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Original Research

Debriefing and Clinical Judgment Ability in Nursing Education: A Scoping Review

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A R T I C L E I N F O

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A B S T R A C T

Clinical judgment is a critical competence for nursing students, yet its development remains inconsistent across nursing programs. Debriefing has emerged as a promising educational strategy to enhance this ability, particularly when integrated with simulation-based learning. The Method used a scoping review followed the Arksey and O'Malley framework to identify debriefing techniques used in undergraduate nursing education, their outcomes on clinical judgment, and learning activities that support their development. Fourteen studies published between 2016 and 2024 were included from three databases (ProQuest, MEDLINE, and PubMed). Inclusion criteria were English-language, full-text available, and focused on undergraduate nursing education. Results of this study are structured and theory-based debriefing methods were found to significantly improve nursing students' clinical judgment, particularly in noticing, interpreting, and reflecting. Simulation-based learning combined with reflective debriefing and clinical placements further supported skill transfer into real practice settings. The conclusion is that structured and theory-informed debriefing significantly enhances clinical judgment in nursing education. Integrating reflective debriefing into simulation and clinical learning activities is essential to bridge the gap between theoretical knowledge and clinical competence. Recommendation is that educators are encouraged to adopt structured, theory-based debriefing models and ensure that facilitators receive proper training. Future research should explore longitudinal and interprofessional effects of debriefing on clinical competence.

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INTRODUCTION

According to the International Council of Nursing (1987) nurses are defined as professionals who have successfully completed an accredited basic and general nursing education program and have been granted authorization to practice by the appropriate regulatory authority in their respective countries. Foundational nursing education includes a formally approved curriculum designed to provide comprehensive knowledge in the behavioural, life, and nursing sciences, preparing learners for general nursing practice, leadership roles, and advanced or specialized study (International Council of Nursing, n.d.). The primary aim of the bachelor of nursing program is to develop graduates who can effectively apply theoretical knowledge in real-world clinical settings as healthcare professionals (Johnston et al., 2017).

Kavanagh & Szweda (2017) found that only 23% of newly graduated nurses demonstrated the entry-level competence required to be considered practice ready. Likewise, a study in Taiwan reported that only about 53% of undergraduate nursing students achieved a satisfactory level of clinical competence (Liou et al., 2020). Furthermore, an integrative review from Gonzalez & Nielsen (2024) highlighted the scarcity of scholarly literature that specifically explores instructional strategies that foster clinical judgment skills within clinical practice environments. The review of these studies shows that nursing educators have utilized diverse methods to enhance students' clinical judgment abilities. Nevertheless, further investigation is required to establish evidence-based best practices in clinical education. Advancing this area is essential to improve the quality of clinical learning and ensure that educational strategies effectively support critical thinking and sound clinical decision-making (Gonzalez & Nielsen, 2024).

Yang et al. (2019) reported that simulation-based instructional methods had a significantly greater impact on students' clinical judgment abilities compared to conventional, non-simulation approaches. Such methods enhance performance across key dimensions of clinical judgment, including noticing, interpreting, responding, and reflecting. Existing literature also emphasizes that debriefing plays a critical role in facilitating clinical learning, both in real-world clinical placements and in simulated learning environments (Dreifuerst, 2015; International Nursing Association for Clinical Simulation and Learning [INACSL] Standards Committee et al., 2021; Lomuscio et al., 2025).

Structured debriefing refers to a guided reflective process following a simulation or clinical encounter, using a defined framework to help learners critically examine their actions, decisions, and underlying reasoning to promote deeper learning and strengthen future clinical judgment (Dreifuerst, 2015). In their concept analysis of debriefing within professional clinical practice settings, Fisher & Oudshoorn (2019) observed that although debriefing is widely used in simulation laboratories, it should also be incorporated into clinical practice education to enrich learning experiences and minimize the gap between theoretical knowledge and clinical application. Additionally, is relevant across multiple domains of nursing education and is recommended as a curricular component to support reflective practice, which can positively influence educational outcomes (National League for Nursing [NLN], 2015 in Reed, 2020).

Recent literature further reinforces the contribution of debriefing to clinical judgment development and nursing education more broadly. Debriefing facilitates reflective thinking, emotional processing, and the integration of theoretical knowledge into clinical decision-making (Şahin & Başak, 2021). Structured debriefing models such as Debriefing for Meaningful Learning (DML) and the Lasater Clinical Judgment Rubric (LCJR) have shown effectiveness in promoting critical thinking and clinical reasoning (Bussard et al., 2024). Integrating debriefing practices into nursing curricula may bridge the gap between academic preparation and clinical readiness.

A persistent challenge in nursing education is the disparity between the expected practice readiness of graduates and their actual clinical competence, particularly in the domain of clinical judgment. Despite the use of diverse teaching strategies such as simulation, the evidence regarding best practices for fostering clinical judgment remains limited and inconclusive. In addition, although debriefing has been recognized as an effective method for connecting theoretical knowledge with clinical application, its consistent integration into clinical education has not yet been fully achieved. To address this gap, the present study seeks to examine: (1) the debriefing methods employed in nursing education, (2) the outcomes associated with the application of debriefing in nursing education, and (3) the learning activities that have been reported to enhance clinical judgment among nursing students.

METHOD

Scoping reviews are an appropriate method for mapping existing research on a particular topic, identifying the types of available evidence, highlighting areas of knowledge strength and gaps, and outlining key characteristics of the concepts being studied (Peters et al., 2020). The purpose of this review aligns with the methodological approach, as scoping reviews offer a rigorous process for examining

the literature, synthesizing existing evidence, and informing future research directions (Tricco et al., 2018). The five-stage framework developed by Arksey & O'Malley (2005) was utilized, which includes formulating the research question, locating relevant literature, screening and selecting studies, extracting and organizing data, and synthesizing, summarizing, and presenting the findings. The research questions guiding this review were: What debriefing methods are used in nursing education, what are the reported outcomes of implementing debriefing in nursing education? and What learning activities have been identified as contributing to the development of clinical judgment among nursing students?

Searches were conducted across three major databases: ProQuest, MEDLINE with full text (EBSCO), and PubMed. A Structured search strategy was employed, incorporating Medical Subject Headings (MeSH) and relevant keywords. To locate relevant literature, a comprehensive search strategy was developed using the Population–Concept–Context (PCC) framework. For the population, terms such as "Nursing Student", "Students", "Pupil Nurse", "Undergraduate students", "baccalaureate students", "Pre-licensure". Boolean operators (AND and OR) are applied to combine search terms, ensuring comprehensive and systematic search across the selected databases *(Table 1)*. The inclusion criteria were limited to peer-reviewed articles published in English between 2015 and 2025.

All retrieved records were imported into Covidence platform (Systematic Review Software, Veritas Health Innovation, Melbourne, Australia). Duplicate records were automatically removed. Title and abstract screening were performed independently by two reviewers, followed by full-text assessment using predefined inclusion and exclusion criteria. No discrepancies occurred throughout the screening process, and all decisions were reached by consensus.

Data extraction was conducted in Covidence using a structured form to capture key information, including authors, year, country, study objectives, measurement tools, study design and sample, learning activities, debriefing methods, and major findings. Extracted data were organized and synthesized thematically to identify patterns and trends in debriefing practices and their impact on clinical judgment. The PRISMA extension for scoping reviews was used to guide transparent reporting, and the study selection process is illustrated in Figure 1.

Table 1. PCC to determine and develop keywords in the database

Population	Concept	Context
Nursing Student OR Students, nursing OR pupil nurse OR undergraduate students OR baccalaureate students OR Pre-licensure)	Debriefing OR debrief OR AND Clinical judgment	Nursing education, OR clinical placement OR clinical practice, OR simulation laboratory

RESULT

Study Characteristics

Targeted database searches and thorough full-text screening resulted in the inclusion of 14 articles, as presented in Table 2. These studies originated from diverse countries, including the United States (n = 3), Brazil (n = 2), South Korea (n = 2), Australia (n = 2), Palestine (n = 1), Norway (n = 1), France (n = 1), China (n = 1), and the United Kingdom (n = 1). The three studies from the United States (Alanezi et al., 2025; Davis & Wood, 2022; Hines & Wood, 2016) reported on debriefing but employed different debriefing methods. The included studies were published between 2016 and 2024, with a noticeable increase in publications over the past five years, indicating growing scholarly interest in this topic. Various research methodologies were employed, including qualitative (n = 2), quantitative (n = 8), and mixed methods designs (n = 4).

The sample sizes ranged from 19 to 319 participants, with most studies involving undergraduate nursing students at different academic levels. Specifically, the samples included second-year (e.g., Høegh-Larsen et al., 2023), third year (e.g., Johnston et al., 2019; Yang et al., 2024), fourth year (e.g., Janicas & Narchi, 2019), and final-year students (e.g., Dix et al., 2021; Jang & Moon, 2021). This variation illustrates the broad relevance and adaptability of debriefing strategies throughout the progression of nursing education.

Consistent with the purpose of a scoping review, no critical appraisal tool was used, as the aim was to map existing evidence without excluding studies based on methodological quality or risk of bias (Peters et al., 2020). The detailed findings of the included studies are presented in Table 2.

Table 2. Literature review results

No.	Authors details, Year	Country	Objectives and Measurement Tools	Study Design and Sample	Learning activity	Debriefing method	Findings
1	Rita de Cassia Silva Vieira Janicas, Nádia Zanon Narchi (2019)	Brazil	To compare the clinical performance of nursing students in learning scenarios with and without debriefing in a simulation centre. Tools: Clinical performance test (Exame de Desempenho Clínico - EDC).	Longitudinal randomized crossover study with a quantitative approach. Sample: 120 nursing students in 4th semester. Intervention group: n=59, control group n=61.	Simulation in clinical performance scenarios with and without debriefing	Structured Debriefing with 4 phases: welcoming, synthesis, discussion, and summary, after simulation.	Debriefing with clinical scenarios effectively enhances nursing students' clinical performance, supporting its use as a valuable teaching strategy.
2	Thierry Secheresse (2021)	French	To compare explicit (highly guided debriefing with direct teaching of content) with implicit (low-guided debriefing) in nursing education. Tools: Declarative Knowledge questionnaire, Self-efficacy questionnaire, and Self-confidence questionnaire.	Randomized prospective study. Sample: 136 nursing students participated during 46 simulation sessions.	High fidelity Simulation (46 simulation sessions)	Explicit and implicit debriefing after simulation. Debriefing in 20 minutes.	Explicit, guided debriefing with direct instruction was more effective for knowledge acquisition than implicit, reflective debriefing.
3	Bortolato-Major (2019)	Brazil	Evaluate the contribution of debriefing after simulations for nursing students. Tools: debriefing evaluation scale that assesses psychosocial, cognitive, and affective aspects.	Quantitative study. Sample: Nursing students. In year 2	High fidelity simulation.	Debriefing with good judgment techniques in 15 minutes (average) after simulation (National league or Jefferies simulation theory)	Debriefing served as a reflective exercise that supported the development of essential competencies, particularly in leadership, care relationships, and decision-making. The cognitive domain showed the strongest agreement in learning outcomes.
4	Ae Ri Jang & Jeong Eun Moon (2021)	South Korea	To determine the effectiveness of established nursing care simulations by evaluating, through video, a select number of nursing students in scenarios that simulate nursing care for Increased Intracranial Pressure (IICP) patients. Tools: anxiety level using STAI-X; critical thinking disposition scale; confidence; theoretical knowledge; clinical performance; and clinical judgment by video analysis with National Council of State Boards of Nursing (NCSBN) clinical judgment framework (qualitative analysis)	Mixed Method-Non-equivalent, with pre and post-test. Sample: 77 final year Nursing students (control 39, intervention 38)	High fidelity simulation	Not clearly described	Simulation-based nursing care effectively enhances students' clinical judgment, theoretical knowledge, confidence, and clinical performance.

5	Samantha Dix, Julia Morphet, Tamsin Jones, Noelleen Kiprillis, Monica O'Halloran, Katie Piper, Kelli Innes (2021)	Australia	To explore final year nursing student's ability to transfer clinical judgement skills to the clinical practice setting following immersive simulation Tools: Interview with Tanner's Clinical Judgment Mode (TCJM) as theoretical framework	Qualitative research with intervention. Sample: 319 Final year nursing students	Phase 1: Immersive High-Fidelity Simulation workshop with 2 clinical scenarios. Phase 2: 160 hour of clinical placement at healthcare services.	DML to guide discussion based on TCJM.	Simulation effectively develops clinical judgment by exposing students to realistic scenarios, encouraging questioning, and enhancing decision-making under pressure.
6	Anne Mette Høegh -Larsen, Marianne Thorsen Gonzalez, Inger Åse Reierson, Sissel Iren Eikeland Husebø2, Dag Hofoss and Monika Ravik (2023)	Norway	to compare the same group of students' self-assessment of clinical judgment with an evaluator's assessment in both simulation and clinical settings Tools: LCJR-Norwegian used for self-assessments and evaluator assessments	Quantitative comparative design. Sample: 23 second-year bachelor's nursing students	High-Fidelity Simulation and clinical placement	DML based on TCJM for 45 minutes	Student self-assessment alone may not reliably reflect clinical judgment, especially among those with lower performance levels — indicating the Dunning-Kruger effect.
7	Fahad Zeed Alanezi, Caroline F. Morrison, Robin Wagner, Benjamin Kelcey, Elaine Miller (2025)	United States	To explore the experiences of undergraduate nursing students regarding hot and cold debriefings styles following Basic Life Support (BLS) training. Tools: Interview use Kolb's Experiential Learning Theory (ELT).	Qualitative research. Sample: 44 third- and fourth-year bachelor's nursing students	BLS training	Hot and cold debriefing for 10-20 minutes, used same structure, open-ended questions, with 6-8 students. Hot debriefing: within minutes to hours after the simulation. Cold debriefing: within hour to weeks after the simulation.	Integrating simulation followed by debriefing into the nursing curriculum—especially for teaching BLS—is highly beneficial. Debriefing enhances nursing students' skills and knowledge, and recommendations were provided to improve debriefing strategies.
8	Ahmad Ayed, Inaam A. Khalaf, Imad Fashafsheh, Ali Saleh, Hala Bawadi, Jamila Abuidhail, Imad Thultheen, Hasan Joudallah, (2022)	Palestine	to evaluate the influence of using HFS as a teaching method on clinical judgment among paediatric nursing students Tools: LCJR	Quasi experimental. Sample: 150 Baccalaureate Paediatric nursing students	High fidelity simulation and traditional lecture class	Debriefing discusses the positive aspect of performance for 10 minutes	High-fidelity simulation effectively enhances clinical judgment, theoretical knowledge, confidence, and performance in paediatric nursing students.
9	Jian Yang, Wen Jie Zhou, Si Chen Zhou, Dan Luo, Qian Liu, Ai-Ling Wang, Si-Hong Yu, Xiao-Ping Zhu, Xue Yu He, Fen Hu, Bing Xiang Yang and Jie Chen	China	To evaluate the effect of an integrated non-immersive virtual simulation and high-fidelity face-to face simulation program on enhancing nursing students' clinical judgment ability and understanding of nursing	Sequential exploratory mixed-methods study. Quantitative: pre-test/post-test with control group. Qualitative: semi-structured interviews to	Non immersive Virtual simulation in high fidelity simulation program and High-fidelity simulation program	30 minutes of debriefing after simulation	Combining virtual and face-to-face simulation effectively enhances nursing students' clinical judgment, as confirmed by both quantitative and qualitative data.

	(2024)		students' experiences of the combined simulation. Tools: LCJR, Simulation Design Scale (SDS) and focus group interview.	explore student perceptions. Sample: 122 3rd Year nursing students			
10	Johnston, Sandra, Nash, Robyn, & Coyer, Fiona (2019)	Australia	To explore the effect of a simulated clinical experience and debriefing based on learning transfer principles, on perceptions of clinical reasoning and the transfer of this learning, in third year undergraduate nursing students enrolled in their final clinical semester. Tools: Nurses Clinical Reasoning Scale (NCRS) and focus group interview	Mixed method design. Sample: 256 3rd year nursing students.	Simulation	Intervention Group: simulation debriefing guided by principles of transfer of learning, based on the theory of Salomon and Perkins (1989). Control: standard debriefing based on Pendleton's (1984) model, commonly used in the study institution. 20 minutes debriefing, after simulation	Applying learning transfer principles in simulation debriefing may enhance clinical reasoning, particularly through improved reflection and conceptual understanding.
11	Yun-Jeong Oh, Hee-Young Kang, Yeoungsuk Song, dan Ruth Lindquis (2021)	South Korea	To compare the effects of Transformative Learning Theory (TLT) based on Mezirow's that uses critical reflection in providing care to patients versus non-TLT debriefing protocol on knowledge, critical thinking disposition, problem-solving process, and clinical judgment. Tools: Problem-Solving questionnaire, Critical Thinking Disposition Scale, LCJR by observation	Randomized controlled trial Sample: 56 junior nursing students	Simulation	Intervention: Debriefing protocols based on Mezirow's TLT after simulation Control: Gather-Snalyze-Summarize (GAS)–based debriefing after simulation	The TLT debriefing approach in simulation can be tailored to improve problem-solving, critical thinking, and clinical judgment outcomes, which are vital to nursing education related to the provision of care to patients
12	Patrick Lavoie, Jacinthe Pepin, Sylvie Cossette (2017)	United Kingdom	To describe how nursing students perceived that the Reflective dEbriefing after a PatieNt Deterioration simulation (REsPoND) fostered learning and how it contributed to their clinical judgment in patient deterioration simulation Tools: Interview use REsPoND framework build by Lavoie based on Experiental Learning Theory, Theory	Sequential explanatory mixed-methods study. Sample: 19 students who showed the greatest clinical judgment score variation in a randomized controlled trial of the effectiveness of REsPoND	High-fidelity simulation (three times)	DML for 30 minutes. Open ended question align with TCJM.	Clinical judgment might be improved when a systematic assessment approach is used to structure debriefing. The relationship between reflection and self-assessment during debriefing remains to be disentangled

			of reflection, and TCJM.				
13	Rebecca G. Davis, and Felecia G. Wood (2022)	United States	To examine the impact of post clinical pharmacology-focused reflective debriefing sessions on clinical judgment in prelicensure senior nursing students. Tools: LCJR by observer, measured in the beginning, middle, and at the end of semester.	Non-randomised experimental study Sample: 128 senior-level baccalaureate nursing students	Clinical placements	Intervention group: two reflective debriefing sessions focused on students' pharmacology-related clinical experiences during 12-week critical care rotation (1 hour). Control group: participated only in standard post-conference activities	Clinical experiences support the development of clinical judgment in nursing students; educators should implement and evaluate strategies to foster this growth.
14	Cheryl B. Hines and Felecia G. Wood (2016)	United States	To investigate whether a standard debriefing script, based on TCJM, could foster clinical judgment Tools: LCJR used in self-assessment and by observation.	Quasi experiment. Sample: 53 final year nursing students	2 Simulation and 6 clinical learning experiences	Standardized debriefing script based on TCJM within 30-45 minutes.	Students and instructors reported that standardized debriefing scripts improved perceptions of clinical judgment especially in noticing, interpreting, and reflecting— supported the development of reflective thinking.

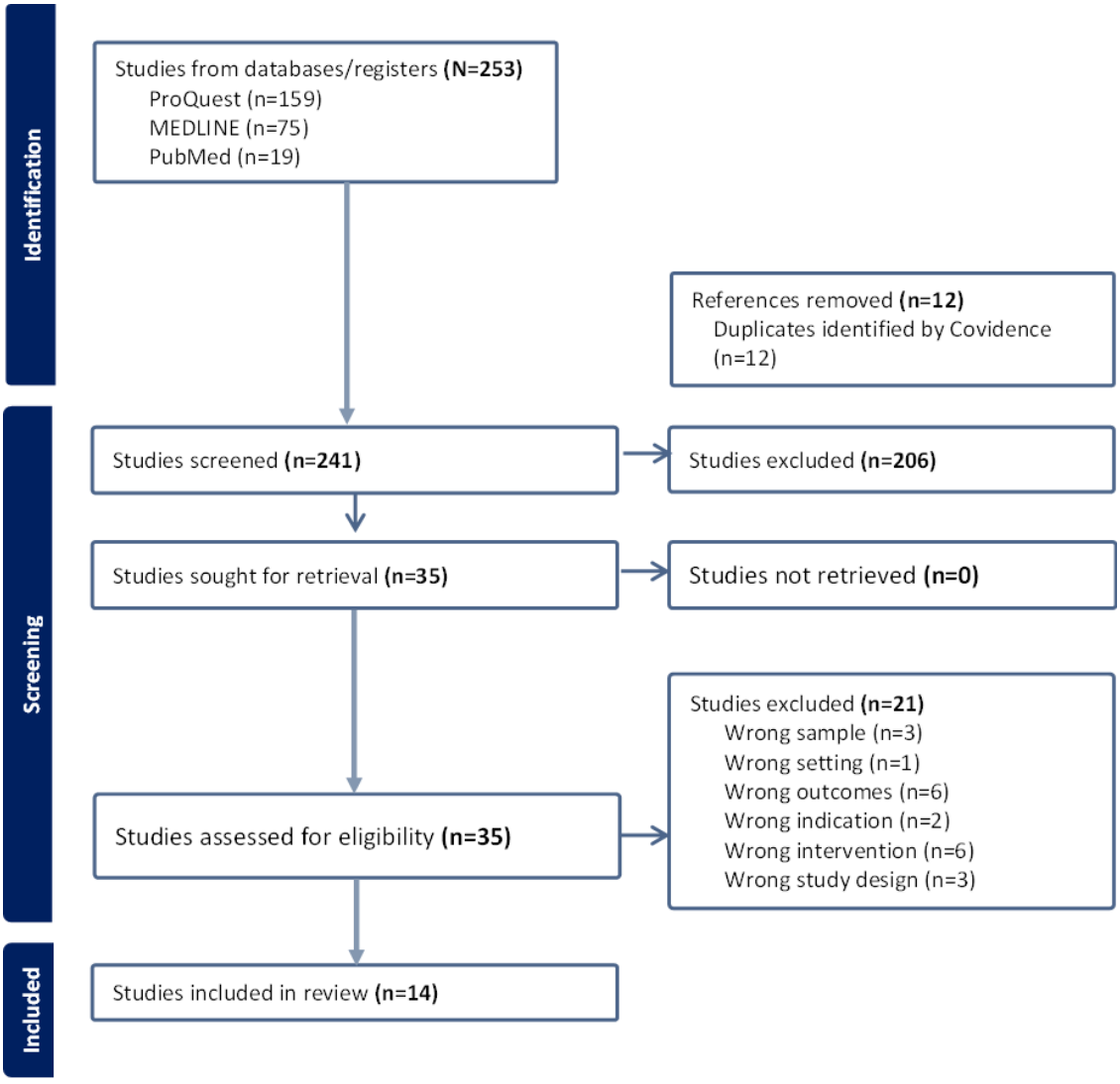

Figure 1. PRISMA Flow Diagram

Debriefing Methods Utilized in Nursing Education

This review identified a wide range of debriefing techniques aimed at enhancing clinical judgment in undergraduate nursing students *(Table 3)*. Although these approaches varied in structure, facilitation style, and theoretical underpinnings, they shared a common goal of fostering critical thinking and informed clinical decision-making. The most frequently employed method was structured debriefing (Davis & Wood, 2022; Hines & Wood, 2016; Janicas & Narchi, 2019; Lavoie et al., 2017, Dix et al., 2021; Høegh-Larsen et al., 2023), while three studies did not specify their procedures due to differing research focus.

Most debriefing sessions occurred after simulation activities; however, one study conducted debriefing following clinical placement (Davis & Wood, 2022), three combined simulation and clinical learning (Dix et al., 2021; Hines & Wood, 2016; Høegh-Larsen et al., 2023), and one followed a training session (Alanezi et al., 2025).

Several studies employed theoretical frameworks to guide debriefing, with TCJM being the most cited (Dix et al., 2021; Hines & Wood, 2016; Høegh-Larsen et al., 2023; Lavoie et al., 2017). Others used TLT (Oh et al., 2021), Kolb's Experiential Learning (Alanezi et al., 2025; Lavoie et al., 2017), learning transfer principles (Johnston, 2019), and Jefferies' simulation theory (Bortolato-Major et al., 2019), enriching the reflective process and clinical reasoning.

Instructional design-focused techniques included four-phase debriefing (Janicas & Narchi, 2019) and techniques comparing explicit versus implicit facilitation (Secheresse et al., 2021), emphasizing the value of guided facilitation and feedback. Innovative methods such as pharmacology-based reflection (Davis & Wood, 2022), hot vs. cold formats (Alanezi et al., 2025), and learning transfer-based debriefing (Johnston, 2019) expanded debriefing practices beyond traditional simulation contexts, incorporating variable timing and clinical applications.

Debriefing with good judgment (Bortolato-Major et al., 2019) offered a holistic approach, addressing emotional, cognitive, and interpersonal aspects crucial to clinical decision-making.

Overall, the findings demonstrate that structured, theory-informed, and reflective debriefing methods are most effective in cultivating clinical judgment. The integration of conceptual models and intentional facilitation strategies plays a central role in preparing nursing students for complex clinical situations.

Table 3. Debriefing Methods and Their Measured Outcomes in Nursing Education

Debriefing Technique	Study	Key Features	Measurement Tool	Main Outcomes
Structured debriefing (Structured debriefing; standardized script based on TCJM; REsPoND Reflective Debriefing; Pharmacology-Focused Debriefing, and DML guided by TCJM)	Janicas & Narchi (2019)	After simulation performance, consist of four phases: welcoming, synthesis, discussion, summary	Clinical performance test scores	Structured debriefing group showed significant improvement in clinical performance ($p < 0.001$).
	Hines & Wood (2016)	After simulation and clinical placement; guided by TCJM	LCJR	Improvement in clinical judgment's stage noticing, interpreting, reflecting
	Lavoie et al. (2017)	After high-fidelity simulation; Structured assessment and reflective questioning	LCJR, Qualitative Themes	Improved judgment through structured reflection
	Davis & Wood (2022)	After clinical placement; structured session during clinical rotation; focused on medication-related decision making and reflection	LCJR	Significant increase of clinical judgment score for all respondents.
	Dix et al. (2021)	After high fidelity simulation; six phase debriefing model applied by trained facilitators	Thematic analysis	Enhanced clinical judgment through realistic simulation, improved data interpretation, emotional intelligence, and recognition of role-based challenges.
	Høegh-Larsen et al. (2023)	After high-fidelity simulation and clinical placement; six-phase debriefing model applied by trained facilitators; 45-minute debriefing.	LCJR from evaluator and students' self-assessment	Discrepancy between self and evaluator-assessed clinical judgment; low performing students overestimated abilities, indicating Dunning-Kruger effect.
Hot vs Cold Debriefing	Alanezi et al. (2025)	After BLS training; structured prompts and open-ended questions; timing variation	Thematic analysis	Enhanced reflection, feedback, and learning experience
Explicit vs Implicit Debriefing	Secheresse et al. (2021)	After high fidelity simulation, guidance in debriefing, 20 minutes.	Knowledge, self-efficacy, and Self-confidence questionnaire	Higher knowledge gain in explicit debriefing group; no difference in self-efficacy.
TLT	Oh et al. (2021)	After simulation, focused on reflection, problem-solving, critical thinking	LCJR and Critical Thinking Scale	Improved clinical judgment, critical thinking, and problem solving
Debriefing based on learning transfer principles	Johnston (2019)	After simulation; based on Salomon & Perkins theory; backward and forward reflection	NCRS and qualitative theme	Significant improvement in clinical reasoning and decision-making; enhanced reflection and use of structured frameworks.
Debriefing with Good Judgment	Bortolato-Major et al. (2019)	After high fidelity simulation, evaluated psychosocial, cognitive, affective domains	Debriefing Evaluation Scale	High scores in cognitive, psychosocial, and affective domains.
Not clearly describe	Jang & Moon (2021)	After high fidelity simulation as a main intervention.	Critical Thinking Disposition Scale Confidence, theoretical knowledge, clinical performance, and clinical judgment by video analysis with NCSBN (qualitative analysis)	Debriefing not used as the main intervention
	(Ayed et al., 2022)	High-fidelity simulation as a main intervention; Discuss the positive aspect of performance	LCJR	
	Yang et al. (2024)	After non-immersive virtual simulation as a main intervention; 30 minutes.	LCJR, Simulation Design Scale, and focus group interview	

The Outcomes of Applying Debriefing in Nursing Education

All included studies reported positive outcomes following the use of debriefing in nursing education, particularly in terms of enhancing clinical judgment *(Table 3)*. This review highlights a variety of debriefing strategies used in undergraduate nursing programs, each contributing to clinical judgment development through distinct learning mechanisms. Across the studies, the outcomes consistently showed that structured, theory-based, and reflective debriefing techniques are associated with measurable improvements in multiple domains of clinical judgment.

Debriefing models grounded in theoretical frameworks such as TLT (Oh et al., 2021) and TCJM (Dix et al., 2021; Hines & Wood, 2016; Høegh-Larsen et al., 2023) were linked to enhanced reflection, problem-solving, and critical thinking. Improvements were documented in specific domains such as noticing, interpreting, and reflecting, using measurement tools such as the Lasater Clinical Judgment Rubric (LCJR) and thematic analysis.

Similarly, REsPoND reflective debriefing (Lavoie et al., 2017) and pharmacology-focused reflective sessions (Davis & Wood, 2022) facilitated structured assessment and repeated reflection, resulting in progressive gains in clinical judgment over time. The use of learning transfer principles (Johnston et al., 2019) also supported the development of structured reasoning, with qualitative findings indicating improved use of conceptual frameworks.

Studies employing explicit and guided debriefing formats (Secheresse, 2021; Janicas & Narchi, 2019) demonstrated significant improvements in knowledge acquisition and clinical performance, reinforcing the value of facilitated and intentionally structured reflective dialogue. Meanwhile, hot versus cold debriefing (Alanezi et al., 2025) and debriefing with good judgment (Bortolato-Major, 2019) emphasized emotional processing and multidimensional learning, contributing to psychosocial, cognitive, and affective development.

Overall, the findings demonstrate that the effectiveness of debriefing in enhancing clinical judgment is closely tied to its structure, theoretical foundation, and reflective depth. Techniques that incorporate guided questioning, conceptual models, and repeated reflection consistently yield stronger outcomes across cognitive, affective, and behavioural domains.

Learning Activities That Enhance Clinical Judgment in Nursing Students

The synthesis of the reviewed studies shows that simulation-based learning combined with structured debriefing is the most prominent approach for strengthening clinical judgment in undergraduate nursing education *(Table 4)*. Activities such as high-fidelity simulation, reflective debriefing, and the application of theoretical frameworks like TCJM, TLT, and DML consistently demonstrated positive outcomes. These strategies enhanced key components of clinical judgment, including noticing, interpreting, and reflecting, while also strengthening problem-solving and critical thinking skills. For example, Janicas and Narchi (2019) reported significant improvements in clinical performance through structured debriefing, while Oh et al. (2021) demonstrated that TLT-based debriefing promotes the development of both clinical judgment and problem-solving abilities.

Furthermore, integrating simulation with extended clinical placements and virtual components, as seen in studies by Dix et al. (2021) and Yang et al. (2024), facilitated the transfer of judgment skills to real-world practice. Systematic and reflective debriefing models, such as REsPoND and standardized scripts based on TCJM, were also shown to enhance students' ability to analyse complex clinical situations and engage in reflective thinking. Collectively, these findings highlight the value of experiential, theory-driven, and reflective learning activities in fostering strong and sustainable clinical judgment skills among nursing students.

Table 4. Learning activities supporting clinical judgment

Study	Activity Type	Clinical Judgment Support
Janicas & Narchi (2019)	Simulation with structured debriefing	Significantly improved clinical performance and clinical judgment in nursing care.
Johnston et al. (2019)	Debriefing based on learning transfer principles	Improved the clinical reasoning score.
Jang & Moon (2021)	Simulation for nursing care of IICP patients	Identified 10 clinical judgment processes; improved confidence and performance.
Oh et al. (2021)	Debriefing based on TLT	Improved problem-solving, critical thinking, and clinical judgment.
Dix et al. (2021)	High-fidelity simulation + debriefing + 160h placement	Helped transfer clinical judgment skills to practice; emphasized emotional intelligence.
Høegh-Larsen et al. (2023)	Simulation with DML model + clinical placement	Highlighted discrepancy in clinical judgment assessment between students and evaluator.
Ayed et al. (2022)	High-fidelity simulation with paediatric case + debriefing	Significantly improved clinical judgment compared to control group.
Lavoie et al. (2017)	Reflective debriefing using REsPoND model	Systematic assessment approach improved clinical judgment.
Yang et al. (2024)	Virtual and face-to-face simulation	Greater improvement in Clinical judgment from both activity
Hines & Wood (2016)	Standardized debriefing script based on TCJM	Improved noticing, interpreting, and reflecting aspect in clinical judgment; promoted reflective thinking.

DISCUSSION

Debriefing has become a cornerstone of nursing education, particularly in simulation-based learning, due to its well-documented ability to promote reflective thinking, clinical reasoning, and clinical judgment (Reierson et al., 2017). The findings of this scoping review demonstrate that undergraduate nursing programs employ a wide range of debriefing approaches, each grounded in different theoretical models and facilitated through distinct structures and styles.

Structured and Theory-Based Debriefing

Structured debriefing methods were the most frequently utilized across the reviewed studies. These approaches often followed a defined framework and were facilitated by trained educators. For instance, DML, grounded in TCJM, was widely adopted to guide reflective discourse and promote clinical reasoning (Dix et al., 2021; Høegh-Larsen et al., 2023). Likewise, standardized debriefing scripts based on Tanner's model were applied in both simulation and clinical teaching environments to support systematic reflection (Hines & Wood, 2016).

The emphasis on structured debriefing aligns with evidence from Reierson et al. (2017), who demonstrated that structured debriefing enhances feedback specificity, reflection depth, and psychological safety. Their study showed that students participated more actively in reflective discourse when the debriefing session followed an organized sequence and incorporated supportive tools such as observation guides and video review (Reierson et al., 2017).

Additionally, reflective debriefing models such as REsPoND (Lavoie et al., 2017) and pharmacology-focused debriefing (Davis & Wood, 2022) extended the scope of debriefing beyond simulation, integrating clinical experiences and promoting deeper reflection on decision-making processes. This approach aligns with findings from a systematic review of randomized controlled trials, which concluded that combining simulation with other educational strategies—such as reflective training, mobile applications, or structured feedback—enhances the effectiveness of clinical reasoning development in nursing students (Pérez-Perdomo & Zabalegui, 2024).

Extending Debriefing Beyond Simulation: Clinical Practice Applications

Debriefing has been effectively adapted for clinical placements. Vreugdenhil et al. (2024) introduced a peer-led model based on illness script theory, enhancing clinical reasoning during hospital internships through contextual reflection, structured questioning, and safe learning environments. Similarly, Davis and Wood (2022) applied reflective debriefing during clinical rotations focused on pharmacological decisions, showing progressive improvement in students' judgment. Hines and Wood (2016) used TCJM-based scripts in both simulation and clinical settings to foster reflective thinking and response accuracy. Høegh-Larsen et al. (2023) implemented DML-based debriefing across contexts, revealing discrepancies between students' self-assessments and evaluator ratings, thus highlighting the importance of guided reflection in clinical practice.

These studies support integrating debriefing into clinical education, aligning with the NLN's "Debriefing Across the Curriculum" initiative (NLN, 2015, as cited in Morse et al. 2021) which promotes reflective dialogue throughout nursing programs to bridge theory and practice.

The Outcomes of Applying Debriefing in Nursing Education

This review confirms that structured, theory-based debriefing significantly enhances clinical judgment in nursing education. Approaches grounded in TCJM and TLT improve students' abilities in noticing, interpreting, and reflecting (Dix et al., 2021; Hines & Wood, 2016; Oh et al., 2021).

Reflective strategies like REsPoND and pharmacology-focused sessions foster progressive development through guided reflection (Davis & Wood, 2022; Lavoie et al., 2017), while explicit formats improve performance and psychological safety (Janicas & Narchi, 2019; Secheresse et al., 2021). Moreover, evidence shows that guided self-reflection in pre-clinical settings can enhance critical thinking, especially when supported by structured rubrics and feedback (Merduaty & Arum, 2023). This suggests that reflective strategies are beneficial across both academic and clinical stages.

LCJR, derived from Tanner's model, provides a validated framework for assessing clinical judgment. It enables structured feedback, self-evaluation, and shared language among educators and learners (Lasater, 2011). Its application in clinical orientation programs has been shown to improve preceptor confidence, communication, and evaluation objectivity (Lazzara, 2020). Overall, combining guided questioning, conceptual models, and structured reflection that supported by tools like LCJR, yields stronger outcomes across cognitive, affective, and behavioural domains.

Learning Activities That Enhance Clinical Judgment in Nursing Students

Simulation-based learning with structured debriefing remains a key strategy for developing clinical judgment. High-fidelity simulations, reflective debriefing, and theoretical models like TCJM and TLT consistently enhance students' noticing, interpreting, and reflecting skills (Dix et al., 2021; Hines & Wood, 2016; Oh et al., 2021). Jessee (2021) noted that simulation and debriefing provide a psychologically safe space for decision-making and personalized coaching. Extended clinical placements and virtual simulations further facilitate the transfer of judgment skills into real clinical settings (Dix et al., 2021; Yang et al., 2024) (Dix et al., 2021; Yang et al., 2024).

The LCJR, derived from TCJM, is a widely validated tool for assessing clinical judgment across simulation, practice, and

journaling. It facilitates formative feedback and reflective learning (Jessee, 2021). Gonzalez and Nielsen (2024) identified LCJR as the most used tool in clinical education, serving both assessment and instructional purposes through concept-based learning, journaling, and debriefing. Its integration enhances feedback, metacognition, and educator-student alignment.

Pouralizadeh et al. (2017) identified five key factors influencing clinical judgment: thoughtful behaviour, professional ethics, evidence-based care, learning environment, and educator roles—highlighting the value of experiential and reflective strategies. Combining experiential learning with structured tools like LCJR, grounded in theory, effectively prepares students for safe, competent practice in complex healthcare settings.

Despite its benefits, several gaps remain. Few studies employed randomized controlled designs to directly compare debriefing methods. Interprofessional debriefing, cultural adaptations, and the long-term impact of debriefing on professional competence also remain underexplored. These areas represent important directions for future research to inform curriculum development.

This review has limitations: small sample sizes, non-randomized designs, inconsistent use of tools like LCJR, and lack of standardized facilitator training may affect outcomes (Daneshfar & Moonaghi, 2025). In addition, the exclusion of grey literature and non-English publications may introduce selection bias. Larger trials using standardized protocols are needed to strengthen the evidence base (Park et al., 2025).

CONCLUSION

This scoping review demonstrates that debriefing is a highly effective educational strategy for enhancing clinical judgment in undergraduate nursing education. Structured and theory-based debriefing methods, particularly those grounded in TCJM, TLT, and DML, consistently improve students' abilities in noticing, interpreting, reflecting, and making sound clinical decisions. Learning activities such as high-fidelity simulation, reflective debriefing, and integrated clinical placements further strengthened the development and transfer of clinical judgment to real practice settings. The use of validated tools like the LCJR enhances both assessment and reflective learning. However, inconsistencies in implementation, limited use in clinical settings, and lack of standardized facilitator training remain challenges that must be addressed to optimize the impact of debriefing on clinical competence.

To maximize the benefits of debriefing, nurse educators are encouraged to routinely employ structured, theory-based models such as DML and LCJR and to participate in formal debriefing-facilitation training to ensure consistency and effectiveness. Future research should investigate the longitudinal impact of debriefing, explore interprofessional and culturally adapted models, and examine its sustained influence on clinical competence and readiness for professional practice.

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REFERENCES

Alanezi, F. Z., Morrison, C. F., Wagner, R., Kelcey, B., & Miller, E. (2025). The effect of hot and cold debriefing on basic life support competence and reflection in undergraduate nursing students: A qualitative study. *Nurse Education in Practice*, *83*(February), 104292. https://doi.org/10.1016/j.nepr.2025.104292

Arksey, H., & O'Malley, L. (2005). Scoping studies: towards a methodological framework. *International Journal of Social Research Methodology: Theory and Practice*, *8*(1), 19–32. https://doi.org/10.1080/1364557032000119616

Ayed, A., Khalaf, I. A., Fashafsheh, I., Saleh, A., Bawadi, H., Abuidhail, J., Thultheen, I., & Joudallah, H. (2022). Effect of high-fidelity simulation on clinical judgment among nursing students. *Inquiry (United States)*, *59*, 1–6. https://doi.org/10.1177/00469580221081997

Bortolato-Major, C., Mantovani, M. de F., Felix, J. V. C., Boostel, R., da Silva, Â. T. M., & Caravaca-Morera, J. A. (2019). Debriefing evaluation in nursing clinical simulation: A cross-sectional study. *Revista Brasileira de Enfermagem*, *72*(3), 788–794. https://doi.org/10.1590/0034-7167-2018-0103

Bussard, M. E., Jessee, M. A., El-Banna, M. M., Cantrell, M. A., Alrimawi, I., Marchi, N. M., Gonzalez, L. I., Rischer, K., Coy, M. L., Poledna, M., & Lavoie, P. (2024). Current practices for assessing clinical judgment in nursing students and new graduates: A scoping review. *Nurse Education Today*, *134*. https://doi.org/10.1016/J.NEDT.2023.106078

Daneshfar, M., & Moonaghi, H. K. (2025). The impact of clinical simulation on bridging the theory–practice gap in nursing education: A systematic review. *BMC Medical Education*, *25*(1), 1–12. https://doi.org/10.1186/S12909-025-07790-8/TABLES/1

Davis, R. G., & Wood, F. G. (2022). Cultivating clinical judgment in pharmacological decision-making through reflection on practice. *Journal of Nursing Education*, *61*(3), 143–146. https://doi.org/10.3928/01484834-20211128-10

Dix, S., Morphet, J., Jones, T., Kiprillis, N., O'Halloran, M., Piper, K., & Innes, K. (2021). Perceptions of final year nursing students transer of clinical judgement skills from simulation to clinical practice: A qualitative study. *Nurse Education in Practice*, *56*(September). https://doi.org/10.1016/j.nepr.2021.103218

Dreifuerst, K. T. (2015). Getting started with debriefing for meaningful learning. *Clinical Simulation in Nursing*, *11*(5), 268–275. https://doi.org/10.1016/j.ecns.2015.01.005

Fisher, M. E. M., & Oudshoorn, A. (2019). Debriefing for professional practice placements in nursing: A concept analysis. *Nursing Education Perspectives*, *40*(4), 199–204. https://doi.org/10.1097/01.NEP.0000000000000487

Gonzalez, L., & Nielsen, A. (2024). An integrative review of teaching strategies to support clinical judgment development in clinical education for nurses. *Nurse Education Today*, *133*(April 2023), 106047. https://doi.org/10.1016/j.nedt.2023.106047

Hines, C. B., & Wood, F. G. (2016). Clinical judgment scripts as a strategy to foster clinical judgments. *Journal of Nursing Education*, *55*(12), 691–695. https://doi.org/10.3928/01484834-20161114-05

Høegh-Larsen, A. M., Gonzalez, M. T., Reierson, I. Å., Husebø, S. I. E., Hofoss, D., & Ravik, M. (2023). Nursing students' clinical judgment skills in simulation and clinical placement: A comparison of student self-assessment and evaluator assessment. *BMC Nursing*, *22*(1), 1–10. https://doi.org/10.1186/s12912-023-01220-0

INACSL Standards Committee, Decker, S., Alinier, G., Crawford, S. B., Gordon, R. M., Jenkins, D., & Wilson, C. (2021). Healthcare simulation standards of best practiceTM the debriefing process. *Clinical Simulation in Nursing*, *58*, 27–32. https://doi.org/10.1016/j.ecns.2021.08.011

International Council of Nursing. (n.d.). *Current nursing definitions | ICN - International Council of Nurses*. Retrieved May 19, 2025, from https://www.icn.ch/resources/nursing-definitions/current-nursing-definitions

Jang, A. R., & Moon, J. E. (2021). The effect of nursing simulation on the clinical judgment of nursing care for patients with increased intracranial pressure (IICP). *Iranian Journal of Public Health*, *50*(10), 2055–2064. https://doi.org/10.18502/ijph.v50i10.7506

Janicas, R. de C. S. V., & Narchi, N. Z. (2019). Evaluation of nursing students' learning using realistic scenarios with and without debriefing. *Revista Latino-Americana de Enfermagem*, *27*. https://doi.org/10.1590/1518-8345.2936.3187

Jessee, M. A. (2021). An update on clinical judgment in nursing and implications for education, practice, and regulation. *Journal of Nursing Regulation*, *12*(3), 50–60. https://doi.org/10.1016/S2155-8256(21)00116-2

Johnston, S. (2019). An evaluation of simulation debriefings on student nurses' perceptions of clinical reasoning and learning transfer: A mixed methods study. *International Journal of Nursing Education Scholarship*, *16*(1). https://doi.org/10.1515/IJNES-2018-0045,

Johnston, S., Coyer, F., & Nash, R. (2017). Simulation debriefing based on principles of transfer of learning: A pilot study. *Nurse Education in Practice*, *26*, 102–108. https://doi.org/10.1016/j.nepr.2017.08.002

Kavanagh, J. M., & Szweda, C. (2017). A crisis in competency: The strategic and ethical imperative to assessing new graduate nurses' clinical reasoning. *Nursing Education Perspectives*, *38*(2), 57–62. https://doi.org/10.1097/01.NEP.0000000000000112,

Lasater, K. (2011). Clinical judgment: The last frontier for evaluation. *Nurse Education in Practice*, *11*(2), 86–92. https://doi.org/10.1016/j.nepr.2010.11.013

Lavoie, P., Pepin, J., & Cossette, S. (2017). Contribution of a reflective debriefing to nursing students' clinical judgment in patient deterioration simulations: A mixed-methods study. *Nurse Education Today*, *50*, 51–56. https://doi.org/10.1016/j.nedt.2016.12.002

Lazzara, L. (2020). Implementation of the lasater clinical judgment rubric as a progress review tool. *Nursing DNP Projects*, *35*. https://openriver.winona.edu/nursingdnp/35

Liou, S. R., Liu, H. C., Tsai, S. L., Chu, T. P., & Cheng, C. Y. (2020). Performance competence of pregraduate nursing students and hospital nurses: A comparison study. *Journal of Clinical Nursing*, *29*(13–14), 2652–2662. https://doi.org/10.1111/jocn.15287

Lomuscio, S., Capogna, E., Sironi, S., Sguanci, M., Morales Palomares, S., Cangelosi, G., Ferrara, G., Mancin, S., Amodeo, A., Destrebecq, A., Parozzi, M., & Dal Bello, S. (2025). Debriefing methodologies in nursing simulation: An exploratory study of the italian settings. *Nursing Reports*, *15*(1), 1–13. https://doi.org/10.3390/nursrep15010007

Merduaty, R. C., & Arum, A. addillah. (2023). How guided self-reflection improves critical thinking of nursing students in the pre-clinical stage? *Journal of Holistic Nursing*, *10*(2), 111–117. https://doi.org/10.31603/nursing.v0i0.8876

Morse, K. J., Fey, M. K., & Forneris, S. G. (2021). Evidence-based debriefing. *Annual Review of Nursing Research*, *39*(1), 129–148. https://doi.org/10.1891/0739-6686.39.129

Oh, Y. J., Kang, H. Y., Song, Y., & Lindquist, R. (2021). Effects of a transformative learning theory based debriefing in simulation: A randomized trial. *Nurse Education in Practice*, *50*(December 2020), 102962. https://doi.org/10.1016/j.nepr.2020.102962

Park, Y. S., Lee, S. J., & Hur, Y. (2025). Facilitators, barriers, and future direction of high-fidelity simulation in nursing education: a qualitative descriptive study. *BMC Nursing*, *24*(1), 1–10. https://doi.org/10.1186/S12912-025-03541-8/TABLES/1

Pérez-Perdomo, A., & Zabalegui, A. (2024). Teaching strategies for developing clinical reasoning skills in nursing students: A systematic review of randomised controlled trials. *Healthcare (Switzerland)*, *12*(1). https://doi.org/10.3390/healthcare12010090

Peters, M. D. J., Godfrey, C., McInerney, P., Munn, Z., Tricco, A. C., & Khalil, H. (2020). Chapter 11: Scoping reviews (2020 version). In: Aromataris E, Munn Z (Editors). *The Joanna Briggs Institute*, *March*, 32. https://doi.org/https://doi.org/10.46658/JBIRM-20-01

Pouralizadeh, M., Khankeh, H., Ebadi, A., & Dalvandi, A. (2017). Factors influencing nursing students' clinical judgment: A qualitative directed content analysis in an Iranian context. *Journal of Clinical and Diagnostic Research*, *11*(5), JC01–JC04. https://doi.org/10.7860/JCDR/2017/25753.9822

Reed, S. J. (2020). Measuring learning and engagement during debriefing: A new instrument. *clinical simulation in nursing*, *46*, 15–21. https://doi.org/10.1016/j.ecns.2020.03.002

Reierson, I. Å., Haukedal, T. A., Hedeman, H., & Bjørk, I. T. (2017). Structured debriefing : What difference does it make ? *Nurse Education in Practice*, *25*, 104–110. http://dx.doi.org/10.1016/j.nepr.2017.04.013

Secheresse, T., Lima, L., & Pansu, P. (2021). Focusing on explicit debriefing for novice learners in healthcare simulations: A randomized prospective study. *Nurse Education in Practice*, *51*, 102914. https://doi.org/10.1016/j.nepr.2020.102914

Shinnick, M. A., Woo, M., Horwich, T. B., & Steadman, R. (2011). Debriefing: The most important component in simulation? *Clinical Simulation in Nursing*, *7*(3), e105–e111. https://doi.org/10.1016/J.ECNS.2010.11.005

Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K. K., Colquhoun, H., Levac, D., Moher, D., Peters, M. D. J., Horsley, T., Weeks, L., Hempel, S., Akl, E. A., Chang, C., McGowan, J., Stewart, L., Hartling, L., Aldcroft, A., Wilson, M. G., Garritty, C., … Straus, S. E. (2018). PRISMA extension for scoping reviews (PRISMA-ScR): Checklist and explanation. *Annals of Internal Medicine*, *169*(7), 467–473. https://doi.org/10.7326/M18-0850,

Vreugdenhil, J., Broeksma, L., Teuwen, C., Custers, E., Reinders, M., Dobber, J., & Kusurkar, R. A. (2024). Debriefing to nurture clinical reasoning in nursing students: A design-based research study. *Nurse Education Today*, *143*(September). https://doi.org/10.1016/j.nedt.2024.106402

Yang, F., Wang, Y., Yang, C., Zhou, M. H., Shu, J., Fu, B., & Hu, H. (2019). Improving clinical judgment by simulation: A randomized trial and validation of the Lasater clinical judgment rubric in Chinese. *BMC Medical Education*, *19*(1), 1–6. https://doi.org/10.1186/s12909-019-1454-9

Yang, J., Zhou, W. J., Zhou, S. C., Luo, D., Liu, Q., Wang, A. L., Yu, S. H., Zhu, X. P., He, X. Y., Hu, F., Yang, B. X., & Chen, J. (2024). Integrated virtual simulation and face-to-face simulation for clinical judgment training among undergraduate nursing students: A mixed-methods study. *BMC Medical Education*, *24*(1), 1–17. https://doi.org/10.1186/s12909-023-04988-6