

THE EFFECT OF VIDEO-SUPPORTED TEACHING METHODS ON ATTITUDES TOWARDS POST-DEATH ORGAN DONATION

EL EFECTO DE LOS MÉTODOS DE ENSEÑANZA CON APOYO DE VÍDEO EN LAS ACTITUDES HACIA LA DONACIÓN DE ÓRGANOS POST MORTEM

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RESUMEN

Introducción: Las donaciones realizadas tras la muerte cerebral siguen siendo la fuente más importante de órganos para trasplantes. **Objetivo:** El objetivo de este estudio es evaluar el efecto de los métodos de enseñanza con apoyo de vídeo en las actitudes de los estudiantes de último curso de enfermería hacia la donación de órganos post mortem. **Materiales y Métodos:** Este estudio es una investigación cuasi-experimental controlada con prueba previa y prueba posterior. El estudio se llevó a cabo con 60 estudiantes de enfermería voluntarios durante el año académico 2024-2025. Los datos se recopilaron utilizando el Formulario de Información del Estudiante y la Escala de Actitudes hacia la Donación de Órganos Post Mortem (PODAS) y se analizaron mediante pruebas t y ANOVA unidireccional. **Resultados:** El estudio reveló una diferencia significativa en las puntuaciones de la PODAS de los estudiantes que expresaron su disposición a donar órganos después de la muerte antes y después de la formación ($t = 3,698/p < 0,001$). La prueba t para muestras emparejadas realizada para determinar el efecto de la formación en las actitudes de los estudiantes

hacia la donación de órganos reveló una diferencia estadísticamente significativa entre las puntuaciones PODAS previas a la formación ($\bar{X} = 3,97 \pm 0,37$) y posteriores a la formación ($\bar{X} = 4,11 \pm 0,36$). Puntuaciones PODAS antes y después de la formación ($\bar{X} = 3,97 \pm 0,37$) y después de la formación ($\bar{X} = 4,11 \pm 0,36$). **Conclusión:** El estudio determinó que el método de enseñanza asistido por vídeo utilizado en el estudio condujo a avances positivos, especialmente en lo que se refiere a la reducción de las actitudes negativas y al aumento de la aprobación familiar y de las actitudes generales hacia la donación de órganos.

Palabras Clave: Cadáver; Muerte; Enfermería; Trasplante de órganos; Método de enseñanza asistido por vídeo.

ABSTRACT

Introduction: Donations made after brain death continue to be the most important source of organs for transplantation. **Aim:** This study aims to evaluate the effect of video-supported teaching methods on the attitudes of final-year nursing students towards post-mortem organ donation. **Materials**

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and Methods: This study is a pre-test, post-test controlled quasi-experimental research. The study was conducted with 60 volunteer nursing students during the 2024-2025 academic year. Data were collected using the Student Information Form and the Post-Mortem Organ Donation Attitude Scale (PODAS) and analyzed using t-tests and one-way ANOVA. **Results:** The study revealed a significant difference in the PODAS scores of students who expressed a willingness to donate organs after death before and after the training ($t = 3.698$, $p < 0.001$). The paired samples t-test conducted to determine the effect of the training on students' attitudes towards organ donation revealed a statistically significant difference between pre-training ($\bar{X} = 3.97 \pm 0.37$) and post-training ($\bar{X} = 4.11 \pm 0.36$) PODAS scores before and after the education ($\bar{X} = 3.97 \pm 0.37$) and after the education ($\bar{X} = 4.11 \pm 0.36$). **Conclusion:** The study found that the video-supported teaching method employed led to positive outcomes, particularly in reducing negative attitudes and increasing family approval and overall attitudes towards organ donation.

Keywords: Cadaver; Death; Nursing; Organ transplantation; Video-assisted teaching method

INTRODUCTION

Diseases are as old as human history. They have threatened human life since ancient times and continue to do so today. Thanks to advances in healthcare, the fight against disease has taken on a new dimension, and organ/tissue transplants have made it possible to treat diseases.^(1,2)

Transplantation is an interdisciplinary treatment method that encompasses all procedures involved in transferring living cells or tissues from a living or cadaver (dead) donor to a recipient and ensuring that they function properly in the recipient.^(3,4) The survival rate and quality of life of transplant patients are steadily improving, and most are beginning to lead normal or near-normal lives.⁽¹⁾

Globally, 57,494 organ transplants were performed in 2022, averaging 18 per hour, representing a 9.1% increase compared to 2021.⁽⁵⁾ This represents a 52% increase

compared to 2010, but it is known that this rate is less than 10% of the global need⁽⁶⁾. In Turkey, a total of 5,265 organ transplants were performed in 2023, including 3,452 kidneys, 1,756 livers, 40 hearts, 15 lungs, 1 pancreas, and 1 small intestine.⁽⁷⁾

Transplantation is performed in two ways: from cadaveric and living donors. According to 2023 data, Spain ranks first with 49.38% for cadaveric donors, while Turkey ranks 33rd with 3.58%. Turkey ranks first with 53.8% for living donors.⁽⁸⁾

Despite the increase in the number of organ transplants worldwide, many people are still waiting in line.^(1,9) It is known that organ donation is more common in Western countries than in other countries.⁽¹⁰⁾ It is stated that even in countries that are advanced in organ transplantation and donation, transplantation studies are not at the desired level. Therefore, the primary issue in transplantation is the shortage of sufficient organ donors.⁽¹¹⁾ There are various issues that affect organ donation. These include factors such as individuals' education and socioeconomic levels, ethical, legal, and religious reasons, unwillingness to compromise bodily integrity after death, health problems, and fear of donating.^(10,11) Nurses, who spend the most time with patients among healthcare professionals, are considered an important factor in increasing the number of donated organs due to their awareness and positive attitudes towards organ donation.⁽¹²⁾ At the same time, studies indicate that nursing students, who will be the healthcare professionals of the future, also have misconceptions and lack knowledge about organ donation and transplantation.⁽¹³⁾ Donations made after brain death continue to be the most important source of organs for transplantation. However, the country ranks quite low in the world in terms of cadaveric organ donation. Therefore, it is essential to prioritize the inclusion of organ donation in the education curriculum to assess knowledge and attitudes, address knowledge gaps, promote positive attitudes, and increase awareness of the topic.

Various educational and teaching methods are employed in nursing education, in parallel with the advancement of technology. One of these methods is video-assisted teaching. The

video-assisted teaching method is known to contribute to mental stimulation and enhanced understanding by engaging multiple senses. ^(14,15) The integration of digital tools into nursing education is important today.

OBJECTIVES

This study aims to evaluate the effect of the video-assisted teaching method given to final-year nursing students on their attitudes towards post-mortem organ donation.

MATERIALS AND METHODS

Study Design and Participants

This study is a pre-test, post-test controlled quasi-experimental research. The study population was drawn from the School of Health Sciences of a university located in the Western Region of Türkiye during the 2024–2025 academic year. The entire population (N = 63) was included within the scope of the research, and no sample selection was made. The purpose of the study was explained to the student nurses before data collection began. It was stated that the information provided by the participating students would be kept confidential and private. It was explained that the data obtained would only be used for the purposes of the study. Participation was voluntary, and permission was obtained prior to the participant's involvement. Three students did not attend class during the data collection phase of the study, so a total of 60 students participated in the study.

Instrument

Data were collected using a Student Information Form and the Post-Mortem Organ Donation Attitude Scale (PODAS) developed by the researchers.

Nurse Introduction Form: This form was created based on the literature ^(1,11,16) and includes questions about the students' gender, school of graduation, previous education on organ transplantation, willingness to donate organs after death, official application for organ donation, belief in having sufficient knowledge about organ donation, and opinion on the reasons for the low rate of cadaveric organ donation.

Attitude Scale Toward Organ Donation

After Death (PODAS): In this study, the PODAS was used to assess nursing students' attitudes toward organ donation after death. The scale, developed by Andrei ⁽¹⁷⁾, was adapted into Turkish by Gökkaya and Karaman ⁽²⁾. The scale is a five-point Likert scale. The scale is scored from '1-Strongly Disagree' to '5-Strongly Agree.' The average score range that can be obtained from the scale ranges from 1 to 5. As the scores obtained from the scale increase, it indicates that the student's attitude towards organ donation has increased. The scale consists of 17 items and four sub-dimensions. The total scale and each sub-dimension score are calculated by taking the average of the total item scores within each sub-dimension. In the original version of the scale, the Cronbach alpha value for the scale as a whole is 0.863. ⁽²⁾ In this study, the Cronbach alpha value was found to be 0.79 in the pre-education application and 0.82 in the post-education application.

In this study, the scale scores were interpreted by dividing the total score range (4 points) into five equal categories as follows: 1.00–1.79: Very low attitude, 1.80–2.59: Low level of attitude, 2.60–3.39: Moderate level of attitude, 3.40–4.19: High level of positive attitude, 4.20–5.00: Very high level of positive attitude (Tavşancıl, 2010).

Data Collection

The data collection process was carried out in two stages: pre-training and post-training. Prior to training, participants were administered the PODAS, followed by a total of 14 weeks of video-supported teaching, with two hours per week, utilizing both traditional and more visual, auditory, and interactive methods to enhance student attention, clarify topics, and ensure lasting learning. The videos used in the study were reviewed by three faculty members specializing in surgical diseases. Nursing students were taught the history of organ and tissue transplantation, basic concepts and definitions, the ethical and legal dimensions of organ and tissue transplantation, death criteria, organ transplantation from cadavers and living donors, the surgical process for patients undergoing organ and tissue transplantation, the psychological state of patients and their families after organ and tissue transplantation, coping strategies, and nursing approaches. To increase

the emotional awareness of student nurses, videos (with copyright permission) about the life stories of patients who underwent kidney, liver, heart, lung, limb, and face transplants, as well as donors and organ recipients, were shown during the last 30 minutes of each training session (average video length 15 minutes + brainstorming 15 minutes). A brainstorming session was conducted after each video training session.

Data Analysis

The data from the study were analyzed using SPSS 25.0 software. Numerical data were summarized using mean, standard deviation, minimum, and maximum values, while categorical data were summarized using frequency and percentage values. Differences between pre- and post-training scale scores were analyzed using the paired samples t-test. Independent groups t-tests and one-way ANOVAs were used for group comparisons based on sociodemographic variables. Statistical significance was set at $p < 0.05$.

Ethical Aspects of the Study

Ethical committee approval (dated 2024 and numbered 195) was obtained from the university, and institutional permission was obtained from the Health College Directorate of the university where the study was conducted. Students were informed about the study in accordance with the Helsinki Declaration, and informed consent was obtained from students who agreed to participate.

RESULTS

In the study, 65% of the students participating were female, and 20% were graduates of health vocational high schools. 41.7% of participants had previously received education on organ transplantation, while 58.3% had not. None of the students had made an official application for organ donation, with 58.3% stating that they wished to donate their organs after death, while 41.7% stated that they did not wish to donate their organs. While 28.3% of the students who participated in the study believed they had sufficient knowledge about organ donation, 71.7% stated that they lacked sufficient knowledge on the subject. Among the reasons

for the low rate of organ donation from cadavers, 53.3% cited religious reasons, 33.3% cited cultural reasons, and 13.3% cited ethical reasons.

There was a significant difference in the PODAS scores of students who expressed a desire to donate organs after death before and after the training ($t = 3.698$, $p < 0.001$). In addition, students who believed they had sufficient knowledge about organ donation had significantly higher PODAS scores both before ($t = 3.698$, $p = 0.041$) and after ($t = 9.209$, $p < 0.001$) education than those who reported a lack of knowledge. No significant differences were found between other sociodemographic variables and PODAS scores ($p > 0.05$) (**Table 1**).

In the study, the pre-training total mean score of students on the ÖSYOBTÖ was found to be 3.97 ± 0.37 , while the post-training mean score was 4.11 ± 0.36 , indicating a high level of positive attitude towards organ donation. The subscale scores for the positive attitude subscale were 4.15 ± 0.51 before the training and 4.25 ± 0.51 after the training; the subscale scores for the negative attitude subscale were 3.52 ± 0.41 before the training and 3.81 ± 0.43 after the training; the subscale scores for the religious dimension subscale were 4.15 ± 0.94 before the training and 4.25 ± 0.66 after the training; and the family approval subscale scores were 3.36 ± 0.65 before training and 3.97 ± 0.71 after training (**Table 2**).

In order to determine the effect of the education provided to students on their attitudes towards organ donation, a paired samples t-test was conducted, and a statistically significant difference was found between the pre-education ($\bar{X} = 3.97 \pm 0.37$) and post-education ($\bar{X} = 4.11 \pm 0.36$) ÖSYOBTÖ scores before and after the education ($\bar{X} = 4.11 \pm 0.36$) showed a statistically significant difference ($t = -3.814$, $p < 0.001$). This result indicates that the education had a positive effect on attitudes. No statistically significant difference was found between the pre- and post-training positive attitude ($t = -1.364$, $p = 0.178$) and religious dimension ($t = -0.818$, $p = 0.417$) subscale scores. However, a significant difference was found in the negative attitude ($t = -3.835$, $p < 0.001$) and family approval ($t = -4.813$, $p < 0.001$) subdimensions after the training (**Table 3**).

Table 1. Comparison of Students' ÖSYOBTÖ Scores and Sociodemographic Characteristics (n=60)

Introductory Features	n (%)	Pre-training PODAS Ort.±SS	Post-training PODAS Ort.±SS
Gender			
Female	39 (65.0)	3.91±0.39	4.15±0.36
Male	21 (35.0)	3.91±0.34	4.05±0.37
t/p		t=0.036/ p=0.972	t=0.953/p=0.345
School Graduated From			
Regular/Anatolian/ Science High School	48 (80.00)	3.87±0.35	4.07±0.37
Health Vocational High School	12 (20.0)	4.07±0.41	4.27±0.32
t/p		t=-1.636/ p=0.107	t=-1.735/p=0.088
Previous Training Related to Organ Transplantation			
Yes	25 (41.7)	3.86±0.34	4.14±0.37
No	35 (58.3)	3.94±0.39	4.09±0.36
t/p		t=-0.859/ p=0.394	t=0.542/p=0.590
The Situation of Not Wanting to Donate Organs After Death			
Yes	35 (58.3)	3.97±0.36	4.25±0.33
No	25 (41.7)	3.81±0.37	3.9±0.32
t/ p		t=1.667/ p=0.101	t=3.698/p=0.000
Application Status for Organ Donation			
Yes	0 (0.0)	-	-
No	60 (100.0)	3.91±0.37	4.11±0.36
Belief that one has sufficient knowledge about organ donation			
Yes	17 (28.3)	4.06±0.41	4.56±0.1.2
No	43 (71.7)	3.85±0.34	3.94±0.26
t/ p		t=2.093/ p=0.041	t=9.209/p=0.00
Thoughts on the Reasons for the Low Rate of Organ Donation from Cadavers			
Religious reasons	32 (53.3)	3.91±0.37	4.09±0.33
Cultural reasons	20 (33.3)	3.90±0.37	4.09±0.42
Ethical reasons	8 (13.3)	3.90±0.42	4.27±0.34
F/ p		F=0.009/ p=0.115	F=1.074/p=0.292

PODAS: Post-Mortem Organ Donation Attitude Scale; Mean: Average SS: Standard deviation; t: Independent Groups t-test, F: One-way ANOVA Test, p<0.05

Table 2. Distribution of Students' PODAS Scores

	PODAS	Points that can be obtained from the scale	Ort.±SS	Min.-Maks.
Pre-training PODAS	Positive Attitude	1-5	4.15±0.51	3.44-5.00
	Negative Attitude	1-5	3.52±0.41	2.75-4.50
	Religious Dimension	1-5	4.15±0.94	1.50-5.00
	Family Approval	1-5	3.36±0.65	2.00-5.00
	Total Score	1-5	3.97±0.37	3.29-4.71
Post-training	Positive Attitude	1-5	4.25±0.51	3.00-5.00
	Negative Attitude	1-5	3.81±0.43	3.00-4.75
	Religious Dimension	1-5	4.25±0.66	3.00-5.00
	Family Approval	1-5	3.97±0.71	2.00-5.00
	Total Score	1-5	4.11±0.36	3.24-4.82

PODAS: Attitude Scale Towards Organ Donation After Death Mean: Average SS: Standard deviation; Min: Minimum, Maks: Maksimum

Table 3. Comparison of PODAS Total and Subscale Scores Before and After Training

	PODAS	Test value (t)	p value
Pre-training and post-training PODAS	Positive Attitude	-1.364	0.178
	Negative Attitude	-3.835	0.000
	Religious Dimension	-0.818	0.417
	Family Approval	-4.813	0.000
	Total Score	-3.814	0.000

t: t-test for related samples (Paired Samples t-Test)

DISCUSSION

Today, nurses play an important role in organ donation. It is well known that nurses play a crucial role in managing the organ donation process in developed countries, such as the United States and the United Kingdom. Nurses are the professionals who establish the closest contact with patients and their families, developing a relationship of trust. For these reasons, nurses' attitudes, knowledge, and motivation regarding organ donation are of great importance. ^(16,18) The study was conducted to determine the effect of organ

transplantation education provided to final-year nursing students using blended learning models on their attitudes toward post-mortem organ donation. The findings obtained from the research were discussed in light of the literature.

In the research, students who wanted to donate their organs after death showed a significant difference in their PODAS scores after the training. In addition, students who thought they had sufficient knowledge about organ donation had significantly higher PODAS scores both before and after the

training compared to those who indicated a lack of knowledge. Similar studies have also found that as knowledge levels increase, attitudes towards organ donation also increase.^(19,20) Nurses' lack of sufficient knowledge about organ donation, their doubts about the donation process, or their negative attitudes towards donation may lead to the development of negative attitudes towards organ donation.⁽²¹⁾ Therefore, the knowledge gaps of nursing students in their final year of education must be addressed so that they can successfully fulfill their professional roles.

The study found that PODAS scores reflected a high level of positive attitude both before and after education. It was determined that students' attitudes towards organ donation were generally positive, and that these attitudes increased after education. Skowronski et al.⁽²¹⁾ found in their systematic review that there is a strong positive correlation between the attitudes and behaviors of national medical and nursing professionals and national organ donation rates. Nurses remain with patients until their death and support their families.⁽²⁰⁾ In our country, the decision to donate organs is made by the family after brain death. Nurses' positive attitudes have a significant influence on potential donors' decisions. In the country where the study was conducted, both religious affairs and health ministry laws support organ donation from cadavers. In addition, the video-assisted teaching method is known to foster positive attitudes and behaviors, while also providing information and skills to increase donation rates and encourage families to adopt a positive attitude. We believe that this contributes to student nurses adopting positive attitudes towards organ donation.

When the effect of the education provided to students on their attitudes towards organ donation was examined in the study, the findings showed that the education led to positive developments, particularly in reducing negative attitudes and increasing family consent and general attitudes towards organ donation. Skowronski et al.⁽²¹⁾ determined in their systematic review that a significant portion of people do not trust the brain death criteria established by modern medicine from an ethical and legal perspective, and that this

situation causes them to exhibit negative attitudes towards organ donation from cadavers. It is known that this lack of trust negatively affects organ donation. In the United States, it has been found that over 95% of individuals support organ donation, but only 54% have registered as donors⁽¹¹⁾ Šink et al.⁽¹⁷⁾ found that lack of information and awareness about the donation process (47.6%), disrespect for the body (41.3%), concerns about the surgical process (35.0%), use for commercial purposes, lack of family consent (18.9%), concerns about discontinuing medical treatment (17.8%), religious (4.6%) and cultural (3.2%) reasons negatively affect organ donation. Yang et al.⁽²³⁾ concluded in their research that video-supported teaching methods significantly increase self-management and self-efficacy compared to traditional methods. In our research, we believe that paying close attention to ethical and legal principles in real-life stories using video-supported teaching methods is effective in transforming negative attitudes into positive ones.

CONCLUSION

In the study, students who expressed a desire to donate organs after death were found to have high PODAS scores after the training. It was also determined that students' attitudes towards organ donation were generally positive and that these attitudes improved after the training. The video-supported teaching method used in the study was found to be particularly effective in reducing negative attitudes and improving overall attitudes towards organ donation with family consent.

It is recommended that various teaching methods be employed to comprehensively transform knowledge, attitudes, and behaviors regarding the legal, ethical, religious, and cultural aspects of organ donation among final-year nursing students, who are future healthcare professionals and potential advocates for donation.

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