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Knowledge, attitudes, and experiences of intensive care nurses regarding brain death and organ donation: a cross-sectional study

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ABSTRACT

Aims: This study aimed to evaluate the knowledge and awareness of intensive care nurses regarding brain death and organ donation, and to determine the association of institutional training and clinical experience with their attitudes toward postmortem organ donation.

Methods: This descriptive, cross-sectional study was conducted among 446 intensive care nurses working in a tertiary care hospital. Data were collected using a structured questionnaire consisting of four sections, including sociodemographic characteristics, knowledge and experiences related to brain death and organ donation, and the Organ Donation Attitude Scale Toward Postmortem Organ Donation. Statistical analyses were performed using appropriate parametric tests, with a significance level set at $p<0.05$.

Results: The mean total attitude score was 4.07±0.63. While 21.1% of participants were registered organ donors, 63.9% expressed willingness to donate in the future. Participation in general educational activities was not associated with significant differences in attitude scores ($p>0.05$). However, nurses who attended institutional "brain death and donor care" training demonstrated significantly higher scores in the negative attitude subdimension ($p=0.020$), indicating more favorable attitudes after reverse scoring. Additionally, nurses with experience in following up patients diagnosed with brain death had significantly higher positive attitude and total scale scores ($p=0.003$ and $p=0.010$, respectively). No significant differences were observed based on donor care experience.

Conclusion: Intensive care nurses demonstrated generally positive attitudes toward organ donation; however, a discrepancy between willingness and actual donor registration persists. Targeted institutional training and clinical exposure to brain death cases are associated with more positive attitudes. Expanding structured training programs and integrating nurses more actively into the organ donation process may improve donation rates.

Keywords: Organ donation, brain death, intensive care units, nurses, attitude, tissue and organ procurement

INTRODUCTION

Organ failure is a dangerous condition that shortens life expectancy, lowers quality of life, raises the risk of complications, and requires a lot of money to treat. Transplantation is still the best way to treat people with end-stage organ failure.[1] Organ transplants can be done with grafts from living or dead donors. Compared to other European nations, living donation rates are comparatively high in Turkiye. However, raising the percentage of deceased donation is still a major national goal.[2]

In Turkiye, organ donation from a dead person is done when they have been diagnosed with brain death. If the patient didn't say they wanted to donate organs while they were alive, approval for donation is asked for from first-degree relatives after brain death has been confirmed. But rates of permission are still low due of a number of societal, religious, and emotional issues.[3] To deal with this problem, the Ministry of Health has started public awareness campaigns to help people comprehend organ donation after death and to raise awareness in general. Additionally, during family interviews, the chances of getting consent may be higher if the patient's medical condition is clearly explained as being irreversible, if it is emphasized that functionally preserved organs may save the lives of other patients, if families with spiritual concerns are offered to talk to religious authorities, and if relatives' other concerns are addressed in an informative, supportive, and reassuring way.[4]

The primary doctor in charge of the patient's care and the organ transplantation coordinator both tell family members about the consent process. However, family members may

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also ask intensive care nurses for information. These nurses are often the healthcare professionals that are most often at the bedside. Family members are emotionally concerned and uncertain during this time, which makes them more likely to be affected by what critical care nurses think and feel. Consequently, it is imperative that critical care nurses engaged in the care of prospective donors possess precise and current knowledge pertaining to brain death and the organ donation process.[5]

The objective of this study was to assess the existing knowledge and awareness of intensive care nurses concerning brain death and organ donation, as well as to ascertain the potential association between institutional training interventions and awareness in this domain.

METHODS

Ethics

This study has been approved by the Ankara Etlik City Hospital Scientific Researches Ethics Committee (Approval Date: 06.08.2025, Decision No: AEŞH-BADEK1-2025-315). The study complied with the principles of the Declaration of Helsinki.

Study Design and Location

This study was structured as a descriptive, cross-sectional survey to assess critical care nurses' knowledge of brain death and organ transplantation, alongside their views on postmortem organ donation. The study was executed throughout a duration of one month, from September 2025 to October 2025.

The research was conducted at the intensive care units of a tertiary care hospital, encompassing general/reanimation, internal medicine, chest illnesses, neurosurgery, neurology, general surgery, cardiovascular surgery, coronary care, and pediatric intensive care units.

Participants and Study Population

The study population included all nurses currently employed in the hospital's intensive care units during the study period. There was no sampling procedure; instead, all nurses who were eligible and worked in the appropriate units were asked to take part. The final study includes fully completed questionnaires from 446 intensive care nurses.

G*Power version 3.1.9.7 was used to determine the minimum required sample size for a planned comparison of means between two independent groups. The minimum necessary sample size was calculated to be 176 participants, with at least 88 in each group, given an effect size of 0.5, a significance threshold of 0.05, a statistical power of 0.95, and a group allocation ratio of 1:1. Although the minimum required sample size was calculated as 176 for the primary two-group comparisons, we did not employ a restrictive sampling method. Instead, all eligible nurses were invited to participate to maximize the representativeness of the study population. The inclusion of a much larger sample (n=446) was intentional to provide robust statistical power for the multiple subgroup comparisons conducted throughout the study, effectively reducing the risk of type II errors.

Nurses actively employed in intensive care units during the study period and who consented to participate willingly were included in the study. People who didn't want to take part or sent in incomplete questionnaires were not included.

Gathering Data

Researchers used a standardized questionnaire based on the relevant literature to collect data through face-to-face interviews. There were four parts to the questionnaire.

The first section had 11 questions about sociodemographic factors, such as age, sex, marital status, having children, having a chronic disease, taking medication regularly, smoking and drinking alcohol, level of education, length of time spent in intensive care, and type of intensive care unit.

The second part had seven questions about organ donation and people's feelings about it. These questions were about whether the person is currently an organ donor, whether they would be willing to donate in the future, why they would or wouldn't be willing to donate, whether they have a relative who is waiting for a transplant, how they feel about donating the organs of a relative who has been diagnosed with brain death, and whether they are more likely to donate their own organs.

Eight questions about brain death and organ transplantation were in the third segment. These questions tested important medical knowledge, such as the fact that brain death is permanent, the difference between brain death and coma, the lack of brainstem reflexes, and what doctors see in patients who they think are brain dead. This portion also had questions about how participants had followed up with patients who had been diagnosed with brain death and how they had cared for donors.

The fourth part was the Organ Donation Attitude Scale Toward Postmortem Organ Donation. This scale was first created by Andrei Holman[6] and then modified into Turkish by Gökkaya et al.[7]

It has four parts: positive attitude, negative attitude, religious dimension, and family approbation. A 5-point Likert scale (1-5) was used to rate all of the items. Before analysis, reverse-coded objects were recoded correctly. Higher scores in the positive attitude and family approval subdimensions indicated a more favorable attitude toward organ donation, whereas values in the negative attitude and religious dimension subdimensions were interpreted after reverse coding. The internal consistency coefficient (Cronbach's alpha) for the overall scale in this study was 0.928.

Comparisons of Groups and Variables

The dependent variables comprised the overall score and subdimension scores of the Organ Donation Attitude Scale Toward Postmortem Organ Donation.

The independent variables included education on organ donation and brain death, participation in the hospital's organ transplantation unit's "brain death and donor care" training,

experience in following up with patients diagnosed with brain death, and experience in donor care.

Comparisons were made between groups of nurses who had or had not received training on organ transplantation and brain death, attended the hospital organ transplantation unit training, followed patients diagnosed with brain death, and had or had not had experience in donor care.

Statistical Analysis

IBM SPSS Statistics Standard Concurrent User version 30 (IBM Corp., Armonk, NY, USA) was used to do statistical analyses. Descriptive data were represented as number (n), percentage (%), mean±standard deviation, median, minimum, and maximum values.

The normality of numerical variables was evaluated using the Shapiro-Wilk test, supported by visual inspection of histograms and Q-Q plots. Levene's test was used to check if variances were equal. The independent-samples T test was used to compare the scale scores of two groups. For all analyses, a p-value of less than 0.05 was deemed as statistically significant.

RESULTS

The study comprised 446 nurses who worked in intensive care. The average age was 26.9 years (with a range of 22 to 51), and 79.1% (n=353) were women. In the sample, 76.0% (n=339) were single, 22.4% (n=100) were married, and 1.6% (n=7) were divorced. The percentage of people who had kids was 9.6% (n=43). There were 12.3% (n=55) people with chronic diseases, and 11.2% (n=50) people took medicine on a regular basis. The percentages of people who smoked and drank alcohol were 40.8% (n=182) and 20.9% (n=93), respectively. In terms of education, 91.3% (n=407) had a bachelor's degree. The average amount of time spent in intensive care was 3 years, with a range of 1 to 14 years. The general/reanimation intensive care unit had the greatest percentage (41.5%) (**Table 1**).

Table 1. Demographic and clinical characteristics of participants

Variables	Values
Age (years)	26.9±2.7 (22-51)
Gender, n (%)	
Female	353 (79.1)
Male	93 (20.9)
Marital status, n (%)	
Single	339 (76.0)
Married	100 (22.4)
Divorced	7 (1.6)
Having children, n (%)	
Yes	43 (9.6)
No	403 (90.4)
Chronic disease, n (%)	
Yes	55 (12.3)
No	391 (87.7)
Regular medication use, n (%)	
Yes	50 (11.2)
No	396 (88.8)
Smoking, n (%)	
Yes	182 (40.8)
No	264 (59.2)
Alcohol use, n (%)	
Yes	93 (20.9)
No	353 (79.1)
Education level, n (%)	
Vocational high school	9 (2.0)
Associate degree	11 (2.5)
Bachelor's degree	407 (91.3)
Master's degree	16 (3.6)
Doctorate	3 (0.7)
ICU experience	3 (1-14)
Which intensive care unit do you work in? n (%)	
General/reanimation intensive care unit	185 (41.5)
Medical intensive care unit	43 (9.6)
Respiratory intensive care unit	28 (6.3)
Neurosurgical intensive care unit	14 (3.1)
Neurological intensive care unit	56 (12.6)
Surgical intensive care unit	38 (8.5)
Cardiovascular intensive care unit	25 (5.6)
Coronary care unit	30 (6.7)
Pediatric intensive care unit	27 (6.1)

Data are presented as mean±standard deviation or median (min-max). ICU: Intensive care unit

Of the nurses, 21.1% (n=94) said they were organ donors, and 63.9% (n=285) said they were thinking about becoming organ donors in the future. "Saving a person's life" (43.5%) was the most common reason given for being willing to donate. 74.1% of people who didn't donate organs said they didn't have a specific reason. Fifty-two-point five percent (n=234) of those who answered said they would agree to donate the organs of a relative who had been diagnosed with brain death. Eighty-point seven percent (n=360) said they would be willing to become live donors. 53.8% of people had been to a course, presentation, or conference on organ transplantation and brain death. 45.7% had been to the hospital's organ transplantation unit's training on "brain death and donor care." Furthermore, 63.5% (n=283) had managed a patient diagnosed with brain death, and 24.7% (n=110) possessed experience in donor care. The most commonly seen initial indicator of brain death was the lack of the pupillary reflex (46,0%) (**Table 2**).

The Organ Donation Attitude Scale Toward Postmortem Organ Donation had a Cronbach's alpha coefficient of 0.928. The average overall scale score was 4.07±0.63, with a range of 1.3 to 5.0. The average scores for the subdimensions were 4.23±0.76 for positive attitude, 3.92±0.87 for negative attitude, 3.93±0.98 for the religious dimension, and 3.75±0.87 for family approval (**Table 3**). Due to the presence of reverse-coded items in the negative attitude and religious dimension subscales, elevated scores in these areas must be interpreted following reverse scoring and do not directly signify a more negative attitude.

Table 2. Distribution of participants' responses regarding organ donation	
Variables	**n (%)**
Are you an organ donor?	
Yes	94 (21.1)
No	352 (78.9)
Would you consider donating your organs in the future?	
Yes	285 (63.9)
No	161 (36.1)
If you have donated your organs, what is your reason?	N=94
It is consistent with my worldview and religious beliefs	16 (17.0)
To save a person's life	42 (44.7)
The idea that my organs could continue to live in another body after my death	13 (13.8)
The possibility that I or one of my relatives may need an organ transplant in the future	22 (23.4)
Other	1 (1.1)
If you have not donated your organs, what is your reason?	N=352
Religious beliefs	19 (5.4)
Concern about disruption of bodily integrity	40 (11.4)
I do not believe in brain death	7 (2.0)
No specific reason	261 (74.1)
Other	25 (7.1)
Do you have a relative waiting for organ transplantation?	
Yes	12 (2.7)
No	434 (97.3)
Would you donate the organs of a relative diagnosed with brain death?	
Yes	234 (52.5)
No	212 (47.5)
If your answer is No, what is the reason?	N=212
Religious beliefs	26 (12.3)
Concern about disruption of bodily integrity	33 (15.6)
I do not believe in brain death	7 (3.3)
Difficulty explaining this decision to other relatives	45 (21.2)
No specific reason	92 (43.4)
Other	9 (4.2)
Would you donate your organs to a relative in need of transplantation?	
Yes	360 (80.7)
No	86 (19.3)
Have you attended any course, seminar, or conference related to organ transplantation or brain death?	
Yes	240 (53.8)
No	206 (46.2)
Have you attended the "brain death and donor care" training provided by the hospital's organ transplantation unit?	
Yes	204 (45.7)
No	242 (54.3)
Have you ever followed up a patient diagnosed with brain death?	
Yes	283 (63.5)
No	163 (36.5)
Have you ever had a patient who became an organ donor and did you provide donor care?	
Yes	110 (24.7)
No	336 (75.3)
Brain death is an irreversible condition.	
True	419 (93.9)
False	27 (6.1)
Brain death is not a coma.	
True	305 (68.4)
False	141 (31.6)
In a patient with suspected brain death, no reflexes can be elicited.	
True	328 (73.5)
False	118 (26.5)
In a patient you followed, what was the first sign that made you suspect brain death?	
Absence of pupillary reflex	205 (46.0)
Absence of gag reflex during suctioning	63 (14.1)
Absence of withdrawal response to painful stimuli	44 (9.9)
Absence of spontaneous breathing effort	122 (27.4)
Excessive urine output	12 (2.7)

n: Number of participants, %: Percentage, N: Total number of responses to the relevant question

Table 3. Descriptive statistics of the Organ Donation Attitude Scale toward postmortem organ donation

Subdimensions	Cronbach's a	Mean±SD	Min-max
Positive attitude	0.964	4.23±0.76	1-5
Negative attitude	0.895	3.92±0.87	1-5
Religious dimension*	0.918	3.93±0.98	1-5
Family approval*	0.954	3.75±0.87	1-5
Total	0.928	4.07±0.63	1.3-5

*: Reverse-coded items were applied, SD: Standard deviation, Min: Minimum, Max: Maximum

There were no statistically significant variations in the subdimension scores or the total scale score based on attendance at general educational events about organ transplantation and brain death (p>0.05) (Table 4).

Table 4. Comparison of scale scores according to participation in courses, seminars, or conferences on organ transplantation and brain death

	Participation status		Test statistics	
	Yes	No	t-value	p-value
Positive attitude	4.21±0.74	4.25±0.79	0.576	0.565
Negative attitude	3.94±0.83	3.90±0.92	0.445	0.657
Religious dimension	3.96±0.99	3.91±0.98	0.568	0.570
Family approval	3.68±0.91	3.84±0.80	1.902	0.058
Total	4.05±0.62	4.08±0.64	0.429	0.668

Data are presented as mean±standard deviation. t: Independent samples T test

Nurses who participated in the "brain death and donor care" training offered by the hospital's organ transplantation unit exhibited a markedly higher score in the negative attitude subdimension compared to those who did not participate

(4.03±0.82 vs. 3.83±0.91, p=0.020) (Table 5). Due to the reverse-coded structure of this subdimension, this finding should not be construed as indicative of a more negative attitude; instead, it signifies a more favorable attitude towards organ donation following reverse scoring.

Table 5. Comparison of scale scores according to participation in the "brain death and donor care" training provided by the hospital's organ transplantation unit

	Participation status		Test statistics	
	Yes	No	Yes	p-value
Positive attitude	4.26±0.71	4.20±0.80	0.884	0.377
Negative attitude	4.03±0.82	3.83±0.91	2.331	0.020
Religious dimension	4.03±0.98	3.85±0.98	1.894	0.059
Family approval	3.74±0.89	3.76±0.85	0.239	0.811
Total	4.12±0.60	4.02±0.65	1.639	0.102

Data are presented as mean±standard deviation. t: Independent samples T test

Among nurses who had followed up with patients diagnosed with brain death, the positive attitude subdimension score (4.31±0.67 vs. 4.09±0.89, p=0.003) and the total scale score (4.13±0.57 vs. 3.96±0.71, p=0.010) were considerably elevated compared to those who had not (Table 6).

Table 6. Comparison of scale scores according to experience in following patients diagnosed with brain death

	Participation status		Test statistics	
	Yes	No	t-value	p-value
Positive attitude	4.31±0.67	4.09±0.89	3.035	0.003
Negative attitude	3.96±0.85	3.86±0.91	1.096	0.274
Religious dimension	3.99±0.94	3.84±1.04	1.528	0.127
Family approval	3.78±0.89	3.71±0.83	0.884	0.377
Total	4.13±0.57	3.96±0.71	2.583	0.010

Data are presented as mean±standard deviation. t: Independent samples T test

No statistically significant variations were identified in the subdimension ratings or the total scale score based on donor care experience (p>0.05) (Table 7).

Table 7. Comparison of scale scores according to donor care experience

	Participation status		Test statistics	
	Yes	No	t-value	p-value
Positive attitude	4.30±0.71	4.21±0.78	1.184	0.237
Negative attitude	3.91±1.02	3.93±0.82	0.154	0.878
Religious dimension	4.06±0.92	3.89±1.00	1.545	0.123
Family approval	3.82±1.02	3.73±0.81	0.862	0.390
Total	4.13±0.63	4.05±0.62	1.147	0.252

Data are presented as mean±standard deviation. t: Independent samples T test

DISCUSSION

This study provides comprehensive insights into intensive care nurses' knowledge levels, attitudes, and experiences regarding brain death and organ donation across multiple intensive care unit (ICU) units in a tertiary care hospital in Turkiye. With 446 participants, the findings reveal a generally favorable disposition toward postmortem organ donation (mean Organ Donation Attitude Scale score: 4.07±0.63/5.0), though registration rates remain modest at 21.1%.

The subdimension scores paint a nuanced picture: positive attitude (4.23±0.76), negative attitude (3.92±0.87, reverse-coded), religious dimension (3.93±0.98, reverse-coded), and family approval (3.75±0.87). These high scores across dimensions suggest broad acceptance, reinforced by behavioral indicators; 63.9% considering future donation ("saving a life" as primary motivator, 43.5%), 52.5% willing to donate relatives' organs post-brain death, and 80.7% open to live donation.

Attendance at general organ donation/brain death education (53.8%) was not significantly associated with any scale scores (p>0.05), are associated with fewer suggesting that such programs may lack sufficient depth or practical relevance. Conversely, hospital-specific "brain death and donor care" training (45.7% participation) was significantly associated with higher scores in the negative attitude subdimension (4.03±0.82 vs. 3.83±0.91, p=0.020). Since this subscale is reverse-coded, higher scores post-training actually reflect more positive attitudes, indicating the effectiveness of targeted, hospital-based training. Consistent with previous studies, educational content and context crucially shape ICU nurses' knowledge and attitudes. Furthermore, structured and clinically relevant training is associated with more favorable attitudes.[8]

Nurses with brain death patient follow-up experience (63.5%) demonstrated superior positive attitude scores (4.31±0.67 vs. 4.09±0.89, p=0.003) and total scale scores (4.13±0.57 vs. 3.96±0.71, p=0.010). Surprisingly, donor care experience (24.7%) showed no significant attitude difference (p>0.05). Observation and follow-up may suffice for attitude formation, while the emotional burdens of direct donor care might limit potential benefits. Previous literature supports this interpretation, indicating that the emotional stress of the organ donation process in critical care settings influences professionals' perceptions.[5]

The findings of our study reveal a notable "intention-behavior" gap among intensive care nurses, where a generally high willingness to donate organs (63.9%) does not translate into actual donor registration (21.1%). This discrepancy closely aligns with recent findings by Tzenalis et al.,[10] who reported that while 85.19% of closed-ward nurses held positive attitudes toward donation, actual commitment was hindered by fear, prejudices, and a lack of trust in transplant organizations. Furthermore, our study highlights persistent diagnostic knowledge gaps, as only 46% of participants correctly identified the absence of the pupillary reflex as the primary indicator of brain death. This uncertainty is strongly corroborated by both Tzenalis et al., who found that 50% of nurses harbored doubts about the definition of brain death and believed hope persists until the last moment, and the systematic review by Roth and Åkerman,[9] which emphasized that nurses often struggle to emotionally accept a brain death diagnosis when a patient's warm physiology visually contradicts clinical death. Together, these studies underscore that despite high baseline willingness, systemic knowledge

deficits regarding brain death criteria act as significant barriers to organ donation.

Our positive findings exceed several Turkish benchmarks; a 2024 multi-center study reported lower mean attitude scores (61.92±4.49/75) with 91.9% artificial organ knowledge gaps; earlier works showed 32-47% donation willingness. Explanations include our large sample, high education levels (91.3% bachelor's), and tertiary hospital setting versus community hospitals in prior studies. Young age (mean 26.9 years) and single status (76%) may also foster progressive views, contrasting older cohorts elsewhere.[11,12]

Implications and Future Directions

Hospital administrators should mandate the proven "brain death-donor care" training and integrate nurses into family consent processes, leveraging their bedside credibility. Public health campaigns should target the registration-willingness gap.

Multi-center longitudinal studies tracking attitude-behavior translation, randomized training trials, and qualitative family refusal analyses are essential. Investigate why donor care experience doesn't boost attitudes-possible compassion fatigue? Compare urban vs. rural nurses and track generational shifts as this young cohort ages.

Given Turkiye's high living donation but low deceased donation rates, positioning educated ICU nurses as consent advocates could bridge European gaps. Religious leader-nurse collaborations during family interviews warrant formal evaluation.[13]

Limitations

The cross-sectional design precludes causality (e.g., did experience improve attitudes, or did pro-donation nurses seek experience?). Single-center focus limits generalizability despite multi-ICU coverage. Self-reported data risks social desirability bias, especially on sensitive donation topics. Recall bias affects experiential reporting despite the recent timeframe. Furthermore, the reliance on univariate statistical analyses is a limitation of this study. This approach does not account for potential confounding variables-such as age, intensive care experience, or education level-that might simultaneously influence attitudes toward organ donation. Future research should incorporate multivariate models to better isolate the independent associations of these factors. Finally, the reverse-coding of negative/religious subscales requires careful interpretation for readers unfamiliar with the scale.

CONCLUSION

Intensive care nurses demonstrated generally favorable attitudes toward organ donation; however, a notable discrepancy between willingness to donate and actual donor registration persists. General educational activities alone appear not to be significantly associated with attitudes, whereas targeted institutional training and direct clinical exposure to brain death cases are associated with more positive attitudes. These findings suggest that structured, practice-oriented training programs and increased involvement of nurses in the organ donation process may contribute to improving organ donation rates. Further multi-center and longitudinal studies are needed to evaluate the translation of positive attitudes into actual donation behaviors.

ETHICAL DECLARATIONS

Ethics Committee Approval

This study was approved by the Ankara Etlik City Hospital Scientific Researches Ethics Committee (Date: 06.08.2025, Decision No: AEŞH-BADEK1-2025-315).

Informed Consent-Non-Retrospective Studies

Written informed consent was obtained from all individual participants prior to their inclusion in the study. Participants were fully informed about the study's aims, procedures, potential risks and benefits, and their rights-including the right to withdraw at any time without consequence. All participants voluntarily signed a written informed consent form.

Peer Review Process

This manuscript was subject to external peer review.

Conflict of Interest

The authors declare no conflicts of interest related to this study.

Financial Disclosure

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Author Contributions

Concept: HZA, DŞ, TT, EG, RB; Design: HZA, DŞ, TT, EG, RB; Control: HZA, DŞ, TT, EG, RB; Resources: HZA, DŞ, TT, EG, RB; Materials: HZA, DŞ, TT, EG, RB; Data Collection and/or Processing: HZA, DŞ, TT, EG, RB; Analysis and/or Interpretation: HZA, DŞ, TT, EG, RB; Literature Review: HZA, DŞ, TT, EG, RB; Writing the Article: HZA, DŞ, TT, EG, RB; Critical Review: HZA, DŞ, TT, EG, RB.

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REFERENCES

1. Tripathy S, Das SK. Strategies for organ preservation: current prospective and challenges. *Cell Biol Int*. 2023;47(3):520-538. doi:10.1002/cbin.11984
2. Akbulut S, Yilmaz S. Liver transplantation in Turkey: historical review and future perspectives. *Transplant Rev*. 2015;29(3):161-167. doi:10.1016/j.trre.2014.12.002
3. Soylu D, Soylu A, Yüzbaşıoğlu MF. Determination of the factors affecting organ donation: voluntary organ donors. *Transplant Immunol*. 2022;72:101568. doi:10.1016/j.trim.2022.101568
4. Can F, Hovardaoglu S. Organ donation: a comparison of donating and nondonating families in Turkey. *Transplantat Proceed*. 2017;49(9):1969-1974. doi:10.1016/j.transproceed.2017.09.032
5. Kentish-Barnes N, Siminoff LA, Walker W, et al. A narrative review of family members' experience of organ donation request after brain death in the critical care setting. *Intens Care Med*. 2019;45(3):331-342. doi:10.1007/s00134-019-05575-4

6. Andrei H. Development of a scale to measure the attitude toward posthumous organ donation for transplantation in Romania. *Analele Ştiinţifice Univ Alexandru Ioan Cuza Psihol*. 2012;(2):23-40.
7. Gökkaya ÖÜD, Karaman M. Ölüm sonrasına yönelik Organ Bağışı Tutum Ölçeği'nin Türkçe geçerlilik ve güvenirlik çalışması. *Visionary E-J*. 2023;14:39.
8. Masoumian Hoseini ST, Manzari Z, Khaleghi I. ICU nurses' knowledge, attitude, and practice towards their role in the organ donation process from brain-dead patients and factors influencing it in Iran. *Int J Organ Transplant Med*. 2015;6(3):105-113.
9. Thilly Roth N, Åkerman E. Critical care nurses' perceptions and experiences of the organ donation process: a systematic review. *Nurs Open*. 2026;13(1):e70420. doi:10.1002/nop2.70420
10. Tzenalis A, Kontesidou E, Kipourgos G, Andreopoulou E, Gkotsi A, Albani E. Nurses' attitudes and knowledge about organ donation and transplantation in closed hospital wards. *J Critic Care Med*. 2025;11(4): 409-416. doi:10.2478/jccm-2025-0041
11. Kalaycı M, Koyuncu A, Yava A, Olgun N. Yoğun bakım hemşirelerinin beyin ölümü ve organ transplantasyonuna yönelik tutumları ile yapay organ nakline yönelik görüşlerinin değerlendirilmesi. *Yoğun Bakım Hemşir Derg*. 2024;28(1):17-26. doi:10.62111/ybhd.1448724
12. Fırıncıoğlu A, Erkalp K, Sevdi MS, Selcan A. The assessment of the knowledge, attitude and practices of nurses working in intensive care units regarding brain death in Turkey (a survey study). *Istanbul Kanuni Sultan Suleyman Med J*. 2020;12(2):100-108. doi:10.5222/iksstd.2020.27147
13. Akbulut S. Knowledge levels, attitudes and awareness of nurses toward organ donation. *North Clin Istanbul*. 2022. doi:10.14744/nci.2022.24478