Original Article

Passing through a rocky way to reach the pick of clinical competency: A grounded theory study on nursing students' clinical learning

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Abstract

Background: Clinical learning is one of the important issues that helps the perception of nursing students' practice in a clinical setting and its effect on their professional development. The aim of this study is to describe and state the manner of clinical learning in nursing students.

Materials and Methods: This qualitative study was conducted as a grounded theory. The individual semi-structured interviews and participants' observations were taken into account with a purposive and theoretical sample of 27 participants. The data were analyzed using the grounded theory approach and the constant comparison analysis method.

Results: The results showed that students use two approaches of Micro- and Macrolearning. The first includes learning conditions and situations that act like a foundation for the second one (Macrolearning). Macrolearning is a continuous process including all categories of "Facing unfavorable clinical facts," "Clinical situation and appropriate decision making," "Bridging the gap between practice and theory," "Struggle for clinical independence," and "Dynamism" in a continuum reflecting the struggle to obtain clinical competency (core variable).

Conclusions: Through provision of such conditions as students' gradual acquaintance with real situations, selection of more resistant students, use of mentorship and preceptor ship in clinical learning, enhancement of educational standards in hospitals, handling collaborative learning methods to make a cooperation spirit in internship environment, and so on, students can be helped to obtain clinical competency.

Key words: Clinical nursing research, education, Iran, learning, nursing, qualitative research

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Introduction

Clinical learning is one of the important ways of enhancing nursing students' function in a clinical setting and affecting the development of nursing profession. Also clinical learning is one of the major parts of nursing in the world,[1-8] and Iran is not an exception.

Although nursing students spend a lot of their time on learning in a clinical setting,[9] the nature of clinical learning is not well defined. Very few studies have been conducted on students' preparation for clinical learning, the major skills of active learning, and the way they obtain their experiences.[10] Researchers, through their educational experiences as instructors, noticed a wide gap between theory and practice, and they found out that the students do not face ideal learning in a clinical setting.

Thus, it is crucial for nursing instructors to seek for the ways to promote and reinforce students' skills and clinical abilities in clinical settings. Nature of clinical learning ought to be closely noticed, since each of the students have their

unique experience in various clinical settings as well as their own teaching and learning styles, and so on. The detection of these factors is of great help to instructors and educational planning authorities of nursing clinical education and can result in the promotion of nursing students' learning quality.

Peyrovi *et al.* (2005) studied nursing students' clinical experience through Van Manen's phenomenologic methodology. In this study, 5 themes of "Caring-orientated relationships," "Attractive aspects of clinical experience," "Finding oneself in the clinical milieu," "Being supportive to classmates," and "Actualizing potential" were yielded.[11]

Hassani *et al*. (2008) conducted a study on self-efficacy and self-regulation in clinical competency among nursing students and analyzed the data through content analysis. In their study, the perception of self-efficacy was categorized in 5 subthemes of "Obtaining clinical skills," "Patients' examination," "Care planning," "Administration of care and caring evaluation."[12]

Mabuda *et al*. (2008) studied nursing students' experiences during clinical internship to investigate senior nursing students through a qualitative phenomenologic method. They reported that students' negative experiences resulted in some factors, including "Lack of learning and educational supports," "Lack of learning opportunities," "Low combination of theory and practice," and "Low relationship between students, faculty instructors, and hospital personnel."[13]

Yet, how we can promote clinical learning in nursing students has remained a question. Thus, the researchers decided to run a qualitative study with grounded theory method to theoretically describe and state the manner of clinical learning among nursing students. The question of this research is "How does clinical learning occur in nursing students?"

Materials and Methods

A qualitative method was employed to allow the researchers to explain student nurses' perspectives on clinical learning. Data were collected and analyzed using a grounded theory approach.[14] Grounded theory is appropriate for recognition of the processes in their social backgrounds, and analysis and interpretation of the related factors and conditions in these processes.[15,16] Clinical learning is an ongoing and dynamic process, rather than a static situation; therefore, a grounded theory approach is the preferred methodology.

In the present research, 21 undergraduate Iranian nursing students at the second or higher semesters of study in the department of Nursing and Midwifery at the Universities of Tehran and Shahid Beheshti were selected through purposive sampling. According to their viewpoints and suggestions, it was assumed that nursing instructors serve as suitable key informants regarding clinical learning (4 instructors). As a result of the wide range of experiences and perceptions among this group of participants, interviews were conducted theoretically according to the codes and categories as they emerged until saturation of the data among this group was reached. In addition, while interviewing and analyzing the data, some codes indicated the role of the nurses, which guided the continued sampling theoretically up to saturation (2 nurses).

The participants were invited to participate, and all of them attended an orientation to the study. Data were collected through semi-structured interviews and observations.

After signing an informed consent, the participants were asked to agree upon a convenient time and place for the interview. The principal interview questions were the following: "What comes to your mind when you hear the phrase 'clinical learning'?," "Which factors affect your clinical learning?" The interviews were recorded by a digital voice recorder and were subsequently transcribed. The semi-structured, focused interviews were conducted in 1–2 sessions taking an average of 50 min.

In addition to interview, observation was also conducted in the present study to complete the data collection and to investigate clinical learning various dimensions. The chief researcher observed 4 different wards in the morning shift in 2 different hospitals for four 3- to 4-h sessions. The chief researcher observed the students, the staff, and the clinical educator while taking care of the patients from the corner of the ward or a nursing station. The focus of researcher's observation was on participants' observations concerning student–nurse educator, student–patient, and student–staff interactions as well as observation of hospital environment, etc. Field notes were written to describe the observations and were later analyzed, through constant comparative method.[17]

Moreover, memos were written to record insights, conceptualize connections between the categories, hypothesize regarding relationships, and facilitate the development of theory emergence.[18]

The interviews were recorded by a digital voice recorder and were subsequently transcribed and analyzed using the MAXQDA qualitative software package (MAX Qualitative Data Analysis 2010 is a software for qualitative analysis of the data. Excerpt of the interviews with its codes and reminder can be seen in this software. It also makes it

possible for simultaneous comparing of the interviews' data). The researchers read all data repeatedly to achieve immersion and obtain a sense of the whole.[19]

Data were collected and analyzed during a 9-month period from mid-2010 until data saturation, that is, until no additional data were found for development of the properties category. When one category is saturated, nothing remains but to go on to a new group for data on other categories.[20] For data analysis we used Strauss and Corbin method.[15,21] The analysis process included open coding, axial coding, and selective coding. Constant comparison analysis and theoretic sampling were also used in the data analysis process.

In open coding stage, 1198 codes emerged. After several reviews, similar items were combined, and finally in axial coding, 1198 key words were diminished to 28 categories. In selective coding (the third phase), similar codes or those with similar meanings and concepts were categorized in one group. The last 28 categories were categorized and labeled in one core category and 5 categories.

At this stage, categories and subcategories were systemically linked with the core through indepth data collection and constant comparative analysis. The "struggle to obtain clinical competency" emerged as the core category through the process of making a linkage among categories.[22]

Credibility was established through field note writing, memoing, prolonged engagement with the participants, the participants' revisions, using member checking, and peer checking. According to Lincoln and Guba (1985), transferability rests with the audience to judge transferability based on the thick description of the findings. Dependability is guaranteed when credibility is assured. Lincoln and Guba (1985) recommend providing an audit trail as a document to assure confirmability.[23]

Ethical approval was obtained from the Nursing Faculty Research Committee at Tehran University of Medical Sciences.

All of the participants were informed of the purpose and design of the study and that their participation was voluntary with concern for confidentiality and anonymity. Verbal consent was given and also audio-taped. To protect privacy, interviews were conducted with the participation of only the interviewer and the interviewee.[24]

Results

Five categories with one main core variable emerged through constant comparison analysis. All these categories contain some subcategories reflecting main dimensions of that category [Table 1].

The results showed how students access clinical learning in clerkship and what challenges and situations they face through this way. Students employed two approaches for learning: one as Microlearning and the other as Macrolearning. Microlearning is the conditions and situations of learning that act as a base for making Macrolearning. Microlearning states how learning occurs in each clinical situation. Each student tries to develop their own clinical learning with regard to their unique personal characteristics through teachers' teaching and learning opportunities (existing cases, personnel, classmates' education, and so on) as well as available various learning strategies and preferences [Table 2]. Macrolearning is

Table 1: Categories emerged from the data and their subcategories (Macrolearning)

Categories	Subcategories
Facing unfavorable clinical facts	Not fulfilled dreams Difference between facts and reality Shame of unknowns
Analysis of clinical situation and appropriate decision making	Promotion of clinical skills Promotion of theoretic knowledge Preserving beliefs and values
Bridging the gap between practice and theory	Reconstructive thinking Clinical issues analysis Coincidence Correlation between theory and practice Role model orientation
Struggle for clinical independency	Seeking trust in clinical field Maturation Administration Timing Prioritizing Decision making
Dynamism	Thirst of clinical learning Learning continuation in life
Struggle to acquire clinical competency (Core variable)	

Table 2: Conditions and situations of clinical learning (Microlearning)

Categories	Subcategories
Factors related to student	Tendency, motivation, experience, self-confidence, curiosity, interest, etc.
Factors related to teacher	Patience, calm, interaction, self confidence, seriousness, skill, up to date, etc.
Factors related to personnel	Interaction, behavior, respect, skill, up to date, etc.
Learning strategies	Observation, trial and error, practice, bed side teaching, self-directed learning, case report, group discussion, cooperative learning, etc.
Learning preferences	Appropriate environment, condition, time and case for clinical learning etc.

the consequent step that the learner tries to reach for clinical competency. Nursing students' movement toward obtaining clinical competency is laid in a continuum starting from facing unfavorable facts and ending in dynamism with a holistic approach to "struggling to obtain clinical competency" [Figure 1].

Facing unfavorable clinical facts

The movement toward clinical learning starts from this stage. From the viewpoint of the participants "Facing unfavorable clinical facts" with subcategories as "not fulfilled dreams," "difference between facts and reality," and "shame of unknowns" is an issue in clinical learning. As a matter of fact, the students' expectations are not met at the entrance to a clinical environment, and they do not apply what they have already studied theoretically to practice, as done by the nurses working in the wards. In addition, nurse educators do not have enough authority and respect in clinical environment. The participants also indicated "There are no equipments and facilities needed for students' learning in clinical environment," and "The tasks assigned for nursing students are beneath of them." They thought, the nurses in the wards would welcome them, but they were accepted as helpers with not enough respect. Worst of all, the nurses would not provide them with necessary learning situations. All the above issues raised a question in the participants' mind as "Why lots of their expectations are not met in the ward?" On the other hand, they also pointed to the difference between facts and realities. When learners are involved in clinical practice and know the regulations and the environment, they try to figure out the reason for what it practically is and what it should be. They were not convinced with the answers through books, personnel, clinical educators, and classmates, and tried to get the answer through detection of the environment, conditions, and prevailing connections as well as the regulations in the ward. They try to figure out the reason for the difference between what they learned theoretically and what they saw in practice. The participants also believed they could well communicate with other students in other majors and exchange questions related to the patients when they would practice in the ward. But instead, they received questions they had no answer for. This made them ashamed and forced them to modify their learning deficits to fight with this unfavorable feeling.

Analysis of clinical situation and appropriate decision making

Passing the former stage, the students begin to consider modification of the present condition and try to analyze the clinical situation and make appropriate decision. Most of the participants believed that they had promoted their practical skill to obtain their professional situation. Since nursing is a practical profession, nurses' practical skills and

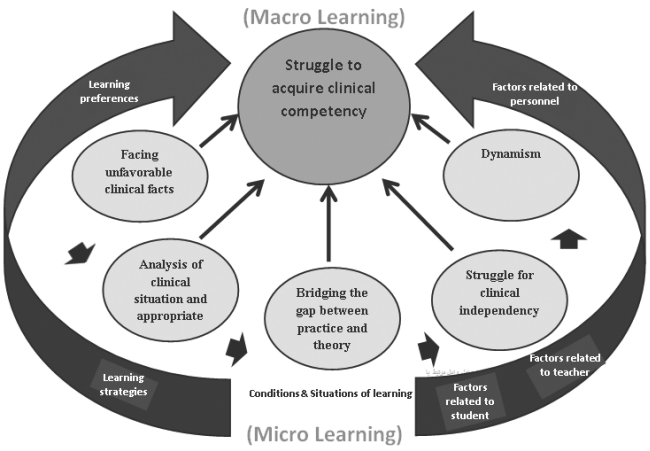

Figure 1: Description of the manner of clinical learning in nursing students

experience make their professional situation in the ward. On the other hand, some participants said, "We should increase our theoretical knowledge through library studying, internet surfing, or asking questions from nurse educators and staff nurses in order to obtain our professional situation." They finally believed that Nurses can identify their nursing profession through being knowledgeable.

Some of the participants also emphasized the preservation of their values and beliefs and believed nursing to be a spiritual profession with a high spiritual value of taking care of the patients. They believed that because their internal satisfaction is important, they can ignore all unfavorable clinical issues and seek for spiritual value of patients' care and patients' and God's satisfaction. They also believed what goes around, comes around, which means you are paid back what you do to others.

Bridging the gap between theory and practice

Participants now try to bridge the gap between theory and practice to fight with the problems. One of the issues, most of the participants indicated, was the struggle to coincide the theory with practice. Participants stated that in the ward, they try to review the already learned materials and remember the signs and symptoms of the learned diseases of the patients assigned to them. This stage can be called "reconstructive thinking" as the learner tries to remember the forgotten items and reconstruct his/her learning deficits. After "reconstructive thinking," the students try "clinical issues analysis" like "why do these signs exist in this patient?" and "why is this caring method administrated for the patient?" Participants seek for a "coincidence" after analyzing these issues through two methods of theory—practice friendship and modeling methods. In theory–practice friendship, they try to make theoretical issues close to patients' condition and after theory–practice

friendship was made, design their care plan based on their already learned materials. Then, the participants make pattern (role) orientation and ask their clinical educators and other individuals involved in their education (staff nurses, senior students, and others), firstly to administrate caring or a procedure themselves for them so that they can learn.

It should be noted that not only learning the procedures is the main issue in modeling, but also other issues, such as behavior, manners, and so on, from others should be learned. With regard to the latter issue, unfortunately, the students at times learn things, such as nonstandard learning of procedures, disrespecting the patients, irregularities, routinization, and so on, that do not fit the clinical learning goals.

Struggle for clinical independency

Participants stated that after pattern (role model) orientation and procedure repeat and practice, it is time to do the procedures (tasks) independently. Here, the concept of struggle for clinical independency finds meaning. They believe they should put clinical trust at the top of their mind. In other words, they should "win others' trust" through correct and appropriate behavior and function. They stated that they should be prepared and skilled, and accept responsibility, be self-confident, and brave enough to do things independently. Overall, the participants' statements show that they should be "clinically matured." Clinical maturation means the stage at which the learners can independently do the tasks in a "reasonable time," and can predict the time needed for each care. Participants also believed that the learners should be able to "prioritize the cares" and be decisive (making firm decisions) in various situations.

Dynamism

Passing the former stations, the learner reaches terminal of dynamism in which meaningful and lifelong learning occurs.

Participants are determined to learn and apply the already learned materials after getting independent in doing their tasks with dynamism and beyond time and place (during their clinical internship). In other words, they are thirsty for clinical learning and try to make best of the internship time. Even at this point, the boarders are removed and learning goes beyond clinical environment and is taken to life so that they take every chance in noninternship hours to learn, when they are with their families, friends, or peers and others. Here, "lifelong clinical learning" finds a meaning as a part of the learners' life.

Struggle to obtain clinical competency

Core variable extracted from this study which is in interaction with other categories is "struggle to obtain clinical competency."

All categories are laid in a continuum reflecting the struggle to obtain clinical competency. This is a core category, and is in association with all other concepts.

The factors related to struggle to obtain clinical competency and their interactive nature determine how nursing students clinically learn. Many of the learners' expectations are not practically met in their transition from clinical learning concerns and at their entrance to the clinical environment. Next, they think of modification of the present condition and analyze the clinical situation and make appropriate decision. Then, they try to help clinical learning by a reconstructive intervention through bridging the gap between theory and practice. Finally, they know, they are clinically mature enough to do things independently.

By passing the former stations, they reach the terminal of dynamism where lifelong and meaningful learning occurs. Their success to reach this stage shows that they have been struggling to obtain clinical competency all along.

Discussion

This study results show the fact that nursing students pass all these stages (from facing unfavorable clinical facts to dynamism) with its all problems just with the hope of obtaining clinical competency, which is the result of their continuous struggle in clinical learning.

Facing unfavorable clinical facts

One of unfavorable paradoxes was the illusion the students had made about the clinical environment they would face, "a palace of dreams" while, the things done were in conflict with what they had theoretically studied. The findings of this study have been supported by other studies,[25-30] whereas in some other studies, the obtained findings are not consistent with those of the present study.[31,32]

Perhaps, the students had better gradually face these unfavorable situations parallel to promotion of educational standards in educational hospital wards.

After all, in addition to all these difficulties, students try to face these whys despite the lack of fact and truth coincidence and seek for answer to these "whys." Here, the role of mentors and staff gets important to clarify students' paradoxes. Other studies have also emphasized the positive role of instructors, mentors, and staff in clarification of students' paradoxes.[30,33,34] The tasks, beneath of the nursing students, were also among these unexpected issues for nursing students in nursing profession. The mentioned items are among clinical education obstacles and problems, pointed to by other studies.[35,36]

Analysis of clinical situation and appropriate decision making

Nursing students try to analyze the clinical situation and make appropriate decision when faced with these whys. Some believe the profession can be well identified through increase of theoretic knowledge. Meanwhile, although it is yet controversial, most of the participants agreed on practical skills as a way to identify the profession. Ericsson (2007) believes expert researchers assumed that extended experience would be sufficient for regular, or at least sufficiently talented individuals to become experts and attain expert levels of performance. However, subsequent studies have shown that those with extensive experience or even vast knowledge in a domain—so-called experts—do not necessarily perform any better than less-trained individuals.[37] However, most of the researchers believe that through a combination of knowledge and skills gained from a range of theoretic and experiential sources, expert nurses also provide holistic care. Thus, the best care comes from the combination of theoretic, tacit, and experiential knowledge.[38-41]

The findings also showed that most of the participants found their professional situation in respecting the values and beliefs. Respecting values and beliefs originates from students' religious beliefs. As, nursing is counted as a holy and valuable profession in Islam, the belief to get close to God as well as human perfection through nursing is a factor for nurses' interest and joyfulness, since they find their profession as a human–God spiritual mission.[42] It has also been mentioned in Quran that "*Be kind for God loves the kind*" (Baghara sura, verse 195). These Islamic religious beliefs can give identity to the profession so that the students can locate their spiritual profession and go for learning.

Bridging the gap between theory and practice

Students indicated that learning with various methods is categorized as "reconstructive thinking" in which the students try to remember the already learned materials and make a logical association between theoretic and clinical issues. Students identified strategies for "unpacking" the learning process, or ways to convert their theoretical knowledge to practical clinical decisions.

Andersson and Edberg (2011) stated that the theoretic nursing science courses are experienced as having limited application to the students' clinical practice, leading to the creation of a gap between theory and practice.[43] Theory–practice gap has been a problem existing in nursing students' clinical education for many years as indicated in many studies.[11,25,27,28,30]

In order to integrate theory and practice, various methods can be handled: the priority of theoretic courses to the practical ones, curriculum revision, consideration of cases according to theoretic materials already learned, and looking for an innovative curriculum to reconcile students' theoretic and practical educational content.

Meanwhile through this way, the students try to bridge this gap by reconstructive thinking so that after obtaining logical results, they achieve the stage of coincidence and make "theory and practice friendship." But, this is not enough and the students try to correlate their practice with the methods administrated by clinical educators, staff, mentors, or preceptors, and even classmates and other peers. Modeling is one of the ways the learners learn with, and is an inseparable part of practical and clinical education of skills indicated by other studies.[30,33,44,45]

Participants indicated the role of other students in learning. Hiring senior students as preceptors in order to guide and educate junior students is one of the effective methods in students' clinical education, communication skills, and so on. Unfortunately, this method is either not so prevalent in developing countries or it is not official in nursing students' education while it is used for nursing students' clinical education in western countries.[46]

Other studies have reported some issues related to inappropriate mentorship. Poor mentors were felt to have poor teaching skills, to break promises, be lacking in expertise, and have an unclear idea of the students' capabilities.[45,47] So, all aspects must be considered in selection of mentors, clinical educators, and preceptors. Meanwhile, modeling has its own problems so that in pattern making, right patterns are not necessarily copied and at times, mislearning (like administration of procedures inappropriately, not practicing skillfully, routinization of the tasks, misbehaving, and so on) occurs. The findings of this study have been supported by other studies.[48-50] Mislearning is the result of routinization of the tasks in the ward by the students, clinical instructors, and staff, together with dumb actions in care. Buller and Butterworth (2001) believe that through routinization, patients' care deviates to disease orientation instead of patients' orientation, resulting in a wide gap between practice and theory.[51]

Struggle for clinical independency

Hayes (1998) believes that students' self-esteem is enhanced when they believe they are contributing to care.[52] Developing confidence is an important component of clinical nursing practice. Development of confidence should be facilitated by the process of nursing education; as a result students become competent and confident.[30]

But in order to get the permission to act independently, a nursing student should be able to win the trust from clinical

instructors, mentors, and staff.[53] Students are innovative and at times, clinical situations provide potentialities for these innovations.

Dynamism

Dynamism can be compared with internalizing values stage of bloom affective domain. It means that the learner reaches a stage at which learning is changed to an internal value and is not limited to a certain time. Heshmati believes that clinical training takes place in a dynamic situation and certain opportunities for teaching are transient, the clinical educator needs to be fully knowledgeable and wholly utilize the opportunities for teaching as they arise.[54]

Struggle to acquire clinical competency

Clinical competency is a complicated and unclear concept, which has already been investigated from different dimensions and approaches in previous years. Axley (2008) believes that in nursing, competency has been defined as the knowledge, skills, ability, and behaviors that a person possesses in order to perform tasks correctly and skillfully.[55]

The competency can help the students present their professional role.[56] Obtaining clinical competency is among the main objectives of medical education. Nowadays, authorities try to promote the quality in this part of educational process through modern approaches in detection of students' clinical competency.[57]

With regard to the differences in background, experience and skills of nursing students, the way of their achievement to clinical competency should be studied in this group of students.

Because this study is based on a small sample of student volunteers from the urban Tehran population, generalizability may be limited.

It can be concluded that detection of each step in learning and the conditions and the situations the students are left in help the instructors and authorities of nursing education not only to consider students› learning needs with regard to each step of their learning, but to have an appropriate reaction toward each step of learning, and ultimately, to enable them to design the related educational curriculum as well.

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References

1. Papp I, Markkanen M, von Bonsdorff M. Clinical environment as a learning environment: Student nurses' perceptions concerning clinical learning experiences. Nurse Educ Today 2003;23:262-8.
2. Shin KR. The meaning of the clinical learning experience of Korean nursing students. J Nurs Educ 2000;39:259-65.
3. Dunn SV, Hansford B. Undergraduate nursing students' perceptions of their clinical learning environment. J Adv Nurs 1997;25:1299-306.
4. Serena P, Anna B. Italian nursing students' perception of their clinical learning environment as measured with the CLEI tool. Nurs Educ Today 2009;29:886-90.
5. Löfmark A, Wikblad K. Facilitating and obstructing factors for development of learning in clinical practice: A student perspective. J Adv Nurs 2001;34:43-50.
6. Carlisle C, Calman L, Ibbotson T. Practice-based learning: The role of practice education facilitators in supporting mentors. Nurse Educ Today 2009;29:715-21.
7. Andrews GJ, Brodie DA, Andrews JP, Hillan E, Gail Thomas B, Wong J, *et al*. Professional roles and communications in clinical placements: A qualitative study of nursing students' perceptions and some models for practice. Int J Nurs Stud 2006;43:861-74.
8. Andrews M, Roberts D. Supporting student nurses learning in and through clinical practice: The role of the clinical guide. Nurse Educ Today 2003;23:474-81.
9. Brammer J. A phenomenographic study of registered nurses' understanding of their role in student learning--an Australian perspective. Int J Nurs Stud 2006;43:963-73.
10. O'Shea E. Self directed learning in nurse education: A review of the literature. J Adv Nurs 2003;43:62-70.
11. Peyrovi H, Yadavar-Nikravesh M, Oskouie S, Berterö C. Iranian student nurses' experiences of clinical placement. Int Nurs Rev 2005;52:134-41.
12. Hassani P, Cheraghi F, Yaghmaei F Self-efficacy and Self-regulated Learning in Clinical Performance of Nursing Students: A Qualitative Research. Iranian Journal of Medical Education 2008;8:33-41.
13. Mabuda BT, Potgieter E, Alberts U. Student nurses' experiences during clinical practice in the Limpopo Province. Curationis. 2008;31(1):19-27.
14. Polit, D., Beck, C., & Hungler, B. Essentials of nursing research: Methods, appraisal and utilization (5th ed.). Philadelphia: Lippincott, 2001.
15. Strauss AL, Corbin JM. Basics of qualitative research: Techniques and procedures for developing grounded theory. United States: Sage Publications, Inc; 1998.
16. Charmaz K. Discovering' chronic illness: Using grounded theory. Soc Sci Med 1990;30:1161-72.
17. Strauss A, Corbin JM. Basics of qualitative research: Grounded theory procedures and techniques. United States: Sage Publications, Inc; 1990.
18. Morse JM. Critical issues in qualitative research methods. Thousand Oaks, CA: Sage.; 1994.
19. Hsieh HF, Shannon SE. Three approaches to qualitative content analysis. Qual Health Res 2005;15:1277-88.

20. Glaser BG SA. The discovery of grounded theory: Strategies for qualitative research. New York: Aldine de Gruyte; 1967.
21. Corbin JM, Strauss AL. Basics of qualitative research: Techniques and procedures for developing grounded theory. United States: Sage Publications Inc; 2008.
22. Byrne M. Grounded theory as a qualitative research methodology. AORN J 2001;73:1155-6.
23. Lincoln YS, Guba EG. Naturalistic inquiry. United States: Sage Publications Inc; 1985.
24. Parvizy SA, Ahmadi F, Nasrabad, AN. An identity-based model for adolescent health in the Islamic Republic of Iran: A qualitative study. East Mediterr Health J 2008;14:869-79.
25. Bjørk IT. Neglected conflicts in the discipline of nursing: Perceptions of the importance and value of practical skill. J Adv Nurs 1995;22:6-12.
26. Chapman R, Orb A. Coping strategies in clinical practice: The nursing students' lived experience. Contemp Nurse 2001;11:95-102.
27. Ferguson KE, Jinks AM. Integrating what is taught with what is practised in the nursing curriculum: A multi dimensional model. J Adv Nurs 1994;20:687-95.
28. Hewison A, Wlldman S. The theory practice gap in nursing: A new dimension. J Adv Nurs 1996;24:754-61.
29. Saltmarsh D, North S, Koop T. Student Expectations of Nursing Education. 2011 [updated 14 July 2005]; Available from: http://www.dest.gov.au/archive/highered/nursing/pubs/student_expect/5.htm. [Last cited on 2011 May 18].
30. Sharif F, Masoumi S. A qualitative study of nursing student experiences of clinical practice. BMC Nurs 2005;4:6.
31. Windsor A. Nursing students' perceptions of clinical experience. J Nurs Educ 1987;26:150-4.
32. Yong V. 'Doing clinical': The lived experience of nursing students. Contemp Nurse 1996;5:73-9.
33. Busen NH, Engebretson J. Mentoring in advanced practice Nursing: The use of metaphor in concept exploration. Internet J Adv Nurs Pract [updated 5 feb 2012]; Available from: http://www.ispub.com/journal/the-internet-journal-of-advanced-nursing-practice/volume-2-number-2/mentoring-in-advanced-practice-nursing-the-use-of-metaphor-in-concept-exploration.html.
34. Hathorn D, Machtmes K, Tillman K. The lived experience of nurses working with student nurses in the clinical environment. The Qualitative Report 2009;14:227-44.
35. Barimnejad L, Azarkerdar A, Hajamiri P, Rasooli F. The investigation of the point of view of nursingstudents in term five and afterward about effective factors on the development of clinical education. Iran J Med Educ 2003;10(Special issue):64-5..
36. Dehghani H, Dehghani K, Fallahzadeh H. The educational problems of clinical field training based on nursing teachers and last year nursing students view points. Iran J Med Educ 2005;1:24-33.
37. Ericsson KW, Whyte J 4th, Ward P. Expert performance in nursing reviewing research on expertise in nursing within the framework of the expert-performance approach. ANS Adv Nurs Sci 2007;30:E58-71.
38. Hughes R. Patient Safety and Quality: An Evidence-Based Handbook for Nurses Rockville Agency for Healthcare Research and Quality(AHRQ). U.S. Department of Health and Human Services, 2008.
39. Rolfe G. Closing the theory-practice gap: A model of nursing praxis. J Clin Nurs 1996;2:173-7.
40. Radwin LE. Knowing the patient: A process model for individualized interventions. Nurs Res 1995;44:364-70.
41. Benner P. From novice to expert: Power and excellence in nursing practice. Menlo Part, CA: Addison-Wesley Publishing Company; 1984.
42. Eshaghi SH. Nursing rituals in the Quran and relatives. 2010. Available from: http://www.parsianforum.com/showthread.php/74600-%D8%A2%DB%8C%DB%8C%D9%86-%D9%BE%D8%B1%D8%B3%D8%AA%D8%A7%D8%B1%DB%8C-%D8%AF%D8%B1-%D9%82%D8%B1%D8%A2%D9%86-%D9%88-%D8%B9%D8%AA%D8%B1%D8%AA [Last cited on 2011 May 20].
43. Lilja Andersson P, Edberg K. Swedish nursing students' experience of aspects important for their learning process and their ability to handle the complexity of the nursing degree program. Nurse Educ Today 2011 [In press].
44. Field DE. Moving from novice to expert-the value of learning in clinical practice: A literature review. Nurse Educ Today 2004;24:560-5.
45. Andrew N, Tolson D, Ferguson D. Building on Wenger: Communities of practice in nursing. Nurse Educ Today 2008;28:246-52.
46. Bott G, Mohide E, Lawlor Y. A Clinical Teaching Technique for Nurse Preceptors: The Five Minute Preceptor. J Prof Nurs 2011;27:35-42.
47. McKenzie BK, Ozkan BC, Layton K. Tips for administrators in promoting distance programs using peer mentoring. Distance Learning Administration (DLA) Annual Meeting, Jekyll Island, GA: Distance Learning Administration (DLA) Annual Meeting 2006 June 4-7.
48. Cornish J, Jones A. Factors affecting compliance with moving and handling policy: Student nurses' views and experiences. Nurse Educ Practice 2010;10:96-100.
49. Kneafsey R, Haigh C. Learning safe patient handling skills: Student nurse experiences of university and practice based education. Nurse Educ Today 2007;27:832-9.
50. Cheraghi MA, Salasli M, Ahmadi F. Iranian nurses' perceptions of theoretical knowledge transfer into clinical practice: A grounded theory approach. Nurs Health Sci 2007;9:212-20.
51. Buller S, Butterworth T. Skilled nursing practice--a qualitative study of the elements of nursing. Int J Nurs Stud 2001;38:405-17.
52. Hayes E. Mentoring and self-efficacy for advanced nursing practice: A philosophical approach for nurse practitioner preceptors. J Am Acad Nurse Pract 1998;10:53-7.
53. Burns C, Beauchesne M, Ryan-Krause P, Sawin K. Mastering the preceptor role: Challenges of clinical teaching. J Pediatr Health Care 2006;20:172-83.
54. Heshmati-Nabavi F, Vanaki Z. Professional approach: The key feature of effective clinical educator in Iran. Nurse Educ Today 2010;30:163-8.
55. Axley L. Competency: A concept analysis. Nurs Forum 2008;43:214-22.
56. Azizi F. Medical education: challenges and vision Tehran: Ministry of Health, Treatment and Medical Education, 2003.
57. Parsa-Yekta Z, Ahmadi F, Tabari R. Factors defined by nurses as influential upon the development of clinical competence. Journal of Guilan University of Medical Sciences 2005;14:9-22.

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