

INTRODUCTION

Organ transplantation means the transplantation of a healthy tissue or organ from a living donor or a dead person instead of an organ that cannot function in the body. Saving the life of a patient who comes to the end of his/her life because of organ failure, increasing his/her lifetime and quality of life are the most important goals of organ transplantation [1]. In this respect, organ donation is defined as the individual's permission and certification of the use of tissues and organs for the treatment of other patients after his/her medical life ends voluntarily while she/he is alive. Despite all the developments we see today, few people donate organs and tissues. In this way, although the number of patients who wait for organ transplantation is increasing day by day, the number of organ donations remains very low when compared with the number of patients who wait for transplantation [2]. This leads to an increase in the number of people who wait for organ or tissue transplantation; and the loss of patients if there are no organs and tissues. In this respect, the need for organ transplantation continues to be an important health problem all over the world [3].

Organ transplantation and organ donation, which have crucial importance, are a subject that is related closely to the attitudes and behaviors, religious beliefs, traditions and cultural values of people, and the development levels of societies. It is also affected by the attitudes of the individuals for organ donation and by the education, socio-economic level, lack of adequate knowledge or misinformation of families. The presence of negative and positive attitudes about tissue/organ donation is decisive in the participation of a person in tissue/organ donation. As it is already well-known, every member of society, especially health employees, must have adequate knowledge and consciousness in increasing tissue/organ donation. The initiatives for increasing and supporting organ donation are the responsibility of the entire medical team, not only the health staff working in this area. Especially nurses have an important role in identifying potential donors and communicating with their families in addition to informing the community to increase organ donation [4]. Nurses also have very important duties about organ donation, training resources development, cooperation with other health team members, researching on educational resources of the society and patients about this issue, cooperating with associations, foundations and government agencies in awareness days and weeks, which are all important for human health. For this reason, it is very important that nursing students, who will be active in healthcare, have adequate knowledge and awareness about brain death and organ transplantation during undergraduate studies [5]. In the studies in the literature, it is reported that nursing students are not aware of current scientific and legal developments and lack adequate knowledge about scientific, ethical and religious issues regarding organ transplantation. In the light of these data, in the present study, it was aimed to examine the opinions of nursing students about organ donation and to evaluate the relation between religious attitudes and organ donation [6].

MATERIALS AND METHODS

The place and design of the study

The study was conducted as a descriptive study with students who were studying in the nursing department of a faculty of health sciences.

The universe and sampling of the study

The universe of the study consisted of 905 students studying at the faculty of health sciences in 2017-2018 academic years. The study aimed to contact the entire universe. However, the study was completed with 659 students, who were at the school during the periods when the data were collected and who agreed to participate in the study [7].

Data collection

After the permission was obtained from the faculty member who was responsible for the course, the purpose and duration of the study were explained to the participants. The data were obtained with interviews with the students who agreed to participate in the study in the classrooms where the course would be carried out before the course started. The data collection tools were completed in approximately 10-15 minutes [8].

Data collection tools

The data were collected with form (3.11) and religious attitude scale, which consisted of 20 questions on sociodemographic characteristics and opinions about organ donation.

Religious attitude scale

The religious attitude scale, whose validity and reliability study was conducted by Kaya in 1998, is in the 5-point likert design and includes 31 propositions, including 17 positive and 14 negative ones. To score the religious attitude scale answers, 5 points were given to I absolutely agree in positive items, 4 points were given to I agree, 3 points were given to I partially agree, 2 points were given to I do not agree options and 1 point was given to I absolutely disagree. In case there were negative items, I absolutely disagree option was given 5 points, I do not agree option was given 4 points, I partially agree option was given 3 points, I agree option was given 2 points and I absolutely agree option was given 1 point, which was in the opposite direction of positive items. The highest score that could be received from the scale was calculated as 155 and the lowest score was 31. High score indicated positive religious attitudes and low scores indicated negative levels in religious attitudes [9].

Ethical aspect of the study

This study was conducted in line with the helsinki declaration; and permission was obtained from the ethics committee of clinical research, department of nursing of the faculty of health sciences and students to collect the data.

Statistical analysis and evaluation of data

The study data were evaluated with the student One-way Anova, Kruskal Wallis, Mann Whitney U and correlation analysis and p<0.05 was taken as statistically significant [10].

RESULTS

It was determined in the present study that the desires of nursing students to donate organs and positive thoughts about organ donation were high. It was also determined that the average religious attitude score of the students was high; and there was a significant relation between their thoughts about organ donation and their religious attitudes (Tables 1-4) [11].

Table 1 The relation between socio-demographic characteristics of the students and the religious attitude scale.

Feature	N (%)	Religious attitude scale X ± SD	p
Gender			
Female	468 (71.0)	121.73 ± 14.79	0.071
Male	191 (29.0)	117.86 ± 15.00	
Age			
18-20	180 (27.3)	119.73 ± 13.67	0.077
21-23	378 (57.4)	121.81 ± 16.82	
24-26	82 (12.4)	116.28 ± 15.79	
27 and above	19 (2.9)	123.63 ± 12.81	

Grade			
1	194 (29.4)	120.15 ± 16.64	0.086
2	185 (28.1)	121.56 ± 17.42	
3	166 (25.2)	119.96 ± 12.91	
4	114 (17.3)	120.78 ± 15.94	
Accommodation			
State dormitory	277 (42.0)	123.84 ± 14.08	0.074
Private dormitory	148 (22.5)	117.04 ± 15.93	
Family	173 (26.4)	117.16 ± 17.82	
Friends	61 (9.1)	124.37 ± 13.76	
Religious attitude scale score average	120.61 ± 15.87		

Table 2 The distribution of the opinions of the students about organ donation and organ transplantation.

Feature	N (%)	Religious attitude scale X ± SD	p
Is there anyone donating organs in the family			
Yes	137 (20.8)	119.50 ± 17.55	0.359
No	522 (79.2)	120.90 ± 15.40	
Is there anyone in the family undergoing organ transplantation?			
Yes	80 (12.1)	123.88 ± 16.66	0.049
No	579 (87.9)	120.15 ± 15.72	
Did you receive training on organ donation-organ transplantation?			
Yes	427 (64.8)	118.80 ± 16.49	0
No	232 (35.2)	123.93 ± 14.10	
Do you consider donating your organs?			
Yes	449 (68.1)	119.98 ± 15.81	0.137
No	210 (31.9)	114.95 ± 15.95	
Why do you not want to donate your organs? (n=210)			
Because of my beliefs	126 (60.0)	118.88 ± 15.77	0.008
To protect the integrity of my body	84 (40.0)	116.57 ± 16.49	

Do you want to donate your organs to the opposite gender?			
Yes	352 (78.4)	120.24 ± 14.10	0.192
No	97 (21.6)	119.04 ± 14.95	

Table 3 The relation between the knowledge of the students about organ transplantation and religious attitudes.

Features	N (%)	The relation between religious attitude scale and organ transplantation knowledge (p)
Organ transplantation occurs only among family members		
Yes	206 (31.3)	0
No	400 (60.7)	
I do not know	53 (8.0)	
Tissue test must be done before the organ transplantation		
Yes	359 (54.5)	0.13
No	130 (19.7)	
I do not know	170 (25.8)	
Brains death of the donor must occur for organ transplantation		
Yes	410 (62.2)	0.015
No	164 (24.9)	
I do not know	85 (12.9)	

Table 4 The relation between the opinions of the students about organ donation and religious attitudes.

Features	N (%)	The relation between the opinions of the students about organ donation and religious attitudes (p)
Organ donation requires love and mercy		
I agree	422 (64.0)	0.001
I do not agree	121 (21.4)	
I am indecisive	96 (14.6)	
Organ donation should be done without anything in exchange		
I agree	530 (80.4)	0.018
I do not agree	82 (12.4)	
I am indecisive	47 (7.1)	

Organ donation is a beneficial act for humanity		
I agree	527 (80.0)	0.014
I do not agree	58 (1.2)	
I am indecisive	74 (8.8)	
Organ donation is a social responsibility		
I agree	331 (50.2)	0.012
I do not agree	191 (29.0)	
I am indecisive	137 (20.8)	
I would donate my organs for those whom I do not know		
I agree	358 (54.3)	0.013
I do not agree	148 (22.5)	
I am indecisive	153 (23.2)	
I would donate my organs to someone from another religion		
I agree	321 (48.7)	0
I do not agree	216 (32.8)	
I am indecisive	122 (18.5)	
Why do you want to donate your organs?		
To save lives	227 (50.6)	0.493
To be beneficial for people	124 (27.6)	
Because of my beliefs	98 (21.8)	

However, it was determined that the students who did not intend to donate their organs gave their religious beliefs as justification; and that a significant number of students did not intend to donate their organs to the opposite gender. For this reason, it may be recommended that the scientific, religious, cultural and traditional attitudes of nursing students who have social responsibilities about organ donation are analyzed in a more detailed manner. In addition, they must also be informed in line with the data that will be obtained in these analyses [12].

DISCUSSION

In our present world, organ transplantation has an important place in the treatment of many diseases. However, current organ donation rates are far below the number of organs needed; and religious beliefs are one of the biggest obstacles for organ donation. For this reason, especially nurses have great responsibilities to minimize the negative attitudes towards organ donation and to spread accurate information. In this context, it is very important to explain all the aspects of organ donation to students during their education. A total of 64.8% of the nursing students who participated in this study said that they were trained about organ transplantation and donation. In many previous studies most of the nursing students were trained about organ transplantation and donation. In addition, 68.1% of the students said that they were considering organ donation. In studies that were conducted with the nursing department students in our country, it was reported that 91.1% (18), 78.2% (12), 51.8% (13), 50.3% , 47.8% (2) and 44.0% (14) or the participants stated that they were considering organ donation and the data showed variability. Although these

studies were conducted in the same country, this difference in the reported results can be explained with the differences between traditions, cultural values, religious beliefs, education and socio-economic levels in the regions [13].

It was determined in our study that most of those with knowledge about the important issues on organ transplantation like pre-transplant tissue test and brain death, were found to be the majority. In many studies that were conducted in our country it was determined that the level of knowledge for organ transplantation was high. However, it is a well-known fact that high knowledge level alone cannot increase the rates of organ donation. Organ donation is affected by many factors. As a matter of fact, many previous studies reported that faith is the most important obstacle for organ donation. In previous studies that examined the effect of the religion on the intention of organ donation, it was reported that the opinion about organ donation was not strict in all religions; however, it may prevent organ donation because faith is a multidimensional concept. In our study, 60% of the participant students who did not wish to donate their organs stated that they did not want donate because of their religious beliefs. However, 21.8% of the students who wanted to donate their organs said that their beliefs were effective in their intention for donating their organs; and most of the students who wanted to donate their organs said they wanted this to save other lives. These contradictory responses suggest that students have no clear opinions about which decision might be correct from a religious point of view [14].

It was reported in the literature that fear of deterioration of the body integrity and opinions about postmortem life affected the attitudes towards organ donation. In the present study, 40% of the participants stated that they did not intend to donate organs for the purpose of preventing the deterioration to the body integrity. When the religious attitudes and opinions about organ donation of the students were examined, it was determined that the average religious attitude score of students who considered organ donation was higher than those who did not want to donate their organs; however, there were no significant relations between their attitudes and desires to donate their organs ($p>0.05$). The fact that the students thought of donating to people they did not know were determined and that it was an act that required compassion, that it must be done without any conditions, that it was a beneficial act for humanity and that they thought about donating for people they did not know showed a significant relation between religious attitudes [15].

CONCLUSION

In the study conducted by the Kilic et al., negative attitude towards organ donation was low and in the study conducted by it was determined that positive thoughts about donation were high. In our study, the high rate of positive thoughts about organ donation is similar to the literature.

It is considered that the most interesting results of this study are the answers to the question do you want to donate your organs to the opposite gender? and I donate my organs to people from other religions. Because 21.6% of the students did not intend to donate their organs to the opposite gender, and most of them took a negative approach or were indecisive about donating their organs to people from other religions. In a study that examined the effect of gender on the intention about organ donation, it was determined that women had more positive thoughts about donation. However, it was also observed that there were not enough data on the intention of donating organs to people from the opposite gender and from other religions. For this reason, the investigation of the causes of these approaches with further studies will contribute to the literature.

FINDINGS

It was observed that 71.0% of the students were female; 57.4% were between the ages of 21 and 23; a total of 29.4% were first-grade students and 42.0% stayed in state dormitory. The religious attitude scale score point average of the students was 120.6 ± 15.8 and there were no significant relations between their religious attitudes and socio-demographic characteristics ($p>0.05$). It was determined that 20.8% of the students who participated in the study donated organs to family members; and 12.1% had organ transplantations in their family members. It was also determined that 64.8% of them were trained about organ transplantation and organ donation; 31.9% did not want to donate organs; and 60.0% did not want to donate because of their beliefs. It was determined that 21.6% of that considering organ donation did not want to donate their organs to the opposite gender.

60.7% of the students said that the transplantation would not be only among family members, 54.5% said that they should undergo tissue adjustment test before the transplantation and 62.2% said that they knew that the brain death

of the cadaver donor occurred before organ transplantation. A total of 64.0% of the students who participated in the study said that organ transplantation had love-mercy feelings in it, 80.4% said that it should be done with nothing in exchange, 80.0% stated that it was a beneficial act, 50.2% said that it was a social responsibility, 54.3 said that they considered donating their organs to those whom they do not know; 32, 8% said that they did not consider donating their organs to someone from another religion and 18.5% said that they were indecisive about this. It was determined that there was a significant relation between the opinions of the students about organ donation and their religious attitudes.

LIMITATIONS OF THE STUDY

The fact that the present study was conducted only in a health sciences faculty of a university, the collection of the data from the students only with data collection tools and the lack of detailed analyses on their thoughts constitute the limitations of the study.

ETHICS STANDARTS

Ethics committee of Gaziantep University was obtained for this study. Permission was obtained from Gaziantep university faculty of health sciences nursing department for this study.

CONFLICT OF INTEREST

No conflict of interest between authors.

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REFERENCES

- [1] Yazici SO, et al. Determining the knowledge and thoughts of nursing students about organ transplantation and donation. *A Journal on the Formation of Knowledge*, Vol. 3, No. 10, 2015, pp. 66-76.
- [2] Kavurmaci M, et al. Knowledge and opinions of university students about organ donation. *Journal of Education and Research in Nursing*, Vol. 11, No. 2, 2014, pp. 15-21.
- [3] Ozer N, et al. Examining the knowledge and thoughts of nursing students about organ transplantation and donation. *Anatolian Journal of Nursing and Health Sciences*, Vol. 13, No. 2, 2010, pp. 1-11.
- [4] Cetin G, et al. Knowledge and attitudes of high school students on organ transplantation and organ donation. *Journal of Research in Education and Teaching*, Vol. 1, No. 2, 2012, pp. 172-177.
- [5] Bortz AP, et al. Spirituality as a predictive factor for signing an organ donor card. *Journal of Nursing Scholarship*, Vol. 47. No. 1, 2015, pp. 25-33.
- [6] Hoy H, et al. The role of advanced practice nurses in transplant center staffing. *Progress in Transplantation*, Vol. 21, No. 4, 2011, pp. 294-298.
- [7] Lopez-Montesinos MJ, et al. Organ donation and transplantation training for future professional nurses as a health and social awareness policy. *Transplantation Proceeding*, Vol. 42, No. 1, 2010, pp. 239-242.
- [8] Cebeci F, et al. Undergraduate nursing students opinions and attitudes toward organ donation: A survey in a Turkish university. *Journal of Nursing Education and Practice*, Vol. 5, No. 9, 2015, pp. 83-89.
- [9] Yaman Aktas Y, et al. Knowledge and attitudes of nursing students at Giresun university faculty of health sciences about brain death and organ donation. *Firat Medical Journal*, Vol. 17, No. 3, 2012, pp. 129-134.
- [10] Sıpkın S, et al. Examination of the perspectives of the faculty members of Onsekiz mart university faculty of medicine, faculty of theology and faculty of fine arts on organ donation. *Journal of ADU Faculty of Medicine*, Vol. 11, No. 1, 2010, pp. 19-25.
- [11] Kim JR, et al. Undergraduate nursing students knowledge and attitudes towards organ donation in Korea: Implications for education. *Nurseing Education Today*, Vol. 26, No. 6, 2006, pp. 465-474.

- [12] Savaşer S, et al. Views of senior nursing students on organ donation. *Florence Nightingale Nursing Journal*, Vol. 20, No. 1, 2012, pp. 1-9.
- [13] Kacaroglu Vicdan A, et al. Determination of Akşehir health school students attitudes towards organ donation. *TAF Preventive Medicine Bulletin*, Vol. 10, No. 2, 2011, pp. 175-180.
- [14] Sarıgöl Ordın Y, et al. Student attitudes towards organ donation: Nursing. *Gumushane University Journal of Health Sciences*, Vol. 7, No. 2, 2018, pp. 28-36.
- [15] Yasar M, et al. Attitudes of senior students of a health vocational school about organ donation and the factors affecting their attitudes. *Journal of General Medicine*, Vol. 18, No. 1, 2012, pp. 33-37.