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High School Students' Knowledge and Attitudes of Organ Donation and Organ Transplantation

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Abstract

The aim of the study was to determine high school students' knowledge and attitudes of organ donation and transplantation. Sample of the study included 179 10th and 11th grade students in a Vocational High School and an Anatolian Teacher High School in Balıkesir in Turkey in Fall Semester of 2011-2012 academic years. Data were collected with Organ Donation Attitude Scale consisting of 10 questions and Organ Donation Knowledge Questionnaire consisting of 5 questions. According to the results of the study, half of the students indicated that they wanted to donate their organs. Although two schools' students had positive attitudes toward organ donation, they had insufficient knowledge about organ donation in general.

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1. Introduction

1.1. Organ donation and transplantation

Organ donation is that someone being alive allows other people to use his/her tissues and organs for medical purposes after ending of his/her life medically, certifies and validates it on one's own volition (Hacettepe Üniversitesi Doku ve Organ Nakli Eğitim, Uygulama ve Araştırma Merkezi, Organ bağıışı; Organ bağıışı hakkında merak ettikleriniz). In our country organs such as heart, liver, kidney, lungs, intestine, pancreas and tissues and organs such as cornea, skin, muscle, bone, bone marrow can be donated. Everyone who is at the eighteen years old and over, and is compos mentis can take organ and tissue donation certification by invoking with identity card to public health authority, state hospital or organ and tissue donation center in the university hospitals (Akış et al, 2008).

Organ transplantation is that a transport event of a solid and new organ taken from a live donor or cadaver instead of nonfunctional organ in the body (Hacettepe Üniversitesi Doku ve Organ Nakli Eğitim, Uygulama ve Araştırma Merkezi, Organ bağıışı).

Organ and tissue transplantation can be conducted in two forms: Cadaver donor and live donor. When brain dead of a patient who is in intense care unit with any reason is occurred, it is called as a cadaver donor in case of his/her organs are donated. Organs and tissues, which can be used at the transplantation of cadaver, are kidneys, liver,

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pancreas, heart, hearth valves and cornea (Organ ve doku nakli hizmetleri). To third degree relatives of a patient who needs organ and tissue transplantation can donate their organs and tissues if other requirements such as tissue and blood type compatibilities occur. It is called as a live donor. Liver and kidney are organs that can be transplanted from a live donor. There is no medical finding affecting donor's health negatively at the transplantation of whether liver or kidney. Available risk is equal to the patient can experience any operation (Organ ve doku nakli hizmetleri; Canlıdan canlıya organ nakli ne demektir?).

1.2. Brief history

Organ transplantation has been a significant subject since prehistoric times, was contemporarily tried on the animals by kidney transplantation by Hungarian surgeon Dr. Ulman in Vienna in 1992. Then, cadaveric kidney transplantation was carried out by Dr. Voronov in Soviet Union in 1933. However, kidney transplantation to human body resulted in failure since the body didn't accept the different tissue. In 1950s, American scientists accelerated organ transplantation studies by conducting organ transplantation successfully. Therefore, they converted tissue and organ transplantations into standard medical application (Türkiye Organ Nakli Derneği).

In Turkey initially Dr. Kemal Beyazıt started to study on organ transplantation in Ankara Hospital in 1968. Although heart transplantation was performed for the first time, the patient died. After Dr. Mehmet Haberal and his colleagues conducted the first successful organ transplantation that was renal transplantation with kidney donated from mother to son in 1975, they performed the first cadaveric kidney transplantation in 1978 (Organ ve doku nakli hizmetleri). In 1990 liver transplantations among relatives were done for the first time in the world (Türkiye Organ Nakli Derneği). National Organ and Tissue Transplantation Coordination System was established in Turkey in 2000 under the coordination and supervision of the Ministry of Health (Akış et al., 2008).

1.3. Religious aspects of organ transplantation

The Supreme Board of Religious Affairs by its decision date March 6th 1980/396 has announced that organ transplantation is permissible. It is stated in the Quran 'if any one saves a life, it would be as if he saved the life of the whole people.' (Surah Al-Maeda, Verse 32, as cited in Hacettepe Üniversitesi Doku ve Organ Nakli Eğitim, Uygulama ve Araştırma Merkezi, Organ bağıışı).

2. Method

2.1. Aim

The aim of the study was to determine the knowledge and attitudes of 10th and 11th grade high school students toward organ donation and transplantation.

2.2. Sample

Sample of the study included total 179 10th and 11th grade students in a Vocational High School (VH) (100) and an Anatolian Teacher High School (AH) (79) in Balıkesir in Turkey in fall semester of 2011-2012 academic years.

2.3. Data collection and data analysis

Data was collected by two instruments: Organ Donation Attitude Scale and Organ Donation Knowledge Questionnaire. Organ Donation Attitude Scale consisted of 10 questions including fill in the blanks question, yes/no, I don't know questions, and multiple-choice questions. While this scale was prepared, Questions 9, 11, 13, 14, 25 and 26 in the study of Vanlıoğlu (2008) were useful. Organ Donation Knowledge Questionnaire included 5 multiple-choice questions. While this questionnaire was prepared, Questions 5, 6, 7, 9 and 10 in the study of Akış et al. (2008) were used.

Data analysis of open-ended questions in Organ Donation Attitude Scale was done by content analysis technique. Statements related to each question were determined and frequencies were calculated. Frequencies of other types of questions in Organ Donation Attitude Scale and Organ Donation Knowledge Questionnaire were also calculated.

3. Results and discussion

3.1. Organ donation attitude scale

Question 1. Do you want to donate your organs? When the students were asked to this question, half of the students said “yes” (%53,07: %48 VH; 59,49 AH). Other answers were: “No” %12,29 (%16 VH; %7,59 AH), “I don’t know” %33,52 (%35 VH; %31,64 AH), “no answer” %1,12 (%1 VH; %1,26 AH). Similarly, teenagers in Sweden gave answers “yes” (%50), “no” (%18), “undecided” (%32) about making organ donation (Sanner, 2002). The rates of “yes” were very close in both studies. Piccoli et al. (2006) reported that %56,7 of the secondary school students in Italy were interested in organ transplantation, while %32,9 of them didn’t think about it and %4,5 of them weren’t interested in it. However, while volition of the students at Health Vocational High School was %34,9 (Yaşar et al., 2008), the rate of staffs at Süleyman Demirel University was %21 (Akış et al., 2008).

Question 2. If you want to donate your organs, what are the reasons of your decision? (You can tick more than one choice.) The findings related to Question 2 were given in Table 1. As seen in Table 1, many students said “because I feel myself happy when I save someone’s life.” (%49,16: %33 ML; %69,12 AL), “because I think that I and my family may need it sometime” (%46,37: %42 ML; %51,89 AL). %2,79 of the participants signed the other choices. In this respect, “because organs will be nonfunctional after death/will decay under the soil.”(%1,67) and “unless somewhat emergency situation appears, I don’t donate. I think I donate all internal organs if you mention after death.” and “to live at the other body.” (%1,11). %18,99 of the participants didn’t give any answer the question. Similarly, Göz ve Gürelli (2007) reported that nurses wanted to make donation (%60.9), especially to help patients (%46,1).

Table 1. The reasons of the students about desire of making organ donation

	VH*	AH*	Total
because I feel happy when I give someone a gift of life.	%33	%69,62	%49,16
because I and my family might also need it one day.	%42	%51,89	%46,37
to make people healthy again	%23	%26,58	%24,58
to be an example to other people	%10	%6,33	%8,38
Other (Please describe)	%1	%5,06	%2,79
No answer	%24	%12,66	%18,99

*VH: Vocational High School; *AH: Anatolian Teacher High School

Question 3. If you don’t want to donate your organs, what are the reasons of your decision? (You can tick more than one choice.) The findings related to Question 3 were given in Table 2. According to Table 2, the reasons why students didn’t want to donate were that “because my relatives don’t accept it” (%11,17: %15 VH; %6,33 AH), “because I am afraid of seeing that my body won’t be respected” (%8,94: %12 VH; %5,06 AH), “because I don’t believe donated organ will be given to a person that is need of” (%8,38: %7 VH, %10,13 AH). However, a few students gave different reasons (%3,35): “Responsibility of this donated organ would continue even if I died. I don’t want to take a risk. I am suspicious about my organs are healthy. Thinking of being mangled makes me frighten”. In contrary, Bölükbaş, Eyüpoğlu and Kurt (2004) implied that people did not want to make organ donation because of their religious beliefs (%44,8). Göz and Gürelli (2007) referred that %71,5 of the nurses did not want to make organ donation since they did not want to make their family sad. Sanner (2002) highlighted that teenagers did not want to or hesitate to donate organs because a dead body was cut made me uncomfortable (%39), my organs were a live at the other person’s body made me uncomfortable (%32), because I was afraid of seeing that my body would not be respected after death (%19), I was afraid of not being death (%17).

Table 2. The reasons of the students about not desire of making organ donation

	VH*	AH*	Total
because my relatives don't accept it.	%15	%6,33	%11,17
because I am afraid of seeing that my body won't be respected.	%12	%5,06	%8,94
because I don't believe donated organ will be given to a person that is need of.	%7	%10,13	%8,38
It is against our religion.	%3	%6,33	%2,79
Other (Please describe)	%2	%5,06	%3,35
No answer	%64	%59,49	%62,01

*VH: Vocational High School; *AH: Anatolian Teacher High School

Question 4. If you want to donate your organs, have you got donor card? There was no students answering “yes” related to Question 4 while almost all of the students answered “no” %86,59 (%85 TV and %88,60 AH).

Question 5. If you have the organ donation card, are you carrying with you? There was no students answering “yes” related to Question 5, most of the students said “no” (%40,22: (%45 TV; %34,17 AH).

Question 6. If you had a donor card , would you carry with you ? Students answered mostly “yes” (%55,30: %49 VH; %63,29 AH). %40,22 of the participants gave some reasons for the question (%30 VH and %53,16 AH). For example, “at any moment everything happens and when they have an accident and lose their lives, because the fact that they have donated their organs is known by their families and doctors in order not to spend time.” (%30,72: %23 TV; %40,50 AH).

Question 7. If you had not a donor card, what are the reasons of lacking of it? The findings of this question were given in Table 3. According to Table 3, these answers were given by the participants: “I haven't any idea about this issue and card.” (%17,31: %12 TV; %24,05 AH) and “I am underage.” (%15,64: %14 TV, %17,72 AH).

Table 3. The reasons of the students' having not an organ donation card

	VH*	AH*	Total
I haven't any idea about this issue and card.	%12	%24,5	%17,31
I am underage.	%14	%17,72	%15,64
because I haven't donated my organs and demanded yet.	%8	%11,39	%9,49
I don't know.	%7	%8,86	%7,82
because of I don't need it.	%5	%8,86	%6,70
I don't want.	%5	%3,79	%4,46
I am undecided.	%4	%3,79	%3,91
because my family doesn't allow.	%1	%1,26	%1,11
I am afraid.	%1	%0	%0,55

*VH: Vocational High School; *AH: Anatolian Teacher High School

Question 8. Do you trust Turkish doctors about organ transplantation? The findings of the question were given in Table 4. As seen in Table 4, most of the students replied “yes” (%53,63: %45 TV; %64,55 AH). The students said “yes” gave also some explanations like “I think that Turkish doctors are successful like doctors in the other countries.” (%11,73: %9 TV; %15,18 AH), “I trust them because I have heard successful transplantation news lately.” (%11,17: %14 TV; %7,59 AH).

Table 4. The reasons of the students whether or not trust Turkish doctors

	VH*	AH*	Total	
I trust.	I think that Turkish doctors are successful like doctors in the other countries.	%9	%15,18	%11,73
	I trust them because I have heard successful transplantation news recently.	%14	%7,59	%11,17
	I trust because technological facilities have been developed significantly in Turkey.	%2	%2,53	%2,23
	I trust because one of my relatives rescued by Turkish doctors.	%1	%0	%0,55

	I don't trust Turkish doctors because of bad news on this issue.	%2	%3,79	%2,79
	It changes doctor to doctor. I do not trust every doctor.	%0	%3,79	%1,67
	I don't think that Turkish doctors do not develop themselves completely.	%0	%2,53	%1,11
I don't trust.	I think they will organ trade.	%0	%2,53	%1,11
	I don't trust doctors since I lost one person from my family because of Turkish doctors.	%2	%0	%1,11
	There are more successful doctors in Europe.	%1	%0	%0,55
	I don't trust doctors whether they are Turkish or foreigner.	%0	%1,26	%0,55
I don't know.	I have not enough knowledge about it.	%0	%3,79	%1,67

*VH: Vocational High School; *AH: Anatolian Teacher High School

Question 9. In case of someone's death of your family or relatives, how do you think what extent will this situation affect your opinions about organ donation and transplantation? While the question were asked to students, the students gave these answers: "Significantly effect" (%25,69: %21 VH; %31,64 AH), "effect" (%30,72: %37 VH; %22,78 AH), "undecided" (%27,93: %28 VH; %27,84 AH).

Question 10. "When I donate organs, I want to know whether a person that will take my organs can pay attention to my organs or not. I don't want to give my organs to a person addicted to alcohol, cigarette, drug and etc." The rates of the students about this question were that "Strongly agree" (%35,75: %43 VH; %26,58 AH), "agree" (%22,90: %24 VH; %21,51 AH), "strongly disagree" (%19,55: %12 VH; %29,11 AH). In short, %58,65 of the participants gave positive answers. Similarly, in one of the study (Sarıtaş, 2005) students (%29,4) thought that it was not important whoever took their organs. Doğan (2008) also reported similar results (%62,4).

3.2. Organ donation knowledge questionnaire

Question 1. Which tissue/organs can be donated? (You can sign much more choices.) While only %4,46 (%2 VH; %7,59 AH) of the students gave true answer about this question, most of the students gave partly true answer by signing one or several choices (%91,62: %95 VH; %87,34 AH). Similarly, a few people (%6) knew all organs which could be donated in China (Wang et al., 2012). However, Akış et al. (2008) reported that the students giving true answer was %37 by signing all choices such as heart, lung, liver, cornea, heart valve, kidney, pancreas, intestine. In short, this rate was higher than the results of our study.

Question 2. How have you learned knowledge about organ donation? (You can sign much more choices.). Most of the students responded "from TV" (%73,18: %79 VH; %65,82 AH), "from my environment" (%65,36: %64 VH; %67,08 AH) and "from Internet" (%48,60: %48 VH; %39 AH) for this question. Similarly, Akış et al. (2008) implied that %72 of the university staff got information from particularly television. Khan et al. (2011) reported that the adults in Pakistan received information about organ donation from television (%46,5) and learning from friends (%19,70). Piccoli et al. (2006) showed that %86,9 of the secondary school students in Italy indicated that television was the main knowledge resource, and then %46,5 newspapers followed it. On the other hand, Bölükbaş et al. (2004) found that television and radio (%37,9) were among the resources for getting knowledge of university students about organ/tissue donation in their study. Yaşar et al. (2008) also indicated that firstly courses were knowledge resources (%67,3) about organ transplantation, secondly media %40,3 took place. It was determined that %70,3 of undecided participants' knowledge level about organ donation was not enough.

Question 3. What are the necessities for donation of organs? (You can sign choice more than one). They replied "health certificate" (%85,47: %91 TV; %78,48 AH) and "identity card" (%68,15: %69TV; %67,08AH) for this question.

Question 4. Where can be organs donated? (You can sign choice more than one) They said "training hospital" (%77,65: %84 TV; %69,12AH), "state hospital" (%51,39: %54 TV; %48,10 AH), "private clinics" (%21,22: %21 TV; %21,52 AH), "local health authority" (%20,67: %22 TV; %18,98 AH) as a result knowledge level of students about this subject was low. Similarly, the rate of correct answer was %11 in the study of Akış et al. (2008).

Question 5. In which conditions could organ transplantation to be done from a person who has not informed making organ donation before? Only %1,67 (%1 VH; %2,53 AH) of the students gave true answer by selecting all choices about the question. Most of the students (%94,41) gave partly true answer by selecting one or several

choices. In the study of Akış et al. (2008), the students mentioned when organ donation could be done: When the first degree two relatives allowed (%47,40), brain dead occurred (%31,85) and by doctor confirmation (%8,14).

In a conclusion, although half of the students had positive attitudes toward organ donation and transplantation, the students in both schools haven't enough information about organ donation and transplantation in general. Positive attitudes toward organ donation can be resulted from good news at the social media. Positive effects of social media must be supported by completing inefficient information of students by teachers. We think that an increase towards organ donation will appear with the support of successful government policy, schools and social media.

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