

Original Research

## The Effectiveness of Preceptorship Program in Improving Clinical Competence Among Novice Nurses: A Systematic Review

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### ABSTRACT

The transition period for new nurses is often characterized by adaptation-related stress, limited clinical experience, and insufficient supervision. Preceptorship offers structured support that helps accelerate competency development and enhance clinical readiness for practice. The Objective is to evaluate the effectiveness of preceptorship programs in improving clinical competence in novice nurses. Methods A systematic search was conducted in PubMed, ScienceDirect, ProQuest, and Google Scholar from August 2019 to April 2025, following the PRISMA 2020 guidelines and registered PROSPERO protocol. This review included quantitative studies involving new nurses who received structured preceptorship interventions with clinical competency as the primary outcome. Eligible study designs comprised randomized controlled trials, quasi-experimental studies, uncontrolled pre–post trials, and cross-sectional surveys. Qualitative studies, student-based programs, and orientations without preceptors were excluded. Two reviewers independently conducted study selection, data extraction, and methodological quality appraisal using the JBI critical appraisal tools. The findings were synthesized narratively. The Results: Ten studies consistently demonstrated that preceptorship programs improved clinical competence, confidence, and readiness for practice. Eight studies reported significant improvements ( $p < 0.05$ ). Effective programs included individualized supervision, structured feedback, and standardized competency assessments. Critical success factors included preceptor readiness, continuity of preceptorship, organizational support, and reduced transition shock. The conclusion is that the findings indicate that well-structured preceptorship programs can enhance the clinical competence and self-confidence of novice nurses. Healthcare institutions are encouraged to adopt standardized preceptorship frameworks, allocate adequate resources, and provide ongoing training and support for preceptors to strengthen practice readiness, improve quality of care, and promote nurse retention.

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## INTRODUCTION

The transition from student to professional nurse represents one of the most demanding phases for new graduates, characterized by high stress levels and substantial role adaptation. Previous studies indicate that organizational support, structured mentoring, self-confidence, a positive work environment, social support, strong job commitment, and adequate academic preparation all play vital roles in facilitating a smooth transition into clinical practice (Baharum et al., 2023). Furthermore, transitional programs that provide continuous support within a supportive learning environment have been shown to enhance clinical skills, job satisfaction, and perceived support during the first year of practice (Charette et al., 2023). This transition phase is widely recognized as a highly vulnerable period for novice nurses, underscoring the need for targeted interventions that promote consistent adaptation and long-term retention.

In real-world nursing settings, inexperienced nurses often face significant obstacles in acquiring professional skills, largely due to hierarchical teaching approaches and the relatively limited training experience of many of their supervisors (Nielsen et al., 2017). Research also suggests that preceptor mentorship can boost employee confidence and job commitment; however, disparities persist when support is inconsistent or not effectively planned (Choi & Yu, 2022). A Study by Tulleners et al. (2025) found that newly graduated nurses encounter clinical skill difficulties for up to four years post-graduation due to limited hands-on training and frequently rigid learning environments. These constraints collectively hinder the progression of novice nurses toward autonomous and safe practice. Such persistent competency gaps underscore the need for robust, adaptive preceptorship interventions designed to provide consistent guidance and accelerate clinical readiness.

Given these persistent barriers in clinical learning, preceptorship has emerged as a structured and strategic approach to bridge the gap between academic preparation and real-world nursing practice. Experienced senior nurses in this model act as preceptors, offering direct supervision, constructive feedback, and ongoing clinical guidance that boosts practical skills, eases anxiety, and elevates readiness and confidence among novice nurses (NMC, 2006; Walker & Norris, 2020). Studies have shown that preceptorship improves clinical performance, but its success depends on the quality of interactions between preceptors and their trainees, adequate organisational support, and the preceptors' preparedness (Lima & Alzyood, 2024). As such, preceptorship is considered a key structural intervention designed to address competency gaps that cannot be resolved through conventional learning models.

Recent literature has reported varied and sometimes conflicting

findings regarding the benefits of preceptorship for novice nurses, particularly in reducing transition stress and strengthening confidence. A clear structure and tailored approaches are essential, as demonstrated by (Berthelsen et al., 2025), who discovered that long-term advantages entail higher retention rates but also identified obstacles such as extended program duration and increased workloads for preceptors. A study by J. H. Kim & Shin (2020) identified self-efficacy, job satisfaction, and supportive work environments as key facilitators, contrasted with obstacles such as high workloads, unrealistic expectations, and workplace bullying. Similarly, Chen et al. (2021) found that preceptor support enhances clinical competence and mitigates transition shock, with emotional demands and preceptor variability as significant predictors. Evidence from Ahn & Jeong (2025) further showed that positive attitudes, empathy, and encouragement from clinical nurse educators reduce adaptation stress and promote professional growth. Diverse findings across investigations underscore the necessity for rigorous assessment to clarify the actual efficacy and operational demands of preceptorship programmes. Such evaluation is essential to ensure program sustainability, guide organizational investment, and support adaptation of preceptorship models to diverse clinical contexts.

The absence of a thorough assessment of the effectiveness and long-term viability of preceptorship programs necessitates structured evaluations to guarantee that these interventions stay pertinent and adaptable to organisational requirements. Based on this gap, this systematic review aims to evaluate the effectiveness of preceptorship programs in improving the clinical competency of novice nurses. The review focuses its evaluation on the program's achievements in important areas, including clinical expertise, analytical abilities, decision-making, communication, and professional ethics, emphasizing programme components that result in desired outcomes and providing evidence-based recommendations for enhancing and streamlining preceptorship in healthcare environments.

## METHOD

This systematic review was developed based on a PROSPERO-registered protocol and conducted in accordance with the PRISMA 2020 guidelines. The review aimed to evaluate the effectiveness of preceptorship programs in improving the clinical competency of novice nurses. The methodological framework included structured procedures for literature search, screening, quality assessment, data extraction, and synthesis of quantitative primary studies published between August 2019 and April 2025.

The review questions were structured to clarify the research focus using the PICO framework, with the following components: Population - nurses, Intervention - a preceptorship program, Comparison - no comparison group, and Outcome - improved clinical competence. The search was performed using the following key terms: (("Nurse" OR "New Nurse") AND ("Preceptorship

Program") AND ("Clinical Competence")).

Table 1. PICO Research Question Framework

P	I	C	O
New Nurse	Preceptorship Program	no comparison	Improving clinical competence

Studies were included if they involved new nurses participating in structured preceptorship programs and employed quantitative designs such as randomised controlled trials, quasi-experimental studies, pre–post intervention studies, correlational studies, or cross-sectional studies. Studies were excluded if they were qualitative, focused on nursing students, described general orientation programs lacking a formal preceptor role, or were non-empirical (reviews, commentaries, editorials).

A comprehensive search was conducted in PubMed, ScienceDirect, ProQuest, and Google Scholar using MeSH terms and free-text keywords related to novice nurses, preceptorship, and clinical competence. Eligible articles were limited to English-language publications from August 2019 to March 2025. The literature search was conducted between March 2025 and April 2025.

Two reviewers independently performed title/abstract screening and full-text assessment, resolving discrepancies through discussion or consultation with a third reviewer. The PRISMA 2020 flow diagram documented the selection process. Data extraction was completed independently by two reviewers using a standardized extraction form capturing study characteristics, intervention details, measurement instruments, and outcomes. Methodological quality and risk of bias were appraised using the appropriate Joanna Briggs Institute (JBI) critical appraisal tools.

Given the anticipated heterogeneity in study design, intervention duration, and measurement tools, a narrative thematic synthesis was the primary analytic approach. Comparative evidence tables summarized key findings. Meta-analysis was planned if at least two studies demonstrated adequate methodological and statistical homogeneity, using a random-effects model with heterogeneity assessed via  $I^2$  statistics. Subgroup and sensitivity analyses were planned when feasible. If meta-analysis was not possible, findings were integrated through structured narrative synthesis.

RESULT

The article identification and selection process was carried out following the PRISMA 2020 guidelines. Four databases were used in the main search, namely PubMed, ScienceDirect,

ProQuest, and Google Scholar (with the first 300 results screened to maintain data replication). The search yielded a total of 4,486 articles from three major databases: PubMed(484), ScienceDirect (1,420), and ProQuest (2,582). Google Scholar was used as an additional source, but only the first 300 results were screened to avoid inflated and non-reproducible hit counts. After combining all sources and removing duplicates, 4,012 articles proceeded to the initial screening process.

The screening stage resulted in the removal of 3,950 out of 4,012 articles, as they did not meet the required standards, primarily due to irrelevance to preceptorship or clinical training, lack of focus on novice nurses, or failure to employ quantitative study designs or clinical competency outcome measures. A total of 62 articles progressed to the eligibility assessment stage.

A total of 62 articles were fully reviewed. Excluded from consideration were 52 articles, including 16 qualitative studies, 12 studies conducted among experienced nurses, 9 articles that did not utilise preceptorship as an intervention, 8 studies where clinical competency was not the primary focus, 5 studies with insufficient data for analysis due to unclear instruments or incomplete results, and 2 articles. Thus, 10 articles met all methodological and content criteria for inclusion in the final synthesis.

A total of 10 studies were included in the final analysis, as outlined in the Methods section. These studies originated from various countries in East Asia, Southeast Asia, the Middle East, and Europe, with research designs including quasi-experimental, pre-test and post-test, correlational, and cross-sectional.

Findings from the synthesis show that preceptorship programs consistently enhance the clinical competence of novice nurses compared with those receiving no preceptorship or standard orientation programs. The most effective interventions include one-on-one supervision, structured feedback, the use of validated competency instruments, and a program duration of at least 4–12 weeks. Contributing factors to success include preceptor training, organizational support, and a positive learning culture. Key challenges include preceptor workload, lack of program standardization, and variation in supervision quality.

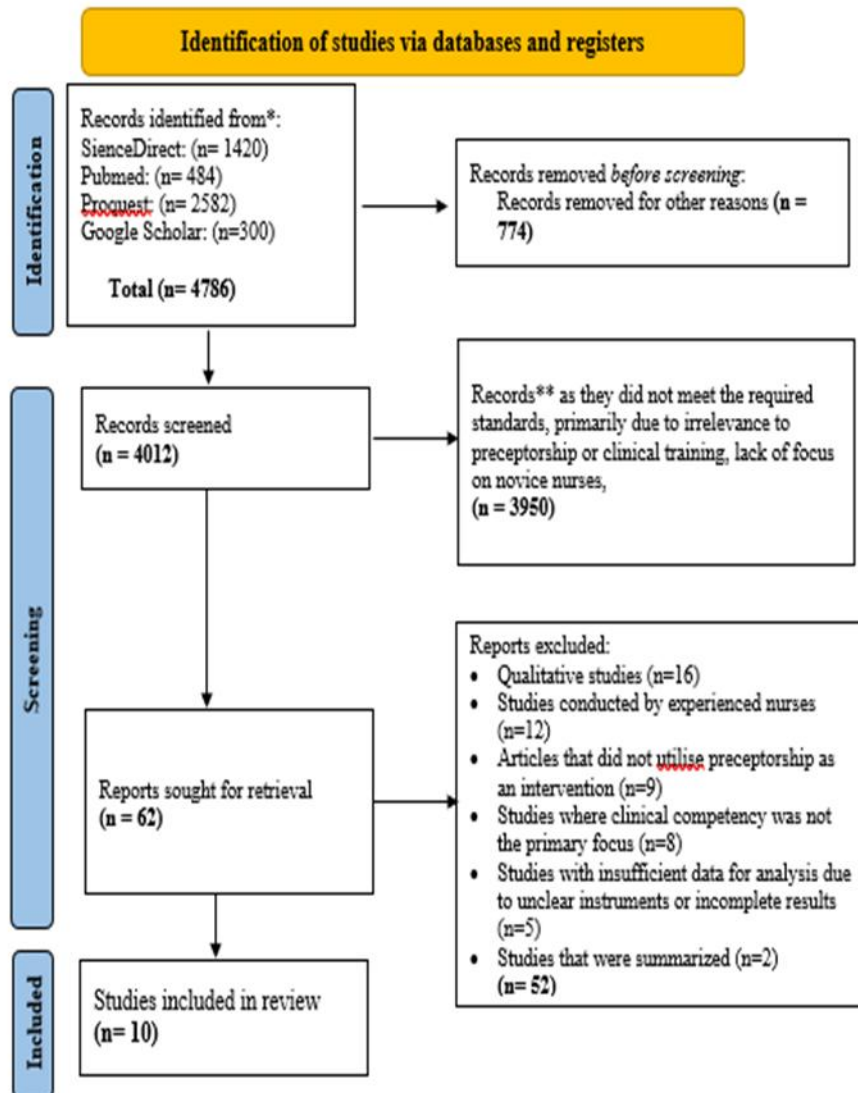


Fig. 1 PRISMA Flow Diagram

**Table 2.** Data Extraction Matrix

No	Author(s), Year	Research Title	Research Purposes	Country	Key Findings
1	Kyeong Hye Kim & Sujin Shin (2025)	Factors influencing preceptor nurses' clinical teaching behavior: A cross-sectional study	This study identified significant factors affecting clinical teaching behavior among South Korean preceptor nurses.	Korea	The study demonstrated that clinical reasoning, critical reflection, perceptions of patient safety, and an appropriate preceptor–preceptee ratio contributed 66.7% to clinical teaching behaviors among nurse preceptors. The research was assessed to have adequate methodological quality and relevance to nursing, as it explored factors influencing preceptors' clinical teaching behaviors. Considering its strengths and limitations, such as instrument quality, inappropriate analytical techniques, and the topic's relevance to nursing education practice, this study was deemed highly suitable for inclusion in the systematic review, particularly as a source of quantitative data, since it fulfilled all methodological criteria of the JBI checklist for cross-sectional studies.
2	Chen, Feifei, Liu, Yuan., et.al. (2021)	Transition shock, preceptor support and nursing competency among newly graduated registered nurses: A cross-sectional study	The aim of the study was to examine the relationship between transition shock, preceptor support, and nursing competency in a sample of newly graduated registered nurses	China	This study found that sustained one-to-one preceptor relationships, the context of preceptorship, and transition shock influenced the development of nursing competence among New Graduate Registered Nurses in China. Accordingly, the research emphasized the importance of providing educational programs aimed at enhancing critical thinking and skills. The study highlighted the crucial role of preceptor support in reducing transition shock and improving the clinical competence of novice nurses ( $r = 0.56$ , $p < 0.01$ ).
3	Abdelaliem, Sally M. Farghaly, Alsleem, D. Khalid., et.al (2025)	The relationship between practical skills confidence and readiness for transition to practice among nursing internship students: Exploring the mediating role of preceptor.	Examine the relationship between practical skills confidence and readiness for transition to practice among nursing internship students through exploring the mediating role of preceptorship.	Saudi Arabia	This study makes a significant contribution both practically and theoretically by clarifying the role of confidence in practical skills and the quality of preceptorship in readiness for transition to the workplace. The perceptions of nurse interns in the study by Abdelaliem, Sally M. Farghaly, Alsleem, D. Khalid, et al. (2025) highlighted the critical role of preceptorship in predicting their success during the transition to clinical practice, particularly by enhancing their confidence in practical skills. The findings indicated that confidence in practical skills accounted for 38% of the variance in preceptorship effectiveness, which in turn positively influenced the overall transition experience of nurse interns. These results underscore the importance of preceptorship

No	Author(s), Year	Research Title	Research Purposes	Country	Key Findings
4	Renning, Kelsey et.al. (2024)	Effectiveness of a paediatric critical care pilot preceptor program: Improved confidence and competency outcomes among a cohort of professional nurses in Blantyre, Malawi	Evaluate the effectiveness of a paediatric critical care nurse preceptor program, via change in nurses' knowledge, skills, confidence, and precepting competence.	Malawi, Africa	<p>and confidence in practical skills as key determinants of a successful transition to professional practice. Therefore, strategies aimed at strengthening preceptorship programs and fostering confidence in practical skills are essential to improve transition outcomes for nurse interns.</p> <p>This study retains high practical and contextual value, particularly by providing insights from training programs in developing countries facing shortages of specialist nurses. It also demonstrated adequate methodological quality, making it a valuable reference for inclusion in a systematic review examining the effectiveness of preceptor training or nursing education interventions. The study reported significant improvements in clinical knowledge (<math>p &lt; 0.001</math>), resuscitation skills and blood gas analysis (<math>p = 0.001</math>), as well as clinical confidence (<math>p = 0.002</math>) following the critical paediatric preceptorship intervention.</p>
5	Chipwanya, Elizabeth., et.al. (2024)	The effect of a preceptorship programme on newly hired experienced professional nurses' self-efficacy in nursing clinical competency in Saudi Arabia	This study aimed to determine if participation in a preceptorship programme affected newly hired experienced professional nurses' self-efficacy in clinical practice and whether their perceived competence was related to respondents' demographic profiles at a university hospital in Saudi Arabia.	Arab Saudi	<p>Self-efficacy post-test scores were significantly higher than pre-test scores (<math>p &lt; 0.001</math>). The programme positively influenced the respondents' self-efficacy scores. As perceived by the respondents, the preceptorship programme had a positive effect and improved their clinical performance in the nursing process. There was no relationship between perceived competence and respondents' demographic profiles.</p>
6	Yuliartiningi., Nursalam., Kartini, Yanis. (2019).	Preceptorship Method to The Achievement of New Nurse Competencies at Rumah Sakit Islam Surabaya Jemursari	Explaining the influence of the preceptorship method on the competency achievement of new nurses.	Surabaya, Indonesia	<p>Overall, this study is of high quality and worthy of inclusion as it provides practical contributions in the local context and demonstrates the effectiveness of the preceptorship method in enhancing new nurses' competence. The study employed a quasi-experimental design with a pretest-post-test and control group, which strengthened its methodological rigor in evaluating changes resulting from the intervention. The findings revealed that the preceptorship method significantly improved the competency achievement of new nurses (<math>p &lt; 0.05</math>).</p>

No	Author(s), Year	Research Title	Research Purposes	Country	Key Findings
7	Lindfors, Kirsi., Flinkman, Mervi., et. al. (2024)	New graduate registered nurses' professional competence and the impact of preceptors' education intervention: a quasi-experimental longitudinal intervention study	The aim of this quasi-experimental longitudinal intervention study was to investigate new graduate nurses' professional competence development after preceptors' participation in an education intervention.	Finland	This study provides insights into the longitudinal process of competency development among new nurses and the role of preceptors' and it demonstrates that an eight-hour short training for preceptors does not result in significant improvements in new nurses' professional competence unless accompanied by systematic long-term support.
8	Mashayekh, Razieh., Ebadi, Abbas., et.al. (2022)	The effect of the preceptorship training program on the participation of clinical nurses in training nursing internship students: a quasi-experimental study.	To determine the effectiveness of the preceptorship training program for the participation of clinical nurses in the education of nursing students.	Teheran, Iran.	This study, highlights the critical role of instructors in clinical nursing education. Which is essential for student development and influencing nurses in clinical settings. It significantly contributes to systematic reviews on preceptor training effectiveness. Despite potential biases and limitations, it is suitable for quantitative synthesis, including meta-analysis. Result showed no significant difference in nurse. Participation scores between experimental ( $101.84 \pm 15.42$ ) and control ( $107.24 \pm 10.53$ ) groups before the intervention ( $P = 0.10$ ). after the intervention, scores increased significantly in the experimental group ( $118.90 \pm 15.11$ ) compared to the control ( $106.21 \pm 11.96$ ) ( $P < 0.001$ ). within the experimental group, all participation scores improved significantly ( $P < 0.001$ ), while changes in the control group were not significant ( $P = 0.41$ ).
9	Kim, Eun A., Bong, Young Sook., et.al. (2024)	Nursing practice readiness improvement program tailored for newly graduated registered nurses: A quasi-experimental study.	To develop a tailored nursing practice preparation improvement program for newly graduated registered nurses and assess its impact on the successful adaptation of nurse.	Korea	This study demonstrates high methodological quality and is appropriate for evaluating the effectiveness of adaptation training programs for new graduate registered nurses (NGRNs). Using a quasi-experimental design with a non-equivalent control group and pre-test – post-test measures. The study provides strong evidence for assessing changes resulting from the intervention. The program was systematically designed based on the ADDIE model and incorporated various educational tours, group discussions, and simulation-based practice training. Findings revealed significant improvements in nursing practice readiness, job satisfaction, retention, intention, and a statistically significant reduction in transition shock. However, the study has potential limitations. As an institutional study, it excluded exogenous variables environment, and educational setting, limiting generalizability. Intervention effects were evaluated

No	Author(s), Year	Research Title	Research Purposes	Country	Key Findings
10	Pohjamies, Netta., Haapa, Toni., et.al. (2022)	Nurse preceptors' orientation competence and associated factors: A cross-sectional study	To identify distinct orientation competence profiles amongst nurse preceptors and explain the associated factors.	Finland	<p>using analyses controlling for pre-scores of dependent variables, but a limitation was the absence of corrected alpha, which may have increased error risk. Overall, the tailored program effectively reduced transition shock (<math>F = 9.18</math>, <math>P = 0.004</math>) and improved practice readiness (<math>F = 19.90</math>, <math>P &lt; 0.001</math>), job satisfaction (<math>F = 4.09</math>, <math>P = 0.049</math>), and retention intention (<math>F = 6.20</math>, <math>P = 0.016</math>) among new graduate registered nurses.</p> <p>This study demonstrates high methodological quality and is appropriate for evaluating the effectiveness of adaptation training programs for new graduate registered nurses (NGRNs). Using a quasi-experimental design with a non-equivalent control group and pretest-post-test measures. The study provides strong evidence for assessing changes resulting from the intervention. The program was systematically designed based on the ADDIE model and incorporated various educational strategies, including, mentoring, departmental tours, group discussion, and simulation-based practice training. Findings revealed significant improvements in nursing practice readiness, job satisfaction, retention intention, and a statistically significant difference. This study also makes a valuable contribution to the preceptor literature, particularly in illustrating how individual and organizational factors influence orientation competence. It is highly relevant and identifies three profiles of preceptor orientation. Competence based on self-assessments from 844 nurses in a finish university hospital. Factors correlated with competence included age, work experience, work motivation, involvement in orientation training, and support from colleagues and supervisors. Significant associations were found between adequate nursing care knowledge (<math>p = .001</math>), adequate nursing care skills (<math>p = .024</math>), current work motivation (<math>p &lt; .001</math>), work motivation (<math>p &lt; .001</math>), participation in new employee orientation education (<math>p &lt; .001</math>), and participation in student guidance education (<math>p &lt; .001</math>) across the identified competence profiles. Nursing care knowledge relevant to new employee orientation was rated higher by profile A nurses (96.5%) compared to profile B (94.0%) and profile C (85.0%).</p>

## DISCUSSION

A review of ten studies showed that preceptorship consistently contributed to improved clinical competence, practice readiness, and confidence among new nurses. The program strengthened technical skills and clinical reasoning through direct supervision, structured feedback, and reflective learning, as demonstrated by Kim & Shin (2025) and supported by Benner's Novice to Expert framework, which emphasizes competency development through experience and ongoing reflection. The program's effectiveness was also demonstrated across a variety of contexts, including facilities with limited resources, as reported by Renning et al. (2024) in Malawi. Furthermore, findings from Saudi Arabia demonstrated that a 90-day program improved confidence and mastery of the nursing process among new nurses. The evidence available indicates that preceptorship plays a vital role in enabling a novice practitioner to become clinically competent.

The success of preceptorship is greatly influenced by the quality of the preceptor-preceptee relationship, organizational support, and preceptor preparedness and training. A study by Pohjamies et al. (2022) emphasized the importance of preceptor selection based on clinical competency and realistic workload management. Ongoing training and schedule flexibility have been found to be essential forms of institutional support (Lindfors et al., 2022; Mashayekh et al., 2024). Furthermore, emotional support from preceptors contributes to developing self-efficacy, consistent with Bandura's theory, as shown by Abdelaliem et al. (2025) and T. T. Chen et al. (2021). These factors strengthen adaptation, reduce transition stress, and increase job satisfaction among new nurses.

Despite its demonstrated effectiveness, the implementation of preceptorship faces various obstacles. The reliance on assessment tools that are largely based on questionnaires heightens the risk of self-assessment bias, making it necessary to use more objective methods like direct observation or the Mini-CEX (Chipwanya et al., 2024; Motefakker et al., 2022). Short or discontinuous preceptor training can also hinder the quality of mentoring. Furthermore, time constraints, high workloads, and varying preceptor competencies often reduce the consistency of mentoring. Other challenges include limited learning infrastructure, the lack of structured feedback systems, and limited access to technology, particularly in low-resource facilities. These barriers highlight the need for more adaptive program planning and stronger organizational support.

This review's results support the notion that preceptorship should be developed as a systematic initiative, enhancing not only clinical proficiency but also confidence and readiness for practice among novice nurses. According to various studies, healthcare institutions are recommended to: (1) Continuously enhance preceptor training, as brief training sessions without continued support have been found insufficient (Lindfors et al., 2022; Mashayekh et al., 2024). (2) employ multiple assessment approaches, including direct observation, Mini-CEX, e-portfolios, and written reflections, which

have been shown to improve the accuracy of competency assessments (Motefakker et al., 2022; Song et al., 2024; Xu et al., 2025). (3) optimize organizational support, particularly workload management and protected mentoring time, in line with evidence emphasizing the importance of structural support (Pohjamies et al., 2022). (4) foster a supportive work culture, including positive role modelling and regular feedback, which has been shown to enhance confidence and resilience among new nurses (Abdelaliem et al., 2025; T. T. Chen et al., 2021); and (5) adapt preceptorship programs to local needs, particularly in low-resource settings, where context-sensitive models have demonstrated effectiveness (Renning et al., 2024). This approach, which combines structured, adaptive, and organisationally supported preceptorship, holds significant promise for enhancing clinical competence and improving the transition of new nurses into professional practice.

## CONCLUSION

A systematic review, conducted in accordance with the PRISMA 2020 guidelines, identified ten eligible studies from an initial pool of 4,486 records and 300 supplementary sources, demonstrating that structured preceptorship programmes consistently improve clinical competence and confidence among novice nurses. Preceptorship is most effective when aligned with Benner's stages of competency development and Bandura's self-efficacy framework, through guided supervision, structured reflection, and high-quality feedback that support the early professional transition.

The evidence suggests that preceptorship enhances clinical skills, self-confidence, and practice readiness; however, its effectiveness depends heavily on a well-organised programme structure, adequate organisational support (including workload management, time allocation, and assessment systems), and competent preceptors with strong teaching and supervisory skills. Healthcare institutions should integrate preceptorship into formal organisational policies, invest in structured and ongoing preceptor training, clearly define preceptor roles and responsibilities, and allocate sufficient resources to ensure consistent, accountable supervision, thereby enhancing patient safety, supporting successful transition, and improving nurse retention.

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