



Attitudes of nurses about organ donation and its related professional factors

Azar Jafari-Koulaee¹, Fatemeh Khenarinezhad¹, Masoumeh Bagheri-Nesami^{2*}, Hadis Javadian-Koutenai¹

¹ Student Research Committee, Mazandaran University of Medical Sciences, Sari, Iran

² Traditional and Complementary Medicine Research Center, Addiction Institute, Mazandaran University of Medical Sciences, Sari, Iran

The health care system can play a significant role in the decision making family and directing them toward satisfaction of donating organs. This study was conducted with the aim of determining the attitude of employed nurses about organs donation, brain death and its related professional factors. This study was conducted in 2015 that samples were selected through the systematic random sampling from all wards of sari's Imam Khomeini hospital. The Instrument of data collection comprised of two-part questionnaire prepared by the researcher. The first part of questionnaire is about the personal and demographic data and the second part of questionnaire is about the investigation of attitude about organ donation. The validity of questionnaire was confirmed by five faculty experts. Data was analyzed by using SPSS16 software. The mean of nurses' attitude about organ donation and brain death was 93.23 ± 9.27 that 56 (46.7%) people had a good attitude and 64 (53.3%) people had the excellent attitude. There was significant statistical relationship between the age ($P=0.01$, $r=0.302$), work experience ($r=0.267$, $P=0.003$) and also between education ($t=3.53$, $P=0.001$) with the attitude of nurses. Considering the positive correlation between the work experience and education and positive attitude of nurses about organ donation, it is suggested that use the nurses with higher work experience and education in order to convince the family of brain death patients to be satisfy with the organ donation.

Keywords: Attitude, Organ Donation, Transplantation, Nurse, Brain death.

Introduction

The advancement of science and the improvement of therapeutic methods, as well as the vital organs transplantation from brain-dead patients to those in need, have saved lives and improved quality of life and increased life expectancy in patients with advanced organ failure [1,2]. In the patient's brain death, the patient is in complete coma and only has an automatic heartbeat, which can be continued by artificial respiratory system and temporarily for a few hours to a maximum of several days [3,4]. The understanding of the real nature of brain death and all its economic, social and Jurisprudential-legal aspects are necessary to meet the needs of patients requiring organs transplantation. By using this theory and introducing it to the society in the form

of continuous developmental culture, the status of donating organ of brain dead patients should be promoted to an ethical principle accepted in society [5]. Brain death is now accepted as a certain death in many Western countries, but it is not acceptable in some Asian countries [6]. Despite the fact that European and American countries suffer from scarcity of organ donation, there is a significant difference between these countries and Asian countries. Lack of funding, the sense of responsibility of politicians, administrative formalities, lack of legal documents, lack of specialized staff, lack of responsible organizations, various religious attitudes and, most importantly, the acceptance of a large part of society in relation to the donation of organ in Asian countries can be due to causes this difference is significant [7]. In the United States, every 12 minutes, 18 people are added to the organ transplant list, and about 18 people die each day due to lack of organs for transplantation [2]. Although the brain death phenomenon and the possibility of using it in the organ transplantation, has created new hopes for

* Corresponding author: **Masoumeh Bagheri-Nesami**, Traditional and Complementary Medicine Research Center, Addiction Institute, Mazandaran University of Medical Sciences, Sari, Iran. E-mail: Mbagheri@mazums.ac.ir

the concerns of a number of patients, but it has brought many ethical, cultural and legal issues [8]. In recent years, medical science has paid special attention to organ transplantation, which has significantly improved the horizons of patients who are in the final stages of failure of the organ [9]. Successful transplantation not only improve the life expectancy and quality of life, but also reduce the cost of treatment in countries [1].

The Studies show that the health care system can play a significant role in the decision-making family of brain death patients and lead to satisfaction or dissatisfaction with the donation [10]. In fact, members of the health team, such as nurses, can accelerate the process of satisfying the family for organ donation by having a friendly relationship with the family members of the patient [11]. It was reported in the study that the doctors and nurses in intensive care unit had a positive attitude towards the donation of organs [12]. Alizadeh Taghi Abad et al also stated in a study that although the expression of organ donation among students is high, the number of participants have the donation card is very limited, which requires more training, especially in the field of medical information, so that it has to provide positive attitude related it [13]. In a study done on medical students in Hong Kong, it was reported that almost all students (99%) had a positive attitude towards donated organ. the students that have higher education have positive attitude twice more than the lower-level students [14]. Ohwaki et al., stated in a study that increased knowledge led to an increase in the positive attitude toward organ transplantation and brain death [15]. Regarding the effective role of the health team, including nurses, doing a research to identify their attitude and facilitate the organ donation is necessary.

A review on available databases revealed that most articles about organ transplantation and donation were limited to medical students and nurses in intensive care units, and limited studies were conducted on nurses from other units. While it seems that nurses in all units can play an effective role in the attitude of community members regarding organ donation and brain death. So, the aim of this study was to determine the attitude of nurses about organ donation and its related professional factors.

Materials & Methods

This descriptive study was conducted in Sari (Mazandaran, Iran) in 2015. Samples were selected

through systematic sampling from the statistical population of nurses working in Imam Khomeini hospital. The inclusion criteria in the study were nurses working in Imam Khomeini hospital in Sari with undergraduate and postgraduate degree. The total number of nurses working in Imam Hospital was 349 and the number of samples in this study was estimated 10 nurses based on the same study [12]. With positive attitude towards organ donation and standard error (0.04). The selection of nurses was done based on a systematic randomized sampling method. At the beginning of the sampling, a list of all nurses working at Imam hospital was obtained from the nursing office. Based on the inclusion criteria in this study, nurses working in Imam Khomeini hospital in Sari with a bachelor's degree or higher, were enrolled in the study. After calculating the number of nurses in each ward, the nurses were selected based on the list of names in the ward. After distributing questionnaires among nurses, 120 questionnaires were completed by them. A two-part questionnaire prepared and used by the researcher. The first part of the questionnaire includes 8 questions related to the demographic information (age, gender, level of education, work experience, marital status, place of residence, position in the ward, having an experience toward organ donation), and the second part includes 23 questions related to the assessment of "nurses' attitudes about organ donation and brain death. The questionnaire designed by the researcher based on national and international articles. The attitude section of the questionnaire consisted of five items. The total score was in the range of 115-23 that was categorized into four groups (93-95) and (92-70) and (69-47) and (46-23) which include excellent, good, moderate and weak attitudes, respectively. The content validity of the questionnaire was confirmed by five faculty members of Mazandaran University of Medical Sciences who had the necessary expertise and experience in the field. The reliability of the questionnaire was evaluated 0.703 by Cronbach's Alpha on 30 nurses working in Imam Khomeini hospital of Sari. After obtaining permission from the university's vice chancellor of research and technological sciences, the head of the hospital and the relevant hospital nursing office sampling was done. Questionnaires were completed by nurses and by assuring research samples that all responses will remain confidential. Data were analyzed by using descriptive statistics such as mean, standard deviation and inferential statistics such as Pearson correlation coefficient,

independent t-test and ANOVA and SPSS version 16.

Results

The range and mean age of participants were 21-50 and 24.24 ± 7.05 years, respectively. Of the 120 participants, 108(90%) were female and 12(10%) were male. The work experience of nurses ranged from 1 to 26 years with a mean of 10.02 ± 6.85 years. The level of education of 103 (85.8%) participation were undergraduate and 17 (14.2%) of them were graduate. 89 (74.2%) of nurses were married, 29 (24.2%) of them were single, 1 (0.8%) of them were widows and 1 (0.8%) of them were divorced. 105 (87.5%) of the participants were nurses, 14 (11.7%) of them were head nurses and 1 (0.8%) of them were supervisor. The place of residence of 107 (89.2%) of the study population was urban and 13 (10.8%) of them were rural. Of the 66 nurses (55%) of the participants in the study, they had an organ donation experience in the past, and 54 (45%) of them had no experience with organ donation.

The range of nurses' attitude scoring was 23-115, which 56 (46.7%) of them had a good attitude and 64 (53.3%) of them had an excellent attitude and generally none of them had not a moderate and poor attitude about organ donation and brain death. 70% of the participants in the study were fully in favor with the items "Donate the organ to be a God-friendly thing". 65% of them agreed with the item "Supporting patients in need of donating patients should be accepted as a valuable ethical principle in society". 52.5% of the respondents also said that completely agreed with item "Organ donation causes the survival of others." Also, 51.7% of them said that they agreed with the item "In the event of brain death, I know organ donation a best action". The attitude of nurses toward organ donation and brain death was examined with 23 questions in this study. The results of other questions are reported in Tables 1 and 2. Correlation between attitude of nurses about organ donation and brain death with age ($r = 0.302$, $P = 0.01$) and work experience ($r = 0.267$, $P = 0.003$) was assessed by using Pearson test, and there was a significant correlation between them. Also, based on independent t-test, there was a significant difference between the mean of nurses' attitude toward organ donation and brain death with different education ($P = 0.001$, $t = 0.353$) in two groups. Based on independent t-test, there was no significant correlation between nurses' attitude toward organ donation and gender ($P = 0.41$, $t = 0.81$), marital status ($P = 0.98$, $t = 0.02$), place of residence

($P=0.30$, $t = 1.02$) and having experience about organ donation ($P = 0.43$, $t = 0.81$). ANOVA test

Table 1. Absolute and Relative frequency of Responses of Questionnaire "Assessment of nurses' attitude about organ donation and brain death"

N	Item	Completely agree	Agree	No idea	Disagree	Completely disagree
1	I know organ donation as a God-friendly action.	84(74%)	36(30%)	0(0%)	0(0%)	0(0%)
2	I know organ donation as an ethical action.	57(47.5%)	55(45.8%)	8(6.7%)	0(0%)	0(0%)
3	In the event of brain death, I know organ donation a best action.	62(51.7%)	45 (37.5%)	11(9.2%)	2 (1.7%)	0(0%)
4	An important motivation in the organ donation is altruism.	52(43.3%)	52(43.3%)	11(9.2%)	5 (4.2%)	0(0%)
5	Bad form of corpse is a factor in avoiding organ donation.	19(15.8%)	21(17.5%)	22(18.3%)	39(32.5 %)	19(15.8%)
6	I agree to receive the member as needed.	49(40.8%)	48(40%)	20(16.7%)	3(2.5%)	0(0%)
7	The reason for people refusing to organ donation is the lack of informed consent.	34(28.3%)	62(51.7%)	17(14.2%)	7(5.8%)	0(0%)
8	Financial need can be a major motivation for organ donation.	18(15%)	37(30.8%)	32(26.7%)	28(23.3%)	5(4.2%)
9	Religion can be effective in donating members.	27(22.5%)	38(31.7%)	40(33.3%)	9(7.5%)	6(5%)
10	The donation of a member does not contradict the process of life and death.	18(15%)	56(46.7%)	25(20.8%)	15(12.5%)	6(5%)
11	I agree that the donation of the organ causes calm to the donor community.	32(26.7%)	44(36.7%)	35(29.2%)	9(7.5%)	0(0%)
12	The organ donation causes vitality in the recipient.	55(45.9%)	47(39.2%)	13(10.8%)	4(3.3%)	1(0.8%)
13	The donation of the organ induces vitality in the recipient's family member donation.	56(46.7%)	54(45%)	10(8.3%)	0(0%)	0(0%)
14	The donation of a member causes the continuity of life in others.	63(52.5%)	39(32.5%)	9(7.5%)	8(6.7%)	1(0.8%)
15	Organ donation contributes to the advancement of medical science.	51(42.5%)	46(38.3%)	18(15%)	4(3.3%)	1(0.8%)
16	The donation of a member strengthens the atmosphere of social solidarity.	40(33.3%)	60(50%)	9(15.8%)	1(0.8%)	0(0%)
17	The member donation contributes to the development of the culture member donation in the community.	60(50%)	50(41.7%)	9(7.5%)	1(0.8%)	0(0%)
18	The patient with brain death is not different in terms of health with the corpse.	38(31.7%)	40(33.3%)	23(19.2%)	18(15%)	1(0.8%)
19	There is no possibility of improving a patient with brain death.	31(25.8%)	33(27.5%)	25(20.8%)	29(24.2%)	2(1.7%)
20	A nurse can play a role in convincing a family member of a brain dead patient.	37(30.8%)	68(56.7%)	12(10%)	3(2.5%)	0(0%)
21	A nurse can play a role in promoting organ donation in the community.	48(40%)	62(51.7%)	9(7.5%)	1(0.8%)	0(0%)
22	Brain death is the irreversible coma.	54(45%)	46(38.3%)	8(6.7%)	11(9.2%)	1(0.8%)
23	Protecting patients in need of organ donation should be accepted as a valuable ethical principle in the community.	78(65%)	40(33.3%)	1(0.8%)	1(0.8%)	0(0%)

did not show a significant correlation between nurses' attitude toward organ donation and position in unit ($P=0.31$, $f=1.2$).

Table 2. The Mean of nurses' attitude about organ donation and brain death according to age, place of residence and level of education

Variable	Mean(SD)	P value, T
Gender	Men	$P=0.41$
	Women	$T=0.81$
Place of residence	Urban	$P=0.30$
	Rural	$T=1.02$
Level of Education	Bachelor	$P=0.001$
	Masters	$T=3.53$

Discussion

According to the research, 56 (46.7%) of the nurses had a good attitude and 64 (53.3%) of them had an excellent attitude. In line with the findings of this study, Kim et al. (2007) stated that nurses' attitude toward organ donation and brain death was positive [16]. Also, Ahlawat et al., in an attempt to determine the attitudes and awareness of health care workers about the donation, stated that 55% of people had a positive attitude toward donation [17]. Milka et al., in their research on nursing students' attitudes towards organ donation, stated that 69% of the students were satisfied with the subject, 25% were skeptical and 6% of them disagreed [18]. Lomera and colleagues in a study on health professionals in the field of organ donation and brain death, stated that 98.7 percent of respondents agreed with the organ donation [19]. The reason of this difference with the results of the present study can be the differences in the educational field and the level of awareness of the members in terms of organ donation, cultural differences, and the differences in the tools. In the present study, 70% of the respondents were completely agreed with the organ donation as a God-friendly action. Along with that, another study reported that 71.1% of the subjects agreed with the adherence of the donation to the goddess [13]. In the present study, 51.7% of the participants stated that in the event of brain death, organ donation is best action. In another study, 76.9% of people said that in the event of brain death, organ donation would be best action [1]. 52.5% of the subjects in this study stated that the organ donation causes the survival of others. In another study, Continuity in the lives of patients was 10.4% of the most important reasons for doctors and nurses in agreement with the organ donation [12]. The reason for the difference in responses can be due to the difference in respondents. Thus, the respondents in this study were nurses working in all units of the hospital

but the respondents in the above studies were the general population, physicians and nurses of the intensive care unit whose responses could vary with each other due to cultural differences and the level of awareness of individuals and having experience in organ donation and brain death. In the present study, more than 90% of persons noted organ donation is cause of calming in the family member and like this result in another study was reported that 7.5% of the most important reasons of agreement people for organ donation [12]. In the present study, more than 80% of people stated that they would be satisfied to receive an organ if needed, which is consistent with that in a study that most people agree to receive the organ if needed [1]. In the present study, 51.7% of nurses stated that the nurse can play a role in promoting the organ donation in the community. In this regard, researchers reported that nursing students can play an important role in promoting organ donation and transplantation process by increasing awareness of recipient and caregivers and their families [20].

In the present study, the majority of people believed that vitality in the recipient was considered as an effective factor in the attitude toward the organ donation. The results of another study also stated that the creation of vitality in organ donation recipients as the cause of organ donation advocates [13]. Also in that study reported that rescue of the recipient was the cause of organ donation advocates [13], which is consistent with this study. Marck et al. stated in a study that religion is one of the effective factors in the organ donation [21]. In this regard, in a study, attention to the spiritual dimension was one of the most important reasons in organ donation of individuals [12], which is consistent with the present study. Also, Alizadeh Taghi Abad et al. reported that lack of adequate information on organ donation is one of the reasons for opposition to organ donation [13]. In line with this study, most people considered the lack of adequate information about organ donation as an effective factor in creating a negative attitude.

In the present study, there was a significant direct correlation between the attitude of nurses about organ donation and brain death with age. Jeon et al. also stated that there was a significant correlation between attitude with the age of the subjects [22] in a study on the attitude of therapeutic staff in relation to brain death and donation. Also, there was a significant correlation between the attitudes of nurses with their work experience, so that with increasing work experience, people had a more positive attitude

toward organ donation. In line with the findings of this study, Massoumian et al. stated that there was a significant correlation between the attitudes of nurses with their work experience [23]. In the present study, there was no significant correlation between nurses' attitudes about organ donation and brain death with experience towards organ donation and brain death that, in contrast to Vijayalakshmi et al., in a study on the attitude of nurses regarding organ donation, there was a significant correlation between attitude of nurses with having experience in caring of a patient with brain death [24]. So having an experience about organ donation or brain death can affect the positive attitude toward organ donation can facilitate organ donation. It was also reported in a study that there was no significant correlation between the attitudes of nurses with their gender [24] which is consistent with the present study, so that the results in the present study indicate that the gender of people has no effect on the positive or negative attitudes. Jeon et al. reported that there is a significant correlation between the attitude of therapeutic staff towards brain death and organ donation with marital status [22] which is not consistent with the present study. One of the possible causes of this contradiction can be the difference between the cultural environment and the type of personnel. So, the subjects in this study were only nurses working in the hospital, but in the study of Jeon et al. [22], the subjects were also selected from physicians and nurses.

The limitations of this study were Access to limited number of nurses, high workload of nurses and inaccuracy in responding to questionnaires due to fatigue. It is suggested to be used of nurses with a higher level of education and work experience in convincing the family of brain death patients to satisficing towards the organ donation and to identifying the organ donation as a valuable ethical principle in the community.

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Conflicts of interest

None declared.

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