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Comparison of the Medical Ethics Approaches according to Professional Experience and the Source of Medical Ethics Training: A Survey Study

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ABSTRACT

Objective: This study aimed to compare the perspective on, the standard of knowledge and perceptions of medical ethics in the sixth-grade medical faculty students of a university hospital and the residents and academics working in the same hospital.

Materials and Methods: In the first step, the participants were divided into three groups as sixth-grade medical students, residents and academics. Each group included 100 participants. The participants were divided into groups according to the source of ethics training (from the person with ethical expertise or except for the ethics expert). The questionnaire, which consisted of 10 main questions, was applied to the participants one-to-one and face to face. The first five questions evaluate the demographic data of the participants, the questions 6, 7, 8 and 9 evaluate the participants' perspectives on medical ethics education and the 10th question evaluates the associations of medical ethics.

Results: The most common age range was 20–24 (30%) years. The majority of the participants agreed that medical ethics training was necessary (92.7%). The findings showed that participants who received medical ethics education from an ethics specialist had more ideas about the distinction between deontology and medical ethics (86.3% vs. 76.1%, p<0.001). The findings showed that participants who received training from ethical experts had higher knowledge of medical ethics.

Conclusion: Providing ethical education by experts may ensure that healthcare professionals have a higher level of basic ethical knowledge. All groups agree on the necessity of medical ethics education.

Keywords: Medical, ethics, academic, survey

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INTRODUCTION

Medical ethics is a practical discipline that provides a structured approach to identifying and resolving ethical issues in medicine and it examines behaviors that physicians must follow in their clinical practice. Medical ethics is a theoretical field of study with its own knowledge and methodology; on the other hand, it is a guiding and self-regulation mechanism related to the professional activities of health professionals within the framework of medical practices (1–3).

Medical professionals should be familiar with and respect basic medical ethical values, such as providing benefit, non-harm, fairness, and respect for autonomy (4). Although the concepts of medicine and ethics have been used together since the time of Hippocrates and certain medical ethics values have been formed, a standard ethics education has come to the agenda in recent years and has become widespread (5). Thus, medical ethics education constitutes one of the important topics of education debates regarding both pre-graduation and post-graduation periods (6, 7). This is because the rapidly increasing medical professionalism in modern medicine increases in parallel with the need for medical ethics (8). Thus, the development of various scales on medical ethics has also been raised (9).

In our university, medical ethics training is given within the department of medical history and ethics. Although this department was established in our university in 2019, medical ethics training has been given by other academicians who are not experts in medical ethics for about 50 years. In the well-established universities of our country, there are departments of medical history and ethics for many years. However, according to our studies, it has been concluded that although some departments have been established, especially in some newly established universities. To our knowledge, there are not medical history and ethics experts, and the training is given to students by other academics (10). The effects of this situation on the attitude, behavior and knowledge levels of health professionals are a matter of curiosity.

In this cross-sectional survey, it was aimed to evaluate and compare the perspectives of pre-graduation (sixth-grade medical students) and post-graduation (residents and academics) staff in medical ethics and some ethical

approaches. In addition, it was aimed to investigate the effects of the source of ethics education on the ethical attitude and behavior or knowledge level by questioning the source of the medical ethics education of the participants and comparing the groups formed with each other.

MATERIALS and METHODS

Participant Selection and Application of the Surveys

Sixth-grade students of medical faculty studying at Erciyes University, residents and academics working at the same university hospital were included in this study. Due to the face-to-face communication with patients, only internal and surgical medical unit residents were included in this study. As of October 2019, there were 306 sixth-grade students from Erciyes University Faculty of Medicine and 217 academics and 462 residents working in the internal and surgical medical units of the same university. In this study, 100 participants were included in each group using a simple random sampling method. Participants were selected from surgical or internal units that were in direct communication with patients.

The ethical perspectives of the participants were evaluated using a questionnaire consisting of 10 questions (Appendix 1). The first page of the questionnaire used for the collection of the data contains explanatory information about the research as informed consent for the participants. In the survey, questions 1 to 9 consisted of elective questions that included the participants' demographic characteristics and their views on ethics and ethics education, while the 10th question consisted of 11 different sub-questions, including the participant's opinions and knowledge levels on medical ethics, and the questionnaire that was filled in by rating every option separately. The four essential rules for basic medical ethical values, such as providing benefit, non-harm, fairness and respect for autonomy, are among these questions and with this question to measure the level of knowledge of the participants about medical ethics (4). In this question, participants were asked to score 1–5 points for each sub-question (1=I don't care at all, 2=I care less, 3=I am indecisive, 4=I care, 5=I fully care). The total score given to this 11 sub-questions was recorded. Questionnaires were administered face to face and one-to-one by the same researcher (T.D.).

Statistical Analyses

TURCOSA Cloud (Turcosa Analytics Ltd Co) software was used for the statistical analysis. Distribution characteristics of numerical data were determined according to the Shapiro-Wilk test and Histogram graphs. Categorical data were expressed as a percentage (%) and numerical data were expressed as median (1–3rd quartile) according to distribution characteristics. Mann-Whitney U test and Kruskal Wallis test were used for the comparison of numerical data that did not show the normal distribution in independent groups, and chi-square test was used for comparison of categorical data. Dunn's post-hoc test was used for Kruskal-Wallis analysis. A p-value of less than 0.05 was considered statistically significant.

Ethical Issues

This study was approved by the Erciyes University Clinical Research Ethics Committee (Approval number: 2019/478). All participants were informed verbally and in writing before this study and their consent was obtained.

Table 1. Some demographic data of all participants

Variable	n	%
Age		
20–24	91	30.3
25–29	83	27.7
30–39	51	17.0
40–44	38	12.7
>45	37	12.3
Marital status		
Married	145	48.3
Single	155	51.7
Gender		
Female	148	49.3
Male	152	50.7
Professional experience (years)		
0–6	99	33.0
7–14	116	38.7
>15	85	28.3

Financial Support

No financial support was received from any institution, organization or individual for this study.

RESULTS

Approximately 30% of the 300 participants included in this study were in the age range of 20–24, 28% were in the age range of 25–29, and 17% were in the age range of 30–39. Most of the participants had a clinical experience of 7–14 years (38.7%). Some demographic characteristics of the participants that were determined by their responses to the first five questions are summarized in Table 1.

When the researchers were classified as students, residents and academics according to their academic titles, there was a difference between the groups concerning "morality" response rates from the associations of the concept of ethics mentioned in the sixth question (p=0.26). The number of participants who found a relationship between morality and ethics was in the academics group, and it was higher than the group of students. The responses of the groups to the questions of ethical education in the seventh and eighth questions were similar. In the ninth question, where the difference between the concepts of deontology and ethics was evaluated, it was seen that the students gave more 'no idea' than the academics (Table 2). When the scores given to the 11 sub-questions in the tenth question were compared, academics gave higher scores to the concepts of non-harm, being honest, respecting privacy, respecting autonomy, while residents were more sensitive to respect for specialization. The data obtained from the tenth question are summarized in Table 3. When the scores given to the four basic rules of benefit, non-harm, fairness, and respect for autonomy were examined, the differences were not significant statistically (43%, 41%, 29%, respectively, and p=0.087).

Table 2. Comparison of the answers given to questions no. 6, 7, 8, 9 by title

	Students (n=100)	Residents (n=100)	Academics (n=100)	p
6- What is the first association that awakens in your mind when it comes to ethics or medical ethics?				
6A- Morality	63 (63%)[a]	68 (68%)[a,b]	80 (80%)[b]	**0.026**
6B- Code of Conduct	43 (43%)	42 (42%)	45 (45%)	0.909
6C- Protection of rights	46 (46%)	38 (38%)	51 (51%)	0.176
6D- The best for the patient	40 (40%)	43 (43%)	51 (51%)	0.270
6E- Communication and rule	23 (23%)	25 (25%)	29 (29%)	0.613
6F- Right decision-making process	34 (34%)	33 (33%)	30 (30%)	0.820
6G- Dilemma	6 (6%)	8 (8%)	4 (4%)	0.492
7- Where did you learn medical ethics?				
7A- From an ethics expert	45 (45%)	54 (54%)	38 (38%)	0.075
7B- Except for the ethics expert	55 (55%)	46 (46%)	62 (62%)	
8- Do you think it is necessary to have ethics courses in medical education?				
8A- Yes	90 (90%)	90 (90%)	98 (98%)	0.043
8B- No	10 (10%)	10 (10%)	2 (2%)	
9- The moral aspect of medicine used to be called deontology. What is your opinion on calling it "ethics" now?				
9A- No difference	17 (17%)[a]	23 (23%)[a]	11 (11%)[a]	
9B- Ethics is a more recent and clear term	32 (32%)[a]	20 (20%)[a]	31 (31%)[a]	
9C- Ethics is more comprehensive	7 (7%)[a]	7 (7%)[a]	23 (23%)[b]	
9D- Deontology covers ethics	9 (9%)[a]	15 (15%)[a]	15 (15%)[a]	0.001
9E- Deontology is narrow and ethics is broad rules	7 (7%)[a]	12 (12%)[a]	10 (10%)[a]	
9F- Deontology deals with the history	2 (2%)[a]	1 (1%)[a]	0[a]	
9G- I have no idea	26 (26%)[a]	22 (22%)[a,b]	10 (10%)[b]	

Different superscripts given in the same line indicate a statistically significant difference

Table 3. Comparing scores according to titles

	Students (n=100)	Residents (n=100)	Academics (n=100)	p
Fairness	5.0 (4.0–5.0), 146.1	5.0 (4.0–5.0), 152.0	5.0 (4.25–5.0), 153.4	0.717
Non-harm	5.0 (4.25–5.0)[a], 138.6	5.0 (5.0–5.0)[b], 155.9	5.0 (5.0–5.0)[b], 157.9	**0.034**
Respect for life	5.0 (5.0–5.0), 151.2	5.0 (5.0–5.0), 151.0	5.0 (5.0–5.0), 149.3	0.971
Honesty	5.0 (4.0–5.0)[a], 135.9	5.0 (4.0–5.0)[a], 142.5	5.0 (4.25–5.0)[b], 173.1	**0.001**
Respect for privacy	5.0 (4.0–5.0)[a], 134.3	5.0 (4.0–5.0)[a,b], 153.0	5.0 (4.0–5.0)[b], 164.2	**0.014**
Avoiding discrimination	5.0 (4.0–5.0), 137.5	5.0 (4.0–5.0), 158.2	5.0 (4.0–5.0), 155.8	0.092
Keeping secret	5.0 (4.0–5.0), 137.3	5.0 (4.0–5.0), 155.4	5.0 (4.0–5.0), 158.8	0.095
Information and consent	4.0 (3.25–5.0), 138.3	5.0 (4.0–5.0), 157.8	5.0 (4.0–5.0), 155.4	0.168
Providing benefit	5.0 (4.0–5.0), 153.9	5.0 (4.0–5.0), 159.0	5.0 (3.0–5.0), 138.6	0.141
Respect for autonomy	4.0 (3.0–5.0)[a], 134.3	5.0 (4.0–5.0)[b], 162.9	5.0 (3.25–5.0)[b], 154.4	**0.010**
Respect for specialization	4.0 (3.0–5.0)[a], 131.0	5.0 (4.0–5.0)[b], 163.7	4.0 (3.25–5.0)[a,b], 156.9	**0.037**

The numerical data were expressed as median (1–3rd quartile) and mean ranks. Different superscripts given in the same line indicate a statistically significant difference

The participants were categorized according to the source of ethics training (from the person with ethical expertise or except for the ethics expert). It was seen that the answers to questions 6, 8 and 9 were generally given similar answers. The number of people who did not have any idea about the difference between ethics and deontology was lower than those who took lessons from ethics specialists (Table 4). When the answers given to the tenth question by these groups were examined, the answers given by the participants who received training from an ethics specialist to all questions were higher than the participants who received ethics training from the person who was not an ethical expert. However, only the difference between "non-harm", "keeping secret" and "respect for autonomy" was sta-

Table 4. Answers given to questions no. 6, 8, 9 by the source of ethics

	Source of medical ethics		
	Ethics expert (n=137)	**Except for the ethics expert (n=163)**	**p**
6- What is the first association that awakens in your mind when it comes to ethics or medical ethics?			
6A- Morality	95 (69%)	116 (71%)	0.731
6B- Code of Conduct	58 (42%)	72 (44%)	0.749
6C- Protection of rights	59 (43%)	76 (47%)	0.537
6D- The best for the patient	68 (50%)	66 (40%)	0.113
6E- Communication and rule	39 (28%)	38 (23%)	0.309
6F- Right decision-making process	48 (35%)	49 (30%)	0.359
6G- Dilemma	9 (7%)	9 (6%)	0.703
8- Do you think it is necessary to have ethics courses in medical education?			
8A- Yes	128 (93%)	150 (92%)	0.642
8B- No	9 (7%)	12 (8%)	
9- The moral aspect of medicine used to be called deontology. What is your opinion on calling it "ethics" now?			
9A- No difference	25 (18%)	26 (16%)	
9B- Ethics is a more recent and clear term.	44 (32%)	39 (24%)	
9C- Ethics is more comprehensive	21 (15%)	16 (10%)	>0.05
9D- Deontology covers ethics	16 (12%)	23 (14%)	
9E- Deontology is narrow and ethics is broad rules	11 (8%)	18 (11%)	
9F- Deontology deals with the history	1 (1%)	2 (1%)	
9G- I have no idea	19 (14%)	39 (24%)	**<0.001**

The categorical data were expressed as n, percentage (%)

Table 5. Comparison of the answers given to questions no. 6, 7, 8, 9 by the source of medical ethics

	Source of medical ethics		
	Ethics expert (n=137)	**Except for the ethics expert (n=163)**	**p**
Fairness	5.0 (5.0–5.0), 155.4	5.0 (4.0–5.0), 146.4	0.252
Non-harm	5.0 (5.0–5.0), 159.7	5.0 (5.0–5.0), 142.8	**0.010**
Respect for life	5.0 (5.0–5.0), 154.7	5.0 (5.0–5.0), 147.0	0.290
Honesty	5.0 (4.0–5.0), 153.7	5.0 (4.0–5.0), 147.8	0.496
Respect for privacy	5.0 (4.0–5.0), 156.8	5.0 (4.0–5.0), 145.2	0.173
Avoiding discrimination	5.0 (4.0–5.0), 152.7	5.0 (4.0–5.0), 148.7	0.642
Keeping secret	5.0 (4.0–5.0), 162.1	5.0 (4.0–5.0), 140.7	**0.014**
Information and consent	5.0 (4.0–5.0), 154.9	5.0 (3.0–5.0), 146.8	0.380
Providing benefit	5.0 (4.0–5.0), 158.3	5.0 (4.0–5.0), 144.0	0.103
Respect for autonomy	5.0 (5.0–5.0), 160.0	4.0 (3.0–5.0), 142.5	**0.049**
Respect for specialization	4.0 (4.0–5.0), 154.3	4.0 (3.0–5.0), 147.3	0.455

The numerical data were expressed as median (1–3rd quartile) and mean ranks

tistically significant (Table 5). The rate of giving 20/20 full points to four important sub-questions (providing benefit, non-harm, fairness, and respect for autonomy) was higher in the participants who were trained by the ethics specialist (45.3% vs. 31.3%, p=0.013).

DISCUSSION

According to the responses of the participants to the tenth question, it was concluded that the level of knowledge of medical ethics, who were trained from the medical ethics specialist, was higher

than the participants who were trained from except for the ethics expert academics. Beside this, no significant difference was observed between the views of ethics education of different degrees, such as academics, residents and medical students. Regardless of the group, the majority of respondents believe that there should be "ethics" training in medical education.

The answers to the sixth question that we asked the participants, questioning the association in mind when it comes to 'ethics', were mostly similar. Interestingly, in all groups, most of the residents thought that there was a relationship between ethics and morality, and the group that made the most association of ethics and morality was the academics. According to medical ethics definitions, one of the important features of ethics is that it is a guiding and self-regulation mechanism related to the professional activities of health professionals (1, 2). On the other hand, according to the residents included in our study, the effect of ethics on the application of what is right for the patient and the decision-making process was far behind the morality, which outweighed the spiritual effectiveness.

Approximately 54% of the participants included in this study reported that they received medical ethics training from except for the ethics expert. According to a study conducted among medical students, participants think that medical ethics education should be taken from ethics experts (11). When the participants were grouped according to the source of ethics education, the answers to the questions were mostly similar. However, as expected, the proportion of participants who had received training from an ethical expert was lower than the participants who had no idea about the difference between ethics and deontology. This situation can be interpreted as the training is carried out within the framework of certain ethical standards, even if not carried out by the ethics expert, whereas people who have been trained by the ethics expert have more precise ideas about certain concepts. Academics and residents included in this study are healthcare professionals who have studied medicine at various universities in the country. Therefore, the source of the ethical education of the participants varies. In this study, in the tenth question, indirectly, it is aimed to measure the ethical knowledge levels of the participants. The concept of medical ethics has many components. However, in this question, the importance of four indispensable factors (providing benefit, non-harm, fairness, and respect for autonomy) for medical ethics was questioned for the participants. Healthcare professionals with sufficient ethical knowledge are expected to give full scores to these four questions (4). According to the results of our study, it was concluded that the participants who received ethics education from the ethics experts pay more attention to the concepts in these four questions. From this point of view, it can be said that the level of knowledge about the medical ethics of healthcare professionals who are trained by an ethics specialist is more sufficient. Answers to the same question were also compared for students, residents and academics. Although the statistical difference was not significant, it was seen that academics gave 20 full points to these four questions at a higher rate. In their studies conducted in 2019, Ozturk et al. (12) pointed out the lack of importance given to respect for autonomy in health care workers. In our study, when the scores given to 11 questions were evaluated, it was seen that academics and residents came to the fore. This can be interpreted as the time spent in the clinic and with the patients' increases, that is, the need for medical ethics increases and some important medical ethics concepts become important in the individual. Interestingly, residents found the issue of respect for specialization more important than other groups. This situation may be the result of the sensitivity of the newly formed people who have started their specialization life.

According to a study conducted among academics, it was reported that the majority of participants believe in the necessity of medical ethics courses (13). According to a recent study, the necessity of medical ethics courses given in medical faculties was reported, but it was reported that there was no standardization regarding the duration of medical ethics courses to be given (4). Similar results have been shown in other studies (14). According to another study, it was concluded that medical ethics education in medical school education significantly changed the students' perspective on medical ethics (15). Similarly, in our study, students, residents and academics seem to agree on the necessity of ethics courses in medical school education, which was posed to the participants in the eighth question.

Limitations of our study can be listed as the low number of participants because only one university covers students and academics, and the lack of homogenization in education levels and education models due to that the participants are from different universities.

In conclusion, the source of ethics directly affects the level of ethical knowledge of the participants, and those who receive medical ethics training from those who are experts in ethics have more information on basic ethical principles. However, students, residents and academics agree that medical ethics courses are necessary and that these courses should be given by medical ethics experts. Although there are some differences in the opinions about the basic concepts of medical ethics and their importance, it can be said that all groups agree on many issues and find medical ethics important.

Ethics Committee Approval: This study was approved by the Erciyes University Clinical Research Ethics Committee (Approval number: 2019/478).

Informed Consent: All participants were informed verbally and in writing before this study and their consent was obtained.

Peer-review: Externally peer-reviewed.

Conflict of Interest: The author have no conflict of interest to declare.

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Appendix 1. Questionnaire

1) Gender a) Male b) Female

2) Marital status a) Married b) Single

3) Degree a) Academics b) Resident c) Student

4) Age range a) 20–24 b) 25–29 c) 30–39 d) 40–44 e)45+

5) How many years have you been in medicine? a) 0–6 years b) 7–14 years c) 15+

6) What is the first association that awakens in your mind when it comes to ethics or medical ethics? You can mark more than one option in this question.

a) Morality b) Code of conduct c) Protection of rights d) The best for the patient

e) Communication and rule f) Right decision-making process g) Dilemma

7) Where did you learn medical ethics?

a) From an ethics expert b) From a non-ethics expert

8) Do you think it is necessary to have ethics courses in medical education?

a) Yes b) No

9) The moral aspect of medicine used to be called deontology. What is your opinion on calling it "ethics" now? In this question, mark only 1 option.

a) No difference

b) Ethics is a more recent and clear term.

c) Ethics is more comprehensive

d) Deontology covers ethics

e) Deontology is narrow and ethics is broad rules

f) Deontology deals with the history

g) I have no idea

10) Rate the principles of professional ethics that you most strongly adopt to be the highest 5 points and the lowest 1 point.

a) Fairness

b) Non-harm

c) Respect for life

d) Honesty

e) Respect for privacy

f) Avoiding discrimination

g) Keeping secret

h) Information and consent

i) Providing benefit

j) Respect for autonomy

k) Respect for specialization