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Intensive Care Residents' Views Regarding Ethical Issues and Practices

Authors' Contribution:
Study Design A
Data Collection B
Statistical Analysis C
Data Interpretation D
Manuscript Preparation E
Literature Search F
Funds Collection G

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Background: This study sought to understand the ethical issues encountered by medical residents during their residencies, evaluate the solutions proffered by them, and present their suggestions.

Material/Methods: A survey consisting of 32 questions, including demographic information, was developed and distributed to Intensive Care Unit (ICU) residents from December 2020 to January 2021. A total of 53 completed questionnaires were submitted to the researchers. The data were analyzed using SPSS software version 26.0.

Results: Of the participating residents who returned completed forms, 50.9% were male and 49.1% were female, with an overall mean age of 30.5±4.4 years. Most residents' views on ethical issues concerned themselves, the clinic, and patients/patient relatives. Responses showed a number of commonalities with the views of ICU physicians in other countries. Suggestions for resolving ethical issues solutions included instruction in medical ethics for all staff, increasing and strengthening pathways of communication both inside and outside of the clinics, regular inventory of medical supplies and assessment of equipment to prevent a shortage of resources, and the establishment of a hospital ethics committee.

Conclusions: As numerous and varied ethical issues were encountered in the participating ICUs, we propose the following: preparation of an ICU-specific guide for resolving ethical problems, clarification of rules based on legal regulations, determining a hierarchy of responsibilities, and ethics courses for all ICU staff. In addition, hospital managers should support ICU services from both a legal and ethical standpoint.

Keywords: Bioethics • Ethics • Intensive Care Units

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Background

The Intensive Care Unit (ICU) is a complex organization of trained healthcare professionals and advanced technical equipment used in the treatment of critically ill patients. Intensive care physicians routinely encounter ethically complex situations, as they have to decide how to treat or prolong the lives of their patients, incorporating the attitudes and expectations of the patient or their relatives, together with medical and ethical values [1]. According to the literature, the main ethical issues arising in ICUs involve patient admission and discharge decisions, which treatments are in the patient's best interests [2], conflicts over treatment modality or futile treatment, and decision-making at the end of life [3]. The conflicts arising from the ethical issues in question usually occur among the medical teams, the patients/surrogates, or between the patient's care goals and patient surrogates.

Ethical issues in the ICU should be carefully evaluated by examining all of the relevant parameters and incorporating all of the stakeholders in the ICU. However, making fast (and correct) decisions in accordance with ethical values is an absolute necessity in ICU units [4]. Nowadays, the general public is better informed regarding patient rights and related ethical issues (eg, beneficence, non-maleficence, autonomy, and justice) in health care, and therefore has higher expectations of medical care. In the ICU, patients/patient relatives and healthcare professionals need to focus on the same problems, requiring quick and correct decisions, in what is an extremely stressful climate. Certain ethical issues inevitably arise as a result of differential expectations and of course knowledge with respect to solving the patient's health problems. Healthcare professionals may vary in their approaches to care or treatment recommendations; even greater differences may be observed between healthcare professionals and patients/surrogates in terms of their attitudes towards and expectations of patient care. For this reason, minimizing these differences and meeting on common ground, based on shared ethical values is of primary importance in choosing and applying the most appropriate course of treatment for the patient.

Numerous studies concerning ethical issues specific to the ICU have been carried out with the participation of nurses or doctors. However, in hospitals that also provide medical resident education, resident physicians are also among the stakeholders in the ICU. Therefore, obtaining the opinions of every healthcare professional, including medical residents, working in the ICU will contribute to both intra- and inter-department cooperation and enable us to better evaluate ICU ethical issues from different perspectives. Medical residents occupy a different position in the hierarchy as they are neither medical students nor fully authorized physicians in the department; nonetheless, they closely follow, observe, and are aware of the many value-based clinical issues, and are even affected by coming face to face with these issues, although they are not at liberty to intervene in these problems [5]. To date, however, there have been few studies examining ethical issues that incorporate the viewpoints of medical residents.

This study aimed to provide answers to the following 2 questions: What are the ethical issues that arise in the ICU, according to the medical residents? And what are their suggestions to solve these problems?

Material and Methods

The present research was conducted as a descriptive quantitative study. A web-based electronic survey using Google Forms was designed to obtain residents' views regarding ethical issues in the ICU. Participants who were willing to provide their opinions were recruited from the ICUs of 6 hospitals throughout Turkey.

For this study, we developed a questionnaire consisting of 2 parts. The first part of the survey contained 4 questions on socio-demographic characteristics such as age, gender, specialization year, and specialization (either surgery or internal medicine). Before determining the items for the second part of the questionnaire, we reviewed the literature and held brief conversations with medical residents, ethicists, and ICU specialists. The second part was comprised of 32 items; the first few questions represented an overview of the domains in question, while the remaining items focused on specific issues covered in more detail during the interviews. This helped us to distinguish between the participants' general perspectives on ICU ethical issues and their approaches to certain issues.

The second part comprised 32 items whose inclusion was based on previous surveys reviewed in the literature as well as on the views on medical residents, ethicists, and ICU specialists. These items were created as Likert-type questions to determine the level of agreement of the responses (always, usually, sometimes, rarely, never). The preparation of the questionnaire was followed by a pilot trial with 12 respondents, a minor revision was made based on their feedback (eg, which questions were relevant or irrelevant, etc.), and then a second pilot study was conducted. Afterward, the questionnaire was distributed as an online survey through Google Forms to ICU residents at 6 hospitals in Turkey.

The questionnaire involves ethical issues divided into 8 domains, excluding the respondents' socio-demographic characteristics: (1) frequency and root causes of ethical issues, (2) scarcity of ICU resources, (3) issues of inter-clinical agreement, (4) futile treatment issues, (5) ethical problems caused

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Table 1. Demographic data.

		Min-Max	Median	Mean±s.d./n %	
Age		24.0-42.0	30.0	30.5±4.4	
Gender	Women			26	49.1%
	Men			27	50.9%
Specialization year		1.0-5.0	2.5	2.7±1.3	
Specialty	General Surgery			7	13.2%
	Anesthesiology and Reanimation			21	39.6%
	Chest Diseases			8	15.1%
	Cardiology			2	3.8%
	Infectious Diseases			6	11.3%
	Neurology			9	17.0%

by patient relatives, (6) intra-and inter-clinical ethical problems, (7) ethical issues arising from the resident's position, and (8) suggestions for solutions to ethical problems. The residents, from various universities, completed the questionnaires on Google Forms between the months of between December 2020 and January 2021.

At the conclusion of the survey period, a total of 53 properly completed questionnaires had been received. For further evaluation, the participating resident physicians were divided into 2 groups: surgical intensive care residents (anesthesiology and reanimation, general surgery) and internal intensive care residents (cardiology, neurology, infectious diseases, chest diseases).

Statistical Analyses

The data were analyzed using SPSS 26.0 software. For descriptive statistics of the data, the mean, standard deviation, median, lowest and highest frequency, and ratio values were used. The distribution of variables was determined using the Kolmogorov-Smirnov (KS) test and the Mann-Whitney U-test was used to analyze quantitative independent variables. The Cronbach's alpha coefficient for the total scale was.837. A value of $P<.05$ was considered statistically significant.

Results

There were a total of 120 residents at the 6 hospitals where ICU residents were surveyed. Of these residents, 66 (79.2%) responded to our survey, although only 53 (63.6%) of the respondents returned a completed questionnaire. Among the respondents, 50.9% identified as male and 49.1% identified as female, with an overall mean age of 30.5±4.4 years. As regards professional experience, 3.8% of the respondents had spent 5 years or less in medical practice, 56.6% had 6 to 10 years of experience, and 39.6% had at least 10 years of experience. On average, the respondents had worked for 2.7±1.3 years in their specialty (**Table 1**).

On the whole, the respondents indicated that they had encountered ethical issues in the ICU, in addition to those resulting from hospital and clinic management. Detailed data for each domain are presented in **Table 2** and the statements of each section and whether there is a significant difference between the 2 groups are only clearly explained. Some of the prepared statements were not included in the table because the response "never" was not specified with respect to relative frequency (always, usually, sometimes, rarely, never) (**Table 2**).

Domain 1. Frequency and Root Causes of Ethical Issues; Patient Admission, Treatment, and Discharge

Most residents responded that they sometimes or rarely encounter ethical issues in the ICU, usually during admission and less often during treatment; the internal medicine and surgery residents were in overall agreement on this point ($P>.05$). However, there was a significant although small difference between the 2 groups in terms of ethical issues pertaining to patient discharge, with the surgery residents reporting more frequent encounters with ethical issues ($P<.05$).

Domain 2. Scarcity of Resources (Beds, Medical Supplies, Advanced Technology)

A majority of the respondents agreed that ethical problems arise in cases of long-term patients, pediatric patients moving into adult intensive care, and patients being transferred between intensive care units for various reasons, as ICUs may not be

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Table 2. ICU ethical issues questionnaire.

		Department Department		Surgery Internal Medicine		
		N	%	N	%	P<.05
Domain 1. Frequency, patient admission, treatment, and discharge						
1. How often do you encounter ethical issues in the ICU?	Always	0	0.0	10	40.0	0.284
	Usually	15	53.6	7	28.0	
	Sometimes	8	28.6	3	12.0	
	Rarely	4	14.3	5	20.0	
	Never	1	3.6	0	0.0	
2. The most common ethical problem I encounter is during ICU patient admission.	Always	2	7.1	0	0.0	0.089
	Usually	11	39.3	6	24.0	
	Sometimes	8	28.6	7	28.0	
	Rarely	7	25.0	11	44.0	
	Never	0	0.0	1	4.0	
3. I encounter the most ethical problems during treatment of intensive care patients.	Always	1	3.6	2	8.0	0.570
	Usually	2	7.1	2	8.0	
	Sometimes	14	50.0	6	24.0	
	Rarely	11	39.3	15	60.0	
4. I encounter the most ethical problems when patients are discharged from the ICU.	Always	0	0.0	5	20.0	0.043
	Usually	7	25.0	8	32.0	
	Sometimes	7	25.0	3	12.0	
	Rarely	12	42.9	8	32.0	
	Never	2	7.1	1	4.0	
Domain 2. Scarcity of resources (eg, beds, supplies, advanced technology/ equipment)						
5. ICU bed capacity is limited; thus, when chronic patients are taken into intensive care, the inability to accept patients in need poses an ethical problem.	Always	11	39.3	8	32.0	0.081
	Usually	10	35.7	5	20.0	
	Sometimes	6	21.4	9	36.0	
	Rarely	1	3.6	3	12.0	
6. Admission of pediatric patients to adult intensive care is an ethical problem.	Always	11	39.3	8	32.0	0.365
	Usually	7	25.0	5	20.0	
	Sometimes	8	28.6	8	32.0	
	Rarely	1	3.6	2	8.0	
	Never	1	3.6	2	8.0	

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Table 2 continued. ICU ethical issues questionnaire.

		Department Department		Surgery Internal Medicine		
		N	%	N	%	P<.05
7. Lack of space constitutes an ethical issue when transferring patients between different intensive care units.	Always	12	42.9	6	24.0	0.339
	Usually	4	14.3	5	20.0	
	Sometimes	5	17.9	4	16.0	
	Rarely	6	21.4	6	24.0	
	Never	1	3.6	4	16.0	
8. The ethical problems I experience in intensive care are due to lack of supplies and technical/equipment problems.	Always	3	10.7	10	40.0	0.066
	Usually	9	32.1	7	28.0	
	Sometimes	7	25.0	3	12.0	
	Rarely	9	32.1	4	16.0	
	Never	0	0.0	1	4.0	
Domain 3. Ethical issues arising from vague rules/regulations						
9. The lack of clear authority and responsibilities when 2 clinics are involved raises ethical problems.	Always	14	50.0	4	16.0	0.027
	Usually	9	32.1	11	44.0	
	Sometimes	4	14.3	4	16.0	
	Rarely	1	3.6	6	24.0	
10. It is an ethical issue when clinics avoid responsibility for the patient and refer patients who are not suitable for tertiary ICU treatment to intensive care.	Always	16	57.1	7	28.0	0.023
	Usually	8	28.6	6	24.0	
	Sometimes	4	14.3	7	28.0	
	Rarely	0	0.0	5	20.0	
11. Some clinics asking anesthesiologists for tests without evaluating the patient presents a problem involving ethics and communication.	Always	16	57.1	5	20.0	0.015
	Usually	5	17.9	4	16.0	
	Sometimes	5	17.9	7	28.0	
	Rarely	2	7.1	9	36.0	
12. The ethical problems I experience in the ICU are usually caused by the disinterested attitude of hospital management.	Always	1	3.6	5	20.0	0.001
	Usually	9	32.1	7	28.0	
	Sometimes	9	32.1	5	20.0	
	Rarely	9	32.1	8	32.0	
13. Not paying attention to clinical rules while removing the patient from the intensive care unit is an ethical problem.	Always	17	60.7	2	8.0	0.000
	Usually	2	7.1	9	36.0	
	Sometimes	7	25.0	6	24.0	
	Rarely	2	7.1	8	32.0	

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Table 2 continued. ICU ethical issues questionnaire.

		Department Department		Surgery Internal Medicine		
		N	%	N	%	P<.05
Domain 4. Futile Treatment						
14. Constant examinations of and unhelpful treatment for patients with minimal signs of life constitute ethical problems.	Always	13	46.4	7	28.0	0.130
	Usually	7	25.0	3	12.0	
	Sometimes	5	17.9	11	44.0	
	Rarely	3	10.7	4	16.0	
15. The relatives' insistence on the continuation of futile treatment for patients presents an ethical issue.	Always	11	39.3	6	24.0	0.004
	Usually	11	39.3	4	16.0	
	Sometimes	3	10.7	5	20.0	
	Rarely	2	7.1	6	24.0	
	Never	1	3.6	4	16.0	
16. The physician's insistence on the continuation of futile treatment on patients represents an ethical issue.	Always	13	46.4	5	20.0	0.040
	Usually	5	17.9	4	16.0	
	Sometimes	7	25.0	7	28.0	
	Rarely	2	7.1	9	36.0	
	Never	1	3.6	0	0.0	
Domain 5. Patients' relatives create barriers						
17. The verbal or physical intervention of the patient's relatives whether directly or through authorized persons creates ethical issues.	Always	22	78.6	12	48.0	0.361
	Usually	0	0.0	10	40.0	
	Sometimes	2	7.1	2	8.0	
	Rarely	4	14.3	1	4.0	
18. Many ethical problems I experience in the intensive care unit arise from the visits of large numbers of patient relatives.	Always	0	0.0	1	4.0	0.003
	Usually	1	3.6	8	32.0	
	Sometimes	14	50.0	10	40.0	
	Rarely	13	46.4	6	24.0	
Domain 6. Intra- and inter-clinical ethical problems						
19. It is an ethical problem when a physician is not familiar with the concept of "Code Blue" and so the responsibility falls to certain clinics.	Always	1	3.6	5	20.0	
	Usually	4	14.3	6	24.0	
	Sometimes	0	0.0	4	16.0	
	Rarely	0	0.0	8	32.0	
	Never	23	82.1	2	8.0	

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Table 2 continued. ICU ethical issues questionnaire.

		Department Department		Surgery Internal Medicine		
		N	%	N	%	P<.05
20. The ethical problems I face in intensive care are caused by the professors' different approaches to treatment.	Always	2	7.1	1	4.0	0.127
	Usually	9	32.1	4	16.0	
	Sometimes	7	25.0	4	16.0	
	Rarely	10	35.7	13	52.0	
	Never	0	0.0	3	12.0	
21. The ethical problems I face in intensive care are caused by the ICU staff (technicians, secretaries, cleaners, etc.) not paying attention to the residents' warnings.	Always	2	7.1	0	0.0	0.004
	Usually	10	35.7	2	8.0	
	Sometimes	5	17.9	3	12.0	
	Rarely	11	39.3	16	64.0	
	Never	0	0.0	4	16.0	
22. The ethical problems I encounter in intensive care stem from my own inexperience.	Always	1	3.6	2	8.0	0.579
	Usually	5	17.9	5	20.0	
	Sometimes	21	75.0	14	56.0	
	Never	1	3.6	4	16.0	
23. The ethical problems I encounter in intensive care stem from a lack of adequate communication.	Always	0	0.0	3	12.0	0.085
	Usually	4	14.3	9	36.0	
	Sometimes	8	28.6	6	24.0	
	Rarely	13	46.4	5	20.0	
	Never	3	10.7	2	8.0	
24. The ethical issues I face in intensive care are caused by the anxiety/stress of patients' relatives and difficulties in discussing informed consent.	Always	0	0.0	4	16.0	0.028
	Usually	3	10.7	5	20.0	
	Sometimes	11	39.3	9	36.0	
	Rarely	13	46.4	6	24.0	
	Never	1	3.6	1	4.0	
25. The ethical problems I encounter in intensive care stem from the lack of intra-clinical communication.	Always	0	0.0	1	4.0	0.232
	Usually	5	17.9%	7	28.0%	
	Sometimes	8	28.6	3	12.0	
	Rarely	13	46.4	11	44.0	
	Never	2	7.1	3	12.0	

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Table 2 continued. ICU ethical issues questionnaire.

		Department Department		Surgery Internal Medicine		
		N	%	N	%	P<.05
Domain 7. Hierarchies create ethical issues						
26. Ethical problems in the ICU arise from the residents' limited authority.	Always	1	3.6	9	36.0	0.043
	Usually	6	21.4	5	20.0	
	Sometimes	9	32.1	7	28.0	
	Rarely	12	42.9	4	16.0	
27. A resident should not be actively involved in resolving ethical problems in intensive care.	Always	4	14.3	9	36.0	0.323
	Usually	9	32.1	6	24.0	
	Sometimes	6	21.4	4	16.0	
	Rarely	9	32.1	4	16.0	
	Never	0	0.0	2	8.0	
28. I am tasked with resolving ethical problems experienced in intensive care on my own.	Always	2	7.1	7	28.0	0.538
	Usually	8	28.6	4	16.0	
	Sometimes	11	39.3	8	32.0	
	Rarely	7	25.0	5	20.0	
	Never	0	0.0	1	4.0	
Domain 8. Suggestions for resolving ethical issues						
29. Improving intra- and inter-clinical communication reduces ethical problems.	Always	9	32.1	4	16.0	0.124
	Usually	7	25.0	5	20.0	
	Sometimes	7	25.0	9	36.0	
	Rarely	5	17.9	3	12.0	
	Never	0	0.0	4	16.0	
30. Having a hospital ethics committee and consultations with medical ethicists reduce these problems.	Always	2	7.1	6	24.0	0.696
	Usually	10	35.7	7	28.0	
	Sometimes	8	28.6	3	12.0	
	Rarely	5	17.9	5	20.0	
	Never	3	10.7	4	16.0	
31. Eliminating shortages in the intensive care unit reduces ethical problems.	Always	4	14.3	6	24.0	0.563
	Usually	16	57.1	10	40.0	
	Sometimes	6	21.4	5	20.0	
	Rarely	1	3.6	4	16.0	
	Never	1	3.6	0	0.0	

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Table 2 continued. ICU ethical issues questionnaire.

		Department Department		Surgery Internal Medicine		
		N	%	N	%	P<.05
32. Ethics training for nurses and employees who are new to the intensive care unit reduces ethical problems.	Always	8	28.6	7	28.0	0.082
	Usually	12	42.9	5	20.0	
	Sometimes	5	17.9	6	24.0	
	Rarely	3	10.7	4	16.0	
	Never	0	0.0	3	12.0	

χ^2 test.

able to accommodate all patients who require such care due to medical and/or technological deficiencies in the ICU. The responses of the 2 groups did not vary significantly (*P*>.05).

Domain 3. Issues of Inter-Clinical Agreement (Arising from Unclear Rules/Regulations)

The 2 groups of respondents mostly agreed that a lack of clarity regarding clinic responsibilities and authority was the source of some ethical issues, as certain clinics would avoid responsibility for their patients, referring those not suitable for tertiary ICU treatment to other ICU departments (*P*<.05).

There was also a significant difference of opinion between the 2 groups (*P* <.05) concerning cases in which some clinics request testing from anesthesiologists without first evaluating the patient, with surgical residents reporting such lapses in ethics as more frequent. Not abiding by clinical rules when discharging patients from the ICU constituted an ethical problem for internal medicine residents, and more so than for surgical residents (*P*<.05).

Domain 4. Futile Treatment

The respondents held dissimilar views regarding the insistence of both physicians and patients' relatives on continuing futile treatment, with surgical residents noting such instances to be more frequent compared to internal medicine residents (*P*<.05).

However, there was no significant difference between the 2 groups with respect to the prevalence of ICU ethical issues such as conducting constant examinations of and providing unhelpful treatment to patients with minimal signs of life (*P*>.05).

Domain 5. Patients' Relatives Create Ethical Issues

The respondents indicated that the verbal or physical intervention of patients' relatives, whether directly or through other authorized persons, creates ethical problems. The views of the internal medicine residents and surgical residents did not significantly differ on this point (*P*>.05).

Domain 6. Intra- and Inter-Clinical Ethical Problems

Most members of the 2 groups agreed that major ethical issues do not frequently arise as a result of professors' different treatment methods/models, the residents' own inexperience, and lack of intra-clinical communication (*P*>.05).

However, internal medicine residents were more likely to respond that some ethical issues are triggered by stress/anxiety on the part of patients' relatives, together with residents' difficulties in discussing informed consent (*P*<.05). There was also a significant difference between the views of the 2 groups regarding the concept of "Code Blue" for patients who require emergency medical attention and its relevance to ethical issues (with some wanting to avoid the responsibility given to certain clinics); the surgical residents indicated that this posed an ethical issue much more so than the internal medicine residents (*P*=.001). The former group also stated that other ICU employees such as technicians, secretaries, and cleaners not paying attention to the residents' warnings triggered ethical problems significantly more frequently than the latter group (*P*<.05).

Domain 7. Resident Hierarchies Create Barriers

Regarding the statement that ethical problems in the ICU occurred as a result of the residents' lack of authority, the views of the 2 groups diverged significantly, with surgical residents less likely to agree (*P*<.05).

There were no significant differences between the 2 groups, however, with respect to the proposition that residents should not be actively involved in solving ethical problems in the ICU; both groups also reported similar levels of being the sole

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individual tasked with resolving ethical issues they encountered in the ICU (*P*>.05 for both).

Domain 8. Suggestions to Resolve Ethical Issues

The respondents suggested necessary precautions to help resolve ethical issues arising in the ICU, including improving intra- and inter-clinical communication, the establishment of hospital ethics committees and consultations with medical ethicists, more careful management of supplies and equipment in ICUs to prevent shortages, and ethics training for ICU staff. There were no significant differences between the views of the 2 groups on any of these points (*P*>.05 for all).

Discussion

ICU medical residents who work full-time in critical care face the same types of ethical problems as other healthcare workers in the admission of patients, medical decision-making and treatment, and discharge processes, which demand values-based attitudes, behaviors, and actions. Resolving issues related to patient admission, treatment, and discharge will contribute to providing more effective healthcare services.

The ethical issues represented by the 8 domains herein have also been identified in several studies conducted by nurses and physicians in various countries [6-8]. Previous studies have suggested that to resolve the problems in the first domain, it is necessary to ensure that the process of ICU patient admission and discharge is in accordance with medical criteria and involves inter-clinical cooperation and clear communication [8,9]. This approach will help guarantee that the time allocated to the patient within the ICU is used most effectively, thus avoiding ethical issues and allowing the patient to receive proper treatment, from both a medical and ethical standpoint [9].

The issue of scarcity of resources negatively affects ICU patient admission, morbidity, and mortality. Studies on this topic have emphasized the importance of the scarcity of resources and medical staff on ICU outcomes, revealing the disruptions caused to ICU services and the harm incurred by patients, especially during a pandemic [9,11]. Since inadequate resources and staff contributes to ICU employee dissatisfaction, burnout [10], and feelings of helplessness, these may lead to conflicts among those employees and between the latter and hospital management, thus affecting the quality of health services in the ICU.

Regarding ICU administration, the issue of providing information and training on business and management ethical codes for hospital and clinic managers has not yet been seriously discussed. To that end, written guidelines should be prepared to outline protocols for ICU practices according to the job description [12]. Such protocols would help guide collaborations between specialists for critically ill patients, establish guidelines for dealing with anxious or angry relatives of patients, and clarify hierarchies of healthcare professionals, both intra- and inter-clinic, with the aim of eliminating discrepancies in how ethical issues are resolved [13]. Health authorities should also incorporate fundamental principles of accountability and mutually respectful and collaborative relationships to provide better ICU service [14].

Although numerous studies have critiqued the practice of futile or inappropriate treatment, this subject remains under discussion and possible solutions have yet to be implemented [15]. Some physicians do not condone the insistence on treating patients with severe irreversible damage or those who cannot live outside of an intensive care setting, noting that such treatment strains resources, thus causing financial damage [16], and is a waste of time/labor, resulting in other patients being denied ICU access while also dismaying healthcare professionals and patients' families [17].

Although the context of the present study was quite limited, the respondents noted that it was not uncommon that in the course of visiting a patient, some relatives and even neighbors would attempt to intervene in their treatment. Previous studies have revealed the extent of violence against health professionals [18,19]. A study conducted in Turkey found that in cases of violence committed against healthcare professionals, the perpetrators were overwhelmingly relatives of patients, 95.1% being male relatives [18]. Although the patient-caregiver-family triad contributes to humanizing the caregiving process for the patient and to building better communication and relationships among the members of the triad [20], the stress experienced by the family/relatives may also disturb the caregiver, both due to the possibility of infection and by increasing the stress levels of the latter, potentially leading to burnout. Relatives of patients often report discomfort with the approach of healthcare professionals [21]; such complaints indicate the dissatisfaction felt by both sides. Therefore, ICUs require a novel strategy and training program to handle issues involving patients and their relatives/visitors [22] to improve the safety of both patients and healthcare workers [22]. These guidelines, to be clearly explained to all ICU visitors, should encompass ICU rules such as appropriate distancing, the maximum number of visitors allowed, visiting hours, and hygiene.

Intra-team ethical conflicts may occur due to poor communication, lack of understanding of one's responsibilities/duties in setting treatment goals, or disagreement regarding ethical judgments, ICU resources, or limitations of the clinics in terms of their tasks [23]. To resolve these kinds of issues, clinic and

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hospital managers should determine the criteria necessary to positively influence the ICU staff and contribute to their health professional skills so they acquire the ability to resolve ethical issues and provide ethical care. The basic factors leading to poor outcomes in ethical ICU care are poor communication and poor relationships (both among staff as well as between staff and patients/patient relatives) [23], hierarchy problems [24], lack of trust, limited time and resources [25], and interpersonal, intra-clinic, or inter-clinic conflicts [11,13]. These issues may result in delays in implementing necessary ethical interventions, ultimately rendering the problem possibly unsolvable if left too long.

Apart from their low position in the ICU hierarchy and hence relative lack of authority, residents also lack experience compared to the other ICU physicians, yet nonetheless may be left to resolve ethical problems on their own. Although studies have found that there may be barriers to residents' completing their programs and incorporating new skills in the ICU [26], they can overcome these obstacles and successfully advance their clinical practice with a reevaluation of these programs. Relevant studies have concluded that residents' main problems stem from the inability to find a mentor, dyssynchronous perspectives between the residents and program leaders, unequal research opportunities [27], and uncertainty with respect to their programs [28]. Other researchers have recommended ethics courses for residents [27]. While the latter may participate in ICU decision-making concerning ethical issues, they nonetheless feel unable to share their thoughts and make possible suggestions [24].

Previous research has suggested resolving ethical issues in the ICU by clarifying intra- and inter-clinical roles and responsibilities, monitoring resources more closely, improving communication with patients and their relatives, establishing hospital ethics committees and consulting clinical ethics specialists, and offering ethics training for all ICU staff [14]. Nearly all studies regarding ethical issues stated that the main problems stemmed from poor communication, lack of good relationships, scarcity of resources, and inter-and intra-clinical conflicts.

Conclusions

This is the first study in Turkey in which ICU medical residents expounded on the ethical problems they face in their daily clinical practice. Our findings support those of previous studies related to ICU clinical ethics issues in the 8 primary domains investigated.

Ethical issues in the ICU do not end with obtaining informed consent, because medical ethical principles such as beneficence, non-maleficence, respect for patient autonomy, and distributive justice also apply, beginning with hospital admission until the patient is discharged. Therefore, it is critical to identify all possible ethical problems that may be encountered and to produce solutions. Ethical issues are not solely the responsibility of the chief clinician, but concern all members of the ICU team involved in patient treatment as well as hospital management.

This study revealed the importance of seeking and comparing the views of all ICU residents on the ethical problems they encounter, understanding the challenges faced by all ICU employees (some of which may become ethical issues), and identifying the factors involved, to find solutions. Our findings suggested that ethics courses for residents, reevaluation of their position in the ICU hierarchy, the establishment of clear guidelines on ethical issues (in written format), and collaboration with other ICU staff represent the most effective methods for handling these challenges.

Limitations

We acknowledge the fact that our study was conducted with a relatively small sample size, but nevertheless believe these findings will be relevant to the majority of programs that seek to improve understanding of residents' views on ethical issues. ICU residents already maintain a very busy work schedule, while the scarcity of time, the drive for efficiency, and the focus on technology in ICUs, together with the COVID-19 pandemic, have all made this profession much riskier and the workload heavier; as a result, the willingness of ICU residents to participate in research has drastically decreased. A strength of this study is fact that our findings are consistent with the results of other studies on ICU ethical issues, indicating that the present study was well designed and produced results that merit consideration. In addition, few studies have explored the perspectives and experiences of ICU residents; therefore, we believe it represents a worthy contribution to this field.

Ethics Approval

This study was approved by the institutional review board of Van Yuzuncu Yıl University Clinical Research Ethics committee (IRB No.148/December 25, 2020), which waived the need to obtain informed consent from participants undergoing the practical feasibility verification. All respondents gave their informed consent to participate in the study.

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