The impact of reflective practice on nursing students: a scoping review

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ABSTRACT

Aim: To explore the strengths and weaknesses of clinical reflection and its impact on clinical practice among nursing students.
Background: Nursing students experience emotional burdens when transitioning from a student to a practicing clinician, with many struggling to apply theoretical knowledge to clinical competency. Reflective practices serve to bridge the gap between theoretical and practical knowledge, while encouraging professional development through self-discovery and self-awareness among nursing students.
Methods: A scoping review was conducted in August 2024 across four databases, including PubMed, Scopus, CINAHL and Web of Science. Eligible studies between 2014 and 2024 were included and focused on nursing students undertaking Baccalaureate studies in higher education, who engaged in reflective practice in their program, which included clinical settings such as hospitals, community centres, or simulated learning environments. Data were extracted, grouped into themes and presented through narrative synthesis. The review followed the PRISMA-ScR checklist.
Results: Among the 13 identified articles, reflective practice was found to be beneficial for supporting clinical competency through professional development. Furthermore, self-discovery and self-awareness were enhanced in nursing students when reflective practice was incorporated into clinical situations. Reflection had a positive impact on the emotional well-being of nursing students when confronted with the environmental effects of healthcare and supported their clinical reasoning and decision making in clinical situations.
Conclusion: Reflective practice has a positive impact on clinical practice and provides emotional support during the transition from student to practicing nurse. Integrating reflective practice in nursing curricula may be beneficial to support and inform nursing students how to reflect and its associated benefits to practice.

1. Introduction

Nursing students often encounter significant challenges during their education journey, describing the transition from student to practicing nurse as stressful and anxiety-provoking (Aryuwat et al., 2024). Current literature highlights a notable gap between theoretical knowledge and clinical practice among nursing students undertaking Baccalaureate studies (Alsalamah et al., 2022). Ugwu et al. (2023) outline this gap leads to delays in care, decision-making difficulties and confusion in clinical tasks, often contributing to emotional burden in the early stages of a nurse's career. Additionally, environmental pressures such as limited resources, staff shortages and complex patient presentations

place significant strain on the nursing profession (Aryuwat et al., 2024).

Reflective practice has been identified as an asset for self-discovery and self-awareness (Matshaka, 2021; Rasheed et al., 2018). Reflection encourages nursing students to draw on previous knowledge and experiences, identifying personal strengths and weaknesses (Walsh and Sethares, 2022). It builds clinical competency by supporting professional development, enhancing decision-making and improving clinical reasoning skills (Alsalamah et al., 2022). Reflection decreases anxiety and negative emotions among nursing students, fostering confidence and positively affecting mental health, leading to greater satisfaction and a desire to deliver quality patient care (Del Vecchio et al., 2024).

Through reflective practice, students consider their thoughts and

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feelings associated with experiences, promoting self-discovery and self-awareness (Patel and Metersky, 2021). It is an effective asset for bridging the gap between theoretical knowledge and clinical practice by deepening the learning experience (Schaepkens and Lijster, 2022). Supportive environments and educational strategies are key to developing self-efficacy and workplace preparation among nursing students (Hallaran et al., 2023).

1.1. Reflective practice

Reflective practice was first introduced by theorist John Dewey (1859–1952), who proposed reflection as persistent, active thinking and considering supporting evidence to guide knowledge of a situation or event (Dewey, 1933). Donald Schön (1987) later applied this concept to professional practice, significantly influencing current reflective practices (Patel and Metersky, 2021). Now widely used by various disciplines, reflective practice attempts to bridge the gap between theoretical knowledge and clinical practice (Hallaran et al., 2023). It deepens knowledge through self-awareness, improves clinician mental health by discussing personal thoughts and feelings and provides direction for professional development through action plans and goal setting (Del Vecchio et al., 2024; Shin et al., 2022).

Since Dewey's initial introduction of reflection, frameworks and models have been developed to encourage individuals to recall events, highlight associated thoughts and feelings and outline action plans for future knowledge (Holdo, 2022) As such, contemporary reflective models are often cyclical, representing continuous improvement (Mohamed et al., 2022). These models allow individuals to continuously learn, improve their professional development and set relevant goals (Patel and Metersky, 2022). For example, the Gibbs' Reflective Cycle (Ahmadpour et al., 2025; Gibbs, 1998) is a commonly used reflective frameworks used across multiple health discipline and higher education (Mantzourani et al., 2019). Gibbs' model prompts individuals through six stages: Description, Feelings, Evaluation, Analysis, Conclusion and Action Plan (Ahmadpour et al., 2025; Gibbs, 1998). This supports the notion that reflection is a lifelong process, essential throughout an individual's life and career (Del Vecchio et al., 2024).

Within the Australian context reflective practice has been incorporated into nursing education programs since the 1980s and is part of the Australian Nursing and Midwifery standards of practice and code of conduct (ANMF, 2018). As a multidimensional skill, reflection requires diverse strategies for effective learning, enabling transformative changes in clinical practice among clinicians (Roca et al., 2020; Van Soeren and Cobbett, 2017). Implementing reflective frameworks in nursing curricula, such as the Situation, Past experience, Read and Refer, Other influences, Understanding and Take it forward (SPROUT) schema, guides students to become reflective clinicians and actively engage in reflective practice (Del Vecchio et al., 2024; Irwin and Coutts, 2017).

1.2. Reflective pedagogies

In the higher education context, reflective pedagogies encourage critical thinking and self-awareness through guided processes (Del Vecchio et al., 2024; Aryuwat et al., 2024). Reflection can be time-based (in-action and on-action), depth-based (pre-reflection to critical reflection) and content-based (action, purposeful, personal and critical reflection) (Machost and Stains, 2023). Aryuwat et al., (2024) identifies that for reflection to be effective, it must be purposeful and meaningful to benefit clinical practice and enhance professional growth. Reflection is a cognitive skill best mastered through repetition and practice, requiring conscious effort to examine events, thoughts and feelings and incorporate new learnings into practice (Patel and Metersky, 2022). Reflective practice plays a pivotal role in professional development (Klaeson et al., 2017). For example, Klaeson et al. (2017) indicates reflection is an individual process that enables growth on both professional and personal levels. Techniques such as narrating and story

writing allow students to emotionally distance themselves from situations enabling deeper reflection their thoughts, feelings and observations. This process enhances clinical practice through lived experiences (Shin et al., 2022).

Within higher education, reflection is recognised as both formal or informal practices, often achieved through debriefing, group discussions, journaling and summative tasks such as assessments or portfolios (Grech, 2021). These approaches enable the development of critical thinking and self-awareness (Zarrin et al., 2023). For example, journaling encourages students to process emotional experiences, clinical experiences and allows for a space to set goals. In addition, group discussions allow for students to share perspectives from lived experiences and collectively build clinical insights to consolidate their theoretical knowledge (Badge et al., 2024).

Formal reflection methods, such as assessments or critical incident analysis, involve thinking deeply and critically about experiences, thoughts and feelings with evidence-based literature (Marshall et al., 2022). These methods develop descriptive skills and provide feedback to support academic reflective skills. Critical incident reflection focuses on events considering moral, ethical and legal aspects, commonly used in clinical practice for mortality and morbidity reviews or medical errors (Steven et al., 2020). This reflection builds critical thinking and clinical judgment skills by discussing what was good and bad in the situation (Veine et al., 2019).

1.3. Barriers to reflection

Despite its benefits, encouraging reflective practice can be challenging (Gathu, 2022). Negative attitudes and preconceived assumptions about reflection can hinder engagement in reflection as some students prefer not to dwell on the past (Chan and Lee, 2021). Furthermore, Chan and Lee (2021) identify emotional discomfort and time constraints also pose barriers to reflection. Effective reflection requires adequate time and mentor support (Del Vecchino et al., 2024). Furthermore, Del Vecchio et al., (2024) identify mentors need adequate training and time to foster a safe environment for reflection to occur.

Strategies to overcome barriers include allocating time for reflection and providing mentor training (Gathu, 2022). Curriculum alignment between reflective practice and practical application helps students understand and engage in reflection (Gathu, 2022). The SPROUT tool is effective in guiding reflection and professional development (Irwin and Coutts, 2017). SPROUT follows steps to facilitate reflection: describing events, drawing on past learnings, using literature, discussing new understandings and applying these in practice (Irwin and Coutts, 2017).

Irwin and Coutts (2017) emphasise that knowledge is modified through experience. Reflective practice enhances knowledge by recalling and analysing events with consideration of thoughts and feelings (Matshaka, 2021). SPROUT has been effective in developing self-awareness and facilitating reflection in students (Marshall et al., 2022; Irwin and Coutts, 2017). Further research on SPROUT's impact on second and third-year students and its application in clinical practice would be beneficial.

Limited research explores the impact of reflection on clinical practice among nursing students. Emerging literature indicates reflective practice has continued to evolve in higher education with a focus on enhancing clinical competence, emotional resilience and decision making skills in undergraduate (Zarrin et al., 2023). Further to this, recent studies have explored the integration of structured reflective tools such as SPROUT model (Irwin and Coutts, 2017) in modern higher education curriculum and simulation based learning showing positive impacts to clinical practice, self-awareness and consolidation of learning (Del Vecchio et al., 2024; Irwin and Coutts, 2017). These findings build on earlier work while advancing understanding of how reflective strategies can complement the pressures of clinical environment and better prepare students for clinical practice.

Despite the recognised benefits of reflective practice in nursing

education, there is limited research on its specific impact on clinical competency, decision-making and emotional wellbeing among nursing students. Existing studies often focus on general outcomes without identifying which reflective tools are most effective. This scoping review aims to explore the strengths and weaknesses of clinical reflection and its impact on clinical practice among nursing students. The emphasis is to address the need for targeted interventions that enhance nursing education and support students' transition to clinical practice.

2. Methods

A scoping review was conducted to address the aims of the study. Guided by Lachal et al., (2017) primary qualitative data synthesis was achieved through six steps: i) defining the research question and inclusion criteria, ii) select the studies, iii) assess their quality, iv) extract and present the formal data, v) analyse the data, vi) express the synthesis. A critical appraisal of methodological quality for individual sources is not mandatory for scoping reviews and was not conducted in this review. The Population, Concept, Context (PCC) model guided the formation of the search terms and search strategy (Table 1).

Reporting adhered to the Preferred Reporting Items for Systematic Reviews and Meta-analysis extension for Scoping Reviews (PRISMA-ScR) checklist (Page et al., 2021) (Fig. 1).

2.1. Search strategy

A broad systematic search was conducted using key databases of PubMed, Scopus, CINAHL and Web of Science in August 2024 associated with studies relating to the impact reflection has on clinical practice among nursing students. These databases were selected due to their relevance of literature in health and clinical trials. The search strategy was framed in conjunction with a health-based research librarian where title, abstract, keyword were searched and adapted to each database's specific requirements. Search terms included Nurses, Nurse* OR Nursing, Student* OR Universit* OR College* OR Tertiary OR "higher education" AND cognitive reflection OR reflection* OR reflective OR "reflective practice* AND impact OR outcome* OR positive OR negative OR reason* OR Judg* (Supplementary file 3). In addition, the reference list of all eligible articles was screened for additional studies aligning to the inclusion criteria.

2.2. Inclusion and exclusion criteria

Eligible publications included those that were written in English between 2014 and 2024. This was to ensure validity and credibility to the type of evidence present and to avoid unexpected errors or omissions on translation. In addition, studies relevant to nursing students undertaking Baccalaureate studies at university or through registered training organisations were included. Further, articles that were either qualitative and quantitative studies were included if impact and effectiveness has been measured either through self-reporting or observational data.

The concept in eligible papers focused on clinical reflection in the form of both informal and formal reflective practices. Informal reflective processes include journaling, story writing or reflective discussions with peers whilst formal reflection processes include facilitated debrief sessions, guided reflective frameworks or summative reflection activities.

Table 1
Population, Concept, Context model.

Population	Nursing students
	Higher education program
Concept	The impact of reflective practice has on clinical practice among nursing students.
Context	Practical setting where the theoretical knowledge is being applied to a practical setting. Including settings of hospitals, community clinics, simulated learning environment.

The impact of reflection has on clinical practice includes the transferal of theoretical knowledge to skill development, critical thinking and self-discovery in a clinical setting.

Articles that were not relevant to the nursing profession or associated with Baccalaureate nursing students were excluded. There were no exclusion criteria regarding age, gender, ethnicity, race, socioeconomic status of potential participants in the included studies.

2.3. Study screening

The study screening process involved several steps to ensure the inclusion of relevant articles. Initially all identified articles were uploaded to EndNote X9 (2019) for initial cleaning. Titles and abstracts of identified articles were then independently screened by two reviewers (XX and XX) to assess relevance after upload to the Joanna Briggs Institute system for the System for the Unified Management, Assessment and Review of Information (JBI SUMARI) (Munn et al., 2019). Full texts of all potential articles were then retrieved and reviewed in detail by two reviewers (XX & XX) to ensure they met the inclusion criteria. Any discrepancies between reviewers were resolved through discussion, with a third reviewer (XX) who was consulted as required. The PRISMA flow diagram visually represented the study selection process, ensuring transparency and rigor in the scoping review (Fig. 1). This thorough screening process ensured a comprehensive understanding of reflective practice's impact on nursing students.

2.4. Data extraction and analysis

Upon the completion of screening, identified articles had data extracted using a data extraction tool using Microsoft Word (Microsoft Corporation, 2023). The data extraction table included author, year, credentials, year of publication, location of study, methodology, aim, study population, sample size, analysis, results and implications. The data were then categorised into outcomes, emerging themes and findings, followed by being categorised into sub-groups of similar topics to discover emerging themes to address the aims of the study.

As guided by Lachlan et al., (2017), data were analysed using a six-step method to develop comprehensive understanding of the phenomenon. Data were first read and re-read to appraise, familiarise, identify, extract, record, organise, compare, relate, map, stimulate and verify. One reviewer (XX) then coded the data through line-by-line coding followed by grounding and categorising these codes into a hierarchical tree structure. Themes were then compared with multiple studies to identify similar themes in the included articles. This produced descriptions to identify key themes from the included articles. The reviewers (XX & XX) then assessed the articles to identify any new interpretation of the extracted data.

Qualitative data were analysed using thematic analysis to gain insight relevant to the research topic and provide new meaning of the phenomena (Braun and Clark, 2022). The analysis of results were then reported in narrative summary along with the table to present overall findings, overarching themes and highlight the key topics and domains identified from the data extraction. The identified quantitative data were examined using descriptive statistics informed by Kaliyadan and Kulkarni (2019) to provide a comprehensive overview of the emerging patterns and trends.

3. Results

The search yielded a total of 973 potential articles from database searching and four studies from hand searching, where 499 duplications were removed leaving 474 articles for screening by title and abstract. The 474 articles were screened, identifying 84 articles as eligible. Next, 68 articles were later excluded due to incorrect health disciplines (n = 40), or due to articles being reflections or reflective papers (n = 12). The full text of the remaining eligible articles (n = 16) was

Table 2
Data Extraction.

Arthor (Date)	Country	Methodology	Study population	Sample size	Methods	Results	Implications
Abelsson, and Bisholt, (2017).	Sweden	Observational (inspired by ethnographic approach)	Nursing students 3 year nursing education program	41	Qualitative study	Students reflected on their actions, identified their preparedness for clinical practice, and avoided negative feedback to peers.	Simulation and guided debriefing help students reflect, close knowledge gaps, and improve patient safety in acute care. Structured debriefing with feedback is crucial for closing knowledge gaps and enhance clinical practice.
Alsalamah, et al. (2022).	Saudi Arabia	Qualitative	nursing students enrolled in university	21	Qualitative study	Reflection in nursing students is impacted by intrinsic and extrinsic factors including willingness to learn, patient characteristics and competent instructors	reflective practice in clinical settings support the students learning experience and aids to support the theory practice gap in nursing students. Reflection enhances personal and professional development through self-awareness and self-discovery.
Bucknall, et al. (2016).	Australia	Descriptive exploratory design	Nursing students (in final year of study)	97	Descriptive exploratory design	Reflection and structured communication frameworks were beneficial to team decision making.	highlights the benefits of implementing team-based simulation to enhance decision making skills within the simulated learning environment.
Byermoen, et al. (2022).	Norway	Qualitative explorative	Third year nursing students	10	Explorative qualitative design	Clinical judgement in nursing students is influenced by personal performance and contextual factors, affecting their performance of physical assessments.	highlights the importance of pedagogy strategies focusing on facilitating reflection-in-action and reflection-on-action to improve clinical judgement and physical assessment skills.
Ching, et al. (2020).	Hong Kong, China	Qualitative	Final year nursing students	24	Focused group interviews	Stressors identified were related to aligning expectations with clinical demands and the willingness to fit into environmental cultures, coping strategies impacted by resilience and burnout	Highlights the importance of support systems to manage stress and build resilience among nursing students. Interventions such as reflection, self-awareness and coping resources were beneficial to support and enhance student well-being and clinical performance.
Hughes, et al. (2021).	USA	Literature review	nursing students	n/a	Review of existing literature on resilience	Four key internal factors: self-efficacy, optimism, emotional intelligence and self-care. Recommended strategies: include reflection, positive reframing, mindfulness and problem based learning.	Promoting resilience through educational strategies can enhance nursing students ability to cope with adversity, reduce burnout, improve retention. Incorporating resilience building activities into curriculums to support clinical readiness.
Jakobsen and Sunde Maehre (2023).	Norway	Qualitative exploratory	second and third year nursing students	52	Quantitative study	Students were more aware of ethical dilemmas, enjoyed group learning through discussion and enhanced curiosity about ethics, enhanced the importance of ethical reflection in clinical practice	Highlights the significance of ethical reflection models in facilitating nursing students on how to manage ethical dilemmas. Incorporating ethical reflection models in curriculums can enhance ethical competence.
Johnston, Nash, and Coyer (2019).	Australia	Mixed methods	nursing students	120	Mixed methods	Simulation debriefs enhanced the students ability to clinical reason and confidence in transferring of knowledge from simulation to clinical practice.	highlights the significance of structured debriefs within simulation education to improve clinical reasoning and facilitate the transferal of knowledge. Recommendations of adopting consistent and protected time to facilitate debriefing in the Simulated Learning Environment
Pai, et al. (2017).	Taiwan	Prospective, longitudinal and correlational design	Final year nursing students	293	Qualitative study	Self-reflection and learning effectiveness mediate the relationship between anxiety and clinical competency. Self-reflection and simulated learning effectiveness positively influenced the emotional impact within clinical practice	highlights the importance of self-reflection tools to be incorporated within nursing programs to encourage positive learning environments, improve mental health and clinical competency within nursing students.
Rasheed, et al. (2018).	UK	Scoping review		n/a	Systematic literature review	self-awareness enhances empathy and clinical skills among nursing students. Self-awareness is essential for nursing practice	recommends the incorporation of self-awareness training within nursing curriculums to enhance clinical readiness and improve patient outcomes.

Table 2 (*continued*)

| Arthor (Date)	Country	Methodology	Study population	Sample size	Methods	Results	Implications
Thomas and Asselin (2018).	USA	Literature review	Nursing students	n/a	Systematic literature review	resilience is a dynamic process that can be learned and develop. Three strategies to promote resilience: support, educate and reflect.	Highlights the significance of resilience training in nursing education to enhance students coping strategies within clinical setting and reduce the stress and burnout and improve ability to adapt to dynamic environments.
Walsh and Sethares (2022)	USA	Literature review	nursing students	n/a	Systematic literature review	guided reflection in the simulated learning environment enhances leadership development, clinical judgement, student satisfaction and critical thinking.	highlights the significance in guided reflection within simulation learning among nursing students.
Zeng et al. (2024)	Singapore	Quasi-experimental. Exploratory	Final year nursing students	49	Cohort study	iCARE group showed significant improvements in self-regulated learning, reflective practice, self-efficacy and skill performance compared to the group reflection.	Demonstrates the impact integrating a structured reflection in nursing curriculums can enhance nursing students learning outcomes. Suggests the need to adapt similar to curriculums to foster cognitive and practice skill development.
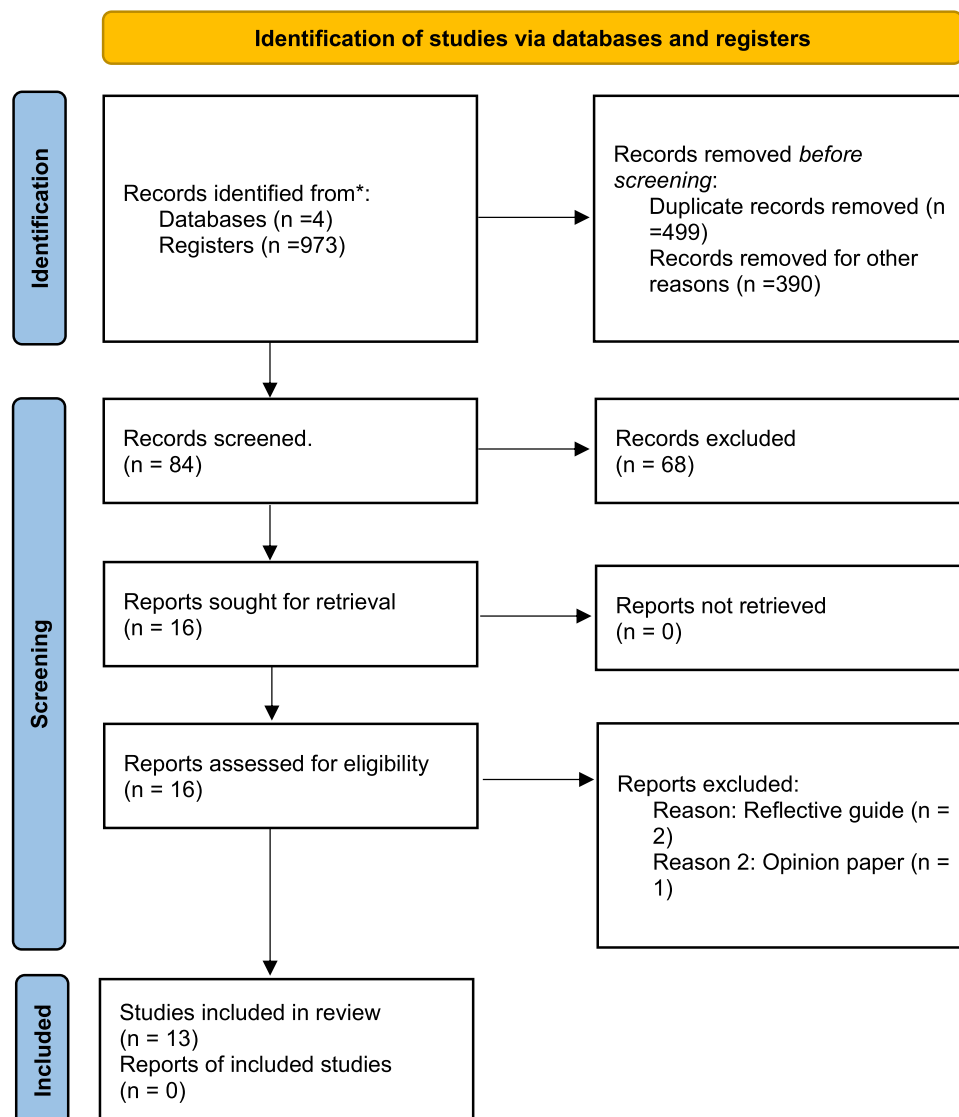
Fig. 1. PRISMA-ScR flow diagram of identified studies.

then retrieved and further screened. Three papers were finally removed due to being a guide of how to conduct reflections, while one paper was also removed due to being an expert opinion.

Among the final 13 articles, three were from Australia (Bucknall et al., 2016; Johnston et al., 2019), Hong Kong (Ching et al., 2020) and Norway (Byermoen et al., 2022; Jakobsen and Sunde Maehre, 2023) with others from Singapore (Zeng et al., 2024), Saudi Arabia (Alsalamah et al., 2022), Sweden (Abelsson and Bisholt, 2017), Taiwan (Pai et al., 2017) and the US (Hughes et al., 2021; Thomas and Asselin, 2018; Walsh and Sethares, 2022). Reflective practice was central to all studies and aimed to explore and report on how nursing education, clinical practice and professional development among nursing students can be enhanced. Also, the studies explored decision-making and emotional intelligence in association with reflective practice. The study contexts included the theoretical and simulated learning environment of educational institutes, clinical hospital settings and virtual seminars. Participants were all nursing students, and the number of participants ranged from 10 to 293 (Table 1).

Among the 13 identified studies, five were qualitative studies, two were quantitative studies, while two were mixed methods and four were literature reviews. In addition, five include reflections within curriculum (Hughes et al., 2021; Jakobsen and Sunde Maehre, 2023; Rasheed et al., 2018; Thomas and Asselin, 2018; Zeng et al., 2024), three (n = 3) involved reflection in clinical practice (Alsalamah et al., 2022; Byermoen et al., 2022; Ching et al., 2020), while five involved reflection within simulation (Abelsson and Bisholt, 2017; Bucknall et al., 2016; Johnston et al., 2019; Pai et al., 2017; Walsh and Sethares, 2022).

In addition to the comparisons made among each of the studies, three main themes emerged: 1) improved clinical competency; 2) enhanced decision-making skills; and 3) Improve wellbeing, which are discussed in detail.

3.1. Improved clinical competence

The theory practice gap is identified to be most prevalent within the early stages of a nursing students' careers (Abelsson and Bisholt, 2017). Reflection plays a crucial role in linking theoretical knowledge to clinical skills (Zeng et al., 2024; Walsh et al., 2022). Engaging in reflective practice enhances clinical competency by fostering self-discovery and helping students identify their strengths and weakness (Abelsson and Bisholt, 2017). Incorporating reflective practice in nursing education and clinical practice, nursing students are better prepared for the demands in clinical settings (Abelsson and Bisholt,2017; Jakobsen & Maehre, 2021; Johnston et al., 2019; Pai et al., 2017). Furthermore, evidence highlights the positive impact of reflective practice on nursing students, including its ability to alleviate the mental burden associated with clinical practice (Ching et al., 2020; Hughes et al., 2021; Thomas & Asselin, 2018; Walsh and Sethares, 2022).

3.2. Enhanced decision-making skills

Decision-making is described as a difficult cognitive skill among nursing students (Alsalamah et al., 2022). It is an aspect where clinical judgement and clinical reasoning skills are called on to achieve best health outcomes for patients (Bucknall et al., 2016). Lack of knowledge, experience, uncertainty and anxiety serve to be barriers in the decision-making process (Bucknall et al., 2016). Reflective frameworks have been identified as a beneficial tool to aid the decision-making process using systematic guided prompts (Bucknall et al., 2016; Jakobsen and Sunde Maehre, 2023; Walsh and Sethares, 2022). Reflective practice is shown to enhance the nursing student's ability to foster critical thinking skills and enhance clinical reasoning when calling on prior knowledge or experience to manage a situation (Abelsson and Bisholt, 2017; Alsalamah et al., 2022; Bucknall et al., 2016).

3.3. Improved wellbeing

Nursing students often experience anxiety in clinical practice due to the high-pressured environment and limited resources to support their personal wellbeing (Thomas and Asselin, 2018; Zeng et al., 2024). Reflective practice enables nursing students to understand their emotions, improve confidence, encourage self-awareness and self-discovery in a situation (Pai et al., 2017). Recalling events through reflection and identifying emotions triggered by a situation builds on self-awareness and self-discovery which enhances emotional awareness (Ching et al., 2020; Pai et al., 2017; Rasheed et al., 2018). Reflection may aid in building resilience, improve mental health wellbeing and enhance emotional intelligence of nursing students (Alsalamah et al., 2022; Ching et al., 2020; Hughes et al., 2021; Thomas and Asselin, 2018).

4. Discussion

The scoping review aimed to explore the impact of clinical reflection and its impact on clinical practice among nursing students, addressing the need for targeted interventions to enhance nursing education and support students' transition to clinical practice. Findings from this scoping review highlight reflective practice as being pivotal among nursing students learning development. Reflection enhances clinical reasoning skills, supports the decision-making process and builds on emotional resilience in nursing students (Bucknall et al., 2016; Ching et al., 2020; Zeng et al., 2024). Reflective practice also serves to be a beneficial tool for bridging the theory practice gap that is present among nursing students in a clinical setting (Walsh and Sethares, 2022).

Nursing students have demonstrated they are able to identify their thoughts, feelings, strengths and weaknesses in a situation to support self-discovery and professional development when engaging in reflective practice (Hallaran et al., 2023). Further, students have shown they have the capacity to consolidate their theoretical knowledge and strengthen the application to clinical practice through recalling on previous knowledge to build clinical competency and enhance the patient experience (Walsh and Sethares, 2022). The impact of reflection has been highly regarded across other health disciplines and serve to be an effective learning tool in graduate medical education (Winkel et al., 2017). Winkel et al., (2017) has suggested reflection was observed to deepen professional values among medical graduate, amplify learnings in complex subjects and provide direction to future clinical practice among medical practitioners. The recognition of reflection across health disciplines highlights the impact reflection has on healthcare to improve clinical competency, improve patient outcomes and the highlights the importance of reflection to be embedded in education programs (Matshaka, 2021; Winkel et al., 2017)

Reflective practice involves the cognitive ability to understand, analyse, articulate and evaluate and serve to be essential in the clinical reasoning process (Almomani et al., 2021). Clinical reasoning incorporates effective reflective processes and decision-making skills to improve a patient's health outcome (Maguire et al., 2023). Clinical reasoning and clinical judgement skills can be enhanced through considering thoughts and feelings associated with the situation and recalling on previous knowledge to manage a situation (Brian, 2023; Karimi et al., 2017). Reflective practice serves to be an essential skill for nursing students to aid decision-making and supports the ability to clinically reason in clinical settings (Abelsson and Bisholt, 2017).

The pressure of becoming job ready graduates and the gap between theoretical knowledge and clinical competency are significant elements to the emotional burden in new nurses (Alsalamah et al., 2022). The emotional burden and anxiety provoking situations can greatly impact a nursing students' clinical practice (Bucknall et al., 2016; Byermoen et al., 2022). In these circumstances, guided reflections and frameworks have the capacity to support the emotional wellbeing of nursing students and help combat the emotional toll caused by the environmental demands of healthcare (Walsh and Sethares, 2022).

In addition, reflective writing across the wider health professionals has been present through education and training and has deepen understandings of events, enhance professionalism and improve personal, communication and empathy skills among health professionals (Artioli et al., 2021). Encouraging nursing students to engage in reflection can build on emotional intelligence, promote resilience, build on clinical competency and improve patient health outcomes (Thomas and Asselin, 2018; Rasheed et al., 2018; Pai et al., 2017). The findings from current literature highlights the significance of reflection in healthcare and the impact reflection has on clinical practice.

4.1. Limitations

A potential limitation of this review is that eligible studies being excluded due to the discussion of reflection in nursing students and other health disciplines. This may not have clearly considered students who were studying in a school-based or vocational type programs, where foundational reflective practice may have been encouraged. The authors argued nursing students enrolled in a higher education setting warrants its own investigation given the complexity of critical thinking and clinically reasoning among nursing student and how this would differ to those enrolled in a school-based based or vocational type programs.

4.2. Future research recommendations

Future research should focus on identifying which specific reflective practices have the greatest impact on clinical practice to achieve clinical competency, self-discovery and critical thinking. Investigating the long-term effects of reflective practice on professional development and patient outcomes would also be beneficial. Additionally, exploring the integration of structured reflective modules in nursing curricula and providing protected time for nursing students to engage in reflection in clinical practice will support the foundational skills for reflection.

5. Conclusion

The scoping review demonstrated reflective practice has a positive impact to clinical practice among nursing students. Through reflection, nursing students can engage in self-discovery and self-awareness in clinical settings. Through guided reflection, previous experiences and knowledge is used to facilitate clinical reasoning skills, support decision making process and combat emotional burden in any clinical situation.

Overall, reflective practice serves to be a beneficial tool to target the theory-practice gap among nursing students, improve clinical practice and enhance clinical reasoning skills in a clinical setting. As such, structured reflective modules are encouraged to be incorporated in nursing curriculum. Furthermore, providing protected time for nursing students to engage in reflection in clinical practice will support the foundational skills for reflection. Future research is required to further explore the impact of reflection among nursing students. For example, investigating which specific reflective practices has the greatest impact to clinical practice to achieve clinical competency, self-discovery and critical thinking would be beneficial to current practice.

5.1. Clinical implications

Reflective practice is essential for bridging the gap between theoretical knowledge and clinical practice in nursing education. It enhances clinical competency, decision-making and emotional wellbeing among nursing students. Integrating structured reflective modules in nursing curricula and providing protected time for reflection can significantly improve nursing education and patient outcomes.

CRediT authorship contribution statement

Pauletta Irwin: Writing – review & editing. **Daniel Terry:** Writing – review & editing, Writing – original draft, Methodology, Formal analysis. **Bowers Madeleine:** Writing – review & editing, Writing – original draft, Visualization, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at doi:10.1016/j.nepr.2025.104468.

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