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Self-Efficacy of Simulation-Based Related Learning Experience on Clinical Skill and Development Among 2nd Year Nursing Students at Dr. Carlos Lanting College

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Abstract

This study analyzes the self-efficacy of simulation-based Related Learning Experience (RLE) in improving clinical skills among second-year nursing students at Dr. Carlos S. Lanting College during clinical practice. Employing a mixed-methods design that integrates quantitative pretest-post-test measures with qualitative focus group discussions, the research utilizes purposive sampling of three sections (approximately 100 students total) who underwent at least one simulation session.

Quantitative data measured clinical skills and self-confidence pre- and post-intervention, complemented by qualitative feedback on the relevance and applicability of the simulated scenarios. Results are expected to highlight improvements in skill performance, critical thinking, clinical judgment, and patient safety awareness. This study aims to provide evidence-based recommendations to inform curriculum development, optimize simulation protocols, and ultimately enhance nursing education outcomes at the institutional level.

Keywords: Simulation-Based Learning, Clinical Skill Development, Nursing Education, Purposive Sampling

1. The Problem and its Background

Introduction

Clinical competence is a cornerstone of effective nursing practice, directly influencing the quality of patient care, safety, and professional performance. Traditionally, nursing education has relied heavily on clinical placements in real healthcare settings to facilitate experiential learning. However, these clinical practicums often face constraints such as limited placement opportunities, inconsistency in learning experiences, and high student–to–patient ratios that may restrict students' exposure to a wide range of clinical scenarios. In response, many nursing education programs have adopted Simulation-Based Learning Experiences (SBLE) as a pedagogical strategy to enhance the development of clinical skills and professional judgment in a controlled, risk-free environment.

Simulation-based learning offers a structured and immersive setting where nursing students can integrate theoretical knowledge with practical skills through realistic clinical scenarios. These experiences commonly employ high-fidelity manikins, standardized patients, and virtual simulation technologies to recreate acute care situations that students may not otherwise encounter during traditional clinical rotations. Research indicates that simulation promotes significant improvements in clinical competency, confidence, and critical thinking among nursing learners. For instance, a systematic review by Ratish (2025) found that simulation-based learning significantly enhanced clinical competency, critical thinking, skill performance, and confidence among student nurses, especially when high-fidelity and hybrid simulation modalities were used. (Nursing Journal) Additionally, evidence from a 2024 systematic review demonstrated consistent and significant improvements in knowledge and technical skills among nursing students exposed to simulation-based interventions across multiple studies, though long-term retention remains underexplored. Despite these advantages, simulation-based learning also presents important challenges that warrant critical examination. Key limitations identified in the literature include the substantial resources required—such as simulation of labs, technology, and trained faculty—along with variability in implementation of

quality and assessment practices. Recent research highlights hurdles related to faculty preparation, standardization of simulation activities, and the financial costs associated with high-fidelity simulators. Moreover, while simulation can effectively prepare students for procedural skills and decision-making in controlled scenarios, questions remain about how closely these experiences translate into real-world clinical competence during actual patient care.

One significant psychological factor that influences students' clinical performance is self-efficacy. According to Albert Bandura, self-efficacy refers to an individual's belief in their ability to organize and execute the actions required to manage prospective situations. In nursing education, students with high self-efficacy are more likely to approach clinical tasks with confidence, persist in challenging situations, and demonstrate better performance outcomes. Conversely, low self-efficacy may result in hesitation, anxiety, and decreased competence during clinical exposure.

At Dr. Carlos Lanting College, where preparing competent and confident nursing professionals is a central educational goal, it is essential to understand both the strengths and limitations of simulation-based learning in the curriculum. Analyzing the impact of SBLE on second-year nursing students' clinical skill development and professional growth will provide valuable insights that can guide curriculum refinement, teaching strategies, and resource allocation. This study, therefore, aims to investigate the advantages and limitations of Simulation-Based Related Learning Experience on clinical skills and development among second-year nursing students, contributing to evidence-based educational practice and helping optimize student outcomes in nursing education.

Theoretical Framework

This study is firmly anchored in Experiential Learning Theory (Kolb *et al*., 2018) and Self-Efficacy Theory (Albert bandura, 1997), underscoring that simulation-based related learning experiences (independent variable) provide second-year nursing students with realistic, hands-on opportunities to translate theoretical knowledge into practice, strengthen critical thinking, and boost confidence, which directly shape their clinical skill development (dependent variable)—revealing not only the advantages such as enhanced competence and readiness for real patient care, but also the limitations such as resource demands and performance anxiety.

Conceptual Framework

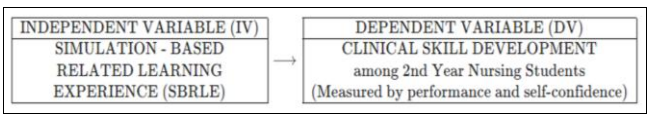

Fig 1: Independent Variable and Dependent Variable

This figure shows the conceptual framework of the study, which has two main variables: the self-efficacy of Simulation-Based Related Learning Experience (SBRLE) as the independent variable and the Clinical Skill Development of second-year nursing students at Dr. Carlos Lanting College as the dependent variable. Fig 1 highlights self-efficacy of SBRLE as the independent variable because it is the teaching method being examined. It refers to the structured training of nursing students through scenarios, simulation exercises, and guided debriefings, which are expected to influence the study's outcome. Fig 1 shows Clinical Skill Development as the dependent variable because it changes based on students' exposure to SBRLE. This variable reflects improvements in performing nursing procedures, making sound clinical decisions, and building confidence in practice.

Statement of the Problem

This study will Self-efficacy of simulation-based related learning experience (RLE) on clinical skill development among second-year nursing students during clinical practice. To achieve this, the study aims to seek answers to the following questions:

1. How do 2nd year nursing students perceived the advantages of simulation-bases related learning in terms of their clinical development?
2. What are the perceived limitations and challenges encountered by students during the simulation period that affect Their learning?
3. What specific source of self-efficacy do students identify or most influential during their clinical skill development in the simulation environment?
4. What is the level of perceived self-efficacy among 2nd year nursing students in terms of:
   4.1 Enactive mastery
   4.2 Vicarious experience
   4.3 social persuasion
   4.4 physiological feedback
5. How do students meet their level of engagement in simulation based learning in terms of:
   5.1 Concrete experience
   5.2 Reflective observation
   5.3 Abstract Conceptualization
   5.4 Active Experimentation
6. What is the level of Clinical skill development among the participants in terms of:
   6.1 Procedural Accuracy
   6.2 Safety Measures
   6.3 Communication Skills

Statement of Hypothesis

The study will test the following *null hypotheses* (H0 - No Effect) against their corresponding *alternative hypotheses* (H1 - Effect Predicted):

Null Hypotheses (H0)

1. There is no significant relationship between students' perceived relevance of the simulation scenarios and their observed clinical performance post-intervention.

Alternative Hypotheses (H1)

1. There is a significant positive relationship between students' perceived relevance of the simulation scenarios and their observed clinical performance post-intervention.

Scope and Delimitation of the Study

This study focuses on self-efficacy of simulation-based Related Learning Experience (RLE) on the clinical skill development of 2nd year nursing students during their clinical practice at Dr. Carlos S. Lanting College for the academic year 2025-2026. It will specifically examine the effectiveness of simulation-based learning in improving clinical skills among nursing students. It will compare the clinical performance of students who participated in

simulation-based activities with those who did not. Additionally, the study will examine changes in the implementation of clinical skills and reasoning post-simulation and gather student feedback on their satisfaction and perceptions of its impact on their clinical practice. Data will be collected through interviews and focus group discussions before and after simulation training sessions, and results will be analyzed using both quantitative and qualitative approaches to provide a comprehensive understanding of the perceived benefits and challenges of simulation-based RLE.

The study will be limited to 2nd year nursing students enrolled at Dr. Carlos S. Lanting College and will not include students from other levels of year, other nursing schools, or related health programs. It will focus only on simulation-based RLE as a learning modality and will not cover other instructional strategies such as traditional lectures, case studies, or purely hospital-based experiences. Furthermore, the study will concentrate solely on clinical skill development and self-efficacy. It will not address other aspects of nursing education, such as theoretical knowledge acquisition, research skills, or leadership training. Therefore, findings will only reflect the experiences of the selected population and may not be generalized to all nursing students or institutions.

Significance of Study

The goal of this study is to analyze the self-efficacy of simulation-based learning on the clinical skill development of second-year nursing students. This study is significant because it will benefit the following individuals and institutions:

Second-Year Nursing Students (Primary benefactors): Most direct beneficiaries are the students. They receive a thorough, practical education that improves their abilities, self-confidence, and clinical practice preparation, ultimately assisting them in becoming more capable and efficient nurses.

Staff nurses and clinical instructors: These professionals guide students in a clinical environment. The benefits of simulation-based learning are that students will be more prepared for their clinical rotations, needing less basic instruction and allowing instructors to concentrate on more complex patient care and advanced clinical reasoning.

Nursing Faculty and Professors: Professors are the main recipients of the research results. The study offers solid evidence that simulation-based learning is a successful teaching strategy. This information can support the funding of simulation technology and guide methods of instruction aimed at enhancing student learning outcomes.

Healthcare Institutions and the Healthcare System: Hospitals and other healthcare facilities benefit from a more competent and confident new generation of nurses. Better-prepared nurses are associated with improved patient care, reduced medical errors, and better patient outcomes, which is a major goal of the healthcare system.

Patients are the most important beneficiaries. They are cared for by nurses who have received training in contemporary, evidence-based techniques that prioritize clinical competency, safety, and critical thinking.

Future Researchers: The findings from this study will provide references and inspiration for other researchers studying this subject. Future researchers will be able to use the findings to determine which aspects of simulation-based learning are more effective for clinical skill development and where improvements are most needed. This study will serve as a foundational piece of literature, providing a clear starting point for a variety of prospective studies on nursing education.

Definition of Terms

This section of the study explains and defines the terms used, which May be unfamiliar to some people. Further explanation of the terms used in This study may help both researchers and the target audience avoid Misunderstandings when using unfamiliar terms.

Simulation-Based RLE

Conceptual Definition – A teaching method using realistic scenarios, mannequins, or technological aids to replicate clinical situations for practice and learning.

Operational Definition - The structured, mandatory simulation sessions were administered to the second-year BSN students at Dr. Carlos S. Lanting College for their NCM 111 course.

Clinical Skill Development

Conceptual Definition – The process by which students acquire, practice, and refine psychomotor and cognitive abilities is essential for effective patient care.

Operational Definition - The measurable change in students' performance scores on the Clinical Performance Evaluation Checklist and their self-reported Self-Efficacy Scores from pretest to posttest.

Second-Year Nursing Students

Conceptual Definition – Learners enrolled in the second academic year of the BSN program typically focus on foundational clinical practice.

Operational Definition – The convenience sample of approximately 240 students from three sections of the BSN program at Dr. Carlos S. Lanting College during the 2025-2026 academic year.

Clinical Judgement

Conceptual Definition – The nurse's ability to observe, interpret, and make reasoned decisions about a patient's needs based on clinical data and knowledge.

Operational Definition - The students' ability to articulate the rationale behind their actions during **Focus Group Discussions (FGDs)** and the critical thinking component was assessed in the performance checklist.

Self-Confidence

Conceptual Definition – An individual's belief in their capacity to successfully perform a particular nursing task or clinical procedure.

Operational Definition - The score obtained by students on the **Self-Efficacy Scale** instrument was administered before and after the simulation intervention.

2. Review of Related Literature and Studies

This chapter contains Related Studies and Related Literature reviewed by researchers from previous studies conducted as references for this study. The information presented in this chapter will be used to extend and impact knowledge relevant to this study.

For students who have limited access to real clinical

settings, simulation-based learning (SBL) has emerged as a crucial pedagogical strategy in nursing education, especially for fostering clinical competencies, psychomotor skills, and critical thinking. Numerous research has examined the effects of simulation on nursing students' abilities, retention of information, and self-assurance in clinical practice over the years. The efficiency of simulation-based related learning experiences, particularly for second-year nursing students, and their influence on skill development during clinical training are demonstrated by the latest studies and literature presented in this section, which was published between 2020 and 2025.

The study conducted by Tong *et al*. (2024) [6] recently carried out a multicenter randomized controlled experiment to examine the impact of simulation-based learning on nursing students' abilities at five Nursing universities. Out of the 270 individuals in the trial, 239 finished the intervention. Four teaching approaches were examined by the researchers: case studies, computer-based simulation (CBS), high-fidelity simulation (HFS), and a combination of the two. Before, right after, and three months after the intervention, data were gathered. The HFS group had higher post-test skill scores than the CBS group ($p = 0.048$), and the results showed a statistically significant difference in skill improvement between the groups following the intervention ($p = 0.020$). Significant improvement was also observed in the combined HFS+CBS group ($p = 0.020$). High-fidelity simulation facilitates short-term skill acquisition, but its long-term effects could need reinforcement, as the differences were no longer statistically significant at the three-month follow-up ($p = 0.139$).

Similar to this, Oanh *et al*. (2024) [5] investigated the impact of simulation-based training on 173 second-year nursing students' critical thinking, problem-solving abilities, and self-efficacy in Vietnam using a before-and-after study. The researchers discovered statistically significant increases in students' self-efficacy scores from a pretest mean of 27.91 ± 5.26 to a posttest mean of 28.71 ± 3.81 ($t_{172} = -2.26$, $p = 0.025$) when they used moderate-fidelity simulation scenarios throughout an adult nursing course. Following the intervention, students also showed improved performance in critical thinking and problem-solving. The findings demonstrate that even moderate-fidelity simulations can successfully boost students' confidence and cognitive skills necessary for safe and effective patient care when combined with systematic debriefing and guided reflection. This data suggests that simulation helps second-year nursing students improve the higher-order thinking abilities necessary for clinical decision-making in addition to improving their technical capabilities.

Huang *et al*. (2024) conducted a quasi-experimental study in Taiwan that used simulation-based augmented reality (AR) to enhance pediatric nursing abilities and clinical reasoning among nursing students, which lends further credence to these findings. The intervention promoted interactive learning and in-the-moment decision-making by simulating pediatric settings using augmented reality technology. Comparing the simulation experience to baseline assessments, the results showed statistically significant gains in clinical reasoning and practical nursing skills. Additionally, students expressed greater involvement and a sense of reality in the educational process. The study underlined that integrating technology-enhanced simulation, like augmented reality, not only enhances skill performance but also promotes motivation, confidence, and active learning. These findings show how simulation technology can help close the gap between theoretical and practical clinical practice, which is important for organizations like Dr. Carlos Lanting College that want to develop their Related Learning Experience (RLE) program.

An increasing corpus of synthesis literature supports the general efficacy of simulation-based learning in nursing education, going beyond specific empirical research. A comprehensive evaluation of 33 research published between 2017 and 2023, including 3,670 individuals from nursing schools worldwide, was carried out.

According to Hung *et al* (2021) One quasi-experimental study involving 81 nursing students found that 88.9 % of participants achieved high self-efficacy after completing simulation activities, indicating that almost nine out of ten students felt more confident about their capabilities post-simulation (i.e., higher belief in performing clinical tasks) compared to before the intervention. Additionally, 91.36 % performed satisfactorily in clinical simulations, and 94 % rated their clinical competence as satisfactory after simulation exposure. Self-confidence and learning satisfaction levels were also notably high, with 98.1 % expressing confidence in their learning outcomes and 96.3 % reporting satisfaction with the simulation program.

According to Alharbi *et al*. (2024) [1]. According to the review's findings, simulation-based learning often produced notable gains in clinical expertise and knowledge. When compared to traditional instruction, reported performance gains varied from 10% to 35%. For example, CPR training was one skill-based intervention that demonstrated a 45.9% increase in skill scores (from 22.29 ± 5.07 to 32.51 ± 1.80). The research did point out, nevertheless, that reports of long-term skill retention after five months were not often consistent, indicating the need for repeated simulations or frequent reinforcement. This systematic review supports the finding that simulation-based experiences greatly promote immediate skill development, which is in line with the goals of evaluating second-year nursing students' skill development.

In a meta-analysis of 145 empirical research from higher education, Chernikova *et al*. (2020) [2] found that simulation-based learning had a significant favorable impact on students' skill development, with an overall effect size of Hedge's $g = 0.85$ ($SE = 0.08$; 95% CI [0.69, 1.02]). According to the analysis, simulation improved complex cognitive abilities, including problem-solving and decision-making, as well as psychomotor performance. This quantitative data supports simulation's inclusion as a fundamental teaching method in nursing education by highlighting its significant influence on the development of technical and cognitive skills. The results of this meta-analysis offer statistical support for the use of simulation as a teaching method to improve clinical competency in second-year nursing students.

Complementing these quantitative and qualitative findings, Hilleren, Christiansen, and Bjork (2022) [3] conducted a narrative review analyzing 121 studies published from 2013 to 2022 on how practical nursing skills are learned in simulation and skills laboratories. Their synthesis revealed that simulation-based education had been applied to over 50 different nursing skills, with most studies reporting improvements in students' technical and psychomotor performance. However, only about 8.5% of the reviewed

studies explored the actual processes of how students learn during simulation, highlighting a gap in understanding the pedagogical mechanisms involved. The authors emphasized that structured debriefing, repeated deliberate practice, and well-designed scenarios were essential components to ensure skill transfer from simulation to clinical practice. Their findings underscore the importance of instructional design in achieving maximum learning outcomes—an aspect that will also be considered in the implementation of simulation-based RLE at Dr. Carlos Lanting College.

Synthesis

Simulation-based learning (SBL) improves nursing students' clinical and technical skills, based on the studies reviewed. Oanh *et al*. (2024) [5] found that second-year students reported higher levels of self-efficacy and problem-solving skills (p = .025). In contrast, Tong *et al*. (2024) [6] showed significant improvements in psychomotor performance (p = .020). Huang *et al*. (2024) noted that using augmented reality simulation enhances critical thinking and engagement, highlighting how technology bridges theory and practice. These findings align with wider research; Chernikova *et al*. (2020) [2] found a large effect size (Hedge's g = 0.85) for simulation-based training, while Alharbi *et al*. (2024) [1] noted a 10 to 45% increase in performance. Hilleren *et al*. (2022) [3] highlighted that structured debriefing and repeated practice improve skill retention. These studies generally agree that simulation boosts competence, but they show different results based on the quality of design and the level of fidelity. This variation emphasizes the importance of simulation for developing the skills of second-year nursing students. However, there's a gap because most research supporting the effectiveness of simulation-based learning was done outside the Philippines. There is little information on how it affects second-year nursing students in the country. Additionally, most current studies focus on short-term skill improvements instead of how simulation translates into actual clinical performance after hospital exposure. Furthermore, few studies assess how psychomotor, cognitive, and emotional skills develop together during Related Learning Experiences (RLE). It is necessary to examine the effects of simulation-based RLE on students' overall skill development and clinical readiness in nearby nursing programs like Dr. Carlos Lanting College. In our conclusion This study looks at the lack of local evidence and builds on earlier findings that simulation helps nursing students improve their skills. It explores how simulation-based RLE impacts second-year students' skill development during clinical practice, focusing specifically on nursing education in the Philippines, unlike other studies conducted in different areas. The study connects theory and practice by linking simulation results to real-world performance. It also provides valuable insights for improving Dr. Carlos Lanting College's nursing curriculum and training methods.

3. Research Methodology

This chapter focuses on the Research Design, Research Locale, Research Respondents, Sampling Design, Research Instruments, Ethical Standards and Considerations, Data Gathering Procedures and Statistical Treatment.

Research Design

This research utilized a mixed-method research design, which is a study of both quantitative and qualitative. Thus using a Sequential Exploratory Design to analyze the self-efficacy of simulation-based Related Learning Experience (RLE) on the clinical skill development of second-year nursing students during clinical practice. In the first phase, a qualitative approach will be used to explore in-depth how students internalize, interpret, and apply the knowledge and skills acquired from simulation training in actual clinical settings. The responses will be analyzed to identify advantages and challenges in applying simulation-acquired skills to actual clinical situations.

The results derived from the qualitative phase will serve as the foundation for the second phase, a quantitative approach, which will involve pretest–posttest measures to check how widely those self-efficacy apply among the population. This mixed-method approach allows for a comprehensive understanding by first exploring the phenomenon qualitatively and then validating and quantifying the findings.

By combining qualitative exploration and quantitative measurement, the Sequential Exploratory Design provides an in-depth analysis of how simulation-based learning enhances or limits the clinical skill development of nursing students, ensuring that both measurable outcomes and personal narratives are considered (Creswell & Poth, 2018) [7].

Research Locale

This study will be conducted at Dr. Carlos Lanting College, located in Tandang Sora, Quezon City, Philippines. The institution is recognized for its commitment to excellence in nursing education and offers a Bachelor of Science in Nursing (BSN) program, level I accredited by the Philippine Association of Colleges and the Commission on Accreditation (PACUCOA). The college is equipped with a modern simulation laboratory that replicates various clinical settings, including hospital wards, emergency rooms, and outpatient clinics, providing students with immersive, hands-on learning experiences.

Dr. Carlos Lanting College was selected as the research locale due to its active integration of simulation-based learning into the second-year nursing curriculum. Simulation activities are embedded in core subjects such as Fundamentals of Nursing, Health Assessment, and Medical-Surgical Nursing, allowing students to develop and refine clinical skills in a controlled, supportive environment before actual hospital exposure.

The study will focus on self-efficacy of simulation-based learning experiences on clinical skills and the development of second-year nursing students currently engaged in both simulation-based training and clinical practice. Thus, the research locale of this study will take place in the College of Nursing Department.

Fig 2: Locale

Fig 2. Showing a satellite view of Tandang Sora Ave, particularly at Dr. Carlos Lanting College and its nearby places. (*Courtesy: Google Maps*).

Population of the Study

The population of this study will consist of the 2nd-year Bachelor of Science in Nursing (BSN) students enrolled at Dr. Carlos Lanting College during their Second Semester of the Academic Year 2025-2026.

This population is specifically defined as students who are at the 2nd-year level of their nursing education and have been exposed to the Related Learning Experience (RLE) and its corresponding clinical duty areas component. This includes groups:

- **2nd year Nursing Regular Students** - Regular students who have undergone the basics and fundamentals of nursing during their first-year curriculum.
- **2nd Year Nursing Irregular Students** – These are students who are officially enrolled in the nursing program at the second-year level but may have varying academic loads due to delays, subject backlogs, shifting, or transitional academic adjustments.
- **2nd Allied Students -** Those who are taking nursing as a second degree and are academically placed at the 2nd-year level at the start of their nursing education.

Sampling Design

This study utilized a Non-Probability Purposive Sampling Technique in selecting the respondents. According to Etikan & Bala (2020), purposive sampling is appropriate when the researcher intentionally selects individuals who possess specific characteristics needed for the study. In this research, only 2nd Year Nursing students who have participated in Simulation-Based Related Learning Experience (RLE) were included because they are the ones who can provide relevant, accurate, and experience-based insights on the self-efficacy, advantages, and limitations of simulation in clinical skill development.

Research Instrument

This study utilized a mixed-method research instrument to assess the self-efficacy of Simulation-Based Related Learning Experience on Clinical Skill Development Among all 2nd Year Nursing Students During Clinical Practice. The quantitative component consisted of a structured four-point Likert-scale questionnaire (Strongly Agree, Agree, Strongly Disagree, Disagree) measuring three areas: the improvement of clinical skills and confidence after simulation, the relevance of simulation scenarios to actual clinical practice, and the challenges when applying learned skills in real patient care. The questionnaire allowed the researchers to obtain measurable and comparable data on students' skill development. This approach is supported by Kelly and Ewell (2021) [11], who found that simulation-based instruction significantly improves nursing students' clinical performance and confidence, reinforcing the importance of evaluating outcomes through structured perception based measurements. To complement the numerical findings, a qualitative component was included in the form of one open-ended question and a Focus Group Discussion (FGD). These allowed participants to describe their personal experiences, challenges, and suggestions regarding simulation-based learning. However, Qualitative responses were analyzed through thematic coding to identify recurring insights and to provide context to the quantitative results. By combining both survey data and narrative feedback, the instrument ensured a clearer and more comprehensive understanding of how simulation-based learning (RLE) influences real clinical readiness of the 2nd year nursing student of DR. Carlos Lanting College.

Ethical Standards and Considerations

The researchers ensure that all ethical guidelines related to studies involving students' participation are carefully observed throughout the conduct of this research. The relevant academic authorities will be consulted before any data is collected, and each participant will give their informed consent. The study titled " Self-efficacy of Simulation-Based Related Learning Experience on Clinical Skill Development Among 2nd Year Nursing Students During Clinical Practice" will be explained to the respondents, who are second-year nursing students, along with its goals and methods.

Anonymity and confidentiality will be strictly upheld. All collected information will be safely kept and utilized only for educational objectives. At any point during the study, participants will be free to leave without facing any form of negative consequences.

The researchers will make sure that involvement won't result in any bodily, psychological, or emotional harm. Throughout the entire research process, the study will adhere to the ethical standards of beneficence, non-maleficence, respect for others, and fairness.

Lastly, the researchers pledge to uphold honesty and integrity in the gathering, processing, and disclosure of data. To maintain academic and ethical honesty, sources and related studies shall be properly acknowledged.

Data Gathering Procedures

The researchers will begin by drafting a formal letter of request addressed to the Dean of the College of Nursing. This letter will state the purpose of the study and seek approval to conduct data collection within the institution. The letter, along with the research instrument, will be submitted to the Ethics Committee for review and approval.

A purposive sampling technique will be used to select participants from the target population. This approach involves intentionally selecting students who meet specific criteria relevant to the study—specifically, 2nd year Nursing students who have experienced Simulation-Based Related Learning Experience (RLE) within Dr. Carlos Lanting College (DCLC). These students are considered the most appropriate respondents because they can provide firsthand insights into the advantages, relevance, and challenges of simulation-based learning in clinical skill development.

Before participation, each qualified student will receive a briefing on the purpose of the study, with emphasis on voluntary participation and confidentiality of responses. Students who are willing to take part will sign an informed consent form, confirming their agreement to participate in both the survey and the Focus Group Discussion (FGD).

The researchers will then distribute a Google Form link containing the Simulation-Based Learning Evaluation Questionnaire (a four-point Likert scale: Strongly Agree, Agree, Disagree, Strongly Disagree) along with open-ended questions to all consented participants.

The quantitative data will be gathered through the Likert-

scale responses, while the qualitative data will be collected from the open-ended questions and FGDs. The research instrument will be validated by three nursing experts prior to use to ensure content validity.

Before the administration, standardized instructions will be read aloud to ensure a uniform understanding of the measured areas and rating scales. All collected data will be encoded, stored securely, and treated with strict confidentiality, accessible only to the researchers.

Statistical Treatment

The researchers selected the following statistical procedures were used to interpret the data gathered from the respondents of the study.

1. Simple Percentage: The demographic profile variables of the respondents were anaylyzed using simple percentage with the following formula:

$$P = \frac{F}{N} \times 100$$

Where:

P = percentage
F = frequency of response per category
N = number of response
100 constant multiplier

2. Weighted Mean: Determined the respondent's level of agreement on each statememts regarding the advantages, relevance and the limitations of simulation based learning (RLE) will be computed.

$$WM = \frac{\Sigma(f \times w)}{N}$$

Where:

WM = Weighted mean
E = summation symbol
F = frequency for each option
W = Assigned weight
N = Total number of frequency

3. Likert scale: The following Likert scale serves as the guide for interpreting the data gathered.

Scale	Weighted Means/Equivalent	Corresponding Remarks
4	3.26 - 4.00	Strongly Agree
3	2.51 – 3.25	Agree
2	1.76 - 2.50	Disagree
1	1.00 – 1.75	Strongly Disagree

4. Reliability of the Questionnaire: The reliability of the questionnaire will be evaluated using **Cronbach's Alpha** to determine the internal consistency of the items.

$$\alpha = \frac{k}{k-1}\left(1 - \frac{\sum \sigma^2_{\text{item}}}{\sigma^2_{\text{total}}}\right)$$

Where:

α = reliability coefficient
k = number of items in the scale
Σσ²_item = sum of the variances of each item
σ²_total = variance of the total combined score
k − 1 = correction factor to adjust for number of items
1 − = proportion of shared variance among items

5. Pearson Correlation: Determines the strength and direction of a relationship between two variables.

$$r = \frac{\sum(x_i - x)(y_i - y)}{\sqrt{\sum(x_i - x)^2 \sum(y_i - y)^2}}$$

Where:

r = correlation coefficient
x = scores for variable X
y=
Σxy = sum of the products of paired scores
Σx = sum of x scores
Σy = sum of y scores
Σx² = sum of squared x scores
Σy² = sum of squared y scores

4. Presentation, Analysis, and Interpretation of Data

Reliability Analysis

Table 1: Reliability Analysis

Test Scales	α	N
Perceived Self-Efficacy	0.82	4
Engagement of Simulation-Based Learning Experience	0.90	8
Clinical Skill Development	0.88	6

Reliability analysis was conducted to determine the internal consistency of the instruments used in the study. Cronbach's alpha (α) was computed for each scale to assess the degree to which the items consistently measure the intended construct.

As shown in Table 1, the Perceived Self-Efficacy scale, consisting of four (4) items, obtained a Cronbach's alpha of 0.82, indicating good internal consistency. This suggests that the items included in the scale reliably measure students' perceived self-efficacy.

The Engagement of Simulation-Based Learning Experience scale, composed of eight (8) items, yielded a Cronbach's alpha of 0.90, which indicates excellent reliability. This result implies that the items measuring engagement in simulation-based learning experiences are highly consistent with one another.

Similarly, the Clinical Skill Development scale, consisting of six (6) items, produced a Cronbach's alpha of 0.88, demonstrating good reliability. This indicates that the items in this scale consistently measure the construct of clinical skill development.

Overall, the Cronbach's alpha values for all three scales ranged from 0.82 to 0.90, which are above the commonly accepted threshold of 0.70. This indicates that the instruments used in the study possess adequate to excellent internal consistency, confirming that the scales are reliable for measuring the variables included in the research.

Demographic Profile of the Respondents

Table 2: Age of Respondents

Demographics	Min.	Max.	M	SD
Age	19	42	20.20	2.75

The demographic characteristics of the respondents were analyzed in terms of age and sex, as presented in Tables 2 and 3.

As shown in Table 2, the respondents' ages ranged from 19 to 42 years old, with a mean age of 20.20 and a standard deviation of 2.75. This indicates that the majority of the respondents were in their early twenties, suggesting that the sample primarily consists of young adult students who are typically within the expected age range for undergraduate nursing education.

Table 3: Sex of Respondents

Demographics		*F*	*%*
Sex	Male	33	32.0%
	Female	70	68.0%

In terms of sex, Table 3 shows that out of the total respondents, 70 (68.0%) were female, while 33 (32.0%) were male. This indicates that the sample was predominantly composed of female respondents. The higher proportion of female participants reflects the common trend in the nursing profession, where female students often comprise the majority of the population.

Overall, the demographic data suggest that the respondents are mostly young adult nursing students, with a greater representation of female participants in the study.

Level of Perceived Self-Efficacy

Table 4: Items of Perceived Self-Efficacy Scale

S. No	Items	$\bar{x}$	σ	Interpretation
1	I feel confident in my clinical skills after successfully performing procedures during simulation and return demonstrations.	3.49	0.55	High
2	My previous successful simulation experiences increase my belief in my ability to perform clinical tasks correctly.	3.49	0.54	High
3	Observing my clinical instructors perform clinical procedures improves my confidence in performing them independently.	3.50	0.55	High
4	Watching my classmates successfully perform clinical skills motivates me to believe that I can also perform well.	3.46	0.65	High

Note: 1 = Very Low, 2 = Low, 3 = High, 4 = Very High

Table 4 presents the mean and standard deviation of the respondents' answers for each item measuring perceived self-efficacy in simulation-based learning experiences.

Based on the results, all items obtained mean scores ranging from 3.46 to 3.50, which fall within the "High" interpretation according to the scale used (1 = Very Low, 2 = Low, 3 = High, 4 = Very High). This indicates that the respondents generally have a high level of perceived self-efficacy in performing clinical skills during simulation-based activities.

Specifically, the item "Observing my clinical instructors perform clinical procedures improves my confidence in performing them independently" obtained the highest mean score (M = 3.50, SD = 0.55). This suggests that demonstrations by clinical instructors play a significant role in strengthening students' confidence in performing clinical procedures on their own.

Meanwhile, the item "Watching my classmates successfully perform clinical skills motivates me to believe that I can also perform well" received the lowest mean score (M = 3.46, SD = 0.65), although it is still interpreted as High. This indicates that peer observation also contributes to students' confidence, though slightly less compared to instructor demonstrations and personal successful experiences.

The relatively low standard deviation values (0.54–0.65) indicate that the responses of the participants were fairly consistent. Overall, the findings suggest that the respondents possess a high level of confidence in their ability to perform clinical skills, particularly when supported by successful practice, instructor demonstrations, and peer learning within simulation-based environments.

Level of Engagement of Simulation-Based Learning Experience

Table 5: Items of Engagement of Simulation-Based Learning Experience Scale

S. No	Items	$\bar{x}$	σ	Interpretation
1	I actively participate in hands-on activities during simulation sessions.	3.39	0.66	High
2	Performing actual procedures during simulation enhances my learning experience.	3.50	0.59	High
3	Participating in a structured debriefing allows me to reflect deeply on my actions and decisions during the simulation.	3.54	0.53	High
4	Reviewing my performance after a simulation session helps me identify specific areas where I need to improve.	3.57	0.51	High
5	Simulation exercises help me clearly connect the theories I learned in the classroom to practical nursing interventions.	3.51	0.52	High
6	I can easily identify the scientific rationale behind the clinical actions during a simulation scenario.	3.37	0.56	High
7	I used the insights gained from previous simulation sessions to plan and improve my approach to new clinical cases.	3.58	0.51	High
8	I feel ready to apply the problem-solving strategies I practiced in simulation to actual patient care in the hospital.	3.42	0.58	High

Note: 1 = Very Low, 2 = Low, 3 = High, 4 = Very High

Table 5 presents the mean and standard deviation of the respondents' level of engagement in simulation-based learning experiences.

The results show that all items obtained mean scores ranging from 3.37 to 3.58, which fall within the "High" interpretation based on the scale used (1 = Very Low, 2 = Low, 3 = High, 4 = Very High). This indicates that the respondents generally demonstrate a high level of engagement during simulation-based learning activities.

Among the items, "I used the insights gained from previous simulation sessions to plan and improve my approach to new clinical cases" obtained the highest mean score (M =

3.58, SD = 0.51). This suggests that students actively apply knowledge and experiences gained from previous simulations to improve their performance in subsequent clinical scenarios.

Similarly, the item "Reviewing my performance after a simulation session helps me identify specific areas where I need to improve" also received a relatively high mean score (M = 3.57, SD = 0.51), indicating that reflection and self-assessment after simulations play an important role in enhancing student learning and engagement.

On the other hand, the item "I can easily identify the scientific rationale behind the clinical actions during a simulation scenario" obtained the lowest mean score (M = 3.37, SD = 0.56), although it is still interpreted as High. This suggests that while students remain engaged in simulation activities, some may still require additional support in linking theoretical knowledge to clinical reasoning during simulations.

The standard deviation values ranging from 0.51 to 0.66 indicate that the responses were relatively consistent among the respondents. Overall, the findings demonstrate that the respondents exhibit a high level of engagement in simulation-based learning experiences, particularly in terms of active participation, reflection, and application of knowledge in clinical scenarios.

Level of Clinical Skill Development

Table 6: Items of Clinical Skill Development Scale

S. No	Items	$\bar{x}$	σ	Interpretation
1	I am able to perform nursing procedures (e. g., wound care, IV insertion) step-by-step according to the clinical checklist after simulation training.	3.45	0.62	High
2	Simulation training has significantly reduced the number of technical errors I make when performing clinical skills.	3.47	0.53	High
3	I consistently prioritize patient safety protocols, such as proper patient identification and hand hygiene, during simulation.	3.67	0.48	High
4	Simulation-based learning has made me more vigilant about preventing medical errors in a clinical setting.	3.57	0.55	High
5	I feel comfortable communicating therapeutic information to the "patient" or their family during a simulation scenario.	3.55	0.60	High
6	Simulation has improved my ability to provide clear and concise verbal reports to other members of the healthcare team.	3.54	0.57	High

Note: 1 = Very Low, 2 = Low, 3 = High, 4 = Very High

Table 6 presents the mean and standard deviation of the respondents' level of clinical skill development after participating in simulation-based learning experiences.

The results show that all items obtained mean scores ranging from 3.45 to 3.67, which fall under the "High" interpretation based on the scale used (1 = Very Low, 2 = Low, 3 = High, 4 = Very High). This indicates that the respondents generally perceive that simulation-based learning has significantly contributed to the development of their clinical skills.

Among the items, "I consistently prioritize patient safety protocols, such as proper patient identification and hand hygiene, during simulation" obtained the highest mean score (M = 3.67, SD = 0.48). This suggests that simulation-based training strongly reinforces the importance of patient safety practices among the respondents.

Additionally, the item "Simulation-based learning has made me more vigilant about preventing medical errors in a clinical setting" also received a relatively high mean score (M = 3.57, SD = 0.55). This implies that simulation activities help students become more aware of potential risks and errors in clinical practice.

On the other hand, the item "I am able to perform nursing procedures step-by-step according to the clinical checklist after simulation training" obtained the lowest mean score (M = 3.45, SD = 0.62), although it is still interpreted as High. This suggests that while students feel confident in performing procedures, there may still be areas where further practice and reinforcement are needed.

The standard deviation values ranging from 0.48 to 0.62 indicate that the responses of the respondents were relatively consistent. Overall, the findings suggest that the respondents demonstrate a high level of clinical skill development, particularly in areas related to patient safety, error prevention, communication, and procedural competence, as influenced by simulation-based learning experiences.

Summary of the Level of Scales

Table 7: Summary of Level of Scales

Scale	$\bar{x}$	σ	Interpretation
Perceived Self-Efficacy	3.49	0.47	High
Engagement of Simulation-Based Learning Experience	3.49	0.43	High
Clinical Skill Development	3.54	0.44	High

Table 7 presents the overall summary of the mean and standard deviation for the three major variables in the study: Perceived Self-Efficacy, Engagement of Simulation-Based Learning Experience, and Clinical Skill Development.

As shown in the table, Clinical Skill Development obtained the highest mean score (M = 3.54, SD = 0.44), interpreted as High. This indicates that the respondents generally perceive that simulation-based learning experiences significantly contribute to the development of their clinical competencies, particularly in performing procedures, ensuring patient safety, and communicating effectively within the healthcare team.

Both Perceived Self-Efficacy and Engagement of Simulation-Based Learning Experience obtained the same mean score of 3.49, with standard deviations of 0.47 and 0.43, respectively, which are also interpreted as High. This suggests that the respondents have a strong level of confidence in their ability to perform clinical tasks and actively participate in simulation-based learning activities.

The relatively low standard deviation values across all three variables indicate that the responses of the participants were fairly consistent. Overall, the findings reveal that the respondents demonstrate high levels of perceived self-efficacy, engagement in simulation-based learning, and clinical skill development, suggesting that simulation-based

learning experiences play a significant role in enhancing students' confidence, participation, and clinical competence.

Correlation Analysis

Table 8: Correlation Analysis

S. No	Variables	1	2	3	4
1	Age	-			
2	Sex	-0.00	-		
3	Perceived Self-Efficacy	-0.10	-0.14	-	
4	Engagement of Simulation-Based Learning Experience	-0.15	-0.06	**0.78***	-
5	Clinical Skill Development	**-0.21****	0.04	**0.67***	**0.83***

Note: *p < .01 (two-tailed), **p < .05 (one-tailed)

Table 8 presents the results of the correlation analysis examining the relationships among age, sex, perceived self-efficacy, engagement of simulation-based learning experience, and clinical skill development.

The results show that age has a small negative correlation with clinical skill development ($r = -0.21$, $p < .05$, one-tailed). This indicates that as age slightly increases, the level of perceived clinical skill development tends to slightly decrease, although the relationship is weak. Age also shows weak negative correlations with perceived self-efficacy ($r = -0.10$) and engagement in simulation-based learning experience ($r = -0.15$); however, these relationships are not statistically significant.

Meanwhile, sex demonstrates very weak correlations with the other variables. It shows a negligible relationship with age ($r = -0.00$), a weak negative relationship with perceived self-efficacy ($r = -0.14$), and a weak negative relationship with engagement of simulation-based learning experience ($r = -0.06$). Additionally, sex has a very small positive correlation with clinical skill development ($r = 0.04$). These findings indicate that sex does not have a significant relationship with the key variables in the study.

In contrast, perceived self-efficacy shows a strong positive correlation with engagement of simulation-based learning experience ($r = 0.78$, $p < .01$) and a moderately strong positive correlation with clinical skill development ($r = 0.67$, $p < .01$). This suggests that students who have higher confidence in their abilities tend to be more engaged in simulation activities and demonstrate greater development of clinical skills.

Similarly, engagement of simulation-based learning experience has the strongest positive correlation with clinical skill development ($r = 0.83$, $p < .01$). This indicates that students who are more actively engaged in simulation-based learning experiences tend to show higher levels of clinical skill development.

Overall, the results suggest that while demographic variables such as age and sex have minimal influence, perceived self-efficacy and engagement in simulation-based learning experiences are strongly associated with clinical skill development among the respondents. These findings highlight the important role of student confidence and active participation in simulation-based learning in enhancing clinical competence.

Regression Analysis

Table 9: Regression Analysis

Variables	B	σ	β	t
Perceived Self-Efficacy	0.05	0.08	0.05	0.58
Engagement of Simulation-Based Learning Experience	0.81	0.09	0.78	8.78*

Model Summary: $R = 0.83$, $R^2 = 0.69$, Adjusted $R^2 = 0.68$, SE = 0.25

ANOVA: $F(2, 100) = 111.60$, *p < .01

Dependent Variable: Clinical Skill Development

Table 9 presents the results of the multiple regression analysis conducted to determine whether perceived self-efficacy and engagement of simulation-based learning experience significantly predict clinical skill development among the respondents.

The overall regression model was found to be statistically significant, as indicated by the ANOVA result $F(2, 100) = 111.60$, $p < .01$. This means that the independent variables, when taken together, significantly predict the level of clinical skill development. The model summary shows a multiple correlation coefficient (R) of 0.83, indicating a strong relationship between the predictors and the dependent variable. Additionally, the coefficient of determination ($R^2 = 0.69$) suggests that approximately 69.1% of the variance in clinical skill development can be explained by perceived self-efficacy and engagement of simulation-based learning experience. The adjusted R^2 of 0.68 indicates that the model remains strong even after adjusting for the number of predictors included in the analysis.

In terms of individual predictors, engagement of simulation-based learning experience was found to be a significant predictor of clinical skill development ($B = 0.81$, $\beta = 0.78$, $t = 8.78$, $p < .01$). This indicates that higher levels of engagement in simulation-based learning are associated with greater development of clinical skills. The large standardized beta coefficient further suggests that engagement has a strong influence on clinical skill development.

On the other hand, perceived self-efficacy was not found to be a significant predictor of clinical skill development ($B = 0.05$, $\beta = 0.05$, $t = 0.58$). This suggests that although self-efficacy is related to clinical skill development, it does not independently predict clinical skill development when engagement in simulation-based learning experience is considered in the regression model.

Overall, the findings indicate that engagement in simulation-based learning experiences plays a crucial role in predicting the development of clinical skills, while perceived self-efficacy does not significantly contribute to the prediction when both variables are analyzed simultaneously. This highlights the importance of active participation and involvement in simulation activities in enhancing students' clinical competencies.

Thematic Analysis of Clinical Skills Improved Through Simulation-Based RLE

A thematic analysis was conducted on the responses of the participants regarding the clinical skills they perceived to

have improved after participating in the simulation-based Related Learning Experience (RLE). The responses were coded and grouped into recurring categories, resulting in several major themes that reflect the perceived impact of simulation-based learning on students' clinical competencies.

Theme 1: Improvement in Basic Clinical Assessment Skills

The most frequently mentioned improvement among respondents was related to basic clinical assessment skills, particularly vital signs monitoring and patient assessment. Many students reported that repeated practice during simulation helped them become more confident and accurate when measuring vital signs such as blood pressure, pulse, respiration, and temperature.

Several participants emphasized that vital signs assessment is a fundamental nursing skill frequently used in clinical settings, which allowed them to continuously practice and improve their competence. One respondent explained that repeated exposure during clinical duties and simulations helped them perform the procedure faster and with greater accuracy. Others mentioned that practicing head-to-toe assessments and recognizing early signs of patient deterioration strengthened their ability to evaluate patient conditions effectively.

These responses indicate that simulation-based learning provides opportunities for students to repeatedly perform essential assessment skills, thereby improving both accuracy and confidence.

Theme 2: Development of Therapeutic Communication Skills

Another prominent theme identified from the responses was the improvement of communication and patient interaction skills. Many participants reported that simulation helped them become more comfortable communicating with patients, explaining procedures, and building rapport.

Students shared that practicing communication during simulation scenarios helped them learn how to interact professionally with patients and healthcare teams. Some respondents also mentioned that therapeutic communication allowed them to reassure patients, build trust, and demonstrate professionalism during clinical encounters.

Furthermore, several participants highlighted that simulation helped them become more mindful of the words they use when speaking to patients, ensuring clarity, empathy, and respect during patient care.

Theme 3: Enhancement of Clinical Reasoning and Decision-Making

The analysis also revealed that simulation-based RLE contributed to the development of clinical reasoning, critical thinking, and decision-making skills. Some students indicated that simulation scenarios required them to analyze patient conditions, prioritize nursing interventions, and make timely clinical decisions.

Participants explained that simulation exercises often present realistic situations where patient conditions change unexpectedly. This required them to think critically, identify urgent patient needs, and determine appropriate nursing actions. Through these experiences, students reported that they became more capable of organizing tasks and making safe clinical judgments.

Theme 4: Development of Technical and Procedural Skills

Another theme that emerged from the responses was the improvement of specific nursing procedures and technical skills. Several participants reported gaining competence in procedures such as subcutaneous injections, IV therapy, catheterization, enema administration, gloving, perineal care, and other nursing interventions.

Many respondents noted that simulation allowed them to practice these procedures in a safe and controlled environment, which helped them understand the correct techniques and develop confidence before performing them in real clinical settings.

Additionally, some participants mentioned that repeated return demonstrations during simulation helped them develop procedural accuracy and muscle memory, allowing them to perform skills more smoothly during actual patient care.

Theme 5: Increased Confidence and Hands-on Learning

Another recurring theme identified in the responses was the role of hands-on practice in building confidence. Many students stated that simulation-based learning increased their self-confidence in performing nursing skills, particularly during return demonstrations and clinical duties.

Participants highlighted that the opportunity to practice repeatedly, receive feedback, and apply theoretical knowledge in simulated scenarios helped them feel more prepared for real clinical situations. Some respondents also expressed that simulation helped them transition from theoretical knowledge to practical application, making them feel more capable of handling real patients.

Summary of Themes

Overall, the thematic analysis identified five key themes describing the clinical skills most improved through simulation-based RLE: (1) improvement in basic clinical assessment skills, (2) development of therapeutic communication skills, (3) enhancement of clinical reasoning and decision-making, (4) development of technical and procedural skills, and (5) increased confidence through hands-on learning.

These findings suggest that simulation-based learning plays a significant role in strengthening both the technical and cognitive competencies of nursing students, while also enhancing their confidence and preparedness for real clinical practice.

Thematic Analysis of Challenges Encountered During Simulation-Based RLE

A thematic analysis was conducted on the responses of the participants regarding the challenges they encountered during simulation-based Related Learning Experience (RLE) that hindered their ability to perform clinical skills effectively. The responses were analyzed and grouped into recurring patterns, which resulted in several key themes.

Theme 1: Anxiety and Performance Pressure

The most frequently reported challenge among respondents was anxiety and nervousness during simulation sessions. Many students expressed that performing procedures while being observed by clinical instructors and classmates created pressure that affected their performance. Participants reported that this anxiety sometimes caused them to

overthink, hesitate, or forget important steps in the procedure.

Some respondents also mentioned experiencing social anxiety, fear of making mistakes, or fear of being judged by instructors and peers. Others described experiencing mental blocks or feeling overwhelmed during return demonstrations or emergency scenarios. This pressure sometimes resulted in difficulty concentrating or performing tasks smoothly despite prior preparation.

These findings suggest that psychological factors, particularly performance anxiety, significantly influence students' confidence and effectiveness during simulation-based learning activities.

Theme 2: Difficulty Understanding or Memorizing Procedures

Another common challenge reported by participants was difficulty understanding, memorizing, or recalling clinical procedures. Several students indicated that the number of steps required for certain procedures made it difficult to remember all the necessary actions during return demonstrations.

Some respondents noted that the fast pace of discussions and assessments limited their ability to fully absorb the information before performing the procedures. Others mentioned that they struggled to process the checklist steps in the correct order, especially when performing a skill for the first time.

This theme highlights the cognitive demands of simulation-based learning, where students are expected to apply theoretical knowledge and procedural steps simultaneously.

Theme 3: Time Pressure and Task Prioritization

Another challenge identified in the responses was time pressure during simulation activities. Some participants reported difficulty completing procedures within the allotted time while simultaneously remembering documentation, patient communication, and safety protocols.

In addition, some students found it challenging to prioritize tasks and manage multiple responsibilities during simulation scenarios, particularly when faced with complex or emergency situations. These challenges sometimes led to confusion or incomplete execution of procedures.

Theme 4: Environmental and Situational Factors

Several respondents also identified environmental or situational factors that affected their performance during simulation sessions. These included distractions in the learning environment, large numbers of students in the simulation room, seating arrangements that limited visibility, and noise that made it difficult to concentrate.

Other students mentioned that certain clinical scenarios, such as assisting deliveries, administering injections to infants, or performing catheterization, created additional pressure due to the perceived seriousness of the procedures. These situations sometimes increased their nervousness and affected their ability to perform confidently.

Theme 5: Lack of Confidence and Self-Doubt

Another theme that emerged from the responses was lack of confidence in performing clinical skills. Some participants expressed doubts about their abilities, particularly when performing new procedures or when they felt unprepared.

Students also reported feeling uncertain about whether they were performing the steps correctly, which sometimes led to hesitation or slower performance during simulations. In some cases, respondents described feeling overwhelmed by the responsibility associated with patient care, even in simulated settings.

Summary of Themes

Overall, the thematic analysis revealed five major challenges encountered by students during simulation-based RLE: (1) anxiety and performance pressure, (2) difficulty understanding or memorizing procedures, (3) time pressure and task prioritization, (4) environmental and situational factors, and (5) lack of confidence and self-doubt.

These findings suggest that although simulation-based learning provides valuable opportunities for clinical skill development, students may experience psychological, cognitive, and environmental challenges that influence their performance. Understanding these challenges can help educators design more supportive simulation environments that reduce anxiety and enhance students' learning experiences.

Thematic Analysis of Factors that Helped Students Gain Confidence in Simulation-Based Learning

A thematic analysis was conducted on the responses of the participants regarding the factors that helped them gain confidence in performing clinical skills during simulation-based Related Learning Experience (RLE). The responses were examined and grouped into recurring patterns, resulting in several major themes.

Theme 1: Guidance and Support from Clinical Instructors

One of the most prominent themes identified in the responses was the guidance and encouragement provided by clinical instructors. Many respondents emphasized that the instructions, demonstrations, and feedback from their clinical instructors significantly helped them improve their clinical skills and gain confidence during simulation sessions.

Participants reported that clinical instructors provided constructive feedback, practical advice, and reassurance, which helped them identify mistakes and improve their performance. Some students also mentioned that the supportive attitude of their instructors, including words of encouragement and motivation, helped reduce anxiety and increased their confidence when performing clinical procedures.

Furthermore, debriefing sessions after simulations were identified as an important learning opportunity, where instructors explained the rationale behind procedures and helped students reflect on their actions.

Theme 2: Repeated Hands-on Practice

Another major factor that contributed to students' confidence was repeated hands-on practice. Many participants stated that performing clinical skills multiple times during simulation allowed them to become more familiar with the procedures and improved their accuracy and efficiency.

Students explained that repetition helped them develop muscle memory and procedural familiarity, which gradually reduced their fear of making mistakes. Several respondents also noted that practicing procedures in a simulation

laboratory allowed them to gain experience before performing the same skills in real clinical settings.
This theme highlights the role of simulation as a safe learning environment where students can practice and refine their skills through repetition.

Theme 3: Learning in a Safe and Supportive Environment
Several participants highlighted the importance of a safe and low-risk learning environment in building their confidence. Since simulation activities involve mannequins or simulated patients, students felt less afraid of harming real patients while practicing their clinical skills.
This safe environment allowed students to learn from their mistakes without serious consequences, which encouraged them to experiment, improve, and gradually become more confident in performing procedures. Many respondents stated that this "safe-to-fail" environment helped them become more comfortable with clinical tasks.

Theme 4: Peer Support and Collaborative Learning
Another theme identified in the responses was the influence of peer support and collaborative learning. Some participants shared that observing classmates, studying with peers, and receiving encouragement from friends helped increase their confidence during simulation sessions.
Students reported that watching their classmates successfully perform procedures motivated them to believe that they could also perform the same skills. Additionally, group discussions and shared learning experiences allowed students to exchange knowledge and support each other throughout the learning process.

Theme 5: Personal Preparation and Self-Motivation
Personal preparation and self-motivation also emerged as important factors that contributed to students' confidence. Several respondents mentioned that studying procedures in advance, reviewing lecture materials, watching instructional videos, and reading textbooks helped them feel more prepared for simulation activities.
Other participants highlighted the role of positive thinking, determination, and self-encouragement in building confidence. Some students emphasized that reminding themselves that mistakes are part of the learning process helped them overcome fear and improve their performance during simulation sessions.
Additionally, a few respondents mentioned the role of personal beliefs and faith, which helped them stay calm and confident when performing clinical skills.

Summary of Themes
Overall, the thematic analysis revealed five key factors that contributed to students' confidence in performing clinical skills during simulation-based learning: (1) guidance and support from clinical instructors, (2) repeated hands-on practice, (3) learning in a safe and supportive environment, (4) peer support and collaborative learning, and (5) personal preparation and self-motivation.
These findings indicate that both educational support systems and personal learning strategies play an important role in helping nursing students develop confidence in performing clinical procedures through simulation-based learning experiences.

Overall Summary of Thematic Analysis Findings
The qualitative findings from the thematic analysis further supported the quantitative results. Students reported that simulation-based RLE improved several clinical competencies, particularly vital signs monitoring, patient assessment, communication skills, clinical reasoning, and procedural skills. However, they also identified challenges such as performance anxiety, difficulty memorizing procedures, time pressure, and environmental distractions during simulation sessions.
Despite these challenges, several factors were found to enhance students' confidence, including guidance from clinical instructors, repeated hands-on practice, supportive learning environments, peer encouragement, and personal preparation. These findings highlight the importance of structured simulation activities, supportive mentorship, and opportunities for repeated practice in developing nursing students' competence and confidence in clinical practice.
Overall, the results indicate that simulation-based learning experiences play a significant role in improving students' engagement and clinical skill development, while also fostering confidence and readiness for real clinical situations. The findings emphasize the importance of active participation in simulation activities and effective instructional support in strengthening nursing education and preparing students for professional clinical practice.

5. Summary of Findings, Conclusions and Recommendations
A summary of findings, conclusions and recommendations as well as the outcomes of this study and the analysis of the collected data are Presented in this chapter.

Summary of Findings
This study was conducted to determine the level of self-efficacy of simulation-based Related Learning Experience (RLE) and its influence on the clinical skill development of second-year nursing students at Dr. Carlos Lanting College. Based on the comprehensive analysis of the collected data, the findings revealed that the respondents were predominantly young adult learners with a mean age of 20.20 years, and the majority were female, which is consistent with the gender distribution commonly observed in the nursing profession. This demographic profile suggests that the participants are at a developmental stage where experiential and hands-on learning approaches, such as simulation, are particularly effective in enhancing skill acquisition and professional competence.
In terms of perceived self-efficacy, the results strongly indicated that the respondents possessed a high level of confidence in their ability to perform clinical procedures accurately and safely. This heightened sense of self-efficacy can be attributed to repeated exposure to simulation-based activities, opportunities for hands-on practice, and observational learning through instructor demonstrations. The students' confidence was further reinforced by successful task completion during simulations, which enhanced their belief in their own capabilities to perform in real clinical settings. This implies that simulation-based learning serves as a powerful tool in strengthening students' psychological readiness and professional self-assurance.
Similarly, the level of engagement in simulation-based learning was found to be consistently high, highlighting that

students were not merely passive participants but were actively involved in the learning process. They demonstrated initiative in performing procedures, critical reflection on their actions, and the ability to integrate theoretical knowledge into simulated clinical scenarios. This high level of engagement reflects the effectiveness of simulation as an interactive and student-centered teaching strategy that promotes deeper learning, critical thinking, and active participation.

Furthermore, the findings revealed that the level of clinical skill development among the respondents was also high, indicating that simulation-based RLE significantly contributed to the enhancement of essential nursing competencies. These competencies include improved procedural accuracy, adherence to patient safety protocols, effective communication skills, and the development of clinical reasoning and decision-making abilities. The data clearly suggest that simulation not only facilitates the acquisition of technical skills but also strengthens the cognitive and interpersonal aspects of nursing practice.

The correlation analysis provided further support for these findings, revealing strong and positive relationships among self-efficacy, engagement, and clinical skill development. Notably, engagement demonstrated the strongest correlation with clinical skill development, emphasizing its critical role in the learning process. On the other hand, demographic variables such as age and sex were found to have no significant relationship with the key variables, indicating that the benefits of simulation-based learning are universally applicable across different student profiles. Moreover, the regression analysis confirmed that engagement in simulation-based learning is a significant predictor of clinical skill development, underscoring the importance of active participation and involvement in achieving optimal learning outcomes. While self-efficacy was positively correlated with clinical skill development, it did not emerge as a significant predictor when combined with engagement, suggesting that confidence alone is not sufficient without active engagement in learning activities.

In addition, the qualitative findings provided deeper insights into the students' experiences, reinforcing the quantitative results. Students reported substantial improvements in various areas, including clinical assessment skills, communication, critical thinking, and technical proficiency, as well as a noticeable increase in confidence when performing procedures. However, the study also identified several challenges encountered by the students, such as anxiety, performance pressure, difficulty in memorizing procedures, time constraints, environmental distractions, and lack of confidence in certain situations. Despite these challenges, several facilitating factors were identified that enhanced students' learning and confidence, including effective instructor guidance, constructive feedback, repeated hands-on practice, a safe and supportive learning environment, peer collaboration, and personal preparation. These findings highlight the multifaceted nature of simulation-based learning and its ability to address both the strengths and limitations of student learning experiences.

Conclusion

Based on the comprehensive findings of the study, it can be concluded that simulation-based Related Learning Experience (RLE) is a highly effective and essential instructional strategy in nursing education, particularly in enhancing the clinical skill development of second-year nursing students. The study clearly demonstrates that students who are exposed to simulation-based learning develop high levels of self-efficacy and engagement, both of which play vital roles in shaping their clinical competence and overall learning outcomes. However, among these factors, engagement in simulation activities emerged as the most significant determinant of clinical skill development, highlighting that active participation, involvement, and experiential learning are crucial in achieving mastery of clinical skills.

Furthermore, simulation-based learning provides a safe, controlled, and realistic environment where students can practice clinical procedures, make mistakes, and learn from them without compromising patient safety. This approach not only enhances technical proficiency but also fosters critical thinking, decision-making, and effective communication, which are essential components of professional nursing practice. The study also concludes that while self-efficacy contributes to students' confidence and motivation, it must be complemented by active engagement and continuous practice to produce meaningful improvements in clinical performance.

Despite the positive outcomes associated with simulation-based learning, the study acknowledges that students still experience psychological and cognitive challenges, particularly anxiety and difficulty in recalling procedures during simulations. These challenges may hinder performance if not properly addressed. Therefore, it is essential for educators to implement supportive strategies that minimize stress and promote a positive learning environment. Overall, the findings affirm that simulation-based RLE is a critical component of modern nursing education that effectively bridges the gap between theoretical knowledge and clinical practice.

Recommendation

After reviewing the findings of this research, a list of several Recommendations was made.

Nursing Students: Students should actively participate in simulation activities and maximize opportunities for hands-on practice. They should engage in advance preparation, such as reviewing procedures and studying materials before simulations. Students are encouraged to develop self-confidence and stress management strategies to overcome anxiety during simulations.

Clinical Instructors and Faculty: Provide consistent guidance, demonstrations, and constructive feedback during and after simulation sessions. Incorporate structured debriefing sessions to enhance reflection and learning. Create a supportive and non-threatening learning environment to reduce student anxiety.

Healthcare Institutions and the Healthcare System: Healthcare institutions and the healthcare system should strengthen simulation-based training, provide adequate resources, and ensure competency-based learning to produce clinically competent and safe healthcare professionals.

Future researchers: Are recommended to explore the long-term effects of simulation-based learning, investigate additional variables that may influence clinical performance, and conduct similar studies in other institutions to enhance the generalizability of the findings.

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7. Dedication

This research is dedicated to the following:

To **Second-Year Nursing Students**, whose experiences we hope to validate and improve through the recommendations derived from this study, to provide a high quality of practical learning.

To the **Faculty** and **Clinical Instructors** at Dr. Carlos Lanting College, who instilled in us the knowledge, skills, and ethical commitment required for the noble profession of nursing.

To the **Future Patients** we are training to serve, whose safety and well-being are the ultimate purpose of this rigorous education.

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