**Title page**

**Full title:** The main challenges of medical ethics from the perspective of physicians in Iran

**Running title:** Medical Ethics Challenges in Iran

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**ABSTRACT**

**Background and aim:** It is widely accepted thatmedical ethics is a crucial factor because of its extent and connection with society, and sensitivity of health topics in all communities. Moreover, it has been considered in both clinical and scientific research. This study attempts to identify the most important ethical challenges in the medical community of Iran, based on the views of practitioners and experts in this field, we hope that our results help to specialists and researchers to focus on ethical challenges in medicine in the future.

**Materials and methods:** The present study is an applied research and has a descriptive-survey design in terms of data collection method. Therefore, 10 challenges were finally detected in this area by reviewing the literature and then ranked them according to expert opinions.

**Results:** Challenges such as professional communication in medicine, training physicians and faculty members, and abortion were the top priorities.

**Conclusion:** Different foundations of each culture and community necessitate to consider the ethical challenges in medical field of any society.

**Keywords:** Ethics, Medical Ethics, Professional Communication, Training, Abortion

**INTRODUCTION**

Medicine requires the observation of ethics, like all professions, and professionals have two expectations of ethics: the systematic expression of ethical responsibilities in the profession, and the precise detection and effective resolution of professional ethical issues (1). Ethics is defined as a set of inner and spiritual traits of human being, which appears as actions and behaviors derived from the inner mood of humankind, and thus the ethics can be reportedly defined through its effects (2).

Advances in medical technologies have emerged new and tangible issues in this area, and has created important challenges in the modern world. A science called as Medical Ethics has been considered to solve these challenges. The history of medical ethics is as old as medicine. The medical ethics is a system of ethical principles, which benefits practically from the values for clinical medicine and scientific research. The medical ethics is a collection of values that can be referred by professionals in case of any conflict. These values include respect for independence, non-violence and prejudice, philanthropy and justice (3).

The medical ethics is an interdisciplinary knowledge linked with various sciences such as ethics, law, religion, and philosophy. Therefore, attention to these domains and related issues is inevitable in the definition of medical ethics (4). The ethical problems arising from the advances in modern medical diagnosis in medicine have necessitated the need to address medical ethics (5). To this end, with the aim of defining and establishing the ethical principles for physicians in accordance with their overall responsibilites for patients and other physicians (their colleagues), some ethical codes, including respect, honesty and confidentiality were defined around the world (6).

Given the different foundations of each culture and community, achieving a consensus in this regard is very difficult. Therefore, various communities consider the principles that can examine the challenges with inclusive insights.

Considering the importance of ethical issues and challenges in medicine, this research has addressed some of the most important challenges in this field in Iran.

**MATERIALS AND METHODS**

This research has been focused on the analysis of the most important ethical challenges in medicine. The current research has an applied design in terms of the objective, and a descriptive-survey design in terms of data collection method. We searched google scholar, pubmed, scopus and Enbase with key words of ethic, medicine, medical ethic, chalenges. Among about 500 relevant abstract we found about 168 fits the subject articles. According to review on the obtained articles, 10 topics regarding medical ethics and their challenges were found at last. Table 1 shows a summary of the ethical challenges and issues in the medicine.

Then, the views of experts in this area were collected regarding the importance of each of them using a questionnaire. To assess the importance of challenges, a questionnaire was designed based on a 7-point Likert scale in which the degree of agreement of experts on the importance of each challenge was questioned.

**Statistical analysis**

In order to analyze the data, Kolmogorov-Smirnov test (K-S) was used to determine and fit the normality of the data obtained from the questionnaire. The K-S was applied using the following two hypotheses:

H0: The variable in question has a normal distribution.

H1: The variable in question has a non-normal distribution.

The test results showed that the distribution of the questionnaire-derived data followed the non-normal distribution. Therefore, the data were considered as a community independent of distribution. Hence, the distribution-independent (nonparametric) tests were utilized for the analysis. Subsequently, the nonparametric Friedman test was used to prioritize the main challenges and issues. Content validity of the questionnaire was verified using expert opinion, and Cronbach's alpha coefficient was used to measure the questionnaire reliability.

The Cronbach's alpha coefficient was estimated to be 0.823 for the questionnaire. Given the fact that this number is larger than 0.70, it can be concluded that the questionnaire has a required reliability. Data were analyzed by SPSS software version 22 using inferential statistical tests.

**RESULTS**

By analyzing the results from the reponse of experts to the questionnaires distributed in this study, the most important ethical issues and challenges in medicine were detected and prioritized. A total of 53 questionnaires were distributed among the experts in the Tehran University of Medical Sciences and Health Services to collect data in identifing the main challenges. These people expressed their views in a 7-scale spectrum. In order to ensure that all the challenges would be identified, a text box was considered in the questionnaire, so that experts could add any omitted challenges based on their own discretion and then prioritize them.

The results of this test are shown in Table 2. As can be seen, p-value is equal to or less than 0.05. Finally, the results of the questionnaires were prioritized using Friedman test, which are shown in Table 3. Based on the findings in Table 3, the challenges such as professional communication in medicine, training physicians and faculty members, and abortion were the top priorities.

**DISCUSSION AND CONCLUSION**

New medical ethics is in fact one of the branches of professional ethics that tries to bring ethics into the practical field of physicians and the medical staff, as well as in ethical decision-making process in the medicine. This process involves an analytical activity in which the thoughts, beliefs, obligations, behaviors, feelings, arguments, and discussions are examined in an accurate and critical manner in the medical-ethical decisions. Decisions in medical ethics discuss medical performance, axioms / values, good / bad, correct / wrong, and do's/don'ts (7).

Given the fourfold principles of the international community (respect for independence, non-violence and prejudice, philanthropy and justice), and the fourfold Islamic principles (relationship with God, self, society and nature), issues and challenges can be answered and interpreted, which may also not have common responses. Given the cultural and social context of Iran, there are different challenges, and we need to analyze the prioritization of the attentions of the medical community to these issues, and to consider further research based on geographical, cultural and sociological conditions. In line with this goal, and as noted, this study identified the most important ethical challenges in medicine. Therefore, 10 main challenges were finally detected in this area by reviewing the literature and making advantage of expert opinions, followed by accordingly prioritizing these challenges. The results of the research show that five of the most important challenges are:

1- Professional communication in medicine: including physician-patient communication, obtain consent, secrecy, truth telling and communication with colleagues (8)

2- Challenges for training physicians and faculty members: One of the topics challenged in the health field is the focus on training and delivering the meanings and concepts of professional ethics to the physicians (4).

3- Abortion; Some consider the life and the right to life for the embryo, but some give this right to the mother who carries the fetus (9).

4- Children's rights in medicine: One of the important issues in medicine is the observance of children's rights; they lack sufficient capacity to understand the medical issue and make informed decisions due to inadequate growth and young age. Therefore, some believe that parents should take care of children until the age of majority (10).

5- The risks of using information technology: The ethical risks induced by new information technologies have contributed to the conflict between their applications with the principles of utility, free will, integrity and justice. There is fear of uncertainty about the confidentiality of information and the lack of integrity due to the hacking of systems by hackers and the provision of inaccurate information to patients. For example, for a person who has negative HIV test result, the result can be declared positive. Further, imbalances and the lack of access to internet services by all people will also undermine justice (11).

6- Euthanasia: the word "euthanasia" comes from the Greek prefix of the EU (= good) and the word Thanasia (= death), “good death”, derived from Thanatos, the goddess of death in Greece. In the Western perspective, there is often no problem with this, and any person has the right to decide for himself, but some also give warnings about the unpleasant effects in the heart of the physicians.( 12)

Physiologists and clinical psychologists often want to assess patients' ability to make decisions about life and death at the end of their lives. People with mental conditions, such as delusion or clinical depression, may be unable to make final decisions (12).

7- Conflict of interests between physicians and patients: This conflict in the interests of both sides endangers health, and imposes more costs and problems on patients to respond to self-interest.

8- Simulation: Cloning or human simulation has become a universal debate today. Although the details and future of this issue are still unclear for the world, many individuals and groups around the world follow the explanation of this phenomenon from a variety of dimensions. At national level, this issue has been encountered with different reaction of fuqaha in terms of fiqh (13).

9- Transplantation of organs and tissues: Transplantation of organs and tissues has merged with ethical issues as it has attracted the attention of religious scholars and philosophers, lawyers, physicians, policymakers and even the public in most countries (14).

10- New Methods of contraception and pregnancy induction: This topic is also included in The Canon of Medicine, a book compiled by the Persian physician-philosopher Avicenna (Ibn Sina). Although contraception is not permitted in Islam, these measures and even abortion are permitted in certain circumstances (15).

It is suggested that future research can use qualitative methodologies to identify effective variables in the field of medical ethics and even to explain their relationships.

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Table 1. The most important challenges and medical ethical issues according to literature review

|  | **Medical ethic chalenges** |
| --- | --- |
| 1 | Euthanasia |
| 2 | Abortion |
| 3 | Professional communication in medicine |
| 4 | Children's rights in medicine |
| 5 | Transplantation of organs and tissues |
| 6 | Simulation |
| 7 | New Methods of contraception and pregnancy induction |
| 8 | The risks of using information technology |
| 9 | Challenges for training physicians and faculty members |
| 10 | Conflict between the interests of physicians and patients |

Table 2. The result of Kolmogorov–Smirnov test (K–S test)

| Asymp.sig. (2-tailed) | Medical ethic chalenges |  |
| --- | --- | --- |
| 0.001 | Euthanasia | 1 |
| 0.003 | Abortion | 2 |
| 0.015 | Professional communication in medicine | 3 |
| 0.001 | Children's rights in medicine | 4 |
| 0.009 | Transplantation of organs and tissues | 5 |
| 0.003 | Simulation | 6 |
| 0.000 | New Methods of contraception and pregnancy induction | 7 |
| 0.008 | The risks of using information technology | 8 |
| 0.001 | Challenges for training physicians and faculty members | 9 |
| 0.000 | Conflict between the interests of physicians and patients | 10 |

**Table 3. Ranking Challenges by Friedman Test**

| Medical ethic chalenges | **Mean Rank** | **Final ranking** |
| --- | --- | --- |
| Euthanasia | 4.93 | 6 |
| Abortion | 6.79 | 3 |
| Professional communication in medicine | 8.41 | 1 |
| Children's rights in medicine | 6.07 | 4 |
| Transplantation of organs and tissues | 3.36 | 9 |
| Simulation | 4.50 | 8 |
| New Methods of contraception and pregnancy induction | 2.21 | 11 |
| The risks of using information technology | 5.71 | 5 |
| Challenges for training physicians and faculty members | 8.18 | 2 |
| Conflict between the interests of physicians and patients | 4.64 | 7 |