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**Hemşirelikte Araştırma Geliştirme Dergisi**

# Yoğun bakım çalışanlarının nafile tedaviye ilişkin görüşleri*

# Opinions of intensive care professionals about futile treatment

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***Özgün Araştırma***

**Abstract**

***Objective:*** The study was conducted to determine the views of nurses and physicians working at intensive care units on the concept of futile treatment.
***Methods:*** The sample of the descriptive study included 176 individuals. The data were obtained with the futile treatment questionnaire developed by the researchers. The research data were evaluated with the percentage calculation and chi-square significance test.
***Results:*** Based on the statistical analysis of the findings, it was determined that 55.1% of the nurses and physicians said that futile treatment was provided for some patients in the intensive care units and 67.6% were knowledgeable about the futile treatment concept. Of the health professionals, 61.4% stated that futile treatment should not be administered in intensive care units, 58.0% stated that physicians played an important role in making decisions to provide futile treatment, and 60.8% experienced ethical dilemmas in futile treatment practices.
***Conclusions:*** A great majority of the nurses and physicians stated that some patients received futile treatment in intensive care units but futile treatment should not be provided in intensive care units. It is suggested that institutional and legal policies should be established on the administration of futile treatment in clinical settings in Turkey.

***Keywords:*** Treatment, futile treatment, health professionals, intensive care.

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**Özet**

***Amaç:*** Bu çalışma, yoğun bakım ünitesinde çalışan hemşirelerin ve hekimlerin nafile/boşuna tedavi kavramına yönelik görüşlerini belirlemek amacıyla yapılmıştır.
***Yöntem:*** Bu tanımlayıcı araştırmanın örneklemini 176 birey oluşturmuştur. Veriler araştırmacılar tarafından geliştirilen nafile tedavi anketi ile elde edilmiştir. Araştırma verileri, yüzde hesaplama ve ki-kare önemlilik testi ile değerlendirilmiştir.
***Bulgular:*** Bulguların istatistiksel değerlendirmesi sonucu hemşire ve hekimlerin %55,1'ine göre yoğun bakım ortamında bazı hastalara nafile tedavi uygulandığı, %67,6'sının nafile tedavi kavramını bildikleri belirlendi. Sağlık profesyonellerinin %61,4'ünün yoğun bakım ortamlarında nafile tedavinin uygulanmaması gerektiğini belirttikleri, %58,0'inde nafile tedaviyi uygulama kararında hekimin önemli rol oynadığı ve sağlık çalışanlarının %60,8'inin nafile tedavi uygulamalarında etik ikilem yaşadıkları belirlenmiştir.
***Sonuç:*** Hemşire ve hekimlerin büyük çoğunluğu yoğun bakım ortamında bazı hastalara nafile tedavi uygulandığını, yoğun bakım ortamlarında nafile tedavinin yapılmaması gerektiğini belirtmiştir. Bu bağlamda ülkemizde klinik ortamlarda nafile tedavinin uygulanmasına ilişkin kurumsal ve yasal politikaların oluşturulması önerilir.

***Anahtar Sözcükler:*** Tedavi, nafile tedavi**,** sağlık çalışanları**,** yoğun bakım

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**Introduction**

Treatments or practices in which health professionals, patients and patients' relatives consider that medical intervention is unpractical, provides minimum contribution to the quality of life and/or promises no reasonable hope of survival are defined as futile treatment.[5-8] In the international literature, various discussions concerning the definition of this concept still continue and this concept is defined as "Medical futility" "futility care", "futile care" or" futile treatment".[4, 9-12] Trotter[13] brought "purpose and action" onto the agenda as sub-headings of the concept of medical futility. Therefore, all medical practices have an objective, actions aim at achieving this goal and if the action fails to realize this goal, then this may be called as futile treatment. Kasman[9] defines the concept of futile treatment as a clinical action which cannot achieve any special purpose for the patient.

In a study conducted in Canada on this issue, a large majority of the doctors and nurses working in intensive care units reported that futile treatment was provided in those units.[11] In another study, it was determined that futile treatment was provided in intensive care units upon the family's demand, or due to lack of time and/or communication.[12] In our country, the issue of futile treatment regarding adult intensive care units has not been addressed yet; however, the concept of futility has been mentioned in studies on the attitudes of pediatric intensive care nurses towards decision-making about end-of life.[14,15] In this study,[14] while half of the nurses supported the view that aggressive treatment should be continued until brain death occurs, some of the other nurses maintained the idea that all aggressive treatments should be withdrawn and only palliative care should be continued.

In Şenses and Ersoy's study,[15] 36.42% of the physicians and 28.7% of the nurses used the concept of futile treatment, and some of the physicians and nurses preferred to comply with the families' demand for interventions not likely to produce any medical benefits.

Modern medicine has very effective methods to prolong life; however, these methods cause pain and suffering in dying patients. Nurses may face ethical dilemmas in managing the care of patients due to their roles of a caregiver and patient advocacy while making decisions to provide treatment and care for a dying individual.[4, 10, 14, 16] Unfortunately, in our country there are no national policies regarding intensive care practices. However, there exists a declaration about end-of-life issued by the Turkish Medical Association. This declaration emphasizes that withdrawal of the treatment and care would be ethical when there is no hope for the improvement of a patient's condition and/or if the

treatment is unlikely to produce any physiological benefits but causes the patient to suffer more pain and distress.[8] The concept of futile treatment is quite a new concept in our country, and thus there is no study in Turkish literature related to doctors and nurses working in adult intensive care units. Our study on the concept of futile treatment will demonstrate the sensitivity of intensive care professionals specific to our culture, and thus will provide the data which will reflect a different cross-cultural view about the concept of futile treatment. Therefore, this study was conducted to determine the views of nurses and physicians working in intensive care units about the concept of futile treatment.

## Material and Methods

### *Type of the Research*

This study was designed as a descriptive and cross sectional study.

### *Study Population and Study Sample*

Three hundred and five people (175 nurses and 130 physicians) who worked in the intensive care units of two university hospitals in the central Anatolia region of Turkey (Cumhuriyet University Hospital of Sivas; Erciyes University Hospital of Kayseri) between May 15, 2010 and July 15, 2010 constituted the population of the study. One hundred and seventy six of them (108 nurses and 68 physicians) agreed to participate in the study and constituted the study sample. Participation rate in the study was 57%.

The study data were collected in the participants' own environments. Upon filling out the forms, the nurses and doctors handed in the forms to the researchers via the responsible nurse. The researchers gave the participants the questionnaires, informed them about it and told that the questionnaires would be collected two days later. The participants were told that participation in the study is voluntary, that they should not include their names on the questionnaire, that the data obtained would only be used within the scope of the study, and that all personal information would be kept confidential. After the questionnaire was pilot tested with 15 nurses and 10 physicians, it was revised and it took its final form. Prior to the study, the approval of the ethics committee was obtained from Cumhuriyet University Faculty of Medicine Research Ethics Board (decision no. 2010/37-40.) and informed consents from the participants. The study was conducted in accordance with the principles of the Declaration of Helsinki.

### *Data Collection Tools*

The data were obtained with two different forms described below:

*Socio-demographic questionnaire*, this form includes 19 questions on general socio-demographic characteristics, occupational information and futile treatment.

*The "Opinions of physicians and nurses regarding futile treatment" form*, which includes twenty-eight 3-choice (agree, undecided, disagree) propositions, was prepared by the researchers by screening the literature on the concept of futile treatment.[4, 9,11,12,17-19] The propositions included in the form are classified into six groups. Propositions 1, 2, 8, 11, 20, 21 and 24 reflect the views on the concept and the meaning of futile treatment; propositions 3,6,7,15 and 17 reflect the views on the implementation of futile treatment; propositions 9,10,18 and 19 reflect the views that futile treatment should not be provided; propositions 4,5,12 and 16 reflect the views on the decision of a patient and his/her family; propositions 13 and 14 reflect the views on the reasons of the delivery of medical futile care; and propositions 22,23,25,26,27 and 28 reflect the views on how to regulate the delivery of futile treatment (Appendix1).

***Data Assessment***

For the evaluation of the data, frequency distributions and descriptive statistics were used. To compare the doctors' and nurses' views, the Chi-square significance test was used. P values less than 0.05 were considered statistically significant.

**Results**

The mean age of the participants in the study was 30.35 ± 5.23 (22-48). Of them, 61.4% were nurses, and 38.6% were physicians. Of the participants, 47.2% had 0-4 years of professional life and 69.3% worked in intensive care units for 0-4 years (Table 1).

**Table 1: The Distribution Of Some Socio-Demographic Characteristics (n= 176)**

| Characteristics | N | % |
|---|---|---|
| **Gender** | | |
| Women | 127 | 72.2 |
| Male | 49 | 27.8 |
| **Age distribution** | 30.35±5.23 (22-48) | |
| **Education** | | |
| license | 108 | 61.4 |
| Graduate education | 68 | 38.6 |
| **Occupation** | | |
| physician | 68 | 38.6 |
| nurse | 108 | 61.4 |
| **Service time** | | |
| 0-4 years | 83 | 47.2 |
| 5-9 years | 53 | 30.1 |
| 10 years and over | 40 | 22.7 |
| **Duration of intensive care services** | | |
| 0-4 years | 122 | 69.3 |
| 5 years and over | 54 | 30.7 |
| **The distribution of the number of patients** | 13.68 ±7.28 (3-34) | |
| **Working hours** | | |
| shift | 122 | 69.3 |
| daytime | 40 | 22.7 |
| Shift + daytime | 14 | 7.9 |
| **Marital status** | | |
| married | 99 | 56.3 |
| single | 77 | 43.8 |
| **Receiving training related to intensive care after graduation** | | |
| Yes | 106 | 60.3 |
| No | 70 | 39.8 |
| **Receiving training related to ethics after graduation** | | |
| Yes | 92 | 52.3 |
| No | 84 | 47.7 |
| Total | 176 | 100.0 |

Of the participants, 26.1% reported that futile treatment in intensive care units was administered every day. According to the participants' statements, the reasons why futile treatment was administered were as follows: the physician's demand (58.0%), the family's demand (42.6%), the hospital management's demand (36.9%), the attempt to protect the patient's life (35.8%), the similarity between futile treatment and euthanasia (34.4%), the principle of beneficence (24.4%). Of the

participants, 38.1% said that the decision to deliver futile treatment should be made by the ethics committee, 22.2% by the team and 19.9% by the responsible physician (Table 2).

**Table 2: Participants' Opinions On The İmplementation, Frequency, Causes And Decision Makers Of Futile Treatment İn İntensive Care Clinics (n= 176)**

| Characteristics | Number | % |
|---|---|---|
| **Implementation of futile treatment**[a] | | |
| Yes | 142 | 81.0 |
| No | 34 | 19.0 |
| **Frequency of futile treatment (n=142)** | | |
| No answer | 15 | 10.5 |
| Everyday | 37 | 26.1 |
| Once a week | 31 | 21.8 |
| Once a month | 37 | 26.1 |
| 1-10 times | 6 | 4.2 |
| Rarely | 16 | 11.3 |
| **Reasons of futile treatment**[b] | | |
| Physician's demand | 102 | 58.0 |
| Hospital management | 65 | 36.9 |
| Responsible nurse | 21 | 11.9 |
| The patient's family | 75 | 42.6 |
| Responsibility to protect life | 63 | 35.8 |
| Similarity between futile care and euthanasia | 57 | 34.4 |
| Quality of life | 42 | 23.9 |
| Principle of beneficence | 43 | 24.4 |
| The principle of justice | 22 | 12.5 |
| Religious belief | 23 | 13.1 |
| Personal value | 21 | 11.9 |
| Law | 6 | 3.4 |
| **Decision maker(s)** | | |
| Responsible physician | 35 | 19.9 |
| Independent physician group | 4 | 2.3 |
| Team | 39 | 22.2 |
| Patients' relatives | 4 | 2.3 |
| Ethics committee | 67 | 38.1 |
| Other[c] | 12 | 6.8 |

[a] According to their own statements
[b] Multiple responses
[c] The decision was made by the cooperation of the team, ethics committee and patients' relatives

The physicians' and nurses' opinions on the futile care propositions are shown in Table 3.

***Opinions on the Concept and Meaning of Futile Treatment***

Based on the opinions of physicians and nurses on the concept and meaning of futile treatment, it was found that the vast majority of the participants agreed with proposition 1. A high percentage (63.6%) of all the professionals agreed with the second proposition that "Futile treatment and interventions only extend an individual's life span"; however, the percentage of the nurses (68.5%) was higher than that of the physicians (55.9%), ($p = 0.016$). It was determined that the percentages of the physicians and nurses who considered the treatment and care given to patients whose brain death occurred as futile treatment were close to each other (61.8% and 64.8% respectively) (Proposition 8).

**Table 3: Opinions Of Physicians And Nurses On The Futile Treatment Propositions ( n= 176)**

| Proposition [a] | Physician | | | | | | Nurse | | | | | | Total | | | | | | P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | I agree | | I disagree | | I am undecided | | I agree | | I disagree | | I am undecided | | I agree | | I disagree | | I am undecided | | |
| | No | % | No | % | No | % | No | % | No | % | No | % | No | % | No | % | No | % | |
| 1 | 42 | 61.8 | 17 | 25.0 | 9 | 13.2 | 77 | 71.3 | 14 | 13.0 | 17 | 15.7 | 119 | 67.6 | 31 | 17.6 | 26 | 14.8 | 0.124 |
| | | | | | | | | | | | | | | | | | | | |
| 2 | 45 | 66,2 | 18 | 26,5 | 5 | 7,4 | 84 | 77,8 | 15 | 13,9 | 9 | 8,3 | 129 | 73,3 | 33 | 18,8 | 14 | 8,0 | 0.114 |
| 3 | 37 | 54,4 | 26 | 38,2 | 5 | 7,4 | 60 | 55,6 | 26 | 24,0 | 22 | 20,4 | 97 | 55,1 | 52 | 29,5 | 27 | 15,3 | 0.024 |
| 4 | 36 | 52,9 | 14 | 20,6 | 18 | 26,5 | 65 | 60,2 | 15 | 13,9 | 28 | 25,9 | 101 | 57,4 | 29 | 16,5 | 46 | 26,1 | 0.467 |
| 5 | 19 | 27,9 | 28 | 41,2 | 21 | 30,9 | 26 | 24,1 | 41 | 38,0 | 41 | 38,0 | 45 | 25,6 | 69 | 39,2 | 62 | 35,2 | 0.623 |
| 6 | 37 | 54,4 | 22 | 32,4 | 9 | 13,2 | 52 | 48,1 | 29 | 26,9 | 27 | 25,0 | 89 | 50,6 | 51 | 29,0 | 36 | 20,5 | 0.167 |
| 7 | 35 | 51,5 | 21 | 30,9 | 12 | 17,6 | 72 | 66,7 | 16 | 14,8 | 20 | 18,5 | 107 | 60,8 | 37 | 21,0 | 32 | 18,2 | 0.035 |
| 8 | 42 | 61,8 | 16 | 23,5 | 10 | 14,7 | 70 | 64,8 | 12 | 11,1 | 26 | 24,1 | 112 | 63,6 | 28 | 15,9 | 36 | 20,5 | 0.052 |
| 9 | 37 | 54,4 | 17 | 25,0 | 14 | 20.6 | 71 | 65.7 | 14 | 13.0 | 23 | 21.3 | 108 | 61,4 | 31 | 17,6 | 37 | 21,0 | 0.116 |
| 10 | 36 | 52,9 | 13 | 19,1 | 19 | 27,9 | 75 | 69,4 | 13 | 12,0 | 20 | 18,5 | 111 | 63,1 | 26 | 14,8 | 39 | 22,2 | 0.087 |
| 11 | 25 | 36,8 | 22 | 32,4 | 21 | 30,9 | 50 | 46,3 | 23 | 21,3 | 35 | 32,4 | 75 | 42,6 | 45 | 25,6 | 56 | 31,8 | 0..233 |
| 12 | 14 | 20,6 | 39 | 57,4 | 15 | 22,1 | 42 | 38,9 | 49 | 45,4 | 17 | 15,7 | 56 | 31,8 | 88 | 50,0 | 32 | 18,2 | 0.039 |
| 13 | 33 | 48,5 | 23 | 33,8 | 12 | 17,6 | 68 | 63,0 | 21 | 19,4 | 19 | 17,6 | 101 | 57,4 | 44 | 25,0 | 31 | 17,6 | 0.083 |
| 14 | 21 | 30,9 | 35 | 51,5 | 12 | 17,6 | 52 | 48,1 | 36 | 33,3 | 20 | 18,5 | 73 | 41,5 | 71 | 40,3 | 32 | 18,2 | 0.040 |
| 15 | 42 | 61,8 | 17 | 25,0 | 9 | 13,2 | 78 | 72,2 | 18 | 16,7 | 12 | 11,1 | 120 | 68,2 | 35 | 19,9 | 21 | 11,9 | 0.319 |
| 16 | 38 | 55,9 | 21 | 30.9 | 9 | 13.2 | 69 | 63.9 | 17 | 15.7 | 22 | 20,4 | 107 | 60,8 | 38 | 21,6 | 31 | 17,6 | 0.048 |
| 17 | 31 | 45,6 | 22 | 32,4 | 15 | 22,1 | 76 | 70,4 | 17 | 15,7 | 15 | 13,9 | 107 | 60,8 | 39 | 22,2 | 30 | 17,0 | 0.004 |
| 18 | 47 | 69,1 | 10 | 14,7 | 11 | 16,2 | 92 | 85,2 | 4 | 3,7 | 12 | 11,1 | 139 | 79,0 | 14 | 8,0 | 23 | 13,1 | 0.014 |
| 19 | 29 | 42,6 | 28 | 41,2 | 11 | 16,2 | 62 | 57,4 | 15 | 13,9 | 31 | 28,7 | 91 | 51,7 | 43 | 24,4 | 42 | 23,9 | 0.000 |
| 20 | 22 | 32,4 | 19 | 27,9 | 27 | 39,7 | 42 | 38,9 | 25 | 23,1 | 41 | 38,0 | 64 | 36,4 | 44 | 25,0 | 68 | 38,6 | 0.636 |
| 21 | 21 | 30,9 | 28 | 41,2 | 19 | 27,9 | 52 | 48,1 | 30 | 27,8 | 26 | 24,1 | 73 | 41,5 | 58 | 33,0 | 45 | 25,6 | 0.063 |
| 22 | 11 | 16,2 | 46 | 67,6 | 11 | 16,2 | 40 | 37,0 | 46 | 42,6 | 22 | 20,4 | 51 | 29,0 | 92 | 52,3 | 33 | 18,8 | 0.003 |
| 23 | 48 | 70,6 | 13 | 19,1 | 7 | 10,3 | 72 | 66,7 | 9 | 8,3 | 27 | 25,0 | 120 | 68,2 | 22 | 12,5 | 34 | 19,3 | 0.013 |
| 24 | 51 | 75,0 | 8 | 11,8 | 9 | 13,2 | 82 | 75,9 | 8 | 7,4 | 18 | 16,7 | 133 | 75,6 | 16 | 9,1 | 27 | 15,3 | 0.550 |
| 25 | 46 | 67,6 | 13 | 19,1 | 9 | 13,2 | 80 | 74,1 | 10 | 9,3 | 18 | 16,7 | 126 | 71,6 | 23 | 13,1 | 27 | 15,3 | 0.160 |
| 26 | 55 | 80,9 | 6 | 8,8 | 7 | 10,3 | 84 | 77,8 | 8 | 7,4 | 16 | 14,8 | 139 | 79,0 | 14 | 8,0 | 23 | 13,1 | 0.667 |
| 27 | 55 | 80,9 | 7 | 10,3 | 6 | 8,8 | 89 | 82,4 | 8 | 7,4 | 11 | 10,2 | 144 | 81,8 | 15 | 8,5 | 17 | 9,7 | 0.779 |
| 28 | 54 | 79,4 | 8 | 11,8 | 6 | 8,8 | 93 | 86,1 | 8 | 7,4 | 7 | 6,5 | 147 | 83,5 | 16 | 9,1 | 13 | 7,4 | 0.495 |

[a] Description corresponding to the number of each proposition is given in the Appendix.

It was determined that 31.8% of the participants were undecided about the proposition 11: there is no difference between withholding and withdrawing of life support if its use is proved to be medically futile (p = 0.233). The proposition about which the highest proportion of the participants (38.6%) were undecided was the proposition 20: "The concept of futile treatment is a medical intervention which ignores patient autonomy". Of all the professionals, 41.5% agreed with the proposition 21: "Delivering futile treatment and treatment is contrary to the goals of medicine". It was also determined that the great majority of the physicians and nurses (75.6%) agreed with the proposition 24: "Even if the treatment is withdrawn, medical practices regarding patients' physical care should be continued".

***Opinions on the Implementation of Futile Treatment***

The percentages of physicians and nurses who stated that some patients underwent futile treatment in intensive care units were close to each other; on the other hand, since 20.4% of the nurses were undecided about the proposition 3, the difference was statistically significant (p = 0.024). Of the entire participants, 50.6% disagreed with the proposition 6: "Resources in intensive care units should not be used for the treatment and care which are unlikely to contribute to desirable results.", and the difference was statistically insignificant. When asked their opinions about the proposition 7 regarding demoralization experienced due to futile care, 30.9% of the physicians and 14.8% of the nurses stated that they were not demoralized, and the difference between the groups was statistically significant (p = 0.035). Although 61.8% of the physicians and 72.2% of the nurses agreed with the proposition 15 that the decision of futile treatment should be taken by the team, the difference between them was not statistically significant (p = 0,319). Of the entire participants, 60.8% agreed with the proposition 17: "as a health professional, I am in an ethical dilemma because I think I have provided futile care". Almost half (45.62%) of the physicians and 70.4% of the nurses agreed with the proposition, and the percentage of the nurses agreeing with the proposition was significantly higher than that of the physicians (p = 0.004).

***Opinions about the Propositions That Futile Treatment Should Not Be Provided***

The percentage of the nurses (65.7%) who agreed with the proposition 9 that futile treatment should not be provided in intensive care units was higher than that of the physicians (54.4%), but the difference between them was not statistically significant (p = 0.116).

It was determined that 52.9% of the physicians and 69.4% of the nurses agreed with the proposition that patients should be provided with all treatment and care practices in intensive care units as long and as much as possible, (Proposition 10). Of the participants, 39.2% disagreed with the proposition 5 and 50.0% with the proposition 12, both of which were about the view that the patient's relatives demand is of no great importance when the decision to deliver futile treatment is made, and the difference was statistically significant (p = 0.039). A little more than half (55.9%) of the physicians and 63.9% of the nurses agreed with the proposition 16 suggesting that the decision to provide futile treatment should be made together with the family members, and the difference between the groups was statistically significant (p = 0.048).

***Opinions on Decisions Made By the Patient and Family***

Although the difference was statistically insignificant (p = 0.467), more nurses (60.2%) than the physicians (52.9% ) agreed with the proposition 4 that the decision about the use of futile treatment made by the patient with his/her free will based on the informed consent should be respected.

When the decision of futile treatment was made; of the participants, most (79.0%) agreed on the following principle: no harm should be done and that the patient should get benefit (propositions 29 and 30). Approximately half (42.6%) of the physicians and 57.4% of the nurses agreed with the proposition that the limited resources should be allocated fairly. The difference between the groups was statistically significant (p = 0.000).

***Opinions on the Reasons for the Implementation of Futile Treatment***

Almost half (48.5%) of the physicians and 63.0% of the nurses stated that futile treatment was provided in intensive care units upon families' demand (Proposition 13).

It was stated by 30.9% of the physicians and 48.1% of the nurses that futile treatment was provided due to lack of communication within the team, and there was a statistically significant difference between the nurses and the doctors regarding their agreement with the provision (p = 0.040) (proposition 14).

***Opinions on Regulating Guidelines Regarding the Implementation of Futile Treatment***

More than half of the nurses (67.6%) and 42.6% of the physicians stated that there were no attempts to prevent the delivery of futile treatment in intensive care units. The difference between the groups was statistically significant (p = 0.003) (proposition 22). Of all the participants, 68.2% agreed with the proposition 23 that clinical policies should be developed in order to prevent the delivery of futile treatment in intensive care units, and the difference was found to be statistically significant (p = 0.013). Of all the physicians and nurses participating in the study, 71.6% agreed with the proposition that there should be clinical ethicists in intensive care units from whom consultancy can be received, 79.0% agreed with the proposition that ethics education should be planned, 81.8% agreed with the proposition that ethical dilemmas should be dealt with team cooperation, % 83.5 agreed with the proposition that national criteria regarding ethical and legal dimensions of the issue should be established (Propositions 25,26,27, 28 respectively).

**Discussion**

In this study, it was found that most of the nurses and physicians agreed with the proposition on the definition of the concept of futile treatment (Table 3). In line with this finding, it can be said that the participants of the study have similar perceptions about the concept of futile treatment. In our study, more than half of the nurses and physicians (55.1%) stated that some patients received futile treatment in the intensive care units (Table 3).

In a study conducted in Canada, most of the physicians and nurses working in intensive care units reported that futile treatment was delivered in those units,[11] which is similar to the findings of our study. When the health staff was asked how often they encountered practices which they considered as futile treatment while providing treatment or care in intensive care units, some said every day (Table 2). These rates suggest that futile treatment is delivered in intensive care units. In several studies conducted in different countries,[11, 12, 16, 20] it has been reported that the frequency of the delivery of futile treatment is very high.

In another study, it was found that futile treatment was delivered in intensive care units upon the demand from families or due to lack of communication or time[12]. In a study conducted in Canada, it was reported that family's demand, physicians' demand and the legal obligation were among the reasons for providing futile treatment.[11] Similar results were obtained in our study. Among the reasons of the delivery of futile care, physicians' demand, family's demand and responsibility to

protect patient life took the first place (Table 2). Physicians provide futile treatment due to following reasons: they want to extend the dying patient's life and to relieve the patient's suffering; they do not want to be held responsible for deaths; success rate in an intensive care unit is based on the numbers of surviving patients; paternalistic attitudes still prevail in health care.[21,22] In their study in which they investigated physicians' views about the decision-making regarding end-of-life in intensive cares, Hot and Gürgan[23] found that physicians were held responsible for decision-making, which supports the results of our study.

Principle of beneficence refers to any action which provides the benefit for a patient at the highest level, and to prevent and remove harms, and to weigh and balance the possible goods against the cost and harms of an action.[5, 18, 24, 25] In this study, some of the participants stated that they pursued this practice in line with the principle of beneficence (Table 2). In their study, Hot and Gurgan related the decision of withdrawing life-support treatment to the reason that the treatment was not beneficial, which is consistent with the results of our study.[23]

In this study, 34.4% of the participants stated that withdrawing futile treatment was not different from euthanasia, and thus the treatment should be pursued (Table 2). The fact that euthanasia is prohibited in Turkey may have affected participants' responses. Hot and Gurgan[23] determined that 62% of the physicians considered that the withdrawal of life-support treatment was similar to euthanasia, which supports our findings.

While 38.1% of the participants stated that the decision to deliver futile treatment should be taken by the ethics committee, 22.2% stated that it should be made by the team (Table 2), which might be due the fact that it is difficult to take the responsibility for making the decision to deliver futile treatment and thus the responsibility should be shared. In Hot and Gurgan's study, it was determined that the decision to withdraw life-support should be made by the ethics committee.[23] What is ethical is that the decision should be taken not by one person but by the team so that the responsibility can be shared. In developed countries, clinical ethics committees in hospitals help professionals while they make ethical decisions; however, in our country there are not such organizations which will support health professionals in the clinical decision-making process.

***Opinions on the Concept and Meaning of Futile Treatment***

In this study, in line with the opinions of physicians and nurses on the concept and meaning of futile treatment, it was found that the vast majority of the participants agreed that the delivery of futile treatment only extended a patient's life but contributed minimum benefit to the patient's quality of life, and increased the duration during which the patient suffered from pain and/or distress (Table 3). In a study in which intensive care nurses' opinions regarding futile treatment was investigated, nurses stated that the delivery of futile treatment just extended patients' painful life.[26]

In their study, Löfmark and Nilstun[27] reviewed the literature on futile treatment and reported that most of the physicians used the term quality of life to define futile treatment, and half of the physicians and nurses regarded treatments and practices as futile if they did not provide any physiological benefit for the patient and the family. When the ethical declarations of Turkish Medical Association, the American Medical Association's Codes of Ethics and the British Medical Association's decision on end of life are reviewed, it is seen that quality of life and principle of beneficence were used as the criteria.[8, 28, 29]

It was determined that the great majority of the participants regarded the treatment and care provided for patients after their brain death occurred as futile treatment (Proposition 8), The majority of the physicians and nurses stated that interventions regarding the physical care of a patient should be pursued, even if the treatment was discontinued. Even if it was decided that the treatment was of

no possible benefits, treatment and care necessary to extend life should be continued by all health professionals and institutions.[30] While almost half of the nurses had the opinion that there was no difference between withholding and withdrawing of interventions regarded as futile treatment in terms of moral responsibility, some of the physicians and nurses remained undecided (Proposition 11). In a few national and international studies too, participants stated that there was no difference between withholding and withdrawing, which is in line with our findings.[14, 20, 31] On the other hand, in Hot and Gurgan's study, the great majority of the physicians stated that there was a moral difference between withholding and withdrawing, which contradicts with our findings. [23]

It is a striking fact that almost half of the physicians and nurses are undecided whether the delivery of futile treatment disregards the objectives of medicine and the autonomy of a person (propositions 20, 21). In line with the findings in our study, it can be assumed that futile treatment is provided considering physiological benefit. However, in the literature, it is emphasized that decisions should be made by the team, patients and their relatives altogether.[24] Robichaux and Clark reported that nurses fulfilled the physiological needs of the patients by giving priority to the "no harm principle". [32]

***Opinions on the Implementation of Futile Treatment***

While the majority of the participants stated that futile treatment was provided for some of the patients in intensive care units (proposition 3), the number of the nurses who were undecided was greater than that of the physicians. This might be due to the fact that nurses have dependent roles which require coordination with other health disciplines and that they mostly just participate in practices.

It can be said that participants agreed that the delivery of futile treatment prevented the fair allocation of limited resources in intensive care units (propositions 6). Health professionals experience dilemmas both because medical resources are limited and expensive, and because it is their responsibility to allocate these limited resources efficiently.[25] Opportunities to extend life with medical supports and emphasis on quality of life rather than quantity of life bring about economic concerns too[33] and this might cause health professionals to consider economic concerns while making the decision of delivering futile care.

It was determined that the participants, particularly the nurses, became demoralized due to the delivery of futile treatment (Proposition 7). Another finding shows that the vast majority of the participants (60.8%), particularly of the nurses, experienced ethical dilemma because they provided futile care, which supports the previous finding (Proposition 17). Lack of efficient communication in intensive care units, nurses' spending more time with patients, their role of patient advocacy, lack of regulation to guide decision-making processes related to the end of life applications in intensive care units in our country, and lack of scientifically planned patient-specific care can be listed among the reasons for experiencing ethical dilemmas.[11,14, 32] For health care workers, since the concept of life is not two different concepts such as being alive and leading a human life, it is difficult for them to make a decision and thus they experience a dilemma. Therefore, the vast majority of the physicians and nurses have the opinion that the decision about delivering futile treatment should be made as a team, which supports our thesis (Proposition 15). Studies conducted on moral distress revealed that levels of moral distress increased in health care professionals who stated that futile treatment was provided in intensive care units.[4, 10, 16, 34]

***Opinions That Futile Treatment Should Not Be Provided***

More than half of the physicians and nurses stated that futile treatment should not be provided for patients in intensive care units (proposition 9) or for oncology patients whose brain death occurred and who are in terminal state, but that patients in intensive care units had the right to benefit from all the necessary treatment and care practices (Proposition 10), which proves that the participants experienced ethical dilemmas due to the delivery of futile treatment.[4, 10, 16, 34]

***Opinions on Decisions Made By the Patient and Family***

In our study, it was found that the vast majority of the physicians and particularly of the nurses regarded that the patients' will or the patients' relatives' decision of not providing futile treatment in the intensive care unit is of importance (propositions 4,5,12,16). Health professionals have ethical responsibilities regarding the implementation of futile treatment. They should find ways to develop communication with patients and their families.[35] Through effective communication, families can be encouraged to participate in decision-making process.

In several other studies too, it is emphasized that the physician's decision is of course important in futile treatment applications but it is also emphasized the patient's and the family's participation in doctor's decision is of importance too. [26, 36, 27]

***Opinions on the Reasons for the Implementation of Futile Treatment***

The vast majority of the physicians and nurses in the study reported that futile treatment was provided because of the demand from the family (proposition 13) and lack of communication (proposition 14). A statistically significant proportion of the nurses in particular reported that futile treatment was provided because of the lack of adequate communication within the team. Since nurses have a status to carry out the decision rather than make it and since effective communication methods are not used,[37] nurses might perceive the implementation of futile treatment as a problem.

Our findings are consistent with the results of studies in the literature. In their study of intensive care units, Sibbald et al. (2007) found that futile treatment was provided upon the family's demand[12]. In another study, it was found that futile treatment was provided upon families' or physicians'' demand.[11]

***Opinions on Regulating Guidelines Regarding the Implementation of Futile Treatment***

In the study, it was determined that futile treatment was provided, but there were no efforts to withhold or withdraw it (propositions 22). However, a large number of physicians and nurses agreed on the following: (1)clinical policy regarding the withholding and withdrawing of futile treatment should be developed, (2) there should be clinical ethicists in intensive care units, (3) appropriate training programs which can contribute to medical ethical decision-making process should be planned, (4) the responsibility should be shared within the team, and (5) the criteria regarding ethical and legal dimensions of the issue should be established.

These recommendations reflect the views that difficulties regarding the implementation of futile treatment experienced by the participants can be solved through cooperation within the team, and through legal and institutional policies In their study, Robichaux and Clark emphasize that information on ethics and experience rather than clinical skill should be in the forefront in order to prevent conflicts related to implementation of futile treatment in end-of-life care. [32] The decisions taken within the scope of institutional policies are one of the main factors playing a role in solving problems resulting from end-of-life care.[38, 39]

***Conclusion***

As a result of our study, it can be said that health care professionals have similar views on futile treatment implementations and experience a number of dilemmas on this issue. Health care workers agree that the implementation of futile treatment contributes minimum benefit to patients' quality of life, but extends the duration of pain or distress they suffer. A great majority of the nurses and physicians stated that although some patients in intensive care units received futile treatment, it would be better not to provide futile treatment in intensive care units. It was also determined that physicians played an important role in making decisions whether futile treatment should be provided and that health care workers experienced ethical dilemmas due to the implementation of futile treatment. Participants stated that their problems could be solved through cooperation within the team, and through institutional and legal policies.

In this context, legal arrangements and training programs aiming to develop healthcare professionals' skills should be planned in our country. There is a need for the establishment and development of legal criteria and practice guidelines which will guide professionals in the clinical decision making process whether treatments and applications are futile or not.

***Limitations***

This study has one limitation. It demonstrates the results in only two hospitals. Therefore, the results of this study cannot be generalized to all other hospitals.

**Authors' contributions**

Study design: D Ö, Ş K, G Y
Data collection and / or analysis: D Ö, G Y, Ş K, E T
Preparation of the manuscript: D Ö, Ş K, G Y, E T

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**Apendix 1.**

| Number | Proposition |
|---|---|
| 1 | If the physician, patient or patient's relatives agree that treatment or interventions in which medical intervention is futile, which provide minimum contribution to the quality of life of a patient, have no possibility of meeting the expectations of the patient, and/or do not provide a reasonable chance of recovery, these treatment or interventions are medically futile interventions |
| 2 | Futile treatment and interventions only extend an individual's life span. |
| 3 | Some patients receive futile treatment in intensive care units. |
| 4 | The decision, whether futile treatment should be provided, be made by the patient on his/her own will during the better stage of the disease and be based on the informed consent should be respected |
| 5 | Futile treatment should be provided even if the patient or his/her relatives do not provide permission. |
| 6 | Resources in intensive care units should not be used for the treatment and care which are unlikely to contribute to desirable results. |
| 7 | Delivering futile treatment without the permission of the patient and/or his/her relatives demoralizes health professionals. |
| 8 | I think that the treatment provided for patients who are after their brain death has occurred should be considered as futile care. |
| 9 | Futile treatment should not be provided in intensive care units. |
| 10 | I think that patients in intensive care units should be provided with all treatment and care practices as long and as much as possible. |
| 11 | There is no difference between withholding and withdrawing of life support if its use is proved to be medically futile treatment. |
| 12 | Whether or not the patient and/or his relatives want the treatment is of no importance in making decision of futile treatment delivery. |
| 13 | In intensive care units, upon the demand of patient's relatives, futile treatment are provided for patients for whom it is unlikely to achieve the treatment goals. |
| 14 | Futile treatment are provided for patients due to lack of adequate communication between the members of the intensive care team. |
| 15 | Decisions that futile treatment should not be provided for patients in intensive care units should be made by all the members of the team. |
| 16 | Decisions regarding the delivery of futile treatment to patients in intensive care units should be made through coordination with the family members. |
| 17 | As a health professional, I experience ethical dilemmas because I think I have provided futile treatment. |
| 18 | While making decisions regarding the delivery of futile treatment, principles of providing benefit and causing no harm should be taken into consideration. |
| 19 | While decisions regarding the delivery of futile treatment are made, fair allocation of finite resources should be taken into consideration more. |
| 20 | The concept of futile treatment is a medical intervention which ignores patient autonomy |
| 21 | Delivering futile treatment is contrary to the goals of medicine. |
| 22 | We have some efforts to prevent the delivery of futile treatment in the intensive care unit. |
| 23 | Clinical policies should be developed in order to prevent the delivery of futile treatment in intensive care units. |
| 24 | Withholding or withdrawing medical treatment does not necessitate the withdrawal of nursing care. |
| 25 | I think that there should be clinical ethicists in intensive care units from whom we can receive consultancy. |
| 26 | Ethics education, which can help intensive care givers to make medically ethically approved appropriate decisions, should be planned. |
| 27 | The responsibility of solving ethical dilemmas regarding futile treatment should not be left only to the hands of health professionals; but should be shared through team coordination. |
| 28 | National criteria including ethical and legal dimensions of futile treatment should be established. |