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Original Article

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Importance of Empathy in Transplant Coordinators during Organ Donation from Cadavers

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Abstract

Objective: To investigate the association between empathy levels in organ transplant coordinators, who have an important role in organ donation from cadavers, and success rates of organ donation.
Materials and Methods: This study was performed among healthcare providers who worked as organ transplant coordinators for at least a year across 21 hospitals in 9 cities of Turkey. In the socio-demographic data form prepared for the study, the coordinators were asked questions on their gender, age, professional experience, term of employment, and number of shifts per month. Additionally, the number of brain deaths that occurred during their shifts and the number of such cases accepted as donors were determined.
Results: No relationship was found between the total empathy score of coordinators and the rate of finding a donor. There was no association between age, professional experience, shift, donor declaration, and empathy score. JSE Cronbach alpha value was calculated as 0.78.
Conclusion: None of the variables related to organ transplant coordinators that were examined in this study were associated with the number of organ donations from deceased donors. Short-term and late communication by the coordinators could explain this situation. Earlier, longer, and repetitive contacts can contribute to obtaining positive results in organ donation.
Keywords: Empathy, coordinator, donor, donation, kidney, transplantation

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INTRODUCTION

Organ transplantation is a lifesaving treatment option in patients with end-stage organ failure (1, 2). Organs can be donated from living or deceased donors. While organ donation rates from deceased donors are high in European countries, this rate is much lower in Turkey (3).

The low numbers of organ donation in Turkey could be due to both socio-cultural reasons and organizational problems. Religious beliefs can have both positive and negative effects on this issue. Although transfer of an organ to another person is ecclesiastically perceived as negative, the idea of rehabilitation of a sick person is strongly supported in religious perspectives (4, 5). Problems in organization include the number of transplant centers, experience of transplant teams, and training of auxiliary staff in transplantation.

Persuading the relatives of patients declared brain dead for organ donation is a dynamic process against time. Relatives of patients declared brain dead are left alone with a critical decision. Numerous factors can affect an individual's acceptance of organ donation. For instance, it is known that empathy in nurses who provide healthcare to patients when brain death occurs are helpful in persuading the patient's relatives about donation (6). The effect of empathy in other members of the transplant team on organ donation is not yet known.

Empathy is the capacity to instinctively understand how other people feel and what they think (7). Empathy

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is the experience of understanding another person's thoughts, feelings, and condition from his or her point of view. Empathy in medicine is a skill that makes it possible to establish a communication with patients by acknowledging and evaluating their cognitive opinions, experiences, and concerns (8). It is known that on the one hand, empathetic behavior contributes to amelioration of patient care results and on the other, it increases the job satisfaction of healthcare providers (9). In addition to these factors, while empathy decreases malpractice, it also increases patient satisfaction with participation and adaptation of the patient and the patient's relatives to the treatment process (10).

The aim of this study was to investigate the association between the empathy levels in organ transplant coordinators, who have an important role in organ donation from deceased donors, and the success rates of organ donation.

MATERIALS AND METHODS

This study was performed among healthcare providers who worked as organ transplant coordinators for at least one year across 21 hospitals in 9 cities of Turkey. The ethics committee approval for the study was obtained from the Ethics Committee of Bursa Yüksek İhtisas Training and Research Hospital (Approval Date: July 20, 2018. Approval Number: 2011-KAEK-25 2018/06-28). The study was performed in conformity with the Helsinki Declaration.

Communication with the coordinators was established via the Bursa Organ Transplantation Center in August 2018. Survey forms were sent to the coordinators as e-mails, and completed forms were received as e-mails from those who accepted participation in the study. Thirty-five coordinators were in charge of the organ transplantation centers of the related hospitals during the period of the study, and 31 completed forms were received by the researchers.

In the socio-demographic data form prepared for the study, the coordinators were asked questions on their gender, age, professional experience, term of employment, and number of shifts per month. Additionally, the number of brain deaths that occurred during their shifts and how many of them were accepted as donors were determined. Furthermore, the number of annual brain death cases in the institution where the coordinators worked and how many among them were evaluated as donors were also assessed.

The health professional's version of the Jefferson Scale of Empathy (JSE) was used in evaluation of the coordinators' empathy status. The Turkish validity and reliability study of the scale was conducted by Ozturk et al. (6). The JSE is composed of 20 questions and three sub-scales. Evaluations are made using the total score obtained (11).

Statistical Analysis

Normal distribution suitability of variables was analyzed by Shapiro-Wilk test. In case of normal distribution suitability, total empathy score was given with the mean, standard deviation, minimum, and maximum values. In case of non-suitability, it was given with median, minimum, and maximum values with donor declaration variables. The reliability of the JSE was evaluated using item-total correlation and the Cronbach alpha coefficient. The relationship between the total empathy score, donor declaration, age, term of employment, and shift variables was analyzed using a correlation analysis, and the Spearman correlation coefficient was calculated. Comparisons of the total empathy score and donor declaration number between groups were made using the independent samples t test and Mann-Whitney U test. A p-value<0.05 was considered statistically significant. Statistical analyses were performed using IBM Statistical Package for the Social Sciences software for Windows version 20.0 (IBM SPSS Corp.; Armonk, NY, USA).

RESULTS

Item Analysis and Reliability

Internal consistency of the JSE was examined using the item-total score correlation and Cronbach α coefficient, and the results are given in Table 1. The general Cronbach α coefficient of the JSE was α=0.78. When the Cronbach α coefficient is considered, it is observed that the JSE is an acceptable tool of measurement in terms of internal consistency. When reliability coefficients of sub-scales were analyzed, the results were as follows: Cronbach α value α=0.79 for the perspective taking sub-scale, α=0.50 for the compassionate sub-scale, and α=0.85 for standing in the patient's shoes.

In the scoring algorithm of the JSE, questions 1, 3, 6, 7, 8, 11, 12, 14, 18, and 19 were scored in reverse, and the answers to these questions were re-coded in our study; the total and sub-scale scores were calculated using converted scores of the related questions. Correlation based item analysis was done to determine the representation power of the scale items. When item-total score correlations of the JSE were analyzed, a relationship between answers to questions 1, 2, 5, 9, 12, and 18 and the total scale score could not be determined (r_s=0.21; p=0.247, r_s=0.12; p=0.517, r_s=0.30; p=0.106, r_s=0.30; p=0.103, r_s=0.30; p=0.105; and r_s=0.25; p=0.180, respectively). It was found that correlation coefficients between scores for the remaining 14

Main Points

- No positive association was detected between the empathy scores of organ transplant coordinators and the number of donor declarations.
- In Turkey, short-term and late communication by the coordinators could explain this situation.
- Considering empathy, an earlier, longer, and repetitive contact can contribute to obtaining positive results in organ donation.

Table 1. JSE sub-scale reliability levels, relationship between scales and mean score values of scales

Scale and sub-scales	Cronbach α	Total scale and sub-scale correlations (rs)	Mean±St. Deviation
JSE	0.78	-	101.45±15.10
Perspective taking (Item 2, 4, 5, 9, 10, 13, 15, 16, 17, 20)	0.79	0.77*	57.29±8.70
Compassionate care (Item 1, 7, 8, 11, 12, 14, 18, 19)	0.50	0.78*	34.35±7.31
Standing in the patient's shoes (Item 3, 6)	0.85	0.56*	9.81±3.60

rs: Spearman correlation coefficient;
*significant at p<0.001

questions of the scale and the total scale score varied between r_s=0.40-0.60 and this was statistically significant (p<0.05). When the relationship between each sub-scale score and the total JSE score was analyzed, it was observed that the correlation coefficients varied between r_s=0.56-0.78 and this was statistically significant (p<0.001).

Reliability levels of the JSE sub-scales and the association between them and the mean score values of the scales are shown in Table 1. It was identified that sub-scales of the JSE were internally associated.

General characteristics of the participants are given in Table 2. While the mean age was 39.29±8.26, the male/female ratio was 12/19. There was no association between age, professional experience, shift, donor declaration, and the empathy score.

The empathy score did not change depending on whether the coordinator was a doctor or a nurse. There was no difference between the nurse and doctor groups in terms of duration of being a coordinator (Table 3).

There was no association between donor declaration and age, professional experience, and number of shifts. Donor declaration did not vary according to the type of coordinator (Table 4). In our study, no association was determined between the total empathy score and the rate of finding a donor (r_s=-0.22; p=0.236). The median empathy score was 105 (49:125) among those who made a donor declaration (n=25), and it was 100.50 (80:113) among those who did not make a donor declaration (n=6), and no difference was found between those who made a declaration and those who did not (p=0.268).

Table 2. General characteristics of participants

Variable	n=31
Age (year)	39.29±8.26 (24:62)
Gender (male/female)	12 (38.70%)/19 (61.30%)
Professional experience (year)	8 (0:20)
Shift	2 (0:10)
Time being a coordinator	4 (1:15)
Hospital (total number of deaths last year/ total number of donors last year)	Coordinator number
1 (36/13)	2 (6.45%)
2 (37/12)	2 (6.45%)
3 (34/11)	1 (3.23%)
4 (13/5)	1 (3.23%)
5 (1/0)	1 (3.23%)
6 (17/0)	2 (6.45%)
7 (10/7)	3 (9.68%)
8 (11/3)	2 (6.45%)
9 (5/1)	1 (3.23%)
10 (0/0)	1 (3.23%)
11 (6/1)	1 (3.23%)
12 (15/6)	3 (9.68%)
13 (12/2)	1 (3.23%)
14 (7/5)	1 (3.23%)
15 (17/3)	1 (3.23%)
16 (23/4)	1 (3.23%)
17 (31/15)	1 (3.23%)
18 (25/12)	1 (3.23%)
19 (16/5)	1 (3.23%)
20 (50/18)	1 (3.23%)
21 (17/6)	3 (9.68%)
Donor declaration	
No	6 (19.40%)
1	2 (6.50%)
2	1 (3.20%)
3	2 (6.50%)
4	1 (3.20%)
5	3 (9.70%)
6	5 (16.10%)
7	3 (9.70%)
11	1 (3.20%)
12	3 (9.70%)
13	2 (6.50%)
15	1 (3.20%)
18	1 (3.20%)

Data presented as mean±st. deviation (min.: max.), median (min.: max.) or n (%)

DISCUSSION

Our study did not find an association between the total empathy score of the coordinators and the rate of finding a donor. There

Table 3. Variables associated with empathy

	Total Empathy Score	
	rs	**p**
Age (year)	-0.05	0.791
Professional experience	-0.33	0.074
Shift	-0.35	0.057
Donor declaration	0.12	0.523
Gender	**Total Empathy Score**	
Male (n=12)	102.83±12.78 (80:121)	
Female (n=19)	100.58±16.67 (49:125)	
p	0.693[a]	
Coordinator	**Total Empathy Score**	
Nurse (n=24)	102 (49:125)	
Doctor (n=7)	111 (84:121)	
p	0.153[b]	
Coordinator	**Time being a coordinator**	
Nurse (n=24)	4 (1:12)	
Doctor (n=7)	5 (2:15)	
p	0.391[b]	

Data presented as mean±st. deviation (min.: max.) or median (min.: max.)
[a]Independent samples t test
[b]Mann-Whitney U test
rs: Spearman correlation coefficient

Table 4. Relationship between donor declaration and age, profession, professional experience, and number of shifts

	Donor Declaration	
	rs	**p**
Age (year)	-0.12	0.509
Professional experience	-0.19	0.318
Shift	-0.09	0.648
Profession	**Donor Declaration**	
Doctor (n=24)	5 (0:18)	
Nurse (n=7)	7 (2:15)	
p	0.234[b]	

Data presented as median (min.: max.)
[b]Mann-Whitney U test
rs: Spearman correlation coefficient

was no association between age, professional experience, shift, donor declaration, and empathy score. The JSE Cronbach alpha value was calculated as 0.78.

The JSE was developed by Hojat al. (11) in 2001 in order to determine the physicians' empathy levels, and later its Turkish adaptation was developed. In this research, internal consistency of the JSE was at an acceptable level, and validity of its Turkish form was verified.

In our study, while no positive association was detected between the empathy scores of organ transplant coordinators and the number of donor declarations, a previous study found a positive relationship between the empathy scores of intensive care nurses and number of donor declarations (6). In order to explain this situation, communication features of the coordinators with patients' relatives and their duration must be examined. While nurses' empathy level positively affects organ donation, a lack of such a relationship among coordinators can be explained by the longer contact time of nurses with the patient and his/her relatives. Relatives of patients who are declared brain dead may be more likely to take the suggestions and requests of healthcare providers, with whom they are in contact for a longer time, into consideration

At the time of brain death determination with an official record, the time signed in the record is accepted as the medical and official date and hour of death of the individual (12). In our country, after brain death is declared to the family by the physician, the organ transplant coordinator negotiates with the family members regarding organ donation. In case the family decides on organ donation, the coordinator prepares the official record (13, 14). In this regard, it can be understood that the coordinator's contact takes place during the process of brain death. However, this phase may be too late to persuade the families regarding organ donation. For this reason, earlier and more frequent contact can be suggested for successful organ donation rates.

It must be remembered that family negotiations of organ donation takes place in a very critical phase when the family has just been informed about the death of their relative. In order to start this negotiation and advance it systematically, the coordinator must psychologically and technically have full knowledge of the process. He/she must be capable of leading the process and of using his/her communication skills during this process (15-18). Those who lead these negotiations are suggested to obtain knowledge about behavioral sciences that deal with behaviors of people who suffer bereavement, differences between attitudes of individuals, and interpretation of behaviors of individuals in these cases (15). All these suggestions indeed recommend establishing an empathetic dialogue with those who are expected to make a decision on organ donation (19, 20).

Limitations

The low number of participants in this study is an important limitation. However, it includes official coordinators who work in large centers including the cities that have the highest rate of organ donation in Turkey. Different results could be achieved in further studies in which international variations are evaluated.

CONCLUSION

None of the variables related to organ transplant coordinators that were examined in this study were associated with the number of organ donations from deceased donors. Coordinators were neutral with respect to organ donation. Short-term and late communication by the coordinators could explain this situation. Earlier, longer, and repetitive contact can contribute to obtaining positive results in organ donation.

Ethics Committee Approval: Ethics committee approval was received for this study from the Ethics Committee of Bursa Yüksek İhtisas Training and Research Hospital (Approval Date: July 20, 2018. Approval Number: 2011-KAEK-25 2018/06-28).

Informed Consent: Verbal informed consent was obtained from the participants of this study.

Peer-review: Externally peer-reviewed.

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