

Received: 2019.04.08

Accepted: 2019.05.28

Published: 2019.07.09

Patient Knowledge, Attitudes, and Behaviors Associated with Organ Donation

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Statistical Analysis C
Data Interpretation D
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Source of support: This study was presented as a poster in 23rd International Conference on Healthcare and Life-Science Research (ICHLSR), Dubai, 2017

Background: This study compared the knowledge, attitudes, and behaviors associated with organ donation and transplantation among patients undergoing dialysis versus those visiting family health centers (FHCs).

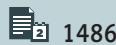
Material/Methods: This cross-sectional study included patients undergoing hemodialysis treatment at the Meram Medical Faculty and those visiting FHCs in Meram district for other reasons.

Results: The study participants were 128 individuals visiting FHCs and 111 patients undergoing dialysis. Of these, 169 individuals (70.7%) correctly answered the question "What is brain death?" The knowledge level in the FHC group was higher than that in the dialysis group. Less than half of the individuals indicated willingness to donate an organ. Furthermore, subjects in the dialysis group were more likely than those in the FHC group to answer "no" to the question "Would you be willing to donate an organ to someone of a different religion?"

Conclusions: Positive attitude towards organ transplantation and donation does not necessarily reflect positive behavior these 2 groups.

MeSH Keywords: Attitude • Behavior • Directed Tissue Donation

Full-text PDF: <https://www.annalsoftransplantation.com/abstract/index/idArt/916824>



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Background

Organ transplantation is one of the noteworthy advancements in medical science. Since ancient times, organ and tissue transplantation has been widely contemplated to be feasible. The first organ to be transplanted was the kidney, performed by Dr. Joseph Murray and Dr. David Hume at Brigham Hospital in Boston in 1953 [1].

In recent years, various organs have been successfully transplanted. However, the global demand for organ transplantation exceeds the available supply of organs and this is a major challenge in transplantation medicine. Thus, understanding the attitudes and beliefs associated with organ donation of the general public is essential [2]. In Europe and the USA, the proportion of organ transplantation after brain death is higher than that in Muslim countries [3,4]. Various studies regarding organ transplantation have reported education, socioeconomic status, culture, and religion to be among the important factors associated with the success of transplantation [5]. This study aimed to compare the knowledge, attitudes, and behaviors associated with organ donation and transplantation from living donors among patients undergoing dialysis versus outpatients visiting family health centers (FHCs).

Material and Methods

This cross-sectional study was conducted from 2 January 2017 to 5 April 2017. The study included 2 groups of individuals. The first group comprised patients undergoing hemodialysis at the Meram Medical Faculty, and all patients in the dialysis unit agreed to participate in the study. The second group comprised outpatients visiting FHCs. Of the 29 FHCs in Meram district, 5 FHCs were randomly selected for the study. The outpatients who agreed to participate in the study were included during the research.

The researchers reviewed the relevant literature and prepared a questionnaire that included 2 sections. The first section included questions regarding the socio-demographic characteristics, and the second section included questions regarding the knowledge, attitudes, and behaviors of individuals associated with organ donation and transplantation from living donors. The validity and reliability of the questionnaire were not analyzed. A preliminary assessment of the questionnaire was conducted with 10 people who were not included in the study. Accordingly, the questionnaire was modified and administered using the face-to-face technique. The questionnaire was administered to the dialysis group after routine dialysis treatment and to the FHC group while waiting at FHCs. The questionnaire required approximately 10 min to complete. Approval from the Necmettin Erbakan University Meram Medical Faculty

Ethics Committee (Date: 28-04-2017, no. 2017/891) was obtained. Participants were informed regarding the aim of the study, and their consents were obtained before the administration of the questionnaire.

Statistical analysis of data was conducted using the SPSS 24.0 statistical software package (IBM SPSS, Chicago, IL, USA). Data were summarized using percentage distributions. Categorical data were analyzed using the chi-square test and logistic regression analysis. In all the analyses, $p < 0.05$ was considered to be statistically significant.

Results

The study participants were 128 individuals from FHCs and 111 patients from hemodialysis units. All participants were Muslim. Table 1 depicts the sociodemographic characteristics of the participants. In the FHC group, the proportion of university graduates (49.2%) was the highest, and in the dialysis group the proportion of primary school graduates (50.0%) was the highest ($\chi^2=48.99$ $p < 0.001$). No one in the FHC group needed organ donation. Table 2 summarizes the answers to some questions regarding the knowledge associated with organ transplantation and donation, and Table 3 summarizes answers to questions regarding attitudes and behaviors of participants.

Discussion

This study assessed the knowledge, attitudes, and behaviors associated with organ donation and transplantation from living donors among patients undergoing dialysis at Meram Medical Faculty and adult outpatients visiting FHCs.

The first fatwa associated with organ transplantation in Islamic countries was passed in Egypt in 1959 [6]. However, the first fatwa regarding organ transplantation in Turkey was passed by the Religious Affairs Administration, Religious Affairs High Council in 1980. In this fatwa, tissue and organ transplantation after brain death were permitted. Since then, the high council has declared fatwas that the tissue and organ transplantations are permissible after brain death and from living donors. Approximately half of the participants in this study were unaware of these fatwas.

In our study, 38% of the participants approved of organ donation. In a study including university students in Balikesir [7], this proportion was 53%; however, it was found to be 91% in another study including female university students in Ankara [8]. In studies conducted in Istanbul and Kayseri, 74% and 58% of the participants, respectively, displayed a positive approach towards organ donation [9,10]. This wide variation

Table 1. Sociodemographic characteristics of participants of research regarding organ transplantation and donation, Konya, Turkey 2017.

		Group			
		Family Health Center		Dialysis	
		n=128	%	n=111	%
Gender	Male	54	42.2	53	52.47
	Female	74	57.8	48	47.73
Marital status	Married	74	57.8	72	64.9
	Single	47	36.7	17	15.3
	Divorced/widow	7	5.5	22	19.8
Education	Primary school	19	14.8	55	50.0
	Secondary school	8	6.3	16	14.5
	High school	38	29.7	21	19.1
	University	63	49.2	18	16.4

Table 2. Sentences of knowledge regarding organ transplantation and donation, Konya, Turkey 2107.

		Group				χ^2	p
		Family Health Center		Dialysis			
		n=128	%	n=111	%		
What is brain death?	Know	117	91.4	52	46.8	56.93	0.001
Is recovery possible after brain death?	Know	40	31.3	52	47.3	6.40	0.010
What is an organ donation?	Do not know	11	8.6	21	18.9	5.46	0.010
Where is the organ donation card taken?	Know	26	20.3	17	15.3	0.99	0.310
What is cross transplantation?	Know	35	66.0	18	34.0	4.26	0.030
Is there a fatwa from the department of religious affairs regarding organ transplantation and donation?	Do not know	59	46.1	58	52.3	0.90	0.340

in the percentage of participants with a positive attitude towards organ donation may stem from their hesitations regarding organ donation.

When participants were asked “Why do you not want to make an organ donation?” 28.5% stated it to be because of religious beliefs and 27.6% stated that they do not want their bodies to be interfered with. It seems to us that these 2 answers express the same attitude because there is a notion of preserving a dead body’s integrity in Islamic belief, and after-brain-death organ transplantation is less common in Muslim countries compared with non-Muslim ones.

Our search of the literature found no studies on organ transplantation and donation that include patients undergoing

dialysis; therefore, we could not conduct a one-to-one comparison of our results. The proportion of participants who believed that organ donation was appropriate according to Islamic belief was 7.9%. In a study conducted in Egypt [11], this proportion was found to be 19%. In a study conducted in Qatar [12], religious beliefs were reported to be a major obstacle for organ donation. Furthermore, in a study performed in Saudi Arabia, 26% of the participants stated that organ donation was not approved by the religion of Islam [13].

Only 9 participants in our study had organ donation cards. Compared with the number of participants with a positive attitude towards organ donation, the number of participants with organ donation cards was quite low. This finding shows that positive attitude towards organ donation did not necessarily

Table 3. Sentences of attitudes and behaviors regarding organ transplantation and donation, Konya, Turkey 2017.

		Group				χ^2	p
		Family Health Center		Dialysis			
		n=128	%	n=111	%		
Are you willing to donate your own organs?	Yes	50	39.1	41	36.9	0.48	0.780
Have you donated an organ?	No	125		110		0.75	0.380
Will you accept organ donation if you need it?	Yes	98	76.6*	89	80.9*	3.52	0.170
Have your relatives donated their own organs?	Yes	8	6.3*	25	22.5*	13.39	0.001
Will you be willing to donate an organ to someone you do not know?	Yes	68	58.1	49	41.9	2.79	0.240
Will you be willing to donate to someone of another religion?	No	36	28.1	50	45.5*	7.70	0.020
Is there any religious inconvenience with regard to organ donation?	No	73	57.0	66	59.5	0.19	0.90
Will you investigate if the donation of the organ is suitable in the Islamic belief?	No	84	67.7*	78	71.6*	0.71	0.700
Does it matter who the organ donor is?	Yes	20	39.2	31	60.8	6.63	0.030
Do you have an organ donation card?	Yes	4	3.1	5	4.5	0.28	0.560
Do you need an organ donation?	Yes	0	0.0	35	31.5	56.63	0.001

* Column percentage.

reflect positive behavior. In a study including medical health-care personnel [14], the proportion of individuals with an organ donation card was 17.9%, and a study conducted in Poland [15] found this rate was 12%.

The mass media is a common source of information regarding organ donation. In a study including clergymen in Kayseri [16], mass media was the most common answer with regard to the source of knowledge regarding organ donation.

Between the 2 groups in our study, no difference was observed regarding the willingness to donate an organ to an unknown person. However, the dialysis group stated that personal characteristics of the organ donor and receiver were important. However, a person cannot know the personal characteristics of an unknown individual, which is a contradiction. This finding indicated concern regarding religious beliefs and the hesitation to donate an organ to a person of a different religion. In the present study, a higher ratio (45.5%) of participants in the dialysis group than in the FHC group answered “no” to the question “Would you be willing to donate to someone of another religion?” In the dialysis group, although 35 participants required organ donation, and 8 had already undergone organ transplantation, they stated that they were not willing to donate an organ to a person of a different religion. This may

be explained by the higher level of education among the individuals in the FHC group. A higher education level may further improve the understanding of individuals regarding the requirements of the religion they follow, because no hadith or verse of the Koran forbids organ donation and transplantation.

In both groups, approximately 40% of individuals had a positive attitude towards organ donation. We expected this to be higher in the dialysis group, because 35 participants stated that they needed organ transplantation. In a group in which people require organ donation, the low ratio may be attributed to the fact that individuals in this group consider their organs to be unsuitable for donation. However, in a study including healthcare professionals in Turkey [14], the proportion of people willing to donate an organ was 44%.

Conclusions

Positive attitude towards organ transplantation and donation does not necessarily reflect positive behavior in our 2 study groups. Both groups were unaware of the Islamic religion's considerations regarding organ donation. Mass media is the most important source of information regarding organ donation. Religious belief is one of the most important

factors associated with hesitation regarding organ transplantation and donation.

Recommendations

The Directorate of Religious Affairs should use mass media more efficiently to provide people with correct information. Clergymen should be educated regarding organ donation.

Highlights

This is the first study to compare the knowledge, attitudes, and behaviors regarding organ donation and transplantation

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Limitation

Our study included only 1 dialysis unit, and similar studies must be performed in different dialysis units. The validity and reliability of the questionnaire were not analyzed.

Conflicts interest

None.