Preceptorship Model for Nursing Undergraduate Students: A Systematic Review

Muhammad Irwan[1], Nur Isriani Najamuddin[2], Risnah[3], Musdalifah[3] Syamsiah Rauf[3], Andi Adriana Amal[3], Muthaharah[3]

[1]Lecture of Nursing Departement, Health Faculty, Universitas Sulawesi Barat, [2]Lecture of Nursing Departement, STIKES Bina Generasi Polewali Mandar, [3]Lecture of Nursing departement, Health and Medicine Faculty, UIN Alauddin Makassar

Abstract

Objectives: To find out the effectiveness of clinical education models for nursing undergraduate programs.

Methods: From the PubMed, Science direct, Wiley online, and Secondary Search databases, 7 articles were obtained consisting of qualitative research that discussed the model of implementing preceptorship for nurses and undergraduate nursing students. The selection of research articles to be reviewed by establishing the inclusion and exclusion criteria then the process of searching for articles is synthesized into PRISMA flow diagram. Journal criticisms have been carried out using Qualitative CASP tools and Case-control.

Results: Researches from 8 countries that have been published and can be generalized to where the average participant is described as a student undergraduate nursing, nursing staff and clinical facilitators / supervisors. This type of intervention is focused on various clinical education models for undergraduate nursing programs. The findings obtained regarding the effectiveness of the clinical education model for undergraduate nursing programs. This review literature proves that the clinical facilitator model (preceptrorship) is better than the educator model based on student perception and learning outcomes.

Conclusion: This review literature proves that the clinical facilitator model (preceptrorship) is better than the standard educator model based on student perceptions and student learning outcomes themselves, it is proven that the preceptorship model provides greater involvement and learning environment compared to the standard facilitator model. All clinical education models show the advantages or disadvantages and limitations of each, however the potential student learning outcomes can be maximized if the model used is the results evaluated using systematic research.

Keywords: Nursing students, preceptorship, nursing education

Introduction

Globally, nurse educators are looking for better ways to prepare nurses to study and practice diligently to fall into space in the delivery of health services. In Indonesia, as in many other countries around the world, nurse education has changed training such as in-hospital training for undergraduate equivalent Nursing education undertaken in nursing professional education, this allows students after achieving a bachelor's degree to be considered to have had minimum experience to start practice professional nursing. In previous years various models of clinical nursing education have been used to develop students' clinical abilities in practicing their knowledge, skills, and attitudes [1].

Several studies have revealed that clinical education models and settings are the most influential in developing nursing competencies and professional socialization [2]. Clinical placement can also affect student confidence in

Corresponding author:
Risnah
E-mail: risnah@uin-alauddin.ac.id

clinical practice, enhance teamwork, and organizational skills and readiness to qualify for the profession[3]. In nursing education, classrooms, simulations and practice-based laboratory experiences make important contributions to the development of student learning [4], however experience in actual clinical exercise settings is an irreplaceable component in preparing students to be professional and competent in practice [5].

In most countries, clinical nurse staff who act as mentors or facilitators have and an important role in developing student learning in clinical practice although there are some international gaps in their roles and responsibilities [6]. In the review, Cooper Brathwaite & Lemonde[1], identify ten types of basic models: faculty-supervised practicum, preceptorship, education unit, joint appointment, secondment, affiliate position, internship, internship, cooperative education (co-operative education), work-study and undergraduate nurse employme, but this review is limited to the search for types of models, main features, benefits, and limitations. It is clear that the clinical education model including significant variations in roles and responsibilities between students, lecturers and clinical nurses at this hospital is linked to supervision; teaching, learning and evaluating; and differences in the nature of the relationship between clinical and academic organizations [4].

All clinical education models have their own weaknesses and weaknesses. However, the potential and student achievement can be maximized if the clinical model used is the model that is evaluated according to clinical placement. In addition, a comprehensive understanding of the current clinical education model allows nurse educators and educational institutions to select and implement most effective models in terms of improving the quality of student learning outcomes. However, most studies often evaluate specific clinical models[7]. Several studies comparing models [2], there is plenty of evidence evaluating various clinical placement models in nursing education, but there is no most accurate evidence that is well designed according to a systematic review to inform the effectiveness of these models. Therefore, the author reviews several research articles that review the effectiveness of several clinical learning models in undergraduate nursing students.

Materials and Methods

Methods

a. Study Selection

In order to be eligible, the writer selects articles that are detailed as followson Table 1

b. Information Sources

Search articles using PubMed, Wiley Online, Google Schoolar, Secondary Searching from the beginning to the basic data needed.

c. Quality Assessment

The author determines the topic and compiles foreground questions consisting of population (P), intervention (I), comparison (C), outcome (O), and time (T). In this review the desired population (P) is nurse (nurse OR nurse students), intervention (I) is preceptorship, and outcome (O) is clinical nursing education. Database used in gathering articles with relevant keywords (PICOT) and a combination of "AND" and "OR". To be more specific, the author limits publication years in the last 10 years, full text, and only articles that use English. The search results in each database are described as follows on Table 2.

Based on screening conducted on database search results by reading research abstracts that are considered most in line with PICOT material and using PRISMA (Preffered Reporting Items for Systematic Reviews and Meta-analysis) flow diagrams.

d. Data Synthesis, Analysis, And Risks Of Bias

In the six articles, critics of research journals were conducted using appropriate CASP tools, namely 6 articles with Critical Appraisal of qualitative study Adapted from The Pocket Guide to Critical Appraisal; the critical appraisal approach used by the Oxford Center for Evidence Medicine, checklists of the Dutch Cochrane Center, BMJ editors' checklists and the checklists of the EPPI Center (Center for Evidence Based Management, 2018) and 2 articles with Critical Appraisal of a Cross-Sectional Study (Survey) Study adapted from Guyatt GH, Sackett DL, and Cook DJ and piloted with health

care practitioners (Critical Appraisal Skills Program, 2018) are obtained on Table 3 and Table4.

e. Research Ethics

Research is based on published articles so that they do not come into direct contact with nurses and do not require ethical approval.

Results

One of the preceptorship models is to assign students to practice, to organize activities with experienced nurses who work in clinical facilities such as hospitals. The clinical facilitator model, usually consists of clinical facilitators employed by educational organizations to oversee aspects of clinical competence for nursing undergraduate students in a variety of different clinical settings, including providing direct supervision and evaluation. Clinical facilitators are experienced clinical nurses, mostly seconded from the clinical sector to the university. This study found four studies comparing clinical learning models and clinical facilitator models [2,5,6].

Summarizes the research characteristics and main findings that are relevant to the effectiveness of clinical facilitators and clinical facilitator models. Three studies revealed that the clinical facilitator model is better than the educator model based on student preferences and learning outcomes [5,6]However, an unequal control group pre-test-post-test study found a preceptor model showing higher clinical practice ability and teaching effectiveness; and the ability of students' nursing practice was found to be directly related to teaching time by the supervisor[2]. Collaborative clinical learning model A collaborative research study between Karlstad University and the county council in Sweden using descriptive qualitative surveys to evaluate collaborative clinical supervision models [7].

The supervision model consists of placing students for five weeks with opportunities to make shorter placements in the wards and related clinics. Four levels of supervision are provided and include a Personal Preceptor which provides daily bedside supervision and Primary Prevention that provides support to student groups and supports Personal Preceptor. Both levels of nurse supervisors come from clinical (hospital) with a minimum of two years nursing experience. In addition, the main requirement is to have attended a basic nursing course including clinical learning courses. research conducted by [8]. Our findings indicate that the participants, who participated and completed the CPD course, have developed the skills and competencies that they believe are necessary to encourage the development of knowledge in their respective workplaces. Clinical Nurses provide expertise and support for mentors and students with Senior Clinical Nurse lecturers who have overall responsibility for the quality of student placement and learning supervision.

Although data analysis is limited, the authors report that the supervision model achieves the expected goals in students being encouraged to seek knowledge, link theory with practice, demonstrate critical and reflective thinking, and affective learning. This model also supports clinical nurses to perform the role of the teacher and facilitate the assessment of student learning [9]. Less than half of the educators were found to have knowledge of clinical preceptorship while the majority reported good attitude from the preceptor. Knowledge of clinical preceptorship is associated with having a master's degree (OR 0.377 and 95% CI [0.150, 0.948]) and more than four years of teaching experience (OR = 0.088 and 95% CI [0.010, 0.796]). The authors report that clinical preceptorship attitudes greatly influence knowledge gaps. having a higher degree and longer teaching experience are relevant factors related to the quality of the preceptor [9].

Table 1. Inclusion criteria and exclusion criteria article collection

Indicator	Inclusion Criteria	Exclusion Criteria
Respondents	Articles with preseptorship with respondents and nursing students, nursing staff, and clinical facilitators / preceptors	Articles that do not discuss Preceptorship of nurses or students in hospitals
Type of research	Research with quantitative cross sectional approach and quasi experiment	Only abstracts, individual reports, newsletters and the title Review
Year of publication	The study was published in 2008 to date	Research published before 2008
Results	The research focuses on the application of Preceptorship models and clinical nursing education models	If the research does not reveal the application of Preceptorship and clinilal nursing education models
Language	Research articles in English	Research articles that do not speak English

Table 2. Search results for articles with filters: Publication 2008-2017, original articles, full text, and in English.

PICO Keywords	PubMED	Willey	Googel Scholar	Secondary Searching
*Nursing studenst**OR**nursing staff **OR**preceptor**AND**preceptorship**AND**clinical nursing education models*	22	16	105	7

Tabel 3. CriticalAppraisalofaQualitativeStudy(Survey)

No	Appraisal Questions	Angel K. Chen et al (2015)	Brathwaite et al (2010)	Allan at al (2012)	Kim et al (2015)	Carlsonet al (2016)	DeMeester et al (2016)	Croxon & Magginis (2009)
1	The research objectives are clear	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	The accuracy of the research methodology	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	Research design accuracy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	Sample characteristics described. The sampling process is stated	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	Data collection described (Topic Guide)	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Cont... **Tabel 3. CriticalAppraisalofa*QualitativeStudy(Survey*)**

6	Critical assessment of the role of the researcher and potential bias	Yes	Yes	Yes	Can't tell	Yes	Yes	Yes
7	Ethical considerations, Explanation to participants about the research process and explanation of the effects of the study on participants	Yes	Yes	No	Yes	Can't tell	Can't tell	Can't tell
8	The analysis is explained in depth	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9	Credibility of findings - use of more than one analysis was discussed in connection with the initial research question	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10	Contributions to existing knowledge are discussed, identification of how research can be used and identification of new areas of research	Can't tell	Can't tell	No	Yes	Yes	Yes	Yes

Adapted from The Pocket Guide to Critical Appraisal; the critical appraisal approach used by the Oxford Center for Evidence Medicine, checklists of the Dutch Cochrane Center, BMJ editor's checklists and the checklists of the EPPI Center (Center for Evidence-Based Management, 2018).

Tabel 4. CriticalAppraisalofaCross-SectionalStudy(Survey)

No	Appraisal Questions	Teferra et al (2015)	Löfmark et al. (2012)
1	Did the study address a clearly focused question / issue?	Yes	Yes
2	Is the research method (study design) appropriate for answering the research question?	Yes	Yes
3	Is the method of selection of the subjects (employees, teams, divisions, organizations) clearly described?	Yes	Yes
4	Could the way the sample was obtained introduce (selection)bias?	Yes	Yes
5	Was the sample of subjects representative with regard to the population to which the findings will be referred?	Yes	Yes
6	Was the sample size based on pre-study considerations of statistical power?	Yes	Yes
7	Was a satisfactory response rate achieved?	Yes	Yes
8	Are the measurements (questionnaires) likely to be valid and reliable?	Yes	Yes
9	Was the statistical significance assessed?	Yes	Yes
10	Are confidence intervals given for the main results?	Can't tell	Can't tell
11	Could there be confounding factors that haven't been accounted for?	Yes	Yes
12	Can the results be applied to your organization?	Can't tell	Can't tell

Adapted from The Pocket Guide to Critical Appraisal; the critical appraisal approach used by the Oxford Center for Evidence Medicine, checklists of the Dutch Cochrane Center, BMJ editors' checklists and the checklists of the EPPI Center (Center for Evidence Based Management, 2018).

Discussion

The purpose of this systematic review is to examine the effectiveness of clinical nursing education models in nursing education programs. This review included nine studies including one pre-post-test study study [2] and seven qualitative survey studies [4,5,8,10,11] and cross sectional study [9,6] with a total of 1893 participants including 1286 nursing students. The review identified five clinical placement models; clinical preceptor models, clinical facilitator models, clinical education unit models, collaborative clinical placement models and arranged clinical mentor placement models and compare the effectiveness of clinical introduction models versus clinical facilitator models and clinical education unit models versus standard facilitation models.

This study found four studies comparing the clinical diagnosis model and the clinical facilitator model and three studies found the clinical facilitator model to be better than the teacher model based on student preferences and lean results[5,6]. There is not enough evidence to draw conclusions about the collaborative effectiveness of the clinical placement model and the clinical placement model of a mentor that is organized based on available studies. The quality of the research included and the small sample size can make the results unsuitable and do not need to give a true picture of the effectiveness of the model. The clinical preliminary model is a practice education model that is widely used with outcame is that students can work with experienced nurses who have routine practice and clinical culture[6]. The lack of expertise of experts in teaching and evaluation compared to clinical Facilitators is a major limitation. The main challenge for the clinical preceptor model in the implementation of clinical learning is that clinic nurses who are busy have limited time to fulfill their duties as preceptor or educate nursing students [12].

The quality of student clinical learning is influenced by several factors including work attitude, the relationship between students and nurses, the duration of students' clinical practice and feelings of belongingness [7,8,13]. The systematic findings of this review also indicate that clinical guidance by clinical facilitators must be supported by adequate resources for sustainable development. With the shortage of nurses in many countries around the world, it is very important that clinical learning (preceptorship) offers students that they must study well to ensure they have a successful clinical learning experience but with a large number of students in one clinical / hospital can provide effects that make clinical learning models become less quality. Implications for further research It is clear that despite the use of various clinical education models no one has been identified as the most effective.

This systematic review found evidence of the effectiveness of clinical education models from descriptive studies. Randomized controlled trials (RCTs), with larger samples, are guaranteed to better identify the effectiveness of the model and add to the body of knowledge surrounding clinical education models in undergraduate nursing programs.Future research must cover various aspects of models and valid data collection and can be used as a tool to increase understanding of the feasibility of various models in clinical / hospital placement. In addition, further research is needed on comparing clinical learning models. This will allow further researchers and input for academics to better understand the effects of clinical placement in other clinical areas and provide a stronger and broader basis for future recommendations.

Conflict of Interest: No conflict interest

References

1.   Cooper Brathwaite A, Lemonde M. Team Preceptorship Model: A Solution for Students' Clinical Experience. ISRN Nurs. 2011;1–7.

2. Kim C-J, Park J-W, Kang S-W. Effects of a collaborative clinical practicum on clinical practice ability and teaching effectiveness among nursing students. J Nurs Educ Pract. 2013;3(12):143–50.

3. Bradshaw C, Connor MO, Egan G, Tierney K, Butler MP, Fahy A, et al. Competence Assessment. Br J Nurs. 2012;21(15):923–8.

4. Allan HT, Magnusson C, Evans K, Horton K, Curtis K, Ball E, et al. Putting knowledge to work in clinical practice: Understanding experiences of preceptorship as outcomes of interconnected domains of learning. J Clin Nurs. 2018;27(1–2):123–31.

5. Croxon L, Maginnis C. Evaluation of clinical teaching models for nursing practice. Nurse Educ Pract. 2009;9(4):236–43.

6. Löfmark A, Thorkildsen K, Råholm MB, Natvig GK. Nursing students' satisfaction with supervision from preceptors and teachers during clinical practice. Nurse Educ Pract. 2012;12(3):164–9.

7. Chen AK, Rivera J, Rotter N, Green E, Kools S. Interprofessional education in the clinical setting: A qualitative look at the preceptor's perspective in training advanced practice nursing students. Nurse Educ Pract. 2016;21:29–36.

8. Carlson E, Bengtsson M. Perceptions of preceptorship in clinical practice after completion of a continuous professional development course- a qualitative study Part II. BMC Nurs. 2015;14(1):1–7.

9. Teferra AA, Mengistu D. Knowledge and attitude towards nursing clinical preceptorship among Ethiopian nurse educators: An institution-based cross-sectional study. Int J Africa Nurs Sci. 2017;7:82–8.

10. Ashley C, Halcomb E, Brown A, Peters K. Experiences of registered nurses transitioning from employment in acute care to primary health care—quantitative findings from a mixed-methods study. J Clin Nurs. 2018;27(1–2):355–62.

11. Myrick F, Caplan W, Smitten J, Rusk K. Preceptor/mentor education: A world of possibilities through e-learning technology. Nurse Educ Today. 2011;31(3):263–7.

12. Serrano-Gallardo P, Martínez-Marcos M, Espejo-Matorrales F, Arakawa T, Magnabosco GT, Pinto IC. Factors associated to clinical learning in nursing students in primary health care: an analytical cross-sectional study. Rev Lat Am Enfermagem. 2016;24:8345.

13. DeMeester DA, Hendricks S, Stephenson E, Welch JL. Student, Preceptor, and Faculty Perceptions of Three Clinical Learning Models. J Nurs Educ. 2017;56(5):281–6.