

Intensive care unit nurses' perception of the barriers to effective in-service education: A qualitative study

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Abstract

Context: Educating the staff in organizations is one of the most important issues in different countries, so concerning the necessity of nurses' roles and scientific advancements in providing nursing care will not be achieved without in-service education.

Aims: The purpose of this study is to investigate intensive care unit nurses' perception of the barriers to effective in-service education.

Settings and Design: This qualitative study was conducted at Shiraz University of Medical Sciences (sums).

Materials and Methods: The researcher used the conventional content analysis method to evaluate nurses' perception of the barriers to effective in-service education from March 2015 to June 2016.

Statistical Analysis Used: Data analysis was done with a conventional content analysis method.

Results: Three main themes of nurse's in-service education barriers were extracted from the analysis of the data. The themes are ineffective teaching methods, inappropriate content of educational programs, and inappropriate scheduling of teaching programs.

Conclusion: Identifying the barriers to effective in-service education can guide nurses and nursing administrators in improving education in the nursing field and subsequently providing better treatments for patients.

Keywords: Barrier, In-service education, Nursing, Qualitative research

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INTRODUCTION

Education and promoting human resources is one of the main strategies for adjusting positively with changing conditions. Organizations' endurance is highly dependent on different skills and capabilities of the staff, the more these strategies are provided on time and good, the more organizations can adjust with the diverse environment too.^[1]

If educating and developing human resources are programmed thoroughly, they can be a profitable investment for organizations. Furthermore, in this respect, in-service education is one of the important factors in developing organizations for updating the knowledge and skills of the staff.^[2] To develop and coordinate the nursing profession with the advancements gained in technology as well as the close relationship between nurses and patients and other health-care teams,^[3] in-service education is introduced as an effective and economic way.^[2]

In other words, due to the necessity of nurses' role and scientific advancements in nursing treatment methods, providing high-quality and efficient nursing services will not be possible without education, studying and knowing new methods because their perception and information about the problems is a factor that influences the quality of nursing treatments.^[4,5] Moreover, in this regard, hospitals undergo high expenses for educating the staff.^[6]

On the one hand, the key to success in units and hospitals is a professional education and can bring about pleasant outcomes such as decreased mistakes, nurses' better behaviors, achieving great honors, and better nursing treatments.^[7]

Therefore, preparing and designing constant educational programs based on the educational needs of target groups is an important priority in applying the programs that were always confirmed and welcome by the medical community. Regarding the fact that different aspects of in-service education like effectiveness, methods of evaluation, tools, and time were unknown^[8] and the importance and effect of education on the development of the organization, evaluating its effectiveness is a crucial issue.^[9,10]

On the other hand, as a special and highly specialized medical environment, the intensive care unit (ICU) is a place in which several specialists work, they have the responsibility of critically treatment of ill patients with advanced equipment. At the same time, nurses are the major caregivers in the health workforce because of the prolonged contact with patients, which often leads to nurses assuming

the role of safety guardian.^[11] Hence, due to the rapid progress of sciences and technologies, they should be aware of all the new skills and techniques of care.^[12] The results of a study have shown the positive effects of various human resource development programs, including in-service training, on the nurses' efficiency, self-confidence, knowledge, and skills.^[11] In-service training courses had resulted in reducing the organization costs, reducing the employees' resignations, turnover, and absenteeism, as well as increasing the organizational efficiency, creating deeper insights, increasing the employees' abilities and skills, and in general, increasing the productivity. Thus, the professional skills of ICU nurses are of utmost importance.^[12]

However, concerning work conditions of nursing and its requirement for creating a dynamism and innovation in this field, the significance of education and constant learning as well as the researcher's years of work and experience in different units of the hospital, it has been revealed that despite many attempts of officials in charge and spending high amounts of money in education, there are still challenges regarding the effectiveness of education from nurses' viewpoint that investigating them is a necessary fact in its effectiveness. Although many studies related to in-service education have been done, few of them investigated barriers to effective education qualitatively from nurses' point of view. Hence, the present study was conducted to investigate barriers to effective in-service education from the nurses' point of view.

MATERIALS AND METHODS

Research design

The study was conducted using a descriptive exploratory qualitative design with a content analysis approach. Content analysis is a way to analyze written, verbal, or visual information. It actually serves as an action guide and aims at providing valid insights from data to obtain a broad and complete description of a phenomenon.^[13] In this research, an inductive approach of content analysis was used. In this method, categories are derived from the data during data analysis, which help to attain a richer understanding of a phenomenon.

Participant and research context

Participants of this study included 24 nurses working in the ICU of one hospital. They were selected using purpose-based sampling. Then, they were invited to participate in the study. Purposive sampling is suitable for qualitative studies where the researcher is interested in informants who have the best knowledge or experience concerning the research topic or phenomenon of

interest.^[14] The criteria for entering the study included at least 1-year work experience, having the experience of attending the in-service education, and willingness to participate in the study.

Data collection

Data collection was conducted through individual in-depth semi-structured interviews and focus groups in a quiet room in the hospital. Interviews were carried out from March 2015 to Jun 2016. The fourth author (N. M.) arranged and conducted all the interviews with the participants who work in the ICU in the hospital. The interviews were recorded and immediately transcribed verbatim. In the individual interviews, data were collected from each participant in one session. Overall, 15 individual face-to-face interviews were held with 15 participants. The individual interviews lasted 35–90 min. One focus group interviews were held with 6 nurses, none of whom had been individually interviewed.

Focus group discussion is widely used in qualitative research. In this method, group dynamics can encourage people to describe their perspectives that occur less frequently in an individual interview.^[15] Therefore, to understand the views of the participants better, this method was used along with an interview in the present study. The focus group interviews lasted 95–120 min. The interview questions included the following:

- What is your idea about education in the nursing field?
- How is nursing education going in hospitals?
- What factors hinder effective education for nurses?

In addition, they continued by asking specific and following questions like “can you explain more? what do you mean? Can you explain it by an example of your personal experience? Why? How?” to achieve the research purposes and based on the responses of participants for clarifying the details of their responses. The interviews continued until the saturation of data and to the point where no newer data were obtained.

Data analysis

Data analysis was done simultaneously with data collection using conventional content analysis method. First, the researcher transcribed the content of interviews word by word immediately after it was done, and then, she analyzed the transcriptions to gain a deeper comprehension of the participants' experiences based on based on five-stage Grenheim and Landman conventional content analysis method. As the whole interview text was typed after it was done and in the next phase, it was read several times to achieve a general perception of the content, following

that the meaning units were determined and the preliminary codes were extracted, then the codes were categorized based on their similarities and differences. In the final stage, the content hidden in the data was extracted. The researcher utilized ONE-NET software, the 2013 version as well as handy methods for categorizing and analyzing.

Rigor

Prolonged engagement with this phenomenon and dedicating sufficient time to collect data and investigating them constantly were the used methods for increasing the credibility of data that the researcher was present in the unit from the very 1st day to collect data in different days and shifts and made a good relationship with the participants. To assure the accuracy and validity of the findings and in accordance with the transcribed versions, some of the written interviews, as well as their codes and categories, were investigated by five postdoctoral nursing professors; also, the interviews and codes were given to four participants in the study to member check and they admitted that they were in accordance with their perception and interpretations. Moreover, the researcher decreased the analysis and coding of participants' words and improved data credibility by limiting the review of texts with the possibility of data accumulation at the beginning of the study. To achieve reliability or dependability in this study, all the phases were investigated separately by external observers (qualitative researchers), and then the results were compared, for the purpose of confirmability of data, all data collection and analysis phases were explained and described so that this research was conducted in a step by step repetition and auditing form. Despite the fact this qualitative research is not transferable, the researcher tried to present a clear explanation of the text, selecting participants, data collection, the process of doing the research, and research data so that the researchers can make use of it in similar situations in future.

Ethical considerations

The ethics committee of Shiraz University of Medical Sciences approved the project (No. ir.suns.rec. 1395.s1092).

The purpose of the study was explained to participants before conducting each phase and they were assured of the confidentiality of their information. Furthermore, a written consent letter for participating in the study was obtained from the participants. They had the right to revoke the study at any time they wished. In addition, the time and place of the interviews were selected based on the participants' ideas as well as keeping them anonymous during all phases of the research.

RESULTS

The participants were 24 hospital nurses who were 25–42 years old working in the ICU. The key demographics findings of the nurses are listed in Table 1.

The three main themes emerged from the data are as follows:

(1) ineffective education methods, (2) inappropriate content of educational programs, and (3) inappropriate scheduling of educational programs [Table 2].

Ineffective educational methods

Some of the participants' responses to explain this situation were concentrating on lecture-based teaching; they declared that in educational classes held, a presentation of the content was lecture-based, so discussions were not seen in these classes that much and nurses participated in these classes very little too. They emphasized the ineffectiveness of this lecture-based educational program and regarded it as one of the important educational challenges.

"...one important thing that we can see in educational classes is that everybody likes to give a speech, the problem is that the nature of discussions is not something that one

person comes in front of the class, speaks and then takes his seat" (participant 9).

Participants talked of a lack of centrality in clinical education and no education in a real situation and providing bedside care for the patient as important challenges of education in nursing field.

"There is very little clinical education" (participant 2).

Inappropriate content of educational programs

Some of the participants clarified the observed problem by emphasizing this point that the majority of presented teachings are not applicable from their point of view; they also believed that many of the presented subjects and topics were redundant and waste of time.

"We have to take part in classes that are not useful for us because they are held based on predetermined topics and all these ineffective contents are taught repeatedly; in many cases, the teachings we receive are not applicable" (participant 1 from focus group).

The participants remarked that for the further importance and creative nature of the educational material and preventing the redundancy in teaching as well as preserving the nurses' energy, education officials must make sure that educational sessions are not repeated before the absolute selection of the subject and preparations for them.

"most of the materials presented in educational classes are repetitious or copies of the same material in previous years" (participant 12).

Inappropriate scheduling of educational programs

Short educational sessions and holding them in inappropriate times can affect the effectiveness of the education, but one of the challenges mentioned in the present study is inappropriate scheduling of educational programs.

Some of the participants found that the educational programs are inefficient since they are not presented in an appropriate time.

"Sometimes, we are busy in your work shift in the unit and the patient calls at the same time, at this crucial moment, we are told that we have to participate in class; in these situations, we have no other choice than going to class or ignoring it and prioritizing our patient, in any case, we are not feeling satisfied; then, practically, there's no suitable time to attend the class" (participant 4 from focus group).

Table 1: Demographics characteristics of the participants

Demographics	n (%)
Gender	
Female	23 (95.8)
Male	1 (4.2)
Marital status	
Married	22 (91.7)
Unmarried	2 (8.3)
Education	
Associates' degree	22 (91.6)
Bachelors' degree	1 (4.2)
Masters' degree	1 (4.2)
Age, mean (SD)	35.86 (7.86)
work experience (year), mean (SD)	6.08 (5.09)
Nursing experience, mean (SD)	9.90 (6.65)
Overtime work per month (h), mean (SD)	58.10 (36.65)

SD: Standard deviation

Table 2: Main themes and subthemes of barriers to effective in-service education in nurses

Main themes	Subthemes
Ineffective educational methods	Inadequacy of using collaborative educational methods Inadequacy of using clinical educational methods
Inappropriate content of educational programs	Inapplicability of educational subjects Repeated educational topics
Inappropriate scheduling of educational programs	Providing educational programs in inappropriate times Long educational sessions

The nurses stated that regarding high workload and fatigue after work, it is very tiring for them to take part in long educational sessions, so they are seen as barriers to education.

“... for example there are some educational classes that last from morning till noon, in my idea, such classes cannot be effective” (participant 8).

DISCUSSION

This study emphasizes the role of hospital nurses. The findings of this study showed that nurses have a common understanding of effective in-service education barriers, although some themes are more important such as ineffective educational methods, inappropriate content of educational programs, and inappropriate scheduling of educational programs.

Improving human resources in nursing is one of the important responsibilities of nursing supervisors and includes activities that are set to improve eligibility, knowledge, and creating skills for nurses to present better clinical services.^[16] Gopalan *et al.* showed in their study that effective educational programs play an important role in promoting and progression of the staff.^[17] However, the participants believed that nursing teachings are not efficient enough for improving their skills so they were dissatisfied with some educational aspects available for them. Kerman, Saaravai *et al.* (2012) mentioned the problems of nursing education in three main themes “theoretical teaching,” “the gap between theory and practice,” and “clinical teaching” in their study; therefore, old-fashioned teaching method and teacher-oriented classes where learners have the least cooperation as well as repeated teachings and inapplicable nature of taught materials are the problems of education in nursing in their idea. Concerning the particular nature of nursing, learners of this profession must possess a real perception of the educational content so that they can use the acquired knowledge in certain clinical situations effectively. According to the results, using active educational methods are effective in increasing deep thinking skills and making the learned materials stable in mind in a meaningful way.^[18]

On the other hand, the results of a study by Vizehsfar revealed that insufficiency of education is one of the challenges of enabling health-care volunteers; admittedly, the majority of participants in the study mentioned lack of practical education and teaching skills as the main barriers to improving their abilities, and they also mentioned the insufficiency of the educational programs.^[19] Nowadays,

nursing education must concentrate on problem-solving methods and critical thinking so that their ability and knowledge of caregiving increase.

Despite novel teaching methods, it is seen that in most cases, teachings are done through lecturing. The results of a study by O'mahony *et al.* showed that lecturing is the most applied method in education centers because its utmost advantage is the ability to present information to a great number of learners.^[20] In this regard, Pearce *et al.* and Henderson *et al.* revealed that despite presenting innovative teaching methods and techniques, lecturing is still the most common teaching method used where the learners have the least cooperation in it and they are teacher oriented and one way.^[21,22] Nevertheless, the participants of the present study emphasized the effectiveness of active teaching methods; in this respect, a study by Yew and Goh showed that problem-solving-based learning strategy is very effective in students' learning and developing their learning and problem-solving skills.^[23] Furthermore, the results of other studies indicate the fact that holding educational classes using cooperative methods affects changing nurses' performance.^[20,22] Holding educational sessions in a real environment is one of the important examples of efficient education. Based on the participants' remarks, education in a real environment can be effective in boosted learning as well as their stability in mind. Eslamian *et al.* showed in their study that workplace learning can be done officially or unofficially and that it is one of the most powerful learning strategies, and they mentioned workplaces as the most suitable education and learning settings.^[24]

Updated education is one the most important issues in education, and it can be said that the existence of education is defined as a necessity for updating information in the nursing field and taking care of patients. Thus, new educational programs reinforce the motivation to participate in these programs; therefore, better results will be gained.^[25]

Presenting educational programs at an appropriate time is among the reasons that influence the effective education. The results of a study by Naserian *et al.* revealed that 55.7% of the nurses participating in the study mentioned inappropriate scheduling as one of the most important reasons for their unwillingness to take part in educational programs.^[26] Furthermore, a study by Chong *et al.* investigated the factors influencing participation in education classes for nurses in Malaysia and showed that inappropriate scheduling of programs will influence nurses' participation in educational classes.^[27]

Participant nurses stated that because of interferences of educational classes with their work shifts, they cannot take part in these classes regularly since the findings of a study by Nsemo *et al.* admitted the fact that one of the main factors influencing educating nurses can be inappropriate scheduling of educational programs regarding their work shifts.^[28]

In conclusion, effective in-service education focusing on new teaching methods and considering appropriate content and scheduling are important issues in improving reinforced education. On the one hand, lack of a professional developing program can influence nurses' decision regarding quitting this profession or attempting for early retirement because the positive effects of professional development in nursing due to their effectiveness for patients and the organization as well as its effect in job satisfaction for nurses are undeniable. Therefore, nurses and health-care providers look for strategies to improve their individual and professional development.^[29] The findings revealed that meeting the educational needs of nurses is a crucial principle. Hence, educational approaches need to be revised and modified using new teaching methods for nurses.

This qualitative study was done using an unstructured interview and focus group. We wanted to explore the nurses' effective in-service education barriers and experiences in depth. We also tried to maximize the breadth of our sample. However, we had some limitations in conducting this study, such as doing it in one hospital and one unit and not having access to several hospitals.

CONCLUSION

Concerning the findings of this research project, it is advised that educating nurses to be done using cooperative and patient bedside methods in a short and appropriate time; also, it must be done considering the needs of the participants to make it more effective. Hospital officials can make use of the results of this study to gain a deeper insight into effective education, present problems, and barriers and make decisions to eliminate and subsequently improving nurses' education based on them. On the other hand, these findings can contribute managers in designing, organizing, improving human resources, controlling, and evaluating, as well as accrediting nursing caring. However, specifying the importance of educating nurses can help curriculum designers and education officials in designing and enacting effective education as well as facilitating achieving educational purposes that are improving nurses' performance more and easier.

Conflicts of interest

There are no conflicts of interest.

Authors' contribution

NM and SY made substantial contributions to conception and design. MM made analysis and data interpretation, drafting the manuscript, and revising it critically for important intellectual content. SP made data acquisition, drafting the manuscript, and revising it critically for important intellectual content. All authors read and approved the final manuscript.

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