

## The Effect of Training the Implementation of Evidence-Based Nursing Practices on the Attitude of Nurses in Tehran, Iran

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**Abstract: Background:** Nurses are the largest group providing health services, and play an essential role in the ongoing care, health promotion and preservation. Therefore, familiarity with the current evidence and research findings is essential for nurses. **Objective:** The aim of this study was to determine the attitudes of nurses before and after the training program of implementing evidence-based nursing practices. **Materials and methods:** This quasi-experimental study was conducted on forty training nurses selected by purposive sampling method from two hospitals in Tehran, Iran. The data collection tool was a questionnaire that was completed by the subjects during pre-test and post-test. The data were analyzed by statistical software SPSS 19. **Results:** The majority of nurses (97.5%) had moderate attitude before training, but 52.2% immediately after training, and 75% in the second month after the training had high levels of attitude. **Conclusion:** The results showed that the educational program had a positive impact on nurses' attitude. Therefore, to be compatible with scientific progresses achieved in the present world and to overcome the obstacles and difficulties of evidence-based practice, it is emphasized to train implementing methods and it is hoped that this study can help implementation of evidence-based nursing by preparing changes in the clinical setting with the positive change in attitude and can assist the implementation of evidence-based nursing practices.

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### 1. Introduction

With the advent of complex and rapid changes in health care, it is necessary to provide care based on the best evidence. Nurses are the largest health providing group, and have an essential role in sustaining care, improving and maintaining health at different levels, and providing health care (1). Clearly, nurses are required to be familiar with current evidence and findings of studies regarding their field of activity (2).

The process of implementing nursing practices should not only provide the opportunity for discussion, interaction, criticism, interpretation, reasoning, analysis, judgment and correct decision making, but also should be a planned, systematic and well evaluated approach for changing and increasing knowledge, attitude and skills of nurses (3). Today, the clinical decision making is based on up-to-date evidence and scientific experiments referred to as evidence-based practice (4). In the evidence-based practice, nurses can use the results of studies to promote their clinical skills and the quality of patient care and make appropriate clinical decisions. Evidence-based practice is not a new concept; this

approach has led to huge changes in the development of clinical care so that it explains the process of implementing patient care and decreases non-standard clinical practices (1, 4). Another advantage of evidence-based practice in the health care system is that it is responsive to the challenges of patient safety and increase the quality of nursing care (5). The evidence-based practice in health centers will increase job satisfaction, improve service quality, reduce costs, improve public health and approximate national standards to international standards (4). However, the papers and studies conducted in this area suggest that nurses have difficulty in implementing evidence-based practice (6). The lack of time and nursing shortage, environmental conditions, poor management and supervision, disrespecting scientific practices and lack of access to research results have been reported as the barriers for implementing evidence-based practice in Iran (7, 8). In recent years, national guidelines have been issued with an emphasis on evidence-based practice, hence nurses are obliged for implementing these guidelines in all care provided to patients. Therefore, to maintain and develop clinical standards

and implement evidence-based nursing, nurses should increase and update their knowledge and attitudes and to this end, they require constant in-service training and updating information (9). Nevertheless, despite the efforts made in this field, care in Iran is still based on routines and division of labor is based on duty. In fact, the necessity to strengthen research skills and use evidence are not noted, thus, this study aims to teach the implementation of evidence-based nursing practices with the help of simple tools and technology available to nurses. Considering that training will change attitudes and behavior, it is hoped that the result of the training in this study will lead to behavior change toward the implementation of evidence-based nursing practices.

### Materials and methods

This research is a quasi-experimental study. After consulting with a professor of statistics, considering the probability of 10 percent loss in samples, 40 nurse educators was selected by purposive sampling method. The data collection tool was an evidence-based practice questionnaire consisting of two parts of demographic and attitude questionnaire developed and assessed by Rubin and Parrish (10). The first part of the questionnaire consists of demographic information with 9 items about age, gender, marital status, educational degree, work experience, employment elsewhere, place of service, department of service and the history of passing previous evidence-based training courses and the second part included 14 items on attitude about evidence-based practice. To determine the validity of the data collection tool, content and face validity were used, so that it was given to 10 faculty members in Shahid Beheshti Faculty of Nursing and Midwifery and 5 nurses working in hospitals and then it was evaluated in terms of simplicity, clarity and relevance of content within items. The reliability of the tool was determined through intra-class correlation coefficient of 0.94, and Cronbach's alpha of 0.80 was used to determine its internal consistency. Attitude subscale had 14 items and the general subscale scores was 14-70. In the present study, training nurses in each department who had bachelor's degree or master's degree with at least 3 years of work experience were considered. The required coordination was made with the chancellor and research deputy of Shahid Beheshti Faculty of Nursing and Midwifery to issue a written letter of introduction. During a meeting with hospital managers, matrons and educational supervisors, the aim of the study was explained to attract their cooperation. Samples were selected and their consent was taken to participate in the study. Two workshops (12 hours) were scheduled under the titles of 'familiarity with evidence-based nursing approach' and 'planning and implementing evidence-based

nursing clinical training'. The workshops were held within a week of each other. The curriculum included the emphasis on the importance of evidence-based practice, developing an evidence-based curriculum, the generalities of evidence-based curriculum, teaching suggested framework for planning and holding evidence-based journal club, implementing steps for evidence-based nursing and giving clinical examples of evidence-based nursing and developing a clinical scenario related to evidence-based practice. A post-test was performed for participants immediately after holding workshops and in the second month. The workshops were evaluated in terms of the content, implementation, and participants' feedback. Evaluation was conducted for participants based on the active participation and presentation of the assignments determined. The results were analyzed in SPSS 19 using descriptive and inferential statistics. Paired t-test was used for comparison of results.

### Results

In this study, the mean age of participants was 36 years, and 80% of participants were female. The majority of nurses (60%) were married. Of the 40 participating nurses, 20 were from each hospital. The highest level of education was bachelor's degrees (75%). Most participants were working in one hospital (62.5%). The majority (67.5%) had no previous history of passing evidence-based nursing training during their services. The work experience of the research population was not less than 3 years, so that approximately half of them had a record of 3-10 years work experience and the other half had over ten years work experience. The highest percentage of nurses (97.5%) had moderate attitude before training and only 2.5% had a good attitude, but immediately after training, nurses' attitude increased significantly toward the implementation of evidence-based nursing practices, so that the number of people who had a good attitude reached 21 people from one person (Table 1). In other words, there was 50 percent increase in attitude. There was also a significant increase two months after training, so that the majority of participants (75%) had a good attitude. Paired t-test showed a significant increase ( $p \leq 0.05$ ) in the mean attitude score after training (Table 2).

According to findings of this study, no significant relationship was observed between gender, marital status, work experience and attitude of participants.

### Discussion

Certainly, interest in learning and improving skills to implement evidence-based practice originates from a positive attitude toward this approach that can be developed in daily functioning (9). Therefore, the aim of this study was to "determine the attitude of

nurses in Imam Hussain and Khatam Alanbia hospitals before and after implementing evidence-based nursing practices". The results showed that nurses' attitude became more positive and there was a significant relationship between attitudes before and after the intervention. Most nurses had moderate attitude before training and only few nurses had good (positive) attitude. After training, nurses' attitude toward the implementation of evidence-based nursing practices became significantly more positive.

Before training, about half of the participants (45%) believed that evidence-based practice helps the improvement of patient care outcomes and after training 80.5% of the participants believed the same. Based on the findings of this study, no significant relationship was observed between gender, marital status, work experience and attitude of the subjects. The results of the present study are consistent with the results of Knops study conducted on surgical nurses' knowledge and attitude about evidence-based nursing and its barriers (11). There are numerous reports about the effects of using evidence-based approach on peoples' attitude and the outcomes in some studies have been reported as positive or negative attitude. The results of a Taiwanese study on nurses' attitudes toward the use of research showed their positive attitude in this regard (12). In Iran, a study reported that 70% of nurses had a positive attitude toward the use of research in clinical practice. Ahmadi conducted a study on medical students and reported that 41% of interns and 66% of residents had a positive attitude toward evidence-based medicine, and others had no particular view. The residents and those who were trained by evidence-based medicine found a more positive attitude toward this approach (7-9). These results are consistent with the results of the current study. The above-mentioned cases underscore the value of using this approach because of its important outcomes, so that Steven states that the nurses who are engaged with scientific evidence in their work, not only develop the consequences related to patient, but also increase their job satisfaction (13). It is necessary to pay attention to people's attitude for implementing an approach, as people's attitude affects development of skills, which require learning and having a positive attitude toward that subject (9).

The results of this study indicate that the majority of nurses had the attitude that using evidence-based nursing process improves their performance after training. A study showed that using evidence-based practice increases self-confidence in decision making and clinical preparation (14). These results are consistent with the self-efficacy theory that says, "Individuals are more likely to engage in practices for which they have high self-efficacy" (15). In addition, after training and participating in workshop, the

majority of nurses said that when there is a conflict between research findings and nurses' observations, they should give priority to research findings. In this regard, Levin and Feldman believing that the philosophical basis of the evidence-based practice is interactive solutions, suggest that this approach is a nurse-centered policy for experiential learning and causes critical thinking, communication and analytical skills and professional growth (16). Fonteyn also writes that using evidence-based nursing research findings increases the probability of using evidence and enhances their commitment toward its use in future (17). Based on the data obtained from this study, participants' attitude turned good (positive) and was not poor after training. In a study conducted on nurses to assess knowledge, attitude and barriers to implementing research findings, the results showed that most samples had negative attitude toward implementing research results in practice. This finding is not consistent with the present study. In that study, three items measuring the implementation of research findings in practice included adequate training, organizational facilities, and capability of implementing results in practice and nurses believed that insufficient training and lack of adequate organizational support were major barriers to implementation of research findings in practice (18). In the study of Manspecker, nursing students had a poor attitude toward evidence-based care before training, and their knowledge and attitude significantly increased after training (19). This training program positively affected the nurses' attitude.

### Conclusion

To be compatible with scientific progresses achieved in the world and to overcome the obstacles and difficulties of evidence-based approach, training of implementing methods is emphasized.

Merger of science of nursing with clinical practice leads to increased patient safety, higher quality of care, maintenance of nurses' highest preparation and using the best evidence for clinical decision-making. Because this approach attempts to improve the international language of nurses, its importance is undeniable. Therefore, given the positive effect of this function on nurses' attitude, it can be expected that evidence-based education set the grounds for evidence-based performance in clinical setting. Hence, holding educational workshops, holding journal clubs in wards, teamwork and interactive discussions are important steps in implementing evidence-based performance.

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