Archives of Anesthesiology and Critical Care (Autumn 2025); 11(4): 548-555.

Available online at http://aacc.tums.ac.ir

Research Article

The Relationship between Futile Care and Moral Sensitivity in Nurses Working in the Neonatal Intensive Care Unit of Medical Training Centers in Gorgan 2024

Hamid Hojjati[1], Shiva Eslamian Koupaei[2], Termeh Riahi Madvar[3], Nafiseh Hekmati Pour[4], Ailin Delavari[5], Hossein Motahari Niya[6], Malihe Kabusi[7]*

[1]*Nursing Research Center, Golestan University of Medical Sciences, Gorgan, Iran.*

[2]*Department of Nursing, Tehran Medical Sciences Branch, Islamic Azad University, Tehran, Iran.*

[3]*Department of Nursing and Midwifery, Rafsanjan Medical Sciences, Kerman, Iran.*

[4]*Department of Nursing, Aliabad Katoul Branch, Islamic Azad University, Aliabad Katoul, Iran.*

[5]*Nursing and Midwifery, Golestan University of Medical Sciences, Gorgan, Iran.*

[6]*Taleghani Hospital, Golestan University of Medical Sciences, Gorgan, Iran.*

[7]*Nursing, Student Research Committee, Golestan University of Medical Sciences, Gorgan, Iran.*

ARTICLE INFO

Article history:
Received 13 February 2025
Revised 06 March 2025
Accepted 20 March 2025

Keywords:
Futile care;
Moral sensitivity;
Nurses;
Neonatal intensive care

ABSTRACT

Background: Nursing interventions in neonatal intensive care units of hospitals can occasionally turn into futile and costly measures, bringing about ethical conundrums. The aim of the present study was to investigate the relationship between futile care and moral sensitivity among nurses working at the neonatal intensive care units (NICU) of teaching medical centers in Gorgan city, North of Iran.

Methods: This 2024 descriptive-analytical study was conducted on 100 NICU nurses enrolled by quota sampling. Data collection tools included a demographic information questionnaire, the Lutzen moral sensitivity questionnaire, and a futile care questionnaire developed based on the Corley moral distress scale. The data gathered were entered into SPSS version 21 software and analyzed using descriptive (tables, mean, and standard deviation) and inferential (Pearson correlation coefficient) statistics.

Results: According to the results, the participants acquired the mean score of 62.12 ± 4.08 for moral sensitivity and 44.16 ± 5.81 for futile care. The Pearson correlation coefficient showed no significant association between moral sensitivity and futile care (r = - 0.12, P = 0.2).

Conclusion: Regarding the impact of nurses' moral sensitivity and perception of futile care on the quality of health service provision, authorities are advised to consider plans and solutions (such as professional ethics training courses) to improve nurses' awareness of ethical dilemmas, moral sensitivity, and attitudes towards futile care.

The authors declare no conflicts of interest.
*Corresponding author. malihekabusi987@gmail.com
E-mail address: azimibehzad1365@gmail.com
DOI: 10.18502/aacc.v11i4.19373

Introduction

The neonatal intensive care unit (NICU) is among the most stressful hospital wards, bearing a high burden of job stress and anxiety [1-2] due to the nature of patients hospitalized in this unit and corresponding specialized care required [3-4]. Nursing care provided at the NICU is occasionally invasive and, sometimes, ineffective and not promising [5]. Personalized care provided in this ward can sometimes remain futile, rising stress and moral dilemmas for nurses [6-7].

Futile care, especially in intensive care units (ICUs), can profoundly reduce patient survival [8]. The concept of futile care refers to a type of care measures carrying no reasonable chance of benefiting the patient [9-10] or extending his/her survival [11]. Often, the admission of critically ill patients in ICUs fails to improve their recovery, inferring futile care [12], which leads to extra health costs and causes the dissatisfaction and burnout of health care workers [13].

Futile care, especially in ICUs, is neither curative nor life saver but postpones demise [14], causing contradictions with regard to prolonging patients' and families' suffering, imposing enormous health care expenditure, including costly medications, and occupying ICU beds [15]. This issue is a source of moral distress among nurses [6], who, on the one hand, desire to save lives and provide supportive care to patients [16], but on the other hand, are aware of the costs and suffering imposed on patients and their families by providing futile care and prolonging unavoidable death [17]. This conundrum places nurses between a sense of responsibility and conscientiousness and relieving the patient's suffering [18], causing them to become surrounded by moral confusion and distress [17-18]. Moral sensitivity, as the first requirement of adherence to ethics, refers to an individual's awareness of moral dimensions such as tolerance, calmness, responsibility, and prioritizing ethical issues [19-20]. A person's moral sensitivity makes him/her to become sensitive to ethical events [21]. In NICUs of hospitals, moral sensitivity is a profound source of distress for nurses providing care to admitted children and neonates [22-23].

Studies indicate that when nurses recognize futile care, especially in ICUs, they experience a rise in moral distress and conflicts [6]. This is because they comprehend that continuous futile care only prolongs the patient's suffering and imposes psychological pressure on family members and health care providers [16]. In such situations, despite the fact that discontinuing futile care can be ideal for life, families generally demand continuing care due to emotional issues [4-5], which may be hard for nurses to abide by since they are aware of the ineffectiveness of such agonizing and costly nursing services [14]. Therefore, these ethical challenges cause nurses to deny the provision of such services, pushing them into moral conflicts [24-25].

In recent years and by the expansion of ICU nurses' professional and supportive roles, a great emphasis has been directed toward ethical issues in nursing care [26]. The results of a study by Moaddabi et al. (2021) revealed that futile care was meaningfully associated with a number of moral distress indicators [18]. In another study, Schneiderman (2011) argued that the medical team should always consider their care effective and ethical no matter the patient's severity of situation, negating futile care [27]. The findings of Araço et al. (2018) demonstrated that moral sensitivity and positive attitudes when providing care and attention to patients' needs, especially during their final days of life, can not only improve the quality of services provided but also obviate moral tensions among nurses [28]. Therefore, it is necessary for health education managers and authorities to prioritize ethics training courses focusing on futile care, especially in ICUs [16].

After a review of the available literature, one can easily understand that the decision to continue to cease futile care raises an ethical conflict, so nurses' awareness and understanding of futile care can play a major role in reducing their moral distress [29]. Collectively, ethical issues are unavoidable in ICUs, and futile care is one of the most important of these issues. Therefore, it appears that the empowerment of nurses in terms of moral sensitivity can play an important role in improving their attitudes towards effective and ethical care. We found no study investigating the link between NICU nurses' moral sensitivity and their perception of futile care. Therefore, this study was conducted to explore the relationship between the perception of futile care and moral sensitivity among nurses working at the NICU.

Methods

Study Design

This was a cross-sectional descriptive-analytical study conducted in 2024. The research environment included the NICUs of the teaching medical centers of Gorgan City, Golestan province, north of Iran, and the research population consisted of eligible nurses working at the NICUs of these centers.

Ethics Considerations

This study received approval from the institutional research council and the Research Ethics Committee of Golestan University of Medical Sciences (GUMS) (ethics code: IR.GOUMS.REC.1403.190). The researcher then visited the teaching medical centers affiliated to GUMS and explained the objectives of the study to their managers to acquire their consent for study conduction. Next, a list of subjects who could be eligible was

prepared. These subjects were contacted to arrange a meeting and obtain informed consent. During a face-to-face meeting with subjects, the objectives of the study were explained to nurses, and they were assured of the anonymity of their information. Also, all subjects were notified that they had the opportunity to withdraw from the study at any time point they desired.

Inclusion and Exclusion Criteria

Inclusion criteria in this study encompassed holding a bachelor's degree or higher in nursing, having at least six months of work experience in NICU, and providing informed consent to participate in the study. Exclusion criteria were incomplete filling out of questionnaires and reluctance to participate or continue participation in the study.

Sample Size

The sample size was calculated based on a study by Begjani et al. (2022) using the G*POWER software and considering a correlation coefficient of 0.36, a study power of 0.95, a 95% confidence level, and the statistical significance threshold of 0.05 (6). Accordingly, the total sample size was calculated as n=100. The quota sampling method was used to recruit subjects. First, two teaching medical centers in Gorgan, Taleghani and Shahid Sayyad Shirazi hospitals, both of which operate NICUs, were selected. Then, considering the total number of nurses working in each hospital, the quota for each of them was decided (Taleghani Hospital =70; Sayyad Shirazi Hospital = 30). Finally, the researcher referred to the hospitals during various work shifts to collect data in an accessible manner.

Data Collection

Demographic Information Questionnaire

This tool was used to gather demographic data (age, gender, marital status, education level, work experience, work shift, and employment status).

The Futile Care Questionnaire (developed by Hajilo et al.; 2020)

This tool was standardized in Iran based on Corley's moral distress scale [30] to measure nurses' perception of futile care in terms of incidence and severity. This questionnaire explores futile care situations with a focus on satisfactory demise, pain and agony management, immediate care discontinuation, effective communication with family members, disagreements between health team members, involvement of family members in care options, and resource allocation. The questions of this questionnaire are scored on a 6-point Likert scale from never/none (score 0) to frequently (score 5) in both the severity and incidence dimensions. The scoring range was between 0 and 85, categorized into three levels: low (scores of 0-28), moderate (scores of 29-56), and high (scores of 57-85). A high score indicated a higher level of nurses' perception of futile care, and a low score reflected their low awareness and understanding of this concept. The validity of this questionnaire was confirmed by 10 faculty members, and its reliability was affirmed based on Cronbach's alpha coefficient of 0.89 [31].

Moral Sensitivity Questionnaire (MSQ)

This scale was developed by Lutzen et al. (1994) in Sweden to assess the moral sensitivity of nurses delivering clinical care [32]. The questionnaire consists of 25 questions organized into 6 dimensions, including autonomy, relational orientation, following the rules, experiencing moral conflict, structuring moral meaning, and expressing benevolence. Each question is scored on a Likert scale [complete agreement (4), relative agreement (3), relative disagreement (2), complete disagreement (1), and no opinion (0)]. The highest score was 100, and the lowest score was zero. A score between 0 and 50 indicated low moral sensitivity, and scores of 51-75 and 76-100 reflected moderate and high moral sensitivity, respectively [19] (Table 1 and 2). The questionnaire's content, face, and criterion validities were analyzed and reported to be desirable in a study by Maghami et al. (2017) [31], who also confirmed the reliability of the tool with Cronbach's alpha coefficient of 0.7 [33].

Statistical Analysis

The data were collected and entered into SPSS version 21 software. For data analysis, descriptive (table, mean, standard deviation) and inferential (Pearson correlation coefficient) statistics were performed, and the significance level was regarded as $P<0.05$.

Results

Participants' Characteristics

In this study, the mean age of the participants was obtained as 34.33 ± 6.9 years. In terms of work experience, the mean duration was 9.87 ± 6.93 years. The nurses' demographic characteristics have been summarized in (Table 1).

The Link Between Futile Care and Moral Sensitivity Among NICU Nurses

According to the results of this study, the mean score of moral sensitivity in the research population was 62.12 ± 4.08, indicating a moderate level of moral sensitivity (Table 2).

Regarding the link between moral sensitivity and demographic features, the analysis of variance (ANOVA) test revealed that moral sensitivity was significantly associated with age ($P = 0.02$) and work experience ($P = 0.04$). According to the Scheffe post hoc test, the

significant distributional difference was related to the age group of 30-40 years and the work experience group of > 15 years. Accordingly, nurses older than 40 years and with work experience of >15 years had lower moral sensitivity levels. As evidenced by Mann-Whitney U test, moral sensitivity was not significantly associated with gender (P = 0.19), marital status (P = 0.42), education level (P = 0.19), and work shift (P = 0.98) (Table 3).

The mean score of futile care among nurses was obtained as 44.16 ± 5.81. According to the Pearson correlation coefficient, no significant correlation was detected between moral sensitivity and futile care (r =-0.12, P = 0.2). Regarding the link between nurses' perception of futile care and their demographic characteristics, the ANOVA test revealed no significant relationship between futile care perception and age (P = 0.88) or work experience (P = 0.07). According to the Mann-Whitney U test, futile care perception had no significant link with gender (P = 0.34), marital status (P = 0.06), education level (P = 0.54), and work shift (P = 0.07) (Table 4).

Table 1- The frequency distribution of demographic information of NICU nurses working at the teaching medical centers of Gorgan (2024)

Demographic features		Frequency	Percentage
Age (years)	<30	26	26
	30-40	51	51
	>40	23	23
Gender	Female	58	58
	Male	42	42
Marital status	Single	31	31
	Married	69	69
Education level	Bachelor's degree	81	81
	Master's degree	19	19
Work experience (years)	<5	21	21
	5-10	48	48
	10-15	7	7
	>15	24	24
Work shift	Fixed	47	47
	Rotational	53	53

Table 2- Mean and standard deviation of moral sensitivity score in various dimensions among NICU nurses

Moral sensitivity dimensions	Mean ± SD
Autonomy	7.21 ± 2.06
Relational Orientation	12.34 ± 1.65
Following The Rules	4.6 ± 1.35
Experiencing Moral Conflicts	7.51 ± 1.24
Structuring Moral Meaning	13.58 ± 1.75
Expressing Benevolence	16.75 ± 2.17
Total score	62.12 ± 4.08

Table 3- The association of moral sensitivity with demographic features of NICU nurses

Demographic features		Frequency	Percentage	Moral sensitivity (Mean ± SD)	P value
Age (years)	<30	26	26	63.11 ± 4.9	0.02
	30-40	51	51	62.5 ± 5.1	
	>40	23	23	60.12 ± 2.3	
Gender	Female	58	58	61.67 ± 3.67	0.19
	Male	42	42	62.73 ± 4.21	
Marital status	Single	31	31	62.61 ± 4.22	0.42
	Married	69	69	61.83 ± 4.34	
Education level	Bachelor's degree	81	81	62.07 ± 4.15	0.19
	Master's degree	19	19	62.31 ± 3.84	
Work experience (years)	<5	21	21	63.28 ± 5.21	0.04
	5-10	48	48	62.31 ± 4.84	
	10-15	7	7	62.71 ± 4.42	
	>15	24	24	60.25 ± 2.45	

Work shift	Fixed	47	47	62.12 ± 4.72	0.98
	Rotational	53	53	62.11 ± 4.11	

Table 4- The association of futile care perception with demographic features of NICU nurses

Demographic features		Frequency	Percentage	Moral sensitivity (Mean ± SD)	P value
Age (years)	<30	26	26	44.65 ± 8.56	0.88
	30-40	51	51	43.9 ± 4.52	
	>40	23	23	44.26 ± 4.23	
Gender	Female	58	58	43.23 ± 7.23	0.34
	Male	42	42	42.5 ± 4.78	
Marital status	Single	31	31	45.5 ± 8.21	0.06
	Married	69	69	43.41 ± 4.53	
Education level	Bachelor's degree	81	81	44.37 ± 6.21	0.74
	Master's degree	19	19	43.82 ± 4.46	
Work experience (years)	<5	21	21	43.44 ± 9.56	0.97
	5-10	48	48	44.12 ± 4.43	
	10-15	7	7	43.24 ± 5.93	
	>15	24	24	43.22 ± 4.9	
Work shift	Fixed	47	47	43.08 ± 3.71	0.07
	Rotational	53	53	45.12 ± 7.08	

Discussion

In the present study, we investigated the relationship between moral sensitivity and futile care among NICU nurses working in the teaching medical centers of Gorgan City, the capital of Golestan province in north of Iran. Our findings disclosed that moral sensitivity was not significantly associated with futile care perception. The nurses participating in this study benefited from desirable levels of moral sensitivity and futile care perception. We noticed that moral sensitivity was significantly associated with age and work experience but not with gender, educational level, marital status, and work shift. However, futile care showed no significant relationship with demographic characteristics of nurses.

According to the present study, NICU nurses demonstrated an overall moderate level of moral sensitivity, which was consistent with the findings of studies by Amiri et al. (2020) and Alamdari et al. (2024) in Iran [34]. These observations reflect those nurses in Iran face similar ethical challenges at their work environments, which might be enforced by the lack of appropriate ethical training and excessive work burden. In studies conducted in other countries, Goktas et al. (2022) [35] and İlter et al. (2024) [36] also reported a moderate level of moral sensitivity among nurses. However, Pang et al. (2024), in a report from China, declared a beyond average level of moral sensitivity among nurses working at hospital ICUs [37]. This difference may be related to the implementation of extensive ethical training courses, as well as suitable access to adequate resources and organizational support allowing for resolving ethical conflicts in developed countries. In fact, these factors, as well as managers' close monitoring of clinical performance, can have a profound impact on nurses' moral sensitivity [38].

Our findings also revealed a moderate level of futile care perception by nurses, which was consistent with a report by Begjani et al. (2022) [6] but contradicted the results of Zadi et al. (2024), who declared that 65% of nurses achieved a high level of futile care perception [39]. In Iran, countless nurses face futile care due to a shortage in resources, manpower, and standardized care protocols. In their study, Dunwood et al. (2010) also reported a moderate level of futile care perception among nurses and asserted that excessive futile care could expose nurses to moral distress [40]. In Japan, Kadooka et al (2014) witnessed relatively lower rates of futile care [41]. Among other factors that can justify these differences include optimal resource management, the existence of transparent clinical care guidelines, and the pronounced role of moral counseling teams.

In the present study, we found no statistically significant relationship between moral sensitivity and futile care perception among NICU nurses. This observation agreed with the results of a study by Hajiloo et al. (2020) [31] but differed from the reports of Moaddaby et al. (2021) [18] and Asayesh et al. (2018) [42]. Discrepancies among studies in this area could be due to issues such as using different data gathering tools and questionnaires, as well as different work environments and job characteristics (e.g., adult ICU vs. NICU), demanding their unique care provision ethical complexities. Reed (2015) believes that despite their indispensable role in addressing patients' needs and improving their quality of life, nurses face extensive ethical challenges in this path, requiring them to upgrade their communication skills, cultural competence, and understanding of ethics and emotional support, as

important elements required to obviate such challenges [43].

Regarding the association of moral sensitivity with NICU nurses' demographic features, our findings disclosed that older and more experienced nurses possessed lower moral sensitivity. This finding was in agreement with the report of Ashktorab et al. (2013), stating that moral distress aggravated with advancing age [44]. Moreover, Joolaee et al. (2012) observed an inverse correlation between age and moral distress [45], which could be justified by the psychological exhaustion or deterioration of ethical incentives among older nurses or those with prolonged work experience. In fact, experienced nurses, who have a long history of facing ethical conundrums at the workplace, generally mitigate their tendency or ability to actively respond to these challenges.

We observed no significant association between futile care perception and demographic characteristics among NICU nurses participating in this study. This finding may highlight either the conceptual complexity of futile care or the profound impact of structural and organizational factors on this concept [46]. Futile care can stem from poor hospital policies, shortage of resources, or incorrect care-related decisions disregarding nurses' moral sensitivity.

Among the limitations of this study are the use of self-reporting for assessing nurses' moral sensitivity and futile care perception and restricting the research population to NICU nurses working at the teaching medical centers of Gorgan city.

The role of nurses in promoting the health of patients and improving their condition is very key and important. So that training and improving the health literacy of nurses can lead to improving the health status of patients. Also, intensive care nurses provide more basic and vital care and can be helpful in this regard [47-.49]

Conclusion

Our findings demonstrated that the NICU nurses participating in the present study possessed moderate moral sensitivity and futile care perception, reflecting the adverse impact of moral and structural challenges on the quality of nursing care. Regarding that unsatisfactory moral sensitivity can intensify futile care incidence, it is suggested to implement specialized training programs to upgrade moral awareness and discover practical solutions to resolve moral conflicts. More experienced and older nurses, who may be exposed to job burnout, are suggested to benefit from psychological support. Moreover, organizational structure should be upgraded by reviewing hospital policies and improving access to the resources necessary for ethical decision-making. Finally, our findings can provide a ground for more extensive research on the impact of organizational and cultural constructs on health care providers' moral sensitivity and futile care perception in medical environments.

Acknowledgements

The researchers are obliged to express their gratitude to the officials of the teaching medical centers of Gorgan city and all nurses who cooperated with us in this study.

Ethics Consideration and Informed Consent

This study was approved by the institutional research council and the research ethics committee of Golestan University of Medical Sciences (IR.GOUMS.REC.1403.190). Informed written consent was obtained from all nurses participating in the study, who were ensured about the confidentiality and anonymity of their information. The participants were fully aware of their right to withdraw from the study at any time.

Data Availability

The dataset used in this study is available upon request from the corresponding author.

References

[1] Kabusi M, Golfiroozi S, Rajabloo M, Yahyanezhad M, Hojjati H. The Effect Of Neonatal Cardiopulmonary Resuscitation Training On The Knowledge Of Neonatal Ward Nurses. Int J Med Investig. 2023;12(3):190-6.

[2] Golfiroozi S, Hojjati H, Hekmati Pour N, Kabusi M, Farhadi S, Yahyanezhad M. Effect of in-service training courses in neonatal cardiopulmonary resuscitation on the rate of successful resuscitation in nurses working in the neonatal department: A quasi-experimental study. J Nurs Rep Clin Pract. 2023;2(4):198-203.

[3] Fathi N, Askari A, Hossinpour R, Babaei Pouya A, Salehi AR, Ghodrati Torbati A, et al. Investigating the Association of Mental Workload, Occupational Fatigue and Job Stress in Emergency Nurses in Iran. Health Emerg Disasters Q. 2024;9(4):295-302.

[4] Ali Khalil H, Radha Aziz A. The relationship between nurses' clinical competencies and burnout in neonatal intensive care units: A cross-sectional study. J Nurs Adv Clin Sci. 2024;1(3):133-7.

[5] Begjani J, Movahidimoghadam F, Khoshnavay Fomani F, Beiranvand F. The effect of educational and supportive package by peers on the self-efficacy mothers of premature neonates: A quasi-experimental study. J Nurs Adv Clin Sci. 2024;1(2):91-6.

[6] 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):301-6.
[7] Zaheri A, Keshavarz F, Mirzaei Z. The relationship between nurses' perception of ethical climate at the workplace and patient satisfaction with health services provided: A cross-sectional study. J Nurs Adv Clin Sci. 2024;2(2):71-6.
[8] Rakhshan M, Joolaee S, Mousazadeh N, Hakimi H, Bagherian S. Causes of futile care from the perspective of intensive care unit nurses (I.C.U): qualitative content analysis. BMC Nurs. 2022;21(1):225.
[9] Ho MH, Lin CC. Futile care and burnout in intensive care unit nurses. Intensive Crit Care Nurs. 2022;71:103228.
[10] Rezaie A, Molayi F, Shaafi MS, Ghanbari Ghalesar M. Nurses' perception of futile care: A narrative review. J Nurs Adv Clin Sci. 2024;2(2):106-12.
[11] Sibbald R, Downar J, Hawryluck L. Perceptions of "futile care" among caregivers in intensive care units. CMAJ. 2007;177(10):1201-8.
[12] 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.
[13] Rezaie F, Shohani M, Alijani H, Abedi L. The effect of spiritual self-care training on the attachment of the mothers of premature babies hospitalized in the neonatal intensive care unit (NICU) of Taleghani Hospital, Ilam. Med J Tabriz Uni Med Sci. 2023;45(2):161-70.
[14] Mohammadi S, Roshanzadeh M. Exploring the Perception of intensive care unit nurses of futile care. Educ Ethics Nurs. 2022;3(2):65-72.
[15] Meadow W, Cohen-Cutler S, Spelke B, Kim A, Plesac M, Weis K, et al. The prediction and cost of futility in the NICU. Acta Paediatr. 2012;101(4):397-402.
[16] Borhani F, Mohammadi S, Roshanzadeh M. Moral distress and perception of futile care in intensive care nurses. J Med Ethics Hist Med. 2015;8.
[17] Otaghi M, Shirkhani S, Azadi A, Khorshidi A, Mousavimoghadam SR. The relationship between perception of futile care and moral distress of nurses in critical care units. J Biochem Technol. 2018;9(2-2018):113-9.
[18] 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.
[19] Khalighi E, Solaimanizadeh L, Borji M, Tarjoman A, Soltany B, Zareie F. Investigating relationship between religious commitment and moral sensitivity in nurses working in ICU. BMC Res Notes. 2020; 13(1):41.
[20] Kovanci MS, Atli Özbaş A. Moral distress and moral sensitivity in clinical nurses. Res Nurs Health. 2024;47(3):312-23.
[21] Hamzehpour H, Aghahosseini SS. Moral Sensitivity And Interprofessional Collaboration In Nurses: A Correlational Study. Nurs Midwifery J. 2023;21(7):503-10.
[22] Babaei SM, Araghian Mojarrad F, Kamali M, Arab Larimi M, Jafari H. Moral sensitivity and related factors in Iranian critical care nurses: A narrative review. J Nurs Rep Clin Pract. 2023;1(2):78-83.
[23] Ye B, Luo E, Zhang J, Chen X, Zhang J. Moral Sensitivity and Emotional Intelligence in Intensive Care Unit Nurses. Int J Environ Res Public Health. 2022;19(9).
[24] Atashzadeh-Shoorideh F, Tayyar-Iravanlou F, Chashmi ZA, Abdi F, Cisic RS. Factors affecting moral distress in nurses working in intensive care units: A systematic review. Clin Ethics. 2021;16(1):25-36.
[25] Mills M, Cortezzo DE. Moral Distress in the Neonatal Intensive Care Unit: What Is It, Why It Happens, and How We Can Address It. Front Pediatr. 2020;8.
[26] Alamdari MP, Raiesdana N, Nobahar M, Yavari MB. Comparison of the correlation between moral sensitivity and clinical competence in emergency and intensive care nurses: A cross-sectional-correlation study. Int Emerg Nurs. 2024;75:101483.
[27] Schneiderman LJ. Defining Medical Futility and Improving Medical Care. J Bioeth Inq. 2011;8(2):123-31.
[28] Araç B, Doğan R, Sarıtaş S. Determining the Moral Sensitivity of Intensive Care Nurses. Int J Med Investig. 2018;7(1):88-97.
[29] Yildirim G, Işık MT, Yalcin SO. Relationship Between Physician's and Nurses' Attitudes Towards Futile Treatment and Their Approach to Death and Terminally Ill Patients. Omega (Westport). 2023; 302228231153712.
[30] Corley MC, Elswick RK, Gorman M, Clor T. Development and evaluation of a moral distress scale. J Adv Nurs. 2001;33(2):250-6.
[31] Hajiloo P, Torabi M. The relationship between moral sensitivity and Nurses' perception of futile care in patients with Covid-19. 2020.
[32] Lützén K, Nordin C, Brolin G. Conceptualization and instrumentation of nurses' moral sensitivity in psychiatric practice. Int J Methods Psychiatr Res. 1994;4(4):241-8.
[33] Maghami M, Yektatalab S, Torabizadeh C. The attitude and the level of ethical sensitivity of nurses towards elder patients in selected hospitals affiliated to Shiraz University of Medical Sciences. J Geriatric Nursing 2018;4(2):35-46.
[34] Amiri E, Ebrahimi H, Namdar Areshtanab H, Vahidi M, Asghari Jafarabadi M. The Relationship between Nurses' Moral Sensitivity and Patients' Satisfaction with the Care Received in the Medical Wards. J Caring Sci. 2020;9(2):98-103.
[35] Goktas S, Aktug C, Gezginci E. Evaluation of moral

sensitivity and moral courage in intensive care nurses in Turkey during the COVID-19 pandemic. Nurs Crit Care. 2023;28(2):261-71.
[36] İlter SM, Ovayolu Ö, Serçe S, Ovayolu N. An Investigation of the Relationship Between Compassion Fatigue and Moral Sensitivity of Intensive Care Nurses. Omega (Westport). 2024;90(2):521-35.
[37] Pang F, Zhang Y, Liu H, Du A, Tian Y, Chen H, et al. Factors associated with moral sensitivity among nurses in adult intensive care units: A cross-sectional study in China. Nurs Crit Care. 2024;29(6):1385-93.
[38] Schmocker D, Tanner C, Katsarov J, Christen M. Moral sensitivity in business: A revised measure. Curr Psychol. 2023;42(12):10277-91.
[39] Zadi O, Tavani FM, Behshid M, Sheikhalipour Z, Rahmani P, MT KH. Futile care in COVID-19: how ICU nurses' resilience impacts turnover intention? A cross-sectional descriptive study. BMC Health Serv Res. 2024;24(1):1664.
[40] Dunwoody DR. Nurses' level of moral distress and perception of futile care in the critical care environment: D'Youville College; 2010.
[41] Kadooka Y, Asai A, Fukuyama M, Bito S. A comparative survey on potentially futile treatments between Japanese nurses and laypeople. Nurs Ethics. 2014;21(1):64-75.
[42] Asayesh H, Mosavi M, Abdi M, Masoud MP, Jodaki K. The relationship between futile care perception and moral distress among intensive care unit nurses. J Med Ethics Hist Med. 2018;11:2.
[43] Reed C. Ethical dilemmas and end-of-life care. Nursing Made Incredibly Easy! 2015;13:16-24.
[44] Ashktorab T, Vaezi A. Moral distress: evaluating nurses' experiences. Iran J Med Ethics Hist Med. 2013;6(1):64-73.
[45] Joolaee S, Jalili HR, Rafii F, Hajibabaee F, Haghani H. Relationship between Moral Distress and Job Satisfaction among Nurses of Tehran University of Medical Sciences Hospitals. J Hayat. 2012;18(1):42-51.
[46] Ferrell BR. Understanding the moral distress of nurses witnessing medically futile care. Oncol Nurs Forum. 2006;33(5):922-30.
[47] Mobarakian M, Taghinejad H, Mohammadi R, Otaghi M. Comparison of the Effect of Self-Care Education by Nurse and Peer on Self-Care Ability of Candidate Patients for Angiography. J Isfahan Med Sch. 2024;41(750):1184-91.
[48] Shahbazi G, Otaghi M, Shahbazi S, Parvaresh-Masoud M. Comparing stress, coping strategies, and quality of life among nurses working in ICU and emergency ward with other hospital departments. Ann Trop Med Public Health. 2018(3.3 Sp):SP53.
[49] Mousavi E, Kavi E, Larti N, Gharahzadeh A. The relationship between attitude toward the effectiveness of teamwork and observing safety standards in Isfahan educational hospitals. Rev Latinoam Hipertens. 2018;13(3).