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Ethics Education in Medical Sciences; A National Descriptive Survey

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Abstract

Background: Historically, teaching medical ethics was always an important educational objective; however, the educational strategies to fulfill this goal varied in different times and areas. In the past two decades, teaching ethics has become an important part of the core curriculum of medical sciences in IRAN; however, ethics is relatively a newcomer to the undergraduate curriculum of medical sciences. This study aimed to evaluate the current status of teaching ethics in medical sciences in Iran.

Methods: This descriptive survey was quantitatively conducted in two phases; evaluation of the curricula and syllabus of all undergraduate programs and surveying medical ethics teaching in all medical universities and/or schools using a questionnaire. The course title, content, hours (units), the recommended references, the teaching and students' assessment methods, and the information of ethics teachers were reviewed and analyzed.

Results: The study showed some features about the current status of ethics teaching in medical sciences, including 1) no incorporation of ethics in 10 BS and MSc curricula; 2) different course titles, course contents and course units in similar programs; 3) non-adherence to the curriculum in terms of the core content, the references, and teaching and assessment methods; 4) non-adherence to the ethics core content especially in medical, dentistry, and pharmacy schools; 5) lack of qualified ethics teachers; and 6) no horizontal or vertical integration in ethics teaching.

Conclusion: Taken together, to overcome shortcomings in teaching ethics, the authors suggest a four-phase approach for strengthening and reforming ethics education in medical sciences including determining the core content for ethics teaching by experts consensus, revising curricula in all undergraduate programs of medical sciences, training ethics teachers, and amending infrastructures for teaching ethics.

Keywords: Ethics Education, Medical Education, Medical Ethics

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Introduction

Upbringing good healthcare providers who will raise the health and the medical welfare of society in a professional manner necessitates special attention to medical education, specifically teaching ethics.

Historically, teaching medical ethics was always an important educational objective; however, the educational strategies to fulfill this goal varied in different times and areas. In Iran, teaching ethics was always considered a

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↑What is "already known" in this topic:
Teaching medical ethics was always one of the important aspects of medical education. Historically it was mentioned in the texts and daily practice of health care educators, implicitly and explicitly. However, in new decades it gained more attention as an educational objective, and many medical universities around the world developed new instructional designs in this regard.

→What this article adds:
In this article, as a national survey, we evaluate the status of teaching medical ethics in Iran and based on our findings we proposed four phased recommendations to overcome the deficiencies and make more progress in this field.

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part of medical education; for instance, Iranian physicians and scholars such as Avicenna and Rhazes produced manuscripts on principles of medical ethics and the characteristics of a good physician. These types of educational activities have been followed in the era of modern medicine in Iran by publishing books in medical ethics since 1963 (1).

The World Federation for Medical Education defined ethical values and behavior as one of the core competencies of medical students as the minimum essential requirements (2). Considering the unique and sensitive nature of the medical professions, there are many concerns about the personal and professional characteristics of medical students; so medical ethics education was considered to have a major companionship in the curriculum of medical sciences (3). Because teaching ethics may develop students' values, views and professional behavior. In Iran, in the past two decades, teaching ethics has become an important part of the core curriculum of medical sciences; however, ethics is relatively a newcomer to the undergraduate curriculum of medical sciences.

The sixth goal of the "National Strategic Plan for Medical Ethics" of Iran indicates promoting education in the field of medical ethics through several activities including the development of ethics education, improvement of quality of ethics education, and integration of medical ethics education. Therefore, the "Higher Council of Medical Ethics", set out its mission on promoting ethics education by establishing the National Committee of Ethics in Education of Medical Sciences (NCEEMS) as its subcommittee in 2016 under the supervision of the education deputy of the "Ministry of Health" that acts as a policy-making body in ethics education in medical sciences. The main responsibilities of NCEEMS are auditing, assessment and monitoring of ethics education and promoting ethics education in medical sciences by proposing practical objectives and effective educational strategies (4).

It is believed that for all healthcare professionals who might serve patients and have a clinical practice, ethics literacy and ethics education is essential (5).

Literature shows that moral competence and moral reasoning ability decline during medical school (6). Since education is considered the main factor in developing moral competence and moral reasoning ability (7), adjusting medical education to increase the moral competence of medical professionals is highly needed. Accordingly, we should be aware of the current status of medical ethics education in medical sciences and how it performs. Therefore, a thorough evaluation of the ethics education system seems to be critical in strengthening medical ethics teaching (8).

Until now, the current practice of teaching ethics to undergraduate medical sciences has not been reviewed. To address the current status of teaching ethics to undergraduate students of medical sciences and locating where we are now and where we should be in the future and our approach toward that, this survey was conducted in 2018-2019 in Iran.

Methods

This descriptive survey was performed as quantitative research using questionnaires and surveys in two phases. Because, in our country, teaching ethics to students of medical sciences launched more than 10 years ago and ethics has been included in most curricula, it seems that quantitative assessment of the current situation will be of great help in finding the basic and structural deficiencies.

In the first phase of the study, the current approved curricula and syllabus of all undergraduate programs were reviewed to see if the course of medical ethics (or whatever its title can be) has been included in the curriculum, the course hours (unit), the course content, the recommended references for further study, and teaching and assessment methods. All topics mentioned in each syllabus were coded and categorized based on the experts' opinions into three categories, including completely relevant topics, non-relevant topics, and relatively relevant topics. This categorization was based on the relevancy of the content of the used reference to the syllabus of the course. As all the experts were instructors of the ethics courses in health sciences, they had a good mastery of the issue.

In the second phase of the study, a questionnaire was designed to survey all medical ethics departments and/or the education deputies of each medical university and/or medical school. The questionnaire contained information including the course title, the course content, the course hours (units), the recommended references for further study, teaching and assessment methods, and information about ethics teachers. The second author sent the reminders three times to all medical universities in a one-year period.

Data analysis

Descriptive statistics was applied to describe quantitative measures and analyzed the data using IBM SPSS Statistics 24 (IBM Corp).

Results

First phase

The curriculum of 18 bachelor's degree programs, 19 masters of sciences (MSc) programs and 3 doctorate programs (medicine, dentistry and pharmacy) have been reviewed. Our results showed that there is no medical ethics course in 10 bachelor and MSc programs including health services management (BS), health technology (BS), health education (MSc), laboratory sciences (BS), audiometry (BS), optometry (BS), midwifery (MSc), midwifery (BS), Emergency medical technician training program (BS), and radiology (BS).

The content analysis of the rest of the curricula and the related syllabus resulted in 3 categories of topics, including 56 completely relevant topics (Table 1), 48 non- relevant topics, and 14 relatively relevant topics. Further, our results show that in some similar programs, the course title and the course units (hours) are not the same. For example, there are 6 different MSc programs in nursing with similar student requirements and course title, while the course unit is different.

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Table 1. Relevant topics and their assigned codes

Code	Topic	Code	Topic
1	Ethical principles and theories	30	Truth telling
2	Ethical sensitivity	31	Ethics in education
3	Ethical decision making	32	Resource allocation
4	Communication skills	33	Brain death
5	Ethical guidelines	34	Futility
6	History of ethics	35	Transplantation
7	Professional responsibilities	36	Ethical considerations in pediatrics
8	Ethical considerations in vulnerable	37	Professional ethics
9	Patients right charter	38	Bioethics
10	Ethical challenges	39	Nursing ethics
11	Ethical consultation	40	Ethical development
12	Professionalism	41	Ethics implication
13	Professional errors	42	Disaster
14	Research ethics	43	Transfusion
15	Ethical considerations in special issues	44	Biotechnology
16	Negligence	45	Hidden curriculum
17	Ethical and legal responsibility	46	Developing ethical practice
18	Informed consent	47	Medical testimony
19	Moral distress	48	Artificial reproduction
20	Confidentiality	49	Ethical management
21	Ethical meanings in nursing	50	Ethical thinking
22	Nurses rights	51	Philosophy of ethics
23	Bad news	52	Dress code
24	Beginning of life	53	Justice
25	End of life	54	Ethical regulations
26	Islam's view of ethics	55	Professional competency
27	Ethics in consultation	56	Ethical analysis
28	Conflict of interest		
29	Ethics in military medicine		

Second phase

Fifty-seven out of 69 medical universities and/or medical schools (RR= 82.6%) replied to our request. The obtained data were analyzed regarding the course title, the course content, the recommended references to students, and the teaching and assessment methods. The results are presented accordingly.

Course title

The data show that for some programs, the course title and course units of medical ethics are not the same as the curriculum. Those programs include anesthesia (BS), the technology of operating room (BS), radiology (BS), nursing (BS), psychiatric nursing (MSc), internal nursing (MSc), nursing management (MSc), emergency nursing (MSc), biotechnology (MSc), medicine (doctorate), Pharmacy (Pharm D), and dentistry (doctorate).

Course content

The percentage of adherence to the approved syllabus by calculating the compliance between the taught versus the offered topics in the syllabus was calculated (Table 2). Then, based on experts' opinions, twenty-seven topics were selected as the core content of the medical ethics syllabus for three doctorate programs (medicine, dentistry, and pharmacy). Afterward, the responses of the medical, dentistry and pharmacy schools were analyzed (Table 3).

Of 48 medical schools, the data was received from 29 schools (RR= 60.4%). The medical schools mostly teach half of the core topics including basic principles and theoretical foundation (%100), confidentiality (%89.7), communication skills (%86.2), research ethics (%82.8), professionalism (%69), medical error (%58.6), informed consent (%82.8), truth-telling (%72.4), beginning of life care (%75.9), end of life care (%82.6), conflict of interest (%65.5), ethics in education (%82.8), and resource allocation (%51.7) to the students (Table 3). The topics of ethical issues in reproductive technologies and ethical thinking are no longer offered to medical students.

Of 36 dentistry schools, only 14 schools provided the data (RR= 38.8%). In dentistry, the more favorable topics for teaching include basic principles and theoretical foundation (%100), confidentiality (%100), communication skills (%85.7), research ethics (%92.9), professionalism (%78.6), medical error (%85.7), informed consent (%92.9), truth-telling (%92.9), beginning of life care (%57.1), conflict of interest (%85.7), ethics in education

Table 2. Percentage of adherence to syllabus in different programs

Program & degree	Adherence (%)
Medicine (doctorate)	48.4
Dentistry (doctorate)	68.3
Pharmacy (Pharm D)	61
Midwifery counseling (MSc)	49.9
Psychiatric nursing (MSc)	42.8
Geriatric nursing (MSc)	32.1
Emergency nursing (MSc)	35.6
Anesthetics (BS)	74
Clinical psychology	25
Internal nursing (MSc)	48.9
Military nursing (MSc)	64.2
Pediatric nursing (MSc)	55.9
Nursing (MSc)	79
Technologies in operating room (BS)	76
Radiotherapy (BS)	22.2
Environmental health (BS)	12.5
Emergency technician (BS)	30.5
Circulation (BS)	37.5

MSc= Master of Science; BS= Bachelor of Science

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Table 3. Course content in medicine, dentistry and pharmacy

Code	Titles	Percent of coverage (Medicine)	Percent of coverage (Dentistry)	Percent of coverage (Pharmacy)
1	Basic principles & theoretical foundation	100	100	100
2	Ethical decision making	10.3	21.4	0
3	Communication skills	86.2	85.7	60
4	Ethical guidelines	3.4	0	80
5	History of medical ethics	41.1	28.6	80
6	Ethical responsibility	17.2	14.3	20
7	Ethical issues in vulnerable groups	17.2	0	0
8	Patients right charter	48.3	50	40
9	Ethical challenges	3.4	0	40
10	Ethical consultation	3.4	0	0
11	Professionalism	69	78.6	60
12	Medical error	58.6	85.7	40
13	Research ethics	82.8	92.9	100
14	Legal issues	20.7	14.3	0
15	Informed consent	82.8	92.9	20
16	Confidentiality	89.7	100	20
17	Truth telling	72.4	92.9	40
18	Ethical issues of beginning of life care	75.9	57.1	20
19	Ethical issues of end of life care	82.6	42.9	20
20	Islamic view	13.8	14.3	0
21	Conflict of interest	65.5	85.7	20
22	Ethics in education	82.8	85.7	40
23	Ethical considerations of resource allocation	51.7	35.7	20
24	Ethical considerations of transplantation	17.2	0	0
25	Ethical considerations of biotechnology	17.2	7.1	0
26	Ethical issues of assisted reproductive technology	0	0	0
27	Ethical thinking	0	0	0

(%85.7), and resource allocation (%35.7). Some topics including ethical guidelines, ethical issues in vulnerable groups, ethical challenges, ethics consultation, and ethical considerations of transplantation, are not considered for teaching in dentistry (Table 3).

Of 23 pharmacy schools, only 5 schools answered (RR=21.7%). The pharmacy schools mostly prefer teaching basic principles and theoretical foundation (%100), communication skills (%60), ethical guidelines (%80), history of medical ethics (%80), professionalism (%60), and research ethics (%100) (Table 3). The results show that the topics of Islamic view, ethical considerations of biotechnology and transplantation, legal issues, ethics consultation, ethical issues in vulnerable groups, and ethical decision-making are not taught in pharmacy.

References

All of the recommended references to the students were compared to the references which were offered in the currently approved syllabus and the percentage of compliance was calculated. The results show various degrees of adherence to the syllabus (Table 4). Because of a lack of enough data about other programs, the percentage of compliance was not calculated.

Table 4. Percentage of adherence to the references

Program & degree	Compliance (%)
Medicine (doctorate)	84.2
Dentistry (doctorate)	5.2
Pharmacy (Pharm D)	85.7
Nursing (MSc)	74.3
Anesthetics (BS)	86.2
Emergency technician (BS)	54.1
Technologies in operating room (BS)	50
Radiology (BS)	23

MSc= Master of Science; BS= Bachelor of Science

Teaching method

Considering the method of teaching ethics in medical sciences, and based on the data obtained from medical universities, lecture presentation was the most favorable method for teaching; however, sometimes ethics teachers use small group discussions. The other methods including clinical case presentation and scenario simulation, are being used to varying degrees.

Student assessment

The results show that multiple-choice questions (MCQs) are mostly used (%96) for student assessment. The data was not enough to analyze logbook usage. Of medical schools, %94.8 are using MCQs, %2.6 of them are employing objective structured clinical examination (OSCE) or logbook for students assessment, and %18.9 consider a supplementary score for class participation. In dentistry, MCQs is used by %89.4 of the schools, and the logbook or OSCE is applied by %5.2 of dentistry schools, while %47.3 of them consider supplementary score for students' class participation. In pharmacy schools, no logbook or OSCE was reported and all schools are using MCQs for student evaluation; however, %28.5 of the pharmacy schools consider supplementary scores for class participation. Other than %2.5 of nursing schools that reported logbooks and OSCE as their method of student assessment, no more information was obtained.

Teachers' information

According to teachers' self-declarations, most of them had 5 years of teaching experience in medical ethics or less. The ethics teachers are discipline-based and the ratio

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of qualified ethics teachers was disproportionate. Only 10 out of 226 ethics teachers have PhD degrees in medical ethics. Sixty-three out of 216 ethics teachers, who had not PhD degree, have passed a short course educational program in medical ethics and a hundred and seven out of 216 have conducted research in medical ethics. Of 226 ethics teachers, 97 (%42.9) were assistant professors, 54 (%23.8) were associate professors, 19 (%8.4) professors and 56 (%24.7) had no academic degree. Totally, all of the 226 ethics teachers published 397 papers in Persian (1.7 paper per person) and 227 papers in English (1 paper per person).

Discussion

In this study, ethics education in medical sciences was evaluated, which highlights some major deficiencies. Generally, our study shows some features about the current status of ethics teaching in medical sciences including: 1) no incorporation of ethics in 10 BS and MSc curricula; 2) different course titles, contents and units in similar programs; 3) non-adherence to the curriculum in terms of the core content, the references, and teaching and assessment methods; 4) non-adherence to the ethics core content especially in medical, dentistry, and pharmacy schools; 5) lack of qualified ethics teachers; and 6) no horizontal or vertical integration in ethics teaching. Comparing our results with the US/Canadian, Chinese and UK studies shows that the weaknesses are the same, but with about ten years delay (9-11).

The discrepancies in ethics teaching between similar programs may represent that ethics teaching in medical sciences in our country is in the formative stage, similar to other countries (9). As we observed, ethics teaching is mostly experiential and suboptimal; however, the students' perceptions may be different and misleading, albeit we did not evaluate students' perceptions.

In a study in Egypt, Fawzi revealed that a formal medical curriculum is used in 89 medical schools in the study area, but different medical ethics courses are offered which do not guarantee a standard for ethics teaching (12).

This study showed that the majority of ethics teachings lean toward ethics theories and are less related to clinical practice which is in agreement with the other studies (13) and the students may assume that all the ethics is what they have been taught.

Comparatively, there is a small overlap between the curricular contents of each program which is an indicator of a lack of consensus about the course titles. The course content should be based on national and international standards and students' needs as well as cultural and religious considerations. Also, a high amount of effort should be centered on raising students' practical skills in ethical decision-making. Wang and Li proposed several stages to incorporate ethics teaching into the medical curriculum including considering ethics in all educational objectives, basic sciences and medical sciences by involving the students in ethical decision-making in clinical case discussions, teaching ethics during clinical rounds, ethics rounds and case analysis, and having ethics seminars (14). Fava et al. divided the objectives of medical ethics education into cognitive and virtue objectives. The cognitive objectives include upgrading knowledge and understanding of moral principles which shape medical practice, and the virtue objectives consist of practice development in order to nurture a good doctor. The virtue objectives should construct the character of the health professionals including compassion, honesty, and integrity and also should foster critical thinking skills (15). Both aspects seem to be quite important (16).

In addition, ethics education is mostly through non-aligned courses, while integrated ethics education is mostly achievable by longitudinal courses throughout the curricula.

Quintero et al. reported three main challenges in ethics education; the hidden curriculum, the gap between theory and practice, and the difficulty of shaping character. One of the key strategies to overcome these challenges is considering integration as the key element for medical education (17). Eckles et al. argue that ethics education needs to be integrated and coherent, provided by a multidisciplinary team and provided throughout all years of medical education (6). To provide integration in teaching ethics in medical sciences, reform is needed.

Most of the schools are using lecture presentations; however, small group discussion is used by some ethics teachers for developing knowledge and attitude correspond to ethics. The lecture is a useful method for transferring and introducing key concepts, while small group discussion is mostly used for interactive discussion (10). Small group discussion is widely accepted as a useful method of teaching ethics to develop moral reasoning and normative identification (6, 18); however, it is not currently used in ethics teaching in our country except for a few cases. This method needs more ethics teachers with pertinent expertise which seems to be a major barrier in our teaching system. The other methods including case-based discussion or case analysis and portfolio, were employed by a few schools in this study. Nevertheless, we should be aware that the methods of teaching ethics are different between and even within countries (19). Furthermore, there should be enough attention to the fact that learning about how to incorporate sympathy and humanity in health care services is only possible when the students face real life situations and have the chance to discuss their concerns and practice during their training course (20). Some propose the self-learning method as a part of teaching to potentiate ethical reasoning and decision-making (21). Regarding the wide variety of concerns in teaching methods in Western countries including the UK, Australia and New Zealand continuing attempts are on the way to improve the teaching and assessment methods (22).

MCQs were the preferred method of student assessment, and a few schools favored logbook evaluation complementary to MCQs. The most concerning part of the result is that there is the possibility that the students pass the ethics course which is not presented to them comprehensively, without achieving the main objectives of learning ethics. This is because the MCQs method does not evaluate the students' competency and this would be worrying

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for the next generation of healthcare providers who have a central role in the healthcare system.

There are a few certain shortcomings in teachers' competencies. First, the medical ethics departments consist of small numbers of ethics teachers who serve the large number of students. Although ethics teachers are multidisciplinary but they teach different courses instead of co-teaching. There is little training for ethics teachers who have not been certified in teaching ethics. This problem was identified as a common issue in different medical schools (9). Some studies indicated the necessity of advancing teachers' role models to empower them in ethical thinking and ethical decision-making (9, 13). Yu and Liu believe that as hidden curriculum plays a significant role in training ethical health care providers (physicians), we should set up a positive hidden curriculum (23). According to the UK Consensus Statement, integration needs full coverage of the core curriculum and it necessitates ethics teachers' liaison with colleagues in other disciplines (24); because ethics is multidisciplinary.

Conclusion

The finding of this survey showed a discrepancy between the written and performed curricula.

According to our findings and the observed deficiencies, we suggest the following four-phase approach for the development of ethics education in medical sciences in Iran.

In the first phase, we recommend that the National Committee of Ethics in Education of Medical Sciences (NCEEMS), declare its consensus statement of the core content for ethics teaching in medical sciences in undergraduate students through its steering committee and based on the expectations from all groups of healthcare providers, the ethical principles they expect to incorporate into practice, and their capabilities in understanding ethical challenges and ethical decision making.

In the second phase, we recommend curriculum revision in all undergraduate courses in medical sciences. we suggest developing ethics curricula in medical sciences in order to create teaching integration both horizontally and vertically. More efforts are needed to incorporate ethics teaching as a longitudinal teaching program in medical sciences specifically in medical, dentistry and pharmacy schools. Furthermore, an investigation into finding the best method of teaching ethics and the importance of didactic lectures, small group discussions (teacher-centered versus student-centered teaching), and other methods of teaching applicable to ethics should be conducted. Likewise, student assessment should be better oriented at students' competency.

In the third phase, there seems to be an urgent need for training ethics teachers who are knowledgeable in ethics and have expertise in clinical ethics and practice. So, advanced and developed training courses should be provided for potentiating the ethics teachers. Empowering ethics teaching by establishing multidisciplinary ethics departments consisting of clinical practitioners (from different disciplines) and professors of humanities and medical ethics (ethicist-philosophers and physicians) is highly recommended.

In the fourth phase, we propose amendments to infrastructures, including having a better definition and affiliation for the department of medical ethics in each university and/or school.

We hope that this approach guides us to integrated ethics education in medical sciences throughout the country.

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Authors' contribution

All authors have made substantial contributions to both (1) the conception and design of the article or study, or acquisition of data, or analysis and interpretation of data, and (2) drafting the article or revising it critically for important intellectual content. Each author is able to take public responsibility for the entire work.

Conflict of Interests

The authors declare that they have no competing interests.

References

1. Ethemadian MN. Medical Ethics and Customs. Tehran: Tehran University Press;1963. (in Persian)
2. World Federation for Medical Education. Basic Medical Education WFME Global Standards for Quality Improvement (2012 version). https://wfme.org/standards/. Accessed March 22,2020.
3. Giubilini A, Milnes S, Savulescu J. The medical ethics curriculum in medical schools: present and future. J Clin Ethics. 2016;27(2):129-45.
4. Dent JA, Harden RM, Hunt D, eds. A Practical Guide for Medical Teachers, Fifth edition. Elsevier Publication.
5. Chao SY, Chang YC, Yang SC, Clark MJ. Development, implementation, and effects of an integrated web-based teaching model in a nursing ethics course. Nurse Educ Today. 2017;55:31-37.
6. Eckles RE, Meslin EM, Gaffney M, Helft PR. Medical ethics education; where we are? Where should we be going? A review. Acad Med. 2005;80:1143-52.
7. Feitosa H, Rega S, Bataglia PU, Sancha KFC, Regor G, Nunes R. Moral judgement competence of medical students: a transcultural study. Adv Health Sci Educ. 2013;18(5):1067-85.
8. Chin JJL, Voo TC, Abdul Karim S, Chan YH, Campbell AV. Evaluating the effects of an integrated medical ethics curriculum on first- year students. Ann Acad Med Singapore. 2011;40:4-18.
9. Sherer R, Dong H, Cong Y, Wan J, Chen H, Wang Y, et al. Medical ethics education in China: lessons from three schools. Educ Health. 2017;30:35-43.
10. Mattick K, Bligh J. Teaching and assessing medical ethics: where are we now? J Med Ethics. 2006;32:181-185.
11. Silverberg LI. Survey of medical ethics in US medical schools: a descriptive study. J Am Osteopath Assoc. 2000;100:373-8.
12. Fawzi MM. Medical ethics educational improvement, is it needed or not?! Survey for the assessment of the needed form, methods and topics of medical ethics teaching course amongst the final years medical students Faculty of Medicine Ain Shams University (ASU), Cairo, Egypt 2010. J Forensic Legal Med. 2011;18:204-7.
13. Deng R. Basic models of medical ethics education and its support system. Med Philos. 2012;33:61-3.
14. Wang L, Li M. Integrating medical education and ethics education for students during clerkships. Med Philos. 2013;34:81-4.
15. Fava A, Frank L, Gligorov N, Brinbaum S, Cumminis P, Faller R, et al. A model for the assessment of medical students competency in medical ethics. Am J Bioethics. 2013;4(4):68-83.
16. Association of teachers of ethics and law in Australian and New Zealand medical schools (ATEAM). An ethics core curriculum for Australian Medical Schools. Med J Australia. 2001;175(4):205-10.
17. Quintero GA, Vergel J, Arredondo M, Ariza M, Gomez P, Pinzon-Barrios A. Integrated medical curriculum: advantages and

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[DOI: 10.47176/mjiri.36.176]

disadvantages. J Med Educ Curric Dev. 2016;3:133-137.
18. Self DJ, Olivarez M, Baldwin DC. The amount of small-group case-study discussion needed to improve moral reasoning skills of medical students. Acad Med. 1998;73(5):521-3.
19. Williams J. Medical Ethics Manual. 2nd ed. The World Medical Association, Inc.; 2009.
20. Cochran-Smith M. Constructing outcomes in teacher education: policy, practice and pitfalls. Educ Policy Anal Arch. 2001;9(2).
21. Yacoub AA-H, Ajeel NA-H. Teaching medical ethics in Basra: perspective of students and graduates. East Mediterr Health J. 2000;6(4):687-92.
22. Campbell A, Chin J, Voo T. How can we know that ethics education produces ethical doctors? Med Teach. 2007;29:431-6.
23. Yu J, Liu F. Constructing an evaluation system of the hidden curriculum in advanced medical schools. Chin Med Ethics. 2013;26:647-8.
24. Consensus statement by teachers of medical ethics and law in UK medical schools. Teaching medical ethics and law within medical education: a model for the UK core curriculum. J Med Ethics. 1998;24:188-92.

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