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The Outcomes of Faculty Development Based on Evolution and Ennovation Program of Medical Education (Qualitative Research)

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Abstract

Aim: The comprehensive evaluation program of the health system in higher education is a strategic plan in line with the goals of health reform program. The planning levels are based on 12 general policies. As professors of medical universities have an important role in public health promotion, this study aimed to identify the outcomes of faculty development at medical universities in the northern parts of Iran based on the evolution and innovation program of medical education.

Methods: This qualitative research was conducted using Grounded Theory Approach during 2015-2016. The research population consisted of 22 faculty members of medical universities in the Northern part of Iran. Sampling was performed by a purposive sampling method for those who had responsibilities at university or college.

Findings: The obtained results suggested two main themes: the internal university outcomes (i.e. promotion of education quality at universities), and external university outcomes (i.e. public health promotion).

Conclusion: It is suggested that education policy makers apply a more accurate and systematic plan in order to achieve development and growth of their faculty members; so, the effectiveness and efficiency of faculty members, and consequently, higher education will be promoted.

Keywords: Innovation program, Faculty development, Medical education, Outcome

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Introduction

Higher education in the medical field is an important area, which has a very broad impact on a wide range of other institutions like economic, social, cultural and political sectors. The quality of universities and higher education centers depends on the dynamics of the faculty members. Faculty members in medical education have an important role in health promotion because they not only have the responsibility of teaching future doctors and paramedics, but also are responsible for the health of patients as doctors [1]. Benor believes that "the university or college is, in fact, made up of faculty members, and knowledge development of faculty members means higher university quality [2]. On the other hand, since the university education in any field has always been so important to nations and people because of its functionality in human society, the status of higher education is considered as one of the most important factors affecting their growth and development. So, the nature and quality of a higher education institution depend on the quality of the faculty members. It is almost impossible for a higher education institution to provide high quality education in the absence of faculty members with knowledge, ability, professional competence, commitment and motivation [2]. Hence, in recent years, the development of faculty members has become an important issue in higher education.

Accordingly, the health system is known as the trustee of education and training of human resources and bears a heavy responsibility. Therefore, it is necessary to draw a specific plan due to the significant expansion of medical universities and institutions of higher education in the country and for the infrastructures to improve the quantity and quality of higher education. Medical education experts across the country have designed and modified a development and innovation program in medical education based on higher education in health domain. This program considers issues such as responsive education in the health system, equity in health higher education, development of new knowledge, professional ethics and promotion of medical education in the higher education system in the health domain [3].

It is obvious that the specific purpose of Ministry of Health and Medical Education is to train and nurture human resources in the health system in line with the qualitative and quantitative improvement of medical education, which is the main element of the mission of universities [4]. Higher quality of medical education will result in higher quality of health care services and healthier society; the role of faculty members is much highlighted in all these issues.

The main objective of this study is to identify

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the internal and external outcomes of the development of faculty members of medical universities in the northern parts of Iran based on the evolution and innovation program in medical education using Grounded Theory (GT) approach from the view of faculty members.

It is to be noted that the internal outcomes are behavioral changes in faculty members as well as students as a result of implementing experience acquired through the developmental activities. External outcomes are indirect outcomes resulted from the developmental activities of faculty members, including those that cause changes in the behavior of individuals and move in line with the health needs of the community and the society.

Methods

This qualitative study was conducted using GT approach during 2015-2016. The research population consisted of 22 faculty members of medical universities in the northern parts of Iran. The samples were selected from those members who participated in the seminars and workshops on the evolution and innovation in medical education and studied the book of "Change and Innovation in Medical Education" published by Ministry of Health and Medical Education; the samples were informed about the program and willingness to participate in the study. Their characteristics are listed in Table 1. Purposive sampling was done on those who were responsible in the departments of basic and clinical sciences (Table 1). Data analysis from each interview was a lead for the next sample selection, so that the data obtained from the first four interviews made the researchers to conduct more interviews with a number of other faculty members. Then to complete the forming theory and saturation, some other faculty members were selected by theoretical sampling method and interviewed.

Table 1: Characteristics of the interviewed participants

No	Field of study	Academic degree	Educational group
1	Virology	Associate Professor	Basic Sciences
2	Histology	Assistant Professor	Basic Sciences
3	Anesthesiology	Associate Professor	Clinical Sciences
4	Dentistry	Associate Professor	Clinical Sciences
5	Microbiology	Assistant Professor	Basic Sciences
6	Physiology	Associate Professor	Clinical Sciences
7	Thoracic surgery	Associate Professor	Clinical Sciences
8	Dental (oral and maxillofacial diseases)	Associate Professor	Clinical Sciences
9	Orthopedics	Professor	Clinical Sciences
10	Anesthesiology	Associate Professor	Clinical Sciences
11	ENT	Assistant Professor	Clinical Sciences
12	Heart surgery	Associate Professor	Clinical Sciences

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No	Field of study	Academic degree	Educational group
13	Urology	Associate Professor	Clinical Sciences
14	Infectious diseases	Professor	Clinical Sciences
15	Pediatrics	Professor	Clinical Sciences
16	Oncology	Associate Professor	Basic Sciences
17	Social Medicine	Associate Professor	Clinical Sciences
18	Nutrition	Associate Professor	Basic Sciences
19	Pharmacology	Professor	Basic Sciences
20	Environmental health	Associate Professor	Basic Sciences
21	Anatomy	Associate Professor	Basic Sciences
22	Bacteriology	Assistant Professor	Basic Sciences

After coordination with the faculty members, first, the researcher explained the purpose of the study for the participants, and if they agreed to participate in the study, the interview time was set. Semi-structured interviews were used as the main method of data collection. After approval, the interviews were performed focusing on the internal and external university outcomes within the faculty development programs. The participants were asked about their viewpoints on the probable outcomes of the evolution and innovation program in medical education and also on the activities of students and faculty members. They were also asked about the outcomes of this program on public health.

The interviews were recorded and extracted exactly and verbatim after each interview; then they were used as the original data. Interviews were usually held in one session in a quiet room and private workplace.

The data analysis was performed using the Strauss method at the same time with data collection and constant comparative analysis [5]. For this purpose, implementation and initial coding for each interview were conducted before the next interview. Then the data and codes from each interview were compared with those of the previous interview. Coding was performed in three stages: open, axial and selective. Open coding is an analytical process through which the identified concepts, their characteristics and dimensions in data can be discovered. At this stage using GT, the basic categories of information about the phenomenon under study were formed by classifying the information. The researcher set the categories based on all the collected data, such as interviews, observations and events or commentaries. Axial coding is the process of connecting categories to sub-categories, and linking the categories in the level of characteristics and dimensions. At this stage, categories, characteristics and dimensions obtained from the open coding were codified in order to create increasing knowledge about their relationships. Selective coding is an integrating and improving process of integration through which the researcher can write a theory of the relationship between the

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existing categories in the axial coding.

Some other methods were used to ensure the credibility and trustworthiness of the data. To verify the credibility of data and extracted codes, the participants helped to review them. In this regard, the transcripts of each interview and extracted codes were given to every participant to confirm the credibility of texts and extracted codes (member checking).

The researchers also shared the classifications of data with some of the faculty members who did not participate in the research. The researchers tried to record the study process for audit-ability purpose [6].

The time and the place of the interviews were checked to the participants by a phone call, and then the interviews were done in a 1-1.30 hour session.

Ethical considerations were also taken into account. In this regard, along with the interview questions, a letter was sent containing the researcher's ethical obligation to maintain the provisions of interview and the profile of participants only with the consent of the interviewee. The study protocol was also approved by the Ethics Committee of the university. All interviews were recorded and examined to extract key points.

Results

The characteristics of the participants are presented in Table 1. This study aims to identify the outcomes of the faculty members' development at medical universities in the northern parts of Iran based on the evolution and innovation program of medical education in the form of GT. The data were divided into two main themes and eight sub-themes (Table 2).

Table 2: The main themes and sub-themes derived from the primary and secondary data analyses

Main themes	Sub-themes
Internal university outcomes (Promotion of education quality in the universities)	-Improving teaching and evaluation methods -Improving the communication skills of students and teachers -Providing critical thinking to the students - Internalizing the professional ethics
External university outcomes (Public health promotion)	- Training the committed doctors -Increasing the patients' satisfaction -Successful participation in the global arena -Scientific interaction with the universities in the world

Discussion

The outcomes of faculty members' development at medical universities in the northern parts of the Iran based on the evolution and innovation program of medical education in the form of GT included internal and external university outcomes.

Internal university outcomes consisted of improving the existing teaching and evaluation methods, improving the communication skills

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of students and teachers, providing critical thinking to the students, and internalizing the professional ethics.

One indicator that has a great impact on individual learning is the teaching method. Many lecturers and thinkers of educational area always mention learning and teaching methods together. Considering different teaching methods, teaching is always related to learning, and the nature of this relationship certainly has a crucial role in promoting the quality of learning environments [4]. The results of Thomas study showed that there are no proper coordination between the learning styles and the teaching methods of professors; this issue can adversely affect the educational environments and the student's performance. Professors do not apply a correct method to evaluate the educational environment, and cannot provide a feedback and enhance learning for the students [7]. This issue was also observed in the present study interviews.

The communication skills can be a very important factor in the pursuit of patient problems, and ultimately, in increasing the patients' medical satisfaction. These results are in agreement with the findings of many other studies on the subject [8-13].

Also among the cases mentioned by the faculty members as the outcomes of flourishing faculty members was increasing critical thinking approach in the students, which is consistent with the findings by Noshadi and Khademi [14]. Khandaqi and Pak-mehr concluded that improving the students' critical thinking leads to better mental health level. In particular, critical thinking skills in the students of medicine and health jobs are certainly necessary [15].

Institutionalization was another outcome mentioned by the faculty members and students based on which the medical universities should perform their development programs with the main pillar of developing professional ethics [16]. In this regard, Yamani et al. found that medical universities are responsible for teaching and learning students who directly or indirectly deal with human life after graduation, so their faculty development programs have the utmost importance [17].

External university outcomes

Increasing the public health level was the most important issue mentioned by the faculty members in terms of external consequences of executing the evolution and innovation program in medical education. This issue can result in nurturing committed, responsible, efficient and professional future doctors. These physicians can increase the public health level, and ultimately, patients' satisfaction.

McAdam also believes that universities and colleges are created to meet the needs and expectations of the society, and medical

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schools are no exception to this [18].

Azizi suggests that medical schools are pathways to meet the needs and expectations of the society by providing health care services [19]. So the philosophy of existence of educational centers can never be neglected or denied. Hence, responsive medical training can be defined as a proper medical system that considers the health problems of the country as its operational priorities, and aims to educate physicians who are willing and able to serve their society and effectively deal with the health problems in the first, second and third levels [20]. In a study, Kristina concluded that today there is no higher education system in which responsive medical education acts as an essential component; so responsive medical education should seriously begin its activity [21].

The faculty members of medical universities in the present study believed that the universities should have ongoing programs to meet the needs of public health; however, these programs cannot be implemented without the moral and financial support. In the study of Nili et al., some factors were found to be important components in the implementation of responsive medical education: systematic planning, adequate funding, proper and sufficient facilities, support of the Ministry of Health and Medical Education, and coordination of the attitudes and priorities between the Department of Health and Department of Education [22].

Another external university outcome of the faculty development from the perspective of faculty members was successful participation in the global academic arena. Accordingly, the acquisition of scientific citation in the health area is one of the overall objectives of policy makers in every higher education system. In the development and innovation plans of medical education, expansion of international interaction was considered necessary for the development of new technologies. As well as the promotion of international accreditation standards in higher education to support top universities to enter the international competition [3].

Conclusion

According to the experiences and perceptions of the participants, the expected outcome of the faculty development based on evolution and innovation program in medical education was to improve the quality of medical education and the public health level as providing desirable and high quality services results from training the competent students in this field, which is essentially linked to the mission of medical education institutions. It is suggested that education policy makers try to apply a more accurate and systematic plan in order to achieve development and growth of their faculty members; so, the effectiveness

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and efficiency of the faculty members, and consequently, the higher education will be promoted.

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