

Identifying Gaps Between Theory and Clinical Practice Among Fourth-Year Nursing Students for Skill Enhancement

Jairah Kaye M. Angue¹, Karyle Ella P. Barrieta¹, Sahib Jeet J.K. Brar¹, Bryan S.A. Dimayuga¹, Melanie Marie O. Maganes¹, Jewel Grecelyn F. Mondina¹, Joel John A. Dela Merced¹, Cecile F. Guevara¹, Juvy G. Reyes¹, Elenita M. Arreglo¹, Florence B. Grageda¹, Mary Ann E. Lopez¹, Emerita M. Abendanio¹, Carlos Kurt S. Sedeno¹

Bachelor of Science in Nursing, College of Nursing, Our Lady of Fatima University - Quezon City, Philippines¹

Corresponding author:

Name: Jairah Kaye M. Angue
Address: Bachelor of Science in Nursing, College of Nursing, Our Lady of Fatima University - Quezon City, Philippines
E-mail: anguejairah@gmail.com

Article info:

<http://dx.doi.org/10.70848/cnj.v2i1.17>
pISSN 3063-9247
eISSN 3063-9255

Article History:

Received: November 17th, 2024
Revised: April 26th, 2025
Accepted: April 26th, 2025

Abstract

Introduction: The theory-practice gap, a significant issue in nursing education, has been a primary concern for student nurses worldwide. Despite its importance, many nursing students struggle to connect theoretical knowledge with clinical practice, leading to gaps in their understanding and skills. **Objective:** This phenomenon has been observed in various countries, including India, the Philippines, and others. **Method:** This qualitative study aims to investigate the theory-practice gap among selected fourth-year nursing students, exploring the reasons behind the misalignment between theoretical concepts and clinical exposures. The researchers employed a phenomenological research design centered on comprehending people's lived experiences and the phenomena that have influenced them. The researchers interviewed fifteen (15) fourth-year nursing students chosen for the video and audio recording in-depth interview by following the inclusion and exclusion criteria. With this, the researchers sought the assistance of a qualitative expert by utilizing NVivo software to extract significant statements and merge them into themes for thematic analysis. **Result:** Based on the findings, the discrepancies are caused by several factors: student readiness, equipment availability, unfamiliar procedures, heavy workloads, and adaptability to the clinical settings, in addition to variations between instruction in the skills laboratory and clinical practice. **Conclusion:** Generally, the study has identified the gaps between integrating theoretical concepts and clinical exposure. Considering the identified gaps, the researchers recommended five nursing programs related to skill enhancements that adapt to changing demands in the healthcare industry, provide long-term knowledge and skills, and develop innovative education strategies that could upgrade the overall quality of nursing care.

Keywords:



INTRODUCTION

Experiences in clinical settings are crucial for helping student nurses develop the knowledge, abilities, and attitudes needed to work in general healthcare settings and specialty professions. However, many nations that offer nursing education also need help. The theory-practice gap, or mismatch between theoretical notions and clinical practice, has been an issue in academia (Saifan et al., 2021). To demonstrate this, a research study in India found that old conventional ways need to be enhanced in today's students' clinical exposure since some registered nurses have a different manner of executing practices than what colleges educate nursing students (De, 2022). Furthermore, a study conducted in the Philippines investigated the relationship between theory and practice and discovered that clinical performance is more favorable when nursing students perform moderately compared to the average performance in theoretical knowledge (Sanglay et al., 2023). According to Şimşek et al. (2023), 72.8% of 389 nursing students recognized the discrepancy between theoretical nursing courses and clinical practice, indicating theory practice gaps among most students.

The theory-practice gap was a universal issue and the most major crisis facing nursing students until now. As stated by Saifan et al. (2021), it was a problem wherein the "dividing of theoretical understanding from the practical application" concerns newly licensed registered nurses and nursing students throughout clinical placements. Additionally, according to the research mentioned by Hashemiparast et al. (2019), most students need help to relate the theoretical knowledge acquired during instruction with what they carry out in practice in clinical education settings (Saculingan et al. 2024). Hence, incompetency occurs in delivering quality care based on the difficulties and obstacles to successful healthcare services in medical environments and healthcare institutions. Previous research has identified some elements that lead to theory-practice gaps, such as system problems, resource constraints, inadequate experience, poor work conditions, and a lack of cooperation with students in medical settings and educational institutions. Moreover, a researcher had developed issues related to the theory- practice based on their personal experiences and observations during their clinical rotations in the operation room. The main concern arose when a circulating nurse in the hospital asked the student nurse to do the skin test injection before the operation. According to the circulating nurse who supervises the student nurse, insert the needle at 10 to 15 degrees into the skin with the bevel-side down. As a result, the student nurse

needed clarification about what the nurse said because there was a difference from what the clinical instructor taught in the skills laboratory. Based on the researcher's observation and comparison in intradermal injection, a very small wheal was developed yet not visible using the 'bevel-down technique.' However, on the next operation with a different circulating nurse, the nurse instructed to do skin testing in a 'bevel-up technique,' and the wheal formed easily on the patient's forearm. This needs to be clarified why the two circulating nurses had different knowledge of skin testing techniques. Likewise, the global pandemic affected the Batch 2024 fourth-year nursing students who align with the affected people in the study.

Researchers aimed to identify the theory-practice gap by determining the reasons for misalignment between theoretical concepts and clinical exposures of fourth-year nursing students. Theory integration and practice were necessary for effective performance in clinical settings. The study's significance was to identify the hindrances of fourth-year nursing students in using theoretical knowledge in clinical settings. The researchers used emerging themes to extract the study's results with the assistance of the qualitative expert. As the results showed, there was a gap mainly focused on theoretical concepts and clinical exposure among fourth-year nursing students.

Considering the nursing curriculum is performance-based, the following stated benefits or contributions were related to the study. The nursing service delivered professional clinical competencies/skills, improving safe and quality nursing care (Soriano et al. 2024). It produced capable, self-sufficient nurses who can carry out their duties if it can earn a substantial connection between theory and practice. Effective nursing education significantly strengthens the health system. It gave workers the skills and knowledge to recognize individual and group health needs and deliver care using the best scientific evidence. Also, the professional competence of the clinical instructors was an influential human resource. It benefitted faculty and university administrators in understanding the gap in the education system. It provided the foundation for different approaches, measures, and policies to help nurse educators fill these gaps more effectively. Moreover, it provided valuable solutions and recommendations to decision-makers while generating improvements to the nursing curriculum. Furthermore, it prepared the nursing students to be in charge of their care-related actions, increase their experience, and develop their learning and interpersonal skills in the real world of nursing. More importantly, future researchers could use this study to add to the existing literature on theory-practice gaps

and determine ways or solutions to bridge the gap during clinical practice.

METHOD

1. Design

The study aimed to determine the theory-practice gap of the selected fourth-year nursing students. With that, the researchers chose a qualitative methodology for this objective. Brannan et al. (2022) stated that qualitative research explores and produces more in-depth insights into real-world issues. It obtained data about individuals' experiences, perceptions, and behaviours. Additionally, it addressed the hows and whys. One of the strengths of qualitative research was its capacity to convey methods and trends of behaviour among people that are complex to measure. The qualitative method allowed participants to elaborate on how, why, or what they were thinking, feeling, and experiencing at a specific time or during an event of interest.

The researchers utilized phenomenological research design, an approach that was a method for thoroughly understanding particular circumstances and exploring what people experience. This method was concerned with analyzing the phenomena that have impacted a person. It emphasized the examination of a person's actual experiences in the world. Moreover, it is centered on specific characteristics and recognizes a phenomenon as perceived by a person (Harappa Education, 2021). Additionally, phenomenological study fits the researcher's study because it focuses on the study of an individual's lived experiences within the world, which is what the study was about. Lastly, it was applicable to investigate the similarities in a group of people's behaviours.

2. Number of samples and sampling techniques

The researchers target population was fourth-year nursing students with clinical exposure in various hospital areas to carry out this study. As they had theoretical knowledge and clinical exposure done simultaneously. There were fifteen (15) fourth-year students involved with the most relevant information to the study's aims.

Purposive and Snowball sampling were both utilized in the study. Purposive sampling was a non-probability sampling approach in which units were chosen because they exhibit traits that must be present in the study. Meanwhile, snowball sampling was a form of purposive sampling that entails identifying and enlisting people utilizing referrals from current or original participants.

To be included in the study, the participants must be; 1.) Attending University in Quezon City, 2.) Experiencing clinical exposure in any area/rotation to qualify for the in-depth interview, and 3.) Currently enrolled in the second semester of the school year 2023-2024.

Participants excluded were; 1.) Unenrolled fourth-year nursing students in the second semester of the school year 2023-2024, 2.) Other year-level students, 3.) Irregular students, and 4.) Students pursuing programs other than nursing.

The study was conducted in a university located at Lagro, Quezon City, in the academic year 2023-2024. The conducting of the study started in the last week of April 2024 and ended in the first week of May 2024.

3. Instruments

Qualitative research gathers and analyzes non-numerical data such as: text, video, or audio to gain insight into thoughts, opinions, or experiences. It could be used to develop authentic research ideas or to understand a situation thoroughly (Bhandari, 2020). The self-made interview questionnaire was used as the research instrument.

The interview guide questions had ten (10) open-ended questions answered in the participants' own words. The researchers searched for examples of interview guide questions using a qualitative approach as a guide for the study and made their interview questions from scratch. An English Licensed Professional Teacher translated the questions from English to Filipino to ensure the information was conveyed accurately and used as a guide for the interview process. Moreover, the researchers requested validation of the interview questionnaire from the three (3) nursing clinical instructors. They chose the clinical instructors as experts to validate, review, and correct the questions relating to the misalignment between the theoretical concepts and the clinical exposure of the selected fourth-year nursing students. The interview questions underwent several validations and critiques to investigate the reliability and validity of the instrument used in the study.

In addition, before starting the data collection process, the researchers conducted the pilot study twice. Regarding the pilot study process, the researchers used open-guided questions to provide broad and sufficient information. They also asked follow-up questions once they encountered responses that needed to be clearly defined. The first pilot study was done on March 7, 2024, while the second one was on April 2, 2024, with a total of three (3) participants done using a qualitative approach to determine the research's feasibility. The first pilot study results were great as they showed the exact results the researchers aimed to find. However, there were discrepancies between the researchers and how the interview process was done. The research adviser suggested doing a second pilot study for more credible results. According to Rahman and Shakir (2022), executing a pilot study enhanced the validity and rigor of qualitative research. It attained the research process and served to identify and resolve ethical and practical issues that may harm the main research project or violate participants' human rights.

Furthermore, both results of the research pilot study process were able to answer all the interview questions precisely. Right after the interview, the researchers encapsulated the results and acknowledged the participants for participating. They utilized video-audio recordings, which served as evidence of the in-depth interview approach. The participants shared their experiences regarding the clinical duties and return demonstrations they encountered. Lastly, after the research adviser approved the second pilot study results, the researchers proceeded to data collection immediately.

4. Data collection process

The data collection procedure for the study began with the researcher adviser's approval of the proposed title, "Gap Identification Between the Theoretical Concepts and Clinical Exposure of the Selected Fourth Year Nursing Students: Basis for Skill Enhancement Recommendations." As soon as the title was approved, the paper was submitted to the Research Development and Innovation Center (RDIC) in January 2024 to ensure and review research ethics. Additionally, while waiting for the ethical certificate, the researchers asked for assistance validating the researcher-made interview guide questions to the experts from the first week to the third week of February 2024.

The researchers received the ethical certificate in March 2024 and conducted the pilot study immediately. The first pilot study was done in March 2024. The second pilot study was conducted in April 2024. After approving the second pilot study results with the research adviser, they sought permission from the Program Head of the College of Nursing in April 2024 to conduct the study. Once the Letter to the Dean was signed, they searched for fifteen (15) participants from fourth-year nursing students with clinical exposure in any area by following the purposive and snowball sampling method, including the inclusion and exclusion criteria. The data gathering began in the last week of April 2024 and ended in the first week of May 2024. They presented themselves and explained why they conducted this study. Moreover, after explaining all the benefits, scope, and limitations, the researchers provided a print-out informed consent to those selected and ensured confidentiality. Upon reading the informed consent, all participants knew that video-audio recorded and transcribed information collected for data analysis by the researchers was strictly confidential to protect their data privacy. Each interview session consisted of three people - one as the interviewer who recorded the video-audio interview. Then, the other transcribed the information during the interview phase, and an interviewee. Every participant had their coding principles. For example, participant 1 had the code of 'P1' to maintain and study anonymity.

As soon as the participants agreed to the informed consent, in-depth interviews with the researchers began. An in-depth interview was a

widely used approach in qualitative research for conducting thorough interviews with a few participants (Rutledge & Hogg, 2020). Unimrkt Research (2023) cited the advantages of an in-depth interview, including the detailed nature of the data, inquiring into various issues and viewpoints, and establishing a personal connection between the researcher and the participant, resulting in an essential qualitative market research instrument—the capability of participants to express themselves freely. It involved semi-structured questionnaires as an interview guide for the researchers. The interview lasted for 30-45 minutes.

After the interview, the researchers humbly asked for the participants' university email addresses to show the complete transcription of each participant's interview process. As the data gathering ended, the researchers immediately transcribed recorded interviews into anonymized and verbatim raw data in May 2024. In addition, as the researchers finished transcribing the raw data for each participant, the principal investigator sent the data to the participants via their university email. The purpose of returning the transcribed data was to test the rigor, review their answers, and serve as proof of participation in the research. Also, after the principal investigator received participants' feedback from the university email regarding the complete transcription, the researchers asked for assistance from the qualitative expert for the transcribed data to develop further thematic analysis. In the third week of May 2024, the qualitative expert provided the data analysis concerning the fourth-year nursing students' theoretical concepts and clinical exposure.

The researchers were responsible for keeping all the documents and files following the Data Privacy Act of 2012. All research digital files, including video-audio recordings and interview narratives, were stored in a hard drive with a protected password and deleted three (3) years after the completion of the research. Also, the physical documents used in the research will be shredded into pieces to ensure the confidentiality of the information and to protect the names of those who participated in the study, for instance, if there was a request for disposal. Lastly, only the researchers accessed the data to secure confidentiality and privacy, explicitly highlighting the Republic Act of the Philippines 10173, also known as the Data Privacy Act of 2012

5. Analysis

A popular method for examining qualitative data in the social sciences, psychology, and other domains was thematic analysis. It aimed to specify underlying themes, patterns, and meanings in a dataset. Also, it is typically employed to describe a collection of texts, including detailed interviews or transcripts. Accordingly, the researchers closely reviewed the data to look for themes such as recurring concepts, subjects, or ways of phrasing things (Villegas, 2023). As stated by Villegas (2023), it also recognized the subjective role of the researcher in shaping the analysis process. The

researchers employed this data analysis method to guarantee that the data obtained reveal their perspectives, opinions, expertise, and experiences relevant to the study's purpose (Caulfield, 2023). Under the thematic analysis, this study took an inductive approach, a logical methodology in forming inferences or conclusions that involve moving from specific to general. Furthermore, this approach required gathering data, looking through broader views and patterns, and creating general conclusions (Bhandari, 2023).

The researchers examined the video-recorded interviews and transcribed them verbatim. The data from the participants' input were the basis of how they delivered their statements and the preferred language utilization. The data had to be analyzed in six (6) steps: (1) researchers provided a thorough overview of all the data from transcribed audio and analyzing through texts; (2) highlighted parts of the texts that describe the substance of the phrases were labeled as 'codes'; (3) merged the codes into a single theme; (4) reviewed themes to ensure no missing data; (5) named the themes and defined them for easy understanding; (6) wrote an analysis with an introduction, methodology, results, and conclusion (Caulfield, 2023). The participants were genuine and truthful in responding to the interview questions for more consistency. No adjustments were made to the transcribed open-ended responses, regardless of whether participants requested any changes or whether that was what they intended to say. Next, the parties decided who would sign the document.

The collected data were analyzed with the assistance of a qualitative expert, who employed specialized software to provide a thematic representation of the participants' answers. The software utilized was NVivo, a powerful tool capable of importing and handling various data formats and types. It was especially suitable for sorting, organizing, and evaluating qualitative data. Additionally, it has been proposed that using NVivo software or computer-assisted qualitative data analysis software (CAQDAS) can enhance the overall quality of the study. Notably, qualitative data yielded valuable insights if adequately managed despite its inherent complexity. Upon receiving the results, including themes, sub-themes, and discussions, researchers enlisted the expertise of an English linguist to translate the findings from the original Filipino responses into English. Lastly, the researchers examined the findings to confirm and identify the gaps based on the data.

6. Research Ethics

The study's information had to be explained to all participants. Participation in the research study was entirely voluntary, and participants could withdraw at any time. The principle of autonomy underpins the importance of obtaining the participants' consent before any study or interview was conducted. It included refusing and participating in research without coercion or informed consent. Participants were asked to sign an informed consent

containing the needed information and permission for the interview to be recorded. Researchers must respect the right of the participants to make their own accord decisions on whether to engage in the said study. To maintain the anonymity of the participants, they must be given complete information about the study and be able to decide whether or not to participate.

The researchers applied the principle of justice or fairness in treating participants appropriately and prioritizing the research subjects' needs over the study's goal. When recruiting participants based on the selection criteria, they still have the right to fair treatment and privacy. During the interview, no disparaging, racist, or other unpleasant language was utilized. The researchers were required to treat the participants equally.

The researchers also ensured the application of the principle of beneficence. Thus, they were obliged to protect the individuals against harm while still being concerned about eliminating significant advantages from the study. Participants were viewed as moral agents, and they had to choose if the positive aspects of the study outweighed any potential negative unintended consequences.

Likewise, the researchers applied the principle of nonmaleficence, which involved the ethical requirement not to cause harm to the research participants. It demonstrated the need to limit any potential risk or harm that participants may face due to their participation in the study. The researchers ensured that there was no harm to the participants while being part of the study without anyone being harmed or obtaining information at the expense of others.

Researchers guaranteed that the data was credible, that participants were comfortable, and that no brute force was used in answering questions. This research prevented plagiarism and acquired credentials demonstrating the study's uniqueness. In line with this, the researchers accepted responsibility for unfavorable feelings that arose before or during the interview and let professionals, including advisors for nursing research and guidance counselors, know.

The participants had the right to know the truth and not to be misled about any part of the research. The researchers ensured that honesty and transparency to the participants were maintained while conducting the study. The researchers were to commit to preserving the truth while respecting each participant's dignity and autonomy, defining a decent and noble path. Moreover, the researchers were to ensure fidelity by maintaining open communication with the participants to create a positive environment.

Participants' confidentiality was assured. Individuals may only consent to contribute information for study purposes provided they comprehend that it will not be disclosed beyond the study's scope or to unauthorized individuals. Similarly, the participants provided their informed consent to partake in the study. The researchers asked the participants to sign an informed consent form. It was needed to ensure

that the participants agreed to be part of the study voluntarily without coercion and with full knowledge of what the study was all about. When recruiting the participants, they were required to sign informed consent for their involvement in the research. The informed consent form comprised information on the study, which can be found on the first page. The informed consent form comprised information on the study, which can be found on the first page. It also included a summary of the study's content so that participants understood what the research was about when they participated. The study was conducted once the researchers completed the validation process, the research adviser's signature on the following requirements, such as the letter to the participants, and a review by the Research Development and Innovation Center (RDIC) and the Institutional Ethics Review Committee (IERC) before proceeding with data collection.

To protect the individual's privacy is described as the right of the participant to regulate access to personal information. The researchers were responsible for keeping the participant's personal information in unlawful disclosure and not disclosing it to anyone unless requested or necessary. The acquired data were saved on a hard drive with a protected password that was only accessible to researchers and deleted after three (3) years once the study had been conducted. The researchers conducted several video-audio- recorded interviews in a secure area to ensure the participants' privacy. All gathered personal information remained confidential by Philippine legislation, namely the Republic Act of the Philippines 10173 and the Data Privacy Act of 2012.

RESULT

This chapter addresses the findings of the researchers' data-collecting process, which included interview questions designed to obtain and develop an in-depth understanding of the gap between theoretical concepts and clinical exposure. The interview data was presented by the researchers as emerging themes, which provided the framework for addressing the study's objectives. Presented below are relevant studies that add more credibility to the themes and sub- themes.

Thematic Representations

This study focused on identifying the theoretical concept and clinical exposure of fourth-year nursing students. The purpose of this study is to know if there is a discrepancy or underlying cause of the gap. The time invested by researchers using an in-depth interview approach is significant for each participant, who uses a conversational format. In particular, the interview questions are open to interpretation and lead to a discovery approach (Rutledge & Hogg, 2020). Following the interview process between the participants and researchers, the researchers with the assistance of coding experts

used NVivo as an analysis for the thematic representation. The researchers employed theme analysis to examine a collection of texts, such as transcripts or interviews. To identify recurring themes, the researcher thoroughly examines the data, analyzing subjects, concepts, and patterns of meaning (Caulfield, 2023).

Theme 1. Adaptation to Clinical Environment

This theme explores how students adapt to diverse and dynamic clinical environments, including hospital departments and patient populations. Adapting to the clinical environment involves acclimating to various healthcare settings, such as public and private hospitals, and navigating their unique challenges and learning opportunities. In line with this, adaptation requires students to adjust their practices and attitudes to align with the specific demands of each clinical setting: including patient demographics, staffing levels, and available resources. Return demonstrations play a significant role in nursing education by allowing students to apply theoretical knowledge to practical skills under supervision. These demonstrations provide opportunities for students to showcase their proficiency, receive feedback, and bridge the gap between skills laboratory learning and clinical practice.

Nursing students' professional socialization is facilitated by clinical adaptation. Enhancing the clinical learning environment and promoting the growth of clinical practice competency are two ways to accomplish clinical adaptation. Nursing students encounter the socialization process when they initially enter the clinical environment and throughout each subsequent placement. The importance of students' socialization in nursing school is already widely recognized. According to Romero-Martin et al. (2020), students with a sense of belonging in the workplace tend to form better relationships with clinical personnel and enhance learning outcomes. Furthermore, the nursing profession entails dealing with the job's emotional and practical aspects. Adaptability and resilience are essential qualities that nursing students must possess in order to effectively handle difficulties and maintain flexibility in their practices and expectations, especially amid rapidly changing and unpredictable situations. Clinical practice enables nursing students to cultivate adaptation, enhancing their resilience as a future workforce. Lastly, according to Baharum et al. (2023), the development of resilience and adaptability by person-centered approaches leads to their application in person-centered ways.

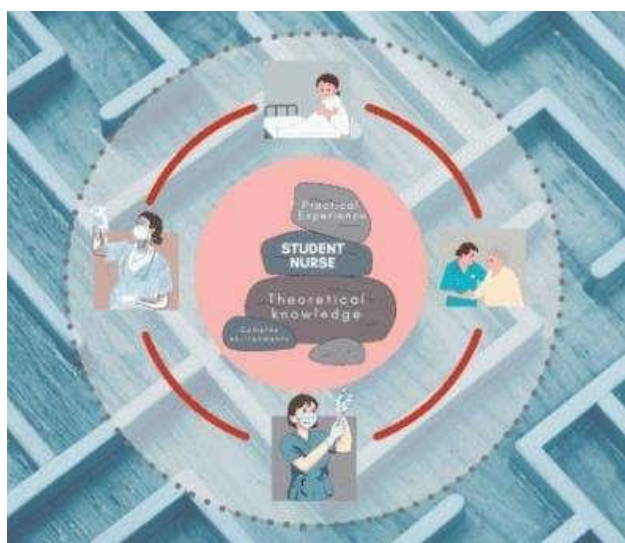


Figure 1. Adaptation to Clinical Environment

This figure illustrates that every student nurse has to navigate or rotate to various departments. Examples in the illustration above are the geriatric ward, general ward, and operating room, which enhance clinical judgment and flexibility with real-life scenarios. Moreover, as the student nurses explore other areas, the maze in the background symbolizes adaptability to the specific environment, and the balancing rocks symbolize harmonization of how the student nurse applies theoretical knowledge and practical experiences in clinical environments.

Sub-theme 1.1. Variation in Hospital Environments

Sub-theme 1.1 explains that students encounter diverse hospital environments with varying levels of equipment availability, patient volumes, and organizational cultures. Adapting to these differences requires flexibility and open-mindedness.

Nursing students must utilize their knowledge and abilities in clinical settings to obtain the appropriate credentials for patient care. For them, their level of achievement is highly reliant on the quality of didactic instruction they obtain. Clinical experience is regarded as a prerequisite and foundational element of the educational process in nursing. Furthermore, the hands-on learning setting serves an integral role in the process of shaping nursing students into skilled and competent professionals. It is equipping them with the necessary skills to function properly as nurses (Meyer et al., 2022). Recognizing and understanding the learning environments serve as vital for the establishment and execution of efficient curricula, specifically nursing education. To ensure that students receive the most from these varied learning opportunities, curriculum developers should investigate how to best

incorporate these contextual differences into the curriculum. Educators should help students develop their ability to adapt to the complexity of these surroundings. It is also essential to highlight how students co-construct the learning environment and their learning (Boe & Debesay, 2021).

Sub-theme 1.2. Navigating Different Departments

Sub-theme 1.2 explains that students must work in various hospital departments, each with its workflow, patient population, and procedures. This requires students to quickly adapt to new settings and expectations.

This subtheme's findings were related to a study written and published by Alotaibi et al. (2023), which found that nursing students encountered various obstacles during their internships that can negatively impact their educational experiences and career development. These problems encompassed adapting to the rapid and demanding professional setting, handling emotional strain, negotiating complex communication along with patients and coworkers, and conquering gaps in understanding or skill deficits in several areas. In line with this, the study

focused on analyzing the nursing interns' experiences at emergency departments in Saudi Arabia while in training and investigating the elements that influence these learning experiences. Similarly, the study aimed to enhance comprehension of the challenges faced by nursing interns and offer valuable insights that can be used as a guide to facilitate professional growth and education. Based on the results discussed, the issues encountered by nursing students during the internship include specialized and procedural interventions, social contact, decisiveness, and concerns about well-being and safety. It emphasized the necessity for programs focused on the education and training of individuals in nursing to prioritize students' readiness for the intricacies of emergency assistance and care. In addition, a study has shown that communication is a substantial hindrance for student interns in emergency departments. Therefore, the authors recommended that nursing courses prioritize communication training and must note that programs created for nursing education must align with the practical requirements and circumstances in emergency departments to provide seamless growth in nursing practice (Alotaibi et al., 2023).

Sub-theme 1.3. Balancing Theoretical Knowledge with Practical Experience

Sub-theme 1.3 states that students must strike a balance between theoretical knowledge gained in the skills laboratory and practical skills honed in clinical settings. These require students to apply theoretical concepts to real-world scenarios while also adapting to the realities of patient care.

A study published by Carless-Knae and Nowell (2023) stated that the preparation's main focus entails

establishing links within theoretical knowledge gained in the lab and effectively showcasing those connections in real-world clinical settings. In order to satisfy professional quality-of-care standards, nursing students must proficiently apply their theoretical understanding to solve specific patient care scenarios. Furthermore, in simulated situations, students can put into practice the information they have acquired in class before working with actual patient

Theme 2. Role of Return Demonstrations

This theme focuses on the significance of return demonstrations in bridging theoretical knowledge with practical skills in the clinical setting. Return demonstrations play a significant role in nursing education by allowing students to apply theoretical knowledge to practical skills under supervision. These demonstrations serve as opportunities for students to showcase their proficiency, receive feedback, and bridge the gap between skill laboratory learning and clinical practice.

According to Msosa et al. (2022), in line with international trends in nursing and education, the institution has implemented skills laboratories for clinical instruction, instruction, and evaluation in its undergraduate nursing and midwifery programs. Before implementing skills laboratories, the college's clinical education predominantly followed an apprenticeship framework, wherein students acquired knowledge and underwent evaluation directly at patients' bedsides. Nursing educators and students have teaching, learning, and evaluation challenges due to limits in clinical service settings. Challenges in clinical learning included limited resources, patient and student congestion, and ethical concerns about employing humans repeatedly to standardize experiences. Nursing education has two essential elements: clinical teaching and learning. With that, most clinical teaching and learning activities are performed at healthcare institutions,

where theoretical knowledge is put into reality. Although the clinical environment is a crucial area in which to apply theories gained in the laboratories, there still needs to be a gap in the magnitude of applying theory to practice. The efficient application of theory to practice depends on numerous elements, including generating student learning opportunities and support from preceptors (Amoo et al., 2022).

This figure illustrates the pivotal role of theoretical knowledge in shaping the clinical skills of the future of nurses. The information imparted in the skills laboratory contributes to the increased confidence of student nurses. Moreover, it underscores the significant role of clinical instructors in shaping the efficiency and capability of student nurses.

Sub-theme 2.1. Value of Hands-On Learning

Sub-theme 2.1 describes that return demonstrations allow hands-on learning experiences for students to practice and refine their clinical skills in a controlled environment, enhancing skill acquisition and promoting confidence in nursing procedures..

According to Chang and Lai (2021), nursing skills play a vital part in developing nursing education core competencies and are required for clinical nursing workers to perform their professional duties. Simulation-based learning (SBL) has become a popular tool for preparing nursing students for practical placement. It allows trainees to simulate simple and complex clinical problems in a secure, controlled and supported environment without endangering patients (Solli et al., 2020). Nursing students gain their confidence not only in applying the theoretical concepts learned in the simulation laboratories to their actual clinical exposure but also by knowing the importance of having a hands-on learning experience through return demonstrations.

Sub-theme 2.2. Need for Additional Guidance

Sub-theme 2.2 describes that while return demonstrations offer valuable learning opportunities, students often require additional guidance and support to translate theoretical knowledge into clinical practice effectively. Feedback from instructors and preceptors is essential for identifying areas of improvement and enhancing skill development.

Even after learning the fundamental ideas and concepts required for nursing patient care, students still experience a sense of disorientation when faced with real-world scenarios. Bresolin et al. (2023) reported that teaching nursing students to enhance their self-efficacy using various technology solutions had positive results. However, they continued to emphasize the need for more improvements, and nurse educators played a critical role in facilitating the use of learning methodologies and theoretical approaches to improve nursing students further. In contrast, Roser Cuesta-Martínez et al. (2024) made each nursing student a peer mentor for other nursing students, demonstrating that nurse educators were



Figure 2. Role of Return Demonstrations

not the only ones who could help the students perform well. As a result, there was a mutual benefit: the mentees developed self-assurance and depended more on the mentors' assistance. In contrast, the student mentors were challenged to improve their leadership and teaching abilities.

Sub-theme 2.3. Bridging Theoretical and Practical Knowledge

Sub-theme 2.3 explains that return demonstrations serve as a bridge between theoretical knowledge gained in the classroom and its application in real clinical settings. By practicing nursing skills in simulated scenarios, students can reinforce their understanding of concepts and prepare for the complexities of patient care.

Since its inception, return demonstration has been utilized and refined; its significance rests in serving as a basis for nursing students as they readied themselves for clinical practice. The authors of the paper by Afaneh et al. (2023) first examined the factors contributing to theory and practice gaps, primarily inadequate clinical exposure, lack of autonomy, and technology in healthcare settings. After discovering the reason, recommendations included additional clinical exposure, open communication, teamwork, orientation, preceptorship, empowerment, and self-assurance. Aside from the return demonstration, it connects theoretical and practical knowledge since nursing students are expected to be competent and prepared for the future needs of the nursing profession. The study goes beyond as; according to Saifan et al. (2021), students suggested reforming curriculum material and creating a clinical culture since they thought these actions might close the theory-practice gap. The most important things they could do to better themselves for the nursing profession going forward were to reduce the amount of paperwork during clinical training, synchronize classes, laboratories, and clinical training, and lessen the tension and loudness of clinical instructors.

Theme 3. Challenges Faced in Clinical Rotations

This theme addresses the various challenges encountered by students during their clinical rotations, including workload, unfamiliar procedures, and patient interactions. Clinical rotations expose students to a range of challenges, including heavy workloads, unfamiliar procedures, and complex patient interactions. These challenges can impact students' learning experiences and require resilience, adaptability, and effective coping strategies to overcome.

Multiple challenges hinder clinical learning, such as a lack of an effective feedback delivery system, insufficient supervision, limited resources, inadequate clinical orientation, and the failure to integrate the clinical curriculum with the preclinical years. It is essential to implement interventions like integrating a clinically oriented curriculum, providing

teacher training, adopting a student-centered teaching approach, and establishing an effective feedback delivery system to ensure high-quality clinical learning during rotations. According to Jacob et al. (2022), the students highlighted how their expectations and actuality differ. When students from many colleges are crammed into a hospital room, the patient's privacy and confidentiality are put in danger. Furthermore, it has been noted that patients exhibit aggression when student nurses repeatedly perform the same procedure on them, leaving them feeling irritated and restless. Student nurses talked about how short placement stays in some wards and erratic rotation plans impact their clinical learning and instruction. They talked about how the clinical learning schedule was so erratic that they occasionally took a long time in some wards and a short time in others. Overall, these difficulties could be a factor in recent nursing graduates' poor performance and ineptitude.



Figure 3. Challenges Faced in Clinical Rotations

This figure shows a nursing student who underwent her first clinical duty as a scrub nurse and got confused by the operating room instruments needed during the operation. It represents some of the cases that were unfamiliar, which caused a dilemma among nursing students to showcase their skills and perform well in a clinical setting. As well as professionals, interaction with a student without motivation and any guidance can be a hindrance to doing their task.

Sub-theme 3.1. Heavy Workload

Sub-theme 3.1 showed that clinical rotations often involve demanding schedules and high patient volumes, leading to heavy workloads for nursing students. Balancing patient care responsibilities, documentation tasks, and learning objectives can be challenging and require time management skills. Emotional exhaustion, indifference, and incompetence were the symptoms of academic

burnout. The feeling of exhaustion due to academic commitments is considered emotional fatigue. Apathy is a cynical and aloof attitude toward study, whereas incompetence is a feeling of inadequacy as a student. Academic burnout in nursing students produced psychological disengagement, frustration in their studies, and a lack of confidence (Hwang & Kim 2022). Likewise, Huyen (2019) stated that it may be difficult for nursing students to distinguish between theory and practice. In order to deal with these problems and improve the training system for health professionals, researchers argue that better cooperation between academics and medical institutions is needed.

Sub-theme 3.2. Unfamiliar Procedures

Sub-theme 3.2 explains that students may encounter unfamiliar procedures or clinical scenarios during rotations, requiring them to quickly learn and adapt. Navigating these situations can be daunting and may necessitate additional support and guidance from clinical instructors or preceptors. In some clinical learning environments, students lacked the confidence to care for their patients independently and could only see clinical nurses in action. As students got more insecure and apathetic, their possibilities to participate in clinical settings decreased significantly. Other research revealed that a nurse's lack of confidence was one of the most critical aspects impacting a clinical learning environment. Despite their ability, students experienced unnecessary stress when doing invasive operations such as intravenous injections. In order to perform the surgery with confidence, they often relied on guidance from their clinical trainer. As a result, confidence substantially impacted the student's clinical experience (Huyen, 2019).

Sub-theme 3.3. Complex Patient Interactions

Sub-theme 3.3 confirmed that interacting with patients in diverse clinical settings can present challenges such as communication barriers, emotional distress, and ethical dilemmas. Managing these interactions effectively requires empathy, communication skills, and cultural competence.

Based on the nursing student's interview from Iran, the student reported an unfavorable impact on clinical nurse opinions. Emphasis should be placed on the fact that students will encounter problems with their professional practice when patients and families refuse to allow them to participate in treatment. Nurse educators must understand if clinical problems negatively affect students' perceptions and perspectives—their education. The educational environment strongly influences medical students' clinical competence (Huyen, 2019).

Theme 4. Discrepancies Between Skills Labs and Real Clinical Settings

This theme examines the disparities between the controlled environment of skills labs and the dynamic nature of real clinical settings, including

equipment availability and procedural differences. Students may encounter discrepancies between the simulated environment of skills labs and the realities of clinical practice. These differences can include variations in equipment availability, patient acuity levels, and organizational cultures, requiring students to adapt their skills and expectations accordingly.

According to Koukourikos et al. (2021), a major challenge in nursing education is the disconnect between theory and practice. Nursing students worldwide need assistance putting their theoretical knowledge into practice. This gap hampers the learning process and affects a student's ability to integrate nursing terms and concepts into their professional practice. Nursing students need to improve their clinical skills due to different factors, which certainly affect how they perform their simulations and how they provide quality care once they are in the field. Traditional nursing education used to include teaching psychomotor skills and theoretical instruction through demonstrations. Students practiced through mannequins and models in the laboratory before applying their skills to real patients in clinical settings. However, some students may feel anxious due to a lack of experience, unfamiliarity with modern equipment, increased awareness of medical errors, and fear of making mistakes in clinical settings (Dođru & Aydın, 2020). As stated by Lee et al. (2019), although multiple studies have indicated that simulation-based learning (SBL) improves student learning, they have always focused on its efficacy. It remains contentious whether SBL closes the gap between "knowing" and "doing," with data as to whether SBL affects student behaviors in actual clinical situations. The utilization of virtual simulation technologies in nursing education provides students with the opportunity to learn in an environment that is both safe and realistic, enabling them to develop the skills and attitudes necessary to prepare for real clinical experiences. The manner in which each nursing school delivers education to its students can have a substantial impact on how these prospective nurses manage different scenarios in the field, considering they may face situations with limited

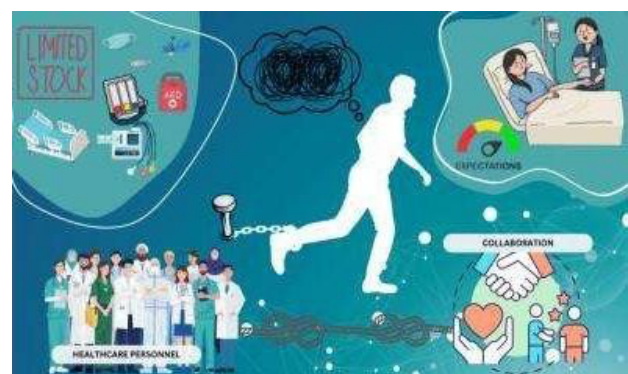


Figure 4. Discrepancies Between Skills Lab and Real Clinical Settings

resources, equipment, and personnel. Other than technical problems, the stress of the environment

could greatly affect how the company provides quality care to its clients

This figure emphasizes the various factors that prevent student nurses from confidently delivering quality care. It also emphasizes the significance of fostering a collaborative approach among healthcare personnel to ensure the delivery of the best possible service to clients.

Sub-theme 4.1. Equipment Availability

Sub-theme 4.1 showed that discrepancies in equipment availability between skills labs and clinical settings can impact students' ability to practice and refine their skills effectively. Limited access to equipment in clinical settings may necessitate improvisation or adjustment of practice techniques.

As stated in the recent study by Turan et al. (2019), many people rely on technology in their daily lives. Along with this advancement, the role of innovation is crucial to nurses' ability to deliver patient care. Today's nursing students have grown up with technology. As a result, the nursing care industry is projected to be more open to innovation. It is believed that the use of technological equipment affects the level of inventiveness. Researchers in the past have pinpointed different elements that lead to a disconnection between theory and practice. It encompasses areas for improvement in systems, limitations in resources, insufficient experience, unfavorable work environments, and inadequate communication between healthcare facilities and educational establishments. The inadequate resources in simulation labs and clinical settings significantly impact the provision of patient care by nursing students.

Sub-theme 4.2. Patient Acuity Levels

Sub-theme 4.2 explains that skills laboratories may not fully replicate patients' complexity and acuity levels in clinical settings. Therefore, students may need to adjust their approach and expectations when caring for actual patients, particularly those with high acuity or complex care needs.

Concerning the findings of this study related to complexity and acuity levels in clinical settings, Gonzalez-Garcia et al. (2020) cited emergency departments and intensive care units (ICU) as healthcare settings that promote competency development. It conveyed an intense emotional experience, emphasizing the significance of attitudes about the procedures. The nurses' profiles emphasized their human nature and position as assistants for nursing students in these complicated units with extreme medical demands. They additionally acknowledged the value of providing enough information and assistance to crucial patients and their families. Another published research created by Coddens (2023) supports this sub-theme. Since nursing students are known as unregistered staff, they cannot offer care without supervision and are frequently viewed as guests instead of employees. With that being said, Coddens (2023)

cited that assertive communication with patients played an essential role in the student's development and led to positive outcomes. Furthermore, this period would allow students to hone their interpersonal abilities by interacting with their fellow students. Hence, Raypole (2020) stated that students may practice peer, which offers an optimal environment for exploring open communication and adjusting to the difficulties linked to assertiveness.

Sub-theme 4.3. Organizational Cultures

Sub-theme 4.3 states that variations in organizational cultures between skills laboratories and clinical settings can impact students' experiences and expectations. Moreover, adapting to different workplace cultures may require students to navigate hierarchies, communication styles, and interdisciplinary collaborations.

Based on the verbatim statements below and the description of this subtheme, the researchers' findings were related to the published study on the impact of organizational culture on nursing. Aydogdu (2023) stated that the efficacy of an organizational culture founded on solid interpersonal connections can be described by its capacity to strengthen coordinated care, cultivate collaboration, facilitate constructive resolution of conflicts, improve professional involvement, and offer high-quality and patient-focused service. Furthermore, it was essential to emphasize that the assessments made by nurses concerning the organizational culture are vital in this procedure, as they provide valuable insights for continual enhancement and the delivery of top-notch health care. Additionally, according to Ko and Kim (2022), healthcare personnel have had to rapidly adjust to developments in the medical field and fulfill their professional responsibilities due to advancements in medical technology, shifts in population demographics, and healthcare policies. In line with this, nursing schools aim to equip aspiring nurses with the understanding and abilities to address health issues by integrating practical and theoretical instruction. Lastly, students can immediately apply their academic knowledge through clinical experience.

Theme 5. Importance of Equipment and Resource Availability

This theme underscores the significance of having adequate equipment and resources in the clinical setting to facilitate learning and patient care. The availability of equipment and resources in clinical settings significantly impacts students' ability to provide safe and effective patient care. Adequate access to equipment, supplies, and support services is essential for students to practice and develop their clinical skills in real-world settings.

It was clear that having the right equipment is essential in clinical settings, but not every hospital has the resources and supplies necessary to keep up with the daily demands placed on the equipment. It was challenging for nursing students to get used to

this as they are used to seeing the same equipment in a clinical environment from their return demonstration. Not only was there a lack of availability, but the quality of equipment of the previous machines also posed a challenge. Students learned how other nations' technological advancements vary from those in certain hospitals. This article by Ramzi Shawahna et al. (2024) mentioned that supplies and equipment, such as monitoring, vascular access, airway management, resuscitation medication, and cervical immobilization equipment, were lacking in public and government hospitals, and their study aimed to help future researchers fill up the gaps in supplies and equipment.

While students pursue their drive to become professional nurses, students have the most remarkable experiences possible and develop into outstanding nurses. Embodo & Alonzo (2024) asserted that the nursing students' performance was significantly improved and that adequate educational materials influenced them. Notably, students achieved student success by making sufficient use of textbooks, laboratory equipment, technology, physical facilities, and human resources. This study demonstrated how crucial it is for students to have access to resources and equipment. While sufficient equipment could be accessible for students in nursing school, clinical instructors are free to choose how best to present it to students so they can better understand how to use machines and supplies. The goal of the research by Okwuchukwu et al. (2022) was to commend clinical teachers for their diligent use of the resources provided by the organization. Incentives were suggested by the research for their use of resources and equipment.



Figure 5. Importance of Equipment and Resource Availability

This figure illustrates that the availability of medical equipment is a critical asset that significantly contributes to the enhancement and quality of healthcare services. Managing the availability of resources is a vital aspect of guaranteeing the continuation of providing excellent patient care. Without efficient management implementation, community healthcare service delivery is significantly affected.

Sub-theme 5.1. Impact on Skill Development

Sub-theme 5.1 describes that adequate equipment and resource availability positively impact students' skill development by allowing them to practice nursing procedures safely and effectively. Limited access to essential resources may hinder skill acquisition and confidence in performing clinical tasks.

By utilizing the method of instruction and learning in the nursing skills laboratory, students applied their acquired theoretical knowledge and effectively incorporated the necessary skills to carry out techniques successfully. Students must practice various procedures and methods for using equipment required in actual patient care. In order to accomplish these goals, a nursing skills laboratory must be equipped with the necessary facilities, equipment, resources, and supplies to simulate a realistic hospital environment.

Additionally, it should feature the essential qualities for optimal clinical education and practice (Bo et al., 2021). Also, insufficient equipment was a major constraint in care situations, resulting in disruption, missed care or delayed care delivery, and psychological strain. Lack of physical resources, modern equipment, and medical supplies were vital stressors affecting the quality of care nursing students provide. In a research carried out by Zamzam et al. (2021), they discovered that the presence of up-to-date facilities and equipment plays a crucial role in enhancing the abilities of nursing students.

Sub-theme 5.2. Patient Safety and Quality of Care

Sub-theme 5.2 explains that the availability of necessary equipment and resources directly impacts patient safety and the quality of care provided. Inadequate resources may compromise patient outcomes and contribute to adverse events or errors in clinical practice.

Resource constraints have been linked to alterations in care provision and, in certain instances, poor results among critically sick patients. Efficient utilization of resources was essential to facilitate health and social care professionals in delivering and maintaining high-quality services for individuals. The presence of enough modern tools in the workplace was valuable in enabling the delivery of patient care. Assessing how clinical settings use their resources ensures that the next phase of quality regulation considers how well providers use their available resources and how safe, effective, caring,

responsive, and well-led their service is (Anesi & Kerlin, 2021). Lu et al. (2022) found that insufficient resources can jeopardize patient safety and lead to an unsatisfactory clinical learning experience for nursing students. In order to enhance patient safety and the standard of care, healthcare facilities need to implement a holistic strategy that prioritizes the availability of resources and equipment, as well as the overall environment within the clinical setting, in order to advance optimal patient safety and exceptional patient care.

Sub-theme 5.3. Student Preparedness and Confidence

Sub-theme 5.3 showed that access to appropriate equipment and resources enhances students' preparedness and confidence in delivering nursing care. When students have access to necessary tools and support, they can approach clinical practice with greater assurance and competence.

The most crucial ability for nursing students is their capacity to deliver care. It facilitates the proficient execution of nursing duties and enables a valuable educational experience in the clinical environment. Moreover, the availability of suitable equipment and resources is strongly linked to their confidence in social communication skills related to patient care. Moreover, nursing students' confidence levels significantly correlate with their level of preparedness (Lanahan et al., 2022). Torbjornsen et al. (2021) identified insufficient equipment as an important barrier in care settings, resulting in interruptions, neglected or delayed care, and mental stress. They affect the patient and the nurse-patient interaction, influencing nurses' satisfaction levels. The presence of enough modern supplies in the workplace is essential for enabling the provision of care, reducing stress, avoiding treatment delays, and improving efficiency and patient satisfaction. Upgrading the quality of nursing care requires the presence of easily accessible modern facilities and equipment. The absence of adequate physical resources and substandard working conditions are significant stressors that decrease the quality of patient care.

DISCUSSION

This chapter addresses the findings of the researchers' data-collecting process, which included interview questions designed to obtain and develop an in-depth understanding of the gap between theoretical concepts and clinical exposure. The interview data was presented by the researchers as emerging themes, which provided the framework for addressing the study's objectives. Presented below are relevant studies that add more credibility to the themes and sub- themes.

Theme 1. Adaptation to Clinical Environment

Students highlighted the need in adapting to various hospital departments and patient populations, often experiencing cultural shock initially. Flexibility and self-evaluation were emphasized as crucial aspects of adaptation in the clinical environment. The adaptation to the clinical environment emerged as a critical theme, reflecting the challenges and opportunities students encounter across different hospital departments. While students highlighted the need for theoretical knowledge, they also emphasized the importance of practical application and flexibility in navigating diverse clinical settings. Overall, this theme underscores the dynamic nature of nursing education, where students must continually adapt to new environments and patient populations to enhance their learning and professional growth.

Theme 2. Role of Return Demonstrations

Return demonstrations were seen as crucial for applying theoretical knowledge in real- life situations. Students highlighted the importance of recall and application during clinical rotations, despite discrepancies between expectations and real-life scenarios. The role of return demonstrations in bridging theoretical knowledge with practical skills was evident in the transcripts. Students acknowledged the value of return demonstrations in skills labs but also emphasized the need for additional guidance and support during clinical rotations. This highlights the importance of integrating theoretical learning with hands-on experience to ensure students can effectively apply their knowledge in real-life situations, despite the challenges and discrepancies they may encounter.

Theme 3. Challenges Faced in Clinical Rotations

Students faced challenges such as: heavy workload, unfamiliar procedures, and navigating patient interactions, including instances of discrimination. However, they also highlighted the learning opportunities and growth resulting from these challenges. The challenges faced during clinical rotations, such as: heavy workload, unfamiliar procedures, and patient interactions, underscored the complexity of nursing education. While these challenges can be daunting, students also recognize the learning opportunities they provide. This theme emphasizes the resilience and adaptability required of nursing students as they navigate the demands of clinical practice and underscores the importance of supportive learning environments and mentorship to facilitate their professional development. Clinical rotations are integral to nursing education but can be challenging due to heavy workloads, unfamiliar procedures, and complex patient interactions. These challenges provide valuable learning opportunities for students to develop clinical competence, critical thinking skills, and resilience. In line with this, nursing educators and clinical preceptors play a crucial role in supporting students through these challenges by

providing guidance, feedback, and opportunities for reflection.

Theme 4. Discrepancies Between Skills Labs and Real Clinical Settings

Students noted discrepancies between skills labs and real clinical settings, particularly in terms of equipment availability and the need for additional learning and adaptation. They highlighted the importance of being prepared for variations in resources and procedures encountered in different hospital settings. Discrepancies between skills labs and real clinical settings highlighted the emphasized necessity for nurse education programs to better align with the realities of clinical practice. Additionally, students emphasized the importance of exposure to diverse clinical environments and the variability in equipment and resources across different hospitals. It suggests a need for nursing education programs to incorporate further realistic simulations and provide students with opportunities to adapt to varying clinical contexts better to prepare them for their future roles as nurses. Discrepancies between skills labs and real clinical settings highlight the importance of providing students with realistic learning experiences that train them for professional practice. Nursing programs should strive to bridge the gap between simulated and real-world environments by incorporating realistic scenarios, addressing equipment limitations, and exposing students to diverse patient populations. By acknowledging and addressing these discrepancies, educators can better prepare students for the complexities of clinical practice.

Theme 5. Importance of Equipment and Resource Availability

Students highlighted the importance of having access to necessary equipment and resources in the clinical setting to support learning and patient care. They also suggested improvements in resource availability to enhance the overall learning experience during clinical rotations. The importance of equipment and resource availability in the clinical setting emerged as a significant concern among students. Limited access to essential resources can impact learning and patient care, highlighting the need for healthcare facilities to prioritize resource allocation and support nursing education initiatives. This theme underscores the significance of collaboration between educational institutions and healthcare organizations to ensure students have access to the necessary tools and resources to succeed in their clinical training and future careers as nurses. The availability of equipment and resources significantly influences students' learning experiences and the quality of care they can provide in clinical settings. Nursing programs must prioritize access to essential tools and support services to ensure students can develop their clinical skills safely and effectively. Additionally, collaborations between educational institutions and healthcare facilities are crucial for addressing resource disparities and providing

students with high-quality learning environments. By prioritizing equipment and resource availability, educators can better prepare students for the demands of professional nursing practice

CONCLUSION

This chapter shows that the researchers aimed to discover the lived experiences of selected fourth-year nursing students who faced theory-practice gaps in their clinical exposure by gathering data from individuals who had been chosen based on specific criteria. It sought to answer the question: How do fourth-year nursing students identify the gap between theory and clinical exposure?

The researchers assumed that the differences in theoretical knowledge when applied to clinical exposure is where the theory-practice gap arises since there are discrepancies in the teaching of each institution and once they are in the clinical setting. Some participants have clearly stated this in their answers to the interview. It is not only the resources that cause the theory-practice gap but also how they are taught in the institution and the diverse clinical setting. The research question of this study pertained to the researchers' insights into the lived experiences of the selected fourth-year nursing students regarding what they thought about the misalignment of the theoretical concepts taught in the skills laboratory and their clinical exposure. Since they have been more exposed to the clinical setting, their insights/experiences have been more credible for conducting this study.

After the interview session, the researchers transcribed the participants' answers into a text. The researchers then obtained the results in an emerging code with the help of a qualitative expert using NVivo software. The participants' interview answers revealed several issues concerning the "gap" between theoretical concepts taught in the university and clinical exposure taught in the hospital premises. The results consist of five themes with three sub-themes to support them further. Based on the results, the gap that arose had many underlying reasons, not just because of the discrepancies between what is taught in the skills laboratories and the clinical setting. Adaptation to the clinical environment, heavy workload, unfamiliar procedures, patient interaction complexity, equipment availability, student preparedness, and confidence are reasons these "gaps" are always present.

In light of this study, it is evident that the theory-practice gap exists in nursing education and affects nursing students' performance in clinical settings. All themes mentioned in this study are vital to a student's learning process. This study was able to identify the gaps which were provided by the participants: adaptation to the clinical environment, heavy workload, unfamiliar procedures and patient interaction. It has a significant role in enabling students to achieve their learning outcomes. Return demonstrations were also essential to prepare

nursing students in the clinical setting. It was an effective means of acquiring the necessary knowledge, skills, attitude, and values to become an excellent care provider. Additionally, nursing students faced challenges; therefore, clinical instructors made a valuable contribution by providing guidance, feedback, and support by equipping students with enough knowledge to overcome these challenges. More importantly, students mentioned the importance of equipment and resource availability as they influence students' learning experiences and the quality of care they can deliver in clinical settings. Lastly, efficient resource management is vital to social and healthcare providers to maintain high-quality services to individuals.

RECOMMENDATIONS

Nursing is a profession expected to deliver safe, high-quality service to the community. This study, which is performance-based, can help nurses enhance their self-sufficiency and capability in providing health services. Addressing the theory-practice gap empowers them to consider more efficient nursing services, ultimately boosting their confidence in service delivery. In light of a rapidly evolving world, the healthcare service must promptly adjust to meet changing demands. It is imperative for nurses and other healthcare professionals to likewise adapt to these shifts, ensuring the delivery of high-quality care.

Nursing Education

Nursing education should provide the basis for long-term knowledge and facilitate effortless progress from studying to achieving a bachelor's degree program. It aims to equip nursing students with the ability to utilize critical thinking abilities and provide exceptional guidance, enabling them to effectively care for patients in clinical settings upon obtaining their professional licenses. Moreover, it faces local and global issues, as numerous factors contribute to challenges. First is the nursing curriculum, which the university must be aware of and modify based on continuously evolving professional practice, including advanced technologies and applying health care management. The second is aligning education with clinical practice, highlighting the latest information in the current research literature. Third, simulation (SIM) laboratories are a safe practice area for applying the integrated acquired theory in the skills laboratory to the actual simulation. Also, the entire nursing education system may have high-fidelity simulation (HFS) when a realistic depiction of a simulation exists.

Faculty

The Faculty of Nursing takes on a number of roles that help create an excellent future generation of nursing professionals. The faculty may provide a basis for several strategies and regulations designed to assist nurse educators in more efficiently addressing these gaps, by developing new innovative

strategies through deliberate simulation-based learning experience. They may increase the amount of simulation experiences in the junior year. This can enable nursing students to strengthen their application and synthesis of didactic knowledge from the onset of their nursing education. This development has the potential to act as a foundation for continual improvement of future methods in the nursing curriculum.

Clinical Instructors

Clinical instructors are the foundation of skills in return demonstration. Their expertise molds the students into better nurses in the future. Based on the results of this study, clinical instructors can be supportive and give the students allotted time to learn the skills of return demonstration with adequate guidance and consideration without terrorizing them inside the skills laboratory. Students may be more likely to improve their skills, boost their confidence, and be knowledgeable enough to perform the given tasks. The clinical instructors may also contribute to building a learning atmosphere that is favorable to the academic growth of the nursing students by strengthening the mastery of skills in the laboratory and exposure of the students in the earlier year.

Nursing students

Nursing students are one of the keys for this study to be done. The researchers concluded this study because of their experiences, opinions, and time allotted for the interview session. Based on the results of this study, nursing students may utilize our research study to improve their clinical skills by recognizing the gaps and thinking of an efficient way to somehow bridge them. The current and future nursing students should address the identified gaps to improve their clinical skills and be more prepared for diverse clinical situations in the future. Students should use this research as an eye opener on why the theory gap practice is still present this year.

Future researchers

The results of this study are expected to serve as a valuable resource for other researchers looking to address similar issues. The researchers had identified each area of concern. Students may experience the unpredictability inherent in various departments, whether through observing nurses facing challenges in hospitals or through extended clinical duties, to familiarize themselves with real-world situations. Also, the researchers recommended that future studies should prioritize the following: providing adequate equipment and supplies for students to practice with actual patients, and allowing them to gain a genuine understanding of the responsibilities of nurses in a clinical setting. After utilizing sufficient equipment and supplies, assessments of nursing students may be conducted to gauge the impact on skill development, quality of care, preparedness, and confidence. The findings of this study are likely to raise further questions and

avenues for investigation, driving progress and innovation in the field. Ultimately, this study may lay the groundwork for future research at the local, national, or global levels.

Conflict of Interest

This study primarily focused on identifying the gap between the selected fourth-year nursing students' theoretical concepts and clinical exposure. The researchers ensured that the institution's ethical considerations and guidance were followed during the entire research process. As the study was being conducted, the researchers experienced some concerns while searching for fourth-year nursing students since the participants' schedules were more complicated than any other level. The researchers had to adjust based on the schedules and interviewed (15) fifteen participants. Moreover, the researchers ensured that they only asked interview questions related to the study, which are the gaps in applying theoretical concepts to their clinical exposure. Lastly, this study was conducted in a university located at Lagro, Quezon City, in the academic year 2023-2024. The researchers has encountered multiple conflicts in gathering the required data due to the limitation of number of the allowed participants.

Acknowledgments

The researchers would like to express their utmost and sincere gratitude to the following people, who provided valuable assistance and dedication in facilitating the study's successful completion:

To the Almighty God for His continuous guidance and for imparting knowledge and insight to the researchers as they finish their study.

To Dr. Joel John Dela Merced, a research adviser from the College of Nursing, who assisted and instructed the researchers along the entire nursing research process.

To the Chairs and Panel Members of the College of Nursing, the researchers express their deepest gratitude for providing comments and suggestions to make improvements in their study.

To the Validators, the researchers would like to sincerely thank the validators for allowing them the time to review the interview questions. Their input is crucial as they move forward with the study.

To the Qualitative Expert, Dr. Emerson Aliswag, for guiding them in thoroughly analyzing the participants' answers, enabling the researchers to obtain the precise information needed for the study.

To the Grammarian, Mr. Glenbert Avelino Diniay, for dedicating his time to reviewing the paper and providing valuable assistance in translating the participants' Filipino answers to English.

To the Fourth-Year Nursing Students, as their participants, the researchers would like to thank you for allotting precious time to the researchers despite their busy schedules. Their responses helped them finish the research paper with ease. Lastly, to the Group members, the people who made this research

paper possible, all the hard work and sacrifices paid off.

Funding

There is no funding involved from other institutions in this research.

REFERENCES

- Abdullahi, K. O., Ghiyasvandian, S., & Hasanpour, M. (2022). Theory-Practice Gap: The Knowledge and Perception of Nigerian Nurses. *Iranian Journal of Nursing and Midwifery Research*, 27(1), 30–34. https://doi.org/10.4103/ijnmr.IJNMR_294_19
- Afaneh, T., Villamor, M. Y., Opinion, F., Hassan, N., & Mihdawi, M. (2023). Exploring the gap between school of nursing theoretical foundations and clinical practice. *Journal of Professional Nursing*, 49, 158–164. <https://doi.org/10.1016/j.profnurs.2023.10.002>
- Alotaibi, R. M., et al. "Exploring Factors and Challenges Influencing Nursing Interns' Training Experiences in Emergency Departments in Saudi Arabia." *International Medical Education*, vol. 2, no. 3, 1 Sept. 2023, pp. 131–140, www.mdpi.com/2813-141X/2/3/13, <https://doi.org/10.3390/ime2030013>.
- Amoo, S. A., Aderoju, Y. B. G., Sarfo-Walters, R., Doe, P. F., Okantey, C., Boso, C. M., Abraham, S. A., Druye, A. A., & Enyan, N. I. E. (2022). Nursing Students' Perception of Clinical Teaching and Learning in Ghana: A Descriptive Qualitative Study. *Nursing Research and Practice*, 2022, 1–9. <https://doi.org/10.1155/2022/7222196>
- Anesi, G. L., & Kerlin, M. P. (2021). The impact of resource limitations on care delivery and outcomes: routine variation, the coronavirus disease 2019 pandemic, and persistent shortage. *Current Opinion in Critical Care*, 27(5), 513–519. <https://doi.org/10.1097/mcc.0000000000000859>
- Baharum, H., et al. (2023, April 18) "Success Factors in Adaptation of Newly Graduated Nurses: A Scoping Review." *BMC Nursing*, vol. 22, no. 1, p. 125, [bmcnurs.biomedcentral.com/articles/10.1186/s12912-023-01300-1](https://doi.org/10.1186/s12912-023-01300-1), <https://doi.org/10.1186/s12912-023-01300-1>.
- Bhandari, P. (2023, June 22). Inductive reasoning: Types, examples, explanation. Scribbr. <https://www.scribbr.com/methodology/inductive-reasoning/>
- Bhandari, P. (2020, June 19). What is Qualitative Research? | Approaches, Methods & Examples. Scribbr. <https://www.scribbr.com/methodology/qualitative-reasoning/>

- research#:~:text=Qualitative%20research%20involves%20collecting%20and
- Blakeslee, J. R. (2020). Effects of high-fidelity simulation on the critical thinking skills of baccalaureate nursing students: A causal-comparative research study. *Nurse Education Today*, 92, 104494. <https://doi.org/10.1016/j.nedt.2020.104494>
- Bø, B., Madangi, B. P., Ralaitafika, H., Ersdal, H. L., & Tjøflåt, I. (2021). Nursing students' experiences with simulation-based education as a pedagogic method in low-resource settings: A mixed-method study. *Journal of Clinical Nursing*, 31(9-10). <https://doi.org/10.1111/jocn.15996>
- Bresolin, P., Steindal, S. A., Hanne Maria Bingen, Jaroslav Zlamal, Jussara Gue Martini, Eline Kaupang Petersen, & Andréa Aparecida Gonçalves Nes. (2023). Technology-Supported Guidance Models to Stimulate Nursing Students' Self-Efficacy in Clinical Practice: A Scoping Review (Preprint). <https://doi.org/10.2196/preprints.54443>
- Bruce, et al. "Qualitative Perspectives of Teaching and Learning in Clinical Skills Laboratories in a Developing Country." *International Journal of Africa Nursing Sciences*, vol. 16, 2022, p. 100410, <https://doi.org/10.1016/j.ijans.2022.100410>.
- Carless-Kane, S., and Nowell, L. (2023, August 1). "Nursing Students Learning Transfer from Classroom to Clinical Practice: An Integrative Review." *Nurse Education in Practice*, vol. 71, p. 103731, www.sciencedirect.com/science/article/pii/S1471595323001932, <https://doi.org/10.1016/j.nepr.2023.103731>.
- Caulfield, J. (2023, June 22). How to do thematic analysis: Step-by-step guide & examples. Scribbr. <https://www.scribbr.com/methodology/thematic-analysis>
- Chainok, L., Suwannobol, N., Tapin, J., & Chularee, S. (2023, January). Effects of Pre-training Program for Nursing Practicum in Delivery Room by Learning through Modeling and Return-demonstration Technique on Stress and Readiness of Nursing Students. ResearchGate. https://www.researchgate.net/publication/367991462_Effects_of_Pre-training_Program_for_Nursing_Practicum_in_Delivery_Room_by_Learning_through_Modeling_and_Return-demonstration_Technique_on_Stress_and_Readiness_of_Nursing_Students/citation/download
- Chang, Y. M., & Lai, C. L. (2021). Exploring the experiences of nursing students in using immersive virtual reality to learn nursing skills. *Nurse Education Today*, 97, 104670. <https://doi.org/10.1016/j.nedt.2020.104670>
- Coddens, K. (2023). Communication Techniques for Nursing Students. Honors Theses. https://scholarworks.wmich.edu/honors_theses/3693/
- Colindres, J., Acosta, C., Salinas, R., & Ultado, M.C. (2018). Correlation Between Lecture Grades and Related Learning Experience (RLE): Revisiting Standards of Nursing. *Acta Medica Philippina*, 1(1). [https://registry.healthresearch.ph/index.php?view=research&cid=70189#:~:text=Related%20Learning%20Experience%20\(RLE\)%20is](https://registry.healthresearch.ph/index.php?view=research&cid=70189#:~:text=Related%20Learning%20Experience%20(RLE)%20is)
- Constructivism. (2023, April 4). Office of Curriculum, Assessment and Teaching Transformation - University at Buffalo. <https://www.buffalo.edu/catt/develop/theory/constructivism.html>
- Dela Merced, J. (2018). Seeing Through the Lenses of Visually Impaired Adults (Via): A Phenomenological Inquiry Towards the Development of a Proposed Counselling Program and Support Group System
- De, S. (2022, December 15). An analysis of theory practice gap in nursing. *Nursing & Healthcare International Journal*, 6(6). <https://doi.org/10.23880/nhij-16000276>
- Doğru, B. V., & Aydın, L. Z. (2020). The effects of training with simulation on knowledge, skill and anxiety levels of the nursing students in terms of cardiac auscultation: A randomized controlled study. *Nurse Education Today*, 84, 104216. <https://doi.org/10.1016/j.nedt.2019.104216>
- Dziurka, M., Machul, M., Ozdoba, P., Obuchowska, A., Kotowski, M., Grzegorzcyk, A., Pydyś, A., & Dobrowolska, B. (2022). Clinical Training during the COVID-19 Pandemic: Experiences of Nursing Students and Implications for Education. *International journal of environmental research and public health*, 19(10), 6352. <https://doi.org/10.3390/ijerph19106352>
- González-García, M., Lana, A., Zurrón-Madera, P., Valcárcel-Álvarez, Y., & Fernández-Feito, A. (2020). Nursing Students' Experiences of Clinical Practices in Emergency and Intensive Care Units. *International Journal of Environmental Research and Public Health*, 17(16), 5686. <https://doi.org/10.3390/ijerph17165686>
- Hashemiparast, M., Negarandeh, R., & Theofanidis, D. (2019). Exploring the barriers of utilizing theoretical knowledge in clinical settings: A qualitative study. *International journal of nursing sciences*, 6(4), 399–405. <https://doi.org/10.1016/j.ijnss.2019.09.008>
- Hwang, E., & Kim, J. (2022). Factors affecting academic burnout of nursing students according to clinical practice experience. *BMC*

- Medical Education, 22(1). <https://doi.org/10.1186/s12909-022-03422-7>
- Hung, C. C., Kao, H. F. S., Liu, H. C., Liang, H. F., Chu, T. P., & Lee, B. O. (2021). Effects of simulation-based learning on nursing students' perceived competence, self-efficacy, and learning satisfaction: A repeat measurement method. *Nurse Education Today*, 97, 104725. <https://doi.org/10.1016/j.nedt.2020.104725>
- Jacob, A., Munyaw, Y., & Seif, S. (2022). Perceptions and experiences of diploma nursing students towards clinical learning and teaching. A qualitative study. https://www.researchgate.net/publication/365262701_Perceptions_and_experiences_of_diploma_nursing_students_towards_clinical_learning_and_teaching_A_qualitative_study
- Ko, Y.-J., & Kim, S.-Y. (2022). Transition Shock Experience of Nursing Students in Clinical Practice: A Phenomenological Approach. *Healthcare*, 10(4), 613. <https://doi.org/10.3390/healthcare10040613>
- Koukourikos, K., Tsaloglidou, A., Kourkouta, L., Papatheanasiou, I. V., Iliadis, C., Fratzana, A., & Panagiotou, A. (2021). Simulation in Clinical Nursing Education. *Acta Informatica Medica*, 29(1), 15. <https://doi.org/10.5455/aim.2021.29.15-20>
- Kurt, S. (2021, February 21). Constructivist Learning Theory - Educational Technology. <https://educationaltechnology.net/constructivist-learning-theory/>
- Lanahan, M., Montalvo, B., & Cohn, T. (2022). The Perception of Preparedness in Undergraduate Nursing Students During COVID-19. *Journal of Professional Nursing*, 42(36150848), 111–121. <https://doi.org/10.1016/j.profnurs.2022.06.002>
- Langari, M., Darban, F., & Sabzevari, S. (2022). Relationship Between Perception of Constructivism Learning-based Approaches and Self-actualization in Nursing Students. *Strides in Development of Medical Education*, 19(1), 164-169. <https://doi.org/10.22062/sdme.2022.197732.1115>
- Lee, B. O., Liang, H. F., Chu, T. P., & Hung, C. C. (2019). Effects of simulation-based learning on nursing student competences and clinical performance. *Nurse Education in Practice*, 41, 102646. <https://doi.org/10.1016/j.nepr.2019.102646>
- Mehdipour-Rabori, R., Bagherian, B., & Nematollahi, M. (2021). Simulation-based mastery improves nursing skills in BSc nursing students: a quasi-experimental study. *BMC Nursing*, 20(1). <https://doi.org/10.1186/s12912-020-00532-9>
- Merriam-Webster. (2024). Merriam-Webster Dictionary. Merriam-Webster.com; Merriam-Webster. <https://www.merriam-webster.com/>
- Meyer, R., Archer, E., & Van Schalkwyk, S. C. (2022). The private healthcare setting as a place for educating nurses: A qualitative exploration. *International Journal of Africa Nursing Sciences*, 17, 100483. <https://doi.org/10.1016/j.ijans.2022.100483>
- Msosa, A., Bruce, J., & Crouch, R. (2022). Qualitative perspectives of teaching and learning in clinical skills laboratories in a developing country. *International Journal of Africa Nursing Sciences*, 16, 100410. <https://doi.org/10.1016/j.ijans.2022.100410>
- Mukhalalati, B. A., & Taylor, A. (2019). Adult Learning Theories in Context: A Quick Guide for Healthcare Professional Educators. *Journal of Medical Education and Curricular Development*, 6. <https://doi.org/10.1177/2382120519840332>
- Munangatire, T., Nestor, T., & Asino, H. M. M. (2023). Nursing students' experiences and expectations of clinical learning: A qualitative study. *Nurse Education Today*, 124, 105758. <https://doi.org/10.1016/j.nedt.2023.105758>
- Newton, R. H., & Krebs, A. (2020). Bridging the Theory-Practice gap using simulation to teach care of patients with disabilities. *Teaching and Learning in Nursing*, 15(4). <https://doi.org/10.1016/j.teln.2020.04.003>
- Nikolopoulou, K. (2022, August 11). What is purposive sampling? | definition & examples. Scribbr. <https://www.scribbr.com/methodology/purposive-sampling/#:~:text=Purposive%20sampling%20refers%20to%20a>
- Padagas, R. C. (2020). Nursing Students' Expectations of Their Clinical Instructors: Practical Implications in Nursing Education, 12(4), 393–410. <https://doi.org/10.18662/rrem/12.4/353>
- Phenomenological Research: Methods And Examples. (2021, September 27). Harappa Education. <https://harappa.education/harappadiaries/phenomenological-research/>
- Pingue-Raguini, M. P. R., Abujaber, A. A., & Gomma, N. G. (2020). Students' Level of Satisfaction in Nursing Skills Demonstration: Basis for Designing Debriefing Strategies. *International Journal of Medical Research & Health Sciences*, 9(11): 30-38. <https://ijmrhs.com/medical-research/students-level-of-satisfaction-in-nursing-skills-demonstration-basis-for-designing-debriefing-strategies.pdf>
- Rahman, A., & Shakir, M. (2022). Conducting Pilot Study In A Qualitative Inquiry: Learning Some Useful Lessons. *Journal of Positive School Psychology*, 6(10), 1620–1624. <https://journalppw.com/index.php/jpsp/article/view/13459>
- Raypole, C. "Honest, Not Bossy: How to Assertive Communication." *Healthline*, 20

- Aug. 2020, www.healthline.com/health/assertive-communication.
- Romero-Martin, M., Gomez-Salgado, J., Safont-Montes, J. C., Navarro-Abal, Y., Climent-Rodríguez, J. A., & Jimenez-Picon, N. (2020). Cultural Adaptation and Validation of the Nursing Students' Perceptions of Instructor Caring into Spanish. *Nigerian Journal of Clinical Practice*, 23(4), 515. https://doi.org/10.4103/njcp.njcp_386_19
- Roser Cuesta-Martínez, González-Sanz, P., Rosa-Dolors Raventós-Torner, María Jiménez-Herrera, María Jesús Aguarón-García, Laura Lorenzo Allegue, & Font-Jimenez, I. (2024). Experiences of nursing students in A peer mentoring program during their clinical practices. A qualitative study. *Nurse Education Today*, 139, 106234–106234. <https://doi.org/10.1016/j.nedt.2024.106234>
- Rutledge, P. B., & Hogg, J. L. C. (2020). In-Depth Interviews. *The International Encyclopedia of Media Psychology*, 1–7. <https://doi.org/10.1002/9781119011071.iemp0019>
- Saifan, A. R., Devadas, B., Daradkeh, F., Fattah, H. A. A., Aljabery, M. A., & Michael, L. M. (2021, September 13). Solutions to bridge the theory-practice gap in nursing education in the UAE: a qualitative study. *BMC Medical Education*; BioMed Central. <https://doi.org/10.1186/s12909-021-02919-x>
- Sanglay, H. A., Bantali, J. B., Cruz, P. B. D., & Casi, G. L. (2023). Theory And Practice: Performance Of BCU-BSN Students In The Major Nursing Subjects. *Cognizance Journal of Multidisciplinary Studies*, 3(7), 97–108. <https://doi.org/10.47760/cognizance.2023.v03i07.010>
- Sam, B. (2023). Enhancement of Learning Abilities of Student Nurses: Teaching and Learning Strategies. https://www.researchgate.net/publication/370173771_Enhancement_of_Learning_Abilities_of_Student_Nurses_Teaching_and_Learning_Strategies/citation/download
- Simkus, J. (2023). Snowball Sampling Method: Definition, Techniques & Examples. <https://www.simplypsychology.org/snowball-sampling.html>
- Şimşek, P., Özmen, G. Ç., Yavuz, M. E., Koçan, S., & Çilingir, D. (2023). Exploration of nursing students' views on the theory-practice gap in surgical nursing education and its relationship with attitudes towards the profession and evidence-based practice. *Nurse Education in Practice*, 69, 103624. <https://doi.org/10.1016/j.nepr.2023.103624>
- The Importance of Clinical Experience: The “Nursing Internship.” (2017, June 13). Duquesne University School of Nursing. <https://onlinenursing.duq.edu/blog/importance-clinical-experience-nursing-internship/>
- Solli, H., Haukedal, T. A., Husebø, S. I. E., & Reiersen, I. S. (2020). The art of balancing: the facilitator's role in briefing in simulation-based learning from the perspective of nursing students – a qualitative study. *BMC Nursing*, 19(1). <https://doi.org/10.1186/s12912-020-00493-z>
- Torbjørnsen, A., Hessevaagbakke, E., Grov, E. K., & Bjørnnes, A. K. (2021). Enhancing students learning experiences in nursing programmes: An integrated review. *Nurse Education in Practice*, 52(103038), 103038. <https://doi.org/10.1016/j.nepr.2021.103038>
- Toriente-Relloso, J., Abdullah-AbuAlula, N., Magtalas-Medina, J., & Gatioan-Manood, E. (2021). Nursing Skills Laboratory as Milieu of Clinical Learning and Practice. *American Journal of Nursing Research*, 9(4), 112–117. <https://doi.org/10.12691/ajnr-9-4-2>
- Turan, N., Kaya, H., Durgun, H., & Aşti, T. (2019). Nursing Students' Technological Equipment Usage and Individual Innovation Levels. *Computers, Informatics, Nursing*, 37(6), 298–305. <https://doi.org/10.1097/cin.0000000000000512>
- Tram, H. (2019). Challenges for Nursing Students in the Clinical Learning Challenges for Nursing Students in the Clinical Learning Environment. <https://digscholarship.unco.edu/cgi/viewcontent.cgi?article=1160&context=theses>
- Valenzuela, P.A., Beriso, A., Punta, D.J.D.L., Guiraldo, S., Macaraeg, K., Nieva, M.N., Sagisi, J.R., Merced, J.J.D., Jecino, L.M., Lopez, M.A., Lapitan, M., Avelino, M.C.R., Batungbacal, M., (2023). Lived Experiences of Fourth Year Nursing Students on Limited Face-to-Face Classes: Basis for Program and Policy Enhancement. *Psychology and Education: A Multidisciplinary Journal*, 10(7), 754-799. <https://doi.org/10.5281/zenodo.8140703>
- Villegas, F. (2023, September 12). Thematic analysis: What it is and how to do it. *QuestionPro*. <https://www.questionpro.com/blog/thematic-analysis/#:~:text=Thematic%20analysis%20is%20a%20method,making%20sense%20of%20the%20data.>
- Zamzam, A. H., Abdul Wahab, A. K., Azizan, M. M., Satapathy, S. C., Lai, K. W., & Hasikin, K. (2021). A Systematic Review of Medical Equipment Reliability Assessment in Improving the Quality of Healthcare Services. *Frontiers in*

public health, 9, 753951.

<https://doi.org/10.3389/fpubh.2021.753951>

- Zhang, J., Shields, L., Ma, B., Yin, Y., Wang, J., Zhang, R., & Hui, X. (2022, July 15). 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), 1–9. <https://doi.org/10.1186/s12909-022-03609-y>
- Saculingan, N. L., C. Cabalang, H. Y., T. Cardona, L. C., N. Espiritu, C., M. Garcia, S. P., C. Ramel, J., ... Vargas, R. (2024). Educational Pathways from Classroom and Beyond: Exploring the Learning Experiences of Nursing Student. *Celebes Nursing Journal*, 1(2), 104–115. <https://doi.org/10.70848/cnj.v1i2.14>
- Soriano, R. J., Adante, N. D., M. Agbuya, J. G., B. Beñales L. A., Dela Cruz, I. R., Gatus, J. C. A., ... E. Abonalla, A. J. (2024). Exploring The Strategies Of Nurses in Giving Health Teachings Among Diabetes Mellitus (DM) Patients. *Celebes Nursing Journal*, 1(2), 92–103. <https://doi.org/10.70848/cnj.v1i2.13>