



# Designing a non-clinical model of professionalism in education for faculty members of a medical sciences university in Iran: A grounded theory study

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## Abstract

**Background:** Today, professionalism is considered a competitive advantage and its observance at a university is the guarantee of the teaching-learning process in education. The purpose of this study was to design an educational model of professionalism for faculty members at the Tabriz University of Medical Sciences.

**Methods:** This grounded theory study was conducted using a qualitative approach in 2018. The participants of this study were 16 faculty members of the Tabriz University of Medical Sciences. Sampling was purposeful and continued until data saturation. Data was collected by semi-structured interviews. Two methods of reviewing participants and reviewing non-participant experts were used in the data validation. Interview data were analyzed by Strauss and Corbin method.

**Results:** The central core theme of the present study is that ethics in non-clinical education can be categorized in four components: personal characteristics, social interactions, teaching skills, and professional characteristics. Based on casual, contextual and interaction conditions, some strategies were developed and the final model is based on this information.

**Conclusion:** Considering the positive implications of professionalism, increasing productivity in the university, the educational system dynamism, promoting professionalism and developing strategic plans, authorities must focus more on academic and social infrastructure to achieve educational quality and social trust.

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## Introduction

A system of higher education is a prerequisite for sustainable development in each society.<sup>1,2</sup> Education is the most important mission of the university, is the basis for sustainable human development and is a tool for achieving development goals.<sup>3</sup> Faculty members play a major role in directing and leading education<sup>4,5</sup> and the effectiveness of their performance has an important role in academic achievement,<sup>6</sup> success<sup>7</sup> students' learning,<sup>4,8,9</sup> and fulfillment of educational goals.<sup>10</sup> The fulfillment of educational goals cannot be done without taking ethical aspects into consideration, since the link between education and ethics is firm and inseparable.<sup>10,11</sup> Ethics in

teaching is a branch of ethics in higher education, which specifies the professional responsibilities of a teacher in teaching and learning.<sup>12</sup> A teacher's professionalism is the result of knowledge, desire, ability, and attitude<sup>10</sup> which can lead to maintaining safety, welfare and individual and group excellence of students in addition to improving class performance. Conversely, the lack of professionalism can damage the ability of students to learn and their theoretical and specialized proficiency on the content of the lessons.<sup>4,6,7,13,14</sup> A teacher must consider himself bound by ethical principles due to his influence on learners' attitudes and thoughts as well as his duty to meet students' needs.<sup>15,16</sup> Observing the principles of educational ethics at

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the university grants teaching- learning process, increases the effectiveness of teaching<sup>12,17,18</sup> and increases the commitment of instructors to be accountable to the needs of students.<sup>19</sup> Increasing and promoting mental health, increasing knowledge and personal growth at university, increasing productivity and reducing costs,<sup>20</sup> will improve the ethical situation of students throughout the university environment.<sup>21</sup> Transparency and provision of the correct definitions of the principles governing the pursuit of the different jobs is one of the imperceptible factors that contributes to growth and development within developed countries.<sup>20</sup> For this reason, universities around the world have developed a set of ethical codes that everyone follows to help improve the quality of educational activities.<sup>21</sup>

Educational ethics as a topic has been presented to faculty members over the past several years, the most important of which will be mentioned in this paper. Researchers at Johns Hopkins University<sup>5</sup> presented a general and common set of rooted ethics in educational standards supported by faculty members that are: respect for students as human, treating students equally in counseling and scoring, academic adherence to professional responsibilities in course planning, free thinking towards different attitudes in choosing course subjects, objectivity and impartiality in teaching against indoctrination of the courses content and keeping students' scores confidential.

Banner and Cannon<sup>22</sup> analyzed the qualities of the successful teachers: learning, authority, ethics, order, creativity, affection, patience, morale and vitality, highest part of which is ethical nature.

In a study entitled "Ethical Principles in University Teaching", Murray et al<sup>23</sup> posited nine principles of the ethics within the university including content efficiency; pedagogical efficiency; appropriate handling of sensitive topics; avoidance of dual-role relationships with students; maintenance of confidentiality; respect for colleagues and respect for the educational institution. Van Manen<sup>24</sup> held that teachers should have a set of standards that guide them to a good result. He stated that there are traits and characteristics that are the basis both for teachers and for an educational method. The characteristics include a true understanding of the teacher's profession, love and affection for children, and a deep understanding of responsibility, ethical sensitivity, self-critical intellectuality, thoughtful puberty, thoughtful sensitivity toward the learner's mentality, interpretive intelligence, pedagogical perception of the learner's needs, the sustainability in dealing with young people, great passion for learning the mystery of the world, an ethical way to seek something, a clear understanding of the world, hope when faced with existing crises and ultimately to be witty and joyful.

The National Association of State Directions of Teachers Education and Certification<sup>25</sup> (NASDTEC) developed a model code of the ethics for education (MCEE) in which teachers' ethics are categorized into five principles: responsibility to the profession (recognition

of the responsibilities as an ethical profession, efforts to address ethical issues and their elimination, promotion of professionalism both inside and outside the school), responsibility for professional competence (commitment to professional standards, responsible use of information, materials, research and evaluation in favor of students), responsibility to students (respect for students' rights and dignity, showing ethics of care, understanding the educational, scientific, personal and social needs of students, as well as students' values, beliefs and cultural backgrounds, respect for each student's unique value, creating and maintaining an environment that enhances the emotional, intellectual, physical and sexual safety of all students), interacting with students in a right way and appropriate to development), responsibility to parents, colleagues, the community and employers (having effective and appropriate relationships with parents, colleagues, the community and other stakeholders, along with the problem of having multiple relationships) and responsible and ethical use of technology (knowing how to use technology responsibly, ensuring the safety and welfare of students when using technology, maintaining confidentiality in using technology and appropriate use of technology in educational settings).

The National Education Association (NEA)<sup>26</sup> has classified codes of ethics in the education into two principles of commitment to students and commitment to the profession and the principles related to commitment to students include independent action in the pursuit of learning, access to varying points of view, subject matter relevant to the student's progress. To protect the student from conditions harmful to learning or to health and safety, justice and non-discrimination among students, encouraging students to participate in programs, not use professional relationships with students for private advantage, confidentiality and ethical principles related to professional commitment, recognition of professional responsibility, assistance for entry into a profession for a person known to be qualified and not knowingly make a false statement.

Despite the importance of professionalism at the global level, researches and studies conducted within this country indicate weak performance of professionalism in organizations and universities.<sup>12,21,27</sup> Even in some organizations unethical behavior become part of the working procedure knowingly or not.<sup>28</sup> A review of literature showed that the diversity of research on professionalism means many researchers are faced with many dimensions, but the viewpoints of faculty members on the factors that influencing teaching professionalism have rarely been studied and described. In Mahrabi and Arianpour's study<sup>29</sup> "the requirements and strategies in the educational system", respect for students as human, treating students equally in counseling and scoring, and confidentiality of students' scores were mentioned as some of the university principles and concluded that all

educational and research processes are ethical in nature and considering ethical requirements is a necessity.

Shahali et al<sup>30</sup> in another field study “Designing a Model for the Implementation of Professionalism in Iranian organizations”, have divided the factors influencing the implementation of professionalism into individual, organizational and environmental dimensions.

Mesbahi et al<sup>31</sup> identified the factors of individual, managerial, organizational, professional, cross-organizational ethics in their study “the systemic model of professionalism in higher education from the staff’s perspective”.

Mirtaheri et al<sup>28</sup> identified eight components of professionalism: charity, honesty and justice in the organizational management and leadership area, organizational culture and organizational structure in the area of individual responsibility, and in the environmental area, it was also found that among the components in the present situation, the highest mean was for the honesty component and in the optimal situation, the highest mean was for responsibility.

In this study, the researchers studied the dimensions of non-clinical educational professionalism and its effective factors based on grounded theory and a comprehensive study in the form of a paradigm model which is based on the causal, contextual and interaction conditions, strategies and outcomes

### Materials and Methods

Grounded theory was used in this study, which is a qualitative research method with an exploratory approach.<sup>32</sup> In this way, the researcher provides a general explanation of the process, action or interaction of those results from the viewpoints of a large number of participants.<sup>33</sup> Given that education is, in fact, the interaction between professors, students and other elements that constitute the educational system,<sup>34</sup> the use of grounded theory is necessary for a comprehensive study.

### Participants in the study

The participants of this study were 16 faculty members at the Tabriz University of Medical Sciences in the 2018-2019 academic year; 18 interviews were conducted. This study started with purposeful sampling and continued until data saturation was reached based on theoretical sampling. The inclusion criteria included at least 7 years of university services experience, at least 10 scientific and research papers, at least 3 research projects and supervising at least 10 doctoral theses. In theoretical sampling, the analyst collects, encodes and analyzes the data simultaneously and decides what data to be collected and where to find the data in order to improve the theory until its emergence<sup>32,35</sup> and data collection continues until saturation is reached.<sup>36</sup> In terms of sex, 9 faculty members were female and 7 were male. In terms of academic rank, 5 were assistant professors, 5 were associate professors and

6 were full professors.

### Data collection

Semi-structured interviews were used to collect data. The interview guide included several open-ended and general questions that were tailored to the objectives of the research. Examples of interview questions include:

- In your opinion, what are the operational aspects of teaching ethics for faculty members at the medical sciences university?
- What factors increase the educational ethics of faculty members in the medical university?
- How can the health system and the higher education system play a role in reducing or increasing educational ethics of faculty members in the medical sciences university?

Prior to the interview, primary coordination and agreement was made with the participants and the interviews lasted from 40 to 80 minutes. The number of interview sessions was 18, and 2 of the participants were interviewed for the second time.

### Data analysis

Analysis was performed simultaneously using continuous comparative analysis process according to Strauss and Corbin in three stages of open, axial and selective coding.<sup>33</sup> In open coding, after transcribing recorded interviews, content analysis was used to study interviews line by line; basic concepts were extracted and recorded as codes. Codes that were conceptually similar were clustered to form the primary categories. In axial coding, codes and initial categories created in open coding were compared, in addition to integrating similar codes, the categories related to each other were placed on a common axis.<sup>31,32</sup> In fact, at this stage, the paradigm dimensions of coding are formed. Then selective coding was performed and finally the theory (qualitative research model) was obtained.

### Validation

Trustworthiness criteria were used to validate the research due to the fact the validity of data and findings are the important part of the research processing qualitative research.<sup>33</sup> Trustworthiness is a simple measure in which qualitative research can be relied upon and its results considered trustworthy. Guba and Lincoln consider trustworthiness as four criteria of credibility, transferability, dependability, and confirm ability.<sup>37</sup> Hence, in order to ensure credibility that was similar to the internal validity of quantitative research,<sup>38</sup> data verification was done by participants and 4 non-contributing experts with continuous involvement with data and open, axial and selective coding. In the field of transferability, which is, in principle, the generalization of results in a quantitative context,<sup>38</sup> the findings were reviewed by two non-participant experts who confirmed the findings by correcting irrelevant dispersions. To determine

dependability, which is consistent with reliability in quantitative research,<sup>38</sup> two researchers separately encoded the interviews; a great deal of agreement was found among the extracted results. For confirmability, similar to content validity in quantitative research,<sup>38</sup> reviewing content and processes was done by designing several questions for understanding a subject, analyzing negative cases and re-assessing the interviews.

**Results**

This section analyzes the data collected from the interviews, which was analyzed in three stages of open, axial, and selective coding to present the final research model.

**Data analysis (coding)**

**A. Open coding**

Open Coding is an analytical process of naming and classifying concepts and discovering their characteristics and dimensions in the data done through the flip-flap technique by which the researcher examines and analyzes concepts from all different angles to obtain the various viewpoints in terms of the importance and place of concepts.<sup>35</sup>

In the present study, the recorded interviews were transcribed, studied line by line, conceptualized and categorized using content analysis during which concepts were identified based on similarity, conceptual relation and common characteristics between open codes.

**B. Axial coding**

Axial coding is a set of procedures that relates the data by making connection between themes and subthemes. Axial coding also refers to the process of shaping main and sub categories, which is done using a paradigm to show the relationship among the causal conditions, core theme, contextual conditions, interventional conditions, and strategies.<sup>32</sup> which is presented in the following tables.

The core theme is the incident or the main event which includes a series of actions/reactions for controlling or managing it.<sup>35</sup> Core theme in this study is the non-clinical educational professionalism of faculty members whose

characteristics are presented in Table 1.

Based on the data in Table 1, interviewees noted various criteria regarding their adherence to professionalism and their differences are noteworthy. For example, interviewee (2) referred to slacking off in teaching as one of the main failure of teaching at a university that may be overlooked, and stated that “teachers in the class should stop slacking off. Many of the teachers are not interested in teaching and showing the way to the students and instead look at the students as a rival. This is an unethical example.”

One component highlighted in the field of education, and mentioned by most of the interviewees, is respect and attention in all aspects and one of the interviewees (6) stated: “respect is not merely being friendly, respect for beliefs, behaviors and cultures, respect for the rights of others, and mutual respect of other dimensions that must be taught to students.”

**Causal conditions**

The causal conditions are the ones which are the main causes of the studied phenomenon.<sup>35</sup> The results of the content analysis of interviewees’ answers to the questions such as factors affecting educational professionalism among faculty members indicate two main categories regarding the causative conditions for the creation of the phenomenon studied, which are open and axial coding described in Table 2.

One of the factors that causes faculty members not to adhere to principles of educational ethics is their lack of knowledge about these principles. An interviewee (5) states: “The faculty members must already know the ethics of teaching, the rules and the educational rules. Ninety percent of the non-observance of the principles is due to unawareness.”

One factor that many faculty members consider seriously damaging to the higher education system, and especially to professionalism in education, is tendency to prioritize research over education in the faculty member’s assessment. One interviewee (11) said: “I think the system needs to be reformed and education should be prioritized over research. The fact is that today research is prioritized, while in my opinion the first step is education, the second

**Table 1.** Codes and themes related to the core theme

Selective coding	Axial coding (themes)	Open coding (basic concepts)
Core theme Educational Ethics in Non-clinical Education)	Individual characteristics	Conscientious, helping your excellence and others, responsibility, honesty, confidentiality, commitment to knowledge, fair distribution of resources, open to criticism
	Social interactions	Mutual respect, altruism, justice, educational justice
	Teaching skills	Avoid imposing a high volume of lessons, avoid slacking off in the classroom, enough time to teach students in class, teaching students how to learn, guiding students instead of transferring information, stimulating student thinking, attention to the cultural diversity of students, getting students to participate in the class, behavior related to the class and educational objectives, creating a sense of trust, explaining the rules of the class, explaining the expectations from the student, mastering the principles of education and evaluation
	Professional characteristics	Academic mastery and up-to-date content presented in accordance with the knowledge of the day, a pattern of desirability for students

**Table 2.** Codes and themes related to the causal conditions

Selective coding	Axial coding (themes)	Open coding (concepts)
	Individual factors	Attitude, knowledge, experience
Causal conditions	Organizational factors	Awareness of law implementation, professionalism of managers, organizational values, monitoring of activities, level and method of feedback, faculty members assessment method, education, recruitment and promotion system of faculty members, priority of education to research, the level of ethical sensitivity, updating of curriculum subjects

is also education, the third is education in research and then other researches”.

Another interviewee (14) considers quality and professionalism important in recruiting and promoting faculty members and states: “The methods of recruiting and promoting faculty members should be changed and attention should be paid to the quality of work and professionalism in recruiting faculty members rather than paying attention to the quantity and number of papers.”

*Contextual conditions*

It represents a series of special characteristics that refer to a phenomenon; in other words, the location of events or events associated with a phenomenon over a dimension in which action is taken to control, manage, and respond to phenomena.<sup>35</sup> The contextual conditions in this study are two components of the social environment and university environment. The conditions are described in Table 3.

Most interviewees believed that socioeconomic factors strongly influenced the non-observance of professionalism principles, for example, interviewee (2) pointed out: “The most important factors in all countries or continents are the social and economic factors that may lead to poverty, if the faculty members’ needs are not met, they will be tempted to work outside the university despite being a full time and when the student realizes that they don’t follow the rules, he does too.”

One interviewee (16) said: “There are ethical problems, lack of accountability, non-observance of ethical issues, indifference, lack of accountability, deception in our society. If these are resolved, the students who enter the system, will prioritize moral issues to scientific/educational because they notice that they are in responsible and accountable society and the educational system should address these issues and priorities.”

Another interviewee (3) had a different perspective, stating: “The educational ethics of faculty members should not be influenced by external factors. If you feel

greatly responsible and have ethical commitment to the profession and student as well as the sense of responsibility to the student and university, the economic and social factors will not affect you.”

Some interviewees emphasize the necessity of the value of ethics in society as a culture of society, and interviewee (9) stated: “if ethics are considered as value in society, it can actually lead to ethical behaviors by the faculty members. Culturally, if one who teaches is in a good position, he will feel that he is a valuable person according to the dominant culture of society. Otherwise, the person will do the work on a regular basis and try to finish it as soon as possible.” Another interviewee said: “One important point, in both social and cultural aspects, is that how the abusive or the offensive are treated?, which group is the center of attention in the society?” If the community encourages those who behave ethically, and punishes those who misbehave, or if society acts conversely, it affects the society and the university because people are affected by the environment and community.

An interviewee (8) says, “If my colleague is unethical at work, and is not disciplined instead of getting more financial and spiritual rewards than I do, I will unconsciously lose my motivation to observe the principles.”

*Interventional conditions*

Interventional conditions are general and extensive affecting action and interaction alike.<sup>35</sup> Interventional conditions of the educational professionalism based on the present research are shown in Table 4.

One of the most important factors that can influence professionalism in teaching is student characteristics and, of these, the most important factor is students’ lack of motivation.

One interviewee (11) said: “If a student feels that he does not have a good future in the labor market and society, it naturally leads to lack of motivation, which makes her/him not only be insensitive to the professor’s unethical or

**Table 3.** Codes and themes related to the context or contextual variables

Selective coding	Axial coding (themes)	Open coding (concepts)
Context (contextual variables)	Social environment	Community culture, community economics, collaboration of the medical organization, professional associations, public and general education, faculty members job opportunities outside the university
	University indoor environment	The ethics in the work environment of the faculty members (managers of different classes, etc.), students’ cultural diversity, the management of clinical services with human health (high sensitivity), the important position of the health system, behavioral modeling of professors

**Table 4.** Codes and themes related to intervening conditions

Selective coding	Axial coding (themes)	Open coding (concepts)
Intervening factors	Student features	Student's lack of motivation, student's insensitivity to bad behavior, differences in students' knowledge and attitudes and skills
	Resources (financial, material, human)	Some faculty members are not up-to-date, the highest number of faculty members allocate time to practice privately or do research, low ratio of professors to students, depreciation of educational-therapeutic equipment

unprofessional behavior, but it also appeals her/him. For example, the professor failure to come to class, to cover all the sessions, to evaluate the student or to respect justice.”

Another faculty member (13) considered the low ratio of teacher to student as an important factor in teaching professionalism and states: “The high number of students renders the faculty members failure to communicate directly with the students and to evaluate and teach accurately.”

**Strategies**

Strategies in grounded theory refer to providing solutions for dealing with the phenomenon under study whose purpose is to manage the study phenomenon, to deal with it and to show a sensitivity to it .<sup>35</sup> In this study, two fundamental strategies have been suggested for achieving the desired status in terms of faculty members’ educational professionalism, outlined in Table 5.

Long-term strategies include professional commitment of and by top managers and authorities and appropriate policy making. The greater the system’s commitment to ethical performance is, the more favorably this approach is seen in members.

One interviewee (8) said: “If senior management has a professional commitment, policy making and planning will improve ethics and behavior, even activities will be in that direction, and will lead to improved organizational professionalism or organizational ethics.”

Interviewees emphasized the change in faculty members’ assessment method. For example, interviewee (1) says: “The current problem is that faculty members are assessed by the authorities, students, and colleagues in terms of educational ethics and in the assessment, the highest score is allocated for the students. When a professor introduces a weak reference book and teaches at a baseline, he gets a better score in student assessment. In contrast, if a professor introduces the ministry’s reference book with multi-pages and requires more energy to teach,

he will be scored less.”

“One of the short-term strategies is to have a systematic look at the factors affecting the educational professionalism”, according to the interviewees (6) who asked why should we be traumatized? What is wrong with the system? One of the interviewees (11) said: “We shouldn’t try to look for the people who do wrong thing and discipline them, but we have to find out why they do wrong, whether it is their fault or the system’s, therefore, it’s a very good idea to put a checklist for good and poor professionalism at people’s disposal.”

Short-term strategies can refer to continuous monitoring of activities, stated by one interviewee (4) states: “By establishing a disciplinary committee, there should be continuous monitoring and evaluation of the performance and the faculty members’ quality of teaching.”

**Consequences**

Consequences are the result of actions and reactions to the conditions that exist regarding the phenomenon.<sup>35</sup> The outcomes of educational professionalism promotion include three categories: improvement of educational quality and positive organizational and social outcomes as presented in Table 6.

Respecting ethical principles by the faculty members leads to training the student with high professional conscientiousness, appropriate ethics and literacy, and provides the future society with ethical, educated and conscientious specialists and in terms of educational system, it creates a dynamic, up-to-date and qualified system at international level.

**C. Selective coding**

Selective coding indicates that the main variable or the underlying process lies in the data, its quality, the stages of its occurrence and its consequences.<sup>32</sup> Based on the obtained relationships, the concepts derived from open and axial coding were linked to each other in the selective

**Table 5.** Codes and themes related to strategies

Selective coding	Axial coding (themes)	Open coding (concepts)
Strategies	Long term	Institutionalization of ethics at university, strategic planning for gradual change, proper policy making, senior management commitment, attention to values in the organization, change in faculty members assessment, revising the system of recruiting and promoting of faculty members, prioritizing education to research and treatment, creating ethical sensitivity, up-to-date syllabus
	Short term	Continuous monitoring of activities, continuous feedback, counseling and training, more attention to implementing existing laws, systemic error check, explanation of the desirable behaviors, paying more attention to rewarding system

**Table 6.** Codes and themes related to consequences

Selective Coding	Axial Coding (themes)	Open coding (concepts)
Consequences	Educational quality improvement	Student motivation enhancement, educational system's growth and dynamism, increasing student learning, student trust on the educational system, improving established assessment of students
	Social consequences	Training ethical-centered students, strengthening ethical symbols in society, society's trust on the medical education system, society's trust on the health system
	Organizational consequences	Decreasing complaints, productivity, improving the quality of other services (other than education), patient satisfaction with the health system, reducing conflicts among colleagues, reducing conflict between students and faculty members

coding stage and is reflected in a model. Figure 1 reflects the educational professionalism based on the systematic design of grounded theory.

**Discussion and Conclusion**

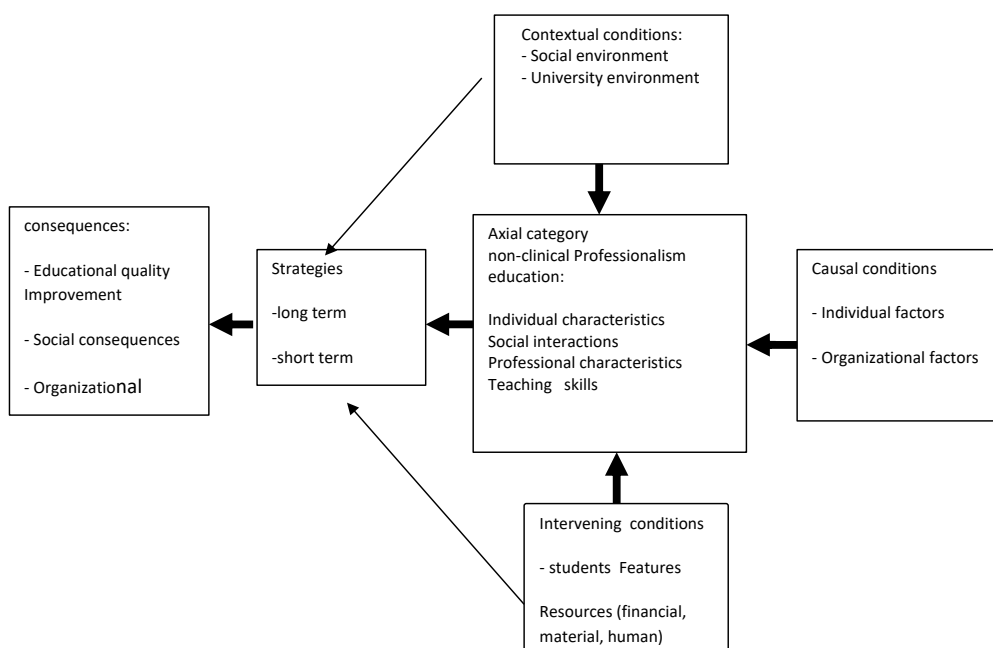
Previous studies have shown the impact of educational ethics and effective teaching, in addition to personal and organizational factors,<sup>28,31,39,40</sup> the educational environment<sup>41,42</sup> and educational efficiency<sup>10</sup> the classroom<sup>43</sup> and social environment.<sup>44</sup> Researchers believe that professionalism can be promoted by designing of programs<sup>10,45</sup> and can have positive effects, such as facilitating the education process<sup>46</sup> gaining student confidence, improving educational performance,<sup>46</sup> improving the quality of education, and increasing the motivation of students.<sup>8</sup>

As seen in the graphic model, components can be classified in four dimensions of personal, social interactions, teaching skills, and professional characteristics. The purpose of the model is to outline the developmental goals in all dimensions. Given that one of the tasks of the faculty members is transferring positive values to students

and efforts to internalize human values, it is essential that faculty members pay greater attention to aspects of their personal ethics and behavior and to understand that their ethics and behavior play an important role in the ethical education of students. Evidence suggests that faculty members have acknowledged this fact and believe that many of their behaviors are indirectly transmitted to students as a hidden curriculum.<sup>15</sup> This aspect is consistent with the result of Mirtaheri et al<sup>28</sup> and Mesbahi et al<sup>31</sup> and Shahali et al.<sup>30</sup>

The social interactions dimension which presented under the themes of mutual respect, altruism, justice, and educational justice was also mentioned in studies by Mirataheri et al,<sup>28</sup> Mesbahi et al,<sup>31</sup> the NASDTEC,<sup>25</sup> Schwimmer and Maxwell,<sup>48</sup> Murray et al<sup>23</sup> and Fallona.<sup>49</sup>

The teaching skills domain presented with subcategories of avoiding imposing a high volume of lessons, avoiding slacking off in class, providing enough time to train students in the class these are consistence with NASDTEC,<sup>28</sup> Schwimmer and Maxwell,<sup>48</sup> Murray et al<sup>23</sup> and Fallona.<sup>49</sup> A point that should be considered in the discussion of the ethics of teaching skills can be the proficiency in the



**Figure 1.** Qualitative research model: non-clinical educational ethics of faculty members.

education principles and valid evaluation of students. Most university instructors are employed without prior preparation for such education principles and often only academic and research abilities are considered. Most medical faculty members learn the process of teaching and education process through trial and error by imitating their mentors and working with students. However, being familiar with a teaching profession and proficiency in one of the effective ways to meet the needs of students can lead to promoting and improving the education quality.

The professional features examined in the sub-categories of scientific domination and the up-to-date content in accordance with the knowledge of the day, the desirability model for the students were in line with the studies by Miratahiri et al,<sup>28</sup> Mesbahi et al,<sup>31</sup> the NASDTEC,<sup>25</sup> Schwimmer and Maxwell,<sup>48</sup> Murray et al<sup>23</sup> and Fallona.<sup>49</sup>

One point that can be considered, in the discussion of the professionalism dimension, is that this category is extensively interconnected having a dimension alone does not represent the faculty members' ethics, but these dimensions are meaningful together. The professionalism and its components are a kind of requirement for successful teaching and facilitating the realization of educational goals, and everything that can provide teaching effectiveness can fit under the components of professionalism.

In this study, the factors affecting non-clinical educational professionalism are classified in four categories of causative conditions (individual and organizational factors), contextual conditions (social and university environments), interventional conditions (students' personal characteristics and financial resources), and the developed strategies (short-term and long-term) that most studies touched on the individual, organizational and environmental factors.<sup>30,31,33</sup> Personal characteristics of students and resources (financial, material and human), environmental factors of the university and strategies being adopted are new findings in this research. Considering these factors and subcategories in developing strategy plans is a way to promote professionalism in education and fulfill outcomes.

In the present study, two major strategies for creating and adhering to the educational professionalism are proposed: long-term and short-term strategies. Educational organizations use long-term strategies (strategic planning for gradual change, proper policy making, senior management commitment, paying attention to values in the organization, changing the way in which faculty members are evaluated, revising the system of recruitment and promotion of faculty members, prioritizing education over research and service, creating ethical sensitivity, updating curriculum subjects) and short-term strategies (continuous monitoring of activities, ongoing feedback, counseling and educating, paying more attention to implementing existing laws, systemic look at errors, explanation of behaviors, more attention

to the system of rewards) to establish ethical criteria in the university, which is consistent with the studies<sup>30</sup> that found by employing manpower bound to ethics and law, reforming recruitment and selection systems and teaching practical ethics by instructors who enjoy ethical traits and behaviors and can play as role models, has been introduced as a solution for the institutionalization of the ethics. Also, short-term strategies of enhancing faculty members' commitment to the principles of professionalism, paying more attention to the reward system and using discipline methods are consistent with Brockstone & Bayer's suggestions.<sup>50</sup>

The consequences of improving educational professionalism in the three aspects of educational quality improvement (enhancing student motivation, growth and dynamism of the education system, increasing student learning and increasing student trust in the educational system), positive organizational consequences (reducing complaints, increasing productivity, promoting quality of other services and patient satisfaction from the health system) and positive social consequences (training ethic-centered student, strengthening ethical symbols in society, community's trust on the medical education system and the health system). Considering the outcomes, institutionalizing the ethics at the university level deserves more attention, and promoting the causal, contextual and interventional conditions as well as strategies will help fulfill these outcomes and enhance the educational professionalism of the faculty members.

Based on research findings, the following suggestions are presented:

The proposed conceptual model of this study could be used as a basis for curriculum development during continuous medical education (on the job training) and is a practical step towards improving the quality of the educational system. In addition to scientific criteria, academic ethics should be taken into consideration in recruiting, selecting and promoting of faculty members, which will lead to the improvement in educational professionalism. Educational workshops such as academic and educational professionalism seem essential for new faculty members at universities, before starting a career as university educator. Courses on familiarity with the principles of educational ethics properly designed and implemented, continuous evaluation of their professional and educational activities, application, effort and attention to professional principles in education and learning in order to realize the goals of the curriculum should be considered and properly designed and implemented, the context and conditions in the organization should be reviewed and revised to help promote faculty members to interact and cooperate more with each other.

#### **Ethical approval**

This research is extracted from PhD thesis at Islamic Azad University, Tabriz, with ethical code of 10221212961019. In this



study, ethical considerations including: confidentiality, informed consent from participants, considerations of possible interests of the participants, etc. have been considered.

### Competing interests

The authors declare no conflict of interest.

### Authors' contributions

Data collection was done by MS and data were analyzed by MS and BT. The manuscript was written by MS and BT and manuscript edition was done by BT, ZDH and MA. Final confirmation of this article was done by BT.

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