



Medical ethics course for undergraduate medical students: a needs assessment study

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Abstract

Education needs assessment is one of the essential components of curriculum development. In this study, we aimed to assess the educational needs of general physicians for medical ethics.

We conducted a three-stage Delphi study of general physicians' views on important ethical issues in their practice. In the item generation stage we retrieved 45 important educational items from a survey of general physicians, patients, well known ethical clinicians, and a review of other universities' curricula and international literature. The questionnaire was designed to ask the importance of each generated item. We then sent the questionnaire to general physicians. Items scored as highly important by more than 80% of the respondents in the first or second consensus development surveys were considered as educational priorities. Four academic medical ethics teachers reviewed and commented on the findings.

The response rate to the first consensus development survey was 38%, of whom 77% also responded to the second survey. We developed consensus on 24 medical ethics items for inclusion in medical ethics curriculum. All items were also considered important by medical ethics teachers, and they added four further items to the list.

Despite the attention given to ethical issues originating from technological advances, the most important educational needs of general physicians in medical ethics are still the traditional issues concerning the doctor-patient relationship and professionalism.

Keywords: *Needs assessment, Medical ethics education, Delphi method, General practitioners*

Introduction

Medical ethics is a core component of medical education intended to empower practitioners in ethical decision making (1); it is in light of its importance that the contents and the teaching methodology of the course are constantly criticized and reviewed (2,3).

Linking education with the needs of the society is an important prerequisite for effective education. Otherwise it may become impossible to achieve the goals of education, and this can lead to a waste of human and financial resources. Educational needs assessment is the process of determining the gaps between the required competencies of trainees and the reality (4) and it is an essential part of curriculum development (5). Educational needs assessment is even more important in designing curricula for subjects such as medical ethics in which the cultural and religious underpinnings of the society should be reflected.

In recent years, different methods of needs assessment have been used to identify the needs of medical students and residents in terms of medical ethics and professional behaviour. In some approaches, students are asked to rank the importance of a number of professional ethics issues (6,7). In others, students are assessed in their ability to make ethical judgments when confronted with common issues in practice (8,9). Results of such studies have pointed to different needs that vary by medical specialty and by society.

Medical ethics syllabus in Iran had initially been developed based on expert opinion. In Tehran University of Medical Sciences, content revision of the medical ethics course was made in 2006 using a review of literature and expert opinions (10), although its validity was not examined by needs of general practitioners.

In this study we assessed the views of general physicians on their educational needs in medical ethics. We aimed to identify those medical ethics topics that should be included in the undergraduate medical education curriculum.

Method

Design

The Delphi method is a useful approach for developing consensus among a relatively large number of participants (11) and has been used extensively for the purpose of developing educational programmes (12-15). We conducted a three-stage Delphi study (item generation plus two consensus development surveys) and complemented the findings with expert opinions. Figure 1 demonstrates the general outline of the study.

Participants

For two reasons we selected our participants from general physicians: firstly because they have

completed the medical education programme and are familiar with the medical ethics course contents, and secondly because they are more likely to offer realistic arguments concerning the importance and necessity of incorporating different medical ethics topics in the curriculum since they are practicing medicine.

We approached the attendees of a national continuing medical education (CME) conference and distributed announcements about the study among them. The said conference is one of the largest in Iran covering about 50 half-day CME events in all specialties. One hundred and thirty six general physicians volunteered to participate.

Item Generation

We used five different approaches for the generation of items for inclusion in our consensus development exercise:

1. We sent a letter to the 136 general physicians volunteering for participation in the study. It contained one open-ended question: "Considering your practice experience, please state the most common medical ethics issues that you have encountered during your professional career." We also enclosed the purpose and methods of the study and sent a reminder after one month.
2. Four clinical academics known as role models for their consideration of ethical issues in practice were interviewed. They were asked to express their opinions of a general physician's needs in terms of medical ethics.
3. Patients attending two general physician clinics in Tehran (one in the north, one in the south, 5 patients each) were interviewed about their expectations from their physicians. Eight items related to medical ethics were extracted from their responses.
4. We reviewed the syllabi of the medical ethics courses of Shiraz and Isfahan universities of medical sciences.
5. Based on the literature, we assessed a review of medical ethics training in North American universities (16), a study of the agreement between the lecturers of medical ethics and law in the UK (17), and a study of designing the core course of medical ethics in Australian universities (18).

We extracted 29 individual items from responses to the letter. Thirteen items were extracted from interviews with clinical academics, eight items from interviews with patients, nine items from review of other universities' curricula, and ten items from literature review. Several items overlapped and ultimately a list of 45 issues in medical ethics was included in our questionnaire (Table 1).

Consensus Development

In our first consensus development survey, we sent the questionnaire to 136 general physicians and asked them to score the importance of each item on a 1-9 scale (1 indicating low importance, 9 indicating high importance) for inclusion in the medical ethics curriculum. We sent a reminder with a copy of the questionnaire after two months.

The second survey questionnaire included 31 items for which no agreement was reached in the first survey. We also reported to the participants which items had already reached the consensus level. This questionnaire was sent exclusively to the respondents of the first survey (52 people) (Figure 1). For each respondent we presented the score they had given to the 31 items, and the relative frequency of other respondents' views on the importance of the items. We then asked them to re-score the importance of each item after taking others' views into consideration. We also asked for their comments on the scores they assigned to each item. We sent two reminders each after one month.

Analysis and Measuring Consensus

To analyze the scores given to each item, we classified the responses into three categories: low importance (scores 1-3), medium importance (scores 4-6), and high importance (scores 7-9). We also calculated the median score for each item. 'Reaching consensus' was defined as having 80% agreement on any level of importance and was calculated for each item separately. All analysis criteria were set a priori (19).

Expert Opinion

While reviewing the responses and comments given to the second survey, we noticed that some physicians had commented on their agreement with certain behaviours relevant to the item, and not on their agreement on whether the item should be covered as part of the medical ethics curriculum. For example, instead of commenting on the importance of teaching the item "truthfulness towards the patient and their families", they had expressed their opinion on whether truthfulness should be observed in poor prognosis conditions or not.

Table 1. Items developed in the item generation stage and included in the questionnaire

No.	Item	No.	Item
1.	Ethics in teaching medical students	24.	Fairness among patients
2.	Ethics in research	25.	Referral to qualified physicians when necessary
3.	New advances in assisted reproductive technology (IVF, embryo donation, egg donation)	26.	Conflict of interest (advertising or prescribing particular medications)
4.	Confronting end of life issues and do not resuscitate orders	27.	Conflict of interest (accepting gifts from patients or industry)
5.	Ethical dealing with lab animals	28.	Conflict of interest (high fees, fee splitting)
6.	Constructive interaction with media	29.	Adherence to religious beliefs and moral values
7.	Doctor-patient responsibilities	30.	Avoiding waste of public resources
8.	Role of family in completing the diagnosis and treatment process	31.	Telling the truth to patients and their families
9.	Respect for patient's privacy	32.	Admitting to own medical error
10.	Respecting patients' religious and cultural beliefs	33.	Disclosing peers' errors
11.	Dealing with requests for inappropriate treatment	34.	Relationship with other members of health care team (nurses, etc.)
12.	Making efforts to relieve patients' pain	35.	Relationship with peers
13.	Obtaining informed consent	36.	Visiting peers free of charge
14.	Abortion	37.	Confidentiality of patient data
15.	Maintaining respect for the profession by physicians	38.	Use of unnecessary or expensive diagnostic tests
16.	Practitioners' personal appearance and grooming	39.	Confronting difficult patients
17.	Dealing with unethical requests	40.	Respect for patient autonomy, and involving them in decision making
18.	Knowledge of theoretical foundations of ethics and philosophy	41.	Responsibility for treatments administered to the patient
19.	Thorough completion of patient records	42.	Complete history taking and clinical examinations
20.	Knowledge of different insurance policies	43.	Allocating enough time to each patient
21.	Knowledge of and respect for the law	44.	Appropriate relationship with patients
22.	Accountability when on call	45.	Issuing false certificates
23.	Commitment to updating scientific knowledge		

IVF=in vitro fertilization

To overcome this limitation, we assessed the views and opinions of medical ethics teachers about the Delphi results. For this purpose, we sent the first survey questionnaire to four academic medical ethics teachers, and asked them to score each item. After collecting their responses, we sent them the collated views of the general physicians and asked them to state their reasons for scoring items differently where applicable.

Results

Forty three (32%) physicians participated in item generation. The questionnaire for the first survey was sent out to all 136 volunteers, and 52 (38%) responded. We sent the second survey questionnaire to the 52 respondents, of whom 39

(75%) responded. 59% of the participants were male, their mean age was 38 ± 6 years, and their practice experience was 9 ± 4 years. Table 1 reports the results of the item generation stage.

In the first consensus development survey, we observed consensus on the importance of 14 items. The participants achieved consensus for a further ten items in the second round (Table 2).

Items with the least importance were ethical dealing with lab animals and constructive interaction with media with a median score of 5 each.

Compared with general physicians, the medical ethics teachers had significantly different opinions on the importance of four items. Adding the items to those already reported in Table 2 provided us with 28 items for inclusion in medical ethics teaching curriculum (Table 3).

Table 2. Items with consensus on high level of importance

No.	Item	Percentage of respondents who scored items in these categories			Median score (1-9)
		High (7-9)	Interme- diate (4-6)	Low (1-3)	
Items with consensus after the 1st consensus development survey (14 items)					
1	Appropriate relationship with patients	90	4	6	9
2	Allocating enough time to each patient	86	8	6	9
3	Complete history taking and clinical examinations	84	10	6	9
4	Relationship with peers	80	18	2	7
5	Confidentiality	90	8	2	9
6	Adherence to religious beliefs and moral values	82	16	2	8
7	Referral to qualified physicians when necessary	82	18	0	8
8	Commitment to updating the scientific knowledge	82	16	2	9
9	Responsibility for treatments administered to the patient	86	14	0	9
10	Accountability when on call	80	18	2	9
11	Knowledge of and respect for the law	90	10	0	9
12	Maintaining respect for the profession by physicians	86	12	2	9
13	Doctor-patient responsibilities	82	14	4	9
14	Ethics in teaching medical students	85	13	2	9
Items with consensus after the 2nd consensus development survey (10 items)					
15	Respecting patients' religious and cultural beliefs	82	15	3	8
16	Relationship with other members of the health care team (nurses, pharmacists, etc.)	87	13	3	8
17	Telling the truth to patients and their families	82	18	0	8
18	Thorough completion of patient records	85	10	5	8
19	Making efforts to relieve patients' pain	85	15	0	9
20	Dealing with requests for inappropriate treatment	90	10	0	8
21	Respect for patient's privacy	85	15	0	8
22	Knowledge of different insurance policies	82	18	0	8
23	Obtaining informed consent	80	20	0	8
24	Fairness among patients	80	17	3	8

Discussion

The results of our study present us with a list of 28 important items that need to be taught to medical students. The participants reached consensus on the educational importance of 24 items.

According to our results, ethics priorities for general physicians are not brought about by modern technology or advances in medicine (e.g.

reproductive health issues); basically they are the same items that have long been among ethical commitments or challenges of physicians. These items require physicians to take on the role of a healer and maintain an ethical approach that gives priority to patient needs rather than their ability to perform complicated ethical analysis on current ethical dilemmas.

Contrary to our expectations, there was a conflict of opinion on the importance of “respect for autonomy and involving patients in decision making”. This is while participating patients in the item generation phase of the study had clearly indicated that they expected such respect from physicians. The study by Asghari et al. also showed that patients preferred to receive information and be involved in decision making (20). Reviewing practitioners’ comments on this item suggested the

predominance of a paternalistic approach towards doctor-patient relationship among them. One physician stated, “*The patient must thoroughly and completely follow the orders of his/her doctor. The patient’s knowledge of the chosen treatment modality is too limited to give them the option of autonomy*”. The medical ethics teachers, however, disagreed with this view and found the item important.

Table 3. Academic medical ethics teachers’ and general physicians’ opinions on selected items

Item	% of physicians scoring the item highly important	Median score given by physicians	Median score given by senior lecturers	Medical ethics teachers’ opinion
Respect for patient autonomy, and involving them in decision making	62	6	8	It seems general practitioners do not believe in this right for patients, but it is very essential.
Conflict of interest (high fees, fee splitting)	66	7	8	Unfortunately, they happen so often, that they seem very natural to do. Issues on doctor-patient conflict of interest are common and are damaging the reputation of physicians.
Use of unnecessary or expensive diagnostic tests	69	7	8	Due to a lack of adequate insurance coverage in our country, this issue is rather important
Confronting difficult patients	32	6	8	Although it is not as important as previously mentioned items, in current medical practice there are many difficult patients

Two years ago, major amendments were made to the entirety of the medical ethics curriculum in Iran (10). Comparing the results of our study with the pre-amendment content of the course showed that 7 sessions (out of a total of 15 sessions) were not in accordance with the essential needs of general physicians. Nonetheless, our results indicate that the course contents may need to be re-addressed. After the amendments, this was reduced to 4 out of 17 issues, such as abortion, end of life issues, ethics in research and resource allocation. Some items belonged more in the legal realm than in ethics (Knowledge of different insurance policies, Knowledge of and respect for the law), which in our curriculum are not included. We plan to negotiate with the Forensic Medicine Department about covering these two items in forensic medicine and medical law course.

Although the results of our study did not indicate the need for resource allocation for General practitioners, their giving high scores to the item of “Fairness among patients” might mean that they need resource allocation to be discussed at the micro level.

In 1998, teachers of medical ethics and law in medical schools throughout the UK offered their consensus statement about the medical ethics

curriculum (17), and in 2010 they updated their statement (21). Compared to their recommendations, we found 5 of the 12 topics were relatively unimportant in the clinical practice of general physicians in Iran; these include research, fertility, genetics, death and termination of life, resource allocation, mental disorders and disabilities (21).

In comparison with the consensus statement of teachers of ethics and law in Australian and New Zealand medical schools regarding the educational content, again six topics were detected unimportant in our survey: research ethics, reproductive ethics, issues in genetics and biotechnology, ethical issues in commercialization of medicine, resource allocation and end of life decisions (18).

In a survey of ethics education at U.S. and Canadian medical schools, end of life issues and allocation of scarce resources were taught in 92 and 75 percent of medical schools respectively. Surprisingly about half of them did not cover genetic tests, reproductive technologies, abortion, research ethics and medical error (16).

Our study has some limitations. Physicians’ scorings for educational purposes can be biased by their belief in a given ethical issue as demonstrated earlier by discussing patient autonomy. We used the comments raised by medical ethics teachers to

minimize this potential source of bias. Another limitation is the extent to which we can generalize our findings. Random sampling is not required in the Delphi method if the participating individuals have enough expertise (or experience) to provide a balanced judgment. Nonetheless, considering the variety of general physicians' services and the recipient populations, it may seem more appropriate to have a representation of the total population of general physicians. Random selection from all general practitioners was not feasible, and we believed ethical issues encountered in Tehran would not be significantly different from those in other provinces, yet a more extended study would give a more accurate understanding of physicians' educational needs throughout the nation. We also received a relatively low response rate. It has been shown that the topic of a survey affects response rate (22) and hence we expected to receive more

responses as the participants were volunteers. Still our response rates were similar to many surveys of physicians around the world (23,24).

Our results can be informative for designing courses in other developing and Islamic countries. Our search did not reveal any published study from Islamic countries using similar methods for assessing medical ethics educational needs.

Revising course contents based on learner needs is only the first step for enhancing the learning process and educational outcomes (i.e. improving physician behaviour). Change in course content will enhance the outcomes only if effective educational methods are used (25). Medical ethics courses should be continuously assessed in terms of their contents, educational methods and change in behaviour, and revised in light of the results of such studies.

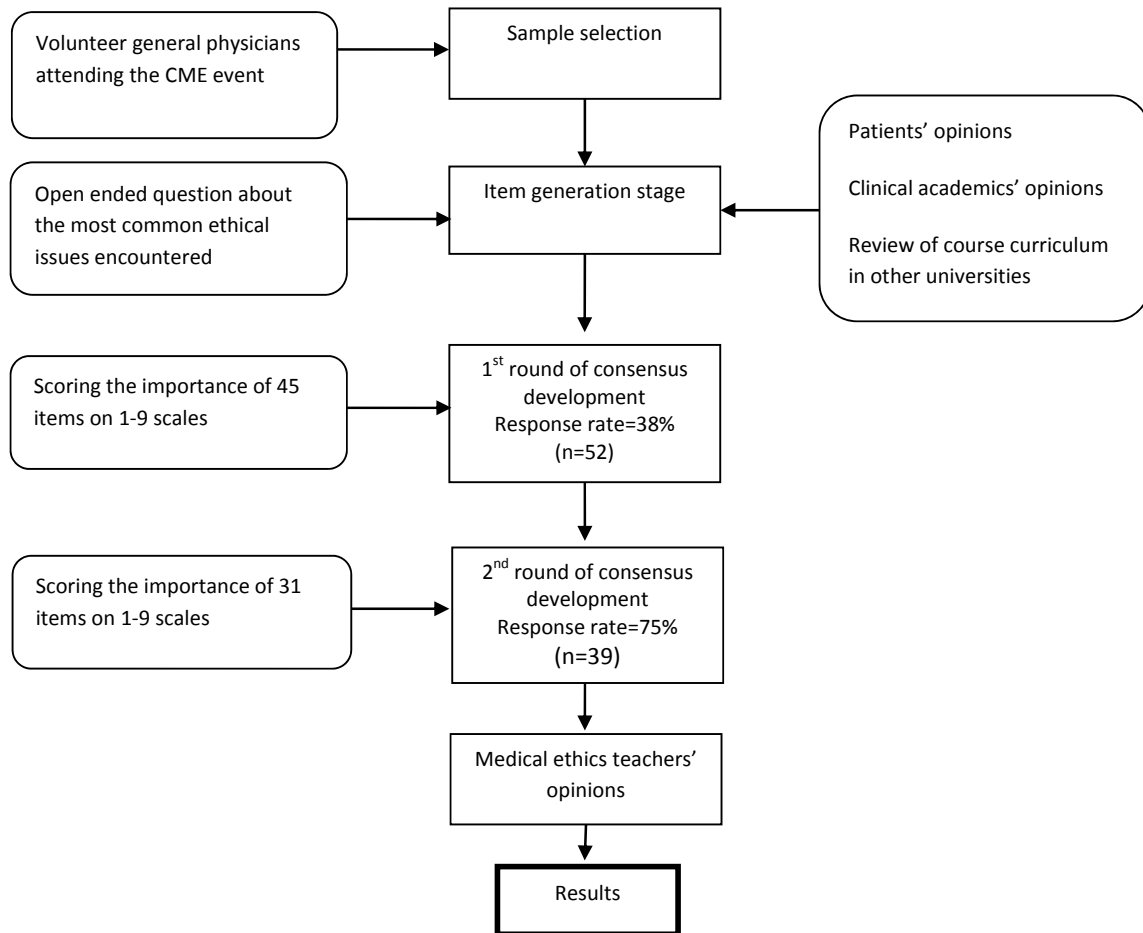


Figure 1. Flowchart demonstrating the study process

Conflict of Interests: none**Acknowledgements**

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