

# Knowledge Attitude and Behavior in the Domain of Organ Transplantation Among Healthcare Professionals Working in a Tertiary Care Hospital and Patients Admitted to the Urology Clinic

Üçüncü Basamak Hastanesine Başvuran Hastaların ve Çalışan Sağlık Personelimizin Organ-Doku Bağışı Konusunda Bilgi ve Görüşleri

Mustafa Karabıçak<sup>1</sup>, Hakan Türk<sup>2</sup>, İlker Oruç<sup>1</sup>, Selin Özdoğan<sup>1</sup>, Ahmet Çinkaya<sup>2</sup>, Cezmi Karaca<sup>3</sup>, Ferruh Zorlu<sup>1</sup>

<sup>1</sup>Tepecik Training and Research Hospital, Clinic of Urology, İzmir, Türkiye

<sup>2</sup>Dumlupınar University Evliya Çelebi Training and Research Hospital, Clinic of Urology, Kütahya, Türkiye

<sup>3</sup>Tepecik Training and Research Hospital, Clinic of General Surgery, İzmir, Türkiye

## What's known on the subject? and What does the study add?

Public education about organ donation and transplantation and a positive attitude on this issue are very important to increase the number of organ donations.

## Abstract

**Objective:** To measure the knowledge level about organ and tissue donation and to determine the attitudes and behaviors of patients admitted to our hospital as well as healthcare professionals working in our hospital.

**Materials and Methods:** A questionnaire designed to document knowledge attitude and behavior in the domain of organ transplantation and donation was prepared by the researchers. This survey was conducted among 298 participants including patients who were admitted to the urology clinic in our hospital between March 2015 and June their relatives as well as healthcare professionals working in our hospital.

**Results:** 90.3% of the participants did not donate any organ previously. Only 50% of respondents knew that brain death and vegetative state were different concepts. 69.1% the participants had knowledge about organ donation.

**Conclusion:** Public education about organ donation and transplantation and a positive attitude on this issue are very important to increase the number of organ donations.

**Keywords:** Organ donation, organ transplantation, brain death

## Öz

**Amaç:** Hastanemize başvuran hastaların ve çalışan sağlık personelinin organ-doku bağışı konusundaki bilgi düzeylerini ölçmek, tutum ve davranışlarını belirlemektir.

**Gereç ve Yöntem:** Araştırmacılar tarafından organ-doku bağışı ile ilgili anket hazırlandı. Bu anket üroloji servisine Mart 2015-Haziran 2015 tarihleri arasında yatarak tedavi gören hasta ve hasta yakınları ile hastanemizde çalışan hemşire ve doktorlardan oluşan 298 katılımcı tarafından dolduruldu.

**Bulgular:** Katılımcıların %90,3'ü daha önce organ bağışı yapmamıştır. Bitkisel hayat ile beyin ölümünün farklı kavramlar olduğunu katılımcıların sadece yarısının bildiği bulunmuştur. Katılımcıların sadece %69,1'inin organ-doku bağışı konusunda bilgisi olduğu ortaya konmuştur.

**Sonuç:** Organ bağışı ve nakli konusunda toplumun eğitimi ve bu konuda olumlu tutum içinde bulunmaları organ bağışı sayısının artmasında çok önemlidir.

**Anahtar Kelimeler:** Organ bağışı, organ nakli, beyin ölümü

**Correspondence:** Hakan Türk MD, Dumlupınar University Evliya Çelebi Training and Research Hospital, Clinic of Urology, Kütahya, Türkiye

**Phone:** +90 555 551 68 85 **E-mail:** hkntk000@gmail.com

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## Introduction

Transplantation is a procedure whereby an intact tissue or organ is transferred from a live donor or a dead person in place of an organ that proves to be dysfunctional in the body (1). Organ donation is the procedure in which a person allows on free will while he is alive and thus certifies that his tissues and organs be used for the treatment of other patients after he is medically dead (2).

Currently, many vital organs such as heart, lung, liver, kidney, pancreas, small intestine, bone marrow, blood, skin and cornea can be transplanted (3).

Transplantation is an effective medical approach with well-known long-term results. Similar to other parts of the world, the most important barrier for transplantation in Türkiye is the scarcity of organs. This scarcity results from lack of information and awareness on organ-tissue donation and transplantation within the society (4,5). Studies show that attitude towards organ donation is affected by education level, socio-economic status, age and gender (6). There are some studies indicating that ethnic origin and religious assumptions also affect social attitude and awareness (7). In order to increase organ donations, it is necessary to eliminate lack of information and negative attitudes within the society on this subject and overcome social obstacles to this end (4,5). The aim of this study was to measure the knowledge level on organ-tissue donation and identify the attitudes and behaviors of not only the patients admitted to our hospital but also the healthcare professionals working in our hospital.

## Materials and Methods

Our study was a descriptive study conducted between March 2015 and June 2015 with a total of 298 participants including patients admitted to the urology clinic of İzmir Tepecik Training and Research Hospital for inpatient treatment, the relatives of such patients and the healthcare professionals working in the hospital. Our hospital provides services to patients from various educational backgrounds, age groups, cultural and socio-economic levels and ethnic origin from any part of İzmir. A survey form which was prepared by the researchers and takes 15 minutes to complete was employed to collect data. The survey is composed of questions that concerns socio-demographic aspects (6 questions) and measures attitudes, behaviors and knowledge levels on organ-tissue donation (7 questions). As a result of this survey, participants were grouped depending on their level of knowledge about organ donation, and the factors affecting the level of knowledge about organ donation were evaluated. This study is a descriptive study.

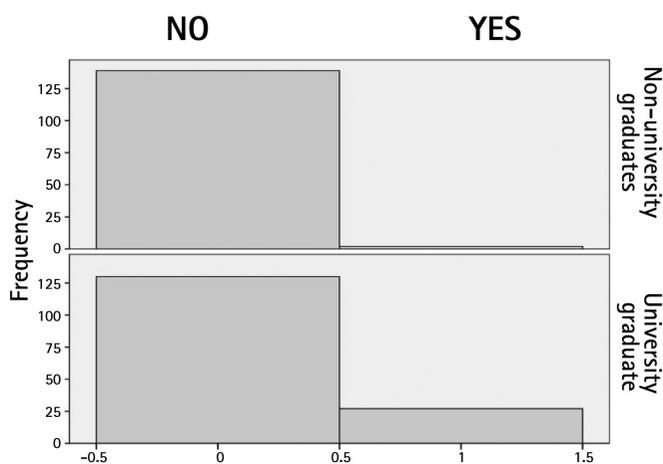
## Statistical Analysis

Windows SPSS 17 software was used for statistical evaluation. Factors affecting the knowledge level of participants about transplantation were evaluated using Pearson's and Spearman's correlation coefficients. A p value less than 0.05 was considered statistically significant. Informed consent was received from every patient. The study was conducted in line with the Declaration of Helsinki.

## Results

While 90.3% of the participants did not donate any organ previously, 9.7% of them donated organs. It was found out that 68.8% of the participants were married, 24.8% of them were single and 6.4% of them were divorced. 24.2% of the participants were physicians, 15.4% were nurses and 60.4% were from other professional groups (Table 1). Only 69.1% of the participants had knowledge about organ donation. 30.9% of the participants did not have any previous knowledge on organ donation.

It was found out that 28.5% of the participants were aged between 20 and 30 years, 27.9% between 30 and 40, 15.4% between 40 and 50, and 28.2% of participants aged over 50 years. It was shown that the knowledge level on organ donation increased gradually with the increasing age of participants. Given the education level of the participants, almost half of them were university graduates while one fourth of them were high school graduates, a few of them were primary school graduates and only a limited number of them were illiterate. As the education level increased, knowledge level about organ donation increased accordingly (Graphic 1). When we grouped the participants by their place of birth, participants from the Aegean Region proved to have more knowledge on transplantation while this rate decreased as one moved towards the Eastern Anatolian Region (Graphic 2).



Graphic 1. Evaluation of organ donation by education level

As for the question "Are vegetative state and brain death the same?", 49.3% of the participants answered "no" while 31.2% of them answered "yes". 19.5% of the participants stated they had no idea about the question. As for the question "If brain death took place, would you donate the organs of your child or relatives?", almost half of the participants answered "yes" while the other half answered "I would hesitate". Determinant factors for the knowledge level on transplantation among participants were young age, a high level of education, being a healthcare professional and being from the Aegean, Marmara and Mediterranean Regions. The group that had

knowledge on organ donation were composed of participants from the younger population ( $p=0.01$ ). The level of education and organ donation were positively correlated ( $p=0.001$ ). The level of knowledge on organ donation was higher in the group composed of the participants who were healthcare professionals ( $p=0.001$ ). The knowledge level on organ donation gradually decreased as one moved from Aegean Region towards the Eastern Anatolian Region in terms of the place of birth ( $p=0.001$ ) (Table 1).

48% of those who had knowledge on organ donation obtained this knowledge from health institutions while 37.4% received

**Table 1. Statistical comparison of both groups**

	Knowledgeable on organ donation (n=205)	Not knowledgeable on organ donation (n=93)	p
<b>Marital status</b>			0.29
Married (%)	150 (73.1)	55 (59.1)	
Single (%)	44 (21.4)	30 (32.2)	
Divorced (%)	11 (5.3)	7 (7.5)	
<b>Age group</b>			0.001
20-30 (%)	73 (35.6)	12 (12.9)	
31-40 (%)	72 (35.1)	12 (12.9)	
41-50 (%)	20 (9.7)	26 (27.9)	
51 and older (%)	40 (19.5)	44 (47.3)	
<b>Education</b>			0.001
Illiterate (%)	1 (0.4)	9 (9.6)	
Primary school (%)	10 (4)	20 (21.5)	
Secondary school (%)	10 (4)	14 (15)	
High school (%)	57 (27.8)	20 (21.5)	
University (%)	127 (61.9)	30 (32.2)	
<b>Profession</b>			0.001
Nurse (%)	44 (21.4)	2 (2.1)	
Physician (%)	71 (34.6)	1 (1)	
Other (%)	90 (43.9)	90 (96.7)	
<b>Gender</b>			0.078
Female (%)	96 (46.8)	43 (46.2)	
Male (%)	109 (53.2)	50 (53.8)	
<b>Place of birth</b>			0.001
Aegean Region (%)	79 (38.5)	22 (23.6)	
Marmara Region (%)	16 (7.8)	6 (6.4)	
Central Anatolia (%)	10 (4.8)	8 (8.6)	
Black Sea Region (%)	13 (6.3)	7 (7.5)	
Mediterranean Region (%)	50 (24.3)	10 (10.7)	
Eastern Anatolian Region (%)	10 (4.8)	11 (11.8)	
Southeastern Anatolia Region (%)	27 (13.1)	34 (36.5)	

information from newspapers and 14.6% from other sources (radio, television, Internet).

## Discussion

Just like any place in the world, scarcity of organ donation is one of the most significant barriers for transplantation in Türkiye. In 2010, total number of brain deaths in Türkiye amounted to 1,036 while the number of donors was 246. The number of patients in the waiting lists for kidney, heart, liver, pancreas and lung transplantation exceeds 60,000 and nearly 7,000-8,000 patients are annually added to this list. Thousands of people lost their lives due to lack of a sufficient number of donors while waiting for organs. The number of transplantations from cadavers was only 743 in 2010 (7). In this study, only 9.7% of the participants considered donating organs previously while almost half of them considered donating the organs of their deceased relatives. Different rates were obtained in studies conducted with different groups. Rates of those who consider donating their organs vary between 30% and 70% in various studies (8,9,10,11,12). It is necessary to identify which factors have affected the thoughts of those who are indecisive and do not accept organ donation and to plan studies relevant to this factor.

It was found out that 69.1% of the participants in our study had knowledge about organ donation. It was seen that the participants who had knowledge on the subject obtained their knowledge mainly from health institutions and newspapers and occasionally from media such as radio, television and the Internet. Given the fact that most of the participants are from professional groups such as nurses and physicians, it was seen that the rate of the participants who had sufficient knowledge and were educated on the subject was not at the desired level yet. It was found out through many studies conducted with different student groups that university students did not have

sufficient knowledge about organ donation and transplantation and that most of the relevant knowledge was obtained from mass media such as television, the internet, newspapers and magazines (13,14,15).

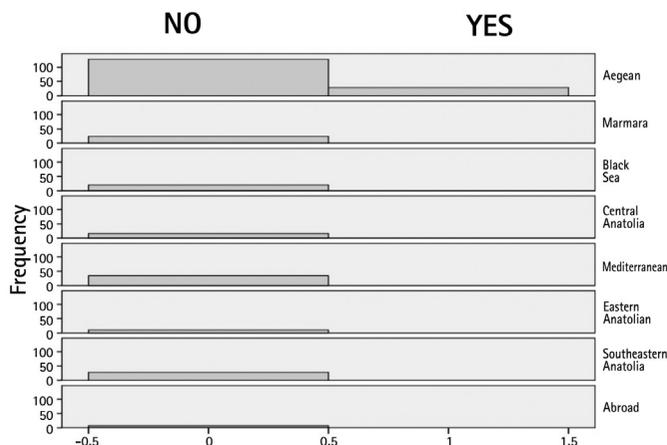
Awareness of organ donation may be associated with the level of education and socio-economic status. It was seen through many studies that individuals who graduated from university and higher-level institutions and had a high level of income displayed a more positive attitude towards organ donation (16,17,18). Similarly, it was observed in this study that the participants who were university graduates had a higher level of knowledge about organ donation.

Geographical characteristics constitute an important factor shaping the family structure of a person, his attitude towards health and diseases and his cultural characteristics. A study found out that participants from the Aegean Region had a more positive attitude while participants from the Southeastern Anatolian Region had a rather negative approach (19). In this study, the participants from the Aegean Region had more knowledge about transplantation while this rate decreased as one went towards the Eastern Anatolian Region.

In terms of conveying knowledge to the society concerning organ donation and transplantation, the easiest way of having access to larger groups is the media. If some videos concerning organ donation and transplantation are broadcast on TV, which is the most effective tool for informing and mobilizing the society, awareness on this subject may be raised. The Ministry of Health should prepare instructional programs for broadcast on TV channels and such programs should be broadcast on a continuous basis. Interviews in newspapers and magazines with the patients who have been waiting for organs and to whom organs have been transplanted may raise awareness within the society. The use of social networks over the Internet has become a common means of communication in our country as it is the case around the world. Websites such as Facebook and Twitter have millions of users in all parts of the world. Social networks have become the easiest, most economic and direct way of informing people and communicating with them on organ donation and transplantation as they allow for direct and instant sharing. The use of a single motto in the campaigns organized in cooperation with the press and visual media and on the internet may raise social awareness on the subject (19).

## Study Limitations

As this study was limited to the patients admitted to our hospital and the healthcare professionals working in our hospital, conclusions can only be generalized to this group. No question was included in the survey as to why the participants did not want to donate their organs. Running a survey with a larger group of patients may ensure better results in further studies.



Graphic 2. Evaluation of organ donation by the region of birth

## Conclusion

It was found out that the participants did not have sufficient knowledge about organ donation. Considering the gradual increase in the need for organ donation, the education level of the society should be improved while changing the opinions of those who are indecisive about organ donation and do not want to donate their organs should be the primary aim. Education programs for eliminating reservations of the society on organ donation should be prepared. Specifically, the middle-aged and over-the-middle-age population should be identified as a target group for such education activities. Moreover, these programs must be extended and spread to the eastern part of the country.

## Ethics

Ethics Committee Approval: It is a descriptive study, Informed Consent: Consent form was filled out by all participants.

Peer-review: Internally peer-reviewed.

## Authorship Contributions

Surgical and Medical Practices: İlker Oruç, Selin Özdoğan, Hakan Türk, Concept: Mustafa Karabıçak, Hakan Türk, Design: Hakan Türk, İlker Oruç, Data Collection or Processing: İlker Oruç, Selin Özdoğan, Cezmi Karaca, Hakan Türk, Analysis or Interpretation: Ahmet Çinkaya, Ferruh Zorlu, Literature Search: Mustafa Karabıçak, Hakan Türk, Writing: Mustafa Karabıçak.

Conflict of Interest: No conflict of interest was declared by the authors.

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