Society of Medical Education & Research

2024, Volume 4, Page No: 263-275
ISSN: 3108-5059

Asian Journal of Ethics in Health and Medicine

Perceived Futility and Its Drivers in End-of-Life Care: A Study of Healthcare Providers

Samira Beiranvand[1], Sogand Daei[2], Zeinab Kord[3], Hadis Ashrafizadeh[3*]

[1]Nursing Care Research Center in Chronic Diseases, School of Nursing and Midwifery, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran.
[2]Clinical Research Development Center, Department of Hematology and Oncology, Faculty of Medicine, Dezful University of Medical Sciences, Dezful, Iran.
[3]Faculty of Nursing, Dezful University of Medical Sciences, Dezful, Iran.

***E-mail** ✉ Ashrafizadeh.h1993@gmail.com

Abstract

The concept of medical futility has created complex dilemmas for healthcare teams. Recognizing these dilemmas can help manage challenging situations more effectively and enable better planning. This study aimed to examine how care providers perceive futile care and the factors contributing to it for patients in the final stages of life. This was an analytical-descriptive study conducted in Dezful, Iran, in 2022. It involved 308 care providers, including physicians, nurses, and medical and nursing interns. Data were gathered using a tool with three parts: demographic. The average score for the perception of futile care stood at 103.20 ± 32.89, while the mean score for the reasons behind delivering futile care was 118.03 ± 26.09. A statistically significant correlation was observed between perception scores and the reasons for providing futile care among end-of-life patients (P-value = 0.000, r = 0.465). The findings revealed that approximately half of the care providers held a moderate perception of futile care and the motives for its provision. The specific reasons cited by participants, combined with the positive association between perception and education levels, underscore the importance of implementing training programs. Such initiatives would help care providers gain a clearer understanding of futile care and foster improved attitudes toward caring for patients at the end of life.

Keywords: Futile care, Chronic patients, End-of-life patients, Nurses, Physicians

Introduction

All health-related fields face ethical dilemmas in one form or another within their professional practice [1]. Factors contributing to the emergence of new challenges and ethical questions for care providers in clinical environments include advances in medical technology (such as dialysis machines, life-support systems, and assisted reproductive methods), the growing elderly population, the rise of various chronic illnesses, greater emphasis on patient rights, and shifts in professional roles [2]. End-of-life care gives rise to some of the most difficult ethical concerns in healthcare, including decisions related to do-not-resuscitate (DNR) orders, euthanasia, and medically assisted dying. It is essential to differentiate clearly between these concepts. Although often mentioned alongside end-of-life issues, futile care and ineffective treatments are fundamentally different from actions intended to end a patient's life deliberately. Futile care involves medical procedures that offer no realistic chance of benefit to the patient in terms of survival or quality of life, such as extending suffering or maintaining irreversible unconsciousness [3-5]. In contrast, euthanasia and medically assisted dying refer to the intentional termination of life and are subject to separate ethical and legal considerations [6].

Access this article online https://smerpub.com/

Received: 05 November 2023; **Accepted:** 16 February 2024

How to cite this article: Beiranvand S, Daei S, Kord Z, Ashrafizadeh H. Perceived Futility and Its Drivers in End-of-Life Care: A Study of Healthcare Providers. Asian J Ethics Health Med. 2024;4:263-75. https://doi.org/10.51847/RpkHfOATkN

Identifying medical futility carries direct ethical implications: when treatment offers no meaningful benefit, physicians have no moral obligation to provide it, even if requested by the patient's family. Some experts further argue that principles of justice require physicians to refrain from ordering futile interventions [7]. There is a broad consensus among ethicists that doctors are not ethically bound to start or continue treatments that are ineffective or unlikely to help. Withholding such interventions is viewed as a core professional responsibility in medical ethics [8].

The apparent simplicity and practical value of the concept of medical futility have led to its incorporation into numerous hospital policies, official reports, and court rulings as a basis for discontinuing aggressive treatments [9]. Contemporary debates over medical futility typically arise when physicians and patients (or their families) differ on whether a specific treatment is futile. In some discussions, the term "futility" is deliberately avoided, and treatments are instead labeled as inappropriate, inadvisable, not indicated, potentially inappropriate, or nonbeneficial. Regardless of terminology, disagreements stem from varying interpretations of what constitutes a genuine benefit for an individual patient. Physicians, patients, and family members may hold contrasting views, for instance, on the worth of briefly extending life when death is unavoidable. In certain cases, the poor quality of a patient's life—such as a permanent lack of awareness or an inability to interact with the environment without the prospect of recovery—leads many to conclude that continued life-sustaining measures have little value. In essence, advances in medical technology can challenge existing moral and ethical beliefs and frameworks [10].

The American Medical Association (AMA) has identified futility as a valid justification for physicians to issue a DNR order, even without patient consent [11]. There is also an ongoing debate regarding statistics on futility. One study examining futility judgments by physicians and nurses in intensive care units found that in 63% of dying patients, at least one disagreement occurred in decision-making about futile care [11]. Research has indicated that nearly 50% of ICU patients who die receive futile care, consuming substantial resources [12]. The concept of medical futility, particularly cardiopulmonary resuscitation (CPR), has also been examined in COVID-19 patients. According to Shah *et al*. [13], out of 1094 hospitalized COVID-19 patients, 63 experienced in-hospital cardiac arrest, and all of them (100%) died following resuscitation efforts, irrespective of individual characteristics or underlying conditions. This finding highlights a high rate of futile interventions during the end-of-life phase in COVID-19 cases, although it does not imply that other treatments would necessarily be ineffective. Consequently, recognizing futile care remains a significant challenge in modern clinical practice, especially given the uncertainty of prognoses for life-saving interventions and constraints on resources and facilities [14].

Thus, delivering futile care involves numerous difficulties, one of the most prominent being its financial burden. Each year, billions of Rials from national per capita income are spent on unnecessary treatments such as antibiotic therapy, endoscopy, and ultrasound, despite the absence of valid medical indications [15]. Moreover, many hospital beds, operating rooms, and ICU spaces are occupied by cases lacking meaningful medical justification [16]. The unpredictable duration of such care can impose heavy financial burdens on patients, families, and the healthcare system, and can also indirectly affect medical staff [17]. These are not the only costs; insurance expenses and additional charges further compound the issue [18]. Beyond healthcare institutions, families often face severe financial strain and emotional distress. Nurses, too, experience negative effects due to institutional limitations [19]. In addition to economic costs, ethical dilemmas frequently arise, challenging core principles such as autonomy, non-maleficence, beneficence, and justice. The principle of autonomy asserts that patients should retain decision-making authority throughout all stages of treatment and have the right to accept or refuse care [20]. When applied to physicians, this principle grants them the authority to make decisions based on clinical judgment and the patient's condition, including prescribing or withholding specific interventions [21].

Given the distinct roles of physicians and nurses, their understanding of the nature and specific examples of futile care in end-of-life patients often differs considerably. This perceptual gap among healthcare providers stems from inconsistencies between clinical judgments and realistic treatment goals [5, 22]. Varying interpretations of what constitutes futility and futile care create significant challenges for treatment teams and patients' families when deciding whether to continue or discontinue interventions [14]. What one team considers

futile may not be viewed the same way by another team, in a different city or country, or by the patient and family [23]. Therefore, any discussion of futility or withholding care must consider the specific cultural and contextual definitions of the term. In medicine and medical ethics, these questions continue to spark extensive debate [24], as decisions regarding futile care and how to manage patients receiving such services rank among the most sensitive issues and can easily result in unethical choices by healthcare staff. Consequently, determining whether medical actions are futile or beneficial requires careful deliberation and cannot be made lightly [18]. Overall, the concept of medical futility has generated many complex conflicts for healthcare professionals. By identifying these conflicts, it becomes possible to address them and develop better management strategies [10]. Despite the widespread occurrence and complexity of issues surrounding futile care among physicians and nurses, this topic has received limited attention in Iranian society, with relatively few studies conducted, particularly among physicians. Given the critical role that treatment team members' perception of medical futility plays in the quality of clinical services and the physical and mental well-being of staff, the present study was undertaken to assess the level of perception and the reasons behind providing futile care from the perspective of care providers at Ganjaviyan Hospital, Dezful, Iran, in 2022.

Materials and Methods

Study design and study setting

This descriptive research was conducted at Ganjavian Hospital in Dezful, Iran, in 2022.

Study participants

The target population included physicians, medical interns, nurses, and nursing students currently working at Ganjavian Hospital in Dezful. This facility is the biggest teaching and referral hospital in the city and functions as the primary healthcare hub for northern Khuzestan Province and nearby districts. The minimum sample size was set at 300, calculated using the standard formula with d = 0.05, P = 0.5, and α = 0.05. Findings from earlier studies by Rostami *et al*. [19] and Rezaei *et al*. [25] were also considered when determining the final sample size.

$$n \geq \frac{(z1-\frac{\alpha}{2})^2 * p(1-p)}{d^2} \quad (1)$$

Inclusion criteria required that nurses hold at least a bachelor's degree (or higher, including master's or Ph.D. in nursing), nursing students be in their 7th or 8th semester, and physicians possess a professional doctorate, specialty qualification, or be serving as medical interns. In addition, every participant needed at least 6 months of direct patient care experience in the terminal phase and had to agree to participate voluntarily. Individuals who declined to join or who submitted incomplete questionnaires were excluded. Sampling was performed using stratified random sampling, with allocation proportional to the size of each professional category. Once the required number for each group was determined mathematically, individual participants were assigned numbers via a random number table. The researcher then approached each group, selected individuals according to their assigned random numbers, and handed out the study questionnaires.

Study process

The researcher attended the hospital during various shifts to distribute the questionnaires. Before participants began filling them out, the aims of the study and its significance were clearly described. All care providers received guarantees of data confidentiality, complete anonymity, and the freedom to withdraw at any time without consequence. After the research proposal received approval from the university research council, the project was formally registered in the Pajoohan system at Dezful University of Medical Sciences to secure the official ethics approval.

Study instruments

The data-gathering instrument was divided into three distinct sections. The first section collected background and demographic details such as age, gender, highest level of education, marital status, years of professional experience, average weekly working hours, current department, clinical background, degree of job satisfaction, interest in the field, shift type, employment at multiple hospitals, and any personal experience with a family member reaching the end-of-life stage.

The second section evaluated participants' perception of futile care. It was formed by merging two established tools: the Perception of Futile Care questionnaire and the perceived inappropriate care (PIC) scale [25, 26]. The PIC scale was created by Pierce *et al*. in 2011. With the developer's permission, certain items were adapted into Farsi in accordance with the translation guidelines

proposed by Wild *et al*. [27]. The Perception of Futile Care portion contains 30 items rated on a 6-point Likert scale (1 = strongly disagree to 6 = strongly agree). All statements are positively phrased. Possible total scores range from 30 to 180. Scores between 30 and 80 were classified as poor perception, 81–130 as moderate, and 131–180 as good. Content validity was verified by ten faculty members from the Medicine and Nursing schools at Tehran University of Medical Sciences. Reliability was assessed using the test-retest method (stability coefficient = 0.75) and internal consistency via Cronbach's alpha (0.85) [25].

The third section explored the underlying reasons for providing futile care. This instrument was originally developed and validated by Yekefallah *et al*. [22]. It consists of 39 items scored on a 5-point Likert scale. It covers five main dimensions: personal beliefs and values (items 1–4, range 4–20), professional competence (items 5–18, range 14–70), organizational policy (items 19–27, range 9–45), legal issues (items 28–32, range 5–25), and sociocultural factors (items 32–39, range 7–35). Total scores range from 39 to 195, with higher scores pointing to a greater number of contributing factors. Scores of 39–77 were interpreted as low perception of reasons, 78–154 as moderate, and above 154 as indicating multiple strong reasons for delivering ineffective care. In the 2013 validation study, overall reliability was reported as 0.91 (Cronbach's alpha), while subscale reliabilities ranged from 0.77 to 0.87 [22]. Validity was established through expert judgment by the supervisor professor and several other academic specialists who reviewed the items for relevance, clarity, and appropriateness.

Study analysis

All collected data were entered into SPSS software version 24 for statistical processing. Scores for the two primary variables — perception of futile care and reasons for providing it — were first computed and then categorized according to the Likert scale. Descriptive statistics, including frequency distributions, means, and standard deviations, were used to summarize both main and demographic variables. Inferential analyses involved independent t-tests, chi-square tests, one-way ANOVA, and non-parametric equivalents (Mann-Whitney U and Kruskal-Wallis tests) where appropriate. To examine the main research objective, Pearson's correlation coefficient was computed between the two key variables across the participant groups.

Patient and public involvement

Patients and/or members of the public participated in both the design and the planned dissemination of this research.

Results and Discussion

The study revealed that participants had an average age of 28.21 ± 7.44 years, ranging from 26 to 70. Women comprised 59.41% of the group, while men made up 40.58%. For non-student care providers, the average professional experience was 5.45 ± 3.71 years, and the average time spent working in special care units was 2.54 ± 1.51 years. Further details on demographic and clinical characteristics appear in **Table 1**.

Table 1. Demographic and clinical characteristics of the research participants (n = 308)

Variables	Category	Reasons for futile care (mean ± SD)	Perception of futile care (mean ± SD)	%	N
Gender	Female	112.66 ± 27.66	100.44 ± 32.33	59.41	183
	Male	116.77 ± 25.09	103.24 ± 34.13	40.85	125
	P-value	0.163*	0.663*		
Marital status	Married	115.21 ± 24.45	100.80 ± 30.94	34	105
	Single	114.19 ± 28.58	104.84 ± 36.17	66	203
	P-value	0.641*	0.297*		
Field of study	Nursing	118.22 ± 26.41	105.85 ± 32.71	66.55	205
	Medicine	108.16 ± 26.12	94.49 ± 35.14	33.44	103
	P-value	0.004*	0.036*		
Educational level	General practitioner	106.86 ± 23.29	90.24 ± 33.81	28.24	87
	Resident (specialization student)	115.10 ± 7.75	153.00 ± 19.07	0.9	3

	Clinical specialist (assistant specialist)	103.50 ± 6.36	116.50 ± 7.18	4.2	13
	Bachelor's degree/nursing student	115.63 ± 27.00	102.03 ± 32.71	55.8	172
	Master's degree in nursing	125.39 ± 26.30	123.43 ± 26.56	8.1	25
	PhD in nursing	124.42 ± 27.62	122.25 ± 19.07	2.6	8
	P-value	0.031**	0.000**		
Work shift	Fixed morning	122.13 ± 29.09	109.33 ± 30.02	10.7	33
	Fixed evening	122.00 ± 24.27	135.50 ± 30.35	1.6	5
	Fixed night	109.20 ± 27.35	108.25 ± 16.52	1.9	6
	Fixed morning–evening	116.91 ± 16.11	106.11 ± 24.06	3.9	12
	Rotational	113.27 ± 26.53	99.65 ± 30.35	81.81	252
	P-value	0.811**	0.117**		
Overtime work	Yes	113.73 ± 27.07	100.48 ± 31.94	41.55	128
	No	115.53 ± 25.97	103.08 ± 32.28	58.44	180
	P-value	0.783*	0.451*		
Palliative care training	Yes	119.30 ± 31.62	113.92 ± 37.59	10.7	33
	No	113.96 ± 25.44	100.28 ± 31.88	89.30	275
	P-value	0.558*	0.078*		

From: Perception of futile care and the reasons behind providing it for the patients at end-of-life stages from the care providers' perspective
1. Comment: Due to non-normal distribution, the Mann–Whitney test was applied for binary variables (marked with *), and the Kruskal–Wallis test was used for variables with several categories (marked with **).

The average score for perception of futile care was 103.20 ± 32.89, ranging from 30 to 180. The average score for reasons behind delivering futile care was 118.03 ± 26.09, with values ranging from 39 to 195 **(Table 2)**.

Table 2. Mean and standard deviation of perception of futile care and the reasons behind it from the perspective of care providers

Variables	Category	Maximum	Minimum	SD	Mean
Perception of futile care	—	180	30	33.44	103.20
Determinants of futile care	Personal beliefs and values	20	4	14.30	4.90
	Individual competence	70	14	12.00	42.24
	Organizational policies	45	9	7.33	24.61
	Legal considerations	25	5	4.31	12.41
	Cultural and social factors	35	7	6.90	24.79
	Total score	195	39	26.18	118.39

From: Perception of futile care and the reasons behind providing it for the patients at end-of-life stages from the care providers' perspective

Overall, 59.67% (n = 153) of care providers displayed a moderate perception of futile care for patients nearing the end of life. In addition, 84.41% (n = 260) achieved moderate scores on the scale assessing reasons for providing futile care **(Table 3).**

Table 3. Distribution of the frequency of perception of futile care and the reasons behind it in end-of-life patients from the point of view of care providers (n = 308)

Variables	Category (score range)	%	N
Perception of futile care	Low (30–80)	25.97	80
	Moderate (81–130)	49.67	153
	High (131–180)	24.35	75
Contributing factors to futile care	Low (39–77)	8.11	25
	Moderate (78–154)	84.41	260

	High (155–195)	7.46	23

From: Perception of futile care and the reasons behind providing it for the patients at end-of-life stages from the care providers' perspective

On the perception of futile care questionnaire, the items that received the strongest agreement concerned poor communication among team members, unclear patient prognosis, and inadequate information given to patients and families about expected outcomes. The items with the lowest agreement were "I think I am providing the patient with insufficient care," "In my opinion, caring for a patient with little chance of recovery is futile," and "I think caring for a patient at the end-of-life stage because of feeling responsible is futile" **(Table 4).**

Table 4. The lowest and the highest mean scores of the items of perception and causes of futile care in the patients at the end-of-life stages

Domain	Item	%	Agreement (Agree/Strongly agree) (n)	SD	Mean
Perception of futile care	**Highest mean scores**				
	Ineffective communication within the healthcare team	45.4	140	1.06	4.07
	Uncertainty regarding the patient's prognosis	38.3	118	1.61	3.79
	Misunderstanding of the patient's prognosis by the patient and family	35.7	110	1.56	3.71
	Lowest mean scores				
	Perception of providing inadequate care to the patient	18.5	57	1.61	2.79
	Belief that caring for patients with a minimal chance of recovery is futile	18.6	58	1.59	2.80
	Considering end-of-life care is futile when driven by a sense of duty	18.6	58	1.82	2.94
Causes of futile care					
Personal beliefs and values	Commitment to fulfilling professional responsibilities	65.9	203	1.34	3.54
	Positive past experiences with recovery among critically ill patients	61.7	190	1.34	3.43
Individual competence	Inadequate use of experienced nurses and provision of inappropriate ICU care	57.4	177	1.52	3.34
	Maintaining patients on treatment due to reluctance to admit new patients during shifts	33.5	103	1.36	2.61
Organizational policies	Absence of a formal committee for decisions on transferring dying patients from the ICU	57.4	177	1.42	3.36
	Overlooking input from supervisors and nursing managers in transfer decisions	47.7	147	1.39	3.04
Legal considerations	Documentation of orders primarily to meet accountability requirements in committees	58.1	179	1.41	3.30
	Ignoring patient or family preferences regarding the avoidance of CPR	40.3	124	1.43	2.81
Cultural and social factors	Financial limitations of families affect the continuation of home-based care	72.1	222	1.32	3.83
	Unrealistic expectations of families regarding full patient recovery	54.6	168	1.41	3.24

1. In this table, the frequency and percentage of respondents who selected "Agree" or "Strongly Agree" have been reported. Consequently, the items with the highest and lowest response rates for both variables are presented by dimension. Additionally, the mean and standard deviation of the Likert scale scores are provided in two separate columns.

When examining reasons for providing futile care, care providers most often pointed to the family's financial inability to arrange home care (under sociocultural factors), a sense of professional obligation, and previous positive experiences with recovery in terminally ill patients (under personal beliefs and values). The least frequently mentioned reasons included continuing medications merely to avoid accepting a new patient during the shift (under individual competence), overlooking the patient or family's request not to perform CPR (under legal issues), and failing to consult supervisors or nursing managers during patient transfers from the ICU (under organizational policies) **(Table 4).**

Further analysis showed no meaningful statistical link between perception of futile care scores and factors such as age (P-value = 0.102, r = 0.113), overall work experience (P-value = 0.394, r = 0.067), experience in special care (P-value = 0.527, r = 0.060), or average overtime hours (P-value = 0.336, r = -0.116). Likewise, the scores for reasons behind futile care showed no significant correlation with age (P-value = 0.232, r = -0.075), work experience (P-value = 0.766, r = -0.022), special care experience (P-value = 0.383, r = 0.076), or overtime hours (P-value = 0.855, r = 0.020).

However, a clear, statistically significant positive correlation emerged between futile care perception scores and the reasons for providing futile care (P-value = 0.000, r = 0.465). Education level was also significantly associated with both perception of futile care (P-value = 0.000) and reasons for providing it (P-value = 0.031). Academic discipline further demonstrated significant relationships with perception of futile care (P-value = 0.036) and reasons behind providing futile care (P-value = 0.004).

The results of this study showed that nearly half of the care providers held a moderate view of futile care. This outcome aligns with the findings reported by Begjani *et al*. [28], but contrasts with those of Moaddaby *et al*. [29]. It appears that the concept of futile care is shaped by a variety of factors, including cultural, ethical, and religious considerations; the quality of communication among healthcare staff, patients, and families; the unpredictable course of certain illnesses; existing guidelines and regulations; and the specific working environment [25].

Regarding perceptions of futile care, participants showed the strongest agreement on items related to poor communication within the treatment team, uncertainty about the patient's prognosis, and insufficient or unclear information provided to the patient and family about the expected outcome. Several previous studies have highlighted ineffective communication between healthcare teams and families, limited nurse involvement in decision-making, and overly optimistic expectations from families as key contributors to futile care [30-32]. To enhance communication, it is advisable to introduce targeted training programs for physicians and nurses focused on communication skills (for example, using the STICC and BATHE models), adopt secure digital platforms linked to electronic health records, and organize routine family meetings to discuss the patient's condition and likely prognosis [33]. Additionally, addressing unrealistic family expectations during the end-of-life period requires greater efforts to educate families about futile care and disease trajectories. This can be achieved through compassionate, story-based methods of sharing medical information and by providing psychological support to help families understand and accept the clinical situation [34].

In contrast, the items that received the lowest agreement in the perception of futile care questionnaire were "I think I am providing the patient with insufficient care," "In my opinion, caring for a patient with a low chance of recovery is futile," and "I think caring for a patient in the final stages of life because of feeling responsible is futile." These findings differ from earlier research; for instance, Kasim *et al*. noted that participants placed greater emphasis on avoiding futile interventions when recovery was unlikely [35]. Such differences in outlook between nurses and physicians may arise from their differing professional responsibilities and varying levels of direct patient and family contact. Nurses tend to adopt a more conservative approach to futile care [4, 36].

According to the present study, the most frequently cited reasons for providing futile care, as perceived by healthcare providers, fell under cultural and social factors. These included the family's financial difficulties,

insufficient knowledge and readiness for home-based care, limited cultural understanding, lack of insurance support, shortage of specialized home nursing facilities that would allow safe discharge, absence of assistance from social work or charitable bodies such as the Behzisti Organization for renting essential equipment like ventilators, and overly hopeful expectations of full recovery by the family. Among these, the financial inability of families to arrange necessary home care facilities emerged as the most prominent issue. These observations are consistent with those of Akbari *et al*. [30], who found that more than half of the participants attributed families' difficulties in managing terminal care to gaps in knowledge, inadequate skills, lack of equipment, and economic constraints. Similarly, Heyland *et al*. [37] found that only 11% of critically ill patients and their families could correctly identify more than two elements of cardiopulmonary resuscitation (CPR), and fewer than 3% had a realistic understanding of CPR outcomes. In the work of Yekefallah *et al*. [22], socio-cultural elements such as insufficient support from social services or charitable organizations like Behzisti, and limited insurance coverage for home care, ranked among the top reasons for futile care. Although the exact order of importance varied slightly, there is considerable overlap with the current findings. It seems that improving how healthcare systems address futile care will require strengthening social support structures, developing culturally sensitive awareness programs, increasing public understanding of the realities and risks of aggressive end-of-life treatments, and shifting societal attitudes toward death—particularly for families of patients in intensive care. Charitable organizations, including the Behzisti Organization, could play a valuable supporting role alongside healthcare teams in this effort [38].

The second most influential dimension identified by participants was personal beliefs and values. This category encompassed religious convictions, dedication to professional responsibilities, feelings of guilt, and past positive experiences with patient recovery. In this study, "commitment to professional duties" and "positive experiences of caregivers with recovery in dying patients" ranked second and third, respectively, among common reasons for futile care. Spiritual and religious beliefs can significantly shape attitudes toward futile care and overall job satisfaction [39]. Moral values and personal encounters with death among physicians and nurses also affect decisions to persist with ineffective treatments [22]. While perspectives on the influence of religion differ, difficult experiences such as sudden or tragic deaths and personal losses may lessen the inclination to prolong treatment [40]. Professionalism, as a core element of caregiving, involves upholding ethical standards, values, and responsibilities in every situation [22]. Interestingly, one earlier study found that positive recovery experiences were among the less frequent reasons for continuing futile care [22]. Nevertheless, personal and professional values and beliefs clearly exert a strong influence on the delivery of futile care [41]. Variations in nurses' perceptions across different studies may be attributed to cultural contexts, the use of different measurement tools, and differences in research design and focus.

The third most prominent dimension from the viewpoint of healthcare providers was individual competence. Key aspects in this category included the shortage of experienced nurses and physicians, as well as delivering substandard care in the intensive care unit, which emerged as the strongest factor. Other elements ranked lower, such as performing futile care under the psychological strain of the ICU environment, lack of trust among team members, insufficient skills in resuscitation leading to further ineffective actions, care mistakes by the team that triggered additional futile interventions, fear of reporting errors, the pressure to document every action as the sole measure of performance, and keeping patients alive with medications to avoid admitting new patients during a shift. Hansen *et al*. [42] noted that nurses often lack adequate knowledge of protocols and approaches for supporting patients and families during end-of-life care, palliative interventions, symptom management, and the appropriate withdrawal of treatments. Studies from physicians' perspectives similarly suggest that futile care frequently stems from a strong treatment-oriented mindset, limited exposure to end-of-life decision-making, emotional bonds with patients, and insufficient training in palliative approaches [40]. In Yekefallah *et al*.'s study [22], the most significant professional competence issues contributing to increased futile care in ICUs were physicians' failure to follow ethical principles when interacting with families, withholding the truth, and obtaining coerced consent for procedures. These behaviors often led to false hope, reluctance to accept clinical realities, fewer patients being discharged home, and prolonged ICU stays

[22]. It is therefore essential to provide targeted training for physicians, nurses, medical students, and nursing students on recognizing signs of impending death, communicating effectively about death and dying with patients and families, and strengthening their overall professional capabilities [43].

Another important dimension involved legal and ethical concerns. The most notable factor here was physicians documenting certain orders purely to demonstrate accountability during committee reviews and hospital meetings. Other elements included recording futile orders out of fear of legal repercussions, the absence of a "Code No" order in patient files leading to mandatory CPR, the lack of national laws or standardized protocols for managing dying patients, and disregarding the patient or family's wishes to withhold CPR, which ranked as the least influential. One key driver of futile care is the tendency to document unnecessary orders due to legal and professional concerns. Andy *et al*. reported that 70.7% of participants considered futile treatment an ethical dilemma, while more than 82.9% admitted to providing such care when instructed by a physician. Nurses without formal ethics education tended to show more permissive attitudes toward futile interventions [44]. In Yekefallah *et al*.'s study [22], the primary legal issue was the absence of national laws or standard guidelines for hospitalizing and treating terminally ill patients. Additional contributing factors include poor bed management in ICUs, issuing futile orders to avoid responsibility, fear of lawsuits or managerial repercussions, unclear hospital policies, and ambiguous guidelines on futile care [41, 45-47]. Santonocito *et al*. identified disagreements over when resuscitation is appropriate as one of the most frequent sources of conflict in clinical settings [48]. In contexts such as Iran and other Islamic countries, the lack of clear, culturally appropriate guidelines for determining the boundaries of futile care and for implementing do-not-resuscitate (DNR) orders creates significant legal, ethical, and religious challenges. Developing a unified, ethically sound, religiously compatible, and legally clear framework for futile care and DNR decisions is crucial to reducing conflicts and promoting better patient-centered care in Islamic healthcare systems.

The final dimension highlighted organizational factors as contributors to futile care. The most critical indicator was the absence of a dedicated committee to decide on the transfer of dying patients from the ICU to home or other wards. Additional factors included admitting patients unnecessarily to prevent family complaints, performing invasive procedures mainly to please families and protect professional image, reluctance to transfer patients to general wards due to concerns about care quality, centralized decision-making by the medical team leading to excessive orders, the lack of step-down or post-ICU units in some hospitals, and overlooking the input of head nurses and nursing managers during patient transfers (the least important factor in this dimension). Research indicates that one major organizational barrier in Iran is the shortage of palliative care centers, sanatoriums, and home-care services. Although some progress has been made in recent years toward establishing such facilities, their availability remains far below the actual demand from patients requiring palliative and end-of-life support [49, 50]. Other studies have shown that physicians may hesitate to stop futile treatments partly to meet family expectations [29]. In Robert Sibbald's research, the majority of participants identified pressure from families or surrogate decision-makers as a significant driver of futile medical interventions [51]. Minor variations between studies can often be explained by differences in participant groups, research settings, and the assessment tools employed.

Furthermore, ignoring patients' personal wishes is another contributing factor. A study conducted in Germany found that older patients frequently struggled to achieve a dignified and peaceful passing because medical teams persisted in delivering interventions the patients neither desired nor benefited from. Relatives described considerable emotional burden and were often forced to push strongly to uphold their family members' wishes concerning end-of-life care [52]. As a result, numerous individuals with terminal conditions ended up receiving interventions that went against their core values, including unwarranted admissions to intensive care units, which caused discontent among patients and families while also placing additional pressure on healthcare resources [53]. According to the research by Yekefallah *et al*. [22], from an institutional policy perspective, the absence of a dedicated committee to decide whether to transfer dying patients to their homes or to other wards was identified as the leading cause of futile care. Hence, determining whether treatments have become futile proves highly complex and demanding, necessitating collaborative efforts and backing from an ethics committee [47]. In Iran, hospital ethics committees tend to remain largely dormant and ineffective, partly because of overlaps or clashes with religious oversight

bodies. Healthcare professionals often lack a clear understanding of these committees' roles, resulting in limited involvement in ethical decision-making [54]. Evidence indicates that organizational structural changes could strengthen the effectiveness of ethics committees and better equip them to address complex treatment challenges [55]. Considering the serious dangers associated with futile care, the existing shortcomings in healthcare institutions are particularly alarming, especially when they lead to the early discontinuation of treatments that might still offer real benefits [15, 18]. Consequently, to reduce futile care and its burden on healthcare staff, responsible authorities must implement measures to eliminate current obstacles and upgrade the required infrastructure.

Results of this research indicate a link between educational level and the perception of futile care. Specifically, medical residents and nurses holding master's or doctoral qualifications displayed the greatest awareness of futile care. This pattern can be explained by various factors, such as more advanced specialized education at higher academic levels, improved skills in ethical reasoning, and broader hands-on clinical exposure, all of which foster a deeper understanding of issues surrounding the end of life. In addition, those with higher educational attainment frequently exhibit a more analytical and comprehensive outlook on healthcare practices, along with increased attentiveness to the cultural, ethical, and systemic aspects of futile care. In investigations by Rezaei *et al*. [25], Moaddaby *et al*. [29], and Nazari *et al*. [41], caregivers with higher educational qualifications demonstrated a superior understanding of futile care and the underlying motives for delivering it. Conversely, the studies by Rostami *et al*. [19] and Andi *et al*. [44] did not identify a relationship between educational attainment and perceptions of futile care. A 2024 German study by Mohacsi *et al*. further emphasized that strong communication between care teams and families, combined with ethics training at advanced academic levels, plays a key role in reducing futile care [52]. The observed variations might stem from differences in the educational backgrounds of the participant groups. Even so, it appears reasonable to conclude that earning higher academic qualifications and participating in relevant educational programs are likely to heighten care providers' awareness of the various dimensions of caring for critically ill patients, particularly regarding futile care.

This research also found that nurses expressed markedly greater awareness of futile care and its causes than physicians did. In the Iranian context, nurses generally dedicate more time to direct bedside care and develop stronger relationships with patients' families. Such close involvement likely heightens their awareness of the negative outcomes associated with futile care, including prolonged patient distress, emotional strain on families, and inefficient use of resources. Moreover, although nurses in Iranian hospitals carry major responsibility for carrying out treatment plans, they are frequently left out of the ultimate decision-making steps. This separation can generate moral dilemmas and intensify their sense of futility. These outcomes are consistent with the findings of Rezaei *et al*. [25], who observed that nurses possess a stronger perception of futile care than physicians and consequently endure higher levels of stress. In a similar vein, Piers *et al*. [26] reported that nurses working in intensive care units are more prone than doctors to experience burnout stemming from futile care and also report elevated perceptions of futility. Piers *et al*. [56] likewise showed that nurses, especially when compared with younger physicians, tend to deliver more futile care and experience greater moral distress. When viewed collectively, these outcomes imply that the perception of futile care is a complex phenomenon influenced by cultural factors, professional hierarchies, and practical clinical exposure. The notable gap between nurses' and physicians' views on futility in Iran underscores the urgent need to improve ethical training, decision-making structures, and nurse involvement in care teams. Comparisons drawn from international research further underline the importance of such changes.

Descriptive studies and data gathered in clinical settings face several challenges, including limited enthusiasm among participants. This lack of interest may arise from multiple causes, such as reluctance to address topics related to dying and existing obstacles to open discussion, since individuals may possess only a partial understanding of the subject. An additional constraint of the current research was reliance on self-reported data for collection, without direct monitoring of healthcare and caregiving staff's actual practices and behaviors. Future investigations could incorporate behavioral assessment techniques, such as direct observation, colleague evaluations, and similar approaches, to provide a more objective evaluation.

Conclusion

Overall, the findings of this study indicated that nearly half of the care providers had a moderate level of perception regarding futile care. In contrast, more than 80% had a moderate understanding of the factors that lead to its delivery. Furthermore, according to the participants, the most frequent reasons for providing futile care fell into two main categories: cultural and social dimensions, and professional beliefs and values. In contrast, the least commonly cited reasons, in descending order, were individual competence, legal considerations, and organizational policy. Reviewing earlier research reveals variations in how care providers view the causes of futile care, as previous investigations often ranked organizational and legal factors among the most prominent. Therefore, additional studies in this area appear essential. Moreover, the specific reasons highlighted by participants, together with the observed connection between rising levels of perception and higher educational attainment, point to the importance of organizing educational programs designed to acquaint care providers with the idea of futile care, shift their attitudes toward end-of-life care practices, and promote the delivery of palliative and terminal care aimed at improving patient comfort and elevating quality of life. Accordingly, policy-level and institutional reforms are required to examine and modernize legal and organizational structures. Such reforms should focus on more effectively embedding ethical consultations and decision-support mechanisms into routine clinical activities. It is equally vital to establish straightforward, culturally appropriate guidelines for managing situations where futile care is suspected. In addition, promoting open and prompt conversations among medical teams, patients, and families regarding expected outcomes, treatment goals, and end-of-life choices is of great importance. Creating customized protocols and communication aids can significantly support these important discussions.

Acknowledgments: None

Conflict of Interest: None

Financial Support: None

Ethics Statement: This study is the result of a professional doctorate thesis of the Corresponding author, which was financially supported by the Faculty of Medicine of Dezful University of Medical Sciences (1401-MED-401073) and approved by the Research Ethics Committee of Dezful University of Medical Sciences (IR.DUMS.REC.1401.085). After receiving the university's introduction letter, the research team visited Ganjavian Hospital and identified suitable participants. All ethical standards governing clinical research, such as obtaining informed and voluntary consent, not harming participants, maintaining data confidentiality, ensuring participants' awareness of their right to withdraw from the study at any time, privacy, and justice, have been observed.

References

1. Tulchinsky TH. Ethical Issues in Public Health: Case Studies in Public Health; 2018. pp. 277–316. doi:10.1016/B978-0-12-804571-8.00027-5
2. Goethals S, Gastmans C, de Casterlé BD. Nurses' ethical reasoning and behaviour: A literature review. Int J Nurs Stud. 2010;47(5):635–50.
3. Gabbay E, Calvo-Broce J, Meyer KB, Trikalinos TA, Cohen J, Kent DM. The empirical basis for determinations of medical futility. J Gen Intern Med. 2010;25(10):1083–9.
4. Rezaei Aderyani M, Nazari Tavakkoli S, Kiani M, Abbasi M, Javadi M. Medical futility, useless or frivolity? Iran J Med Ethics History Med. 2017;10(1):282–90.
5. Aghabarary M, Dehghan Nayeri N. Medical futility and its challenges: a review study. J Med Ethics History Med. 2016;9:11.
6. Gupta S. Euthanasia: Ethical Considerations and Legal Perspectives. 2023.
7. Saettele A, Kras J. Current attitudes of anesthesiologists towards medically futile care. 2013.
8. Gristina GR. Withholding or withdrawing Life-Sustaining treatments. Palliative care in cardiac intensive care units. edn.: Springer; 2021. pp. 99–112.
9. United States Code Annotated United States. President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research. United States Code Annotated

United States 1982, Title 42 Sect. 300v as added 1978.
10. Miller-Smith LLJ, Pope TM. Palliative care: Medically futile and potentially inappropriate therapies of questionable benefit. 2024.
11. Reddy R, Chaet DH. AMA Code of Medical Ethics' opinions related to end-of-life care. AMA J Ethics. 2018;20(8):738–42.
12. Niederman MS, Berger JT. The delivery of futile care is harmful to other patients. Crit Care Med. 2010;38(10 Suppl):S518–522.
13. Shah P, Smith H, Olarewaju A, Jani Y, Cobb A, Owens J, et al. Is cardiopulmonary resuscitation futile in coronavirus disease 2019 patients experiencing In-Hospital cardiac arrest? Crit Care Med. 2021;49(2):201–8.
14. Wilkinson DJ, Savulescu J. Knowing when to stop: futility in the intensive care unit. Curr Opin Anaesthesiol. 2011;24(2):160.
15. Zahedifar M, Tavakoli Bazaz J. End of life ethical Issues and Islamic views. Iran J Allergy Asthma Immunol. 2007;6 (Suppl. 5):5-15.
16. Choi HR, Ho M-H, Lin C-C. Futile life-sustaining treatment in the intensive care unit – nurse and physician experiences: meta-synthesis. BMJ Support Palliat Care. 2024;14(1):36.
17. Lambden JP, Chamberlin P, Kozlov E, Lief L, Berlin DA, Pelissier LA, et al. Association of perceived futile or potentially inappropriate care with burnout and thoughts of quitting among health-care providers. Am J Hospice Palliat Med. 2019;36(3):200–6.
18. Madani M. Ethical considerations of futile care. Iran J Med Ethics History Med. 2013;6(2):31–42.
19. Rostami S, Esmaeali R, Jafari H, Cherati JY. Perception of futile care and caring behaviors of nurses in intensive care units. Nurs Ethics. 2019;26(1):248–55.
20. Lewis J, Holm S. Patient autonomy, clinical decision making, and the phenomenological reduction. Med Healthc Philos. 2022;25(4):615–27.
21. Arrieta Valero I. Autonomies in interaction: dimensions of patient autonomy and Non-adherence to treatment. Front Psychol. 2019;10:1857.
22. Yekefallah L, Ashktorab T, Manoochehri H, Alavi Majd H. Causes of futile care in end of life patients in intensive care units from the viewpoints of nurses. J Health Care. 2018;20(2):105–13.
23. Bahramnezhad F, Cheraghi MA, Salsali M, Asgari P, Khoshnava Fomani F, Sanjari M, et al. Futile care; concept analysis based on a hybrid model. Global J Health Sci. 2014;6(5):301–7.
24. Palda VA, Bowman KW, McLean RF, Chapman MG. Futile care: do we provide it? Why? A semistructured, Canada-wide survey of intensive care unit Doctors and nurses. J Crit Care. 2005;20(3):207–13.
25. Rezaei M, Ghiasvandian S, Zakeri Moghadam M. Comparison of physicians' and nurses' perceptions of futile care in intensive care units of Shiraz University of Medical Sciences hospitals. Iran J Cardiovasc Nurs. 2018;7(1):6–13.
26. Piers RD, Azoulay E, Ricou B, Ganz FD, Decruyenaere J, Max A, et al. Perceptions of appropriateness of care among European and Israeli intensive care unit nurses and physicians. JAMA. 2011;306(24):2694–703.
27. Wild D, Grove A, Martin M, Eremenco S, McElroy S, Verjee-Lorenz A, et al. Principles of good practice for the translation and cultural adaptation process for Patient-Reported outcomes (PRO) measures: report of the ISPOR task force for translation and cultural adaptation. Value Health. 2005;8(2):94–104.
28. Begjani J, Dizaji NN, Mirlashari J, Dehghan K. Moral distress and perception of futile care among nurses of neonatal care units. Indian J Palliat Care. 2022;28(3):301.
29. Moaddaby S, Adib M, Ashrafi S, Kazemnezhad Leili E. Perception of the futile care and its relationship with moral distress in nurses of intensive care units. J Holist Nurs Midwifery. 2021;31(2):85–92.
30. Akbari M, Moosavi S, Syed ZA, Aghabarary M, Nayeri ND, Shamsi-Gooshki E, et al. Causes of futile life-sustaining interventions from the perspective of physicians and nurses in university hospitals in Tehran; 2022.
31. Price DM, Strodtman L, Montagnini M, Smith HM, Miller J, Zybert J, et al. Palliative and end-of-life care education needs of nurses across inpatient care settings. J Continuing Educ Nurs. 2017;48(7):329–36.
32. Effendy C, Yodang Y, Amalia S, Rochmawati E. Barriers and facilitators in the provision of palliative care in adult intensive care units: a scoping review. Acute Crit Care. 2022;37(4):516–26.

33. Alder S. Effects of poor communication in healthcare. HIPAA J. 2025;1(1):2–5.
34. Rivero E. Public does not grasp idea of 'futile treatment' for critically ill patients. UCLA Health; 2020.
35. Kasim DS, Oflaz F. Moral distress and intention to leave job with the attitudes towards futile treatments in nurses: A Cross-Sectional study. CURARE J Nurs 2023(3):9–16.
36. Voultsos P, Tsompanian A, Tsaroucha AK. The medical futility experience of nursing professionals in Greece. BMC Nurs. 2021;20(1):1–13.
37. Heyland DK, Frank C, Groll D, Pichora D, Dodek P, Rocker G, et al. Understanding cardiopulmonary resuscitation decision making: perspectives of seriously ill hospitalized patients and family members. Chest. 2006;130(2):419–28.
38. Collins G. Quality of Life/End of Life/Outcome Prediction. Year Book of Critical Care Medicine. 2012;2012(2012):295.
39. Willing LB. Examining predictors of compassion fatigue in intensive care nurses. Queen's University (Canada); 2019.
40. Willmott L, White B, Gallois C, Parker M, Graves N, Winch S, et al. Reasons Doctors provide futile treatment at the end of life: a qualitative study. J Med Ethics. 2016;42(8):496.
41. Nazari F, Chegeni M, Shahrbabaki PM. The relationship between futile medical care and respect for patient dignity: a cross-sectional study. BMC Nurs. 2022;21(1):1–8.
42. Hansen L, Goodell TT, DeHaven J, Smith M. Nurses' perceptions of end-of-life care after multiple interventions for improvement. Am J Crit Care. 2009;18(3):263–71.
43. Thomas RL, Zubair MY, Hayes B, Ashby MA. Goals of care: a clinical framework for limitation of medical treatment. Med J Aust. 2014;201(8):452–5.
44. Andi S, Akcoban S, Gungor S, Gider NY, Tosun B, Dirgar E. Evaluation of the relationship between nurses' attitudes towards futile treatments and their ethical attitudes: A Cross-Sectional and analytical study. Scand J Caring Sci. 2025;39(2):e70035.
45. Courtwright A, Rubin E. Who should Decide for the Unrepresented? Bioethics. 2016;30(3):173-80.
46. Vergano M, Gristina GR. Futility in medicine. Trends Anaesth Crit Care. 2014;4(6):167–9.
47. Jox RJ, Schaider A, Marckmann G, Borasio GD. Medical futility at the end of life: the perspectives of intensive care and palliative care clinicians. J Med Ethics. 2012;38(9):540–5.
48. Santonocito C, Ristagno G, Gullo A, Weil MH. Do-not-resuscitate order: a view throughout the world. J Crit Care. 2013;28(1):14–21.
49. Aghabarary M, Nayeri ND. Reasons behind providing futile medical treatments in Iran: A qualitative study. Nurs Ethics. 2017;24(1):33–45.
50. Borhani F, Hosseini SH, Abbaszadeh A. Commitment to care: a qualitative study of intensive care nurses' perspectives of end-of-life care in an Islamic context. Int Nurs Rev. 2014;61(1):140–7.
51. Sibbald R, Downar J, Hawryluck L. Perceptions of futile care among caregivers in intensive care units. CMAJ. 2007;177(10):1201–8.
52. Mohacsi L, Stange L, Höfig S, Nebel L, Broschmann D, Hummers E, et al. A 'good death' needs good Cooperation with health care professionals – a qualitative focus group study with seniors, physicians and nurses in Germany. BMC Palliat Care. 2024;23(1):292.
53. Teno JM, Fisher ES, Hamel MB, Coppola K, Dawson NV. Medical care inconsistent with patients' treatment goals: association with 1-year medicare resource use and survival. J Am Geriatr Soc. 2002;50(3):496–500.
54. Joolaee S, Cheraghi MA, Hajibabaee F. Are hospital ethics committees necessary? Iran J Med Ethics History Med. 2015;8(4):12–20.
55. Aghabarary M, Nayeri ND. Reasons behind providing futile medical treatments in Iran: A qualitative study. Nurs Ethics. 2016;24(1):33–45.
56. Piers RD, Azoulay E, Ricou B, DeKeyser Ganz F, Max A, Michalsen A, et al. Inappropriate care in European ICUs: confronting views from nurses and junior and senior physicians. Chest. 2014;146(2):267–75.