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How to develop an undergraduate medical professionalism curriculum: Experts' perception and suggestion

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Introduction: Medical professionalism as a main ability of physicians is very important just like its teaching and learning. This study investigated medical professionalism experts' perspectives and experiences about professionalism as a step towards developing a medical professionalism curriculum.

Methods: A qualitative approach was adopted for this study. The data were obtained from 10 semi-structured interviews with medical professionalism experts with a variety of experiences in Iran between June and September, 2016. All sessions were audio-recorded, transcribed and analyzed using inductive content analysis.

Results: The participants expressed their experiences on professionalism and its features. The data analysis revealed two main categories: 1) teaching and learning strategies including three categories of learning outcome, teaching and learning and evaluation of medical professionalism, 2) role of context with three sub-categories of rules and regulations to develop professionalism, strengthening the hidden curriculum and executive resources.

Conclusions: To address the development of professionalism in medical students, the main factors, i.e., teaching and learning strategies and context with their categories and subcategories should be considered and revised. To sum up, designing a formal medical professionalism curriculum would be necessary and the notion of professionalism must be integrated with all its phases. Employing effective learning and assessment methods by means of qualified teachers and staff in a supportive learning environment provides students with valuable experiences and facilitates the process of teaching.

Keywords: Professionalism, Medical professionalism, Curriculum

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Introduction

In academic education, determining the competencies that graduates of a programme have to achieve is of great importance (1). In 2016, the Iranian Accreditation Council for General Medicine Education introduced 7 core competencies as the basis for training and evaluation of general practitioners. These are clinical skills, communication skills, patient care, health and prevention improvement in health organization and physician role, individual development and continuous learning, professionalism, medical ethics and laws, decision-making, reasoning and problem solving skills (2). One of the competencies which is of great importance in medicine is professionalism. Nowadays, there is no doubt that professionalism is one of the main abilities of general practitioners and its importance is growing every day (3). The literature suggests

that professionalism is a notion that can be learned and is an acquired trait (4). In recent years, much has been studied and written about professionalism in medicine. Its description and phenomenon seems to be growing continuously, and its significance has become more and more evident in the constant changing world of medicine (3). Previously, the social structures of medicine defined the notion of professionalism, but now, professionalism is about the expected behaviors and attributes of physicians (4).

Today, it is clear that having an appropriate curriculum as a major success factor to empower learners is inevitable (5). The need for appropriate curriculum in Medicine as a complicated course of study, with different kinds of abilities expected from its graduates is apparent (6, 7). Like the other competencies in medical curriculum, many universities around the world have addressed professionalism formally and in terms of curriculum (8).

In Iran, there are few studies on professionalism and learning methods for medical students (9). There is also no vocational course in medical curriculum, and only some professional concepts such as medical ethics are taught, and most of the research backgrounds on the current literature are from other countries (9-11).

To develop a curriculum, one of the most important factors and prerequisites is the experts to examine the various dimensions of the program, identify the stakeholders of the program, and determine the learning outcomes of the program and its other components. Usually, some curriculum planning meetings are held in the presence of experts to determine the approaches, teaching methods, assessment methods, facilities and equipment, etc. to achieve the goals (12). In this study, we investigated the viewpoints of Iranian medical professionalism experts on the structure of a professionalism curriculum, and their perception, experiences and suggestions.

Methods

This is a qualitative study; a directed content analysis approach was conducted for gathering the data and analyzing the experiences of the experts of medical professionalism

Ten interviews were carried out between May and July, 2016 with medical professionalism experts from the Medical Universities of Isfahan, Tehran, Iran, Shiraz and Tabriz.

The selection criteria were the expert's experience and a background of teaching and research on the issues related to the subject of this study. All the experts were faculty members of universities of medical sciences and they had educational and research background in the field of medical professionalism, medical ethics, and medical and clinical education. They were selected from different universities in order to maximize the variation of samples.

The method of data collection was semi-structured interviews. It was a purposive sampling with maximum variation (based on their working experiences and universities). In this study, sampling of respondents continued until data saturation.

To meet the objectives of the study, some questions were asked. Examples of the questions used in the interviews are as follows:

1. Who do you think can be considered a professional doctor?
2. What should a general practitioner know about professionalism?
3. In developing a medical professionalism curriculum, what should be considered?

In addition to questions mentioned above, some other complementary ones were asked due to answers of the interviewees. Each interview lasted for about an hour. The interviews were completely recorded and then transcribed verbatim.

To analyze data from the interviews, inductive content analysis was performed to investigate and specify professionalism complex concept completely. This process started with open coding, then creating categories and finally abstraction (13, 14). After the first interview, the process of data analysis, interpretation and coding started. In the open coding step, while reading the text, the memos and headings were written, too. The transcripts were read several times, and as many memos as necessary were written down in the margins to describe the content aspects completely (13, 15). And in this stage, categories were generated. After that, the lists of categories were classified under main headings. The goal of classifying data was to decrease the number of categories by integrating those that were more similar. After defining categories by inductive content analysis, the abstraction phase started, giving a description of the study title by defining categories. By means of content-features words, the categories were named. Subcategories with similarities were grouped together as categories and categories were grouped as main categories. The process of abstraction continued as far as sensible and feasible (13).

Trustworthiness

To improve the validity of the coding process, peer check and member check were done. In

peer check, the emerging codes, subcategories and main categories were rechecked by the members of our research team and the primary researcher explained and explored each phase of the analysis with them. By replaying the audio file, the transcription accuracy was confirmed. Disagreements about the codes and the other issues were discussed in order to reach an agreement. Moreover, we assessed the reliability of the emerging codes. In order to do member check, a randomized selection of transcripts was done by a colleague unfamiliar with this study; the inter-rater reliability was acceptable, being 0.74. Also, the process of recoding transcripts was done by the researcher 3 weeks after the first one; recoding reliability was satisfactory, being 0.80.

Ethical considerations

Ethics Committees' permission was obtained and then the experts were interviewed in their offices and time of the interview was determined by them. At the beginning of each session, the aim of the study was fully explained and consent of interviewees was obtained. Moreover, participation was voluntary. Names were deleted in the transcriptions to assure confidentiality of the study. Also, the recorded audios would not be accessible by anyone except the researcher.

Results

In this study, a total of 365 pieces of text data in interviews were coded, which were grouped into two main categories, three categories and fourteen subcategories (Table 1).

1. Teaching and learning strategies

Teaching and learning strategies of medical professionalism as one of the main categories that emerged in this study includes three subcategories: learning outcome, teaching and learning; and evaluation of medical professionalism. It was about the structure of medical professionalism curriculum that emerged through participants' experiences.

Learning outcomes

Learning outcomes is one of the emerging categories with two subcategories: personal and interpersonal development. It was about the features that turn a medical student to a good physician. The participants' experiences implied that these features should be regarded as learning outcomes of the curriculum. Another issue mentioned by interviewees was the domains of learning outcomes. Knowledge, behavior and attitude domains must be addressed in learning outcomes of medical professionalism.

▪ *Personal development*

Regarding participants' experiences, commitment to excellence, being a lifelong learner, having dignity and integrity, compliance with codes of conduct, detecting one's own position, being knowledgeable and skillful, being dutiful, administration of justice, philanthropy, being confident, maintaining personal, mental and physical health, making best use of resources and opportunities for self-improvement, altruism, being trustworthy, being committed, primacy of patients' welfare, being honest, being

Table 1: Emerging main categories, categories and subcategories from interviews

Main categories	Categories	Subcategories	Code
Teaching and learning strategies	Learning outcomes	Personal development	Commitment to excellence
		Interpersonal development	Communicating effectively with patients
	Teaching and learning	Formal curriculum	Recognizing society's expectations of a good doctor
		Target group	Teachers
		Training methods	discussing about professionalism cases in rounds
		Teachable time	as a longitudinal theme
	Evaluation of medical professionalism	Requirements for effective evaluation	Giving feedback
		Assessors	Training assessors about assessment
		Assessment methods	Students
		Assessment domains	Attitude
		Target group	Summative and formative
Role of context		Rules and regulations to develop professionalism	Establishment of entrance criteria for medical students
		Strengthening the hidden curriculum	Difference in the effects of hidden curriculum on different people
		Executive resources	Computer

accountable, and being compassionate, were learning outcomes of personal development of medical students.

"Being honest is a very important ethical attribute in everybody's life and to be realistic, it is much more important in a physician's life because our information can save lives." (No.8 interviewee).

"Lack of being compassionate results in neglecting patients, their needs and their welfare by medical students; therefore, it leads to neglecting their personal health and development." (No.3 interviewee).

▪ *Interpersonal development*

As interpersonal development learning outcomes, communicating effectively with patients, teachers, colleagues and other students, being respectful to patients, having social skills, team work, keeping patients safe and comfortable, respecting patients' autonomy, being responsive to society, and being respectful to others were identified.

Being compassionate was stressed by most of the interviewees and due to rapid change and growth in sciences and technologies and changes of the communities, it was indicated as a crucial learning outcome for medical students.

Communicating effectively was another key attribute considered by experts to transform students into professional physicians as an important learning outcome. To cure patients, a physician must communicate effectively with them to get necessary information and give them information they need in a comprehensive way. In addition, communication has a vital role in team work and physicians must be able to communicate appropriately with colleagues to facilitate the treatment process of patients.

"As a physician, if I am not able to communicate appropriately with my colleagues, I would have problems in performing my duties. For example, in shift change, lack of proper communication with my colleagues may result in disastrous consequences." (No. 2 interviewee).

Teaching and learning

Teaching and learning medical professionalism was one of the main concerns mentioned by the experts. Formal curriculum, target group, teaching and learning methods and techniques, effective training requirements, and teachable time were subcategories that emerged through interviews.

▪ *Formal curriculum*

To ensure that medical students graduate as professional physicians, first of all, a formal curriculum is required. A curriculum that is formed based on needs assessment and can make society's expectations of a good doctor come true and like other formal curricula, setting goals, is an inevitable part of it to ensure that whatever have been intended, would be covered and met. Moreover, all experts asserted that professionalism should be a longitudinal theme in the curriculum.

Target group

Students, teachers and assessors were target groups of teaching and learning medical professionalism as mentioned by the participants. They said in order to run the curriculum successfully, firstly, it is necessary to train teachers and assessors on the subject.

"To facilitate and increase the efficiency and effectiveness of teaching and learning medical professionalism in student, the teachers and assessors should be empowered with necessary information." (No.2 interviewee).

▪ *Training methods*

In teaching and learning medical professionalism, different methods were mentioned by the participants. Case-based discussion, small group teaching, simulation and role modeling were methods that most of experts emphasized. Small group teaching was indicated as a method that results in strengthening the spirit of cooperation, critical thinking, discussion and communication. Simulation was another method that was mentioned to be effective in learning medical professionalism because it can provide a condition in which students can experience situations similar to those occurring in real settings. They get ready to behave appropriately in real situations and they can figure out dilemmas that they may face in future.

"I have personally used different methods to teach professionalism to my students. It cannot be said that one method is superior to another. Indeed, different situations determine which method to use." (No.5 interviewee).

▪ *Teachable time*

Different ideas were expressed about time of teaching and learning medical professionalism. Some of the interviewees said that basic science phase is the best time to teach professionalism, and some pointed its introduction in the clinical medicine phase. However, most of them considered that all phases must include teaching and learning of professionalism.

"In my opinion, medical students should be

familiar with the concepts of professionalism from the very first day. This aspect of medicine should be emphasized. So it would be better to define a longitudinal theme throughout the curriculum." (No.6 interviewee).

Evaluation of medical professionalism

Evaluation of medical professionalism is another main category that emerged in this study. The subcategories defined were requirements for effective evaluation, assessors, assessment methods, target group, assessment domains and types of assessment.

▪ *Requirements of Effective Evaluation*

To have an effective evaluation, some issues were indicated by experts, including training assessors about assessment, assessment by the proper person, giving feedback, taking into account the mutual effect of evaluating faculty members by students and vice versa.

▪ *Assessor*

This means the need for an authentic assessment using different assessors such as students, faculties, peers, patients and colleagues.

"In order to assess professionalism in our students, depending and relying only on one person's idea is not valid and bias is a threat in this case."(No.4 interviewee).

▪ *Assessment methods*

Both summative and formative assessments of medical professionalism were expressed by the participants. Many of the methods emphasized by the interviewees to assess professionalism are: mini-cex (Mini-Clinical Evaluation Exercise), peer assessment, OSCE (objective structured clinical examination), 360 degree evaluation, motivational standard questionnaire, an attitudinal questionnaire, critical incident reports, evaluation by the teacher, assessment by nurses, assessment by patients, P-Mex (Professionalism Mini-Evaluation Exercise) and Portfolio.

"Professionalism assessment is a continuous process, and it is necessary to use appropriate methods such as Portfolio." (No.8 interviewee).

▪ *Assessment domains*

In order to have an effective and complete assessment of medical professionalism, different domains including attitude, knowledge, incentive, and students' personality attributes were stressed by the participants in the assessment process,

"Professionalism is a concept that must be addressed not only in knowledge domain, but it must be internalized and used in practice. So it is crucial that its teaching and assessment encompass these three domains. "(No.9 interviewee).

▪ *Target group for assessment*

Another issue raised by experts to implement professionalism curriculum effectively was assessing not only students but also teachers.

"Teachers play an important role in the teaching of professionalism, so teaching professionalism to them and subsequently evaluating them can lead to more effective implementation of the professionalism curriculum." (No.1 interviewee).

2. Role of context

The second main category that emerged through interviews is role of context with three subcategories: rules and regulations to develop professionalism, strengthening the hidden curriculum and executive resources.

▪ *Rules and regulations to develop professionalism*

Establishment of entrance criteria for medical students, establishment of codes of conduct, the ratio of staff to workload, paying attention to the expectations of society from the medical profession, codification and implementation of rules and regulations about medical professionalism, and developing medical professionalism guidelines were mentioned by experts as rules and regulations to develop professionalism. To implement professionalism by means of curriculum successfully, a supportive context is non-negligible and rules and regulations are important parts of it.

"I think first of all, we need a clear code of conduct, without it, how can we expect a student to behave in a special order, to be professional and to be aligned with organizational culture? Without it everything is welcomed and expected; developing a code of conduct is a cutoff point." (No.7 interviewee).

▪ *Strengthening the hidden curriculum*

To have professionalism supportive context, strengthening the hidden curriculum is very important. In this study hidden curriculum refers to the condition of the learning environment or the clinical environment, the mood of the teachers or the students, the teacher-learner interaction, the peer influence, and other factors that may affect the delivery of the lesson. Moreover, we must consider that hidden curriculum has different effects on different students and learning occurs mainly by observation and accidently, and role models play crucial roles in hidden curriculum. Moreover, professional and non-professional

behaviors must be defined; also, defining refinement and punishment of unprofessional behaviors is very important.

"Teachers are role models and their behavior is being monitored all the time by students and even staff. So it is very important that we empower our teachers and develop them continuously as role models. No doubt that teachers are key elements in developing hidden curriculum." (No.4 interviewee).

▪ *Executive resources*

Like any other program, professionalism curriculum is being implemented by means of resources such as computer, paper, and ..., the physical environment, time allocation, qualified teachers and assessors…

Discussion

In this study, to develop a medical professionalism curriculum for undergraduate medical students, the authors sought for the perception, experiences and suggestions of the experts regarding the concept of medical professionalism, and what can be useful in developing a new curriculum for medical professionalism.

Two main themes were found in this study. One of them was teaching and learning strategies. One of its categories was learning outcomes. The results of this study show consistency between the medical education experts' perceptions of professionalism and learning outcomes and that in the literature, as stated by GMC in good medical practice (16) and American Board of Internal Medicine Foundation (17). Moreover, some new learning outcomes such as detecting one's own position and making best use of resources and opportunities for self-improvement were expressed by the participants.

Another category of teaching and learning strategies was teaching and learning medical professionalism. Based on participants' experiences, developing a formal curriculum that would be responsive to expectations of the society and needs of medical students is crucial (18). A purposive curriculum that deploys effective methods of teaching and learning is needed to promote professionalism in medical students. According to participants' experiences and literature, integration of professionalism with all phases of the medical curriculum should be considered (19).

Training methods was another category emerged in this study. In addition to effective teaching methods and techniques such as small group teaching (20), case-based discussion (21), reflection, role playing and role modeling (22) that were stressed by experts in this study, educating teachers on professionalism and its teaching methods, considering attitudinal domain in addition to knowledge and skill domains, giving effective, just and constructive feedback (23), are necessary in developing professional physicians (24). A new finding in this study pointed out by the participants as a useful teaching method was professionalism round which means discussing professionalism cases in rounds by faculty members.

Evaluation of medical professionalism based on participants' experiences was another category that is a crucial part in every curriculum. Moreover, assessment of professionalism in a formative, effective and multi-dimensional way by active members (teachers, staff, patients, students…) of the educational and clinical organization is a key parameter in developing a medical professionalism curriculum and refinement of medical students' behaviors with regards to professionalism. In this study and according to literature, peer assessment, OSCE, 360 degree evaluation (25), P-Mex and portfolio were mentioned by experts as effective methods of assessment of professionalism (26). Motivational standard questionnaire and attitudinal questionnaire were considered by the participants as assessment methods of professionalism, too. On the other hand, direct observation (27), self-assessment, team work exercise (28), Situational Judgment Test and Single Best Answer Multiple Choice (29) were methods not mentioned by the interviewees (30).

Role of context as implied thorough participants' experiences was another main category that emerged in this study. Like other programs, successful implementation of a medical professionalism curriculum necessitates some conditions including supportive context (9), codification and implementation of rules and regulations of medical professionalism, and developing medical professionalism guidelines and codes of conduct (31). Also, a supportive organizational culture is where role models and proper behaviors are appreciated and the inappropriate behaviors are detected, corrected and, if necessary, punished (32). In this study, with regards to the experts' experiences, in Iran, lack of rules and regulations, lack of code of conducts and lack of supportive context and culture for medical professionalism issues in the academic environment are obvious to some extent. However, it is crucial to consider these issues in advance to implement the curriculum successfully. The participants emphasized proper

context as a key factor and even prerequisite in developing a medical professionalism curriculum.

Furthermore, considering role models and their impact on learners, staff and even patients in health care organizations, role modelling is an issue of interest in developing professionalism curriculum with both positive and negative effects. As a result, faculty members' development is necessary (22, 33) and professional teachers facilitate the teaching and assessment of professionalism. Moreover, staff training in addition to teachers and students can play a very effective role in achieving the goals of a professionalism curriculum because not only as evaluators, but even to some extent as role models, the staff affect both the learning context and the learners.

To sum up, we hope that tips we have learned in this study can be useful for others. In order to develop a medical professionalism curriculum, we need to focus on outcomes of program firstly and then methods for teaching and evaluation. Appropriate teaching and learning strategies must be defined and applied. Regarding teaching and assessment issues, not only students but also teaching and assessment of teachers and staff are very important. On the other hand, we need to improve the context of organization by setting rules and regulation, defining codes of conduct and empowering the teachers as role models.

Lastly, this is a qualitative study and its nature was designed to clarify themes, which may trigger further studies. As a limitation, the inclusion of more experts was considered, but it was not possible due to their lack of time; however, the findings of the study were authentic and credible, as they were based on opinions of medical professionalism experts.

Notwithstanding the limitations, our understanding of the subject of the study was clear and deep, based on the experts' experiences on professionalism and the potential quality tips to develop a curriculum on medical professionalism for medical students.

Conclusion

The concept of professionalism should be integrated into the general medical curriculum as a longitudinal theme. Specifically, the integration of professionalism and its assessment in clinical phase is crucial. In order to successfully implement the medical professionalism curriculum, it is necessary to provide appropriate context, use appropriate teaching and assessment methods and educate the faculty members and staff on professionalism, and also train students.

Future studies based on other stakeholders' experiences on medical professionalism curriculum and comparing the medical professionalism curriculum of successful medical schools in training GPs are suggested.

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