

INCREASING UNIVERSITY STUDENTS ATTITUDES TOWARDS ORGAN DONATION WITH PEER LEARNING APPROACH

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Received: 27.09.2021; **Accepted:** 08.12.2021; **Available Online Date:** 27.01.2022

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Cite this article as: Sarıgöl-Ordin Y, Akpınar-Soylemez B, Deveci-Kocbilek Z, Kankaya EA, Celik B, Yasak K, Bilik O, Intepeler SS, Dugral E. Increasing university students' attitudes towards organ donation with peer learning approach. J Basic Clin Health Sci 2022; 6: 139-147.

ABSTRACT

Purpose: The purpose of this study was to investigate the effects of a peer learning on attitudes to organ donation and the rate of obtaining a donor card in university students.

Method: This was a quasi-experimental study in a single group. Study was conducted between October-2017 and October-2019 from nursing (n=320) and the fine arts (n=160) students. Peer learning approach was applied as an intervention.

Results: There was a statistically significant difference in the nursing faculty students' positive attitudes to organ donation after peer learning. Also, there was a statistically significant difference in the second-year nursing students' negative attitudes to organ donation after peer learning. The difference in the number of the nursing students having a donor card after peer learning was highly significant. There was not a statistically significant difference in the fine art students' positive attitudes to organ donation and having a donor card after peer learning.

Conclusions: It is recommended that private and social issues such as organ donation be taught to students in the higher education curriculum with the peer learning approach.

Keywords: Peer learning, organ donation, nursing students, university students

INTRODUCTION

Organ shortage is a global problem and the number of the patients on the transplant waiting list is gradually increasing. In Turkey, the number of the transplants from live donors is very high, but the number of the transplants from deceased donors is low (1). It is recommended in the literature that organs from deceased donors should be used for

transplantation because of medical, ethical, and social reasons. For this reason, countries signed the Declaration of Istanbul, which suggests that the policymakers, health care managers, and transplantation professionals should focus on developing programs based on using deceased donors (2). Innovative projects that will increase organ donations should be launched in countries

including Turkey where the rate of organ donations from deceased donors is low.

The awareness of younger population about organ donation is important as they can be trendsetters (3). Turkey has a high youth population (4). Therefore, they are the most important group whose attitudes to organ donation should be improved. It is known that awareness and education studies on organ transplantation are generally carried out with university students who receive health education (5-11). In addition to being a young population, nursing students gain sensitivity in organ donation is very important.

It is emphasized in the literature that effective educational program is necessary for university students (12-14) and specially nursing students (15-17) to improve attitudes to organ donation. It is necessary to perform studies about raising awareness about organ donation in not only health sciences students but also university students in other fields. Fine arts students having awareness about organ donation can also play an important role in increasing the awareness in the society.

Nurses have roles in raising public awareness, taking care of the recipients, donor and families in clinical setting, donor evaluation and care in intensive care center, supporting to related organizations and being a role model for the public. It is suggested that the issue of organ donation should be integrated into the nursing education program (18,19). It is stated in the literature that there is an important gap between volunteering to be an organ donor and being an organ donor. Yalçın Balçık et al. (2019) found in their study with university students that 82% of the students supported organ donation, but that only 3.9% of the students had an organ donor card.¹⁴ In another study with university students, Kavurmacı et al. (2014) also reported that 47% of the university students wanted to donate their organs, but that only 4.2% of the students had an organ donor card (12). Several studies performed with nursing students have shown that although high rates of the students had a positive attitude to organ donation, very low rates of the students had an organ donor card (0.4%-4%) (13,16,18,20). Besides, Kavurmacı et al. (2014) noted that 74% of the university students did not know how to donate their organs (12). Also, personal belief, moral codes, religion, level of knowledge and existence of ambivalence were effected to willingness to donate in nursing students (15).

Several interventions including a brief training for organ donation (5), a web-based intervention (21), sharing informative material (3), a structured education program (8), an education program involving self-learning, sharing what is learned and participating in a seminar (9), lecturing (7), and peer education (22) have been shown to be effective in organ donation in several studies.

Peer interactions play an important role in personal development of individuals (23). Peer education is directed towards utilizing positive effects of peers on behaviors (24). It is suggested that peer learning plays an important role in university education and should be applied in the learning process. Peer learning approach promotes life-long learning skills, critical thinking, reflective learning, communication skills and learning to learn (25).

The purpose of this study was to investigate the effects of a peer learning on attitudes to organ donation and the rate of obtaining a donor card in university students.

METHODS

Study Design

This study had a one-group, quasi-experimental comparative design.

Participants and settings

The study was conducted at the nursing and fine arts faculties of at a university located in the west of Turkey between October 2017 and October 2019. The study population comprised university students receiving education in nursing and fine arts. First-year nursing students were not included in the study since they just started to study at university and it could be difficult to access them and to conduct the study. Besides, fourth-year students were not also included in the study since they had to attend clinical education four days a week and did not have enough time to attend peer learning sessions. So that all the students to be included in the study could have the same year of study, second-year and third-year nursing students and fine arts students formed the study population. The sample size was found to be 180 based on $\alpha=0.05$, $\beta=0.80$, the effect size=0.81 in repeated measures analysis of variance (ANOVA) by using G Power 3.1 as described in a study by Ordin and Söylemez (2018) (22). To access the whole sample, all second-year and third-year nursing and fine arts students were invited to attend a

presentation about the study. After listening to the presentation, the students volunteering to participate in the study were included in the study sample. A total of 320 nursing students, of whom 150 were second-year students and 170 were third-year students (participation rate= %82) were included in the sample. Also, a total of 160 fine arts students, of whom 102 were second-year students and 58 third-year students (participation rate= 50%) were included in the study by using simple randomization.

Intervention: Peer learning about organ donation

Peer learning provides students with the ability to collaborate, teamwork, criticize a topic, communication skills, and learning to learn (25). In this research, the following steps were followed for students to gain these skills.

Steps of the peer learning:

1st step: It took four months for the leader nursing students to receive education about organ donation and plan all the peer learning activities,

2nd step: It took four months for the leader nursing students to give peer learning to the rest of the nursing students included in the study,

3th step: It took four months for the leader fine arts students to receive education about organ donation from the leader nursing students and plan all the peer learning activities,

4th step: It took four months for the leader fine arts students to offer peer learning to the rest of the fine arts students included in the study (Figure 1).

1st step: The whole intervention in the peer learning was managed by leader students selected from the nursing faculty. The leader nursing students were given education about organ donation. They were asked to plan all the activities they would perform in the framework of peer learning. They were offered consultancy by the first researcher (YSO) while planning the activities. The education given to the leader nursing students involved a four-hour discussion with the organ transplantation coordinator, attending organ registry processes four times, observation at Organ and Tissue Transplant Coordination Center and attending the activities arranged in this center and activities organized in the organ donation week. In addition, the students received education about religious, legal and ethical aspects of organ donation from a team including a religious leader, a police commissioner, a medical ethics specialist and an intensive care specialist.

These educational activities were held at the times when the students did not have classes of their undergraduate program.

2nd step: During and after education of the leader students, the leader nursing students were asked to set up peer groups. They were provided with a room in the nursing department and technical support including the devices computer, printer and projector so that they could work actively. The devices supplied were purchased by using the research fund.

3th step: The fine arts students were met and eight volunteering students from different fields of fine arts were selected as leader students. The leader nursing students offered education about organ donation to the leader fine arts students in the fall term lasting four months.

4th step: The leader nursing and fine arts students worked together to organize sensitivity training for organ donation in the fine arts faculty.

Peer learning activities

In the study was signed protocol with city health directorate. In the framework of this study, 12 leader nursing students founded an organ donation student club working with the city health directorate and an organ donation community working with the university rectorate. All education sessions and activities were held by the club and the community. As part of the peer learning and to increase adherence, the students opened social media accounts and accessed many university students through these accounts. The organ donation club held a symposium, three concerts and two panels, conducted an interview on a national TV channel and two interviews on two national radio channels, organized an organ donation exhibition, performed a graffiti work and prepared and delivered banners and brochures. Besides, organ donation registry desks were set up in all social events in nursing and fine arts faculties and a total of 260 students obtained organ donation cards.

Data collection

Data were gathered between October 2017 and October 2019. Data were collected from the nursing students in the first stage and from the fine arts students in the second stage. Data collection was performed before and three months after the peer learning intervention (pretest-posttest). Data obtained

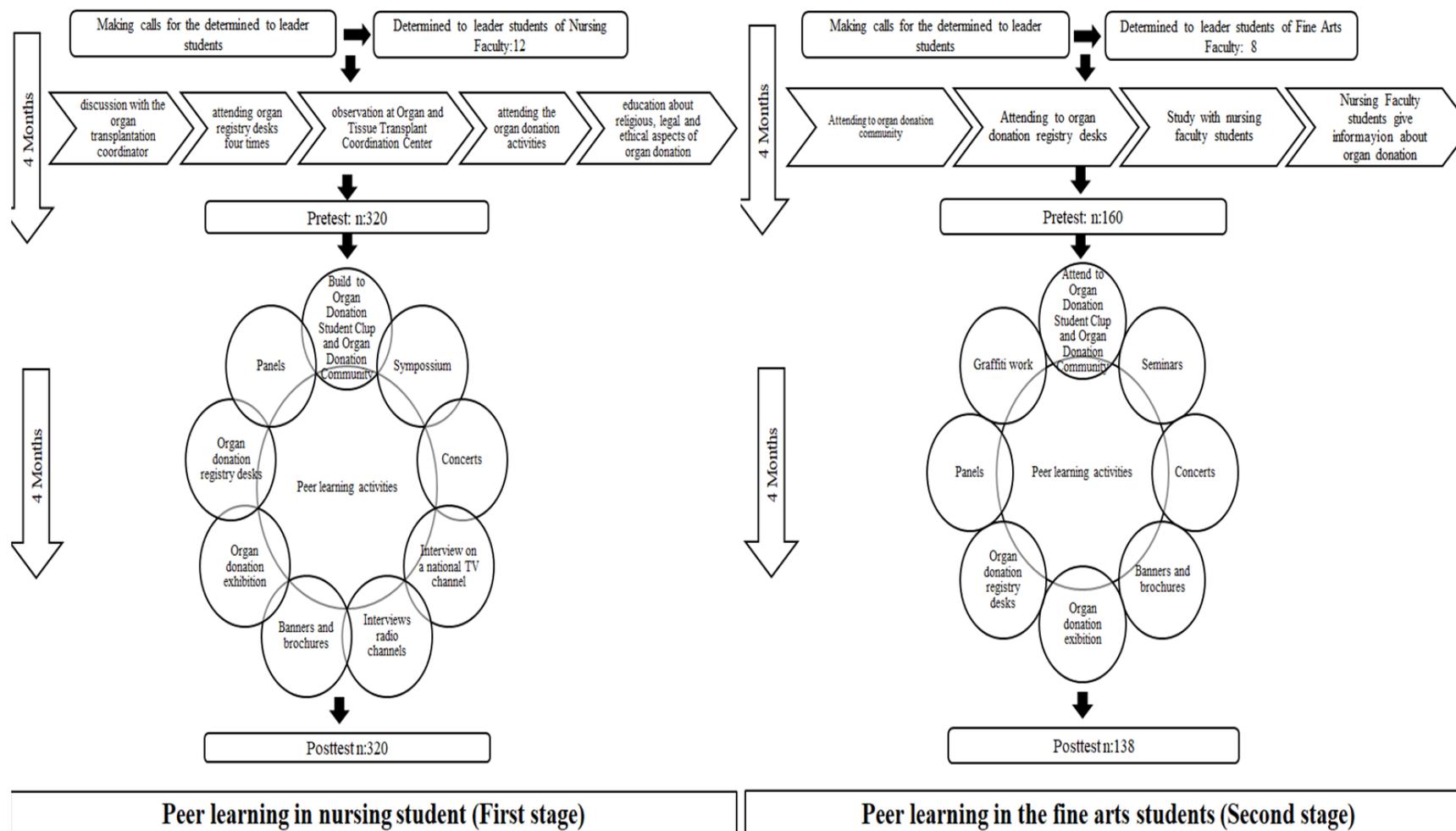


Figure 1. Peer learning about organ donation intervention

from the leader students offering the peer learning were not included in the analysis.

The Organ Donation Attitudes Scale: Data were gathered by using the Organ Donation Attitudes Scale (ODAS), a valid and reliable instrument utilized to show attitudes to organ donation in Turkey. The ODAS is composed of 40 items rated on a 6-point Likert scale, with 1 corresponding to “strongly agree” and 6 corresponding to “strongly disagree” (26,27). Of the 40 items on the ODAS, 20 are negative statements and 20 are positive statements about organ donation. The score that can be obtained from both positive and negative statements of the scale varies between 20 and 120. A high score for the positive statements of the ODAS indicates a positive attitude to organ donation, whereas a low score indicates a negative attitude. The validity and the reliability of the ODAS for the Turkish population were tested by Yazici Sayin (2015) (27). The internal consistency reliability coefficient (Cronbach alpha) was reported to be 0.86 for the scale, 0.93 for the positive statements, and 0.91 for the negative statements in Turkey. Yazici Sayin (2015) showed that the Turkish version of the ODAS had a high internal consistency (27). In the present study, Cronbach’s alpha was found to be 0.80 and 0.85 for positive and negative dimensions of the ODAS respectively.

Sociodemographic and Organ Donation Questionnaire; The questionnaire was prepared by the researchers and consists of four questions. Three questions were about sociodemographic

characteristics and one question was about obtaining a donor card. Besides, obtaining an organ donor card was determined through the records kept in the organ donation registry desks.

Ethical Consideration

The study protocol was approved by the Dokuz Eylul University Non-Invasive Clinical Research Ethical Committee (Approval number: 2017/24-15, Date: 12.10.2017) and the study was conducted in accordance with the Declaration of Helsinki. Approval was given by the administrations of Nursing Faculty and Fine Arts Faculty where the study was conducted. Written informed consent was obtained from the participants.

Data Analysis

Data analysis was made with SPSS 24.0. Data about sociodemographic characteristics were presented in numbers, percentages and mean values. The difference between attitudes to organ donation before and after the peer learning was analyzed with the paired samples t-test and the difference in obtaining a donor card before and after the intervention was determined with McNemar’s analysis. The formulation of Cohen's d' effect size (t/\sqrt{n}) was used to calculate the effect size of the paired sample t test result. The effect size is interpreted according to Cohen d coefficient; ≥ 0.20 mean small effect, ≥ 0.50 mean medium effect, ≥ 0.80 mean large effect. This study has been reported according to the TREND checklist.

Table 1. The Comparison of the Organ Donation Attitudes of the University Students

	Score		Nursing Students				Fine Art Students			
			N	X±SD	t	p	N	X±SD	t	p
2 nd year	Positive attitude	Pretest	150	100.77±16.42	8.571	< 0.001*	102	98.39±16.12	0.130	0.897
		Posttest	150	104.32±12.32			92	98.69 ±16.48		
3 rd year	Negative attitude	Pretest	150	52.53±17.68	2.377	0.019*	102	41.53±17.31	0.150	0.881
		Posttest	150	47.72±20.49			92	41.15±17.64		
Total	Positive attitude	Pretest	170	102.24±14.94	14.907	< 0.001*	58	98.76±16.47	0.300	0.765
		Posttest	170	110.08±8.95			46	99.70±15.54		
Total	Negative attitude	Pretest	170	43.71±14.99	0.049	0.961	58	46.65±18.13	0.243	0.808
		Posttest	170	43.62±17.49			46	45.82±16.09		
Total	Positive attitude	Pretest	320	101.54±15.80	5.330	< 0.001*	160	98.51±16.42	0.292	0.770
		Posttest	320	107.28±11.14			138	99.06±15.87		
Total	Negative attitude	Pretest	320	47.87±16.82	1.638	0.102	160	43.15±17.76	0.092	0.927
		Posttest	320	45.55±19.04			138	42.96±17.20		

n: number; X: mean; SD: standard deviation; t: Paired samples t-test, *Statistically significant

RESULTS

Of all the students, 78.90% (n= 252) were female, 46.70% (n= 150) were second-year university students and 53.30% (n= 170) were third-year university students. The mean age of the nursing students was 21.42 ± 1.65 years (range: 19-24 years). The positive attitudes of the nursing students significantly increased after the peer learning (p<0.001), but no significant decrease appeared in their negative attitudes (p= 0.102). The effect size of the difference was small level (d= 0.30) for positive attitudes. Concerning the attitudes to organ donation according to the education year of the students, the second-year nursing students had a more positive attitude (p <0.001) and a less negative attitude after the intervention (p= 0.019). The effect size of the difference was medium level (d= 0.70) for positive attitudes and very small level (d= 0.19) for negative attitudes in second-year nursing students. The third-year nursing students displayed a significantly increased positive attitude (p < 0.001), but no significant decrease in their negative attitudes (p= 0.961) (Table 1). The effect size of the difference was large level (d=1.14) for positive attitudes in third-year students. Seventy-three of 320 nursing students obtained an organ donor card. There was a significant difference between the rate of obtaining a donor card before and after the peer learning (p < 0.05, Table 2). The mean age of the fine arts students was 20.76 ± 2.73 years (range: 17-32 years) and 64.71% of them (n= 66) were female. There was no significant difference in the mean score of the fine arts students toward organ donation attitudes (p > 0.05, Table 1). Nine of 160 fine arts students obtained an organ donor card after the peer learning (5.60%). The rate

of obtaining a donor card did not differ significantly after the peer learning intervention (p > 0.05, Table 2).

DISCUSSION

In the present study, the peer learning was found to be effective in positive attitudes of the nursing students to organ donation and their behavior of obtaining a donor card. In several interventional studies on attitudes to organ donation and obtaining an organ donor card in nursing students, a structured education program (8), an education program involving self-learning, sharing what is learned and participating in a seminar (9), lecturing (7), education involving lecturing and video (28) and peer education (22) have been employed. These interventions were found to create an effect on obtaining a donor card (7,8,22) and having positive attitudes to organ donation (8,9,22,28)

In the current study, the peer learning was not effective in the attitudes of the fine arts students to organ donation and obtaining an organ donor card. It may be that they spend less time in the faculty and might not have benefited from peer as much as expected since they had more individual studying styles. There have not been any descriptive and interventional studies on attitudes of fine arts students to organ donation. Most of the interventional studies about organ donation have been performed with health sciences students (7,8,9,22,28). This is the first study directed towards enhancing the attitudes of fine arts students to organ donation. Although the study did not show an effect of the peer learning on the fine arts students, its results can guide further studies on students from the fields of study other than

Table 2. The Comparison of Having an Organ Donor Card of the University Students

		Nursing students				Fine art students			
		Having a donor card		X ²	p	Having a donor card		X ²	p
		Yes n/tn (%)	No n/tn (%)			Yes n/tn (%)	No n/tn (%)		
2 nd year	Pretest	4 /150 (2.6)	147/150 (97.4)	22.405	<0.001*	4/102(3.9)	98/102 (96.1)	0.022*	0.882
	Posttest	30/150 (19.9)	121/150 (80.1)			4/102(4.3)	88/102(95.7)		
3 rd year	Pretest	19/170 (11.0)	153/170 (89.0)	11.693	0.001*	5/58 (8.6)	53/58 (91.4)	0.149	0.699
	Posttest	43/170 (25.3)	127/170 (74.7)			5/46(10.9)	41/46 (89.1)		
Total	Pretest	23/320 (7.2)	298/320 (92.8)	30.970	<0.001*	9/160(5.6)	151/160(94.4)	0.105	0.746
	Posttest	73/320 (22.8)	248/320 (77.2)			9/160(6.5)	129/160 (93.5)		

n: number; tn: the total number of the participants in the sample; X²: Chi-square test, *Statistically significant

health sciences. Besides, it can be suggested that peer learning should be designed differently to allow fine arts students to work individually.

There have been interventional studies directed towards university students in different fields of study. In one study, a 45- minute informative training for organ donation was found to bring about positive attitudes to organ donation in university students.⁵ Thornton et al. (2019) performed a study to determine whether a web-based video intervention enhanced university students' willingness to donate their organs (21). They found that the students watching a live-action video about organ donation visited their state registry more frequently than those not watching the video (21). Steenaart et al. (2019) showed in their post-test only randomized, controlled study that a web-based education program increased the knowledge of organ donation and the intention to register for organ donation and to talk to family and friends about donation in students aged 18 years and having a low level of education (29). However, they reported that the web-based education was not effective in registering for organ donation (29). In a campaign undertaken with university students in Brazil, sharing the current informative material was found to increase the knowledge of organ donation and the number of the students agreeing about organ donation when their relatives experience brain death (3).

This study has methodological strengths with respect to the evaluation of the scope and effects of the peer learning. In the organ donation-related interventional studies performed with university students so far, the interventions only included brief trainings whose short-term effects were evaluated (5,7,8,9,21,28,29). However, organ donation is not only related to lack of information but also a multidimensional phenomenon including social, cultural, religious, legal and ethical aspects. The interventions involving short lecturing and only one dimension of organ donation have been reported to be effective short time after performing these interventions. However, their long-term effects remain to be investigated. The peer learning in the present study dealt with the multidimensional aspects of organ donation and lasted a longer time. Besides, the effects of the peer learning were evaluated three months after the intervention. In the interventional studies carried out until now, effects of the interventions on knowledge and attitudes about organ donation and the behavior of obtaining a donor card have been evaluated by using questionnaires

prepared by the researchers performing the studies (5,7,8,9,21,28,29). Unlike the studies reported in the literature, the effects of the peer learning offered in the present study were evaluated by utilizing a valid and reliable data collection tool and the number of the students obtaining a donor card was determined by using both a questionnaire and records kept at the organ donation registry desks.

Cultural features and beliefs are effective in organ donation (10). Interventional studies including diverse age and social groups are needed to increase organ donation among people living in Turkish culture and having Islamic beliefs. In the present study, the peer learning intervention was expected to create an effect on positive attitudes to organ donation in university students who would become nurses and artists in the future in a country with a high youth population. This study shows that the peer learning approach can be used to improve the attitude towards organ donation in nursing education. Although the intervention was found to be ineffective in attitudes of the fine arts students, it might still have created a favorable effect on their awareness of organ donation. The effect of the peer learning needs to be investigated on students from other fields of study. Also, the peer learning approach that performed in this study will present one solution for solve the global organ shortage problem.

Limitations

The current study has some limitations. The study did not include a control group because there is intervention contaminated risk in between intervention and control group during intervention phase. Therefore, the study had a one group with pretest-posttest design. The peer learning utilized in the study was structured by the researchers. The model must be examined and structured carefully by other researchers wanting to use it in order to ensure its fidelity. The educational system varies with each field of study at university. Therefore, the activities to be included into the peer learning should be structured specifically for each field of study.

CONCLUSION

The peer learning was found to be effective in changing attitudes to organ donation and obtaining a donor card in the nursing students, but ineffective in the fine arts students. It can be recommended that individual activities should be incorporated into the peer learning directed towards fine arts students. As

candidates of future artists, fine arts students having sensitivity about organ donation will play a leading roles in social campaigns directed towards increasing organ donations. Thanks to the agreement signed by the university and the city health directorate in the framework of the present project, a strong cooperation was achieved between these institutions. With the activities conducted in this study, the students had an opportunity to think about, discuss and create solutions to a social problem. It is recommended that private and social issues such as organ donation be taught to students in the higher education curriculum with the peer learning method.

*The study was presented in "2019 International Transplant Nurses Society Syposium, 15th-18th November 2019, FL, Orlando, USA" as oral presentation.

Acknowledgements: We would like to express our sincere thanks to The Izmir City Health Directorate and Dokuz Eylul University Rectorate, who support us during the project process, to the students of the Nursing Faculty and Faculty Arts, who participated in the research, Prof. Dr. Necati Gökmen, Dr. Rahmi Baykan, Dr. Lecturer Cemal Hüseyin Güvercin, Commissioner Erman Karaaslan and Karşıyaka District Mufti İsa Gürler.

Author contributions: Conception: YSO, BAS. Desing: YSO, BAS, ÖB, ŞSİ, ED. Data collection: YSO, EAK, BÇ, KY. Analysis: YSO, ZDK, EAK. Interpretation: YSO, ZDK, EAK, BÇ, KY. Manucript Preparation: YSO, BAS, ÖB, ŞSİ.

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

Ethical Approval: The study protocol was approved by the Dokuz Eylul University Non-Invasive Clinical Research Ethical Committee (Approval number: 2017/24-15, Date: 12.10.2017).

Funding: The project funded by Dokuz Eylul University Department of Scientific Research Projects (Project Number: 2018.KB.SAG.027).

Peer-review: Externally peer-reviewed.

REFERENCES

1. Global Observatory on Donation and Transplantation. (2021). WHO collaborating centre on donation and transplantation. <http://www.transplant-observatory.org/who-ont/>
2. The Declaration of Istanbul on Organ Trafficking and Transplant Tourism (2018 Edition). Transplantation. 2019;103(2):218-219.
3. Riccetto E, Boin ISFF. The effectiveness of current informative material in improving awareness and opinion of undergraduate students towards organ donation: a comparative, randomized survey study. Clinics (Sao Paulo). 2019;74:e743.
4. Turkish Statistical Institute. Address Based Population Registration System Results. 2020. <https://data.tuik.gov.tr/Bulten/Index?p=Adrese-Dayali-Nufus-Kayit-Sistemi-Sonuclari-2020-37210&dil=1>
5. Allahverdi TD, Allahverdi E, Akkuş Y. The Knowledge of Nursing Students About Organ Donation and the Effect of the Relevant Training on Their Knowledge. Transplant Proc. 2020;52(10):2877-2882.
6. Kılıçarslan M, Eriş H. The opinions of university students about organ and tissue donation". Electronic Journal of Social Sciences 2019;18(79):838-51.
7. Kurz JM. Impact of organ donation education on US undergraduate nursing students. Prog Transplant. 2014;24(2):211-217.
8. Murakami M, Fukuma S, Ikezoe M, et al. Effects of structured education program on organ donor designation of nursing students and their families: A randomized controlled trial. Clin Transplant. 2016;30(11):1513-1519. doi:10.1111/ctr.12845
9. Potenza R, Guermani A, Peluso M, et al. Effectiveness of an education program on donation and transplant aimed at students of the nursing degree course. Transplant Proc. 2015;47(7):2097-2101.
10. Tsubaki M, Tougo S, Kobayashi M, Arakawa S, Yoshida K. Narrative review on attitudes toward organ donation of undergraduate nurse students. Jpn J Nurs Sci. 2020;17(1):e12291. doi:10.1111/jjns.12291
11. Tsubaki M, Irie S, Konishi K. Present condition and opinion poll on donor cards and organ transplantation for students. Journal of Japanese Association for Emergency Nursing 2017;19(2):31-39.
12. Kavurmacı M, Karabulut N, Koç A. The knowledge and views of university students about organ donation. Journal of Education and Research in Nursing 2014;11(2):15-21.
13. Lei L, Deng J, Zhang H, Dong H, Luo Y, Luo Y. Level of Organ Donation-Related Knowledge and Attitude and Willingness Toward Organ Donation Among a Group of University Students in Western China. Transplant Proc. 2018;50(10):2924-2931.
14. Yalçın Balçık P, Yorgancıoğlu Tarcan G, Sapaz B. Attitudes' of university students towards organ donation and transplantation. SDU The Journal of Health Science 2019;10(3):314-319.
15. Contiero PP, Wilson DM. Understanding ambivalence toward organ donation and

- transplantation: An exploratory study of nursing students. *Nurse Educ Today*. 2019;76:191–195.
16. Güler N, Yılmaz P, Türk KE. Nursing students' attitudes towards organ donation and influencing factors. *Journal of Education and Research in Nursing* 2020;17:38-44.
 17. Reynolds-Tylus T, Potter HA. An examination of nursing students' knowledge about organ donation. *Journal of Nursing Education* 2020;59(7):388-391.
 18. Krucińska B, Pendraszewska M, Wyzgał J, Czyżewski Ł. Assessment of Knowledge and Attitudes Toward Transplantation Among Nursing Students. *Transplant Proc*. 2020;52(7):1991-1993.
 19. Scales A, Bentley H. Organ donation: nursing roles and responsibilities. *Br J Nurs*. 2020;29(1):60-61.
doi:10.12968/bjon.2020.29.1.60
 20. Akpınar Söylemez B, Ordin YS. Attitudes of the Third-Year Nursing Students Toward Organ Donation: Cross-Sectional Study. *Transplant Proc*. 2017;49(8):1698-1701.
 21. Thornton JD, Patrick B, Sullivan C, et al. Comparing web-based video interventions to enhance university student willingness to donate organs: A randomized controlled trial. *Clin Transplant*. 2019;33(4):e13506.
 22. Ordin YS, Söylemez BA. Effects of Peer Education on Attitudes Toward Organ Donation in Nursing Students. *Transplant Proc*. 2018;50(10):2971-2975.
 23. Erikson EH. *Identity and the Life Cycle*. 1980. New York: Norton.
 24. Turner G, Shepherd J. A method in search of a theory: peer education and health promotion. *Health Educ Res*. 1999;14(2):235–247.
 25. Boud D, Cohen R, Sampson J. Peer learning and assessment. *Assessment & Evaluation in Higher Education* 1999;24(4):413-426.
 26. Kent B, Owens RG. Conflicting attitudes to corneal and organ donation: a study of nurses' attitudes to organ donation. *Int J Nurs Stud*. 1995;32(5):484–492.
 27. Yazici Sayin Y. Turkish validity and reliability of Organ Donation Attitude Scale. *J Clin Nurs*. 2016;25(5-6):642–655.
 28. Rykhoff ME, Coupland C, Dionne J, et al. A clinical group's attempt to raise awareness of organ and tissue donation. *Prog Transplant*. 2010;20(1):33-39.
 29. Steenaart E, Crutzen R, Candel MJJM, de Vries NK. The effectiveness of an interactive organ donation education intervention for Dutch lower-educated students: a cluster randomized controlled trial. *Trials*. 2019;20(1):643.