



Attitude of the Community towards Organ Donation

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Abstract

Objective: Identification of attitudes related to organ donation helps achieving a better understanding of willingness for individuals about donation.

Method: We surveyed dialysis patients (group 1), relatives of dialysis patients (group 2) and patients hospitalized for different reasons (group 3); about their opinions for organ donation, their educational and economic status. Their educational status was categorized according educational parameters from illiterate to university degree; as economical parameters 5 categorizations were made with intervals of 1000TL (Turkish Lira).

Results: Positive answers to question on accepting a deceased organ were 74.7, 82.3 and 79.8% in groups 1, 2 and 3, respectively ($p=0.081$). Willingness for donation of organs in occurrence of brain death were 62.1, 58.21 and 63.64% in groups 1, 2 and 3, respectively ($p=0.170$). Positive answers to question about donating a relative's organs were 48.4, 64.7 and 55.5% in groups 1, 2 and 3, respectively ($p=0.382$). Answers to question about accepting organ donation came out to be "yes" 55.5% in illiterate group; while this rate tended to increase as level of education went higher.

Conclusion: There were no significant differences about the willingness for organ donation among three groups. This perspective tended to be positive in percentage as level of education went higher.

Keywords: Deceased donor; Organ transplantation; Organ donation

Introduction

The worldwide lack of organ donors creates an imbalance between the urgent need for transplants and the number of transplantations performed, as it is in Turkey [1,2]. The formation of a trusting attitude towards organ donation within a society increases the willingness to donate organs and thus is a key to future success in the field of transplantation [3,4]. The identification of specific areas of knowledge, attitudes and perceptions related to kidney donation helps to achieve a better understanding of variations in willingness to donate.

Although many surveys have been done among medical staffs, medical students and community about willingness of organ donation [2-4], there is no study have been performed among dialysis patients and their relatives. The objective of this study is to examine the attitudes of Turkish people with different social-economic and education levels, dialysis patients and their relatives, and healthy persons as well, towards organ donation. We investigated the education level, income status and perspectives in case organ transplantation would be necessary for themselves or their relatives in groups including dialysis patients (group 1), relatives of dialysis patients (group 2) and patients hospitalized for different reasons (group 3).

Material and Methods

Within the time frame between November 2014 and February 2015, we have surveyed 3 groups of patients about their opinions for organ donation, their educational and economical status. The survey has been done by our organ coordinator (GO) face to face. In group 1; 99, in group 2; 17 and in group 3; 95 patients were enrolled in this study. Their educational status has been categorized according to educational parameters as; illiterate, be literate, elementary, middle, high school graduates and having a university degree; as economical parameters 5 groups of categorization were made with intervals of 1000TL from 1000 to over 5000TL (Turkish Lira).

Age and gender were found to be statistically similar among the three groups (Table 1 and Table 2). The educational status of group 3 was concluded to be lower than the others (Table 3). The educational status of the group 1 patients tended to be higher compared to the rest ($p=0.001$). Group 3 patients' education level was lower (18.18% illiterate, 12.12% literate, 43.43% elementary

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Table 1: Age distribution of the persons in the study.

		Age									
		18-25 (n.%)		26-35 (n.%)		36-45 (n.%)		46-55 (n.%)		Over 55 (n.%)	
Groups	1	10	10.5	25	26.3	17	17.9	20	21.1	23	24.2
	2	1	5.88	2	11.8	5	29.4	4	23.5	5	29.4
	3	0	0	5	5.05	7	7.07	19	19.2	68	68.7
Total		11	5.21	32	15.2	29	13.7	43	20.3	96	45.5

P= 0.089

Table 2: Gender distribution of the groups.

Groups		Female (n.%)		Male (n.%)	
		1	56	58.95	39
2	11	64.71	6	35.29	
3	47	47.47	52	52.53	
Total		114	54.03	97	45.97

P= 0.181

school graduate) than dialysis patients (27.37% high school, 28.42% university graduate). The educational status of the group 2 was found to be evenly distributed compared to the other groups. Economic status was found to be statistically insignificant (Table 4).

Statistical Analysis

Data were analyzed using the SPSS 16.0 statistical package (SPSS Inc., Chicago, IL, USA). Pearson's chi square tests were used. The Mann Whitney test was used to test the difference of the percentage distributions in gender, age and education. P-values <0.05 were considered as statistically significant.

Results

The answers to the question on accepting an organ from a deceased donor were positive in 79.80% of the group 3, 74.74% in group 1 patients and 82.35% among group 2 (p= 0.081) (Table 5). The answers for the question on whether to donate their organs in case of occurrence of brain death were "yes" 63.64% in the group 3 patients, 62.11% in the group 1 patients and 58.21% in the group 2 (p= 0.170) (Table 6). The answers to the question about donating a relative's organs came out to be positive 55.56% in the group 3 patients, 48.42% in group 1 patients and 64.71% among the group 2 (p= 0.382) (Table 7).

Table 3: Education status of the groups.

		Education											
		Illiterate (n.%)		Literate (n.%)		Elementary (n.%)		Middle school (n.%)		High school (n.%)		University (n.%)	
Groups	1	6	6.32	6	6.32	23	24.21	7	7.37	26	27.37	27	28.42
	2	3	17.65	1	5.88	4	23.53	3	17.65	1	5.88	5	29.41
	3	18	18.18	12	12.12	43	43.43	7	7.07	15	15.15	4	4.04
Total		27	12.80	19	9.00	70	33.18	17	8.06	42	19.91	36	17.06

χ^2 39.728 p= 0.001

Table 4: Economic status of the groups.

		Monthly income									
		0-1000 (n.%)		1001-2000 TL (n.%)		2001-3000 TL (n.%)		3001-5000 TL (n.%)		Over 5000 TL (n.%)	
Groups	1	19	20.00	31	32.63	21	22.11	12	12.63	12	12.63
	2	4	23.53	7	41.18	4	23.53	0	0.00	2	11.76
	3	38	38.38	34	34.34	15	15.15	7	7.07	5	5.05
Total		61	28.91	72	34.12	40	18.96	19	9.00	19	9.00

p= 0.189; TL: Turkish Lira

Table 5: Decision of accepting an organ from a deceased donor.

		If you need an organ transplantation, do you accept from a deceased donor?					
		Yes (n.%)		No (n.%)		indecisive (n.%)	
Groups	1	71	74.74	11	11.58	13	13.68
	2	14	82.35	2	11.76	1	5.88
	3	79	79.80	17	17.17	3	3.03
Total		164	77.73	30	14.22	17	8.00

P= 0.081

Table 6: Decision of donation of the organs after brain death.

		Do you donate your organs after brain death?					
		Yes (n.%)		No (n.%)		indecisive (n.%)	
Groups	1	59	62.11	15	15.79	21	22.11
	2	10	58.82	2	11.76	5	29.41
	3	63	63.64	24	24.24	12	12.12
Total		132	62.56	41	19.43	38	18.01

p= 0.170

Table 7: Decision of donation of the organs of the relatives after brain death.

		Do you donate you relatives' organs after brain death?					
		Yes (n.%)		No (n.%)		indecisive (n.%)	
Groups	1	46	48.42	14	14.74	35	36.84
	2	11	64.71	1	5.88	5	29.41
	3	55	55.56	18	18.18	26	26.26
Total		112	53.08	33	15.64	66	31.28

p= 0.382

The answer to the question about accepting an organ donation in case of necessity came out to be "yes" 55.56% in the illiterate group; while this rate tended to increase as the level of education went higher (Table 8).

The rate of the willingness for organ donation in case of brain death, increased as the level of education went higher. The answers to this question among illiterate people were found to be 29.63% "yes" and 51.85% "no". The answers of college graduates were found to be 66.67% "yes" and 8.33% "no" (p= 0.0000) (Table 9). There is a significant difference among the groups with different education levels for the answers given to the question about the donation of relatives' organs in occurrence of brain death. As the education level

Table 8: Decision of accepting an organ from a deceased donor according to education status.

		If you need an organ transplantation. Do you accept from a deceased donor?					
		Yes (n.%)		No (n.%)		indecisive (n.%)	
Education	Illiterate	15	55.56	10	37.04	2	7.41
	Literate	16	84.21	2	10.53	1	5.26
	Elementary	56	80.00	10	14.29	4	5.71
	Middle school	16	94.12	1	5.88	0	0.00
	High school	30	71.43	4	9.52	8	19.05
	University	31	86.11	3	8.33	2	5.56
Total		164	77.73	30	14.22	17	8

p= 0.008

Table 9: Decision of donation of the organs after brain death according to educational status.

		Do you donate your organs after brain death?					
		Yes (n.%)		No (n.%)		indecisive (n.%)	
Education	Illiterate	8	29.63	14	51.85	5	18.52
	Literate	9	47.37	5	26.32	5	26.32
	Elementary	49	70.00	14	20.00	7	10.00
	Middle school	16	94.12	0	0.00	1	5.88
	High school	26	61.90	5	11.90	11	26.19
	University	24	66.67	3	8.33	9	25.00

p= 0.0000

Table 10: Decision of donation of the organs of the relatives after brain death according to education status.

		Do you donate you relatives' organs after brain death?					
		Yes (n.%)		No (n.%)		indecisive (n.%)	
Education	illiterate	7	25.93	9	33.33	11	40.74
	Literate	6	31.58	5	26.32	8	42.11
	Elementary	45	64.29	9	12.86	16	22.86
	Middle school	11	64.71	3	17.65	3	17.65
	High school	22	52.38	2	4.76	18	42.86
	University	21	58.33	5	13.89	10	27.78
Total		112	53.08	33	15.64	66	31.28

p= 0.007

Table 11: Decision of accepting an organ from a deceased donor according to economic status.

		If you need an organ transplantation. Do you accept from a deceased donor?					
		Yes (n.%)		No (n.%)		indecisive (n.%)	
Monthly income	0-1000 TL	45	73.77	12	19.67	4	6.56
	1001-2000 TL	58	80.56	11	15.28	3	4.17
	2001-3000 TL	30	75.00	4	10.00	6	15.00
	3001-5000 TL	16	84.21	2	10.53	1	5.26
	Over 5000 TL	15	78.95	1	5.26	3	15.79
Total		164	77.73	30	14.22	17	8.06

p= 0.347

goes higher, the rate of positive answers to this question also shows a tendency to increase (p= 0.007) (Table 10).

The answers to the questions “would you accept a diseased organ” (p= 0.347) (Table 11) and “would you donate your organs in case of occurrence of brain death” (p= 0.147) (Table 12) did not show a statistically significant difference among different income groups. The rate of positive answers to question “would you donate the organs of relatives in case of brain death” went higher as the income levels increased (p= 0.047) (Table 13). Here the difference is created with

the answers given by the group having the lowest income (0–1000 TL).

Discussion

The lack of organ donation is a major limiting factor in transplantation in most countries. Public knowledge of organ donation, moral consciousness, and social responsibility will be greatly improved through increased publicity and education. In the current inadequate supply of organs for transplantation causing thousands of patients on organ waiting lists to die each year. The

Table 12: Decision of donation of the organs after brain death according to economic status.

		Do you donate your organs after brain death?					
		Yes (n.%)		No (n.%)		indecisive (n.%)	
Monthly income	0-1000 TL	34	55.74	17	27.87	10	16.39
	1001-2000 TL	51	70.83	13	18.06	8	11.11
	2001-3000 TL	24	60.00	7	17.50	9	22.50
	3001-5000 TL	12	63.16	3	15.79	4	21.05
	Over 5000 TL	11	57.89	1	5.26	7	36.84
Total		132	62.56	41	19.43	38	18.01

p= 0.147

Table 13: Decision of donation of the organs of the relatives after brain death according to economic status.

		Do you donate you relatives' organs after brain death?					
		Yes (n.%)		No (n.%)		indecisive (n.%)	
Monthly income	0-1000 TL	22	3.61	15	24.59	24	39.34
	1001-2000 TL	47	6.53	10	13.89	15	20.83
	2001-3000 TL	21	5.25	3	7.50	16	40.00
	3001-5000 TL	11	5.79	2	10.53	6	31.58
	Over 5000 TL	11	5.79	3	15.79	5	26.32
Total		112	5.31	33	15.64	66	31.28

p= 0.047

donation and transplantation system represents a complex practice and is dependent on individual attitudes, social structures, cultural practices and religious beliefs. Western countries have conducted several studies showing that attitudes towards organ donation and transplantation are influenced by many factors, including education, socioeconomic status, culture, and religion.

Family decisions relied heavily on knowledge of the deceased person's desire to donate. In cases where the deceased did not specify, most participants agreed that they would be unwilling to offer their family member's organs because of cultural beliefs about the body and spirit. People generally express favorable views towards organ donation, very few actually agree to donate before they die or agree to have family members' organs donated upon their deaths. So, it is important to raise awareness about organ donation the persons before they die. One study found that a predicted final consent rate as high as 93% when the deceased patient's preference was known, as compared with 47% when the preference was unknown [5]. Gross et al. reported that 57% of young people felt that their families were insufficiently informed of their willingness to donate, and a significantly more positive attitude towards organ donation was found among people whose relatives were fully informed of their preference [6].

Efforts to increase donation rates have included public awareness and professional educational programs. In our study, there was no significant difference about the perspective on organ donation among the three groups. This perspective tended to be positive in percentage as the level of education went higher. The income status of the groups did not create a difference among the groups on this perspective. It is also strange that even though the dialysis patients are reluctant to donate their organs. This might be one of the indicators of lacking of awareness about organ donation among the community. Family permission is necessary for organ procurement in our country, and family objection plays a significant role in the low donation rates. Since family members are often unaware of the deceased's preference, they are likely to reject the request for donation.

Organ donor awareness was high among the total population, with

88% of the sample having some knowledge of organ donation [7]. In this study, the 25 - 35-year-olds were more aware of organ donation in general than the other age groups. The willingness to donate an organ was more problematic. Of the total sample, 36% indicated they would not donate organs; 33% indicated they might donate organs; and 31% indicated their willingness to donate organs. Educational levels were found to be factors that influence the willingness to become an organ donor. Respondents that had an education further than high school approximately 33% indicated a greater willingness to participate as an organ donor. Twenty-eight percent of the sample that indicated they would not donate organs had less than a high school education.

Maintaining body integrity after death is a common reason for unwillingness to donate organs [8]. The trust for doctors and the medical system appears to be crucial with respect to the likelihood of donating organs. Widespread mistrust in the medical system, low educational levels, and poor economic situations also serve as obstacles to organ donation. Therefore, improving publicity and education efforts is essential in generating positive attitudes towards organ donation.

Yılmaz collected data on perceptions of organ donation in a military unit in Turkey [9]. Participants were given a survey on organ donation, followed by a lecture that answered the questions in the survey; 2 months after the lecture, they were given the survey again. The study showed that 84.8% of participants were willing to donate their organs after attending the lecture on organ donation, as opposed to the 45.4% willing prior to the lesson ($P < 0.001$). The author also found that general knowledge about organ donation increased from 34.8% to 93.7% after participants attended the lecture ($P < 0.001$).

Another study showed that after receiving an educational session, students demonstrated a more extensive knowledge of organ donation, with 31% changing previously held negative attitudes, as compared with a 7% change in the control group [10].

One of the limitations of this study is the smaller number of relatives of dialysis patients of the second group compared to the

others 2 groups. Additionally, the 1st group had a significant higher educational status versus the other two. The current results of the study could be affected by these two variables.

As a conclusion, there is an urgent need to increase the number of organ sources to meet the ever-increasing demand for transplantation. Public awareness even among dialysis patients and their relatives is not sufficient in Turkey. Efforts in advancing knowledge about organ donation, promoting family discussions, training medical staff and students, establishing an organ donation incentive system, and implementing relevant legislation can reshape public attitudes towards organ donation.

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