

# Investigation of Nurses' Attitudes Towards Organ Donation and Affecting Factors: A Descriptive and Cross-Sectional Study

## Hemşirelerin Organ Bağışına Yönelik Tutumları ve Etkileyen Faktörlerin İncelenmesi: Tanımlayıcı ve Kesitsel Bir Araştırma

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**ABSTRACT Objective:** To determine the attitudes of nurses, who play a key role in informing individuals about organ donation, towards organ transplantation and donation, and the factors affecting it. **Material and Methods:** The population of the descriptive and cross-sectional study consisted of 430 nurses working in a university hospital between March 2021-August 2021. Sample selection was not made, and 356 nurses who agreed to participate in the study constituted the sample of the study. Data were collected with an introductory information form and Organ Donation Attitude Scale. **Results:** In the study, the Benevolence and Moral Values sub-dimension mean score of the nurses was determined as 102.79±17.78 in the 18-34 age range (p=0.003). It was found that the benevolence and moral values sub-dimension mean score of the nurses working in the emergency department was 106.28±15.05, and the medical neglect sub-dimension mean score of the intensive care nurses was 26.77±6.72 (p<0.005). The mean score of the medical neglect sub-dimension of nurses with 6-10 years of employment was determined as 30.96±8.52 and the mean score of fear of bodily injury was 31.71±8.45. **Conclusion:** This study showed that nurses' attitudes toward organ donation were positive. It suggests that nurses with negative attitudes individually may not be sufficiently defensive about organ donation. It is foreseen that it will be beneficial to inform nursing professionals about organ donation by giving in-service training.

**ÖZET Amaç:** Bireylerin organ bağışı konusunda bilgilendirilmesinde kilit rol oynayan hemşirelerin organ nakli ve bağışına yönelik tutumlarını ve bunu etkileyen faktörleri belirlemektir. **Gereç ve Yöntemler:** Tanımlayıcı ve kesitsel tipteki araştırmanın evrenini, Mart 2021-Ağustos 2021 tarihleri arasında bir üniversite hastanesinde çalışan 430 hemşire oluşturmuştur. Örneklem seçimine gidilmemiş, araştırmaya katılmayı kabul eden 356 hemşire araştırmanın örneklemini oluşturmuştur. Veriler, tanıtıcı bilgi formu ve Organ Bağışı Tutum Ölçeği ile toplanmıştır. **Bulgular:** Çalışmada 18-34 yaş aralığındaki hemşirelerin Yardımseverlik ve Ahlaki Değerler alt boyut puan ortalaması 102,79±17,78 olarak belirlenmiştir (p=0,003). Acil serviste çalışan hemşirelerin yardımseverlik ve ahlaki değerler alt boyut puan ortalaması 106,28±15,05, yoğun bakım hemşirelerinin tıbbi ihmal alt boyut puan ortalaması 26,77±6,72 olarak bulunmuştur (p<0,005). Çalışma süresi 6-10 yıl olan hemşirelerin tıbbi ihmal alt boyutu puan ortalaması 30,96±8,52, bedensel yaralanma korkusu puan ortalaması 31,71±8,45 olarak belirlenmiştir. **Sonuç:** Bu çalışma, hemşirelerin organ bağışına yönelik tutumlarının olumlu olduğunu göstermiştir. Bireysel olarak olumsuz tutumlara sahip hemşirelerin, organ bağışı konusunda yeterince savunmacı olamayabileceklerini düşündürmektedir. Hemşirelik profesyonellerinin hizmet içi eğitimler verilerek organ bağışı konusunda bilgilendirilmesinin faydalı olacağı öngörülmektedir.

**Keywords:** Organ donation; nurse; attitude

**Anahtar Kelimeler:** Organ bağışı; hemşire; tutum

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Organ donation is defined as the consent of the individual to use his or her organs, either alive or after death, within the scope of the legal framework.<sup>1</sup> In cases where any organ cannot perform its activities or is chronically inadequate, the transplantation of healthy organs from a living or cadaver (in case of brain death) that will fulfill the function of the relevant organ is called organ transplantation.<sup>2</sup> The first successful human-to-human kidney transplant by Joseph Murray in 1954 initiated the development of transplantation.<sup>3</sup> After this discovery, organ transplantation has become an important treatment method for patients with end-stage organ failure. In recent years, the need for organ transplantation has increased due to economic and technological developments, the increase in the elderly population, and diseases.<sup>4</sup> Organ transplantation is a life-saving procedure. Organ donation not only improves the quality of life of the recipients, but also ensures the longevity of the recipients, reduces waiting list deaths, and gives individuals a second chance at life.<sup>5</sup>

The ability of patients with terminal organ failure to receive treatment and the frequency of organ transplantation are also the most important indicators of a country's level of development.<sup>5,6</sup> Despite the great advances in transplantation, a large number of patients, and developments with the developing technology in recent years, organ donations have not reached the desired levels.<sup>5-7</sup>

Despite the increase in the number of patients waiting for organ transplantation, donated organs do not meet the need.<sup>8,9</sup> It has been reported that organ transplants performed according to World Health Organization data meet 10% of all organ transplant needs.<sup>10</sup> In the data of the Turkish Ministry of Health; it has been reported that 25,952 patients are waiting in line for organ transplantation.<sup>11</sup> While the number of living donors in 2014 was 2,132 and the number of cadaveric donors was 564, a total of 2,696, this number increased to 5,595 (4,161 living, 1,434 cadaveric) in 2018. According to the December 2021 data of the Turkish Ministry of Health, while 22,660 patients were waiting for organs in total, 7,762 transplants were performed. It is a serious dilemma that so few people take a step.<sup>11</sup> With the increase in the number of organ donations in Türkiye, the number of donors

falls far behind the growing transplant waiting list. Despite the technological and medical developments, the biggest obstacle in organ transplantation is the lack of cadaveric organs.<sup>7</sup> This is an important social issue and the problem behind the resource is that people avoid donating. The biggest obstacle is their reluctance to donate their organs when they are alive or after they die.<sup>6,12</sup>

The indecision associated with organ donation has been discussed by many authors over the years, with consensus on defining it as the presence of mixed feelings.<sup>5,12</sup> Although mixed feelings are related to much more complex issues, there is the concept of indecision at the core of the issue. Organ scarcity for transplant purposes is a global problem.<sup>5,12</sup> Failure to donate organs is thought to be the result of people not making a decision. According to the Ministry of Health of the Republic of Türkiye, the presence of 583,837 donor cards according to December 2021 data indicates a low number of donors, while the fact that the number of donations is 7,762 also indicates indecision and abandonment.<sup>12</sup>

Nurses play an important role in informing society about organ donation.<sup>7</sup> By establishing correct communication with patients and their relatives, they have the opportunity to raise public awareness by providing individuals with the necessary information about brain death and organ donation. With this role, health professionals are the key to facilitating cadaveric organ donation.<sup>7</sup> Awareness and knowledge of healthcare professionals about transplant medicine are influencing factors for increasing people's sensitivity and reducing their opposition to donations.<sup>12</sup> When the literature is examined, the study by Ju et al. on nursing students in Korea; reported that nurses were not comfortable discussing the possibility of organ donation with their family members.<sup>13</sup> In their study on student nurses in Türkiye, Güler et al. found that nurses were hesitant to talk about organ donation.<sup>14</sup> It has been reported in the literature that nurses avoid discussing their knowledge about the effectiveness of organ transplantation with grieving families.<sup>6-8,13,15</sup>

This study aims to examine the advocacy levels of nurses, who play a key role in informing individ-

uals about organ donation, which has never lost its currency and is gaining importance every day, towards organ transplantation and donation.

## MATERIAL AND METHODS

### TYPE OF RESEARCH

This research was conducted as a descriptive and cross-sectional study to examine the advocacy levels of nurses' attitudes toward organ transplantation and donation.

### RESEARCH QUESTIONS

- What are the attitudes of nurses towards organ transplantation and donation?
- What are the variables affecting the attitudes of nurses towards organ transplantation and donation?

### POPULATION AND SAMPLE OF THE RESEARCH

The universe of this research consisted of 430 nurses working in a university hospital between March 2021-August 2021. Sample selection was not made, and 347 nurses who accepted to participate in the study and whose informed consent was obtained constituted the sample of the study.

### DATA COLLECTION TOOLS AND APPLICATION

The data were obtained by using the personal information form (8, 9, 10, 11, 12) and the "Organ Donation Attitude Scale" prepared by the researchers in line with the literature.

### INTRODUCTORY SPECIFICATIONS FORM

It consists of 9 questions in total, including questions such as nurses' age, gender, the clinic they work in, years of employment, presence of individuals in their family who are waiting for an organ transplant and having an organ transplant, the desire to donate organs, the reason for organ donation or not being found.

### ORGAN DONATION ATTITUDE SCALE

"Organ Donation Attitude Scale", developed by Parisi and Katz in 1986, is a data collection tool for which Turkish validity and reliability studies were conducted by Yazici Sayin.<sup>16</sup> In the Turkish validity and reliability study conducted by Yazici Sayin, the

general, positive attitude, and negative attitude sub-dimensions of the scale were determined as 0.857, 0.925, and 0.914, respectively. Each item on the scale is in a Likert format with 6 options ranging from strongly agree to strongly disagree. The scale used has 2 dimensions. The first dimension consists of positive statements and consists of 20 items that show people's "benevolence and moral values/beliefs" about organ donation. A minimum of 20 and a maximum of 120 points can be obtained from this dimension. The second dimension consists of 2 negative discourses: fear of medical neglect and fear of bodily injury. "Fear of medical neglect" and "fear of bodily injury" each consist of 10 items. A minimum of 6 and a maximum of 60 points can be obtained from this dimension. It consists of 40 items in total. In this study, sub-dimension cronbach alphas were determined as Helpfulness and moral values 0.860, medical neglect 0.920 and fear of bodily injury 0.890.

### ETHICAL ASPECT OF RESEARCH

The research was initiated after obtaining the necessary ethics committee approval from Tokat Gaziosmanpaşa University Social and Human Sciences Ethics Committee (date: April 02, 2021, no: 01-29/07). Institutional permission was obtained from Tokat Gaziosmanpaşa University Hospital to conduct the study. All participants were given written information to participate in the study and their written consent was obtained online. This study was conducted in accordance with the principles of the Declaration of Helsinki.

### EVALUATION OF DATA

Data were analyzed with the IBM SPSS V25 (ABD) program. Frequency and percentage were used in the analysis of sociodemographic data. The skewness and kurtosis values (+1, -1) were examined with the Kolmogorov-Smirnov test and the conformity of the data distribution to the normal distribution was tested. Mann-Whitney U test and Kruskal Wallis test were used to compare normally distributed data. The significance level was taken as  $p < 0.05$ .

## RESULTS

The sociodemographic characteristics of the nurses who participated in our study are given in [Table 1](#). It

**TABLE 1:** Distribution of Nurses by Some Descriptive Characteristics.

| Characteristics  | n   | %     |
|--|-----|-------|
| <b>Gender</b>  |     |       |
| Female   | 201 | 56.46 |
| Male   | 155 | 43.54 |
| <b>Age</b>   |     |       |
| 18-34  | 222 | 62.35 |
| 35-55  | 134 | 37.65 |
| <b>Unit of work</b>  |     |       |
| Internal service   | 106 | 29.80 |
| Surgical service   | 51  | 14.30 |
| Intensive care   | 67  | 18.80 |
| Polyclinic   | 62  | 17.40 |
| Emergency  | 70  | 19.70 |
| <b>Education status</b>                                      |     |       |
| Associate degree   | 74  | 20.80 |
| License  | 210 | 59.00 |
| Graduate   | 72  | 20.20 |
| <b>Year of study</b>   |     |       |
| 0-5 years  | 131 | 36.80 |
| 6-10 years   | 145 | 40.70 |
| More than 11 years   | 80  | 22.50 |
| <b>Individuals with a family history of organ transplant</b> |     |       |
| Yes  | 72  | 20.20 |
| No   | 284 | 79.80 |
| <b>The individual in family awaiting an organ transplant</b> |     |       |
| Yes  | 96  | 27.00 |
| No   | 260 | 73.00 |
| <b>Request for organ transplant</b>                          |     |       |
| Yes  | 301 | 84.60 |
| No   | 55  | 15.40 |

was determined that 56.46% of the participants in the study were women, 62.35% were between the ages of 18-34, 29.80% were working in internal services and 20.20% had postgraduate education. It was found that 40.70% of the participants had 6-10 years of working experience, 20.20% had an organ transplant in their family, 27.00% had a family awaiting an organ transplant, and 84.60% had the desire to have an organ transplant.

Table 2 shows some introductory characteristics of nurses and the distribution of the Organ Donation Attitude Scale and sub-dimension mean scores. Benevolence and moral values sub-dimension mean scores were found to be 102.79±17.78 in the 18-34 age group (p=0.003). It was found that the benevo-

lence and moral values sub-dimension mean score of the nurses working in the emergency department was 106.28±15.05, and the medical neglect sub-dimension mean score of the intensive care nurses was 26.77±6.72 (p<0.005). The mean score of the medical neglect sub-dimension of nurses with 6-10 years of employment was 30.96±8.52 and the mean score of fear of bodily injury was 31.71±8.45 (p=0.001).

## DISCUSSION

To structure the purpose of determining the attitudes of nurses toward organ donation, it has been discussed in light of the literature on our consumption.

It was determined that 84.60% of the nurses in our study were willing to donate organs. When the literature is examined, Alakan and Aşçıoğlu stated that 73.3% of the participants supported organ/tissue donation and transplantation in their study to determine the knowledge, attitudes and approaches of intensive care nurses towards organ/tissue transplantation and donation.<sup>17</sup> In the study of Fernández Alanso et al. with intensive care nurses in Spain, 85% of the participants found that they supported organ donation.<sup>18</sup> Again, Lomero et al., stated that 98.6% of the nurses in Spain supported organ donation and transplantation in their studies on organ donation and transplantation.<sup>19</sup> In the study conducted by Damar et al., on nurses in Türkiye, 17.7% of the participants reported that they supported organ/tissue donation and transplantation.<sup>20</sup> Health workers, who constitute an important part of society, are among the first among potential donors. In this context, the high rate of nurses who are willing to donate organs is considered a positive development in promoting organ donation.

In this study, it was determined that the benevolence and moral values sub-dimension score averages of nurses aged between 18-34 were statistically higher than those of other age groups (p<0.005). When the literature is examined, Damar et al. reported that nurses in the younger age group are more willing to donate organs in their study with health-care personnel in Türkiye.<sup>20</sup> Again, Sarıgöl Ordin et al., found that according to the results of their study on student nurses in Türkiye, the desire of nursing students to donate organs decreases as their age increases.<sup>21</sup> Our

**TABLE 2:** Some descriptive characteristics of nurses and distribution of organ donation attitude scale and its sub-dimensions.

| Characteristics  | Helpfulness and moral values<br>$\bar{X}\pm S.S$ | Medical neglect<br>$\bar{X}\pm S.S$ | Fear of bodily injury<br>$\bar{X}\pm S.S$ |
|--|--|-------------------------------------|---|
| <b>Gender</b>  |  |                                     |   |
| Female   | 101.71±17.08                                     | 28.47±8.50                          | 29.45±8.36                                |
| Male   | 101.91±17.62                                     | 28.69±9.48                          | 30.18±9.21                                |
| Test statistics  | t=-0.109<br>p=0.585                              | t=-0.253<br>p=0.231                 | t=-0.138<br>p=0.400                       |
| <b>Age</b>   |  |                                     |   |
| 18-34  | 102.79±17.78                                     | 27.76±8.37                          | 28.80±8.19                                |
| 35-55  | 100.14±16.35                                     | 29.05±9.19                          | 29.92±8.99                                |
| Test statistics  | t=1.400<br>p=0.003                               | t=1.328<br>p=0.356                  | t=1.178<br>p=0.391                        |
| <b>Fear of bodily injury</b>                                 |  |                                     |   |
| Internal service   | 103.39±17.34                                     | 27.92±10.30                         | 28.83±9.87                                |
| Surgical service   | 95.29±19.42                                      | 27.64±8.38                          | 28.62±8.27                                |
| Intensive care   | 104.83±17.62                                     | 26.77±6.72                          | 27.96±6.49                                |
| Policlinic   | 96.71±15.01                                      | 31.57±9.72                          | 29.64±6.93                                |
| Emergency  | 106.28±15.05                                     | 28.80±7.07                          | 32.40±9.84                                |
| Test statistics  | F=5.394<br>p=0.001*                              | F=4.969<br>p=0.004                  | F=2.764<br>p=0.028                        |
| <b>Educational status</b>                                    |  |                                     |   |
| Associate degree   | 101.35±17.30                                     | 28.37±9.93                          | 29.18±9.92                                |
| License  | 100.95±17.02                                     | 27.76±9.08                          | 28.74±8.77                                |
| Graduate   | 104.72±17.09                                     | 31.11±6.61                          | 32.05±6.52                                |
| Test statistics  | F=1.309<br>p=0.271                               | F=3.872<br>p=0.022                  | F=4.008<br>p=0.019                        |
| <b>Year of study</b>   |  |                                     |   |
| 0-5 years  | 101.98±16.42                                     | 27.93±8.83                          | 28.90±8.62                                |
| 6-10 years   | 102.20±16.34                                     | 30.96±8.52                          | 31.71±8.45                                |
| More than 11 years   | 100.75±17.23                                     | 25.25±8.56                          | 26.47±8.32                                |
| Test statistics  | F=0.194<br>p=0.823                               | F=11.806<br>p=0.001                 | F=10.347<br>p=0.001                       |
| <b>Individuals with a family history of organ transplant</b> |  |                                     |   |
| Yes  | 103.05±15.97                                     | 29.02±9.06                          | 30.16±8.67                                |
| No   | 101.47±17.61                                     | 28.45±8.88                          | 29.33±8.72                                |
| Test statistics  | t=0.691<br>p=0.488                               | t=0.490<br>p=0.572                  | t=0.346<br>p=0.346                        |
| <b>Individual in the family awaiting an organ transplant</b> |  |                                     |   |
| Yes  | 105.41±15.21                                     | 28.12±8.11                          | 29.20±8.05                                |
| No   | 100.46±17.80                                     | 28.73±9.19                          | 29.61±8.94                                |
| Test statistics  | t=2.417<br>p=0.809                               | t=0.569<br>p=0.207                  | t=0.391<br>p=0.208                        |
| <b>Request for organ transplant</b>                          |  |                                     |   |
| Yes  | 102.90±16.50                                     | 28.23±8.90                          | 29.17±8.78                                |
| No   | 101.59±17.40                                     | 30.36±8.59                          | 31.32±8.09                                |
| Test statistics  | t=0.518<br>p=0.889                               | t=-1.630<br>p=0.503                 | t=-1.692<br>p=0.603                       |

study shows parallelism with the literature in this aspect. When we look at the results of the study con-

ducted by Tumin et al. in Taiwan, it was seen that the desire to donate organs increases as age increases.<sup>22</sup>

Emergency nurse, who has an important place among emergency service workers, is the practitioner of necessary nursing care for patients/injured individuals of all ages who are undiagnosed and need emergency intervention.<sup>23</sup> In our study, it was determined that the benevolence and moral values sub-dimension score averages of the nurses working in the emergency service units were statistically higher ( $p<0.005$ ). In this context, emergency room nurses provide the highest quality service to individuals in an emergency in a short time and carry out this service within the framework of helpful and moral values. According to the results of the study conducted by Long et al. in Canada, it was stated that emergency nurses were willing to donate organs and transplants as a result of this.<sup>24</sup> It was also determined that the fear of being neglected medically was lower in nurses working in the intensive care unit ( $p<0.005$ ). When the literature is examined, Alakan and Asıcıoğlu, in their study to determine the knowledge, attitudes, and approaches of intensive care nurses towards organ/tissue transplantation and donation, it was found that willingness and support to donate organs and the clinic that nurses work with were clinically related was found to be higher.<sup>17</sup> Again, Fernández-Alonso et al., in their study, determined that intensive care nurses were willing to donate organs. Since intensive care units allow nurses to fully fulfill their therapeutic and caregiver roles, it is thought that the low fear of medical neglect among intensive care nurses is the reason.

In the participants in our study, it was determined that the fears of medical neglect and bodily injury were higher in nurses with 6-10 years of work compared to nurses who worked less than 5 years and more than 10 years ( $p<0.005$ ). When the literature is examined, Alakan and Asıcıoğlu, in their study on intensive care nurses in Türkiye, reported that as the working years of the nurses increase, their support for organ/tissue transplantation and donation increases.<sup>17</sup> It is thought that the fear of medical neglect and bodily injury may be lower due to the high benevolence and moral values of nurses who work less than 5 years, and due to the experience of those who work more than 10 years. In the study of

Vlaisavljevic et al. in Serbia, it was reported that there was no significant result between the working year and the willingness to donate organs.<sup>25</sup>

## CONCLUSION

To increase organ donations, first of all, it is necessary to eliminate the insufficient knowledge, rejecting attitude, and attitude of society. To overcome the obstacles related to this issue in all fields, first of all, health professionals should be informed about this issue, enlighten society, and advocate for organ donation. Nurses are health professionals who have close communication with patients and their relatives and play a key role in providing information and encouragement about organ donation. It suggests that nurses with negative attitudes individually may not be sufficiently defensive about organ donation. First of all, it is foreseen that it will be useful to give in-service training to nursing professionals and to inform them about organ donation. It is thought that training nurses on how to approach patients and their relatives about organ donation will also contribute to the increase in organ donation.

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### Conflict of Interest

*No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.*

### Authorship Contributions

**Idea/Concept:** Tuba Karabey, Özge Yaman; **Design:** Özge Yaman, Tuba Karabey; **Control/Supervision:** Tuba Karabey; **Data Collection and/or Processing:** Özge Yaman; **Analysis and/or Interpretation:** Tuba Karabey, Özge Yaman; **Literature Review:** Özge Yaman; **Writing the Article:** Özge Yaman, Tuba Karabey; **Critical Review:** Tuba Karabey; **References and Fundings:** Özge Yaman; **Materials:** Özge Yaman, Tuba Karabey.

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