Published online 2018 July 28.

**Research Article** 

# Adaptation of Ethical Components of Education in Medical Universities of Iran and the World (2018)

Mohammad Ali Nemati<sup>1</sup> and Saide Taghizade<sup>2,\*</sup>

<sup>1</sup>Department of Educational Management and Planning, Faculty of Psychology and Educational Sciences, Allameh Tabataba'i University, Tehran, Iran <sup>2</sup>Ph.D. student of Management of Higher Education, School of Graduate Studies, Allameh Tabataba'i University, Tehran, Iran

<sup>\*</sup> Corresponding author: Ph.D. student of Management of Higher Education, School of Graduate Studies, Allameh Tabataba'i University, Tehran, Iran. Tel: +98-9151183340, Email: saide.taghizade@yahoo.com

Received 2018 July 04; Accepted 2018 July 11.

# Abstract

**Background:** Today, in the field of Medical Science, ethics, especially education ethics, is of great importance in the face of human life. This research aimed to conduct a comparative study of the ethical components of education in the medical universities of Iran and the world (universities in America, Europe, Asia, and Australia) and provide solutions to improve it.

**Methods:** The research method consisted of a documentary, library, and comparative study using benchmarking and best practice. The statistical population of this study was 110 universities which were the world's top medical universities (based on Shanghai rankings) and 65 universities of medical sciences in Iran that were selected using a whole sampling method. Data analysis was done using qualitative and descriptive statistics.

**Results:** The findings of the research showed that there was currently no specific unity in the formulation of the content of educational ethics documents in the medical universities. The results also indicated that Iran and even Asia had provided less attention to education ethics than the top medical universities of the world.

**Conclusions:** Since education ethics and ethics document are associated with the success of the world's top medical universities, it is important that the medical universities in Iran pay more attention to this. In this regard, the identified strategies resulting from benchmarking and best practice of the medical universities in this field can be taken advantage of.

Keywords: Education Ethics, Educational Ethics Documentation, Codes of Ethics, Ethics, Medical and Academic Medical Centers

# 1. Background

Education is the most critical responsibility of universities. Education ethics has two important aspects. The first aspect consists of the ethical standards that must be observed in education (content, teaching time, teaching method, etc.), and the second is the individual ethics that people should observe at any time and place (1). Thus, higher education needs ethics, and one of the reasons is the changes in higher education in recent years. In recent years, the influx of people into higher education has made the quantity of higher education one of the most important concerns of academics, rendering the issue of quality less important. In these conditions, attention to ethics in higher education is very important (2) because, in ethics and ethics document, the students' rights to college and university and vice versa are stressed, so the quality in the universities is considered.

Ethics and related issues, especially in Medical Sciences, are some of the topics that cannot be overlooked (3).

This is because the function of humanizing the universities and the pursuit of Medical Science universities with the lives of people make a mistake in dealing with ethical issues extremely harmful. Thus, ethics must be applied to all the standards, stages, processes, and operations of the University, especially in its educational dimension (4). In this regard, the role of faculty members and managers in universities is very significant. In fact, faculty members and managers should behave themselves as a model of ethics for other members of the academic community.

Ethics can be defined as a set of principles and standards of human conduct that determines the behavior of individuals and groups. Professional ethics is a rational thinking process intended to realize the values in an organization and its preservation and dissemination (5). Medical ethics is the science dealing with the relationship between the doctor, the patient, and his/her colleagues. This is an interdisciplinary science, and its subject is ethical issues in the field of Medical Sciences. It deals with the issues

Copyright © 2018, Educational Research in Medical Sciences. This is an open-access article distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (http://creativecommons.org/licenses/by-nc/4.0/) which permits copy and redistribute the material just in noncommercial usages, provided the original work is properly cited. and topics related to the different branches of Medical Sciences, the profession, and the policy of the health system (6). Finally, ethics in education includes the cultural and value concepts based on the understanding of the higher education professionals about the learning and teachinglearning process, which can reflect students' views, needs, and expectations in this area (4).

Despite the importance of ethics and ethical documentation, few studies have been conducted, especially in Iran. Most of the studies have emphasized the need for ethics and paying attention to it. Regarding the quality of attention to ethics, ethical documentation, and ethical courage among the nurses and so on in Iran, there is a lot to be done to achieve the desired state (7). Additionally, in ethics and comparing the effect of teaching ethics by ethical narratives and lectures on the ethical sensitivity of nurses, a study showed that attention to ethics and ethical documentation is critical, and the two methods of narration and lectures significantly improved the nurses' moral sensitivity in each group compared with that before intervention (8). Moreover, the lack of attention to ethics and ethical documentation has caused conflict between student and patient rights in clinical education (9). Thus, it is necessary to identify the various dimensions of the problems in this area and provide appropriate solutions.

Dehghan et al. examined some papers related to Medical ethics in the Islamic countries of the Eastern Mediterranean region of the world health organization (WHO). This study stresses the need for Medical Science universities to give attention to ethics and related issues (10). Also, the position of ethics in Medical education in Iran does not have a good status. The results show that the first goal of Medical ethics education is strengthening the trainees' abilities to conduct health care of patients and support their families, but there is still a need to pay attention to and apply appropriate executive practices in this regard (11).

In the area of ethics and documentation of Medical education ethics, clinical ethics education is one of the most important necessities for the ethical development of the health system. Accordingly, educational programs at various levels, such as short-term courses with a certificate and graduate and postgraduate degrees, in the authoritative universities of the world are increasingly being presented. However, these types of programs and their localization in the country need more attention (12). Moreover, no specific ethical codes have yet been defined in education, especially in Medical education, and even the ethical points of interest in Medical education have not been documented in the ethical and educational resources or Medical books (13).

Other studies have referred to the vacuum of ethical leadership, the challenges of teaching Medical ethics re-

lated to teachers and ethical considerations in Medical education, and patient rights in educational hospitals, all of which indicate a lack of attention to ethics and ethical documentation (14-16). Regarding educational ethics and organizational commitment among the teaching staff of Tabriz University of Medical Sciences, Imani et al. pointed to a significant relationship between professional ethics and organizational commitment. There was a significant relationship between professional ethics and job commitment as well (17). Moreover, gender and nationality affect non-professional behavior. Finally, attention to ethics and ethical documentation is critical (18).

The University of Amsterdam has provided a source for the code of conduct for its staff and students. In this source, the most important codes of conduct for the employees and students in the Medical science universities are completely stated and updated. In this source, the need for attention to ethics and lack of attention to this issue have been expressed (19).

Nevertheless, the drastic increase in the number of Medical universities and the scarcity of teachers who consider Medical ethics as one of the main focus of education has created huge challenges in the teaching of Medical ethics (20), necessitating the creation of an ethical guide for clinical education in the Medical Science universities, ethical documentation, teaching of Medical ethics, and so on (21-25).

Considering the theoretical foundations and the research background, one can state that at present, universities and members of the society of academics, including managers, faculty members, and students, in different fields, especially Medical Sciences, have recognized the status, importance, and the need to pay attention to professional ethics and to develop relevant documentation, especially in teaching and learning. However, more attention needs to be paid to the elaboration of the ethics of education in Iran to reach the full and uniform realization of morality in educational processes and provide other academic processes, as in internationally acclaimed international Medical universities, which is a welcome change and needs emphasis.

# 2. Methods

The present study was qualitative research conducted in 2018. The study was performed using documentary and library studies as well as the comparative study method, such as benchmarking and best practice of national and international experiences. The sampling method used was census. The population of the study was 110 top Medical universities of the world from America, Europe, Asia, and Australia (based on the prestigious international Shanghai ranking) (26) and 65 Iranian Medical universities (27). Of these, 20 universities in Iran and 110 universities abroad have documents on ethics. Of the 100 top universities in the world, 2 universities are in Asia, 5 in Australia, 53 in America, and 40 in Europe. To complete the sample, 8 top Asian Medical universities (except for the 2 universities of Medical Sciences, which were among the top 100 universities) and 2 of the world's top Medical universities (other than the top 100 world Medical universities) were studied; thus, the total number of universities studied were 110. In this research, the documents related to the field of ethics of education in the Medical Science universities were examined and analyzed regarding the main topics or the general framework by analyzing and comparing them using the appropriate methods for the elaboration of comprehensive ethics of education at the Medical Science universities of the country. The data analysis was qualitative using descriptive statistical methods.

Here, it should be noted that for this research, the educational ethics documents in the Medical Science universities were all the evidence relevant to the ethics of education at these universities. Also, the components of the teaching ethics were considered as the components of the abovementioned documents.

#### 3. Results

The first step in comparing the content of the ethics of education in the Medical Science universities was to provide a framework for reviewing the educational ethics (Tables 1 and 2). Then, executive strategies were presented in light of the content analysis of the theoretical foundations, previous research, existing documentation, and comparative study and comparative analysis of the national and international experiences of the selected countries.

In addition to the ethics of education in the Medical Science universities of Iran (Table 1), the ethics of education in Asian, American, European, and Australian Medical universities were also examined (Table 2).

On studying the results of this research, the following can be stated. There are six components in the comprehensive education ethics document in the Medical ethics documentation of the Medical Science universities of Iran (Table 1). These components are the introduction, ethics, the ethical charter of patients, the ethical code of the staff, the student ethics code, and the ethical code of the managers. This shows that not much attention has been paid to the other 10 components of the ethics of education in the universities of Iran.

Moreover, all the components of the comprehensive ethics for education comprehensive document of ethics exist in the education of top Medical science universities. This shows that in the world's top Medical universities, all aspects of educational ethics have been addressed. The progress of these universities indicates that they have paid attention to ethics in education. However, further efforts are needed to have the comprehensive ethics education document (in a more coherent way).

On the other hand, with a closer look at the points outlined below, all the components of the comprehensive education ethics document are present in the United States Medical Science education ethics documentation. In the documentation of the ethics of training in the European Medical universities, all components of the comprehensive ethics for education document, the ethical charter of the educational groups, and the ethics charter of the board of trustees and stakeholders exist. In the Australian Medical Science education ethics documentation, all the components of the comprehensive ethics framework for education, except for the ethics code of the board of trustees and stakeholders, the moral code of conduct, the ethics charter of the education departments, the Patient's moral code of ethics, and the board of trustees ethical charter exist. In the ethics documentation of the Asian Medical education universities, all components of the comprehensive ethics for education document, except for the charter of trustees and stakeholders and the board of trustees and stakeholders ethics treaty, are present.

The components of the ethics documentation of education in Iran's Medical Science universities and the world's top Medical universities have different priorities. Overall, there is a large difference between the framework of the ethics documents of Medical universities in Iran and the world's top Medical universities.

Among the top 100 Medical universities of the world, there are 2 universities in Asia, 5 in Australia, 53 in the United States, and 40 in Europe. Thus, America and Europe have the highest number of Medical universities and the best rank among the top 100 Medical universities of the world. In educational ethics documentation, the European and American Medical Science universities have the most extensive and the best documentation of ethics in education (first America and then Europe).

If the documentation of ethics for the teaching of Medical Science universities is divided into two parts consisting of the charter (university commitment to...) and the treaty (commitment of individuals toward the university), we can obtain the following conclusions. In the Medical Science universities of Iran, Asia, America, Europe, and Australia, the ethical code has been given more priority compared with the moral charter. This shows that in the ethics documentation of the Medical education universities, more attention has been paid to the commitment of individuals toward the university rather than the contrary.

| University Name   | Total | Introduction | Ethics Fundamental <sup>c</sup> | Code of Ethics (University<br>Policy Towards.) | Ethic     | al Commitm | ent <sup>d</sup> |
|---|-------|--------------|---------------------------------|--|-----------|------------|------------------|
|   |       |              |                                 | Patients                                       | Employees | Students   | Managers         |
| Arak University of Medical<br>Sciences  | 2     |              | *                               |  | *         |            |                  |
| Applied Science University<br>of Kaver Medical Sciences                             | 1     |              |                                 |  |           | *          |                  |
| Urmia University of Medical<br>Sciences   | 1     | *            |                                 |  |           |            |                  |
| Isfahan University of<br>Medical Sciences   | 1     |              |                                 |  | *         |            |                  |
| Iran University of Medical<br>Sciences, Tehran                                      | 1     | *            |                                 |  |           |            |                  |
| Baqiyatallah University of<br>Medical Sciences, Tehran,<br>Iran                     | 2     | *            | •                               |  |           |            |                  |
| Tabriz University of Medical<br>Sciences  | 2     |              | *                               |  | *         |            |                  |
| Shiraz University of Medical<br>Sciences  | 2     |              |                                 |  | •         |            | *                |
| Kashan University of<br>Medical Sciences  | 1     |              |                                 |  | *         |            |                  |
| Golestan University of<br>Medical Sciences  | 3     | *            | *                               |  | •         |            |                  |
| Guilan University of Medical<br>Sciences  | 1     |              | *                               |  |           |            |                  |
| Mashhad University of<br>Medical Sciences   | 1     |              | *                               |  |           |            |                  |
| Bushehr University of<br>Medical Sciences and Health<br>Services                    | 2     | *            |                                 |  | *         |            |                  |
| Shahid Beheshti University<br>of Medical Sciences and<br>Health Services            | 3     |              |                                 | *  | ·         | *          |                  |
| Jiroft University of Medical<br>Sciences and Health Services                        | 1     |              | *                               |  |           |            |                  |
| Zanjan University of Medical<br>Sciences and Health Services<br>(under development) | 4     |              | •                               |  | ·         | *          | *                |
| Qom University of Medical<br>Sciences and Health Services                           | 2     | *            | More for the patient            |  |           |            |                  |
| Kurdistan University of<br>Medical Sciences and Health<br>Services                  | 3     | *            |                                 |  | *         |            | *                |
| Kerman University of<br>Medical Sciences and Health<br>Services                     | 1     |              |                                 |  | *         |            |                  |
| Kermanshah University of<br>Medical Sciences and Health<br>Services                 | 2     |              |                                 |  | ٠         |            |                  |
| Total   | 36    | 8            | 9                               | 1  | 12        | 3          | 3                |

<sup>a</sup> Source of selecting the universities: National organization of educational testing. <sup>b</sup>\*This section includes the general commitment of the members of the academic community to the ruling moral authority.

<sup>c</sup>Includes the general ethical principles of the academic community, which is usually expressed as a case; for example, integrity righteousness and tolerance. <sup>d</sup>Commitment of people towards University.

In the ethical documentation at Iran's Medical education universities, the Charter is 1 and Treaty is 18, and at the universities of Medical Sciences in the United States, Europe, and Australia, Charter is 328 and Treaty 396. Hence, it is imperative that the comprehensive ethics document of the Medical universities give more attention to the ethics charter of the universities, as both of these aspects are important.

Moreover, in the documentation of the ethics of the training of Medical Universities of America (Charter 192 and Treaty 234), Europe (Charter 98 and Treaty 122), and Australia (Charter 13 and Treaty 17), more attention has been paid to the ethical code. However, in the ethics documentation, more attention is paid to the ethics charter of the university (Charter 25 and Treaty 23). This means unlike other Medical Science universities, Asian Medical academies are more concerned with the commitment of the university.

In the ethics documentation of the world's top Medical Science universities, first, the attention is paid to students (priority 1 and 2), then to faculty members (priority 3) followed by staff (priority 4). This shows the attention of the world's top Medical Science universities toward students. In contrast, in the ethics documentation of Iran's medical education universities, first, attention is paid to staff(priority 1), then to students and managers (priority 4) followed by patients (priority 5). This indicates that more attention is paid to the staff of the Medical Science universities of Iran, and the ethics of the faculty members are not addressed in the educational ethics documentation.

Additionally, in the academic ethics documentation of the training of the Medical universities of America, the priority is given to the student, faculty, staff, and patient; in the European Medical Universities, to the student, staff, faculty, and patient; in Australian Medical universities, to the students, patients, faculty, and staff; and in the Asian Medical education universities, to the staff, students, faculty, and patients, in the descending order of priority.

Nevertheless, with a look at the results, it is clear that the Iranian Medical universities do not have a good status regarding ethics documentation. Asian Medical academies are currently far from optimal. However, on studying the American, European, and Australian Medical universities, it becomes clear that the ethics of teaching is the subject matter of interest in these continents and has good standards.

The study sample consisted of 110 top universities of the world and 65 Medical universities of Iran, of which 20 Iranian Medical science universities and 110 top Medical universities of the world have had education ethics. This means that 100% of the world's top Medical universities and 30.77% of Iran's Medical Science universities have education ethics documentation.

None of the non-public nursing Medical science universities of Iran, such as the Islamic Azad University Medical Sciences branches and the higher Medical education centers had educational ethics documentation. Thus, in Iran, only state-run Medical universities have education ethics documents. The reason for this may be that the private universities are more focused on earning money, making them not pay enough attention to ethical documentation, and, thus, to apply ethics in educational discussions.

In the world's top Medical universities, the number of institutes, colleges, and centers of science and health is low compared with the number of Medical universities (eight). However, there is no significant difference between them regarding the content and the components of the ethics documentation.

In the documentation of education ethics, the training in the world's top Medical universities (especially American and European universities) in most cases has been the last date of its updating. This shows the importance of ethics training in these universities.

As the results show, in most cases, there is no single framework for providing education ethics documentation, and each university has its own framework, showing that each university focuses on specific aspects of the education ethics documentation. Presenting a good framework for the comprehensive education ethics documentation can provide a clear framework of the most important issues in the comprehensive ethics documentation and can be used both for academics and students. However, according to the circumstances, each university should develop appropriate content for the framework of the comprehensive ethics document.

#### 4. Discussion

The education ethics and higher education help to determine the inappropriate behaviors and provide direction to teachers and faculty members in the implementation of their professional responsibilities. However, the components of education ethics varied among the universities in this study.

In this regard, the moral merits of the professors, students, staff, and all members of the academic society of the Medical universities are significant given the direct relationship between their performance and the lives of humans. Thus, the elaboration and commitment to the ethics of education in Medical Science universities are inevitable. Today, having high-level graduates is not as important to the universities as having graduates with superior ethical values (3).

Nevertheless, as this research was the first to study the education ethics of Medical universities, it is difficult to discuss, analyze, and compare it with other similar studies. Thus, the following statements are set forth.

All the studies on this subject, such as this study, have pointed to the importance of ethics of education, lack of adequate research in this field, and the problems in the executive branch (5, 8, 13, 17, 20). The issue of attention to education ethics documentation has a great effect on the training of medical ethics and the training of skilled and ethical workforce in this field, but the faculty members do

| Table 3. Comparison of   | the Ethics Documentatio   | n in the Universities of th   | ne Country with the Top L   | Iniversities Based on the   | Reputation (Importance   | ) <sup>a</sup>   |
|--|---|---|---|---|--|--|
| Educational Ethics<br>Documentation in<br>Universities<br>(Components) | Components of<br>Educational Ethics<br>Documentation at<br>American<br>Universities | Components of<br>Educational Ethics<br>Documentation at<br>European<br>Universities | Components of<br>Educational Ethics<br>Documentation at<br>Australian<br>Universities | Components of<br>Educational Ethics<br>Documentation at<br>Asian Universities | Components of<br>Educational Ethics<br>Documentation at<br>the World<br>Universities | Components of<br>Educational Ethics<br>Documentation at<br>Iranian<br>Universities |
| Student ethics<br>treaty   | 10.12   | 13.17   | 10.25   | 13.55   | 11.33  | 8.33   |
| Ethical agreement<br>of the faculty<br>members                         | 10  | 10.07   | 7.69  | 8.47  | 9.81   | 0  |
| Student ethics<br>charter  | 9.4   | 11.24   | 10.25   | 13.55   | 10.28  | 0  |
| Moral code of staff<br>(nurses and so on)                              | 9.4   | 10.46   | 12.82   | 5.08  | 9.57   | 33.33  |
| The moral charter of patients  | 8.4   | 8.52  | 7.69  | 10.16   | 8.52   | 2.77   |
| Introduction   | 8.2   | 10.41   | 12.82   | 13.55   | 9.46   | 22.22  |
| Ethical charter of<br>faculty members                                  | 7   | 6.97  | 5.12  | 8.47  | 7  | 0  |
| Ethics<br>fundamental  | 6.6   | 4.26  | 10.25   | 5.08  | 5.95   | 25   |
| Employee ethics charter  | 6   | 6.58  | 7.69  | 3.38  | 6.07   | 0  |
| Ethical code of<br>managers  | 5.4   | 5.03  | 7.69  | 1.69  | 5.14   | 8.33   |
| The ethics treaty of the media   | 5.4   | 5.03  | 5.12  | 1.69  | 5.02   | 0  |
| Ethical media<br>charter   | 5   | 4.56  | 2.56  | 1.69  | 4.55   | 0  |
| The board of<br>trustees and<br>stakeholders<br>ethical treaty         | 2.8   | 1.16  | 0   | 0   | 1.98   | 0  |
| Ethical code of<br>study groups  | 2.2   | 1.55  | 0   | 6.77  | 2.21   | 0  |
| Ethical charter of<br>educational<br>groups                            | 1.6   | 0   | 0   | 5.08  | 1.28   | 0  |
| Ethical code of patients   | 1.4   | 0.77  | 0   | 1.69  | 1.16   | 0  |
| Board of trustees<br>and stakeholders<br>ethical charter               | 1   | 0   | 0   | 0   | 0.58   | 0  |

<sup>a</sup>Values are expressed as percentage.

not have the understanding, knowledge, and required expertise (8, 11, 23). In previous studies, the researchers have suggested that faculty members should select formal education programs for ethics and the need to focus on ethics to gain greater readiness for ethical teaching (9, 15, 25). Presenting seminars for educators, faculty members, and students about ethics in education and educating ethics can be very effective (10, 16). Nevertheless, some studies have provided a framework for a comprehensive university code of ethics which are outlined below.

Four parts are considered in the comprehensive ethical document of Al-Zahra University: introduction, basic principles, organizational commitment toward individuals and the environment, and the commitment of people toward the university (28). This comprehensive moral document is one of the most comprehensive ethical documents examined, which is very similar to the proposed model of this study in terms of the framework. However, in the ethics document of the University of Amsterdam, codes of conduct for the employees and students at the Medical universities have been stated (19). The framework provided for the ethical document in this research is specific to staff and students, so very different from the model presented in the aforementioned study.

Also, concerning the consistency of the components of the ethics documentation of the Medical Science universities, with the suggested pattern of the present research, the following points can be stated. The suggested model of this research, which is expressed in the suggestions and guidelines, has 17 components as given in Table 2. Here among the universities in the United States, 16 components from the documents of education ethics of University of California, 16 components from Stanford, and 13 components from Harvard; among European universities, 11 components from Amsterdam, 11 from Birmingham, and 10 from Yu Ka Leuven; among Australian universities, 9 components from Queensland University, 9 from Melbourne, and 8 from Western Australia; among the Asian universities, 11 components from Tokyo University Ethics Documentation, 11 from Osaka, and 9 from Kyoto; and among Iranian universities, 3 components from the ethics documents of Shahid Beheshti University of Medical Sciences, 3 from Golestan, and 3 from Kurdistan have the most consistency with the proposed model of this study. However, the documentation of education ethics in the Medical universities of the United States and Europe has the most consistency with the proposed pattern of this study, as shown in Table 2.

### 4.1. Suggestions and Strategies

In this section, based on the results, some suggestions and recommendations have been made for the elaboration of Comprehensive Education Ethics in Iranian Medical Science universities.

- In Medical Science universities, given the close relationship between education and human life, the importance of ethics, especially in the field of education, is very high. Thus, the compilation of a comprehensive ethics document for such universities is one of the essential needs.

-The comprehensive ethics framework for education in Medical Science universities enables avoidance of personal opinions and creates integrity in the implementation of ethical issues.

- Developing a comprehensive ethics document for educating patients to provide better services is essential.

- In developing the comprehensive ethics document, sufficient focus should be placed on education of all, such as the faculty, the student, and the training staff.

- In the development of the comprehensive ethics for education, all those involved in education at universities should participate (faculty, students, and staff).

- The training required to familiarize and apply the comprehensive ethics of education at the universities should be given to individuals.

- In the development of a comprehensive ethics document for teaching in universities, advantage should be taken of the noble religious culture and values of the country.

- Medical Science universities should consider penalties to deal with violations of the comprehensive ethics of education document.

- Medical Science universities should hold regular meetings to remove ambiguity about ethical issues and update the comprehensive ethics of education document.

- A full-time reference should be available for the implementation of the comprehensive ethics of education in the Medical Science universities.

- The ministry of science can develop the comprehensive ethics framework for education at universities, but it is better for any university, based on its requirements, to develop a comprehensive ethics code for education.

- For the development of the comprehensive ethics document, education in Medical Science universities has to be elaborate and applied to every one of them using various research and statistical methods (quantitative, qualitative, descriptive, analytical, etc.).

- Ethics courses for Medical education should be held for students of Medical universities.

- Medical ethics programs for Medical Science students should be reviewed regarding the content and methodology.

- A study opportunity should be given for further education of researchers and faculty members to be more familiar with ethics in medical education.

- National seminars, international congresses, as well as workshops should be held for 1 - 2 days for different groups of designing ethics programs for education in Medical universities.

- The comprehensive ethics code for education should have four main sections. These sections include the introduction, the general principles, the ethical charter, and the ethical code. The description of each one is given in the titles of Tables 1 and 2.

#### 4.2. Conclusion

The results from the comparison of education ethics documents of the Medical Science universities of Iran and the world's top Medical universities showed that 30.77% of the former and 100% of the latter have education ethics. These percentages show the significance of educational ethics documents in the world's top Medical universities and their much less importance in Iran's Medical Science universities. Moreover, most of the Medical ethics documents in the Medical Science universities of Iran included in this study are less comprehensive, less precise, less clear, and less efficient compared with those of the world's top universities. Furthermore, it should be noted that there is currently no uniform framework for the development of educational ethics documents at the different universities of the country. Hence, preparing and defining a framework for the development of a comprehensive ethics document for education and other related documents will be valuable in developing the professional ethics documents in the Medical Science universities of Iran, especially the comprehensive document of education ethics.

### Acknowledgments

This study is part of a larger research project. The authors declare that there is no conflict of interests in this study and gratefully acknowledge from all people that help us for do this study.

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| University Name  | Total | Introduction | Ethical<br>Principles |         |                     | Code of Et                  | Code of Ethics(University Policy Towards.) | ·                     |                |                             | Ethio                          | cal Commitm | ent (Commitm     | Ethical Commitment (Commitment of People Towards University) | wards Univer        | ity)                               |      |
|--|-------|--------------|-----------------------|---------|---------------------|-----------------------------|--|-----------------------|----------------|-----------------------------|--------------------------------|-------------|------------------|--|---------------------|------------------------------------|------|
|  |       |              |                       | Student | Faculty 5<br>Mem- ( | Staff<br>(Nurse<br>and<br>) | Board of<br>Trustees and<br>Stakeholders   | Educational<br>Groups | Patients Media | lia Faculty<br>Mem-<br>bers | ty Staff<br>(Nurse<br>and<br>) |             | Student Managers | Board of<br>Trustees and<br>Stakeholders                     | Education<br>Groups | Educationalatients Media<br>Groups | edia |
|  |       |              |                       |         |                     |                             | Asia                                       |                       |                |                             |                                |             |                  |  |                     |                                    |      |
| National University of Singapore (NUS), Medical<br>school <sup>b</sup> | e     | •            |                       |         |                     |                             |  |                       |                |                             |                                | ٠           |                  |  |                     |                                    |      |
| University of Tokyo, Medical school <sup>b</sup>                       | =     |              |                       |         |                     |                             |  | •                     |                | •                           | •                              |             |                  |  |                     |                                    |      |
| Kyoto University   | 6     | •            |                       | •       | •                   |                             |  | •                     |                | •                           |                                | •           | •                |  | •                   |                                    |      |
| Imperial University of Peking, Medical school                          | 3     |              |                       |         |                     |                             |  |                       |                |                             |                                |             |                  |  |                     |                                    |      |
| The University of Hong Kong (HKU), Medical school                      | 9     | •            |                       |         |                     |                             |  |                       | •              |                             | •                              |             |                  |  |                     |                                    |      |
| Universitas Nationalis Seulensis, Medical school                       | 2     |              |                       |         |                     |                             |  |                       |                |                             |                                |             |                  |  |                     |                                    |      |
| Sungkyunkwan University, Medical school                                | 3     |              |                       |         |                     |                             |  |                       |                |                             |                                | •           |                  |  |                     |                                    |      |
| National Taiwan University, College of Medicine                        | 9     |              |                       |         |                     |                             |  |                       |                | •                           |                                |             |                  |  |                     |                                    |      |
| Osaka University, Medical school                                       | п     |              |                       | •       |                     |                             |  | •                     | •              | •                           | •                              | •           |                  |  | •                   |                                    |      |
| Chulalongkom University in Thailand, Medical<br>school                 | ×     |              |                       |         |                     |                             |  |                       | •              |                             |                                | •           |                  |  |                     |                                    |      |
| Total Asia   | 59    | 8            | æ                     | 80      | -0                  | 2                           | 0  | 3                     | 6 1            | ŝ                           | 3                              | œ           | -                | 0  | 4                   | 1                                  | _    |
|  |       |              |                       |         |                     |                             | America                                    |                       |                |                             |                                |             |                  |  |                     |                                    |      |
| Harvard University, Medical school                                     | 13    | •            | ٠                     | •       |                     |                             | •  | ٠                     |                | •                           | •                              | •           | •                | •  |                     |                                    |      |
| University of California San Francisco                                 | 16    | •            | ٠                     |         |                     |                             |  | ٠                     | •              | •                           | •                              | ٠           | •                | •  | •                   |                                    |      |
| University of Washington   | 80    |              | •                     |         |                     |                             |  |                       |                | •                           | •                              | •           |                  |  |                     |                                    |      |
| The Johns Hopkins University   | 6     | •            | ٠                     | •       |                     |                             |  |                       | •              | •                           | •                              | •           |                  |  |                     |                                    |      |
| Stanford University, Medical school                                    | 16    |              | •                     |         |                     |                             |  | •                     | •              | •                           | •                              |             |                  |  |                     |                                    |      |
| Columbia University, Medical school                                    | 10    | •            | •                     | •       |                     |                             |  |                       | •              | •                           | •                              | •           | •                |  |                     |                                    |      |
| The University of Texas Southwestern Medical center at Dallas          | 9     |              |                       |         |                     | •                           |  |                       |                | •                           | •                              | •           | •                |  |                     |                                    |      |
| University of California, Los Angeles                                  | **    |              | •                     |         |                     |                             |  |                       | •              | •                           |                                |             |                  |  |                     |                                    |      |
| Yale University  | п     |              |                       |         |                     |                             |  |                       | •              | •                           | •                              | •           | •                |  |                     |                                    |      |
| University of Pittsburgh-Pittsburgh campus                             | 10    |              | •                     | •       |                     |                             |  |                       | •              | •                           | •                              |             |                  |  |                     |                                    |      |
| University of North Carolina at Chapel Hill                            | œ     | •            | •                     | •       |                     |                             |  |                       | •              | •                           |                                | •           |                  |  |                     |                                    |      |
| University of Michigan-Ann Arbor                                       | 6     |              |                       |         |                     |                             |  |                       |                | •                           |                                |             |                  |  |                     |                                    |      |
| The University of Texas M. D. Anderson cancer center                   | 10    |              |                       | •       |                     |                             |  |                       |                | •                           | •                              |             |                  |  |                     |                                    |      |
| Vanderbilt University  | п     |              |                       |         |                     |                             |  | •                     | •              | •                           | •                              | •           |                  |  |                     |                                    |      |
| University of Pennsylvania, Medical school                             | 6     | •            |                       | •       |                     |                             |  |                       | •              | •                           | •                              | •           |                  |  |                     |                                    |      |
| University of Minnesota, Twin Cities, Medical school                   | 9     |              |                       |         |                     |                             |  |                       |                | •                           | •                              | •           |                  |  |                     |                                    |      |
| University of California, San Diego                                    | 7     |              |                       |         |                     |                             |  |                       |                | •                           | •                              | •           |                  |  |                     |                                    |      |
| Duke University, Medical school  | 6     |              |                       | •       |                     |                             |  |                       | •              | •                           | •                              | •           |                  |  |                     |                                    |      |
| University of Wisconsin - Madison                                      | 6     |              |                       |         |                     |                             |  |                       | •              | •                           |                                |             |                  |  |                     |                                    |      |

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| Cornell University, Medical college                             | 4    |    |    |    |    |    |        |   |    |    |       | •    |    |    |   |      |   |
|---|------|----|----|----|----|----|--------|---|----|----|-------|------|----|----|---|------|---|
| University of Toronto   | œ    |    |    |    |    |    |        |   |    |    | •     | •    |    |    |   | •    |   |
| University of California-Berkeley                               | 4    |    |    |    |    |    |        |   |    |    | •     | •    |    |    |   |      |   |
| Northwestern University   | 80   |    |    |    |    |    |        |   |    |    | •     | •    |    |    |   |      |   |
| Boston University, Medical school                               | 10   |    |    |    |    |    |        |   |    |    | •     | •    |    |    |   |      |   |
| Emory University, Medical school                                | 10   | •  |    | •  | •  |    |        |   |    |    | •     | •    |    |    |   | •    |   |
| University of Utah, Medical school                              | 6    | •  |    |    |    |    |        |   |    |    | •     | •    |    |    |   |      |   |
| University of Chicago   | 12   | •  | •  | •  | •  | •  |        | • |    |    | •     | •    |    |    | • | •    |   |
| McGill University   | 10   | •  | •  | •  |    |    |        |   |    |    | •     | •    |    |    |   |      |   |
| The University of Texas health Science center at<br>Houston     | 10   |    |    | •  |    | •  |        |   |    |    | •     | •    | •  |    |   | •    |   |
| Washington University in St. Louis                              | 13   |    |    |    |    |    |        |   |    |    | •     | •    |    |    |   | •    |   |
| McMaster University   | 5    |    |    |    |    |    |        |   |    |    |       | •    |    |    |   |      |   |
| Tufts University  | 6    |    |    |    |    |    |        |   |    |    | •     | •    |    |    |   |      |   |
| Massachusetts Institute of Technology (MIT)                     | 6    |    | •  | •  |    |    |        |   |    |    | •     | •    |    |    |   |      |   |
| University of Rochester   | 6    |    | •  | •  |    |    |        |   | •  |    | •     | •    |    |    |   |      |   |
| Baylor College of Medicine                                      | 12   |    |    |    |    |    |        |   |    |    |       | •    |    |    |   | •    |   |
| Brown University  | 80   |    | •  | •  |    |    |        |   |    |    | •     | •    |    |    |   |      |   |
| Icahn school of Medicine at Mount Sinai                         | 13   |    |    |    |    |    |        |   |    |    | •     | •    |    | •  |   | •    |   |
| New York University   | 12   | •  | •  | •  |    | •  |        |   | •  |    | •     | •    | •  | ٠  |   |      |   |
| Oregon health and Science University                            | 12   | •  |    |    |    |    |        |   |    |    | •     | •    |    |    |   | •    |   |
| The Ohio State University - Columbus                            | 'n   |    | •  | •  |    |    |        |   |    |    | •     | •    |    | •  |   |      |   |
| University of California, Davis                                 | 12   | •  |    |    |    |    |        |   |    |    | •     | •    |    |    |   |      |   |
| University of Florida   | 6    | •  |    | •  |    |    |        |   |    | •  | •     | •    | •  |    |   | •    |   |
| University of Maryland, Baltimore                               | 7    | •  | •  |    |    |    |        |   |    |    | •     | ٠    |    |    |   |      |   |
| University of Southern California                               | 10   |    |    |    |    |    |        |   |    |    | •     | •    |    | •  |   |      |   |
| Case Western Reserve University                                 | 7    |    |    | •  |    |    |        |   | •  |    | •     | •    | •  |    |   |      |   |
| Rutgers, the State University of New Jersey - New<br>Brunswick  | œ    | •  |    |    |    |    |        |   |    |    | •     |      |    |    |   |      |   |
| The University of Texas health Science center at San<br>Antonio | 10   | •  |    |    |    |    |        |   |    |    | •     | •    | •  |    |   | •    |   |
| University of Alberta   | 12   | •  |    |    |    |    |        |   |    |    | •     | •    | •  |    |   | •    |   |
| University of Cincinnati  | 2    | •  |    | •  |    |    |        |   |    |    | •     | •    | •  | •  |   |      |   |
| University of Colorado at Denver                                | œ    | •  | •  | •  |    |    |        |   |    |    | •     | •    |    |    |   |      |   |
| University of Iowa  | 12   | •  | •  | •  |    | •  |        |   | •  |    | •     | •    | •  |    |   | •    |   |
| The University of Texas health Science center at San<br>Antonio | œ    |    |    |    |    |    |        |   |    |    | •     | •    |    |    |   |      |   |
| Wake Forest University  | 10   |    |    |    |    |    |        |   |    |    |       | •    | •  |    |   | •    |   |
| Total America   | 50.0 | 41 | 33 | 47 | 35 | 30 | 5      | 8 | 42 | 25 | 50 47 | 7 51 | 77 | 14 | = | 7 25 | 7 |
|   |      |    |    |    |    |    | Europe |   |    |    |       |      |    |    |   |      |   |
| University of Cambridge, Medical school                         | ×    |    |    |    |    |    |        |   |    |    |       | •    |    |    |   |      |   |
| Karolinska institute  | 9    |    |    |    |    |    |        |   |    |    | •     | •    |    |    |   |      |   |
| University of Oxford, Medical school                            | 7    | •  | •  |    |    |    |        |   |    |    | •     | •    | •  |    |   | •    |   |

| Mayo Medical school   | 6   |    |   |    |    |      |   |    |    |    |       |    |   |   |    |
|---|-----|----|---|----|----|------|---|----|----|----|-------|----|---|---|----|
| University college London                                   | 7   |    |   |    |    |      |   |    |    |    |       |    |   |   |    |
| The Imperial college of Science, technology and<br>Medicine | 7   | •  | ٠ | •  |    |      |   |    |    |    | •     |    |   |   |    |
| Leiden University   | 4   |    |   |    |    |      |   |    |    |    |       |    |   |   |    |
| University of Zurich  | œ   |    |   | •  |    |      |   |    |    |    | •     |    |   |   |    |
| Amsterdam University  | 80  |    |   |    |    |      |   |    |    |    |       |    |   |   | •  |
| King's college London                                       | 80  |    |   |    |    |      |   | •  |    |    |       |    |   |   | •  |
| KULeuven  | 01  |    |   |    |    |      |   |    |    |    |       |    | • |   | •  |
| VU University Amsterdam                                     | =   |    |   |    |    |      |   | •  | •  |    |       |    | • |   | •  |
| University of Nottingham                                    | 80  |    |   |    |    |      |   |    |    |    |       |    |   |   |    |
| University of Gothenburg                                    | 5   |    |   |    |    |      |   |    |    |    |       |    |   |   |    |
| Erasmus University  | 80  | •  |   | •  |    |      |   |    | •  |    |       |    |   |   | •  |
| Heidelberg University                                       | 7   |    |   |    |    |      |   |    |    |    |       |    |   |   |    |
| The University of Edinburgh                                 | 3   |    |   |    |    |      |   |    |    |    |       |    |   |   |    |
| The University of Glasgow                                   | 4   |    |   |    |    |      |   | •  |    |    | •     |    |   |   | •  |
| University of Barcelona                                     |     |    |   |    |    |      |   |    |    |    |       |    |   |   | •  |
| University of Basel   | 9   | •  |   |    |    | •    |   |    |    |    |       |    |   |   |    |
| University of Bristol                                       | 9   |    |   |    |    |      |   |    |    |    | •     |    |   |   |    |
| University of Frankfurt                                     | -   |    |   |    |    |      |   |    |    |    |       |    |   |   |    |
| University of Helsinki                                      | æ   |    |   | •  |    |      |   |    |    |    | ·     |    |   |   |    |
| University of Munich  | 4   | •  | ٠ | •  |    |      |   |    |    |    | •     |    |   |   |    |
| University of Paris Descartes (Paris 5)                     | 2   | •  |   |    |    |      |   |    |    |    | •     |    |   |   |    |
| University of Paris Sud (Paris 11)                          | 4   |    |   |    |    |      |   | •  |    |    | •     |    |   |   |    |
| Uppsala University  | 2   |    |   |    |    |      |   | •  |    |    |       |    |   |   |    |
| Utrecht University  | 10  |    |   |    |    |      |   |    |    |    |       |    |   |   |    |
| Catholic University of Louvain                              | 2   |    |   |    |    |      |   |    |    |    |       |    |   | • | •  |
| London school of Hygiene and tropical Medicine              | 2   |    |   |    |    |      |   |    |    |    | •     |    |   |   |    |
| Maastricht University                                       | 9   | •  | • | •  |    |      |   |    |    |    |       |    | • |   |    |
| Queen Mary, University of London                            | 4   | •  |   |    |    |      |   | •  |    |    |       | •  |   |   | •  |
| The University of Manchester                                | 4   |    |   |    |    |      |   | •  |    |    |       |    |   |   |    |
| The University of Sheffield                                 | 2   |    |   | •  |    |      |   | •  | •  |    |       |    |   |   | •  |
| University of Bern  | 3   |    |   |    |    |      |   |    |    |    |       |    |   |   |    |
| University of Birmingham                                    | =   | •  | ٠ | •  |    |      |   | •  |    |    | •     |    |   |   | •  |
| University of Copenhagen                                    | 2   |    |   |    |    |      |   |    |    |    |       |    | • |   |    |
| University of Groningen                                     | 7   | •  | • |    |    |      |   | •  |    |    | •     |    |   |   |    |
| University of Milan   | 80  |    |   |    |    |      |   | •  | •  |    |       |    |   | • | •  |
| University of Turin   | 7   |    |   |    |    |      |   | •  |    |    | •     |    |   |   |    |
| University of Science, arts and technology, Medical school  | ٢   |    |   | •  | •  |      |   |    |    |    |       |    |   |   |    |
| University of Iceland                                       | 2   |    |   |    |    |      |   |    |    |    |       |    |   |   |    |
| Total Europe  | 258 | 27 | п | 29 | 18 | 17 0 | 0 | 22 | 12 | 26 | 27 34 | 13 | 3 | 2 | 13 |

|   |     |    |    |    |    |    | Australia |   |    |    |    |    |    |    |    |    |    |    |
|---|-----|----|----|----|----|----|-----------|---|----|----|----|----|----|----|----|----|----|----|
| The University of Melbourne, Medical school                   | 6   | •  | •  | •  | •  | •  |           |   | •  |    |    |    |    |    |    |    |    |    |
| The University of Western Australia                           | œ   | •  | •  | •  |    |    |           |   |    |    |    |    |    |    |    |    |    |    |
| Monash University   | 7   | •  |    | •  |    |    |           |   | •  |    |    | •  | •  | •  |    |    |    |    |
| The University of Adelaide                                    | 9   | ٠  | •  |    |    |    |           |   |    |    |    |    |    |    |    |    |    |    |
| The University of Queensland                                  | 6   |    |    | •  |    |    |           |   |    |    |    |    |    |    |    |    |    |    |
| Total Australia   | 39  | ŝ  | 4  | 4  | 7  | e  | 0         | 0 | e  | -  | 3  | S  | 4  | 3  | 0  | 0  | 0  | 2  |
| All Universities  | 856 | 81 | 51 | 88 | 60 | 52 | 5         | п | 73 | 39 | 84 | 82 | 97 | 44 | 17 | 19 | 10 | 43 |
| <sup>a</sup> Source of university selection: Shanghai ranking |     |    |    |    |    |    |           |   |    |    |    |    |    |    |    |    |    |    |

<sup>b</sup>These two universities are among the top 100 universities of science in cosmic science, which are listed among Asia's leading Medical Science Universities.