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EFFECTIVENESS OF INTERVENTIONS TO IMPROVE PRECEPTOR PERFORMANCE IN NURSING STUDENT COMPETENCIES

Ummi Kulsum*, Rizki Fitryasari, Nuzul Qur'aniati
Master of Nursing Department, Faculty of Nursing, Universitas Airlangga, Mulyorejo, Surabaya, East Java 60115, Indonesia
*ummikulsum2846@gmail.com

ABSTRACT

Perceptors need to be proficient in clinical teaching and assessment in reaching learning objectives while handling client caseload and delivering safe and efficient care. However, evidence to inform best practices for mentor development is limited, as is evidence regarding the efficacy of programs for the mentor role. This study aims to analyse interventions to improve preceptor performance on nursing student competencies. Methods: This study employs a systematic review, with study literature gathered from multiple electronic databases, including Pubmed, Science Direct, ProQuest, and SAGE using a PRISMA flow guidline. Data was collected by searching for research for 2019-2024 and searches were conducted until March 4, 2024. The keywords used are "Intervention" "Improve" "Preceptor" "Student Nursing Performance". Eligible studies require the use of quasi-experiments to identify interventions to improve preceptor performance in the competence of nursing students in different data base sources. Results: A total of 12 articles were analyzed because they provide information about interventions to improve preceptor performance in the competence of nursing students. Five articles on Randomized Controlled Trials, 7 articles using Quasi-experimental design. This article recommends an intervention clinical teaching on One Minute Preceptor because it is effective and can be used in a limited time. Conclusions: Overall, research shows that nursing education should improve recent graduates' readiness to achieve competence. Nurse educators should facilitate comprehensive assistance in order to enable students to acclimatise to the nursing profession's culture before beginning their clinical education.

Keywords: intervention; preceptor; performance; student nursing performance.

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INTRODUCTION

Clinical education is an important component in student learning that protects under the supervision of a registered health professional aimed at providing learning support and linking theoretical and practical knowledge (McCutcheon et al., 2018). Preceptorship is a common model of clinical learning support. Preceptors must be skilled in teaching and clinical assessment, modeling and supporting student achievement of learning goals while managing client load and providing safe and effective care (Raab et al., 2023). Evidence to inform best practice for preceptor development is limited however, as is evidence regarding the efficacy of programs for the preceptor role (Dewar et al., 2020). Professional and regulatory bodies in nursing education, including The National League for Nursing (NLN) and the American Association of Colleges of Nursing (AACN), require that critical thinking should be included as a core element of nursing curricula and that it be evaluated as an outcome indicator of the quality of a nursing education program (Zhang & Chen, 2021). Turnover of NGN has reached rates of 8.8%–37%, (depending on the state which is often the result of a stressful transition in the first year of practice as well as a lack of socialization into the roles of the nursing profession (Hampton et al., 2020) (Lestari et al., 2021).

Clinical learning that is less supportive will have an impact on the competency and performance of nursing students. The student transition period from academic learning to clinical learning is ineffective, preventing students from achieving maximum competency (Spector et al., 2020). Factors that influence the decline in competency and performance of nursing students include the lack of role models, the relationship between land collaboration and education, learning and teaching methods in clinics, student interest and motivation, as well as the condition of practice places or infrastructure (Hampton et al., 2020). One strategy that can be used to increase student competency in providing protection is to increase the knowledge and performance of teachers who are expected to be leaders who help socialize novice nurses and spread student competency and ability to practice safely starting before graduation, and can effectively demonstrate knowledge, skills, behaviors, and attitudes that align with maintenance (Puspita et al., 2023) (Chen et al., 2021). This systematic review aims to identify the best current evidence for improving teacher performance in homicide student competency and the effectiveness of these interventions.

METHOD

Initial scoping searches were conducted to identify similar and relevant systematic reviews that had already been conducted. Articles and journals were appropriate for systematic review according to Preferred Reporting Items for Systematic Review and Meta Analyze (PRISMA).

Literature Search And Screening

Searches were conducted to identify articles or journal publications using key search terms. Search terms were constructed in collaboration with an academic librarian and were based on a PICOS structured question. Three groups of search terms were used and then combined using the Boolean operators AND and OR including (intervention, strategy, method) AND (improve, upgrade) AND (preceptor, mentor, clinical teacher, student supervisor, clinical supervisor) AND (competency, performance) AND (student of nursing). All keywords were used in each database. Articles or journals there were included in the inclusion criteria were limited by year and language used according to the inclusion criteria. Online databases searched included Science Direct, ProQuest, Pubmed and SAGE. References that correspond to systematic reviews are used to identify further studies. Duplicate articles and journals are removed and research is filtered according to inclusion and exclusion criteria, based on abstracts and titles. Full text for all articles and journals included including being downloaded and researched by one researcher using a screening tool to confirm that the study met the inclusion criteria.

Selection Criteria

Studies were required to meet the following criteria to be eligible for inclusion in the systematic review journal articles published in the English language between January 2019 until December 2024. Studies were included in the review if they reported primary research on interventions designed to increase response time, with quasy experiment or Experiment design. Journal extraction was not appropriate is done by taking into account the inclusion criteria of the study to be discussed. Studies that fall under the inclusion criteria are seen from the year of publication, research design used, interventions, participants, data changes, outcome measures. After data extraction and quality analysis, the main features and research findings were discussed by four authors to construct a structure for the synthesis of research findings. Response time change is calculated by subtracting the pre-intervention/comparison group data from the post-intervention group data.

Data Extraction

For each included article, the data extracted included the author's name, year of publication, country, participant setting, type of intervention, instrument, follow up, measurement and P-value. To assess the quality of each included study, a meticulous quality assessment was performed using the Joanna Briggs Institute (JBI) tool. The JBI assessment covers various aspects, including the representativeness of the sample, the appropriateness of the study's methodology, the validity and reliability of the measures used, and the adequacy of response rates.

RESULTS

The search yielded 12 articles, all of which were selected and revised based on a full-text assessment. Table 1 showed a total of 12 studies were identified, based on the results of the literature review that has been conducted, no research has been found that develops the One Minute Preceptor (OMP) model. Nursing students can improve their knowledge and perceptions of professional service experiences. Improvements in this knowledge will ultimately be able to improve positive active learning attitudes and the quality of nursing guidance in achieving nursing student competencies. The learning model needs to be improved to maintain optimal guidance quality for nursing students.

Figure 1.
PRISMA flow diagram showing the screening and selection process

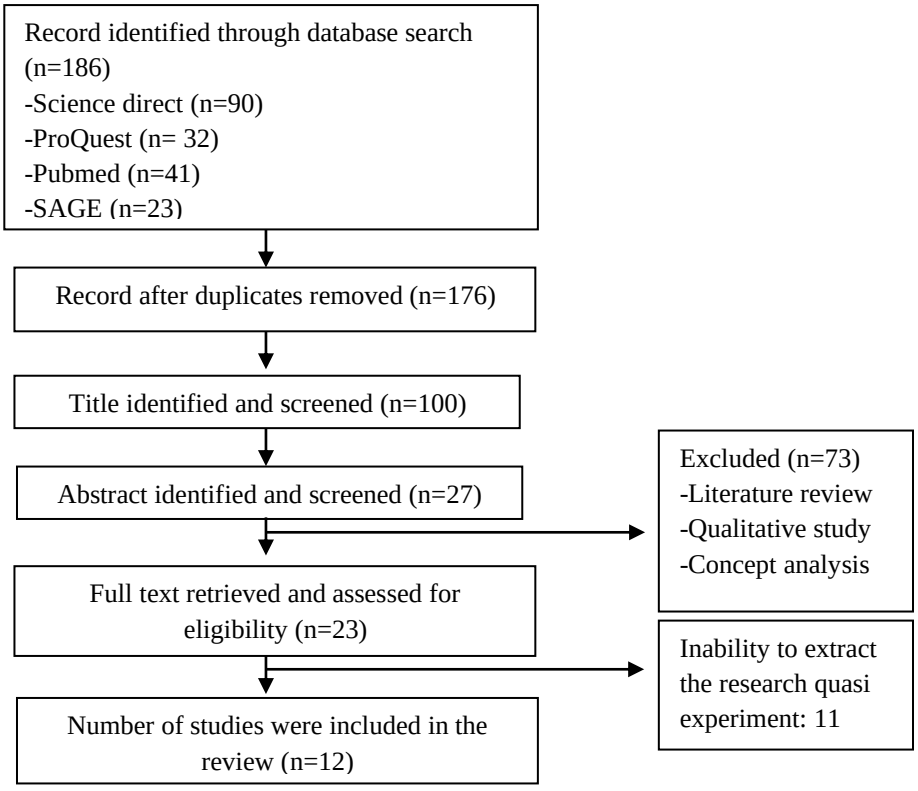

Table 1.
Included Study Characteristics

Author, year, country of origin	Participant setting	Type of intervention	Instrument, follow up	Measurement	P-value
(Chang et al., 2021) Taiwan	110 preceptor	Virtual simulation-based mobile learning application (storyline and dialogue, clinical insight knowledge for performance skills)	Cognitive load scale	The preceptor's ability to use mobile learning applications gets a higher score in knowledge and skills performance	P < 0,001
(Nes et al., 2020) Norwegia	100 supervisor	Use of electronic reports in mobile guidance applications (planning and goal setting every day, monitoring progress for evaluation and adjustment through feedback, suggestions or guidance)	Self-Efficacy in Clinical Performance (SECP)	Self-efficacy in clinical performance and estimates evaluate user acceptance of information technology	P < 0,001
(Gatewood et al., 2020a) California	86 preceptor	The clinical teaching model with the One-Minute Preceptor (OMP) model includes 5 skills (gaining commitment, exploring culture, teaching general rules, reinforcing what has been done well and correcting mistakes)	Survey on the use of teaching skills	Response to preceptor education in the use of the One-Minute Preceptor (OMP) clinical teaching model	P < 0,001
(Zhang et al., 2021) Cina	54 preceptor	Cooperative learning through three phases (preclinical session, clinical practicum and post-clinical conference)	California Critical Thinking Disposition Inventory (CCTDI)	Cooperative learning contributes to nursing students' critical thinking and helps discuss content, share ideas, and solve problems.	P < 0,001
(Bryan & Vitello-Cicciu, 2022) Kanada	94 preceptor	Mentor with authentic leadership	Global Job Satisfaction Survey, and General Performance Scale	Fosters self-awareness and positive relationships and builds the capacity of preceptors and nursing students	P < 0,001
(Putri & Sumartini, 2021) Indonesia	31 preceptor	Active learning method with Peer Learning (PL) and Problem Based Learning (PBL)	AssCE (Assessment of Clinical Education)	Peer learning and PBL can influence clinical learning outcomes in aspects of	P < 0,001

Author, year, country of origin	Participant setting	Type of intervention	Instrument, follow up	Measurement	P-value
		techniques		communication and teaching, nursing care, examination and treatment and professional approaches	
(Noviani et al., 2023) Malaysia	120 preceptor	Socialization In Professional Reality Integration For Nursing Student Transition (SPRINT)	Nurse Professional Competence short-form (NPC-SF) scale	Prior knowledge and professional socialization practice skills	P < 0,001
(Kim et al., 2022) Korea Selatan	30 preceptor	Preceptor education program based on the One Minute Preceptor Model to foster the competence of preceptor clinical nurses	Clinical Core Competency of Preceptor (CCCP) and General Communication Competence Scale (GICC-15)	Evidence-based practice, quality feedback, and self-reflection	P < 0,001
(Fagundes et al., 2020) Brazil	60 preceptor	Whilst the OMP method gives instructions to teachers, SNAPPS provides them to learners	One Pediatric Preceptor (EDTF)	Expressing clinical reasoning, time, taking initiative to, setting	P < 0,001
(Tambolkar et al., 2023) India	30 preceptor	One Minute Preceptor Model (OMP)	Instrument decay is the independent changes in the measuring instrument that may cause a difference to be observed in the two groups	OMP for efficiency and traditional methods for foundational teaching	P < 0,001
(Ong & Cook, 2019) Singapura	31 preceptor	Residents' expectations and perceptions of clinical teaching activities	The first survey (PRE) (refer Appendix A) had 14-items grouped by the microskills: OAC (3 items), PSE (3 items), TGR (3 items), PPF (3 items) and CMF (2 items)	Perceptions in OMP microskills in clinical teaching	P < 0,001
(Satoh et al., 2020) Jepang	30 preceptor	Competencies of Academic Nurse Educators	Questionnaire consisting of 55 items concerning the competencies of nursing academic educator	Factor structure of the competency of academic nurse educator	P < 0,001

DISCUSSION

The results of the literature review are contained in articles published in 2019-2024 and the most in 2021. Sequentially, research conducted by Chang et al., (2021) states The experimental group using mobile applications had significantly higher knowledge scores,

significantly lower intrinsic and foreign cognitive loads, better skill performance, and higher satisfaction than the control group. The application of mobile apps for simulated learning has a positive impact on the performance of nursing students' knowledge and skills and decreases the cognitive load of learning. Nurse educators and researchers should collaborate in developing virtual learning resources to support clinical nursing education.The results of Nes et al., (2020) research reflect critical thinking, learning outcomes, and student satisfaction. Results will be compared before and after the intervention as well as between the control and intervention groups. In the control group, the clinical practicum period will be carried out as usual. In the intervention group, students will monitor their daily lives by filling out daily electronic reports. Based on the student's report and the day's experience, the supervising nurse will provide feedback to the student. Process evaluation will measure thoroughness and potential improvement.

According to Gatewood et al., (2020) that the training includes a 2-hour workshop on clinical teaching models in a community setting, with an emphasis on OMP. The intervention was offered twice and involved 57 participants from 4 different health professions. Data were collected before and after the intervention using surveys. There were no differences in outcomes between professions, including barriers to teaching; However, improvements were found in the provision of positive and corrective feedback as well as overall teaching activities (Kawakami et al., 2022). The results of another study Zhang et al., (2021) revealed that cooperative learning-based practices can improve the critical thinking disposition of nursing students, including truth-seeking, open-mindedness, analytical ability, systematics, confidence, curiosity, and maturity. This study provides evidence that cooperative learning approaches used in clinical practicums can improve students' critical thinking, which is a key educational goal of any nursing curriculum. Clinical practicums such as internships can hardly meet the continuing learning needs of nursing students (Carr et al., 2021). The apprenticeship model is a teacher-centered and passive teaching model often used in the early stages of nursing program development in China, where clinical instructors teach nursing students at the bedside with little discussion and student learning engagement (i.e. sharing ideas) (Priyam et al., 2020). This model still remains mainstream in clinical teaching in the Chinese nursing context. Cooperative learning, as one type of active learning approach, should be applied in a clinical educational setting to help students acquire a variety of skills including clinical reasoning and critical thinking (Amsalu et al., 2020).

According to Bryan et al., (2022) revealed the relationship between the perception of the counselor's authentic leadership and self-efficacy, job satisfaction, and work performance of last-year nursing students. These findings suggest that perceptions of counselors' authentic leadership are associated with increased feelings of self-efficacy and job satisfaction among final-year nursing students. Mentors are an integral part of the nursing student transition process therefore, the preceptorship process can be improved by applying authentic leadership models. These findings have positive implications for nursing students' transition into their roles as competent, ethical, and safe nurses and even have long-term effects on retention (Savaria et al., 2022). Research by Putri et al., (2021) shows that peer learning methods and PBL work well in students' ability to learn actively by discussing with their partners who then determine the nursing care actions to be carried out. This research proves that Peer Learning and PBL in clinical practice can provide improvements in all four aspects of student learning outcomes and improve students' critical thinking skills. As a result, students can appear more professional in their nursing practice.

Another study conducted by Noviani et al., (2023) showed that the SPRINT Intervention significantly increased the overall professional competency score of the experimental group higher than the control group. By comparing the average scores in three measurements, the average scores of the six competency areas improved significantly for the experimental group, while for the control group only three areas of competency improved in the twelve weeks post-test. Conclusion: "SPRINT" as an innovative educational program developed in collaboration with academics, clinical supervisors, can improve professional competence. It is recommended to implement the SPRINT program to help smooth the transition from academic education to clinical education.Research by (Kim et al., 2022) this study was conducted at a tertiary general hospital in Korea to identify solutions to resolve their nurse turnover issues. Given the serious shortage of nurses worldwide, the OMP-based preceptor competency training program developed in this study provides a strategy that can be replicated by various healthcare organizations to improve nursing effectiveness. The research data can also be used to devise a basic utilization plan. This program can promote competency among not only new nurses but also experienced nurses, an aspect that has widespread implications for the clinical nursing field. Therefore, it is necessary to encourage OMP activities for preceptors through an action research approach and to support research and practice in clinical settings (Salminen et al., 2021).

CONCLUSION

Overall, research shows that nursing education should improve recent graduates' readiness to achieve competence. Nurse educators should facilitate to assist students comprehensively so that they can adapt to the culture of the nursing profession prior to their clinical education. Therefore, it is considered necessary to facilitate a smooth transition for nursing students to increase resilience to face difficulties through professional socialization.

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