

**Original Article**

**Ethical and Cultural Issues in Transplantation: The Views and Attitudes of Nurses**

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**ABSTRACT.** Organ transplantation is lifesaving for individuals with end-stage organ failure. However, many people are still waiting for organ transplantation due to religious beliefs and the perspectives of society. Many studies on organ donation have shown that the knowledge levels and attitudes of nurses have an important effect on organ donation rates. The aim of this study was to evaluate the views and attitudes of nurses about ethical and cultural issues related to transplantation. This descriptive study was conducted on 220 nurses who worked in a university hospital in Istanbul, Turkey. Data were collected using a questionnaire form included socio-demographic characteristics, ethical-cultural values, and knowledge levels about transplantation of the participants. Descriptive statistics and Chi-square test were used for the analysis of data. The mean age of the participants was  $24.8 \pm 6.04$  years. Sixty percent of the participants reported that a person with brain-death was the most ideal candidate for organ donation. Seventy-seven percent of them suggested that organ sale was the most common ethical problem in organ transplantation. Sixty-three percent reported that the patient awaiting transplantation for a long time had priority order for organ transplantation. Most of the nurses (91.0%) believed that organ transplantation was religiously and culturally appropriate; however, 67.7% of them reported that it was not considered appropriate by the society due to religious and cultural beliefs. Sixty-two percent of them suggested that the society believed that organ transplantation was unlawful (haram) religiously. Nurses generally had positive views and attitudes about organ transplantation.

**Introduction**

Organ transplantation has become a life-failure. Thanks to the remarkable advances in

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saving option for individuals with end-organ transplantation, many people around the world are given new lives.<sup>1-4</sup> Although advances in transplantation have increased rapidly, many people are still waiting for transplantation because of their religious beliefs and community perspectives.<sup>5,6</sup> The inadequacy of organ donation remains the most challenge problem for health professionals worldwide.<sup>7,8</sup>

Society, culture, legislations, art, media, and medicine have a decisive role in the formation

of organ donation culture.<sup>3,7,9</sup> The increase in the number of transplants worldwide can cause ethical, cultural, and legal problems.<sup>3,10</sup> In Islamic countries, although many religious experts approve organ transplantation, the ethical decision on this issue is controversial. Therefore, general aspects of organ transplantation are influenced by many factors such as religious beliefs, geographical variations, and individual opinions.<sup>10-12</sup> Differences of opinion on organ donation among family members may be due to religious reasons. In addition, some people believe that removal of body parts from the dead person is forbidden religiously.<sup>6</sup>

The knowledge and awareness of society should be improved about this issue in order to increase the number of organ donation. Nurses, who keep close communication with patients and their families, have an important role for overcoming barriers to organ donation. Nurses can act as coordinators among the treatment team, donors, recipients, and their families. Many studies have suggested that the knowledge levels and attitudes of nurses on organ donation have a significant effect on organ donation rates.<sup>6,8,13-16</sup> Therefore, the lack of knowledge and negative attitudes of the nurses may be an important restriction for organ donation. If health-care professionals involved in transplant process do not give enough importance to organ donation, the identification of possible donors becomes difficult, and the attitudes of family members are adversely affected.<sup>6,16</sup> In this context, the aim of this study was to examine the views and attitudes of nurses about ethical and cultural issues related to transplantation.

## Subjects and Methods

### *Study design and sample*

The descriptive study was conducted on 220 nurses who worked in a university hospital in Istanbul, Turkey, between June and August 2018. The inclusion criteria for this study were to be a nurse, to agree to participate in the study, and to complete the questionnaire. In the study, no sample selection was made, and

the entire population was tried to be reached. The study population consisted of 272 nurses, and 80.8% of the population was reached.

### *Data collection*

Data were collected by descriptive information form, transplantation information form, and transplantation ethical and cultural information form. After the participants were informed about the study, the data were obtained from those who agreed to participate in the study. Data were collected by face-to-face interview method. Each interview lasted an average of 15–20 min.

1. Descriptive information form –The form consisted of 11 questions including the sociodemographic data of the participants such as gender, age, educational level, marital status, and the unit where they work
2. Transplantation information form –As a result of the literature review, the form consisted of 13 open- and closed-ended questions prepared by the researchers about the knowledge and attitudes of the participants related to organ donation and transplantation<sup>6,8,10,13,16</sup>
3. Transplantation ethical and cultural values information form –As a result of the literature review, the form consisted of 6 open- and closed-ended questions prepared by the researchers which include the participants' views on ethical issues, religious, and cultural values related to organ transplantation.<sup>3,4,10,17</sup>

### *Ethical consideration*

In order to conduct the study, approval was obtained from Istanbul Medipol University Noninterventional Clinical Research Ethics Committee (Decision number: 388) and related institution. Before the data were collected, the participants were informed about the purpose of the study. After the written and verbal consent of the participants was obtained, the data were collected. The study was conducted on a voluntary basis.

**Statistical Analysis**

The IBM SPSS Statistics version 22.0 (IBM Corp., Armonk, NY, USA) was used for data analysis. Number, percentage, mean, and standard deviation values were used for descriptive statistics of the data. Chi-square test was used to compare categorical variables.  $P < 0.05$  was considered statistically significant.

**Results**

The descriptive characteristics of the participants are shown in Table 1. The mean age of the participants was 24.8 years (standard deviation: 6.04), and 80.0% of them were women. Eighty-three percent of them were single, 87.3% of them did not have children, and 48.6% of them had 0–1-year working time.

Table 1. Distribution of the descriptive characteristics of the participants ( $n=220$ ).

Characteristics	<i>n</i> (%)
Gender	
Female	176 (80.0)
Male	44 (20.0)
Education level	
High school	44 (20.0)
Associate's degree	52 (23.6)
Bachelor's degree	112 (50.9)
Postgraduate degree	12 (5.5)
Marital status	
Married	38 (17.3)
Single	182 (82.7)
Number of children	
None	192 (87.3)
One	18 (8.2)
Two	10 (4.5)
Family type	
Nuclear family	197 (89.5)
Extended family	23 (10.5)
Income status	
Income is less than expense	55 (25.0)
Income equals expense	138 (62.7)
Income is more than expense	27 (12.3)
Working unit	
Clinic	81 (36.8)
Intensive care unit	37 (16.8)
Emergency service	30 (13.6)
Operating room	53 (24.1)
Others (outpatient units, endoscopic units, etc.)	19 (8.6)
Working task	
Nurse	202 (91.8)
Executive nurse	15 (6.8)
Training nurse	3 (1.4)
Working time	
0–1 year	107 (48.6)
2–5 years	66 (30.0)
6–10 years	26 (11.8)
11–15 years	11 (5.0)
16–20 years	4 (1.8)
Over 20 years	6 (2.7)

Table 2 presents the evaluation of knowledge and willingness of the participants related to transplantation. More than half of the participants (63.2%) received training about transplantation. Although 91.8% of the participants

did not donate their organs, 84.1% of them were willing to donate their organs, and 64.1% of them reported that organs were donated to the hospitals. Sixty percent of them reported that a person with brain-death was the most

Table 2. Evaluation of knowledge and willingness of the participants related to transplantation ( $n=220$ ).

Characteristics	n (%)
Training on transplantation	
Yes	139 (63.2)
No	81 (36.8)
Place of transplantation training*	
School	60 (27.3)
Hospital	108 (49.1)
Congress, conference, symposium etc.	24 (10.9)
Organ donation	
Yes	18 (8.2)
No	202 (91.8)
Willingness to donate organs	
Yes	185 (84.1)
No	35 (15.9)
Organ donation unit*	
Hospitals	141 (64.1)
Health departments	32 (14.5)
Police department (during driver's license purchase)	8 (3.6)
Associations and foundations interested in transplantation	27 (12.3)
Organ transplantation centers	80 (36.4)
Ideal candidate for organ donation*	
Healthy person	124 (56.4)
Cadaver	60 (27.3)
Person with brain-death	132 (60.0)
Animal	1 (0.5)
Paralyzed patient	4 (1.8)
Patient in the terminal period	9 (4.1)
Palliative care patient	6 (2.7)
Having adequate information on brain-death	
Yes	142 (64.5)
No	78 (35.5)
Being a relative who has an organ transplant	
Yes	54 (24.5)
No	166 (75.5)
Having knowledge about 3D artificial organ transplantation	
Yes	28 (12.7)
No	192 (87.3)
Blood donation	
Yes	77 (35)
No	143 (65)
Willingness to donate blood	
Yes	198 (90)
No	22 (10)

\*Multiple options were marked.

ideal candidate for organ donation. Sixty-five percent of them did not have enough knowledge on brain-death, and 87.3% of them did not have knowledge on three-dimensional printed artificial organs. Table 3 shows the comparison of descriptive characteristics of the participants with blood donation, organ donation, and training on transplantation.

The evaluation of ethical and cultural values of the participants about transplantation is given in Table 4. Most of the participants (76.8%) suggested that organ sale was the most common ethical problem in organ transplantation. Sixty-three percent of them reported

that the patient awaiting transplantation for a long time had priority order for organ transplantation. Ninety-one percent believed that organ transplantation was religiously and culturally appropriate; however, 67.7% of them reported that it was not considered appropriate by the society due to religious and cultural beliefs. Most of them (61.8%) suggested that the society believed that organ transplantation was unlawful (haram) religiously.

### Discussion

Organ transplantation is one of the most

Table 3. Comparison of descriptive characteristics of the participants with blood donation, organ donation, and training on transplantation (n=220).

Characteristics	Blood donation			Statistics	P
	Yes n (%)	No n (%)			
Gender				3.916 <sup>a</sup>	0.048
Female	56 (72.7)	120 (83.9)			
Male	21 (27.3)	23 (16.1)			
	Organ Donation				
Marital status				6.410 <sup>a</sup>	0.011
Married	7 (38.9)	31 (15.3)			
Single	11 (61.1)	171 (84.7)			
Number of children				24.615 <sup>a</sup>	<0.001
None	9 (50)	183 (90.6)			
One	6 (33.3)	12 (5.9)			
Two	3 (16.7)	7 (3.5)			
Working time				27.656 <sup>a</sup>	<0.001
0–1 years	8 (44.4)	99 (49.0)			
2–5 years	1 (5.6)	65 (32.2)			
6–10 years	3 (16.7)	23 (11.4)			
11–15 years	1 (5.6)	10 (5.0)			
16–20 years	2 (11.1)	2 (1.0)			
Over 20 years	3 (16.7)	3 (1.5)			
	Training on Transplantation				
Having adequate information on braindeath				19.940 <sup>a</sup>	<0.001
Yes	105 (75.5)	37 (45.7)			
No	34 (24.5)	44 (54.3)			
Having knowledge about 3D artificial organ transplantation				12.146 <sup>a</sup>	<0.001
Yes	26 (18.7)	2 (2.5)			
No	113 (81.3)	79 (97.5)			
Religious and cultural view of society				8.690 <sup>a</sup>	0.003
Positive	35 (25.2)	36 (44.4)			
Negative	104 (74.8)	45 (55.6)			

<sup>a</sup>Chi-square test

Table 4. Evaluation of ethical and cultural values of the participants about transplantation ( $n=220$ ).

Characteristics	n (%)
<b>Ethical problems in organ transplantation*</b>	
The organ sale	169 (76.8)
Lack of priority order for organ transplantation	112 (50.9)
Not providing sufficient information to individuals (recipient and donor) and their families who will undergo organ transplants by health professionals	128 (58.2)
Not respected and disregarded the religious and cultural beliefs of individuals (recipient and donor) and their families that will undergo organ transplant by health professionals	112 (50.9)
Not evaluated whether the live donor who will undergo organ retrieval is psychologically ready and voluntary by health professionals	119 (54.1)
During cadaver transplantation, transplantation of his/her organs to others even though he/she has a declaration that he/she will not donate his/her organs before he/she dies.	108 (49.1)
Others (distress between the donor and his/her family related to transplantation, medical errors)	4 (1.8)
<b>Priority order for organ transplantation*</b>	
Young patient	116 (52.7)
The patient whose other organs are getting damaged	67 (30.5)
Patient who had previously undergone organ transplantation and developed rejection	13 (5.9)
Patient with low income	25 (11.4)
Patient waiting for long-term organ transplantation	138 (62.7)
Respectable scientists, artists, etc., in society	6 (2.7)
<b>Suitability for religious and cultural aspects</b>	
Yes	200 (90.9)
No	20 (9.1)
<b>Religious and cultural views of society</b>	
Positive	71 (32.3)
Negative	149 (67.7)
<b>Reasons why organ transplantation is not accepted by society in religious and cultural dimensions*</b>	
The idea that the integrity of the body will be disrupted	129 (58.6)
Spiritually feeling uncomfortable and incomplete	94 (42.7)
The idea that the soul of the dead cannot be at peace	119 (54.1)
The idea that it is unlawful (haram) religiously	136 (61.8)
The idea that the organs will witness on Judgment Day	109 (49.5)
Others	5 (2.3)
<b>Recommendations for the extension of organ donation in society*</b>	
Publication of advertisements and promotional videos	132 (60)
Establishment of training programs by health personnel and providing access to education for all	155 (70.5)
Organizing conferences, symposiums, panels, or congresses by foundations or institutions at regular intervals	135 (61.4)
Explaining the value of Islam to lifesaving to society	167 (75.9)
Others	8 (3.6)

\*Multiple options were marked.

common and critical issues of medical ethics in many countries today.<sup>10</sup> In this study, the views and attitudes of nurses about ethical and cultural problems related to organ transplantation were examined. More than half of the participants (63.2%) were found to have received training on transplantation, and 64.5% of them reported to have sufficient knowledge of brain-death. Lomero et al found that 62.1% of the nurses had never received training on organ donation or transplantation and 86.7% of them wanted to receive more training on this subject.<sup>15</sup> MasoumianHoseini et al found that nurses do not have sufficient knowledge, attitudes, and practices regarding their role in organ donation process.<sup>2</sup> In line with these studies, training programs on organ donation and transplantation for nurses need to be increased.

Among health professionals, nurses serve as a bridge between the community and the health-care system. The knowledge, attitudes, and beliefs of nurses about organ donation are highly effective in raising awareness of organ donation not only in society but also in the health system.<sup>7,15,18-20</sup> In this study, attitudes of the nurses toward organ transplantation were positive. Although most of them (91.8%) did not donate their organs, 84.1% of them were willing to donate. Lomero et al found that attitudes of the nurses toward organ transplantation were generally positive. About 68% of the nurses wanted to donate all the organs and tissues that could help others, and 80% of them were in favor of organ and tissue donation.<sup>15</sup> Hvidt et al found that the majority of the health professionals favor organ donation and transplantation and most of them (77%) approved to donate their organs.<sup>21</sup> Xie et al found that 66.6% of the transplant nurses were willing to accept organ transplant surgery for themselves while 78% of them were willing for their relatives.<sup>8</sup> Vijayalakshmi et al found that the majority of the nurses (81%) were willing to sign the donation card for organ donation, but only 3.8% of them signed the organ donation card.<sup>14</sup> A study conducted in Iran found that 47.4% of the health professionals were willing to donate organs, but

52.5% of them were reluctant. Ninety-six percent of those who signed the organ donation card were willing to donate organs.<sup>10</sup> As a result of these studies, attitudes toward organ donation of the nurses are generally positive as in our study.

All over the world, the differences in medical, legal, and economic regulations of the transplantation process are due to cultural differences between countries. These differences also affect the attitudes and opinions of health-care professionals on transplantation.<sup>22</sup> In this study, a patient with brain-death (60.0%) was the most ideal candidate for organ donation, and the patient awaiting transplantation for a long time (62.7%) had the priority order for organ transplantation. Abbasi et al found that cadaver donor (67.6%) was the most ideal candidate for organ donation. Most of the participants reported that the priority for organ transplantation (recipient) should be given to the young patient (32.62%) and to the patient who has not previously undergone organ transplantation (23.87%).<sup>10</sup> This diversity of views of the nurses on organ transplantation may be due to cultural, social, economic, geographical, and religious differences.

Most of the nurses reported that organ sale was the most common ethical problem in organ transplantation and that health professionals cannot provide sufficient information to individuals (recipient and donor) and their families. Tanimizu et al found that ethical problems related to organ transplantation were experienced in nursing practices since recipients, their families, and donors could not foresee various problems that may occur after transplantation.<sup>9</sup> Shih et al examined ethical issues related to organ transplantation perceived by health professionals, law and religious experts, and found some ethical dilemmas, such as difficulties in touching the hearts of the people, difficulties in helping donors and their families, competence of health professionals, and difficulties experienced by families in the care of recipients.<sup>17</sup> The religious beliefs of the society are shown as an important reason why not enough people are available for organ transplantation.<sup>5</sup> In the

study, most of the nurses (91%) believed that organ transplantation was religiously and culturally appropriate, however, 67.7% of them reported that it was not considered appropriate by the society due to religious and cultural beliefs. More than half of the nurses (61.8%) suggested that the society believed that organ transplantation was unlawful (haram) religiously. Lomero et al found that nurses with no religious beliefs were more willing to donate organs than others.<sup>15</sup> Kobus et al found that age and religion had a significant effect on organ transplantation.<sup>5</sup> Hvidtet al examined intricate facilitators and barriers in organ donation perceived by nurses and doctors.

These factors included having knowledge about organ donation and transplantation, and willingness to donate their own organs, ethical sensitivity in organ donations and transplantations, stressors and individual beliefs, and religion/spirituality to deal with organ donation and transplantation in the hospital.<sup>21</sup> As a result of the studies, it was concluded that attitudes of the nurses toward organ donation and transplantation were affected by many factors such as religious beliefs, cultural and sociodemographic characteristics.

This study was single centered; therefore, the results obtained from the study cannot be generalized to all nurses. It is recommended that the study be conducted with multicenter, larger sample size, and various societies.

### Conclusion

According to the current study, nurses generally had positive views and attitudes about organ transplantation. Although almost all of the nurses did not donate their organs, the vast majority was willing to donate their organs, and most of them received training in organ transplantation. Most of the nurses believed that organ transplants were religiously and culturally appropriate, however, most of them thought that the society did not accept organ donation in terms of religious and cultural issues. Activities such as training programs, advertisements, congresses, and conferences toward organ donation should be increased to

eliminate ethical and cultural issues and to improve positive views and attitudes about organ transplantation.

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