fourth-Year Nursing Students: Role of Clinical Learning Experiences in a Primary Hospital

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**Abstract**— This study examined the influence of related clinical learning experiences on the clinical competency of fourth-year nursing students affiliating at a primary hospital. Using a descriptive quantitative design, 105 students from six colleges of nursing were surveyed with a validated structured questionnaire assessing perceptions of clinical learning experiences and self-reported competency across safe and quality nursing care, health education, and research application. Results indicated that students generally reported positive clinical learning experiences (WM = 4.16, Agree) and high levels of competency (WM = 4.49, Competent). Pearson correlation analysis revealed significant positive relationships between overall clinical learning experiences and overall competency ( $r = 0.65$ ,  $p < 0.001$ ), including the roles of nurse teachers, learning atmosphere, and nursing care in clinical areas. These findings suggest that structured, supportive, and experiential clinical learning environments significantly enhance nursing students' practical skills, confidence, and readiness for professional practice. Based on the results, it is recommended that nursing programs strengthen preceptor involvement, promote student-centered learning environments, and provide increased opportunities for hands-on practice and research engagement.

**Keywords**— Clinical competency, Nursing students, Clinical learning experience, Experiential learning, Primary hospital.

## I. INTRODUCTION

Nursing education is fundamentally grounded in the integration of theoretical knowledge with practical clinical experience. The clinical learning environment is critical for developing the competencies required for safe, effective, and holistic patient care. Competency development among nursing students encompasses technical skills, critical thinking, clinical judgment, communication, and research application, which are essential to prepare graduates for professional practice in complex healthcare settings (Saarikoski et al., 2022; Tegegne et al., 2024). Clinical learning experiences, including structured supervision, hands-on patient care, and engagement with interdisciplinary teams, are pivotal in shaping these competencies (Amoo & Enyan, 2022; Idanan et al., 2025).

The clinical learning environment has been recognized as a multifaceted construct that includes the role of the nurse teacher, the organizational and social climate, and the quality of nursing care provided in clinical

settings (Visiers-Jiménez et al., 2021; Zhang et al., 2022). Nurse instructors and preceptors play a crucial role in guiding students' practical application of theory, fostering critical thinking, and supporting professional socialization. Studies have highlighted that effective mentorship and timely feedback from clinical supervisors directly enhance student confidence and competency acquisition (Juaton et al., 2024; Hoffman & Willemse, 2024). Conversely, inconsistent supervision, limited feedback, and lack of exposure to diverse clinical situations can impede skill development, reduce self-efficacy, and negatively affect students' preparedness for independent practice (Rantung, 2023; Boman et al., 2022).

The COVID-19 pandemic introduced unprecedented disruptions to traditional nursing education, prompting a shift to online and blended learning modalities (Basilaia & Kvavadze, 2020; Dhawan, 2020). While virtual learning facilitated the continuation of theoretical instruction, it limited hands-on clinical

practice, reducing opportunities for experiential learning and direct patient care (Konrad et al., 2020; Bryan et al., 2022). Research indicates that nursing students faced challenges such as anxiety, limited clinical exposure, and reduced confidence in their competencies due to altered or restricted clinical placements (Aguinaldo et al., 2021; Ulenaers et al., 2021). Despite these challenges, studies also show that well-structured online simulations and virtual case studies can partially mitigate gaps in skill acquisition, particularly when integrated with guided mentorship and structured feedback (Chang et al., 2025; Luk et al., 2024).

Clinical competency encompasses multiple domains essential for professional practice. Safe and quality nursing care includes the correct execution of physician orders, infection control, proper patient handover, informed consent, and accurate documentation (Şahin et al., 2021; Workneh et al., 2024a). Health education requires nurses to communicate effectively, provide patient and family education, and encourage self-care and positive behavioral changes (Eustaquio, 2022; Falguera et al., 2025). Research application skills enable students to engage in evidence-based practice, participate in data gathering, and critically analyze outcomes to inform care decisions (Buenaseda et al., 2021; Mousavi et al., 2024). Together, these domains reflect the holistic competency profile expected of graduating nursing students.

Empirical studies have demonstrated a positive correlation between high-quality clinical learning experiences and enhanced competency development. Nursing students who report supportive clinical environments, active engagement with preceptors, and exposure to diverse patient care situations consistently exhibit higher levels of clinical reasoning, procedural skills, and confidence (Saarikoski et al., 2022; Yoeum et al., 2024). For instance, the CLES+T (Clinical Learning Environment, Supervision and Nurse Teacher) scale has been internationally validated to assess the influence of supervision and teaching strategies on nursing student competencies, highlighting the importance of structured mentorship and constructive feedback (Saarikoski et al., 2022).

In the Philippine context, studies have underscored the significance of clinical learning experiences for competency development among nursing students. Research by Dello et al. (2024) found that simulation-based clinical training improved students' proficiency and confidence, while Ramos et al. (2025) demonstrated that self-efficacy is strongly associated with perceived clinical competency in nursing students. Similarly, Cabanizas et al. (2024) linked learning styles to variations in competency outcomes, suggesting that personalized approaches to clinical training can optimize skill acquisition. These findings highlight the interconnectedness of individual student characteristics, clinical environment quality, and structured mentorship in achieving competency development.

The COVID-19 pandemic further emphasized the need for flexible, adaptable, and resilient nursing education strategies. Commission on Higher Education (CHED, 2020) issued guidelines promoting flexible learning approaches, including blended modalities that combine online instruction with limited face-to-face clinical exposure. While these strategies ensured continuity of education, multiple studies reported that restricted hands-on practice affected students' readiness and confidence, particularly in psychomotor skills and research application (Boman et al., 2022; Bryan et al., 2022; Nchabeleng, 2024). Addressing these gaps requires evidence-based interventions to enhance the clinical learning environment and optimize opportunities for experiential learning even amidst disruptions.

Clinical learning experiences also play a role in professional identity formation and students' future intentions to practice nursing. Positive experiences, including inclusive teamwork, supportive supervision, and exposure to diverse patient cases, are associated with higher motivation, job satisfaction, and commitment to the profession (Zhang et al., 2022; Setiawan et al., 2024). Conversely, negative or inconsistent clinical experiences can diminish students' confidence and influence their decision to remain in the profession. Therefore, understanding the factors that shape clinical learning experiences is

critical for both educational outcomes and workforce sustainability.

Furthermore, research emphasizes that structured preceptorship, clear role definitions, and supportive feedback mechanisms are central to enhancing competency development (Juaton et al., 2024; Idanan et al., 2025). Nursing students who experience consistent supervision and constructive feedback demonstrate improved problem-solving skills, clinical reasoning, and independent decision-making. Similarly, opportunities to engage in evidence-based practice and research-oriented projects promote analytical thinking and reinforce the application of theoretical knowledge in real-world settings (Buenaseda et al., 2021; Mousavi et al., 2024).

Despite existing literature, gaps remain in the localized understanding of how related clinical learning experiences affect competency development among Filipino nursing students, particularly in primary hospital settings. While studies have explored simulation-based learning, virtual modalities, and flexible learning approaches, there is limited research examining the interplay of the nurse teacher role, learning atmosphere, and nursing care quality in shaping overall competency. Moreover, the correlation between students' perceptions of clinical learning experiences and their self-assessed competencies warrants further investigation to inform evidence-based interventions.

Given the critical role of competent nursing graduates in delivering safe, effective, and high-quality healthcare, it is imperative to examine factors that influence clinical competency development. This study seeks to evaluate the relationship between related clinical learning experiences and competency outcomes among fourth-year nursing students affiliating at a primary hospital. Focusing on the domains of safe and quality nursing care, health education, and research, the study aims to provide insights into effective strategies to enhance experiential learning, supervision, and mentorship in clinical education.

In summary, the integration of well-structured clinical learning experiences, supportive supervision, and opportunities for hands-on practice is fundamental to nursing education. Positive clinical learning environments contribute to higher competency levels, self-efficacy, and readiness for professional practice, while disruptions or inadequate supervision can impede skill acquisition and confidence (Amoo & Enyan, 2022; Falguera et al., 2025; Yoeum et al., 2024). This study addresses these critical issues by examining the influence of related clinical learning experiences on competency development, providing evidence to inform curricular design, clinical supervision practices, and policy recommendations for nursing education in the Philippines and similar contexts.

Therefore, this study aims to (1) evaluate the influence of related clinical learning experiences on the clinical competency of fourth-year nursing students affiliating at a primary hospital, (2) characterize the demographic profile of the respondents in terms of age, sex, and school affiliation, (3) assess the respondents' perceptions of their clinical learning experiences with specific focus on the role of the nurse teacher, the learning atmosphere, and nursing care in clinical areas, (4) determine the respondents' level of clinical competency across the domains of safe and quality nursing care, health education, and research application, (5) analyze the relationship between related clinical learning experiences and the level of clinical competency, and (6) provide evidence-based recommendations for improving clinical learning environments and enhancing competency development in nursing education.

## II. METHODOLOGY

This study employed a descriptive quantitative research design to examine the influence of related clinical learning experiences on the clinical competency of fourth-year nursing students affiliating at a primary hospital. The descriptive approach allowed the systematic collection and analysis of numerical data to characterize patterns in the respondents' clinical learning experiences and competency levels without manipulating variables. This design is particularly appropriate for assessing

naturally occurring conditions within a real-world clinical environment and for identifying trends and relationships between key variables such as supervision, learning atmosphere, and clinical skills development.

The study population consisted of 1,015 fourth-year nursing students from six colleges of nursing in the province of Albay who were affiliated with Legazpi City Hospital during the data collection period. Using convenience sampling, a total of 105 students who were available and willing to participate were included as respondents. Prior to data collection, ethical approval and institutional permissions were obtained, and all participants provided informed consent. Confidentiality and anonymity were strictly maintained, with no personal identifiers collected and all data securely stored to ensure ethical compliance and protection of participants' privacy.

Data were gathered using a structured, validated questionnaire adapted from established instruments to measure both related clinical learning experiences and clinical competency. The questionnaire utilized a five-point Likert scale to capture respondents' perceptions, with higher scores indicating more positive learning

experiences or higher competency levels. The related clinical learning experience was assessed through the domains of nurse teacher role, learning atmosphere, and nursing care in clinical areas, while competency was measured across safe and quality nursing care, health education, and research application. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize the data, and Pearson's Product-Moment Correlation Coefficient was applied to examine relationships between clinical learning experiences and competency, with significance set at  $p < 0.05$ .

### III. RESULTS & DISCUSSION

#### *Demographic Profile of Respondents*

Table 1 presents the demographic characteristics of the 105 fourth-year nursing students who participated in the study. The majority of respondents were aged 22–23 years (51%), followed by 20–21 years (33%), 24–25 years (11%), and 26–27 years (5%). This distribution indicates that most participants fall within the typical age range for final-year undergraduate nursing students, suggesting that they are at a critical stage for consolidating clinical competencies before transitioning into professional practice.

*Table 1. Demographic Profile of Respondents*

Variable	Category	f	%
Age	20–21	35	33
	22–23	53	51
	24–25	12	11
	26–27	5	5
Sex	Male	28	27
	Female	77	73
School Affiliation	School A	10	10
	School B	14	13
	School C	13	12
	School D	15	14
	School E	27	26
	School F	26	25

Regarding sex, the sample was predominantly female (73%), with males representing 27% of the respondents. This reflects the continued gender distribution trend within the nursing profession, where

female students typically outnumber male students. Such demographic composition may influence interpersonal dynamics, learning experiences, and participation in clinical settings, as gender-related

factors have been noted in previous studies to affect communication styles and collaborative engagement in healthcare environments.

In terms of school affiliation, participants were drawn from six different colleges of nursing, with School E (26%) and School F (25%) contributing the largest proportion of respondents. Schools D, B, and C accounted for 14%, 13%, and 12%, respectively, while School A had the smallest representation at 10%. The inclusion of students from multiple institutions enhances the representativeness of the study and provides insight into how diverse academic backgrounds and institutional training approaches may influence clinical learning experiences and competency outcomes. Overall, the demographic profile establishes a contextual foundation for interpreting the respondents' perceptions of clinical learning experiences and their self-assessed clinical competencies.

### Perceptions of Clinical Learning Experiences

Table 2 illustrates the respondents' perceptions of their related clinical learning experiences across three

domains: Role of the Nurse Teacher, Learning Atmosphere, and Nursing Care in Clinical Areas. Overall, the respondents reported positive perceptions, with an overall weighted mean of 4.16, interpreted as "Agree," indicating that the clinical environment generally supported their learning and skill development.

In the Role of the Nurse Teacher domain, respondents strongly agreed that instructors effectively integrated theoretical knowledge into practice (WM = 4.31), highlighting the critical role of clinical instructors in bridging classroom learning with real-world patient care. Collaboration between the instructor and clinical team (WM = 4.28) and meaningful interactions with staff (WM = 4.24) were also rated highly, demonstrating the importance of teamwork and mentorship in facilitating experiential learning. While the lowest-rated indicator in this domain was feeling like a member of the clinical team (WM = 4.05), it still falls within the "Agree" range, suggesting that inclusion in clinical activities could be further enhanced to strengthen students' engagement and professional socialization.

**Table 2. Related Clinical Learning Experience**

Domain	Indicator	WM	I
Role of Nurse Teacher	Instructor integrates theory into practice	4.31	Agree
	Collaboration between instructor & clinical team	4.28	Agree
	Interactions with staff as learning experiences	4.24	Agree
	Feeling as member of clinical team	4.05	Agree
	Focus on learning needs	4.20	Agree
Learning Atmosphere	Staff provides best learning while ensuring safety	4.10	Agree
	Comfortable in staff discussions	3.97	Agree
	Staff interested in student supervision	4.00	Agree
	Feedback from instructor as learning situation	4.21	Agree
	Diversity of cases as good learning environment	4.11	Agree
Nursing Care in Clinical Areas	Orientation on area policies	4.15	Agree
	Individualized patient care	4.25	Agree
	Confidentiality & privacy observed	4.13	Agree
	Handling patient problems calmly	4.14	Agree
	Clear documentation of nursing care	4.19	Agree
<b>Overall</b>		4.16	Agree

Regarding the Learning Atmosphere, students perceived staff support and feedback as conducive to learning, particularly feedback from instructors (WM = 4.21) and diversity of cases encountered in the ward (WM = 4.11). Indicators such as comfort in staff discussions (WM = 3.97) and staff interest in supervision (WM = 4.00) were slightly lower, pointing to opportunities for fostering more interactive and participatory clinical sessions. In the Nursing Care in Clinical Areas domain, students rated individualized patient care (WM = 4.25) and clear documentation of nursing procedures (WM = 4.19) most favorably, reflecting competence in executing core clinical responsibilities. Orientation on area policies (WM = 4.15), handling patient problems calmly (WM = 4.14), and maintaining confidentiality and privacy (WM = 4.13) were also rated positively, indicating adherence to ethical and procedural standards.

Overall, these findings suggest that the related clinical learning experience provided a generally supportive and structured environment that facilitated skill acquisition, professional development, and integration of theory into practice. The slightly lower scores in certain indicators, such as student participation in discussions and feeling fully integrated into the clinical team, highlight areas for targeted improvement to further enhance learning outcomes and competency development.

***Level of Clinical Competency***

Table 3 presents the self-assessed clinical competency of fourth-year nursing students across three domains:

Safe and Quality Nursing Care, Health Education, and Research. Overall, the respondents demonstrated a high level of competency, with an overall weighted mean of 4.49, interpreted as “Competent,” indicating that the students are generally well-prepared for professional practice.

In the Safe and Quality Nursing Care domain, the respondents reported particularly high competency in obtaining informed consent (WM = 4.57), proper patient endorsement (WM = 4.56), and adherence to strict infection control protocols (WM = 4.55), all interpreted as “Highly Competent.” These findings highlight the students’ strong grasp of essential patient safety standards and foundational clinical procedures. Competency in interpreting and carrying out doctor’s orders (WM = 4.51) and accurate documentation (WM = 4.52), rated as “Competent,” further demonstrates proficiency in translating theoretical knowledge into safe and effective clinical practice.

In the Health Education domain, students were rated as competent across all indicators, including participating in information dissemination (WM = 4.47), encouraging patient and family independence (WM = 4.46), explaining and demonstrating procedures (WM = 4.46), promoting positive behavioral changes (WM = 4.49), and identifying patient learning needs (WM = 4.49). These results suggest that students are capable of providing effective patient education, although there is room for further refinement of communication and teaching strategies to achieve higher levels of proficiency.

***Table 3. Level of Clinical Competency***

<b>Domain</b>	<b>Indicator</b>	<b>WM</b>	<b>Interpretation (I)</b>
<b>Safe &amp; Quality Nursing Care</b>	Interpret & carry out doctor’s orders	4.51	Competent
	Strict infection control	4.55	Highly Competent
	Proper patient endorsement	4.56	Highly Competent
	Obtaining informed consent	4.57	Highly Competent
	Accurate documentation	4.52	Competent
<b>Health Education</b>	Participates in information dissemination	4.47	Competent
	Encourages self-care & family independence	4.46	Competent
	Explains & demonstrates procedures	4.46	Competent
	Encourages positive behavioral change	4.49	Competent
	Identifies patient learning needs	4.49	Competent

<b>Research</b>	Suggests solutions based on findings	4.38	Competent
	Participates in evidence-based practice	4.50	Competent
	Participates in data gathering	4.49	Competent
	Investigates patient care outcomes	4.48	Competent
	Identifies researchable problems	4.46	Competent
<b>Overall Competency</b>		4.49	Competent

Within the Research domain, respondents demonstrated competence in all assessed indicators, including participation in evidence-based practice (WM = 4.50), data gathering (WM = 4.49), investigation of patient care outcomes (WM = 4.48), and identifying researchable problems (WM = 4.46). The lowest-rated indicator was suggesting solutions based on findings (WM = 4.38), indicating that while students are generally capable in research-related tasks, there is a need to enhance their analytical and problem-solving skills in applying evidence to clinical decision-making.

These findings reveal that the students' strongest competencies lie in direct patient care and adherence to clinical safety standards, while higher-order skills such as research application and health education,

although competent, may benefit from targeted instructional support. This underscores the importance of integrating structured research activities, case-based learning, and interactive teaching strategies within clinical training to promote comprehensive competency development.

### ***Relationship Between Clinical Learning Experience and Clinical Competency***

Table 4 presents the Pearson correlation analysis examining the relationship between the related clinical learning experiences and the overall clinical competency of fourth-year nursing students. The findings indicate significant positive correlations across all variables, suggesting that more supportive and structured clinical learning environments are associated with higher levels of competency.

**Table 4:** Relationship Between Clinical Learning Experience and Clinical Competency

<b>Variables</b>	<b>Pearson's r</b>	<b>p-value</b>	<b>Interpretation</b>
<b>Overall Related Clinical Learning Experience vs Overall Clinical Competency</b>	0.65	<0.001	Significant positive correlation
<b>Role of Nurse Teacher vs Overall Competency</b>	0.62	<0.001	Significant positive correlation
<b>Learning Atmosphere vs Overall Competency</b>	0.58	<0.001	Significant positive correlation
<b>Nursing Care in Clinical Areas vs Overall Competency</b>	0.60	<0.001	Significant positive correlation

Specifically, the overall related clinical learning experience showed a strong positive correlation with overall clinical competency ( $r = 0.65, p < 0.001$ ).

This demonstrates that students who perceive their clinical environments as well-organized, adequately supervised, and rich in learning opportunities tend to exhibit greater proficiency in clinical tasks, patient education, and research activities.

Further analysis within individual domains reinforces this relationship. The role of the nurse teacher was strongly correlated with overall competency ( $r = 0.62, p < 0.001$ ), emphasizing the critical impact of instructor guidance, mentorship, and integration of theory into practice on students' skill development. Learning atmosphere also showed a significant positive correlation ( $r = 0.58, p < 0.001$ ), indicating that a supportive, interactive, and resource-rich environment enhances students' confidence and

clinical performance. Similarly, nursing care in clinical areas correlated positively with competency ( $r = 0.60, p < 0.001$ ), highlighting the importance of practical, hands-on experiences in consolidating technical and professional skills.

Collectively, these results confirm that related clinical learning experiences play a pivotal role in shaping nursing students' competency development. They underscore the need for institutions to prioritize structured supervision, inclusive learning environments, and exposure to diverse clinical scenarios to optimize the preparation of practice-ready graduates.

**Table 5. Recommendations for Enhancing Clinical Learning**

Recommendation Area	Proposed Action
<b>Clinical Supervision</b>	Increase preceptor involvement and structured feedback
<b>Learning Atmosphere</b>	Promote inclusive, supportive, student-centered environment
<b>Clinical Skills</b>	Provide more hands-on practice, especially in research & psychomotor tasks
<b>Research Engagement</b>	Integrate evidence-based projects and case studies in clinical rotations
<b>Faculty Development</b>	Continuous training for instructors in mentorship and teaching strategies

Improving the learning atmosphere is another priority. The study suggests fostering an inclusive, supportive, and student-centered environment where students feel actively engaged, comfortable participating in discussions, and integrated into the clinical team. Such an environment not only reinforces learning but also promotes professional identity formation and resilience.

To strengthen clinical skills, it is advised to provide more hands-on practice, particularly in research activities and psychomotor tasks. Similarly, research engagement can be enhanced by integrating evidence-based projects, case studies, and problem-solving exercises into clinical rotations, thereby promoting critical thinking and the practical application of knowledge. Finally, faculty development is crucial; continuous training for instructors in mentorship, teaching strategies, and effective supervision will further improve the quality of clinical education. Collectively, these recommendations aim to optimize the clinical learning environment, ensuring that

**Recommendations for Enhancing Clinical Learning and Competency Development**

Table 5 outlines evidence-based recommendations derived from the findings of this study to enhance clinical learning experiences and competency development among fourth-year nursing students. In the area of clinical supervision, it is recommended that institutions increase preceptor involvement and provide structured, consistent feedback. This ensures that students receive timely guidance and mentorship, which is essential for skill acquisition, professional socialization, and confidence in clinical decision-making.

nursing graduates are competent, confident, and practice-ready.

**IV. CONCLUSION**

The findings of this study indicate that fourth-year nursing students affiliating at a primary hospital generally demonstrate high levels of clinical competency, particularly in safe and quality nursing care, while also showing competence in health education and research. Positive related clinical learning experiences, including effective supervision, supportive learning atmosphere, and structured nursing care opportunities, were significantly associated with higher competency levels. These results underscore the critical role of well-organized, inclusive, and experiential clinical environments in enhancing students' practical skills, professional judgment, and overall readiness for entry into professional nursing practice.

To further strengthen competency development, it is recommended that nursing institutions and clinical facilities enhance preceptor involvement and provide

structured feedback, promote inclusive and student-centered learning environments, and increase opportunities for hands-on practice, particularly in psychomotor skills and research activities. Additionally, integrating evidence-based projects and case studies into clinical rotations, alongside continuous faculty development in mentorship and teaching strategies, will support the holistic preparation of practice-ready nursing graduates. Implementing these measures will optimize clinical learning experiences, ultimately improving the quality of patient care delivered by future nurses.

### REFERENCES

- [1] Amoo, S. A., & Enyán, N. I. E. (2022). Clinical learning experiences of nursing and midwifery students; a descriptive cross-sectional study. *International Journal of Africa Nursing Sciences*, 17, 100457. <https://doi.org/10.1016/j.ijans.2022.100457>
- [2] Basilaia, G., & Kvavadze, D. (2020). Transition to online education in schools during a SARS-CoV-2 coronavirus (COVID-19) pandemic in Georgia. *Pedagogical Research*, 5(4), em0060. <https://doi.org/10.29333/pr/7937>
- [3] Boman, E., Persson, M., & Andersson, E. (2022). Nursing students' experiences of clinical practice during the COVID-19 pandemic: A qualitative study. *BMC Medical Education*, 22, 739. <https://doi.org/10.1186/s12909-022-03796-8>
- [4] Bryan, V., Rouse, S., & May, J. (2022). Undergraduate nursing students' experiences of altered clinical placements during the COVID-19 pandemic. *Teaching and Learning in Nursing*, 17(4), 417–421. <https://doi.org/10.1016/j.teln.2022.151037>
- [5] Cabanizas, C. A., Adsuara, C., Magcale, K. W., Bautista, M., Luna, S. I., & Centro Escolar University – Malolos. (2024). Learning styles and clinical competency of nursing students in Centro Escolar University. *Philippine Council for Health Research and Development (DOST-PCHRD)*. <https://registry.healthresearch.ph/index.php/component/healthregistry/?view=research&layout=details&cid=7104>
- [6] Chang, W., Lin, C., Crilly, J., Lee, H., Chen, L., & Han, C. (2025). Virtual reality simulation for undergraduate nursing students for care of patients with infectious diseases: A mixed-methods study (Preprint). *JMIR Medical Education*, 11, e64780. <https://doi.org/10.2196/64780>
- [7] Dello, S., Encabo, J. J. L., Jariol, K. P., Diolata, P. G., Abordo, I., Sumugat, D. B., & Nebres, A. (2024). Students competency, confidence, and proficiency in simulation-based training at AMCC School of Nursing. *International Journal of Innovative Science and Research Technology*, 9(11). <https://www.ijisrt.com/assets/upload/files/IJISRT24NOV737.pdf>
- [8] Falguera, C., De Los Santos, J. A., Firmo, C., & Batidor, P. (2025). Post-pandemic implications of the nursing students' clinical learning environment and its relationship to academic grit, self-esteem, and caring behaviors: A cross-sectional study. *Acta Medica Philippina*. [https://actamedicaphilippina.upm.edu.ph/index.php/acta/article/view/12031?utm\\_source=chatgpt.com](https://actamedicaphilippina.upm.edu.ph/index.php/acta/article/view/12031?utm_source=chatgpt.com)
- [9] Hoffman, C. M., & Willemse, J. (2024). Factors influencing nursing students' learning in a clinical skills laboratory. *Health SA Gesondheid*, 29. <https://doi.org/10.4102/hsag.v29i0.2631>
- [10] Idanan, K., Palermo, A., Dado, C., Villaluz, K. A., Penalver, L. A., Valdez, M. A., & Cuntapay, T. F. (2025). Theory to practice: Factors influencing clinical skills acquisition among nursing students in a private institution in Pasay. *Philippine Health Research Registry*. <https://registry.healthresearch.ph/index.php/registry?view=research&layout=details&cid=8483>
- [11] Juaton, M., Romina, R. R., Amilhasan, S., Banghulot, Z., Codera, K., Hadjani, A., Ramos, A., Tagayan, F., & Uy, S. (2024). Nurses' involvement on the clinical learning experiences of the nursing students. <https://www.herdin.ph/index.php?view=research&cid=68486>
- [12] Luk, B. H., Yeung, J. W., Pau, O. K., Wong, P. K., Fan, J. C., & Yau, K. K. (2024). Acquiring clinical

reasoning skills via virtual simulation in nursing education: A qualitative study. *Journal of Nursing Education and Practice*, 15(3), 24. <https://doi.org/10.5430/jnep.v15n3p24>

- [13] Ramos, A., Payongayong, C. M., Zerrudo, E., Evangelista, G., Mangaliag, J., Fang, K. J., De Guzman, R. G., & Nicolas, Z. M. (2025). Self-efficacy and perceived clinical competency of selected fourth-year nursing students in three CEU campuses S.Y. 2024-2025. *Health Research and Development Information Network*. <https://registry.healthresearch.ph/index.php/registry?view=research&layout=details&cid=7919>
- [14] Saarikoski, M., Kaila, P., Lambrinou, E., Pérez-Cañaveras, R. M., Tichelaar, E., Tomietto, M., & Warne, T. (2022). The Clinical Learning Environment, Supervision and Nurse Teacher (CLES+T) scale: International validation and use in nursing education. *Nurse Education Today*, 113, 105377. <https://doi.org/10.1016/j.nedt.2022.105377>
- [15] Setiawan, A., Wati, D. N. K., Hassan, H., Sharmil, H., Sukihananto, S., Syamsir, S. B., Rachmawati, U., & Eriska, W. (2024). Insights from a multi-country study: Lessons for future nursing education from community clinical practice amid the COVID-19 pandemic. *Heliyon*, 10(11), e32486. <https://doi.org/10.1016/j.heliyon.2024.e32486>
- [16] Tegegne, K. T., Fetene, J. C., Wudu, T. K., Gonete, Y. A., Tibebu, A. T., Abinew, Y., & Abebe, M. T. (2024). Factors associated with clinical practice competency among nursing and health science students in Ethiopia. *Christian Journal for Global Health*, 11(1), 177–192. <https://doi.org/10.15566/cjgh.v11i1.787>
- [17] Visiers-Jiménez, L., Suikkala, A., Salminen, L., Leino-Kilpi, H., Löyttyniemi, E., Henriques, M. A., Jiménez-Herrera, M., Nemcová, J., Pedrotti, D., Rua, M., Tommasini, C., Zeleníková, R., & Kajander-Unkuri, S. (2021). Clinical learning environment and graduating nursing students' competence: A multi-country cross-sectional study. *Nursing and Health Sciences*, 23(2), 398–410. <https://doi.org/10.1111/nhs.12819>
- [18] Workneh, M., Kassa, M., Mihrete, S., Belege, F., Nigussie, J., Goshiye, D., & Biset, G. (2024a). Level of clinical competency and associated factors of nursing students in Ethiopia: Systematic review and meta-analysis. *BMC Nursing*, 23(1). <https://doi.org/10.1186/s12912-024-02377-y>
- [19] Yoeum, B., Koy, V., & Sam, R. (2024). Factors associated with clinical competency of nursing students. *International Journal of Research in Medical Sciences*, 12(4), 1232–1241. <https://doi.org/10.18203/2320-6012.ijrms20240847>
- [20] Zhang, J., Shields, L., Ma, B., Yin, Y., Wang, J., Zhang, R., & Hui, X. (2022). The clinical learning environment, supervision and future intention to work as a nurse in nursing students: A cross-sectional and descriptive study. *BMC Medical Education*, 22(1). <https://doi.org/10.1186/s12909-022-03609-y>