

Designing Simulation Scenarios to Enhance Nursing Students' Clinical Judgment: A Qualitative Study

Wassana Uppor, Areewan Klunklin,* Nongkran Viseskul, Sombat Skulphan, Sue Turale

Abstract: Clinical judgment is the cognitive process that emerges from critical thinking or clinical reasoning that affects patient safety. For example, not noticing clients' deterioration signs while making a clinical judgment may cause inaction errors. Therefore, nursing students must have sound clinical judgment before entering professional nursing practice. Simulation-based learning has become a vital pedagogy used widely to develop students' clinical judgment. However, to date, simulation-based learning in Thailand has focused on theoretical content and clinical practices rather than the development of cognitive ability. Nursing instructors are vital in developing the thinking process of nursing students. Therefore, a deep understanding of nursing instructors' perspectives on the essential components of designing a simulation scenario for enhancing clinical judgment among nursing students remains important. This qualitative descriptive study aimed to explore the critical components in the design characteristics of nursing simulation scenarios for improving nursing students' clinical judgment based on the perception of nursing instructors. Participants were 23 nursing instructors purposively selected from a nursing college in Thailand. Data were collected during March 2021 in focus group discussions with all participants, then five participants with simulation-based learning expertise undertook individual in-depth interviews. Data were analyzed using content analysis.

From the findings, four themes emerged: 1) fostering instructor support, 2) recognizing students' strengths, 3) enhancing specificity in scenarios, and 4) promoting cognitive development. Nursing instructors can apply the findings in creating simulation-based activities to develop their clinical judgment to support nursing students' cognitive processes. Such actions will help to ensure patient safety and quality of care.

Pacific Rim Int J Nurs Res 2023; 27(3) 445-456

Keywords: Clinical judgment, Nursing simulation scenario, Nursing students, Qualitative study, Simulation-based learning

Received 14 February 2023; Revised 2 May 2023;

Accepted 9 May 2023

Introduction

Patient safety is a priority in nursing practice and all healthcare settings across the globe. Delays in nurses identifying and responding to patient deterioration continue to be a global safety problem because this poses the danger of failing them and further worsening. The failure to recognize the decline has

Wassana Uppor, RN, PhD (Candidate) Faculty of Nursing, Chiang Mai University, Thailand, and Boromarajonani College of Nursing Suphanburi, Faculty of Nursing, Praboromarajchanok Institute, Suphanburi, Thailand. E-mail: far_wa@hotmail.com

Corresponding to: Areewan Klunklin, * RN, PhD, Professor, Faculty of Nursing, Chiang Mai University, Thailand, and School of Nursing, Panyapiwat Institute of Management, Thailand. E-mail: a.klunklin@gmail.com

Nongkran Viseskul, RN, PhD, Associate Professor, Faculty of Nursing, Chiang Mai University, Thailand. E-mail: nongkran.v@cmu.ac.th

Sombat Skulphan, RN, PhD, Associate Professor, Faculty of Nursing, Chiang Mai University, Thailand. E-mail: sombat.sk@cmu.ac.th

Sue Turale, DEd, MNurStud, FACN, FACMHN, Visiting Professor, Faculty of Nursing, Chiang Mai University, Thailand. E-mail: turalecmu@gmail.com

been cited as a crucial procedural component in influencing subsequent, avoidable deaths. There are 2.6 million deaths yearly, especially in low- and middle-income nations, and approximately 1 in 10 individuals suffer harm while obtaining medical attention.¹ Among the 26,557 hospitalized individuals, 2,735 (10.5%) experienced a complication, and 359 (13.2%) died due to a failure to rescue. Of those who died due to failure to rescue, 18.1% could have been prevented.² In Thailand in 2021, the percentage of hospital deaths was 44.9% or 246,748 out of 550,042 total deaths.³ These adverse events can be prevented by nurses' capacity to detect indicators of deterioration and act upon them promptly.⁴

From the report of The National Council State Boards of Nursing (NCSBN)⁵, two common reasons novice nurses have disciplinary action against their licenses: 1) failure to notice and 2) failure to act. These lead to adverse events and medical errors.⁶ Although they used the nursing process to care for the patient, this thinking method developed in 1958 asks a question for nurse educators if it is the best decision-making in the current healthcare system.⁷ Therefore, the NCSBN offered a new approach to bedside clinical judgment, defining it as "the observed outcome of critical thinking and decision-making. It is an iterative process that uses nursing knowledge to observe and assess presenting situations, identify a prioritized client concern, and generate the best possible evidence-based solutions to deliver safe client care."^{8(p.7)} Thus, nurses capable of making clinical judgments in healthcare are essential to safe and effective nursing care. Inadequate clinical judgment is a significant healthcare concern that jeopardizes patient safety and negatively impacts health outcomes. A failure to notice deterioration signs while making clinical judgments may result in inaction errors.⁹ Therefore, it is essential that nursing students have good clinical judgment before entering professional nursing practice, and this can be developed during their nursing education. The optimal time for students to build their clinical judgment is during clinical

education, which allows them to fill the theory-practice gap.

Simulation-based learning (SBL) is a pedagogy widely used to train healthcare providers and students in academic and clinical settings to improve care delivery and client outcomes.¹⁰ Nursing instructors play a vital part in SBL by creating scenarios that stimulate students to develop their cognitive process, especially decision-making skills, and solve problems in clinical practice.¹¹

From the literature reviewed in Thailand, SBL is a standard method in nursing education. However, previous studies have focused on theoretical content and clinical practices rather than the development of cognitive ability, such as making clinical judgments and solving problems per individual patient situations and contexts.^{12,13,14} This is a significant concern, as nursing instructors are responsible for preparing competent future nurses by implementing teaching strategies that optimally promote clinical judgment. In addition, there is a lack of in-depth understanding of the perspectives of nursing instructors in designing the simulation scenarios that emphasize the development of cognitive abilities to improve nursing students' clinical judgment. These limitations demonstrated a knowledge gap in developing clinical judgment in nursing students who will become professional nurses. The findings of this study are expected to shed light on strategies to overcome insufficient clinical experiences and lack of clinical judgment that may jeopardize patient safety and quality of care.

Review of Literature and Conceptual Frameworks

Clinical judgment results from critical thinking to summarize the processes of observation, reflection, and data analysis, focused on resolving issues in the nurse's clinical practice to make accurate clinical decisions and achieve efficient outcomes.¹⁵ Clinical

judgment is the cognitive process that emerges from nursing students' critical thinking or clinical reasoning. It is displayed through a nursing behavior or action through observation, interpretation of assessment, and setting data priorities that result in a response by utilizing proper nursing practice.¹⁶

Tanner's Clinical Judgment Model¹⁷ and Nursing Education Simulation Design (NESD)¹⁸ were frameworks used to underpin this study. Tanner's Model incorporates reflective practice to lead nursing students through clinical scenarios and help them build clinical judgment. This Model comprises four aspects of nurses' thinking: noticing, interpreting, responding, and reflecting. Noticing describes a perceptual comprehension of the current situation and involves recognizing significant or salient parts of the environment. Interpreting refers to the capacity to analyze data to uncover etiology, trends, different aspects to consider or additional information required, and resolution, along with the ability to find pertinent clinical data. Responding refers to the capacity to choose a path of action, including taking no action. To create a care plan, students must consider the scenario and decide on the care goals, nursing action, and intervention. This creation entails selecting nursing actions to address the issues and demands of clients. Reflection means paying close attention to how the client's or family's reaction to the nurse's activity was received. It involves explaining what happened, what the nurse performed, and what could be done to improve action in the future. Finally, the nurse assesses any required knowledge or skills while reflecting on the situation's values and feelings.

A simulation scenario is an artificial representation of a real-world situation to attain educational goals through experience-based learning.¹⁹ The NESD¹⁸ is used for designing, implementing, and evaluating clinical simulation in nursing education. The NESD's basic tenet is that practical simulations enhance educational results and are predicated on several propositions. These include that the learner's learning needs will determine the characteristics of the simulation design,

that the students must be motivated and self-directed participants, and that the teacher's role will vary depending on the simulation's goal and the faculty's perspective of the best educational practices. The framework's five conceptual elements are 1) design characteristics, 2) educational practices, 3) teacher characteristics, 4) student characteristics, and 5) learning outcomes. To clarify how these ideas relate to learning outcomes, the NESD looks at how teachers, students, and educational methods affect various aspects of simulation design.

Study Aim

To explore perceptions of Thai nursing instructors regarding the essential components of the design characteristics of nursing simulation scenarios for improving nursing students' clinical judgment

Methods

Study Design: This study used a qualitative descriptive approach²⁰ driven by naturalistic inquiry that focuses on studying a phenomenon in its natural state to the degree that it is practiced within the contexts of the research phenomenon. This approach was therefore considered a good fit for understanding and describing the phenomenon under investigation. The Consolidated Criteria for Reporting Qualitative Research (COREQ)²¹ were employed as a guideline to report this study.

Study Setting and Sample: The participants were 23 nursing instructors at a nursing college in Thailand recruited from the name list of all instructors using purposive sampling and approached face-to-face. The inclusion criteria were Thai nursing instructors having at least five years of experience in clinical supervision and being a member of the Bachelor of Nursing Science (BSN) Program Committee.

Ethical Consideration: Approval was obtained from the Research Ethics Committee of the Faculty of Nursing, Chiang Mai University (Research ID: 2020-133; Study code: 2020-EXP101) and the

director of the participating nursing college. Before data collection and voice recording, the participants gave written informed consent and had the right to refuse participation or withdraw at any point. Confidentiality and anonymity were protected throughout the study.

Data Collection: Data collection lasted over four weeks, between 1 and 31 March 2021. The data were conducted by the primary investigator (PI), a female nursing instructor with experience in qualitative data collection. Rapport was built throughout the study. The PI introduced herself and shared her educational and working background to develop mutual trust. The semi-structured interview questions were used in focus group discussions and in-depth interviews to obtain detailed descriptions of the participants' experiences. These questions were developed based on the NESD¹⁸ and the clinical judgment model.¹⁷ They were reviewed by experts in qualitative approaches and pilot-tested with nursing instructors.

Initially, data were collected in a total of four focus group discussions with 23 participants. They were divided into small groups with five to six participants per group and asked open-ended questions such as "How does SBL help to improve clinical judgment in nursing students?" Each focus group discussion lasted between 60 and 90 minutes. Then, to gain a deeper insight into the elements of simulation design that effectively improve clinical judgment, individual in-depth interviews were carried out with five of these 23 participants who had experience in the SBL approach, using questions such as "What are the characteristics of SBL for improving clinical judgment among nursing students?", "What are the key components for consideration when creating simulation scenarios for improving clinical judgment among nursing students?" and "What are the barriers to the clinical judgment of nursing students?" Additionally, probing questions were used (e.g., "Can you elaborate on that?" and "Could you give more detail?"). Each participant was interviewed for about 45 to 60 minutes, with repeat interviews conducted with two participants.

All in-depth interviews and focus group discussions were held in a private meeting room of the nursing college. Conversations were recorded using an audio recorder. The researchers believed that data saturation was achieved through interviewing and data analysis until no new ideas or concepts appeared.

Data Analysis: This was performed with content analysis.²² First, audio recordings from the focus group discussions and the in-depth interviews were transcribed and read repeatedly line-by-line to fully immerse the PI in the data. Next, ATLAS.ti software facilitated the coding and analysis of transcripts and field notes, constructing network diagrams, data visualizations, and linkages among coded data to obtain the final themes.²² Finally, a descriptive summary that ideally fitted the data was developed.

Rigor and Trustworthiness: This was established using the criteria of Lincoln and Guba.²³ Credibility was established through peer debriefing, member checking, and triangulation. Peer debriefing was accomplished by checking the transcripts' content with an expert advisory team to ensure the recorded data's accuracy. Data triangulation was achieved in multiple cases using the same focus group discussion/ in-depth interview guide to improve credibility. As for member checking, the findings were returned to three participants to check the data and verify the findings. Finally, confirmability was obtained by establishing an audit trail using field notes, checking and rechecking the raw data with the experts as external auditors, and analyzing and synthesizing data throughout the study.

Findings

There were 23 participants in this study, of whom 22 were female. Their ages ranged from 31 to 55 years. They had clinical supervision experience from 10 to 33 years and experience in using an SBL approach ranging from 6 to 10 years. Four major themes and sub-themes emerged, as presented in **Table 1**.

Table 1. Themes and sub-themes of the study

Themes	Subthemes
1. Fostering instructor support	1.1. Nursing instructors as facilitators 1.2. Providing clinical judgment opportunities
2. Recognizing students' strengths	2.1. Knowledge and prior clinical experience 2.2. Learning styles
3. Enhancing specificity in scenarios	3.1. Setting specific learning outcomes of the curriculum 3.2. Determining key learning points
4. Promoting cognitive development	4.1. Exposure to realistic clinical scenarios 4.2. Complex learning activities

Theme 1: Fostering instructor support

The support from nursing instructors as facilitators and in providing clinical judgment opportunities could help students appreciate the relevance of discipline knowledge and skill, increasing their motivation and engagement. The participants shared their viewpoints on learning.

Subtheme 1: Nursing instructors as facilitators

Learning support from the nursing instructors as facilitators to provide coaching could help the students to think and make clinical judgments based on their competency, for example:

"Instructors are important as they facilitate students to think and keep in mind that whatever decision they make can affect the client's life. This will help develop their clinical judgment." (NI 1)

Higher-order thinking questions should be raised, especially during debriefing,

"The instructors' question is the most important. If instructors don't ask questions to the students, there is no critical thinking. In the end, they won't be able to make a clinical judgment." (NI 3)

Ideally, nursing instructors should possess reflective skills in using questions as prompts for clinical judgment that are needed in debriefing during SBL, as one participant shared, "For students who don't have

questions, instructors have to use prompting questions." (NI 8)

Subtheme 2: Providing clinical judgment opportunities

Clinical judgment opportunities were identified as crucial. Although the prospects for practicing clinical judgment skills in a clinical setting were essential, those opportunities were sometimes inadequately provided.

"When facing an emergency case or urgent cases with acutely life-threatening conditions, ethical considerations suggest no students' involvement in hands-on care. They're just observers without the opportunity to think and make a clinical judgment." (NI 4)

"Issues about clients' rights are significant concerns...So, we can't let students make a clinical judgment on their own." (NI 10)

Therefore, from the nursing instructors' perspectives, simulation scenarios must be designed to give students opportunities to perform nursing actions to develop clinical judgment.

"We have to design simulation scenarios where students can be more than observers who can assess the clients' conditions and take action when the clients' condition worsens, making clinical judgment and prioritizing which action to take first." (NI 21)

"For example, pregnancy-induced hypertension is common, but students only observe rather than make clinical judgments. When designing simulation scenarios, we need to assign students as nurses who can take action to assess the clients and make a clinical judgment to take nursing action. So, nursing instructors play an important role in creating simulation scenarios that provide opportunities to make a clinical judgment." (NI 19)

Theme 2: Recognizing students' strengths

Participants shared that students' strengths of knowledge, prior clinical experience, and learning style could influence their participation in a simulation scenario.

Subtheme 1: Knowledge and prior clinical experience

The participants perceived that their students had inadequate knowledge and lacked previous clinical experience, hindering them from recognizing client conditions changes.

"I think clinical judgment's based on knowledge and prior clinical experience. Some students who have knowledge but lack clinical experience won't be able to notice that something's wrong with the client's condition. Insufficient knowledge in combination with the lack of clinical experience makes clinical judgment even poorer." (NI 1)

"Without knowledge and prior clinical experience, students won't be confident in making clinical judgments." (NI 3)

Thus, participants believed adequate knowledge and previous clinical experience would lead to success in SBL. In addition, higher years of study were considered suitable for clinical judgment development as students were thought to have a sound nursing knowledge and experience foundation.

"Knowing the clinical judgment level allows us to design the scenarios based on the clinical judgment level, rather than using the same scenario with all years of study." (NI 12)

"Third-year students or higher are suitable for SBL to develop clinical judgment." (NI 11)

"Third-year students seem to be ready to apply their nursing knowledge to make a clinical judgment." (NI 7)

Subtheme 2: Learning styles

Learning style was also emphasized, as it facilitated clinical judgment development. For example, students should have an interest in self-directed learning. By contrast, students' lack of interest and motivation could inhibit clinical judgment.

"Students themselves make a big difference because each student has different experiences that contribute to how they learn." (NI 2)

"Students should have the self-confidence to express their opinions, act, and decide." (NI 3)

"If students aren't interested or motivated in learning, they won't be able to apply what they've learned to make a clinical judgment in client care." (NI 6)

Theme 3: Enhancing specificity of scenarios

The participants shared that the focus of scenarios should be specific to what the instructors intended for their students to achieve, which could be performed by determining learning outcomes of the curriculum and key learning points.

Subtheme 1: Setting specific learning outcomes of the curriculum. The participants shared experiences in the SBL approach and frequently mentioned the specific learning outcomes of the curriculum. Therefore, clear learning outcomes should be considered when determining particular learning objectives.

"Preparing the simulation scenario should begin with an analysis of learning outcomes of the baccalaureate program." (NI 21)

“We select the learning outcome that can be achieved by SBL and use it as a basis for determining the specific objective to measure what the students have learned based on that objective.” (NI 19)

Subtheme 2: Determining key learning points. A key learning point involved determining the expected observable behavior of the nursing students in performing a particular nursing practice related to the scenario. Therefore, nursing instructors needed to identify the key learning points as the focus of SBL.

“A well-designed simulation scenario must encourage students to learn the essential topics, such as history taking of essential symptoms, assessing clients’ condition, and deciding which symptoms are important and should be reported to the doctor.” (NI 19)

“Teachers need to decide what should be the major focus and nursing care of a particular condition. Students must be able to assess symptoms.” (NI 20)

Notably, key learning points in nursing care should consider time limits.

“We must set a time limit to allow students to make a clinical judgment promptly. This will help students reflect on the negative consequences to the clients that may result from untimely clinical judgment.” (NI 22)

Theme 4: Promoting cognitive development

Participants expressed that scenarios that provided students with exposure to realistic clinical scenarios and complexity could promote students’ cognitive development in terms of the ability to think and make clinical judgments.

Subtheme 1: Exposure to realistic clinical scenarios. Participants emphasized that natural environments offered a multi-dimensional experience for students to interact and make clinical judgments in situations

that replicate the clinical setting in a realistic, interactive atmosphere.

“Realistic clinical scenarios allow students to feel as if they are working on the ward, stimulating them to think and make a clinical judgment. When coming across similar cases in the future, they’ll know how to take action in real practice to ensure patient safety.” (NI 22)

“The more realistic environments are, the better the students can understand clinical practice with the clients.” (NI 21)

Subtheme 2: Complex learning activities.

Scenarios must incorporate complex learning activities, expose students to alternative practices to identify underlying linkages, prioritize care plans, and enhance learning. Simulations should be designed to range from simple to complex scenarios to stimulate students’ problem-solving.

“Scenarios need to be complex with alternative practices for students to make decisions. So, they can apply their thinking process to analyze the client’s situations and plan for care.” (NI 19)

“Complex scenarios with different alternative practices stimulate students to think and decide which action to take. For example, scenarios where the clients’ condition worsens require students to prioritize which nursing care to give clients first, reflecting whether they can make a sound clinical judgment.” (NI 21)

Discussion

Our study explored the perception of 23 Thai nursing instructors about the characteristics of nursing simulation scenario design to improve clinical judgment among nursing students and revealed four themes discussed below.

Clinical judgment is developed through the learning support of nursing instructors who act as facilitators by using practical questions to encourage students to think critically and analytically, particularly during debriefing. This study finding corresponded to another qualitative study 24, in which clinical discussion with teachers' follow-up questions encouraged students to develop clinical judgment. Consistently, previous research on nursing instructors' experiences in simulation revealed that SBL demanded greater capacity of nursing instructors for effective debriefing discussion.²⁵ A recent study found that nursing instructors should function as facilitators to support students' engagement in the healthcare context.²⁶ Therefore, teacher support as a facilitator and teacher's questions are essential in helping students clearly articulate clinical judgments that will lead to appropriate interventions.

Moreover, clinical judgment development is facilitated by learning opportunities where students' theoretical knowledge and experiences are integrated into a particular circumstance.²⁷ Nursing instructors can support their students by providing more possibilities for training to advance clinical judgment.²⁴ These opportunities enable nursing students to progress from dependence on abstract knowledge and formal norms of nursing care to deeper knowledge, guiding them toward a greater comprehension of the clinical situation. Learning opportunities should be sufficient in depth and breadth, especially regarding direct clinical encounters.²⁸ This will help nurse graduates accomplish practice-focused outcomes and apply knowledge and abilities in their professional practice.

Recognizing students' strengths helps determine their success in developing clinical judgment. Students' knowledge and prior clinical experience were described in this study as one of their strengths in interpreting information and comparing it against the anticipated values and making informed care decisions. Participants highlighted that having solid background knowledge to compare information and the capacity to filter through enormous amounts of data to identify the

essential issues and foresee problems helped students recognize patient deterioration and to act accordingly. These strengths were similarly reflected in the findings of Pouralizadeh et al.,²⁴ where students needed a sound knowledge foundation to draw on when making clinical judgments.

Our findings also highlighted that learning style plays a crucial part in the success of a nursing simulation for developing clinical judgment. Similarly, the NESD framework¹⁸ indicates that student characteristics, previous nursing experience, and self-directed and motivated learning style might affect simulation learning outcomes. Assuming that everyone learns differently and at various rates, learning styles should be considered to modify instruction to meet students' needs.²⁸ Given that a person's learning style is one of many significant factors influencing learning outcomes, clinical judgment is a multifaceted process that is affected by various sources and likely also by preferences for different learning styles.^{29,30} This suggests that distinct learning styles can influence students' clinical judgment abilities in simulation, a concern as Thai nursing students differ from those in other countries. The educational contexts in Thailand tend to be influenced by traditional culture, contributing to students' attitudes toward shyness and obedience.³¹ As a result, Thai students are less likely to express their opinions during a debriefing, an essential process in clinical judgment development.³² Therefore, for a more efficient SBL, nursing instructors need to analyze the differences in student learning styles. In addition, students should be supported to express their opinions by using reflective questions during debriefing to stimulate their thinking process while showing empathy and understanding for their anxiety about the scenario³³ to overcome these traditional cultural obstacles.

When creating a simulation scenario for clinical judgment, participants stressed the importance of determining specific curriculum learning outcomes and key learning points that learning should focus on. Consistently, the critical component of the NESD

framework is learning outcomes. Therefore, it is essential to evaluate learning outcomes to validate what students have learned and confirm the value of the clinical scenario experience³⁴ and the discussion of course and activity outcomes. In our study, learning outcomes of the curriculum were emphasized as contributing to clinical judgment development. This finding aligns with suggestions by the International Nursing Association of Clinical and Simulation Learning Standards Committee³⁵ proposing the establishment of learners' outcomes consistent with the curriculum scaffolded to learners' knowledge and skills as a necessary criterion to achieve the standards of best practice. Similarly, Bastable³⁶ posited that teaching involved deliberately implementing carefully-planned educational activities to meet specific outcomes.

In addition, participants in this study believed that creating a simulation scenario to improve clinical judgment required promoting cognitive development through exposure to realistic clinical scenarios. Simulations should mimic natural clinical environments because they allow students to better understand and familiarize themselves with clinical practice. Our finding is consistent with the NESD in that simulations should simulate actual clinical situations as realistically and authentically as possible.¹⁸ Consistently, new nurses regarded high-fidelity simulation as valuable to their education in the sense of realism that positively affected their clinical judgment development.³⁷ High-fidelity simulations help nursing students solidify their ability to make wise clinical judgments, advancing from the beginning level to the outstanding level of clinical judgment needed for managing problems in actual clinical practice.³⁸

Moreover, complex learning activities emerged in this study as another critical aspect in creating simulation scenarios, stimulating students to think analytically when planning care and prioritizing nursing activities. Our finding resonates with Tanner¹⁷, who proposed that effective clinical judgment involves the ability to notice essential and intricate elements in clinical situations that are not yet identified, interpret

the meaning, and take an appropriate response given that clinical situations are ambiguous with conflicting interests among individuals.

To make sound clinical judgments, nurses need to understand the pathophysiological and diagnostic dimensions of clients' clinical conditions and diseases, clients' and families' illness experiences and their physical, social, and emotional strengths and resources for coping. Thus, complex learning activities allowed students to familiarize themselves with complex care in actual clinical areas, resulting in less anxiety and stress, which helped to enhance their noticing, interpreting, reflecting, and responding to all aspects of clinical judgment. Therefore, the acquisition of clinical judgment needs to consider these complexities to inform nurse instructors' approaches to teaching.¹⁷ This is congruent with the NESD, suggesting that simulation scenarios should be complex to help students identify underlying relationships, prioritize planned care, and practice problem-solving skills.¹⁸ Consistently complex case simulation scenarios led to higher clinical judgment scores among undergraduate nursing students.³⁹

Strengths and Limitations

As far as we know, this is the first study to explore the characteristics of nursing simulation scenario design to improve clinical judgment among nursing students through the perspective of nursing instructors. The findings provide valuable insights that can guide the designing of well-structured, high-quality simulation scenarios that promote cognitive development to improve clinical judgment for undergraduate nursing students. However, this study has some limitations. The sample was nursing instructors in only one nursing college in Thailand. Thus, their perspectives might differ from instructors from other cultures or countries. Further research should be conducted with other samples, such as students and novice nurses, to gain a broader perspective of the phenomenon.

Conclusion and Implications for Nursing Practice

In this study, during restricted clinical practice due to the COVID-19 pandemic, students' participation in care delivery and clinical opportunities to improve their clinical judgment was limited. The findings offer insight into designing simulation scenarios to enhance clinical judgments in nursing students, reflecting the knowledge and understanding of the educator's role in promoting this. Nursing instructors can apply our findings to create SBL activities to stimulate nursing students' clinical judgment skills by fostering instructor support, recognizing students' strengths with a particular emphasis on pathophysiology and disease, enhancing specificity in scenarios, and promoting cognitive development. These components are crucial when designing simulation scenarios that support students' cognitive processes to ensure patient safety and quality of care.

Acknowledgments

We appreciate the participants for their willingness to share their unique experiences.

References

1. World Health Organization. Global patient safety action plan 2021–2030: towards eliminating avoidable harm in health care. Geneva: World Health Organization [Internet]. 2021. [cited 2023 Feb 20]. Available from: <https://www.who.int/teams/integrated-health-services/patient-safety/policy/global-patient-safety-action-plan>
2. Kuo LE, Kaufman E, Hoffman RL, Pascual JL, Martin ND, Kelz RR, et al. Failure-to-rescue after injury is associated with preventability: the results of mortality panel review of failure-to-rescue cases in trauma. *Surgery*. 2017;161(3):782–90. doi: 10.1016/j.surg.2016.08.017.
3. Strategy and Planning Division, Ministry of Public Health. Public health statistics 2021. Bangkok: Strategy and Planning Division, Ministry of Public Health [Internet]. 2021 [cited 2023 Feb 20]. Available from: <https://spd.moph.go.th/wp-content/uploads/2022/11/Hstatistic64.pdf> (in Thai)
4. Massey D, Chaboyer W, Anderson V. What factors influence ward nurses' recognition of and response to patient deterioration? An integrative review of the literature. *Nurs Open*. 2017;4(1):6–23. doi: 10.1002/nop2.53.
5. National Council of State Boards of Nursing. Board action [Internet]. 2019 [cited 2023 Apr 13]. Available from: <https://www.ncsbn.org/nursing-regulation/discipline/board-action.page>
6. Roel E, García-Díez M, Borrás Bermejo B. Medical errors, the third leading cause of death in the United States? *J Health Qual Res*. 2019;34(6):339–41. doi:10.1016/j.jhqr.2019.06.005.
7. Sherrill K. Clinical judgement and next generation NCLEX® – a positive direction for nursing education! *Teach Learn Nurs*. 2020;15(1):82–5. doi:10.1016/j.teln.2019.08.009.
8. Brenton A. Next generation NCLEX® project [Internet]. 2018 [cited 2023 Apr 13]. Available from: https://www.ncsbn.org/2018_Webinar_NGN.pdf
9. Burke JR, Downey C, Almoudaris AM. Failure to rescue deteriorating patients: a systematic review of root causes and improvement strategies. *J Patient Saf*. 2022;18(1):e140–55. doi: 10.1097/PTS.0000000000000720.
10. Campbell SH, Nye C, Hébert SH, Short C, Thomas MH. Simulation as a disruptive innovation in advanced practice nursing programs: a report from a qualitative examination. *Clin Simul Nurs*. 2021;61:79–85. doi: 10.1016/j.ecns.2021.08.001.
11. Abhichartitbutra K, Sngounsiritham U. Teaching skills of nursing instructor in using high fidelity simulation scenario. *Nursing J*. 2019;46(4):202–10 (in Thai).
12. Lertlum L, Tanasasutee C, Panawatthanapisuit S, Bumrungsri C. Development of a simulation-based learning model. *SCNJ*. 2019;6:43–58 (in Thai).
13. Khachat S, Chansuvarn S, Phothong P, Sripho S. Development of simulation-based learning with standardized patient model to promote knowledge, perceived self-confidence and therapeutic of communication skill. *J Boromarjonani College Nurs Suphanburi*. 2022;5(2): 47–60 (in Thai).
14. Jamjang S, Atthamatakul W, Nillium R, Wongyara N. The effects of simulation-based learning on problem solving ability, and self-confidence in nursing care on the patient with health problem of nursing students. *JPCN*. 2021;4(3):178–94 (in Thai).
15. Alfaro-LeFevre R. Critical thinking, clinical reasoning, and clinical judgment. St. Louis: Elsevier; 2019.

16. Uppor W, Klunklin A, Viseskul N, Skulphan S. A concept analysis of clinical judgment in undergraduate nursing students. *Nurs Forum*. 2022;57(5):932-7. doi:10.1111/nuf.12757.
17. Tanner CA. Thinking like a nurse: a research-based model of clinical judgment in nursing. *J Nurs Educ*. 2006;45(6):204-11. doi: 10.3928/01484834-20060601-04.
18. Jeffries PR. A framework for designing, implementing, and evaluating simulations used as teaching strategies in nursing. *Nurs Educ Perspect*. 2005;26(2):96-103.
19. Harrington DW, Simon LV. Designing a simulation scenario. *StatPearls* [Internet]. 2022 Sep 26 [cited 2023 Feb 12]. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK547670/>
20. Turale S. A brief introduction to qualitative description: a research design worth using. *Pacific Rim Int J Nurs Res*. 2020;24(3):289-91.
21. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care*. 2007;19(6):349-57. doi: 10.1093/intqhc/mzm042.
22. Krippendorff K. Content analysis: an introduction to its methodology. California: Sage Publications; 2013.
23. Lincoln YS, Guba EG. Paradigmatic controversies, contradictions, and emerging confluences. In: Denzin NK, Lincoln YS, editors. *The handbook of qualitative research*. 2nd ed. California: Sage Publications; 2000. pp. 1065-122.
24. Pouralizadeh M, Khankeh H, Ebadi A, Dalvandi A. Factors influencing nursing students' clinical judgment: a qualitative directed content analysis in an Iranian context. *J Clin Diagn Res*. 2017;11(5):Jc01-4. doi: 10.7860/JCDR/2017/25753.9822.
25. Luo D, Yang BX, Liu Q, Xu A, Fang Y, Wang A, et al. Nurse educators' perceptions of simulation teaching in Chinese context: benefits and barriers. *Peer J*. 2021;9:e11519. doi: 10.7717/peerj.11519.
26. Jessee MA. An update on clinical judgment in nursing and implications for education, practice, and regulation. *J Nurs Regul*. 2021;12(3):50-60. doi: 10.1016/S2155-8256(21)00116-2.
27. Benner P, Benner PE, Tanner CA, Chesla CA. Expertise in nursing practice: caring, clinical judgment, and ethics. New York: Springer Publishing; 2009.
28. Mailloux CG. Using the essentials of baccalaureate education for professional nursing practice (2008) as a framework for curriculum revision. *J Prof Nurs*. 2011;27(6):385-9. doi: 10.1016/j.profnurs.2011.04.009.
29. Hallin K, Haggstrom M, Backstrom B, Kristiansen LP. Correlations between clinical judgement and learning style preferences of nursing students in the simulation room. *Glob J Health Sci*. 2015;8(6):1-13. doi: 10.5539/gjhs.v8n6p1.
30. Shinnick MA, Woo MA. Learning style impact on knowledge gains in human patient simulation. *Nurse Educ Today*. 2015;35(1):63-7. doi: 10.1016/j.nedt.2014.05.013.
31. Beischel KP. Variables affecting learning in a simulation experience: a mixed methods study. *West J Nurs Res*. 2013;35(2):226-47. doi: 10.1177/0193945911408444.
32. Al Sabei SD, Lasater K. Simulation debriefing for clinical judgment development: a concept analysis. *Nurse Educ Today*. 2016;45:42-7. doi: 10.1016/j.nedt.2016.06.008.
33. Solli H, Haukedal TA, Husebø SE, Reiersen ÅI. The art of balancing: the facilitator's role in briefing in simulation-based learning from the perspective of nursing students – a qualitative study. *BMC Nurs*. 2020;19:99. doi: 10.1186/s12912-020-00493-z.
34. INACSL Standards Committee, Decker S, Alinier G, Crawford SB, Gordon RM, Jenkins D, Wilson C. Healthcare simulation standards of Best Practice™ the debriefing process. *Clin Simul Nurs*. 2021;58:27-32. doi: 10.1016/j.ecns.2021.08.011.
35. INACSL Standards Committee, Miller C, Deckers C, Jones M, Wells-Beede E, McGee E. Healthcare simulation standards of Best Practice™ outcomes and objectives. *Clin Simul Nurs*. 2021;58:40-4. doi: 10.1016/j.ecns.2021.08.013.
36. Bastable S. Nurse as educator: principles of teaching and learning for nursing practice. 5th ed. Burlington, Massachusetts: Jones & Bartlett Learning; 2019.
37. Lawrence K, Messias DKH, Cason ML. The influence of simulation experiences on new nurses' clinical judgment. *Clin Simul Nurs*. 2018;25:22-7. doi: 10.1016/j.ecns.2018.10.008.
38. Ayed A, Khalaf IA, Fashafsheh I, Saleh A, Bawadi H, Abuidhail J, et al. Effect of high-fidelity simulation on clinical judgment among nursing students. *Inquiry*. 2022 Jan-Dec;59:469580221081997. doi: 10.1177/00469580221081997.
39. Salameh B, Ayed A, Kassabry M, Lasater K. Effects of a complex case study and high-fidelity simulation on mechanical ventilation on knowledge and clinical judgment of undergraduate nursing students. *Nurse Educ*. 2021;46(4):E64-9. doi: 10.1097/NNE.0000000000000938.

การออกแบบสถานการณ์จำลองเพื่อเพิ่มการตัดสินใจทางคลินิกในนักศึกษาพยาบาล: การศึกษาเชิงคุณภาพ

วาสนา อุปโป อาริวรรณ กลั่นกลิ่น* นงคราญ วิเศษกุล สมบัติ สุกุลพรรณ Sue Turale

บทคัดย่อ: การตัดสินใจทางคลินิกเป็นกระบวนการทางปัญญาที่เกิดจากการคิดอย่างมีวิจารณญาณหรือการใช้เหตุผลทางคลินิกที่ส่งผลต่อความปลอดภัยของผู้ป่วย การไม่สังเกตเห็นสัญญาณของการทรุดลงของผู้รับบริการเมื่อทำการตัดสินใจทางคลินิกอาจนำไปสู่ข้อผิดพลาดได้ ดังนั้นนักศึกษาพยาบาลต้องมีการตัดสินใจทางคลินิกที่ดีก่อนเข้าสู่การประกอบวิชาชีพการพยาบาล การเรียนรู้โดยใช้สถานการณ์จำลองเป็นวิธีการสอนสำคัญที่ใช้กันอย่างแพร่หลายในการพัฒนาการตัดสินใจทางคลินิกของนักศึกษา อย่างไรก็ตาม การจัดการเรียนรู้โดยใช้สถานการณ์จำลองในประเทศไทย ยังมุ่งเน้นเนื้อหาทางทฤษฎีและการปฏิบัติทางคลินิกมากกว่าการพัฒนากระบวนการคิด อาจารย์พยาบาลเป็นบุคคลสำคัญในการออกแบบการเรียนรู้ ดังนั้นความเข้าใจอย่างลึกซึ้งเกี่ยวกับมุมมองของอาจารย์พยาบาลในการออกแบบสถานการณ์จำลองที่เน้นการพัฒนาความสามารถทางปัญญาเพื่อส่งเสริมการตัดสินใจทางคลินิกอย่างเหมาะสมของนักศึกษาพยาบาลจึงมีความสำคัญ

การศึกษาวรรณนาเชิงคุณภาพนี้มีวัตถุประสงค์เพื่อศึกษาองค์ประกอบสำคัญของการออกแบบลักษณะสถานการณ์จำลองทางการพยาบาลเพื่อพัฒนาการตัดสินใจทางคลินิกของนักศึกษาพยาบาลตามการรับรู้ของอาจารย์พยาบาล ผู้เข้าร่วมวิจัยเป็นอาจารย์พยาบาลจำนวน 23 คน คัดเลือกโดยเฉพาะเจาะจงจากวิทยาลัยพยาบาลแห่งหนึ่งในประเทศไทย เก็บรวบรวมข้อมูลโดยใช้การสนทนากลุ่มกับผู้เข้าร่วมวิจัยทุกคน จากนั้นสัมภาษณ์เชิงลึกเป็นรายบุคคลกับผู้เข้าร่วมวิจัย 5 คนที่มีความเชี่ยวชาญในการจัดการเรียนการสอนโดยใช้สถานการณ์จำลองเสมือนจริง ในเดือนมีนาคม 2564 วิเคราะห์ข้อมูลโดยใช้การวิเคราะห์เนื้อหา

ผลการศึกษาพบว่า มี 4 ประเด็นสำคัญ ได้แก่ 1) การสนับสนุนจากผู้สอน 2) การตระหนักถึงจุดแข็งของนักศึกษา 3) การเพิ่มความเฉพาะเจาะจงในโจทย์สถานการณ์ และ 4) การส่งเสริมพัฒนาการทางปัญญา อาจารย์พยาบาลสามารถนำข้อค้นพบไปใช้ในการสร้างกิจกรรมการเรียนรู้ด้วยสถานการณ์จำลองเพื่อพัฒนาวิจารณญาณทางคลินิก เพื่อสนับสนุนกระบวนการคิดของนักศึกษาพยาบาลเพื่อความปลอดภัยของผู้ป่วยและคุณภาพของการดูแลผู้ป่วย

Pacific Rim Int J Nurs Res 2023; 27(3) 445-456

คำสำคัญ: การตัดสินใจทางคลินิก สถานการณ์จำลองทางการพยาบาล นักศึกษาพยาบาล การศึกษาเชิงคุณภาพ การเรียนรู้โดยใช้สถานการณ์จำลอง

วาสนา อุปโป, พยาบาลวิชาชีพ นักศึกษาหลักสูตรปริญญาเอก คณะพยาบาลศาสตร์ มหาวิทยาลัยเชียงใหม่ และ วิทยาลัยพยาบาลบรมราชชนนีสุนทรบุรี คณะพยาบาลศาสตร์ สถาบันพระบรมราชชนก E-mail: far_wa@hotmail.com
ติดต่อที่: อาริวรรณ กลั่นกลิ่น*, พยาบาลวิชาชีพ ปริญญาเอก คาสตราจารย์ คณะพยาบาลศาสตร์ มหาวิทยาลัยเชียงใหม่ และคณะพยาบาลศาสตร์ สถาบันการจัดการปัญญาภิวัฒน์ E-mail: a.klunklin@gmail.com
นงคราญ วิเศษกุล, พยาบาลวิชาชีพ ปริญญาเอก รองศาสตราจารย์ คณะพยาบาลศาสตร์ มหาวิทยาลัยเชียงใหม่ E-mail: nongkran.v@cmu.ac.th
สมบัติ สุกุลพรรณ, พยาบาลวิชาชีพ ปริญญาเอก รองศาสตราจารย์ คณะพยาบาลศาสตร์ มหาวิทยาลัยเชียงใหม่ E-mail: sombat.sk@cmu.ac.th
Sue Turale, DEd, MNurStud, FACN, FACMHN, Visiting Professor, Faculty of Nursing, Chiang Mai University, Thailand. E-mail: turalecmu@gmail.com