



Evaluation of the Effect of Clinical Scenario-Based Educational Workshop and Reflection on the Knowledge and Attitude of Head Nurses and Clinical Supervisors toward in the Brain Death and Organ Donation

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ABSTRACT

Background: Participation in the organ donation process is a part of the expected activities in the nursing profession and nurses play a major role in this regard. Providing correct information by nurses increases the number of organ donors and it requires knowledge and positive attitude towards organ donation. The present study was conducted with the aim of evaluating the effect of clinical scenario-based educational workshop and re-thinking on the knowledge and attitude of head nurses and clinical supervisors working in Valiasr Hospital of Fasa in southwestern of Iran in 2019.

Materials and Methods: This was a pre-test and post-test type of quasi-experimental study. A total of 50 head nurses and clinical supervisors were randomly divided into intervention and control groups (each group contained 25 subjects). Reflective thinking and clinical scenario-based educational program was implemented for the intervention group in four sessions, 2 hours per session. Then, the mean score of knowledge and attitude in both groups was assessed before, immediately and one month after intervention. Data were analyzed using independent t-test, Chi-square and ANOVA through SPSS, version 22, software.

Results: The attitude ($P=0.47$) and knowledge ($P=0.78$) of head nurses and clinical supervisors in two groups did not differ significantly before training. Intervention group had a significant improvement in attitude and knowledge after training compared to the control group. ($P<0.05$)

Conclusion: Clinical scenario-based education and Reflective thinking was effective in enhancing the knowledge and attitude of nurses towards brain death and organ donation. Thus, it is recommended that nursing managers can consider necessary measures and plans in this regard.

Keywords: organ donation, knowledge, attitude, nurse, education

INTRODUCTION

Organ transplantation as one of the major medical developments and progresses in treatment of patients with dysfunction in organs plays a vital role in improving the quality of life and increasing the life expectancy of patients (1). The role of nurses has grown with increasing the number of organ donations in the world and in Iran, so that attention of nursing care has shifted from nursing care to the donation process and accordingly the role of nurses has also changed (2). Nurses play a key role in identifying organs, effectively following the needs of brain death patients, educating people and nursing the

organ donors (3). Participation in the organ donation process is a part of the expected activities in the nursing profession and nurses play a key role in this regard (4). Nurses can play a major role in identifying the organ donors and obtaining their family's consent for organ donation (5). Having a positive knowledge and attitude toward organ donation in nurses encourages the death brain patient's families to announce their consent in organ donation (6). Nurses can encourage families of brain death patients for organ donation by providing appropriate information to them. Providing correct information about donation requires having a positive attitude and knowledge about it (7-8). Studies conducted in Iran suggested that nurses' knowledge and attitude toward organ

donation is at the low level. The researchers of the studies have stated that holding educational programs can play a major role in increasing the level of knowledge and improving the performance of nurses in organ donation (9-10). The results of studies conducted in other countries also suggested that nurses' knowledge in the area of brain death and organ donation is at low level. In this regard, the results of studies conducted by Naçar et al. (2015) in Turkey, Khalid et al. (2019) in Pakistan, Poreddi et al. (2016) in India and Huern et al. (2016) in Malaysia showed that nurses' knowledge of organ donation was at low level and educational interventions were needed in this area (11-14). Nursing staff can play an important role in the organ donation process and the most studies conducted in Iran on nurses' knowledge and attitudes about brain death and organ donation are descriptive and limited interventional studies have been conducted in this area, and these interventional studies have used only lecture form of education and less modern educational method of clinical scenario-based method leading to active and deep learning has been used (15-17). Hence, the present study was conducted to evaluate the effect of clinical scenario-based educational workshop and re-thinking on the knowledge and attitude of head nurses and clinical supervisors in the area of organ donation in Fasa Hospital in southwestern of Iran in 2019 (18, 19).

MATERIALS AND METHODS

This study was pre-test and post-test type of a quasi-experimental study conducted at Fasa University of Medical Sciences Hospital in southwestern of Iran since March 2018 to June 2019. The research sample included all clinical head nurses and supervisors. To select the research samples, a list of head nurses and clinical supervisors was first prepared. A total of 50 subjects were randomly assigned into two groups of intervention and control (each group contained 25 subjects). The research inclusion criteria included having a bachelor or higher level of education, lack of participation in brain death related and organ donation courses in the last 6 months. Exclusion criteria of research also included unwillingness to participate in the study and absence in more than two sessions and lack of cooperation at the educational sessions. The researcher provided the necessary explanations on the objectives of the study and the implementation of the workshops after obtaining the permission from the research unit and introducing himself to the participants. Educational workshop sessions were held for test group by providing reflective thinking and clinical scenarios in 4 sessions of 2 hours for one month at the conference hall of the hospital (20). The control group did not receive any educational interventions. The content of the educational program was approved by the professors of the nursing department and professors in the field of organ transplantation as well as the head of organ transplantation department at Fasa University of Medical Sciences. Before holding the educational workshop, the knowledge and attitude questionnaires were completed by the subjects of intervention and control groups. Moreover, immediately and one month after the completion of the educational workshop, the questionnaires were completed by the intervention and control group. To collect data, knowledge and attitude questionnaire in the area of organ donation was used (21,22). The knowledge questionnaire includes 11 questions scored as true (score 2), false (score 1) and I do not

know (score zero). The lowest score is zero and the highest score is 22. The attitude questionnaire also included 18 questions, scored from I strongly agree (score 4), I agree (score 3), I disagree (score 2), and I strongly disagree (score 1). The lowest score is 18 and the highest score is 72. Content validity and the reliability of the knowledge and attitude questionnaire have been confirmed by Valiee et al in 2019 (15). In this study, the content validity of the questionnaires was confirmed by 15 nursing professors of Fasa University of Medical Sciences. To confirm the reliability of the knowledge and attitude questionnaire, test-retest method was used. For this purpose, the questionnaire was completed by 50 head nurses and clinical supervisors. They also re-completed the questionnaire after two weeks. The Cronbach's alpha coefficient was obtained 0.89 for the knowledge questionnaire and 0.81 for the attitude questionnaire, indicating desirable level of reliability. Analysis of the data through descriptive and inferential statistical methods was performed using SPSS, version 23, software. To examine the normal distribution of data, the Kolmogorov-Smirnov test was used. Repeated measures of analysis of variance was also used to compare the mean of knowledge and attitude before, immediately and one month after two group and significant level was considered $p < 0.05$.

RESULTS

In this study, 30 (60%) of the participants were female and 20 (40%) were male; 45 (90%) had a bachelor and 5 (10%) had a master degree. The mean age of participants was 35 ± 8.12 and the mean of employment history was 12 ± 8.32 years. Before the intervention, only 5 (10%) of the nurses and clinical supervisors in the test group had an organ donation card. After the intervention, 24 (48%) received the donor card. There was no significant relationship between the employment history and level of education and gender and knowledge and attitude of head nurses and clinical supervisors ($p = 0.48$). There was a significant relationship between attitude and knowledge, so that with increasing the knowledge level, the attitude also increased ($r = 0.014$). The mean score of knowledge and attitude before the educational workshop in two intervention and control groups was not significantly different ($P = 0.27$). Immediately and one month after the training workshop, the mean score of knowledge and attitude in intervention group showed a statistically significant ($P < 0.05$) (**Table 1**).

The mean score of attitude before the educational workshop was not significant in both test and control groups ($p = 0.47$). Immediately and one month after the educational workshop, the mean scores of attitude showed a significant different in the test and control groups ($P < 0.001$) (**Table 2**).

DISCUSSION

The results of this study, which was conducted to evaluate the effect of clinical scenario-based education on knowledge and attitude of head nurses and clinical supervisors on brain death and organ donation, showed that the level of knowledge and attitude of the test group after the implementation of the educational program increased significantly. The results of the research conducted by Azmandian et al. (2012) on the effect of educational program on knowledge and attitude of nurses in the ICU department of Kerman hospital also showed that the

Table 1. Comparison of the mean scores of knowledge nurses in the area of organ donation in the intervention and control groups in three stages of before, immediately and one month after the intervention

Group	Before the intervention	Immediately after the intervention	One month after the intervention	*P-value
intervention	10.38 ±2.39	19.27±2.63	17.43±2.39	<.001
control	10.48±2.43	12.47±2.54	12.78 ±2.63	.034
**p-value	0.78	0.001	0.02	

*repeated measure

**T test

Table 2. Comparison of the attitude score of nurses in the area of organ donation in the test and control groups in the three stages of before, immediately and one month after the intervention

Group	Before the intervention	Immediately after the intervention	One month after the intervention	*P-value
Test	13.08±29.17	10.36±58.27	13.74±55.46	<.001
Control	12.49±27.36	7.31±29.17	7.58±29.39	.057
**p-value	0.47	<.001	.001	

*repeated measure

**T test

mean score of attitude and knowledge in the test group increased after the implementation of the educational program and a significant relationship was found between the attitude and knowledge (23-26). The results of this study were consistent with those of the present study (27). The results of the study conducted by Lin et al. (2014) also showed that the implementation of the educational program led to an increase in the knowledge and attitude of the nurses in the area of organ donation (28, 29). Moreover, the nurses' attitude increased with increasing the level of knowledge (30-34). The result of this study was consistent with that of the present study (35-37). The results of the study conducted by Steenaart (2019) also showed that the use of new educational methods can increase the knowledge and attitude of nurses in the area of organ donation, which was consistent with the results of this study (38-42). The results of the studies conducted by Srinivasula et al. (2018) and Sugumar et al. (2017) and Marqués-Lespier JM (2013) also showed that educational interventions play an important role in increasing the knowledge and attitude of staffs of different medical departments in brain death and organ donation processes and it is necessary to implement educational programs continuously to increase knowledge and improve the performance of the staffs (43-46). The results of the study conducted by Aghayan et al. (2009) to evaluate the effect of the lecture-based educational workshop on the nurses' knowledge and attitudes on donation in Tehran (47, 48), showed that the implementation of the educational program had no effect on the attitude of nurses and no relationship was found between the knowledge and attitude, which was not consistent with the result of the present study (49). Its reason can be type of educational program. The mentioned study was conducted in a lecture form for an hour, while clinical scenario and reflective thinking for 8 hours were used in our study (50).

CONCLUSION

The present study showed that the implementation of educational interventions in the area of brain death and the organ donation has led to an increase in the level of knowledge and attitude of head nurses and clinical supervisors. Therefore,

it is recommended that this educational program can be implemented for other medical disciplines.

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Conflict of Interest

There is no conflict of interest to declared.

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