Implementing a Tailored Educational Program for Nursing Preceptors about Selected Clinical Measurements that Improve their Role Effectiveness

1 Inshrah Roshdy Mohamed; 2 Amany Hassan Abd Erahim Mohammed & 3 Naglaa Mohammed Amein Ghanem

1 Assistant Professor, Medical Surgical Nursing, Faculty of Nursing- Minia University.
2 Lecturer of Community Health Nursing, Faculty of Nursing- Minia University.
3 Women Health and Obstetrics Nursing, Faculty of Nursing- Minia University.

DOI: https://doi.org/10.15520/ijnd.v9i05.2576

Abstract: Background: Preceptor ship is a clinical teaching model through which undergraduate nursing students are facilitated to acquire beginning competencies that enable them to function effectively in the complex workplace environment upon graduation. The aims of the current study were to evaluate the effect of tailored educational program about selected clinical measurements regarding learning process on nursing preceptors (knowledge) and evaluate the preceptor abilities by their perceptee before the educational program. Quasi-experimental (pre-posttest) research design was used. The study was conducted at Faculty of Nursing and Institute of Nursing which affiliated to Minia University and Institute of Nursing which affiliated to Beni Suef University. Purposive study sample included Thirty one (61) preceptors recruited from previous mentioned settings as following: Group I (n=31) & Group II (n=30) respectively, Two tools was utilized, the first one was a structured self-administered questionnaire: to collect personal data of the preceptor and their knowledge regarding selected clinical measurements, the second one: were used to evaluate the preceptor’s abilities which collected from the preceptors before the educational program. Results: revealed that Mean ±SD age regarding study participant (group1) equal 28.1±4.7, about three quarter of participant (74.2%) have baccalaureate of nursing , the Mean ±SD related to the years of experiences was 6.7±4.9. The majority of them (96.8%) hadn’t receiving any staff developmental training program. Lastly the study cleared that total participant (100%) haven’t ongoing any educational program. There are a highly statically differences in knowledge between pre and posttest regarding selected clinical measurements that improving nursing preceptor's role among both studied groups p-values .001**. Conclusion there are improvement in knowledge about selected clinical measurements that improving nursing preceptor's role among both studied groups and the precepts evaluation regarding highest abilities for their preceptor were according to they mentioned as their preceptor available when need help, provide feedback about program, actively sought educational opportunities….etc. Recommendation: the recent study recommended that it is important to design a Preceptorship programs or academy that develop a courses as the best starting point to increase the effectiveness preceptor role and which will reflect on the development of specific skills in their perceptee students

Keywords: educational program, nursing preceptors, clinical measurements.

INTRODUCTION

Clinical practice is a vital part of the education for health care professionals and in several countries teaching is a regulated part of the role of nurses and health care staff [1-3]. Clinical practice involves preceptorship where experienced clinicians teach, reflect and assess the performance of students [4].

Preceptor ship is a clinical teaching model through which undergraduate nursing students are facilitated to acquire beginning competencies that enable them to function effectively in the complex workplace environment upon graduation. Central to this model are preceptors who, although they may be expert clinicians, require specific educational support in order to carry out their student supervision role effectively [5].

The preceptor strives to create a safe and meaningful interactive relationship with the student. During this process, preceptors need to promote reflection as an educational strategy to enhance critical thinking and problem-solving skills, and thereby, support the student’s ability to implement generalized theoretical knowledge into patient-centered problems within each specific healthcare context [6]. Nurse preceptors guide students to integrate theory into practice, teach clinical skills, assess clinical competency, and enhance problem solving skills [7]. Preceptors need to possess a strong familiarity with the principles of teaching and learning to effectively help students reach their learning goals [8].

Being a skilled and experienced professional, a characteristic highly valued by students is not automatically but through linked them to a skilled educator as teaching of a subject is a completely different story [9]. Therefore, it is not surprising that a number of studies argue for the development of further pedagogical education for health care professionals who are precepting students [1, 6, 10] who focusing on: reflection, critical thinking, communication and adult learning principles [11]. Receiving training in communication skills was deemed as the most important aspect with regards to clinical usefulness as a preceptor [12].

The success of the preceptor model has often been hinged on adequate preparation of nurses for their role as preceptors. This is based on the assumption that good
clinicians are not necessarily good teachers and hence there is a need to equip preceptors with key knowledge and skills and to develop appropriate attitudes in order to carry out the preceptor role effectively [13].

Preceptors aids in the “development of professional identity and socialization into the discipline” so developing and educating preceptors is a vital part so there is a need to build a preceptor program at healthcare institutions. Preceptors guide safe practice, accomplish connectedness, create positive learning experiences and relationships, deliver feedback, and “consult with supportive colleagues for advice and guidance” [14].

There is much in the published literature and books on preceptor roles and responsibilities. Fewer references are available in the literature on how to start a preceptor program and program components. The development and implementation of a preceptor program is vital for the success of nurse training and retention to provide quality care at any health care institution [15].

Based on the evidence, it is wise for healthcare institutions to develop and evidence-based preceptor program. Nurturing and providing preceptors with the education and support will aid in nurse recruitment, retention, and job satisfaction [16]. It has also been reported that preceptors who had participated in educational initiatives were better prepared to address challenges and were more satisfied and experienced increased self-efficacy with the preceptor role [17-18]. In conclusion, the literature seems to underline the importance of preceptor education [19-21]

Aims of this study:-

The aims of the study were to:
1. Evaluate the effect of tailored educational program about selected clinical measurements on nursing preceptor (knowledge).
2. Evaluate the preceptor abilities by their perceptee after the educational program.

Research hypothesis:
- The preceptors who attending the tailored educational program about selected clinical measurements will be improving in their knowledge and will be effective in their role than pre educational program.

SUBJECTS AND METHODS

Research design and setting:

Quasi-experimental (pre-posttest) research design was used which is suitable for the nature of existing research. Current study was conducted at Faculty of Nursing and Institute of Nursing which affiliated to Minia University and Institute of Nursing which affiliated to Beni Suef University.

Subjects:

Purposive study sample included Sixty one (61) preceptors recruited from previous mentioned settings as following: Faculty of Nursing and Institute of Nursing at Minia University Group I (n=31) ,Institute of Nursing at Beni Suef University as Group II (n=30). The participants were selected according to the following inclusion criteria: preceptors who are available at the time of research educational program, and preceptors who accepted to participate in the study.

Tools of data collection:

Two tools were utilized in the current study as following:

Tool 1: Structured self-administered questionnaire: it was designed by the researchers after reviewing extensive literature review This tool include two parts:-

1st. Part was aimed to collect personal data about the preceptor such as, age, type of nursing program that graduated, place of work, years in practice as a preceptor, have the preceptor had any developmental or preparatory courses before they assign a job… etc.,

2nd. Part: Structured knowledge questionnaire: It included forty five (45) questions regarding selected clinical measurements, it formulated in forms as an open ended questions and multiple choices questions and it classified into six sections as following:

Section I preceptors' knowledge related to preceptorship: it consists of six (6) open ended questions as definition, objectives and characteristics of an effective preceptorship, phases of preceptorship, roles and responsibilities of preceptors and precept.

Section II preceptors' knowledge related to clinical competence: it consists of eight (8) open ended questions e.g. reason for measuring competence, restrictions on competency assessments, methods and its criteria used to measure Competence… etc.

Section III preceptors' knowledge related to critical thinking and problem solving: it consists of twelve (12) multiple choice questions e.g. definition, benefits and characteristics, steps and skills used during application of problem solving… etc.

Section IV preceptors' knowledge related to communication: it consists of nine (9) multiple choice questions e.g. definition, benefits, types of communication and principles of effective communication process…… etc.

Section V preceptors' knowledge related to clinical teaching: it consists of six (6) multiple choice questions e.g. Importance, principles, methods of clinical teaching and advantage and disadvantage for each methods…… etc.

Section VI preceptors' knowledge related to learning strategies and methods: it consists of four (4) open ended questions as definition, types learning strategies, methods for applying each type and its advantages.

Scoring for the second part was obtained by using a three point Likert scale as (low, moderate and high), so (< 60%) was considered low level of knowledge ; (from 60% to less than 85%) was considered moderate knowledge and (≥ 85%) high knowledge.

Tool II: Precepts evaluation tool to assess the preceptor’s abilities, it prepared by Fink et.al 2008 & and modified by Goode et.al. 2009 [22-23], it was included 14 items as preceptor introduce me to staff/unit, provide feedback about program… etc. it was filled by convenient participants from the undergraduate nursing students (n=66) and from nursing interns students (n=60). Scores were obtained from a 4 point Likert scale as (poor, fair, good and excellent).

Validity and reliability of the tools:

The present study tools were submitted to three academic nursing in the educational nursing field to test the validity of
the tools. All modifications were carried out according to the academic nursing decision on the clarity of sentences and the relevance of the content. In addition reliability of tools was tested by using Alpha Cronbach test. Its result was 0.86 which indicates an accepted reliability of the tool.

**Pilot study:**
It was conducted on six (10%) of the study participants. It was selected from the previously mentioned study setting according to previous inclusion criteria to test the present study tools for its validity, clarity, applicability and the time required to complete it. All required and necessary modifications of the tools were done. The preceptors who participated in the pilot study were included from the study sample.

**Study procedure:**
The current study was achieved through three phases: assessment (pre-test), implementation (conducting education program), and evaluation (post-test).

**I. Assessment:**
During assessment phase the researchers collected the personal data in addition to preceptors' knowledge regarding selected clinical measurements was assessed through using (tool I). Also evaluate of the preceptor's abilities as completed from participated students by using (tool II).

**II. Implementation:**
First, the researcher divided all studied participants (preceptors) into six small groups (n=10 participant) in each class according to their academic schedule and every class receive three interactive sessions when they were free from practical classes which its duration between 3 to 4 hours (started from 9 Am. to 12 Pm.) for consecutive six weeks (three days/week). Then the researchers held a meeting with each group in their Faculty and introduce them self and briefly explained the nature and the purpose of the study. They were informed that participation in this study was voluntary and they had right to withdraw at any time. Oral approval of preceptors to share in this study was achieved. After that, the researcher provided an overview and clarification about two assessment tools to the whole class. Then distributed the self-administered structured knowledge questionnaire (part I & 2) to each participant to assess their personnel data and their knowledge regarding the selected topics about clinical measurements (pre-test) which was took about 30-45 minutes to be completed. Program education sessions were given to the preceptors in the form of lectures and group discussion by using audio-visual aids. An additional 20 minutes were assigned at the end of the lecture for an open discussion with the participants about discussed topics. Hands out (soft and hard ware) were distributed to them at the end of each session.

**III. Evaluation:**
- Two times for evaluations were done for each studied participants (Group I&2) to assess their knowledge about selected clinical measurements, the first one was at the beginning of the study as a baseline data (pre-test), while the second evaluation was conducted after one month (posttest) from the educational program by using the same assessment tool (I second part) in order to evaluate the level of preceptors’ knowledge after implementing the educational program. The data collection lasted three months starting from the beginning of January to the end of March 2019.
- Another evaluation tool (tool II) was used to evaluate of the preceptor's abilities as completed by convenient participants from the undergraduate nursing students (n=30) and from nursing interns students (n=30) was done at the beginning of the study as a baseline data.

**Ethical considerations:**
All official permissions to carry out the study were secured from pertinent authorities as the dean of the Faculty of Nursing at Minia University and the Dean of the Directors of Nursing Institute at Beni Suef University requesting this approval for data collection. Both studied groups were informed about the important and aim of this study. Oral consent was obtained from all the participants (preceptors & perceppee) . All preceptors were informed that their participation is voluntary and their rights to withdraw at any time, and confidentiality of the information obtained. Also the preceptors were informed that the collected data would be used only for the purpose of the present study only, as well as for their benefit.

**Limitations of the study:**
The program was given for participants consisted of preceptors working in academic setting only who had employed or assigned as preceptor but other who works in hospital setting not included, so the findings of the current study may not be generalizable due to limited numbers.

**RESULTS**

**Table (1)** shows that the age of the study participant ranged between 24-40 Mean age ±SD equal 28.1±4.7, about three quarter of participant (74.2%) have baccalaureate of nursing related to the years of experiences also it illustrated that they had Mean ±SD =6.7±4.9. While the majority among them hadn't receiving any staff developmental training program constituted (96.8%). Lastly this table cleared that, the total participant (100%) haven’t ongoing any educational program.

Table (2) revealed that the mean ages of group two ranged between 23-52 years while more than two third (70%) of study participant have baccalaureate degree, regarding years of experiences, results showed their Mean average ±SD 3.9±5.3.Also (83.3%) among study participant (Group II) hadn't received any staff developmental training program only less than one quarter received this program. Regarding the ongoing education program, more than three quarters of these participants don’t received any training program.

Table (3) showed that the knowledge regarding clinical measurements topics for effective nursing preceptor's role among both study sample groups (I &II) pre implement an educational program, results mentioned that about three quarters (73.77%) of preceptor had low level of knowledge regarding two topics effective preceptorship and measuring of clinical competence while the one third (34.42%) among them had moderate knowledge about clinical teaching & critical thinking .On the other hand, only learning strategies and methods topic the participants had high level knowledge and highest percentage (78.68%).
Table (4) showed that distribution of both study sample groups' knowledge regarding clinical competence mean and standard deviation 77.18% regarding the differences between competence and performance and equally percent between methods used and restriction about clinical competency.

Table (5) showed the distribution of preceptor's abilities by their preceptees pre-educational program. \((n = 126)\), more than one third among perceptee were given their preceptors an excellent degree regard their abilities regard they introduce them to staff /unit, available when need help, present information in logic and clear manner, communicated with me by actively listening, and supervision was appropriately constituted \((31.7\% & 30.2\% & 33.3\% & 31.7\% & 36.5\% )\). while more than one third among Preceptees were given their preceptors good degree regarding other areas of practices. Moreover highest percentage \((33.3\% )\) among Perceptees were given their preceptors poor degree because they were not assess their skill capabilities and demonstrate patient assessment.

Table (6) showed that range of mean scores was 14.3332 as the highest and 14.024 as the lowest, thus indicating there is not much difference between the scores, results reveal that the questions asked of the Perceptees regarding their preceptor with the highest means are my preceptor was available when need help, provide feedback about program, actively sought educational opportunities., communicated with me by actively listening, consistently pleasant and helpful, and supervision was appropriate. The lowest categories ranked by means which considered skill and knowledge related are: “my preceptor was introduce me to staff/unit, encourage me to self-directed, evaluate me in positive manner and demonstrate patient assessment.

Table (7) showed that there were highly statically significant differences in knowledge between pre and posttest regards selected clinical measurements among both studied groups \(p\)-value = .001 **

**RESULTS**

Table (1): Distribution of the study sample according to their general characteristics (Group I- \(n=31\)).

| General characteristics                                | No  | %   |
|--------------------------------------------------------|-----|-----|
| Age: (years)                                           | 24-40 | 28.1±4.7 |
| Range                                                  |     |     |
| Mean ±SD                                               | 28.1±4.7 |     |
| Level of education                                     |     |     |
| Bsc                                                    | 23  | 74.2% |
| Master                                                 | 8   | 25.8% |
| Diploma degree                                         | 0   | 0%   |
| Years of experience                                    | 1-16 | 6.7±4.9 |
| Range                                                  |     |     |
| Mean ±SD                                               | 6.7±4.9 |     |
| Having preparation program for preceptor development course |     |     |
| yes (If your answer yes mention it)                    | 1   | 3.2% |
| - Face to face preceptor's program                     | 30  | 96.8% |
| • No                                                   |     |     |
| Having ongoing education program                       |     |     |
| Yes                                                    | 0   | 0%   |
| No                                                     | 31  | 100% |
| Total                                                  | 31  |     |

N.B. (Group I): is a total no. of nursing preceptors who working at Minia university.

Table (1) shows that the Mean ±SD age regarding study participant (group I) equal 28.1±4.7, regarding their level of education, it found that about three quarter of participant \((74.2\% )\) have baccalaureate of nursing, related to the years of experiences also it illustrated that they had Mean ±SD \(=6.7±4.9\). While the majority among them were hadn’t receiving any staff developmental training program constituted \((96.8\% )\). Lastly this table cleared that, the total participant \((100\% )\) haven’t ongoing any educational program.

Table (2): Distribution of the study sample according to their general characteristics (group II - \(n=30\)).

| General characteristics                                | No  | %   |
|--------------------------------------------------------|-----|-----|
| Age: (years)                                           | 23-52 | 27.1±5.2 |
| Range                                                  |     |     |
| Mean ±SD                                               | 27.1±5.2 |     |
| Level of education                                     |     |     |
| Bsc                                                    | 21  | 70%  |
| Master                                                 | 8   | 26.76% |
| PhD                                                    | 1   | 3.3%  |
| Diploma degree                                         | 0   | 0%   |
| Years of experience                                    | 1-28 | 3.9±5.3 |
| Range                                                  |     |     |
| Mean ±SD                                               | 3.9±5.3 |     |
| Having preceptor development preparation course         |     |     |
| yes (If your answer yes mention it)                    | 5   | 16.7% |

Inshrah Roshdy Mohamed, et, at International Journal of Nursing Didactics, 9 (05) May, 2019.
Inshrah Roshdy Mohamed, et al, International Journal of Nursing Didactics, 9 (05) May, 2019

Table (2) revealed that the mean ages of group two ranged between 23-52 years while more than two third (70%) of study participants have baccalaureate degree, regarding years of experiences, results showed their Mean age ±SD 3.9±5.3. Also (83.3%) among study participant (Group II) don’t received any any staff developmental training program only less than one quarter received this program. Regarding the ongoing education program, more than three quarters of this participants don’t received any training program.

Table (3) cleared that knowledge regard clinical measurements topics for effective nursing preceptor’s role among both study sample groups (I & II) pre implement an educational program, results mentioned that about around three quarters (73.77%) of preceptor low level knowledge to tow topics effective precept chip and Measure of clinical competence while the one third (34.42%) among same group has moderate knowledge about clinical teaching & critical thinking. On the other hand, only learning strategies and methods topic was had high level knowledge and highest percentage among both study sample groups (I & II) constituted (78.68%).

Table (4) revealed that distribution of both study sample groups’ knowledge regarding clinical competence topic. The strategy used to improve nsd+68.9%

Table (5) The frequency distribution by percentage regarding items on the precept evaluation tool for their preceptor’s abilities pre-educational program. (n = 126)
Moreover, the highest mean rank among precepts were perceived to their preceptors an excellent degree regarding introducing them to staff/unit, available when needed, present information in logic and clear manner, communicated with me by actively listening, and supervision was appropriate constituted (31.7% & 30.2% & 33.3% & 31.7% & 36.5%) while more than one third among precepts were given their preceptors good degree regard to other and similar areas of practice which mentioned above. Moreover, highest percentage (33.3%), among precepts were given their preceptors poor degree because they were not assess their skill capabilities and demonstrate patient assessment.

Table (6) indicated that the frequency distribution by percentage regarding evaluation of the precept of their preceptor's abilities pre-educational program, it shows about more than one third among precepts were given their preceptors an excellent degree regard introduce them to staff/unit, available when needed, present information in logic and clear manner, communicated with me by actively listening, and supervision was appropriate constituted (31.7% & 30.2% & 33.3% & 31.7% & 36.5%). While more than one third among precepts were given their preceptors good degree regard to other and similar areas of practice which mentioned above. Moreover, highest percentage (33.3%), among precepts were given their preceptors poor degree because they were not assess their skill capabilities and demonstrate patient assessment.

Table (6) Overall means ranked regarding items on the precept evaluation tool for their preceptor's abilities pre-educational program. (n = 126)

| Areas of practice | Mean | SD   | Rank |
|-------------------|------|------|------|
| 10-Available when need help. | 14.3332 | 1.9388 | 1 |
| 2-Provide feedback about program. | 14.2856 | 1.199136 | 2 |
| 9-Actively sought educational opportunities. | 14.238 | 1.99772 | 3 |
| 12-Communicated with me by actively listening. | 14.238 | 2.09196 | 3 |
| 13-Consistently pleasant and helpful. | 14.238 | 1.99772 | 3 |
| 14-Supervision was appropriate. | 14.238 | 2.09196 | 3 |
| 6-Supervise me directly. | 14.1904 | 2.09692 | 4 |
| 3-Assist in the planning and arranging assignment. | 14.1688 | 2.005 | 5 |
| 5-Assess my skill capabilities. | 14.1688 | 2.191 | 5 |
| 11-Present information in logic and clear manner. | 14.1688 | 2.201 | 5 |
| 1-Introduce me to staff/unit. | 14.1428 | 2.10072 | 6 |
| 4-Encourage me to self-directed. | 14.1204 | 2.00852 | 7 |
| 7-Evaluate me in positive manner. | 14.1204 | 2.00953 | 7 |
| 8-Demonstrate patient assessment. | 14.024 | 5.19744 | 8 |

Table (6) showed that range of mean scores was 14.3332 as the highest and 14.024 as the lowest, thus indicating there is not much difference between the scores, results reveal that the questions asked of the precept regarding their preceptor with the highest means are my preceptor was available when needed, provide feedback about program, actively sought educational opportunities, communicated with me by actively listening, consistently pleasant and helpful, and supervision was appropriate. The lowest categories ranked by means which considered skill and knowledge related are: “my preceptor was introduce me to staff/unit, encourage me to self-directed, evaluate me in positive manner and demonstrate patient assessment.

Table (7): Overall knowledge levels as regards important measurements for effective nursing preceptor’s role among both studied groups pre & post educational program (n= 61).

| Level | Pre – education | Post – education | X² | P-value |
|-------|----------------|-----------------|----|--------|
|       | No | %   | No | %   |         |    |
| Low   | 52 | 85.2| 0  | 0   | 152.370| .001**|
| Moderate | 9  | 14.7| 14 | 22.9|        |    |
| High  | 0  | 0   | 47 | 77  |        |    |

Table (7) shows that highly statically significant differences in knowledge and skills between pre and posttest regards important measurements for effective nursing preceptor’s role among both studied groups p-value= .001**

**DISCUSSION**

Perception of health institutions about importance of nursing preceptors role are a major considerations, because that they had an impact on preceptees’ clinical skills and knowledge, role development and personal skills, and on preceptees development of their professional relationships and communication skills [24].
The current results mentioned that about three quarters of preceptor had a low level knowledge regarding two topics “effective preceptorship and measuring of clinical competence” while the one third among them had moderate knowledge about clinical teaching & critical thinking. On the other hand, only learning strategies and methods topic the participants had high level knowledge and highest percentage among both study sample groups (I & II) constituted (78.68%) this may be because the teaching is transitional phase for middle range nurse. This study supports findings by Hickey (2009) and Bradley (2007) [25-26] reported that increased self-efficacy for preceptors in clinical teaching and assessment. Han and Shin (2016) [27] indicated that health professionals reported high levels of self-efficacy in regulating their learning through massive online open courses (Milligan and Littlejohn, 2016) [28].

Moreover current studies shows that highly statically significant differences between pre and posttest regarding selected clinical measurements for effective nursing preceptor’s role among both studied groups p-value= 001 **, this findings is agree with (Edwards et al. / International Journal of Nursing Studies (2015), [29]. Who suggested that preceptor development impacts understanding and builds confidence in the preceptor’s ability to carry out various functions within the precepthip. Higgins, et al. (2010) [30] who concluded that, further research is needed into all aspects of preceptorship (Du.et.al2013.) [31], said that the preceptorship program appears to enable nursing preceptor to achieve level of competence and confidence that they did not have upon qualifying and had a positive impact on their communication skills, personal development, role development, professional relationships and clinical skills development. It also agreed with (Milligan and Littlejohn, 2016) [28]. Who is noted that self-efficacy is highly dependent on the learning content or platform, and linked with task familiarity..

Lastly more than one third among preceptee were given their preceptors an excellent degree regard introduce them to staff/unit, available when need help, present information in logic and clear manner, communicated with me by actively listening, consistently pleasant and helpful, and their supervision was appropriate”.

RECOMMENDATIONS

- Design a preceptorship programs or academy that develop a courses is the best starting point to increase effectiveness of preceptors role then reflect on the development of specific skills in precepts students’
- All health care institutions or academic setting adopt an evidence based preceptor program to enhance its preceptor qualification and use a standardized tool during employment and evaluation of preceptors 
- Further researches are needed into all aspects of preceptorship because it is transitional phase for precepts to become as qualified nurse.

REFERENCES

1. Panzavecchia L, Pearce R. Are preceptors adequately prepared for their role in supporting newly graduated staff? Nurs Educ Today. 2014;34(7):1119–24. doi: 10.1016/j.nedt.2014.03.001. [PubMed] [CrossRef]
2. Carlson E, Pilhammar E, Wann-Hansson C. Time to precept: Supportive and Limiting Conditions for Precepting Nurses. J Adv Nurs. 2010;66(2):432–41. doi: 10.1111/j.1365-2648.2009.05174.x. [PubMed] [CrossRef]
3. Ford K, Courtney-Pratt H, Fitzgerald M. The development and evaluation of a preceptorship program using a practice development. Aust J Adv Nurs. 2013;30(3):5–13.
4. Earle-Foley V, Myrick F, Luhanga F, Yonge O. Preceptorship: Using an Ethical Lens to Reflect on the Unsafe Student. J Prof Nurs. 2012;28(1):27–33. doi: 10.1016/j.profnurs.2011.06.005. [PubMed] [CrossRef]
5. Kamolo E, Vernon R, and Toffoli, L. A Critical Review of Preceptor Development for Nurses Working with Undergraduate Nursing Students International Journal of Caring Sciences May– August 2017 Volume 10 | Issue 2| 1089 Available from http://www.internationaljournalofcaringsciences.org/docs/5_0_kamolo_special_10_2.pdf
6. Carlson E. Precepting and Symbolic Interactionism: A Theoretical Look at Nursing Practice. J Adv Nurs. 2013;69(2):457–64. doi: 10.1111/j.1365-2648.2012.06047.x. [PubMed] [CrossRef]
7. Cant, R., McKenna, L., Cooper, S., 2013. Assessing preregistration nursing students' clinical competence: a systematic review of objective measures. Int. J. Nurs. Pract. 19, 163–176.
8. O'Connor, A., 2006. Clinical instruction and evaluation: a teaching resource. Jones and Bartlett Boston.
9. Heffernan C, Heffernan E, Brosnan M, Brown G. Evaluating a preceptorship programme in South West Ireland: perceptions of preceptors and undergraduate students. J Nurs Manag. 2009;17(5):539–49.
10. Öhman A, Hägg K, Dahlgren L. A stimulating, practice-based job facing increased stress- Clinical supervisors' perceptions of professional role, physiotherapy education
and the status of the profession. Adv Physiother. 2005;7(3):114–22.

11. Baltimore JJ. The Hospital Clinical Preceptor: Essential Preparation for Success. J Contin Educ Nurs. 2004;35(3):133–40

12. Chang C-C, Lin L-M, Chen I-H, Kang C-M, Chang W-Y. Perceptions and experiences of nurse preceptors regarding their training courses: A mixed method study. Nurs Educ Today. 2015;35(1):220–6.

13. Kaviani, N & Stillwell, Y 2000, 'An evaluative study of clinical preceptorship', Nurse Education Today, 20 (3):218–226.

14. Trede, F., Sutton, K., & Bernoth, M. (2016). Conceptualization and perceptions of the nurse preceptor's role: A scoping review. Nurse Education Today, 36, 268-274.

15. Windey, M., Guthrie., K., Sullo, E., Lawrence, C., Weeks, D., & Chapa, D. (2015). A systematic review on interventions supporting preceptor development. Journal for Nurses in Professional Development, 31(6), 312-

16. Dwyer, P.A. & Hunter Revell, S.M. (2016). Multilevel influences on new graduate nurse transition. Journal for Nurses in Professional Development, 32(3), 112-121.

17. O’Brien A, Giles M, Dempsey S, Lynne S, McGregor M, Kable A, et al. Evaluating the preceptor role for pre-registration nursing and midwifery student clinical education. Nurs Educ Today. 2014;34(1):19–24.

18. Smedley A, Morey P, Race P. Enhancing the Knowledge, Attitudes and Skills of Preceptors: An Australian Perspective. J Contin Educ Nurs. 2010;41(10):451–61.

19. Heffernan C, Heffernan E, Brosnan M, Brown G. Evaluating a preceptorship programme in South West Ireland: perceptions of preceptors and undergraduate students. J Nurs Manag. 2009;17(5):539–49.

20. Luhanga LF, Dickieson P, Mossey SD. Preceptor Preparation: An Investment in the Future Generation of Nurses. Int J Nurs Educ Scholarsh. 2010;7(1):1–18.

21. Mårtensson G, Engström M, Mamhidi A-G, Kristofferzon M-L. What are the structural conditions of importance to preceptors’ perceptions? Nurs Educ Today. 2013;33(5):444–9.

22. Fink, R., Krugman, M., Casey, K., & Goode, C. (2008). The graduate nurse experience: Qualitative residency program outcomes. Journal of Nursing Administration, 38(7-8), 341-348. doi:10.1097/01.NNA.0000323943.82016.

23. Goode, C. J., Lynn, M. R., Krsek, C., Bednash, G. D., & Jannetti, A. J. (2009). Nurse Residency programs: An essential requirement for nursing. Nursing Economic$, 27(3), 142. Retrieved from http://www.ajj.com/services/pbshng/ne/default.htm

24. Muir J , Ann Ooms , Jen Tapping , Di Marks-Maran *, Sonia Phillips , Linda Burke. , 2013. A St George's Healthcare NHS Trust, Blackshaw Road, London SW17 0QT, United KingdomKU/SGUL, Faculty of Health and Social Care Sciences, St George’ University of London, Cranmer Terrace, London SW170RE, United Kingd Kingston University and St George's University of London, 30 Beacon Crescent, Tilford Road, Hindhead, Surrey GU26 6UG, United Kingdom School of Health and Social Care, University of Greenwich, Old Royal Naval College, Park Row, London SE10 9LS, United Kingdom

25. Hickey, M., 2009. Preceptor perceptions of new graduate nurse readiness for practice Journal for Nurses in Staff Development 25 (1), 35–41. Preceptors’ perceptions of a preceptorship programme for newlyqualified nursesa,1 b,2 c, a,4 d

26. Bradley, C., Erice, M., Halfer, D., Jordan, K., Lebaugh, D., Opperman, C., Owen, K.L, Stephen, J., 2007. The impact of a blended learning approach on instructor and learner satisfaction with preceptor education. J. Nurses Sta Dev. 23, 164–172?

27. Han, I., Shin, W.S., 2016. The use of a mobile learning management system and academic Tang, F., Chou, S., Chiang, H., 2005. Students' perceptions of effective and ineffective achievement of online students. Comput. Educ. 102, 79–89

28. Milligan, C., Littlejohn, A., 2016. How health professionals regulate their learning in massive open online courses. Internet High. Educ. 31, 113–121.

29. Edwards, Clare Hawker, Judith Carrier, Colin Rees:2015 A systematic review of the effectiveness of strategies and interventions to improve the transition from student to newly qualified nurse

30. Higgins,G.,Spencer,R.,Kane,R..2010.Asystematicreviewof theexperiences andper-fi ceptions of the newly quali ed nurse in the United Kingdom. Nurse Education Today 30, 499–508.

31. Du, S., Lui, Z., Lui, S., Yin, H., Xu, G., Zhang, H., Wang, A., 2013. Web-based distan learning for nurse education: a systematic review. Int. Nurs. Rev. 60, 167–177.