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# The effect of educational workshop on emergency department nurses' self-efficacy in patient training

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## Abstract:

**OBJECTIVE:** Self-efficacy is an individual's self-perception of one's ability to perform competently and to achieve a task or goal effectively. In the nursing field, self-efficacy can be useful in predicting performance, job satisfaction, or well-being. Therefore, due to the importance of this issue, this study aimed to determine the effect of educational workshop on nurses' self-efficacy along with follow-up in patient training.

**METHODS:** The study employed a single group quasi-experimental study with a pretest/posttest design and was conducted in one educational hospital supervised by the Kerman University of Medical Sciences in 2016. Nurses' self-efficacy was analyzed through a researcher-made questionnaire prior and after the workshop and along with the follow-up period ( $n = 20$ ). Data were analyzed using descriptive statistics including mean and standard deviation and analytic statistics such as Pearson correlation coefficient, independent  $t$ -test, paired  $t$ -test, and ANOVA with  $P \leq 0.05$ .

**RESULTS:** This study showed that 1 month after educational workshop, the score of self-efficacy dimensions increased ( $P < 0.05$ ). Furthermore, results showed that after a 3-month follow-up period, self-efficacy score increased in comparison to preintervention self-efficacy score. Results showed that the total score means of self-efficacy before the workshop was  $59.01 \pm 14.91$  while postworkshop, self-efficacy score means was  $79.83 \pm 11.90$ .

**CONCLUSION:** The present research results presented that educational workshop may enhance self-efficacy among nurses. According to the obtained results, it is recommended that the Ministry of Health, Treatment and Medical Training, in cooperation with nursing institutions responsible for nursing and medical in-service education adopt necessary measures to enhance self-efficacy among employees in addition to improving patient training condition at medical processes through similar workshops or conducting related studies.

## Keywords:

Education, patient, self-efficacy, training, workshop

## Introduction

Education on health issues is necessary for a patient's physical and mental health.<sup>[1]</sup> All patients have the right to be educated on maintaining their health, disease prevention, and health promotion.<sup>[2]</sup> The concept of patient education is shaped and considered as a key role of nurses in the provision of

health services.<sup>[3]</sup> Education increases a patient's ability for self-care and results in improved health and the prevention of disease.<sup>[4]</sup> Patient education is considered as an important identity and principle in healthcare services:<sup>[5]</sup> a criterion for securing patient's hospital rights,<sup>[6]</sup> a means to achieve health promotion, and a combination of educational activities planned to help people who are experiencing a disease or its complications.<sup>[7]</sup> Patient education

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must be done regularly and continuously at various interconnected levels to obtain the desired outcome.<sup>[8]</sup> Moreover, patient education programs are dynamic and interesting processes to improve, maintain, and enhance patient care;<sup>[9]</sup> this is a patient-driven process based on the needs expressed.<sup>[10]</sup>

Self-efficacy is the individual's belief in the ability to succeed in a particular situation. It significantly contributes to goal achievements, duties fulfillment, and overcoming challenges.<sup>[9]</sup> Self-efficacy is the certainty an individual feel about doing certain activities; such concept overshadows an individual's effort and performance level. Regarding self-efficacy promotion is critically important in the process of behavior transformation, reiteration and narrowing it down to small steps can lead to self-sufficiency at each stage. Since many human behaviors are triggered by self-influence mechanisms, among which self-efficacy is the most significant and inclusive.<sup>[11]</sup>

A study on diabetic patients showed that the study revealed more effective empowering, whether through workshop or training package to improve the psychosocial empowerment in patients.<sup>[12]</sup> A study of Schindel Martin *et al.* with the title "An Education Intervention to Enhance Staff Self-Efficacy to Provide Dementia Care in an Acute Care Hospital in Canada" showed that intervention group participants described positive impacts including implementation of person-centered care approaches. Implementation of dementia care education programs throughout hospital settings is promising for the enhancement of dementia care.<sup>[13]</sup> Khadivzadeh *et al.* studying the effect of interactive educational workshops with or without standardized patients (SPs) on the self-efficacy of midwifery students in sexual health counseling also demonstrated that although both methods could promote students' self-efficacy, the impact of workshops with SPs was more significant. Therefore, the integration of this training method in midwifery educational curricula is recommended.<sup>[14]</sup>

Self-efficacy feeling could be significant role in goals achieving, tasks implementation, and overcoming to job challenge.<sup>[15]</sup> Clinical education and experience must improve nurses' self-efficacy and enable them to learn different skills and to sufficiently and confidently take care of patients. In spite of various studies conducted on nurses' self-efficacy in different contexts, there has been found no inclusive study analyzing the effect of education on nurses' self-efficacy in clinical contexts focusing on patient training. Thus, regarding the significance of the study, the present research has been conducted to shed light on the effect of workshop training and follow-up on nurses' self-efficacy in the field of patient training.

## Methods

The present study is a single group quasi-experimental research with a pretest/posttest design. The statistical population of the study included nurses who work in the emergency department of an educational hospital at Kerman University of Medical Sciences, Iran. The sample included 30 nurses were selected using the simple sampling method. All participants signed informed consent. Information about workshop purpose and procedure was given to the participants orally or in written form. Confidentiality was kept by putting no name or other personal information in the questionnaires. Finally, 20 nurses meeting inclusion criteria were selected as research samples. Inclusion criteria for participants include have the nursing certificate. Exclusion criteria included lack of consent for participation in the study, not attending the workshops, and incomplete questionnaires.

### Data collection

For data collection, the research team initially developed a questionnaire in two parts after an extensive review of the relevant literature to achieve good content validity. We developed the questionnaire in Farsi to reconcile study issues and concepts culturally and linguistically for Persian-speaking study participants and also due to the lack of current validated questionnaire. The first part included questions about demographic characteristics of nurses, including age, sex, education level, and employment status. The second part contained 31 questions to investigate nurse's self-efficacy including 5 subgroups of patient training process (10 items), educational content (4 items), using educational strategies (11 items), education place (4 items), and education ethics (2 items). The questions were rated using 5 scales of Likert scale (1 = very weak until 5 = excellent). The minimum score was 31, and the maximum score was 155. Rating of the scores was based on the normal distribution curve. Scores 31–82 were weak, 83–135 were intermediate, and 136–155 where appropriate.

The content validity of the questionnaire was approved by 10 professors of the Kerman University of Medical Sciences. Furthermore, the reliability of the questionnaire was determined with internal consistency and intraclass correlation coefficients (ICCs). The Cronbach's alpha coefficient was 0.86, and ICC was used to establish the test-retest reliability of the questionnaire over an interval of 2 weeks using two-way mixed ICCs for absolute agreement at the level of individual items. Its results were interpreted as follows: 0.0–0.2 as low, 0.21–0.40 as fair, 0.41–0.60 as moderate, 0.61–0.80 as substantial, and 0.81–1 as almost perfect.<sup>[16]</sup> To assess the suitable sample size for the test-retest reliability, a power analysis was performed. The power analysis identified that a sample

of 20 nurses was required to have a power of 0.80 to detect a test-retest correlation of 0.90. The questionnaire was given to the research participants as a pretest before the workshop and data were collected and analyzed. Then, a workshop was held at two 5-h consecutive days hosted by two skilled lecturers of patient teaching. One month later, the questionnaire was given as a posttest to measure nurses' self-efficacy. In the follow-up period, 3 months later, the questionnaire was redistributed among nurses.

### Data analysis

To analyze data, descriptive tests, including frequency, percentage, mean, and standard deviation (SD) and analytical tests, including the Kolmogorov-Smirnov test was conducted to indicate that the data were sampled from a population with a normal distribution. The correlation between demographic data and self-efficacy mean score was examined by the Pearson correlation coefficient, paired *t*-test, *t*-test, and ANOVA for repeated measuring using the SPSS software (version 19, SPSS Inc., Chicago, IL, USA). There was a significant difference at the level of  $P < 0.05$ .

## Results

A total of 20 nurses were included in the study, 2 (10%) were male and 18 (90%) were female. Mean and SD of research sample age was obtained as  $30.60 \pm 4.15$ . Respecting employment, 6 individuals (30%) were temporary to permanent, 8 (40%) were contractual employees, and 6 (30%) were permanent (official) employees. Respecting working experience, 12 individuals (60%) benefited up to 10 years of working experience and 8 individuals (40%) showed over 10 years of working experiences.

Research findings showed that the mean and SD of total self-efficacy score prior workshop was  $59.01 \pm 14.91$

while postworkshop self-efficacy mean and SD score was  $79.83 \pm 11.90$ . Research results revealed that postworkshop self-efficacy mean score of nurses increased at all dimensions comparing preworkshop scores [Table 1]. Findings demonstrated that after a 3-month follow-up, preintervention self-efficacy mean score increased in some dimensions and decreased in others. Results of ANOVA with repeated measurement uncovered that the total score of self-efficacy among nurses increased in the 3-month follow-up period, comparing preworkshop score while it decreased at all dimensions in comparison to postworkshop score (1 month later) [Table 2].

According to the research findings, the maximum self-efficacy mean score for the 1-month postintervention period was obtained by temporary-to-permanent employees ( $81.53 \pm 11.30$ ); the maximum mean score in the 3-month follow-up period was attained by contractual employees ( $66.96 \pm 4.13$ ). Pearson correlation coefficient showed that there is no significant relationship between age and working experience with pre- and post-workshop self-efficacy score ( $P > 0.05$ ). In addition, research results also demonstrated that there is no significant relationship between employment status and sex with pre- and post-workshop and follow-up periods ( $P > 0.05$ ).

## Discussion

According to the research results, self-efficacy score, at all dimensions, increased among participants attending in the workshops. This finding is consistent with Ammentorp and Kofoed<sup>[17]</sup> and Fakhri-Movahedi et al.<sup>[18]</sup> Investigated Assessment of the effect of lecturers' behavior on clinical learning from the viewpoints of nursing students. They showed that nursing and medical students passing communication skills are more effective and efficient; in other words, they are significantly better

**Table 1: Comparing pre- and post-workshop self-efficacy mean score**

Self-efficacy dimensions	Mean±SD		Paired <i>t</i> -test results ( <i>P</i> )
	Preworkshop	1-month postworkshop	
Education procedure	64.92±14.30	81.89±13.11	<0.001
Educational content	68.75±16.62	83.81±12.31	<0.001
Educational strategy	49.47±19.44	76.65±13.56	<0.001
Workshop place	56.75±22.11	76.37±16.41	<0.001
Educational ethics	67.00±19.63	86.00±12.96	<0.001

SD=Standard deviation

**Table 2: Comparing pre-, post-, and follow-up intervention self-efficacy scores**

Self-efficacy dimensions	Preintervention	1-month postintervention	3-month follow-up	Significance, <i>P</i>
Education procedure	70.90 (14.36)	86.10 (8.60)	58.60 (5.15)	<0.001
Educational content	73.50 (15.84)	87.00 (10.27)	64.37 (4.35)	<0.001
Educational strategy	51.45 (22.35)	80.25 (11.33)	71.95 (6.04)	<0.001
Workshop place	56.50 (21.89)	80.37 (14.76)	70.12 (7.45)	<0.001
Educational ethics	68.50 (21.28)	88.00 (12.39)	79.00 (10.07)	<0.001

in fulfilling their responsibilities. It seems an educational workshop may increase individual self-efficacy by reminding previous information, giving new hints, and placing person in similar situations with reality.

According to the research results, self-efficacy score decreased in the follow-up in comparison to the 1-month postintervention period, which may come from time effect on individuals' learning. However, the follow-up period tried to focus on recalling previous learning; self-efficacy requires self-esteem in addition to the competence. Moreover, since workshop materials and instructions were given at working hours, nurses concentrated more on doing well in their jobs rather than workshop and education. Apparently, the current clinical context has no effective influence on nurses' self-esteem in caring for the patient; instead, it may have a diminishing effect. Research findings also revealed that follow-up self-efficacy score among nurses increased in some dimensions comparing preintervention self-efficacy score. This finding is consistent with Peyman and Ezzati Rastegar.<sup>[19]</sup>

According to the findings, there was seen no significant relationship between age and pre- and post-intervention self-efficacy scores in nurses. These findings are consistent with Ghadmgahi *et al.*<sup>[20]</sup> and Ammentorp and Kofoed<sup>[17]</sup> whereas Peyman and Ezzati Rastegar<sup>[19]</sup> showed a significant relationship between age and self-efficacy score. It is unlikely that getting old may significantly contribute to individuals' self-efficacy during patient training. In particular, at present, older nurses are mostly assigned to coordination and shift affairs rather than direct interaction with help seekers.

Results demonstrated that temporary-to permanent nurses attained the highest preintervention self-efficacy score; while, contractual nurses obtained the highest postintervention self-efficacy mean score. It appears that official and permanent employment, often relevant with age, the need for direct care, and patient training would decrease, which may be the rationale of lower self-efficacy score of an official (permanent) employee. Higher self-efficacy score of contractual employees may stem from the short distance from graduation to work as patient training is of practical course assignments. Factors such as the type of employment also showed no positive effect on self-efficacy in patient care indicating that clinical context has no effect on nurses' self-efficacy. In contrast, the present research and other studies showed that there is a relationship between years of education and self-efficacy.<sup>[9,21]</sup>

Each research accordance with researcher situation and implementation environment has limitations that they mention can make the reader better known

from the results and provide a field for research's better implementation in the future. The study first limitation, including there, was no control group to the comparison of the workshop's effect with a neutral sample. This limitation weakened the statistical tests and the possibility of extending the results. It suggested that further studies are conducted using a control group. The second limitation, including impossibility to track the total samples in the follow-up period for reason rotating working shifts and nurses great work in the emergency department that causing to confound the independent effect of follow-up that using only and accurate from the follow-up to determine the effect of this method can be resolve this problem.

## Conclusion

The present research results presented that educational workshop may enhance self-efficacy among nurses. According to the obtained results, it is recommended that the Ministry of Health, Treatment and Medical Training, in cooperation with nursing institutions responsible for nursing and medical in-service education adopt necessary measures to enhance self-efficacy among employees in addition to improving patient training condition at medical processes through similar workshops or conducting related studies. Furthermore, it is also advised that nursing assessment and board of examiners as an educational content supervisor may take required measures for promoting patient training and its applicability at all education levels.

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## Conflicts of interest

There are no conflicts of interest.

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