

Implementing the Internship Educational Method, a Step to Reduce the Gap between Theory and Practice, Experience of Undergraduate Nursing Students: A Qualitative Content Analysis Study

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Abstract

Background: An internship project can be considered as a useful step for nursing interns in the transition period and bridge the theory-practice gap in nursing. Since the acquisition of professional competence and skills by students is essential, the present study attempted to provide a deep understanding of nursing students' experiences.

Methods: This study was conducted using a qualitative content analysis approach in the School of Nursing of Kerman University of Medical Sciences in 2020. The participants in the research sample were senior undergraduate nursing students who were selected using purposive sampling. The data were collected through semi-structured interviews with the participants and each interview lasted 60 to 90 minutes. A total of 27 interviews were conducted with 25 students. The collected data were analyzed using a qualitative content analysis method (Graneheim & Lundman, 2004). MAXQDA 20 software was also used to analyze the qualitative data.

Results: The core category that emerged from the analysis of qualitative data was "implementing an internship program; a step to bridge the theory-practice gap", which was divided into three main categories: "transferring knowledge and experiences", "promoting the cooperation between the faculty members and the hospital staff", and "improving the process of clinical care".

Conclusion: Internship programs that are considered a new training technique can increase cooperation between nursing schools and contribute to promoting nursing knowledge in nurses by supporting students and promoting their scientific skills.

Keywords: Education, Internship, Nursing students, Qualitative study

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Introduction

Nursing education contains two components of theory and practice, which are complementary to each other (1). Quality education is education that helps students learn professional knowledge, clinical skills, and nursing concepts and apply them in the clinical setting and under real patient care conditions (2). It also helps students to provide higher quality nursing care by applying nursing theories (3). A nursing student must acquire the ability

to solve clinical problems, critical thinking skills (4), self-confidence, competence, and leadership skills (5). Given that students' professional views about their profession are formed in their academic studies (6,7), acquiring all the above skills with professional knowledge is possible by bridging the gap between theory and practice.

The gap between theory and clinical practice has been recognized as the biggest problem in nursing science for decades. Despite the great efforts of nursing professors,



professionals, and clinical nurses, the gap between theory and practice in nursing is still significant (8). Various studies have addressed the possible causes of the theory-practice gap. For instance, Lee et al attributed this gap to the content of theoretical and practical courses and the insufficient interaction between education and the clinical environment (9,10). Other studies have pointed to inadequate educational planning, inadequate clinical instructors and their ineffective relationship with the clinic (11,12), inadequate student support and incoherent teaching of the theory and the clinical practice (8), as well as lack of attention to problem-solving in education as the main causes of the gap between theory and practice (11).

To bridge the theory-practice gap, some measures have been taken to change clinical teaching methods and incorporate innovation in clinical education (13). Although none of these measures has been able to bridge the gap between theory and practice in the growing nursing profession, they have been largely effective (14). Nursing education in Iran has also faced the challenge of the theory-practice gap, which results in training students who are not able to fulfill their responsibilities to meet the needs of patients and society. One of the important measures to bridge the theory-practice gap is the implementation of new clinical education techniques and establishing close relationships between clinical instructors and clinical nurses in the form of preceptorship, mentorship, and internship programs (15). The internship program is implemented for the clinical education of nursing students in the last two semesters and has many strengths and weaknesses. An internship program is a transition course that enhances the knowledge, skills, and attitudes of aspiring nursing students. It can also be considered as a useful step for nursing students and trainees to adapt to clinical conditions and the work environment (16).

Edwards et al showed that the implementation of an internship program in the last year of the nursing program has been effective in improving nursing students' clinical competence, developing their critical thinking skills, reducing students' anxiety and stress induced by clinical work, increasing self-confidence, and in some cases reducing costs (17). Zhang et al also reported that the internship program has integrated and implemented students' theoretical findings in college with their clinical findings in clinical settings and to some extent reduced the constant gap between theory and clinical practice. In addition, gaining work experience is another benefit of implementing internship programs, which allows students to assess their knowledge and skills in the clinical setting and helps them learn new nursing skills. The same authors also reported the implementation of the internship program has increased students' sense of participation as a member of the care and treatment team and significantly improved the interaction between supervisors, mentorships, and students (18). Ayaz-Alkaya

et al also found that the implementation of an internship program for final year nursing students has increased their job burnout but has promoted professional behaviors in nursing students (19).

In the above studies, the positive effects of the internship course have been pointed out, but the role of this course on reducing the gap between theory and clinic is not clear. Moreover, since the acquisition of professional competence and skills is essential for students, some measures need to be taken including changes in clinical education methods and the implementation of internship programs. Given that the culture dominating the nursing profession and factors such as values, beliefs, quality, and how to use the facilities can affect students' understanding, the present study employed a qualitative method to perform an in-depth analysis of nursing students' experience of implementing an internship program to bridge the theory-practice gap.

Methods

The present study was a qualitative one conducted using a content analysis method. The participants were 25 senior nursing students who were completing an internship program in the School of Nursing in Kerman. The participants were selected using purposive sampling with maximum variation. Each participant served as a guide for selecting the next participants who were selected based on the type of data analysis. The sampling procedure continued until the data were saturated and no new information or theme was observed in the interviews with new participants. Field observations were also used to enrich the data. Sampling lasted from March 2020 to July 2020. The research setting was the School of Nursing of Kerman University of Medical Sciences. The interviews were conducted by a member of the research team who held a Ph.D. degree in Nursing. The semi-structured interviews were conducted based on an interview guide and the participants' statements were recorded and transcribed word by word. The interview guide included open-ended questions that aimed to explore the students' experiences of the internship program. Examples of the questions were: "What is your experience of attending the internship program?", "How did the participation in the program affect your clinical education?", "What changes have been made in your nursing care for patients with the implementation of the program?", and "Tell us about your experience". To enrich the collected data, the researcher asked additional questions by reviewing the content of the interviews and taking into account the answer to each question, the objectives, and the procedure of the study. Each interview lasted 60 to 90 minutes (On average=45 minutes). A total of 27 interviews were conducted with 25 students and two students were interviewed twice. The time and place of the interviews were chosen upon the interviewees' agreement. Most interviews were conducted

at the School of Nursing. After completing the interviews, the collected data were analyzed using the qualitative content analysis method proposed by Graneheim and Lundman (17). To this end, the data collected from the interviews were repeatedly read in four steps to get a general understanding of their content. Then, the data were coded to extract the main themes hidden in the nursing students' experiences. First, 820 primary codes were identified. Afterward, the extracted codes were placed based on similarities and differences into different categories, and finally, the relationship between them was determined.

The concepts used in performing qualitative content analysis were unit of analysis, semantic units, summarization, codes, categories, subcategories, and the core category (17). Qualitative content analysis was performed based on semantic units. According to Graneheim and Lundman, the unit of analysis refers to those interviews that are large enough to be considered as a whole and small enough to be kept in mind as a context for the meaning unit during the analysis process. In the present study, each interview was considered as a unit of analysis. After determining the unit of analysis, the text of the interviews was divided into meaning units. Each meaning unit consisted of words, sentences, or paragraphs that contained aspects related to each other through their content and context. In the next step, the meaning units were condensed while still preserving the core. The condensed meaning units were then coded into subcategories. In the next step, categories were created as the core features of qualitative content analysis. A category refers to a set of codes that are similar at a manifest level. Furthermore, the main category is a recurrent thread of underlying meaning running through codes and categories. The analysis process was performed systematically, but there was a back-and-forth movement between the whole and parts of the text (17). The qualitative data were analyzed using MAXQDA 20 software.

The rigor/trustworthiness of the data was checked using four criteria proposed by Guba and Lincoln including credibility, dependability, confirmability, and transferability (17). To check credibility, the interviewer's skill was improved through the guidance, experience, and help of the members of the research team. Besides, a few pilot interviews were conducted before starting the study to gain a general understanding of the subject. Furthermore, to enhance the dependability of the extracted codes, they were reviewed by some participants and were modified according to their feedback. Moreover, to check the confirmability of the findings, they were peer checked by some experts and professors and the findings were revised according to their opinions. Finally, to assess the transferability of the results, they were compared with the findings of similar studies, and the data were

interpreted by two subject-matter experts.

To comply with ethical considerations, the interviewer provided some explanations about the research procedure and the objectives of the study at the beginning of each interview. The participants were also ensured that the transcript of the interview would remain strictly confidential. Written consent was also obtained from each participant in the interview.

Results

The results of the study showed the participants' mean age was 23.3 ± 2.8 . Besides, of the 25 participants, 10 were male and 15 were female (Table 1). It was also shown that the implementation of the internship training program could have beneficial effects on theory and practice. All participants believed that the implementation of the program brought theoretical and clinical issues closer by nursing professors and students in clinical wards. The participants also stated that their attendance in different shifts in clinical settings helped them to put into practice many of the theoretical issues they had learned.

The core category that emerged from the data was

Table 1. Characteristics of BSc students participated in study

Number of participants	Native/non-native	Level of educational term	Level of mean score in last mid terms
1	Non-native	Seventh term of BSc	A
2	Native	Eighth term of BSc	B
3	Native	Seventh term of BSc	A
4	Native	Seventh term of BSc	A
5	Native	Eighth term of BSc	B
6	Non-native	Seventh term of BSc	C
7	Native	Seventh term of BSc	A
8	Native	Seventh term of BSc	B
9	Native	Eighth term of BSc	B
10	Native	Eighth term of BSc	A
11	Native	Eighth term of BSc	B
12	Non-native	Seventh term of BSc	A
13	Native	Seventh term of BSc	C
14	Native	Eighth term of BSc	A
15	Non-native	Eighth term of BSc	B
16	Native	Eighth term of BSc	B
17	Non-native	Seventh term of BSc	A
18	Native	Eighth term of BSc	A
19	Native	Eighth term of BSc	A
20	Non-native	Seventh term of BSc	A
21	Native	Eighth term of BSc	B
22	Native	Seventh term of BSc	C
23	Native	Seventh term of BSc	A
24	Native	Eighth term of BSc	B
25	Non-native	Seventh term of BSc	B

“implementing an internship program; a step to bridge the theory-practice gap”, which was divided into three main categories: “transferring knowledge and experiences”, “promoting the cooperation between the faculty members and the hospital staff”, and “improving the process of clinical care” (Table 2).

Transferring knowledge and experiences

Transferring knowledge and experiences was one of the main categories identified in this study which was divided into three sub-categories including “the nurse in the peer-led role”, “presentation of scientific materials by students to nurses working in the ward”, and “increasing students’ communication skills”.

Most of the participants acknowledged that the presence of internship nursing students who worked directly with clinical nurses contributed to the scientific development of nurses and nursing students. Accordingly, nursing students with their updated theoretical knowledge could improve the knowledge of nurses working in the clinic. Furthermore, the students learned skills such as how to communicate with the patient, the patient attendant, and other medical staff. A seventh-semester nursing student (Participant 16) stated, “*The nurses working in the ward serve as teachers for us and teach us everything from nursing routines to intensive care for more complex cases*”. Another nursing student (Participant 3) stated, “*I tried to find out some useful information about nursing care for different cases in up-to-date nursing textbooks and make them available to nurses working in the ward*”. One of the clinical professors (Participant 7) stated, “*Our students voluntarily updated all the patient education pamphlets in the wards, and now all the pamphlets available to families and patients are based on the latest nursing findings*”.

Promoting the cooperation between the faculty members and the hospital staff

The second main category that emerged from the data in this study was “promoting the cooperation between the faculty members and the hospital staff”, which was divided into three subcategories including “holding joint workshops by the faculty and the hospital”, “the student’s sense of belonging to the ward”, and “joint student education by faculty members and head nurses”.

In general, the analysis of the participants’ statements indicated that the implementation of the internship program led to a very close interaction between the faculty members and the hospital staff. Moreover, the clinical professors of the school of nursing had close scientific cooperation with the nurses. Some training workshops were also held by clinical professors for the nurses in the wards. Accordingly, one of the nurses (Participant 17) stated, “*The presence of clinical professors and their instructions in the workshops were very useful for the nurses because the clinical professors shared the latest findings in nursing science in these workshops, and the nurses could learn many things that they had not known before*”.

The participants also indicated that one of the benefits of the internship program was that it induced the students’ sense of belonging to the ward. The nursing students stated that there was no distance between them and the nurses working in the ward and they provided care to patients with help from the nurses. One of the nursing students (Participant 9) stated, “*Any problem with nursing care lies with us. Every patient who is discharged thanks us, and the patients count on us as nurses*”.

In some specialized wards, clinical professors conducted educational needs analysis with the head nurses to develop training programs for nurses, and the cooperation between professors and head nurses was very effective in meeting nursing students’ educational needs. One of the clinical nursing professors (Participant 18) stated, “*We attend monthly intra-ward meetings with group members and transfer the information related to nursing care to nurses based on the needs analysis performed by the head nurse*”.

Improving the process of clinical care

The third main category identified in this study was “improving the process of clinical care” which was subdivided into three subcategories including “students’ participation in patient education”, “process-based nursing care”, and “students’ participation in the extraction of nursing errors”.

Almost all participants stated that the level of nursing care was improved during the internship course. Given that the students were aware of the latest nursing findings,

Table 2. The categories, subcategories, and core category identified in the study

Subcategories	Categories	The core category
<ul style="list-style-type: none"> ✓ The nurse in the peer-led role ✓ Presentation of scientific materials by students to nurses working in the ward ✓ Increasing students’ communication skills 	Transfer of new nursing knowledge to working nurses	Implementing an internship program; a step to bridge the theory-practice gap
<ul style="list-style-type: none"> ✓ Holding joint workshops by the faculty and the hospital ✓ The student’s sense of belonging to the ward ✓ Joint student education by faculty members and head nurses 	Promoting the cooperation between the faculty members and the hospital staff	
<ul style="list-style-type: none"> ✓ Students’ participation in patient education ✓ Process-based nursing care ✓ Students’ participation in the extraction of nursing errors 	Improving the process of clinical care	

they shared the information needed by patients. This educational process began in the hospital on the first day of admission and continued until discharge. One of the nursing students (Participant 12) stated, *“I like educating patients very much because I think I also learn a lot from the patients. In the beginning, nobody took this type of education seriously in the ward but it was very attractive to me when I first started teaching patients who were being discharged”*. In addition, one of the nursing professors (Participant 23) stated, *“Our students who are taking this internship program have identified a large number of nursing and medical errors in the wards and we need to plan to minimize them”*.

Discussion

The present study explored the experiences of the nursing students of the effectiveness of implementing an internship program in bridging the theory-practice gap. The analysis of the participants' statements revealed three main categories including “transferring knowledge and experiences”, “promoting the cooperation between the faculty members and the hospital staff”, and “improving the process of clinical care”.

Transferring knowledge and experiences was one of the main categories identified in this study and was divided into three sub-categories including “the nurse in the peer-led role”, “presentation of scientific materials by students to nurses working in the ward”, and “increasing students' communication skills”. One of the important measures in nursing is evidence-based care which refers to the use of recent scientific nursing findings to take care of patients (20). In the internship program, nursing students worked with employed nurses, and evidence-based care was provided by bringing the two groups together. Previous studies have reported health care workers to have poor skills in using the latest scientific findings. Besides, they lack search data retrieval skills (21-23). However, the provision of successful care and treatment requires personal experiences to be used in a specific context together with the state-of-the-art knowledge (24). The nursing students in this study stated that the implementation of the internship program promoted the interaction between the nurses and the students. Accordingly, Ravanipour et al found that effective communication and teamwork have led to improved quality of care (25). Chan also reported that internship clinical education projects improved the clinical skills and knowledge of nursing students and clinical nurses (26). Other studies also showed that cooperation of nurses and internship students improved nursing students' clinical knowledge, practical and communication skills, and self-confidence under the influence of nurses (19,27).

Given that the nursing students in this study attended the internship program in all shifts of the hospital, their presence at the hospital promoted the cooperation

between the faculty members and the hospital staff. This cooperation was improved through joint workshops held by the faculty and the hospital, the student's sense of belonging to the ward, and joint student education by faculty members and head nurses. To implement the program, the faculty members had to play their supervisory role along with the students, which led to the cooperation of the faculty members and the nurses working in the hospital wards. Furthermore, the participation of nurses and faculty members in nursing student education improved the quality of nursing education. Clinical education of students requires inter-team cooperation and student support in the clinical environment. Da Silva et al stated that the participation and increased professional relationships with other members of the care and treatment team as well as with patients were positive experiences (28). Moreover, Tomaschewski-Barlem et al found that the interactions in the clinical setting helped students to prepare for future professional work (29). However, Çapri et al found that although the internship programs improved students' feeling of belonging to the organization, the students endured more stress in the ward and complained of the heavy burden of care due to their poor care skills (30). Ayaz-Alkaya et al also found that internship students had a sense of belonging to the organization, but the internship program increased the load of clinical work in the wards (19).

Another theme that was revealed from the nursing students' experiences was the improvement of the process of clinical care due to student participation in patient education, process-based nursing care, and student participation in the extraction of nursing errors. Ayaz-Alkaya et al reported that implementing the nursing internship program improved the students' professional commitment and they considered themselves as a member of the treatment system responsible for providing patient care (19). Missen et al also found that the internship preparation course increased nursing students' professional skills (31). Besides, Alshammari et al showed that nursing internship students gained a higher level of professional identity compared to practical and problem-solving skills and learning techniques in the 12-month internship course (32).

Conclusion

The present study showed that empowerment of nursing students to start working in the clinical setting is very important, and the internship technique will be one of the effective methods to achieve professional competence and scientific and practical promotion and bridge the gap between theory and practice in nursing science. This new technique can increase cooperation between nursing schools and pave the way for updating nursing knowledge in nurses and students by promoting cooperation between the two groups. Moreover, to develop this new

technique in other universities and medical schools in Iran and other countries, further researches can explore the effectiveness of this technique in improving nursing students' competencies and compare its efficiency with other methods using mixed-method and comparative methodologies.

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Conflict of Interests

None.

Ethical Issues

The present study was approved under project number 98000605 and code of ethics 1398.425 IR.KMU.REC by the Ethics Committee of the Vice Chancellor for Research and Technology of Kerman University of Medical Sciences.

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