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INVESTIGATION into THE EFFICACY of TRAINING about ORGAN DONATION for PARTICIPANTS in DAILY ACTIVITIES in SOCIAL LIFE CENTERS in ÇANAKKALE

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INVESTIGATION into THE EFFICACY of TRAINING ABOUT ORGAN DONATION FOR PARTICIPANTS in DAILY ACTIVITIES in SOCIAL LIFE CENTERS in ÇANAKKALE

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Abstract:
The aim of this study is investigate the efficacy of training given to increase the knowledge levels about organ donation and transplantation in the target group, to correct mistaken or deficient information and to increase awareness of this topic.
This research aiming to identify the efficacy of organ donation and transplantation training is an interventional-type epidemiological study. This study was completed in November-December of 2016 and April of 2017 in the Barbaros, Troia and Esenler Social Life Centers belonging to Canakkale Municipality. Individuals in daily activities in the social life centers who volunteered to participate were included in the study. Participants were given training on organ donation and transplantation.
Participants (n=52) were assessed pre-test, post-test and repeat test in the present study. The whole study group were women. The rate giving the answer no to the question "Can someone who is brain dead return to life?" was 55.8% on the pre-test, while it was 84.6% on the post-test and repeat test and this difference was statistically significant(p=0.0001). Of participants, 38.5% stated they would consider organ donation on the pre-test, 59.6% said they would on the post-test and 55.8% said they would on the repeat test and this difference was statistically significant(p=0.004).
The result of our study is that though knowledge and attitude levels before training were improved after training, repeated test completed 3 months later showed regressions in knowledge and attitude levels. Repeated training and information meetings are required to increase the sensitivity of the individual about this topic.
Key Words: Organ donation, brain dead, effiency of training, Çanakkale

ÇANAKKALE'DE SOSYAL YAŞAM EVLERİNDE GÜNLÜK AKTİVİTELERE KATILANLARA YÖNELİK ORGAN BAĞIŞI KONUSUNDA YAPILAN EĞİTİMİN ETKİNLİĞİNİN İNCELENMESİ

Bu çalışmanın amacı hedef grupta organ bağışı ve nakli konusunda bilgi düzeyinin artırılması, yanlış ya da eksik bilgilerin giderilmesi ve bu konuda farkındalığı artırmak için yapılan eğitimin etkinliğinin incelenmesidir. Bu araştırma organ bağışı ve nakli eğitiminin etkinliğini saptamayı amaçlayan müdahale tipinde epidemiyolojik bir çalışmadır. Bu çalışma 2016 yılında Kasım-Aralık aylarında ve 2017 yılı Nisan ayında Çanakkale Belediyesi'ne ait Barbaros, Troia ve Esenler Sosyal Yaşam Merkezleri'nde yürütüldü. Sosyal yaşam evlerinde günlük aktivitelere katılan bireylerden çalışmaya katılmaya gönüllü olanlar çalışmaya dâhil edildi. Katılımcılara organ bağışı ve nakli konusunda eğitim verildi. Bu çalışmada katılımcılar (n=55) ön test, son test ve tekrar test uygulanarak değerlendirildi. Çalışma grubunun tamamı kadındı. 'Beyin ölümü gerçekleşen biri tekrar hayata dönebilir mi?' sorusuna ön testte katılımcıların %55,8'i, son testte ve tekrar testte %84,6'sı hayır cevabı verdi. Bu fark istatistiksel olarak anlamlıydı (p=0.0001). Katılımcıların ön testte %38,5'i, son testte %59,6'sı ve tekrar testte %55,8'i organ bağışında bulunmayı düşündüğünü belirtti ve bu fark istatistiksel olarak anlamlıydı (p=0.004). Çalışmamızın sonuçları, eğitim öncesi bilgi ve tutum durumlarının eğitim sonrasında iyileştirilebilmesine rağmen 3 ay sonra yapılan tekrar testte bilgi ve tutum durumlarında gerileme olduğunu göstermektedir. Bireylerin tekrarlayıcı eğitimler ve bilgilendirme toplantıları ile bu konudaki duyarlılıklarının artırılması gerekmektedir.

Anahtar Kelimeler: Organ bağışı, beyin ölümü, eğitim etkinliği, Çanakkale

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Introduction

According to organ transplant data from Turkey, 7387 transplants were performed from 1975 to 2001. When the numbers of transplants per year are calculated, it is equivalent to an average of 295 transplants per year (1). Since the foundation of organ transplant coordination systems in 2002, a clear increase has been observed (2). Additionally, in spite of the increase in transplant numbers, only 23.9% are taken from cadavers in 2017 (3). Family consent can only be obtained for nearly 30% of patients with diagnosis of brain death (4). When the situation in European countries is examined in terms of transplant sources, we see that cadavers are used for 75% in England, 75% in Wales, 80% in Scotland and 55% in Northern Ireland (5-8). In America 80% of transplantations are provided by cadaver donors (9). When these rates are compared with rates in Turkey, our country remains behind in terms of transplants from cadaver donors.

According to data from the Organ, Tissue Transplantation and Dialysis Services Department, there are 21534 patients waiting for kidney transplants, 796 waiting for heart, 2166 for liver, 46 for lung, 2 for small intestine, 3 for heart valve and 279 for pancreas transplantation (10). When the large current numbers are considered along with the fact that 59558 dialysis patients may be potential kidney transplant candidates, the topic remains urgent and the necessity to complete studies on this topic is understood more clearly (11).

There are many studies in the literature about measuring knowledge levels relating to organ transplantation and donation aiming to better understand the obstacles. Desire not to disrupt the integrity of the body, conscientious discomfort, worries about organ mafia, consideration that donations may be abused and inappropriateness in terms of religion are among reasons given for not wanting to donate organs (12). A study in America emphasized the lack of awareness in society, religious beliefs, lack of trust in medical personnel, early decisions about death and racism as obstacles to organ donation (13).

By increasing knowledge levels of individuals about organ donation and transplantation with training, the willingness to donate organs has been shown to increase. A study by Tarhan et al. found that 61.2% of participants consented to organ donation before training, while 81.1% consented after information was given (14). Additionally, discussion of organ donation within families has been shown to increase the willingness of individuals related to this topic (15,16). Another study identified that the majority who wanted to donate their organs after they die discussed the topic with their families and more than half who wished to donate their organs stated that their families would abide by their wishes (17).

The aim of this study is investigate the efficacy of training given to increase the knowledge levels about organ donation and transplantation in the target group, to correct mistaken or deficient information and to increase awareness of this topic.

Material and Method

This interventional-type study was completed in November-December of 2016 and April of 2017 in the Barbaros, Troia and Esenler Social Life Centers (SLC) belonging to Canakkale Municipality. Individuals above the age of 18 years participating in daily activities in the SLC who volunteered to participate were included in the study. The sample size was not calculated, all participants who were on the training day were targeted. SLC were established by Canakkale Municipality to organize social activities for children and women.

Educational and social activities are available in these centers. These centers are suitable for this type of training. For this reason, they were selected as research regions. The survey was carried out only to those who accepted to participate in the survey. There were 68 participants before training, 55 after training and 71 after 3 months. The study included 52 participants in three tests.

The research team comprised teaching staff from Canakkale Onsekiz Mart University, Faculty of Medicine, Department of Public Health and personnel from Canakale Provincial Organ Transplantation Coordinatorship. This study was performed by the approval of Canakkale Onsekiz Mart University Clinical Research Ethics Commitee (Protocol number: 2016-16. Protocol date: 21.09.2016). The approval were received from all participants. The research team met before the study and discussed the stages to be completed during the study. Before training a survey form was created in accordance with the literature and pre-training was given to the research team. After pre-training, pre-trials of the survey were completed under observation for 7 random individuals. After completing pre-trials of the survey and training, the survey questions were reviewed again, deficient or erroneous questions were corrected and the final form of the survey was created. On three separate days in October and November the study was completed in three social life centers belonging to Canakkale Municipality. Firstly the aim of the study was explained to participants by the research team. Those who accepted participation had the pre-test survey applied under observation. Participants with difficulty seeing or reading had the pre-test applied during a face-to-face interview. After completing the pre-test survey, teaching staff from Canakkale Onsekiz Mart University, Faculty of Medicine Department of Public Health and personnel from Canakkale Provincial Organ Transplantation Coordinatorship provided nearly one hour of training on 'organ donation, transplantation, diagnosis of brain death, legal obligations and centers for organ donation'. After training, questions from participants were answered. The post test-survey was applied to the same participants under observation or during face-to-face interview for participants with difficulty seeing or reading.

Three months later in April 2017 on three separate days in three social life centers belonging to Canakkale Municipality, the aims and targets of the study three months before were repeated and the study completed again. The repeat test survey was applied to the same participants under observation or during face-to-face interviews for participants with difficulty seeing or reading.

Pre-test Survey: Comprised 17 questions aiming to obtain sociodemographic data and 20 questions about knowledge and willingness related to organ donation and transplantation.

Post-test Survey: Comprised the same 20 questions about knowledge and willingness related to organ donation and transplantation as on the pre-test survey.

Repeat Test Survey: Identical to the post-test survey comprising 20 questions about knowledge and willingness related to organ donation and transplantation.

The knowlenge and attitude questions on pre-test, post-test and repeat test were showed on the Table 1.

Statistical analysis:

The data obtained in the study were analyzed with the SPSS 20.0 statistical packet program. For presentation of descriptive data, number, percentage, mean, standard deviation, median, minimum and maximum values were used. For analysis of categorical data, the chi-square test, McNemar test and Cochran Q test were applied. Data were tested for compliance with normal distribution and the Wilcoxon test and Friedman test used for analysis of variables with non-normal data according to the Kolmogorov-Smirnov test. The Mann

Whitney U test and Significance of Difference between Two Means Test were used for comparison of independent groups of variables. To calculate knowledge and attitude points, each correct answer was given 1 point. Some questions contained more than one correct answer. For assessment of knowledge, 0-17 points were given, while for attitude assessment 0-9 points were given (Table1). Statistical significance was accepted as $p<0.05$. In the analyzes which were use Bonferroni corrected, statistical significant was accepted as $p<0,017$.

Table 1: Questions used to calculate knowledge and attitude points

KNOWLEDGE POINTS QUESTIONS	ATTITUDE POINTS QUESTIONS
Can someone who is brain dead return to life?	Have you considered organ donation before?
Which organs may be donated or transplanted?	Do you think you will donate your organs?
Where do you apply for organ donation?	If someone in your family requires it, will you donate your organs?
Is organ donation appropriate in terms of religion?	Would you accept an organ transplant from someone else if you required it?
In which situations may organ transplants occur?	Would you accept organ transplantation if someone in your family needed it?
Who can give organ transplants?	Would you donate their organs if someone in your family died?
	If someone in your family previously wished to donate their organs, would you abide by their wishes?
	If your family donated your organs after you died, what would your reaction be?
	Do you wish to fill in an organ donation card?

Results

On the study, a total of 52 people were included in the study with 24 from Barbaros Social Life Center (SLC) (46.1%), 12 from Troia SLC (23.1%) and 16 from Esenler SLC (30.8%). The whole study group were women. 73.1% of participants had primary school educational level and 58.9% were housewives. While 76.5% of the study group described their income situation as moderate, 96.2% had at least one child. In this group 67.3% had at least one chronic disease diagnosed by a doctor and 64.7% had individuals with at least one chronic disease in their family or surroundings (Table 2).

Table 2: Socio-demographic characteristics of the participants

Variables	n (%)
Education levels	
Primary school	38 (73.1)
University	12 (23.1)
High school	1 (1.9)
Illiterate	1 (1.9)
Occupation	
Housewife	30 (58.9)
Teacher	9 (17.6)
Pensioner	9 (17.6)
Others	3 (5.9)
Income	
Good	9 (17.6)
Moderate	39 (76.5)
Not good	3 (5.9)
Has you a least child?	
Yes	50 (96.2)
No	2 (3.8)
Has you a least chronic disease?	
Yes	35 (67.3)
No	17 (32.7)
Has anyone in your family a least chronic disease?	
Yes	33 (64.7)
No	18 (35.3)

n: frequency, %: column percentage

In the study group, 56.5% had received information about organ donation and transplantation previously. Of those with high school educational level 44.1% and of those with education level of high school and above 91.7% had received information about organ donation and transplantation and there was a significant difference between the two groups (p=0.012). For participants, the source of information was doctors and other health personnel for 38.0% and newspapers and television for 46.0%. Previous training about organ donation and transplantation had been received by 8.5% of participants. 4.1% of participants had made organ donations and 14.9% knew people in their family who had donated organs. While 4.3% of participants had someone in their family on the organ waiting list, 72.9% stated they had not discussed organ donation and transplantation with their families previously. In this group, 59.2% knew that organ transplantation was performed in Canakkale Onsekiz Mart University Faculty of Medicine.

There were no statistically significant differences between the independent variables of educational level and presence of chronic disease in the family in terms of thoughts on organ donation in the pre-test, post-test and repeat test (p>0.05). There were no statistically significant difference between the groups according to the presence of chronic disease in the pre-test and post-test. On the repeat test, 68.6% of those with chronic diseases and 29.4% of those without chronic diseases were considering organ donation and this difference were statistically significant (p=0.018). On the pre-test 69.2% who had talked with their family about organ donation and transplantation and 28.6% who had not talked with family

considered making organ donations and this difference was statistically significant (p=0.026).

The rate giving the answer no to the question "Can someone who is brain dead return to life?" was 55.8% on the pre-test, while it was 84.6% on the post-test and repeat test and this difference was statistically significant (p=0.0001). According to the Bonferroni-corrected McNemar test, while there was a statistically significant difference between the pre-test and post-test and between the pre-test and repeat test (p=0.001, p=0.001), there was no statistically significant difference identified between the post-test and repeat test. When asked about which organs may be donated, the four most common answers were kidney, eye, heart and liver on all tests. When asked about locations to apply for organ donation, hospitals and organ donation centers were stated most commonly on all tests.

Of participants, 38.5% stated they would consider organ donation on the pre-test, 59.6% said they would on the post-test and 55.8% said they would on the repeat test and this difference was statistically significant (p=0.004). According to the Bonferroni-corrected McNemar test, while there was a statistically significant difference between the pre-test and post-test (p=0.003), there was no statistically significant difference identified between the pre-test and repeat test and the post-test and repeat test. Among reasons for donating organs, on all three tests the main reason given was to help others.

On the pre-test, 42.3% of participants answered yes to the question of "Would you donate their organs if someone in your family died?" with 78.8% answering yes to the question "If someone in your family previously wished to donate their organs, would you abide by their wishes?". On the post-test the rate who answered yes to "Would you donate their organs if someone in your family died?" was 61.5%, with 84.6% answering yes to the question "If someone in your family previously wished to donate their organs, would you abide by their wishes?". On the repeat test, 51.9% of participants answered yes to the question of "Would you donate their organs if someone in your family died?" with 76.9% answering yes to the question "If someone in your family previously wished to donate their organs, would you abide by their wishes?".

On the pre-test, 30.8% of participants reported they wished to fill in a donor card, with 40.4% asking after the post-test and 40.4% asking after the repeat test. However, there was no statistically significant difference identified between the three tests (p>0.05).

The mean knowledge points before training were 8.6±3.5, with points reaching 14.1±2.8 after training and 12.0±2.9 three months later. There was a statistically significant difference between the knowledge points before training, after training and 3 months later (p=0.0001) (Figure 1). The knowledge points after training were higher compared to before training and according to the Bonferroni-corrected Wilcoxon test, this difference was significant (p=0.0001). The knowledge points 3 months later were higher compared to before training and lower than the points after training; according to the Bonferroni-corrected Wilcoxon test these differences were statistically significant (p=0.0001, p=0.0001).

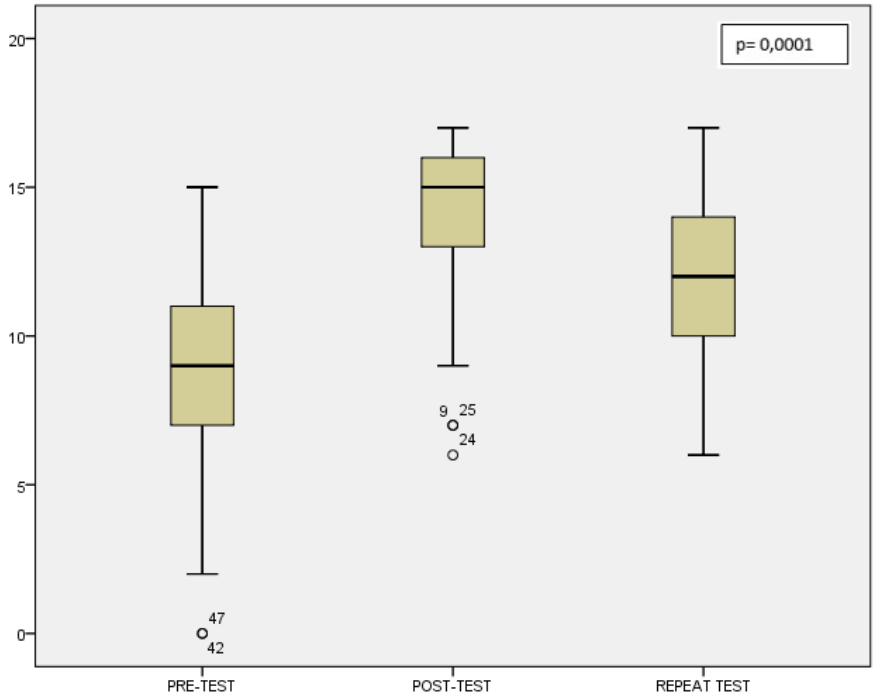

Figure 1: The knowlenge points of participants on pre-test, post-test and repeat test

The attitude points mean was 5.0±2.8 before training, 6.2±2.5 after training and 5.9±2.7 after 3 months. There was a statistically significant difference identified between attitude points before training, after training and 3 months later (p=0.0001) (Figure 2). The attitude points after training were higher than the attitude points before training and according to the Bonferroni-corrected Wilcoxon test the difference was significant (p=0.0001). The attitude points 3 months later were higher than the attitude points before training and according to the Bonferroni-corrected Wilcoxon test this difference was statistically significant (p=0.001). According to the Bonferroni-corrected Wilcoxon test there was no statistically significant difference identified between the attitude points after training and the attitude points 3 months later.

The mean knowledge points of participants in the pre-test who considered organ donation were higher than those who did not consider it or who had no opinion, though there was no statistically significant difference. On the post-test, the mean knowledge points of those who considered organ donation were higher than those who did not consider it or who had no opinion, with no statistically significant difference between the groups. On the repeat test, the mean knowledge points of those who considered organ donation were found to be at statistically significantly higher levels compared to those who did not consider it or had no opinion (13.0±2.8 vs. 10.8±2.5, p=0.003).

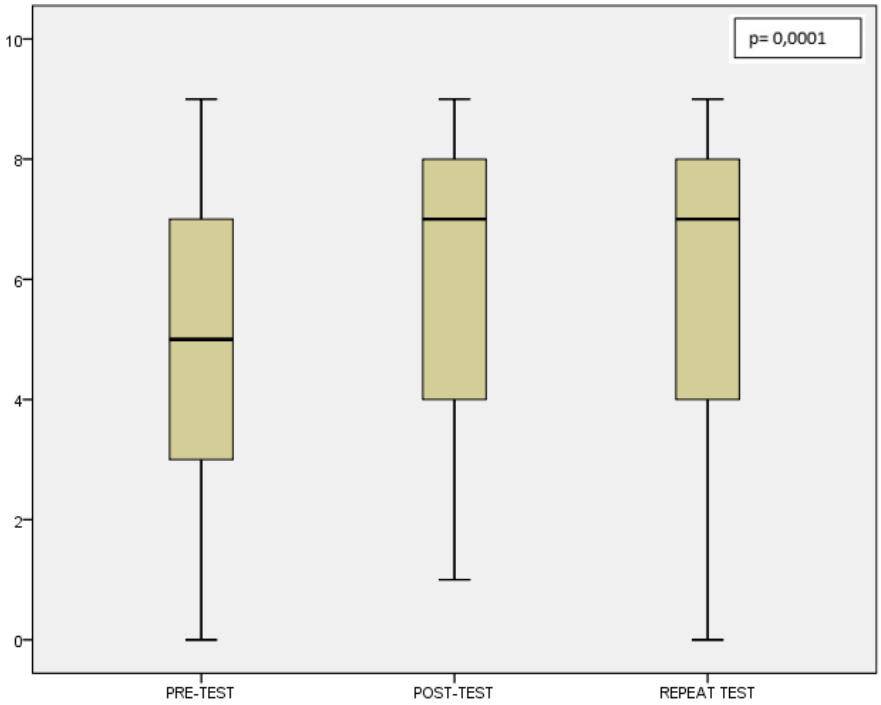

Figure 2: The attitude points of participants on pre-test, post-test and repeat test

Discussion

Though organ transplantation can save the lives or improve the quality of life of many people, the numbers requiring organ transplantation cannot be met by the current organ donations. For this reason, there is a need to analyze the obstacles to organ donation accurately and in detail and to develop solutions.

In our study, there was no statistically significant difference identified on the pre-test, post-test and repeat test between the independent variables of educational level and presence of chronic disease in family members with the consideration of making an organ donation. Similar studies have identified that those with lower educational level are more hesitant when it comes to signing donor cards (18). Such a difference may not have been identified as our study group was a small sample. However, we did identify a significant difference between educational level and previous knowledge about organ donation and transplantation. Though we did not identify a significant correlation between educational level and making organ donation, as the educational level increased the knowledge level about organ donation increased. Thus in accordance with the literature, we believe that it may positively contribute to ensuring societal awareness and increasing the number of organ donations. Just on the repeat test, those with chronic disease were more willing to organ donation. The presence of chronic illness may have increased the willingness to organ donation because of the thought that they may also need one day.

In our study, the mean knowledge points of participants considering organ donation on all three tests were higher. There was a statistically significant difference between those who stated they were considering on the repeat test and those who were not considering, with no different identified on the pre-test and post-test. A study by Yazar et al. found that though the knowledge levels about organ donation were high, they did not identify a statistically significant difference, similar to our study results (19). A study by Agrawal et al. found that the desire for organ

donation was higher among those with knowledge of organ donation compared to those without knowledge and this difference was statistically significant (20). Though we did not find a significant difference between the increased knowledge level and desire for organ donation, we did identify that desire increased. As a result, by increasing knowledge about organ donation and transplantation in society, an increase in the number of organ donations may be provided.

In terms of sources of information about organ donation and transplantation, 38.0% of participants stated doctors and other health personnel while 46.0% cited newspapers and television. In the Turkish Health Literacy Scale Validity and Reliability study, 69.5% of participants stated the most reliable source related to health was health workers, while 6.3% stated radio and television and 4.2% stated newspapers and television. Again 47.5% of participants stated they used doctors and other health workers all the time; 30.1% stated they used television sometimes while 19.0% used television all the time; and 30.3% used newspapers sometimes and 12.8% always used newspapers as sources for health-related topics (21). A study in Saudi Arabia stated that 57.0% of participants received information about organ donation from television, 50% from social media and 17.9% from health personnel (22). Considering that television and communication tools are commonly used currently, even though there are public service announcements encouraging organ donation on mass communication tools and social media, increasing the number and variety of these, showing specific short films about donatable organs and increasing social awareness can be used with the aim of reaching a broad audience. When information sources are examined, it appears that doctors and health personnel have less importance than they should. Yazar et al. in their study stated that 53.1% of participants wished to receive information about organ donation from organ donation units (19). We believe that frequent reminders about this topic, especially in first stage health service organizations where health education and health literacy are expected to be common, will be important during in-service training.

On all three tests, the rate of those considering organ donation was higher than the rate of those who wished to sign a donor card. A study by Balajee et al. found 70% of participants were willing to donate organs after death, while 62.8% stated they were willing to sign a donor card (23). According to our study and the literature, though people are willing to make organ donations, it may be said they are less willing to sign a donor card. Though the training emphasized that the donor card has no official adequacy and only has the quality of a spiritual legacy, people refrain from officially declaring they want to make an organ donation.

The rate of those in the study who stated that they would donate the organs of a dead family member who had previously requested to make an organ donation was identified to be higher than the rate who said they would donate the organs of a family member who died. The results of our study and the literature indicate that if a person communicates to their family that they wish to make an organ donation before they die, family consent is obtained more often for people who are brain dead. If a member of the family carries a donor card, the desire for organ donation of individuals increases (24). Individuals who talk about this topic with their families before are more willing to make organ donation (15,17). As a result, individuals should be frequently reminded of the necessity to discuss organ donation with their families and share their thoughts about this topic. Additionally, the sending information messages to the families of individuals who are organ donors by the Ministry of Health appears to be a beneficial application in this way and should continue.

In our study the total knowledge and attitude points after training were identified to be higher than the points before training. However, the knowledge points 3 months later were found to be significantly lower, while the attitude points were lower by an insignificant level. Training may improve the knowledge levels and attitude to organ donation and transplantation; however the most important requirement is that this situation should continue and that societal awareness should be created. This is the most important target and finding of our study. A single training session may not be sufficient to create a stable situation. As a result, repeated training is required to keep the awareness and positive attitudes of individuals about this topic alive. Thus individuals with sufficient attitudes to organ donation and transplantation may transform this decisiveness into action and make organ donations.

The limitation of our study is that the whole study group were women. Though the participants in this study were in control and able to analyze the variation in their personal knowledge and attitude levels, studies should be completed including both genders in order to assess the sex factor. When the literature is examined, though it is considered that gender does not affect willingness related to organ donation due to studies showing no difference in terms of sex for willingness to make organ donations (20,23,24), considering men have more say within the family structure in our country it becomes very important to determine the attitudes of males to organ donation and donation of organs by family members.

In the last fifteen years, there have been significant advances in organ donation and transplantation. However, it is not sufficient to fulfill the current needs. There is a need to expend more effort to increase the numbers of donations and transplantations.

The most important result of our study is that though knowledge and attitude levels before training were improved after training, tests completed 3 months later showed regressions in knowledge and attitude levels. Currently though health education is accepted as the most important service to increase the health literacy of the individual, our study shows that an unsustainable single training session is not sufficient to ensure long-term awareness and willingness and develop the attitude of the individual. Repeated training and information meetings are required to increase the sensitivity of the individual about this topic. We think that organizing training at 3-6 month intervals, not just during organ donation week, will contribute to long-term awareness. Additionally, a significant key to increasing willingness to make organ donations is that people talk to their families about this topic. Trainings should remind individuals considering organ donation to definitely share these thought processes with their families. It should be emphasized in training and information sessions that the family decision is the only decision that is legally sufficient and people should be reminded to talk about this topic with their families. Those who wish to make organ donations should be encouraged to share their wishes with their family members.

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