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Exploration of the Required Clinical Competencies for Training General Practitioners to Acquire Social Accountability: A Qualitative Study

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Abstract

Background & Objective: Social accountability is an important and essential notion in medical training. Despite significant similarities, various countries have aimed to define proper competencies in medical education according to their own healthcare provision system and society needs. This study aimed to explore the required clinical competencies for training general practitioners to acquire social accountability.

Materials and Methods: This study was conducted in Tabriz University of Medical Sciences, Tabriz, Iran in 2017 using qualitative content analysis. In total, 14 professors and five general practitioners were selected via purposive sampling, using their experiences and views until reaching information saturation stage. Data were collected and analyzed using a semi-structured interview and conventional content analysis, respectively.

Results: In this research, six primary categories of "ability to provide clinical services based on a holistic approach", "cooperation with healthcare team members to promote health and prevention", "role playing in the healthcare system", "communication skills", "professional commitment and ethics", and "decision making in extreme conditions", In total, 15 subcategories were obtained.

Conclusion: According to the results of this study, medical schools must train graduates who can be active in promotion of society health and committed to professional behaviors and ethics, effective communication, teamwork, performing primary care, improving health and preventing diseases in the whole society, which can result in the development of social accountability in medical training.

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Introduction

One of the most important aspects of medical training is its results, which are expressed in the form of professional abilities. In fact, the goal of medical education is accountability to health needs of the society (1). In addition, the main criterion for social accountability of medical curriculum is the level of success of this program in training capable physicians (2). Today, international societies have focused on the fact that in addition to the ability to provide healthcare services to the society, general practitioners of the modern world must be able to act as wise decision-makers about diseases with regard to the various geographical, social and economic conditions of patients. Moreover, these individuals must be skilled in effective and efficient communication and management in health groups and the society, always using internal and dynamic motivations for lifelong learning and research (3).

In 1996, a model was presented at the Brown University of America for medical education in the future centuries, according to which the abilities expected from a successful general practitioner were, as follows: skill of effective communication, basic clinical skills, application of basic knowledge in addressing medicine, diagnosis, management and prevention of diseases, lifelong learning, self-awareness, self-care and individual development, social and public aspects of healthcare, ethical reasoning, and clinical ethics, and problem solving. It is essential to observe these nine abilities in learners at different elementary, intermediate and advanced levels during internship (4). In qualitative research of quality assurance agency, seven themes were extracted regarding the features of graduates in three fields of medicine, dentistry and veterinary medicine, including exploratory thinking, fundamental knowledge, critical thinking, improvement of professional aspects, adherence to ethical principles, teamwork and communication skills (5).

In the Can MEDS project in Canada, seven roles were defined for specialists in clinical medicine, including medical expert, communicator, collaborator, health advocate, leader, scholar and professional. Moreover, the Accreditation Council for Graduate Medical Education (ACGME) of America defined the following competencies as a framework for educational programs of physicians:

Patient care

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Medical knowledge

Practice-based learning and improvement

Interpersonal and communication skills

Professionalism

Systems-based practice (6)

In 2012, Tehran University of Medical Sciences designed a framework for required competencies of students and society according to the collaborative approach. These competencies were included in eight areas of: 1) clinical skills, 2) communication skills, 3) patient management, 4) health promotion and disease prevention, 5) personal development, 6) professionalism and medical ethics and laws, 7) decision making, reasoning and problem-solving and 8) health system and the corresponding role of physicians. It should be noted that a number of these areas are mutual in many countries (7). With regard to the mentioned areas of competency, a physician in the healthcare system of Iran must play three fundamental roles, including manager and leader, clinical services provider and health promoter (8). The main step in educational planning and designing of medical curriculum in all educational systems is defining and determining the abilities required by physicians. Specific abilities are determined to be observed in physicians of each society according to the needs of its members (9). Despite the significant similarity in the framework of competencies required for medical education in different countries, there is no agreement on a mutual set of competencies and outcomes. Various countries have aimed to define proper competencies based on the requirements of their society and healthcare system (8).

Therefore, the study aimed to describe the viewpoints of professors and general practitioners regarding the approach of social accountability. Using a qualitative research, we intended to determine the clinical competencies required by general practitioners so that necessary solutions could be recommended to medical education planners for moving toward the training of more efficient, reliable and responsive physicians.

Materials and Methods

This qualitative research was designed and implemented at Tabriz University of Medical Sciences, Tabriz, Iran in the first academic semester of 2017. Sample population included professors and general practitioners. Subjects were selected through purposive and sequential sampling, which was continued until information saturation. It should be

noted that subjects were medical education and social medicine professors (with valuable information and experience in terms of clinical sciences) and general practitioners, who had continuously practiced medicine for two years immediately after graduation. Nineteen professors and general practitioners (eight experts in medical education, six experts in social medicine and five general practitioners) were entered into the study to collect and produce rich data. The locations of interviews, which were held for 45-60 minutes, were determined based on previous arrangements with the office of participants.

Data were collected through individual semi-structured interviews. At first, the interviews were initiated with some general questions to break the ice, and the researchers tried to manage the interview in a way to be a two-way interaction. The general item of "what is your perception of the concept of social accountability curriculum in medical education?" was the first question of interviews. Following that, the main question of the interview, which was "what are the clinical competencies required by general practitioners for social accountability?" was raised. After that, some other questions were asked according to the response of participants to complete the interview and collect more valuable data. It should be pointed out that the context of interviews was recorded with the permission of participants and coded were used instead of their real names. Interviews were completely written down and compared to the recorded information. In the next stage, contexts of interviews were provided for interviewees to be corrected and confirmed. In the end, information saturation occurred after 17 interviews, and the two subsequent interviews were carried out for assurance. The process of interviews was ended due to lack of obtaining any new information. It should be noted that writing down the interviews and analyzing the data (coding and categorizing the codes) were initiated after the first interview.

Data analysis was carried out based on the conventional content analysis method and using the constant comparative analysis designed by Streubert & Carpenter. This approach is mainly used for analysis of personal data obtained from interviews (10). Data analysis was manually and accurately carried out through the following stages: contexts of interviews were completely written down; all of the words and sentences were reviewed by the researcher; concepts related to the main subject of the research and which was observed in each line or sentence,

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were determined. The main concept of meaningful sentences was extracted in the form of codes. Codes were categorized by placing the codes with mutual concepts in one class and naming each category. Categories obtained from the previous stage were classified according to the similarity of the codes. Each data was compared to all of the information using the constant comparative analysis. To this end, the previous categories were reviewed after each new interview, forming new or integrated categories of similar types. In the end, the primary categories (themes) were obtained by placing the categories next to each other in comprehensible phrases.

It should be pointed out that four criteria of reliability, verifiability, dependability, and transferability were considered to ensure the accuracy and strength of the data (10). Reliability of the data was assured through long-term engagement of the researcher in the research process, establishment of adequate communication with the participants and provision of the results of data analysis for the subjects. To ensure the verifiability of the data, the opinions of participants were used to confirm the accuracy and interpretations of codes after forming the primary codes. In this respect, codes that contradicted the views of the participants were modified. Moreover, control method was used by two professors specialized in quality research, followed by agreement on selected codes and categorization by these individuals. Purposive sampling was applied to increase the dependability of the data, while adhering to the maximum variation and using the opinions of experts in this field.

The researcher aimed to provide a more comprehensive description of research process and analysis of the data to increase the transferability of results. The extracted categories were provided for two professors, who were not among the participants of the research, to determine whether there was any similarity between research results and the personal experiences of these individuals. In the current study, the researcher adhered to the ethical considerations through providing oral and written informationabout the research totheparticipantsandobtained written informed consents from the subjects prior to the study. Inaddition,participation in the research was voluntary and the subjects were ensured of the confidentiality terms regarding their personal information. In this study, the interviews were recorded anonymously and the interview files were deleted at the end of the research.

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Results

In this study, there were 14 rofessors (nine males and five females) and five general practitioners (three males and two females). In total, 335 codes were obtained with the analysis of interviews, which decreased to 65 codes after the elimination of repetitive codes and integration of similar ones. In the end, six and 15 main categories and subcategories were obtained, respectively. In this regard, the main categories included "ability to provide clinical services based on a holistic approach", "cooperation with healthcare team to promote health and prevention", "role playing in the healthcare system", "communication skills", "professional commitment and ethics" and "decision making in extreme conditions", which are described in Table 1.

Table 1: Main categories and subcategories based on analysis of open-ended responses

Main Category	Subcategories
Ability to provide clinical services based on a holistic approach	• Clinical skills • Familiarization with general principles of patient care
Cooperation with healthcare team members to promote health and prevention	• Recognition and control of risk factors for health of individuals and society • Determining the current health status of the covered individual and population • Early diagnosis and timely treatment
Role playing in the healthcare system	• Health promoter and educator • Researcher • Management and leadership • Team making and teamwork
Communication skills	• Effective communication with patients and their companions • Relationship with colleagues
Professional commitment and ethics	• Medical ethics • Professional commitment
Decision making in extreme conditions	• Problem solving • Critical thinking skills

A) Ability to Provide Clinical Services Based on the Holistic Approach

This main category encompassed two subcategories of "clinical skills" and "familiarization with general principles of patient care".

1) Clinical Skills

Participants of the research regarded abilities in a wide range of clinical skills, especially

history taking, clinical examination, practical measures and recording of the obtained data, as the main capabilities of a general practitioner for social accountability.

Participant number four (medical education specialist): "a graduate in medicine must explain about the necessity of performing clinical procedures, as well as its complications and limitations to patients and implement these processes completely and in a standard manner."

Participant number 10 (general practitioner): "history taking is one of the most important abilities of physicians. General practitioners must have complete knowledge about this area since lack of accurate implementation of this process could be a serious threat to health of patients."

2) Familiarization with General Principles of Patient Care

Importance of having a holistic view toward patients and attention to all physical, mental, social and spiritual aspects of disease for detection, treatment and prevention of diseases were pointed out by the participants of the research. Some of the statements of the participants are presented below:

Participant number five (social medicine specialist): "our physicians must be able to consider all aspects of physical, mental and social needs of patients as a whole in diagnosis and treatment of diseases."

Participant number 12 (medical education specialist): "it is expected that necessary abilities be obtained by students of clinical medicine course in important aspects of patient care, including clinical measures, medication prescription, proper nutrition guidance, disease control and rehabilitation."

According to these results, in addition to expertise in a wide range of clinical skills, general practitioners must have a holistic view to patients in order to diagnosis diseases and determine suitable care programs to achieve the desired goals when faced with problems of specific diseases. In medicine, holistic view is interpreted as attention to all social, humanistic and health aspects to identify the hidden causes in what is known as physiological response.

B) Cooperation with Healthcare Team to Promote Health and Prevention

This main category included three subcategories of "recognition and control of risk factors for health of individuals and society", "determining the current health status of the covered individual and population" and "early diagnosis and timely treatment".

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1) Recognition and Control of Risk Factors for Health of Individuals and Society

With regard to the viewpoint of the subjects, a graduate in medicine must acquire the necessary abilities and competencies in detection and control of risk factors for health of individuals in a society as the members of healthcare teams.

Participant number 14 (social medicine specialist): "physicians trained based on the approach of social accountability must have the ability to cooperate with healthcare teams."

Participant number three (social medicine specialist): "recognition and control of risk factors for health of individuals and society, including smoking, drug abuse, high-risk behaviors, and even environmental, economic and social factors, can be regarded important components of competency of general practitioners for social accountability."

2) Determining the Current Health Status of Covered Individuals and Population

The participants of the research believed that recognition of the current health status of individuals by general practitioners plays a significant role in social accountability of health-related services.

Participant number 15 (general practitioner): "a general practitioner must be able to understand the current health status of individuals and society, which is in line with social accountability. However, honestly, I lack this ability as a general practitioner."

3) Early Diagnosis and Timely Treatment

According to the opinions of the subjects, early diagnosis and timely treatment of diseases are someee of the components of clinical competency of general practitioners in social accountability.

Participant number seven (medical education specialist): "today, timely diagnosis of clinical stages of diseases and detection of factors affecting their prognosis and proper intervention are among the essential needs of a responsive physician."

As a member of healthcare team, graduates in medicine must be able to select and apply approaches proportional to the promotion of health and prevention of diseases as an effective intervention at the level of society. Realization of this goal requires ability to evaluate health status of individuals, determine risk factors, detect the causes of diseases and diagnose the disease in a timely manner.

C) Role Playing in Health System

This main category contained the subcategories of "health promoter and

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educator", "researcher", "management and leadership" and "team making and teamwork".

1) Health Promoter and Educator

From the perspective of the subjects, one of the competencies required by physicians in the social accountability approach is the role of these individuals in educating patients. Having this role enables physicians to teach healthy lifestyles to individuals and their families. In addition, proper self-care techniques can be taught to individuals to promote their health, which leads to overall improvement of health of society and prevention of diseases.

Participant number 16 (social medication specialist): "…it is essential to have physicians who promote health in the society through education of healthy lifestyles, which leads to the improvement of health status of the society…".

Participant number 10 (general practitioner): "a physician trained based on social accountability approach definitely has the necessary abilities and competence in teaching accurate self-care methods to individuals…which leads to the promotion of disease prevention and improvement of health status of the society".

2) Researcher

According to the participants, as an effective member of healthcare teams, physicians must play an acceptable role in studies related to health using their clinical experiences.

Participant number 8 (medical education specialist): "teaching of research skills to students by medical education planners and trainers will enable these individuals to be active members of healthcare teams, using their valuable clinical experiences in performing health-related research. This is an important part of social accountability".

3) Management and Leadership

With regard to the point of view of the subjects, leadership and management are among the essential competencies of a physician for social accountability.

Participant number six (medical education specialist): "ability to comprehend management and leadership concepts is one of the necessities of a responsive physician. Planning, decision making, management and leadership are among the important indicators of competency of physicians for social accountability".

Participant number 1 (social education specialist): "…from a long time ago, management of hospitals, as well as healthcare networks and centers have been assigned to general

practitioners. Meanwhile, little attention has been paid to their ability in areas of management and leadership."

4) Team Making and Teamwork

According to the participants, the most important advantage of teamwork is the combination of skills and talents of individuals. Members of a team can defeat problems in their work when relying on the skills of each other. In addition, they can gradually learn problem-solving skills and use them whenever necessary.

Participant number 9 (medical education specialist): "…education of our physicians is mostly for accountability to individual treatment of patients, and there is a lack of proper education in areas of team making, teamwork and collaboration…our graduates lack the necessary self-confidence to be active in healthcare teams and teamwork".

Participant number 3 (social medicine specialist): "…physicians are often selected as leaders of healthcare teams. Therefore, they must definitely have the necessary skills for creating teams and teamwork to use the abilities of team members and exploit the integration of their abilities to solve medical problems and promote the health of individuals in the society…".

According to the results, medical graduates must acquire the necessary competencies in order to play an effective role in the healthcare system as a physician, researcher, educator, manager and leader of healthcare teams to promote health and prevention. In addition, general practitioners must be trained in a way that in addition to acquiring these skills, they could be able to provide beneficial services in areas of health education and protection and prevention of diseases as the first connecting point between people and healthcare system.

D) Communication Skills

The main category of communication skills encompassed two subcategories of "effective communication with patients and their companions" and "relationship with colleagues".

1) Effective Communication with Patients and Their Companions

The participants believe that physicians must show their capability in creating effective communication in all areas, including hearing, sight, speech, and writing.

Participant number 11 (medical education specialist): "…our physician must be able to listen to patients and properly sympathize with them… active listening to patients is

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completely different from just hearing the statements of patients."

Participant umber 2 (medical education specialist): "…a responsive physician must have an all-around interaction with patients; including verbal, visual, effective and friendly communication… a physician must have a proper therapeutic relationship with patients and their companions."

2) Collaboration with Colleagues

From the viewpoint of participants, an effective and good communication with colleagues to coordinate the activities of groups and interaction with other members of the healthcare team is another important component of social accountability required by competent physicians.

Participant 15 (general practitioner): "having a good communication skill enables physicians to be successful in laying the foundation for an effective communication with the members of healthcare team."

Participant number 13 (social medicine specialist):"…in general, there are various individuals in health team, including patients and specialists… therefore, a medical graduate must have the necessary abilities to cooperate and interact with other healthcare team members first as a physician and then as the manager of the team…"

According to the data, the relationship between physicians and patients is in the heart of medicine and the main axis of all clinical measures and cornerstone of medical activities. Therefore, it is essential to understand how to properly communicate with patients and their companions and other healthcare colleagues. In addition to creation of satisfaction in patients, application of communication skills is associated with positive outcomes in the process of diagnosis, treatment and health of patients.

E) Professional Commitment and Ethics

This main category contained two subcategories of "medical ethics" and "professional commitment".

1) Medical Ethics

From the point of view of participants, attention to medical ethics and performance according to ethical principles will be associated with improved social accountability of physicians.

Participant number 1 (social medicine specialist): "…acquisition of knowledge and medical skill must be accompanied by a positive attitude toward the needs of society and improvement of health of the majority of people".

Participant number 5 (social medicine specialist): "…adhering to the principles of

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medical professional and ethics by the physicians of a society increases the satisfaction of patients, leading to improved social responsive of physicians".

2) Professional Commitment

According to the subjects, trust of patients in physicians is one of the necessities of success in diagnosis, treatment and provision of preventive services by these individuals. It seems that what makes the profession of medicine holy and valuable is the trust of the society members of these people.

Participant number 17 (general practitioner): "a responsive physician must prioritize the supply of health for society members, preferring it to his personal interests and requirements".

Participant number 6 (medical education specialist): "if I have an acceptable position in the society as a physician, it is mainly because of trust of people in me. Therefore, I must have some valuable behaviors and attitudes, such as respect, conscientiousness, altruism, empathy, integrity, honesty and justice, in my practice."

According to the data, social accountability is the mission of profession of medicine, and adherence of medical graduates to professional commitment and ethics is the most important strategy to achieve this goal. Special attention must be paid to the development and strengthening of values, attitudes, moral norms, social skills and other features that form human behaviors of a committed physician in training of these individuals, so that medical graduates could strive to improve the society health by performing their professional duties and adhering to specific principles required by their profession.

F) Decision Making in Extreme Conditions

This category included the subcategories of "problem solving" and "critical thinking skills".

1) Problem-solving Skill

In this research, the subjects believed that problem solving is one of the most important thinking processes that help physicians effectively deal with problems and challenges. In this regard, some of the quotes of the participants are presented below:

Participant number 12 (medical education specialist): "the health system of our country faces challenges in meeting the expectations of the community to promote their health. Therefore, the necessity of training efficient, thoughtful and creative graduates with the power of decision making and problem solving according to national, regional, and

international standards is more crucial than ever.

2) Critical-thinking skill

From the point of view of the subjects, critical thinking and decision making about problems of patients are necessary for providing proper care and treatment. This skill enables physicians to make the correct decision in difficult situations.

Participant number 9 (medical education specialist): "the gap between education and clinical practice in the profession of medicine is that the ability of critical thinking does not change during the education stages of students. In addition to solvable problems, medical students will face problems, for which they have no proper response. Therefore, accurate perception of critical thinking can help these individuals improve their problem-solving skill."

Participant number 7 (medical education specialist): "critical thinking is one of the necessities of a successful responsive physician in care of patients and management of unpredictable issues and problems… these individuals must have a clear and accurate knowledge about treatment needs of all patients and know that each patient is unique."

The rapid growth of medical knowledge in the field of patient care requires physicians to deal with these complex changes through higher levels of thinking and argumentation. Given the fact that the main clinical decision maker in the medical team is the physician, medical students must acquire the problem-solving and critical-thinking skills to successfully evaluate abundant information that they will face in the future.

Discussion

The present research aimed to describe the clinical competencies required by general physicians to realize social accountability. Analysis of results yielded six main categories and 15 subcategories. In this regard, the main categories, which were recognized as some of the medical clinical competencies based on the viewpoints of professors and general practitioners, were "ability to provide clinical services according to a holistic approach", "cooperation with healthcare teams to promote health and prevention", "role playing in the healthcare system", "communication skills", "professional commitment and ethics", and "decision making in extreme conditions". According to the results, these categories are required to move toward social

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accountability. In addition, our findings are in line with the results obtained by other studies related to social accountability (4-8).

The first main category of this research was "ability to provide clinical services according to a holistic approach", which included the subcategories of "clinical skills" and "familiarization with general principles of patient care". In this regard, Emadzadeh et al. stated that content related to clinical skills should be taught through integration (horizontal and vertical), as well as teaching in healthcare centers, clinics, and hospitals so that students could express their health needs while being familiarized with the society condition (11). On the other hand, Managheb and Mosalanejhad marked that inefficient ability of family physicians and interns regarding outpatient clinical services might be due to the focus of clinical education on hospital-orientated trainings (1).

Souli and Dasilva asserted that holism in medicine is attention to all social, humanistic and health aspects so that meanings and causes hidden in what is known as physiologic response are recognized (12). Today, the communication model has changed from emphasis on physician and patient to a new model that is patient- and human-oriented (13). From the point of view of Levinson et al., it is essential that healthcare providers have a better perception of individual needs, views and values of patients and establish a trustworthy interaction with patients to provide this type of care (14). Using the viewpoint of Stewart, Haydet recognized patient-oriented care as accepting patients as individuals with specific needs and medical history, regarding this issue a crucial aspect of provision of effective clinical cares (15). Therefore, the new holistic approach to medicine demands different types of training of physicians. In addition, novel training methods and goals must be defined to work in line with social accountability.

"Collaboration with the healthcare team to promote health and prevention" was another main component of clinical competency of physicians for social accountability. The subcategories of this category included "recognition and control of risk factors for health of individuals and society", "determining the current health status of the covered individuals" and "early diagnosis and timely treatment of diseases". In this regard, Damari et al. demonstrated that prioritization of social health issue for healthcare systems is mainly due to "social accountability". Other factors involved in this area include risk (social harms) or support (emergence of

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healthy social behaviors), which affects the increase or decrease of number of diseases (16). Bayati et al. marked that in the family physician program, health orientation is the basis of activities of healthcare teams, and the main goal of the program is maintenance and improvement of level of health of society by providing health services defined for covered individuals, family, and society regardless of differences in age, gender, social features and disease risks (17). In the research by Rezaeian about social accountability of medical schools, it was emphasized that various educational opportunities must be provided for medical students, where not only the clinical problems and diseases of society members are recognized and trained, but also the social damages and problems are assessed. Students must have a close relationship with their families and strive to recognize their problems in order to be eliminated (18).

In the present study, "role playing in the health system" was introduced as another main category, which included the subcategories of "educator and promoter", "researcher", "management and leadership", and "team making and teamwork". Given the fact that cultural poverty and lack of knowledge can lead to many complicated and costly problems, one of the solutions is increasing the knowledge of individuals through proper education of life, which is essential. Results obtained by Shahbazi et al. on the effectiveness of education of healthy lifestyle for the elderly indicated that education of old people about various topics, such as sport, nutrition, and social activities, can prevent their disabilities and improve the health status of the future elderly in the country (19).

On the other hand, Baradaran et al. marked that training management skills must be carried out to change the attitude of students with an applicable approach while avoiding mere theoretical contents. In addition, management education must be added to internship courses, when students have management, communication and leadership responsibilities in hospital wards and can apply their learnings (20). Results obtained from various studies have demonstrated that teaching the skill of leadership to students in universities is accompanied with low costs. Otherwise, teaching of these skills in work environment could be associated with extremely high costs (21).

Another main categories presented in the current study was "communication skills" with two subcategories of "effective communication with patients and their

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companions" and "communication with colleagues". In a research related to the college of surgeon of America, the skill of communication was recognized as the most important skill required by physicians (22). In another research in Canada, communication with other physicians and the skill of listening were introduced as the main skills of physicians (23). In general, studies show that establishment of a proper relationship between physician and patient is the key element for patient and even physician satisfaction. In addition, this factor affects the attraction of cooperation of patients to follow up treatment instructions and participation in accurate diagnosis of diseases and effective treatment (24).

Results obtained by Ghazanfari et al. were indicative of inadequate education of proper communication with colleagues, active participation in healthcare teams and leadership of the healthcare team among the communication skills expressed by medical graduates (25). Jalalvandi et al. also marked that effective communication with patients was associated with increased adherence to treatment, improved health outcome of patients, increased satisfaction of patients and physicians, reduced duration of hospital stay, decreased application of analgesics, increased perception and learning of patients, elimination of symptoms, alleviated costs of treatment, increased quality of life, decreased medical and treatment errors and reduced complaints against physicians (26). Another main category was "professional commitment and ethics", which contained two subcategories of "medical ethics" and "professional commitment". According to the results obtained by Nekoozad et al., ethics play a pivotal role in training physicians. In addition to considering international laws and standards, ethical teachings must be designed based on the culture of each society. In the mentioned study, it was concluded that educational, research and service-providing activities of medical schools must be presented inside the society based on needs of the society and ethical principles (27). Some of the experts regard medical education as an ethical type of training, where physicians learn about professional ethics from experienced physicians (2). According to the domestic medicine board of America, professionalism is institutionalization of a set of points of view, values and behaviors in physicians that leads to permanent preference of interests of patients over personal interests. In general, professionalism in medicine has two dimensions, including virtues and values

of professionalism and responsibilities and necessities of professionalism (28).

The last main category was "decision making in extreme conditions" with subcategories of "problem solving skill" and "critical thinking skill". It is essential to have the problem-solving and decision-making skills in order to recognize the problems of patients and provide a suitable and timely treatment. According to Simpson and Courtney, critical thinking enables physicians to make correct decisions about treatment process so that valuable services could be provided for patients (29). Darban et al. also emphasized the necessity of critical-thinking skill for medical science fields. From the point of view of these scholars, the issue of individual knowledge gained by people is of less importance in the modern world, where we are faced with excessive amount of information. This is mainly due to the fact that it is more important for individuals to acquire skills that help them in understanding new information and evaluating abundant data on a topic while performing thinking activities. Therefore, these skills must be regarded in clinical educations and all educational courses (30).

One of the major drawbacks of the research was limiting the research population to the professors of Tabriz University of Medical Sciences. Therefore, it is suggested that a broader statistical population be selected from medical science universities of the country to receive the opinions of professors of this field. In addition, it is suggested that the current condition of medical education be evaluated in terms of level of attention to clinical competency required by general physicians in line with social accountability.

Conclusion

Suitable policy making and planning for training physicians, who response to needs of the society, seems to be an essential task. Therefore, some components must be regarded to determine the clinical competencies required by general practitioners, including the ability to provide clinical services based on a holistic approach, cooperation with healthcare team to promote health and prevention, role-playing in healthcare system, communication skills, professional commitment and ethics, and decision making in extreme conditions. Each of the mentioned components contains several abilities as subcategories, which are crucial for proper social accountability. Therefore, it is suggested that the curriculum of clinical course of general medicine be reviewed and

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revised by medical education planners and policy makers to develop social accountability in medical education. By doing so, a proper condition can be provided for training committed and successful students.

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