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Developing an Accountable Medical Education Program Model at Babol University of Medical Sciences

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ABSTRACT

Background and Objective: Creating and developing accountability in medical education system requires educating specialized and accountable human resources that are sufficiently familiar with the multidimensional concepts of health and how to achieve them through modern educational methods. Training capable graduates who respond to health needs in an effective manner highlights the importance of implementing an accountable medical education program model in universities. The present study was conducted to develop an accountable medical education program model at Babol University of Medical Sciences.

Methods: To conduct this qualitative study, which aimed to explain the accountable medical education program from the perspective of faculty members at Babol University of Medical Sciences, the first stage was to review the history of accountable medical education and design interview questions, and the next stage was to collect data through interviews with faculty members who are experts in the field of accountable medical education. After coding the data, the accountable medical program model was developed based on the perspective of faculty members.

Findings: The results of the study showed eleven general categories in the form of a paradigm model, including causal conditions (empowering faculty members based on accountability in medical education in line with the transformation and innovation program in medical education, approved directives and regulations on accountability in medical education), axial phenomenon (participation in the design and implementation of accountable medical programs), and contextual conditions (major national programs regarding accountability in medical education, academic operational programs in line with the implementation of accountable medicine).

Conclusion: The results of this study showed that empowering faculty members, participating in the design and implementation of accountable programs and national macro-programs are key factors in developing an accountable medical education program model at Babol University of Medical Sciences.

Keywords: *Model, Medical Faculty, Accountable Medical Education Program.*

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Introduction

According to the definition provided by the World Health Organization (WHO), medical universities have a fundamental responsibility for teaching, researching and providing services in line with the health priorities of society (1). Given the rapid changes in the health care needs of societies and the need to improve the health of the population, there is an increasing need to increase the accountability of health care systems as a vital element in achieving health and meeting the health needs of individuals (2). Active participation in responding to the social needs of the population is a vital social responsibility that medical universities must follow. Social responsibility is essential for all humans to enjoy the values of equity in education, educational quality, effective interaction between the provision of health care services and the education sector, and ultimately to create maximum efficiency in the provision of health care services, and can have various beneficial effects on society and their well-being (3).

Many countries have recognized that the future of healthcare systems depends on their ability to respond more effectively to the rapidly changing needs of society and to make informed decisions to improve their multidimensional needs (4). Studies suggest that the curriculum of various fields of study should move towards accountable education to provide appropriate conditions for increasing the compatibility between theory and practice (5). Establishing and developing responsiveness in the medical education system requires educating specialized and accountable human resources that are sufficiently familiar with multidimensional concepts of health and how to achieve them through modern educational methods (6). Studies show that the Iranian educational system faces the challenge of training capable graduates who must respond effectively to the health needs and current challenges of society (3).

Considering the above-mentioned issues regarding the importance of responsive education and the need of educational systems and society for this type of education, it seems necessary to revise the medical curriculum in order to develop and prepare models and programs for social accountability education and, as a result, to have graduates accountable for providing better health care. Therefore, considering the problems facing its implementation, it is clear that in order to design a comprehensive program for implementing accountable education, the perceptions, opinions, and experiences of faculty members who directly deal with this type of education and have closely experienced the problems and obstacles in its path should be adopted. The aim of this study is to develop a responsive medical education program model at Babol University of Medical Sciences.

Methods

This qualitative study was conducted in two stages of literature review and interview with a content analysis approach at Babol University of Medical Sciences in 2021 after approval by the Research Ethics Committee of the National Center for Strategic Research on Medical Education with the code IR.NASRME.REC.1400.420. In the first stage, the background of accountable medical education was reviewed and interview questions were designed. In the next stage, data were collected through interviews with faculty members who had scientific, research-based, or administrative experience in the field of accountable medical education. The collected qualitative data were coded and finally the accountable medical education program model was developed based on the perspective of faculty members of Babol University of Medical Sciences.

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First stage) Literature review and designing interview questions: In this stage, literature review was conducted regarding the background of accountable medical education using relevant keywords such as "accountability", "health system", "education", "medicine" and "health needs". Relevant documents were collected from reputable databases such as Web of Science, Scopus, PubMed, Google Scholar, IranMedex, SID and IranDoc. Data were collected in a way that included title, authors' names, year of publication, type of research, study location and a summary of the main results. Then, the extracted materials were categorized into different areas and arranged in an appropriate format.

A meeting was held with the project implementers, department managers, and faculty members specializing in medical education and social medicine at the university. In this meeting, the interview questions were reviewed in terms of relevance to the topic, applicability, and compatibility with Iran's educational system and Babol University of Medical Sciences, and some items were revised or deleted. Finally, the questions were referred to several medical education experts in the country so that their opinions and suggestions could be incorporated into the questions. The final questions included the following:

• What information do you have about the accountable medicine program?

• Can the course syllabi in the current program meet the health needs of the field you teach? Please explain.

• To what extent is the role of upper documents effective in creating changes in the structure of educational curricula?

• What role does the Transformation and Innovation Program in Plan Education play in pushing the curricula of medical groups towards accountability?

• In your opinion, what syllabi should be reviewed, changed, or added in order to be accountable to society?

• To what extent do you consider the support of urban and regional authorities for the Health System Accountability Program to be effective?

Second stage) Conducting interviews with faculty members: The participants of this study were faculty members of Babol University of Medical Sciences who had scientific and research experience in the field of community-based health education. Purposive sampling was used to select cases that were rich in information and experience, considering the purpose of the study, and would help the researcher in shaping the target theoretical model. Therefore, using the renowned technique (7), 20 faculty members of Babol University of Medical Sciences were selected from different basic and clinical science educational groups. The interviews were conducted in person, by prior appointment, and lasted about an hour in the interviewee's office. Principles such as obtaining permission from the participants, observing the principles of confidentiality, maintaining anonymity, and the right to withdraw from the study were observed.

Third stage) Coding of study data: Open coding and axial coding were used to analyze the interview data. Based on the guidelines provided by Corbin et al. (8), the responses provided by the interviewees were broken down into smaller units and then these concepts were grouped into larger categories. Due to the repetition of categories and re-examination of the data, repetitive concepts were eliminated and similar concepts were merged. This process continued until the logical saturation of the categories was reached. Then, axial coding was performed using the relevant template and dimensions including causal conditions, axial category, contextual conditions, intervening conditions and consequences, and a paradigmatic model was presented.

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Results

After analyzing the data, the findings of this study were identified as 5 general categories. These categories included being familiar with accountable medicine program, the role of upper documents in changes to the structure of educational curricula, the role of the transformation and innovation program in pushing medical curricula toward accountability, topics that need to be reviewed and modified, and the impact of support from urban and regional officials on the health system's accountable program.

Being familiar with accountable medicine program: This category refers to the need for the medical community to be aware of accountability programs, Ministry of Health policies, and public health promotion. The need to operationalize the content learned by students and train health system providers to be accountable in order to increase the level of community health is one of the key points of this category.

The role of upper documents in changes to the structure of educational curricula: This category includes legal requirements for implementing accountability programs, budgeting for implementing laws, and the need for review by university educational councils. Financial support for community-oriented projects and feasibility studies for their implementation in universities are among the important points of this category.

The role of the Transformation and Innovation Program in moving medical curricula toward accountability: This category refers to the existence of a responsive medicine working group in the transformation program, faculty members' recognition of the transformation program, and awarding educational grants to faculty members active in this field. Moreover, following up on the implementation of operational plans and revising the general medicine curriculum with the aim of being more accountable to the needs of the community are also important points of this category.

Topics that need to be reviewed and modified: This category includes preparing students to provide services to patients, empowering faculty members to play their role as models of learning accountability, and selecting faculty members familiar with the principles of accountability. Reviewing the topics of the internship course with a focus on interaction with patients, companions, and staff in line with accountability is also among the points of this category.

The effect of the support from urban and regional authorities on the health system accountability program: This category refers to the support of the University of Medical Sciences as the custodian of community health, fewer possible problems in the implementation of accountable programs, and material and ethical support from urban authorities for the implementation of community-oriented programs. Greater participation of the public and non-governmental organizations in the implementation of community-oriented programs is also a key point of this category.

Based on the analysis of interview data and coding, a paradigmatic model for the implementation of accountable medical education programs was presented. This model included causal conditions, a central category, strategies, contextual conditions, intervening conditions, and consequences (Figure 1).

Findings of selective coding and presentation of the qualitative research model: During the selective coding and synthesis process, the text of the conducted interviews was reviewed and the sentences and ideas that expressed the relationship between the main and secondary categories were considered. In this stage, the central category or phenomenon around which the other categories were gathered and formed a whole was methodically selected and an abstract description of the process studied in the research was presented by relating it to other categories. The result of the analysis of the findings of the qualitative part of the graphical model is presented in Figure 2.

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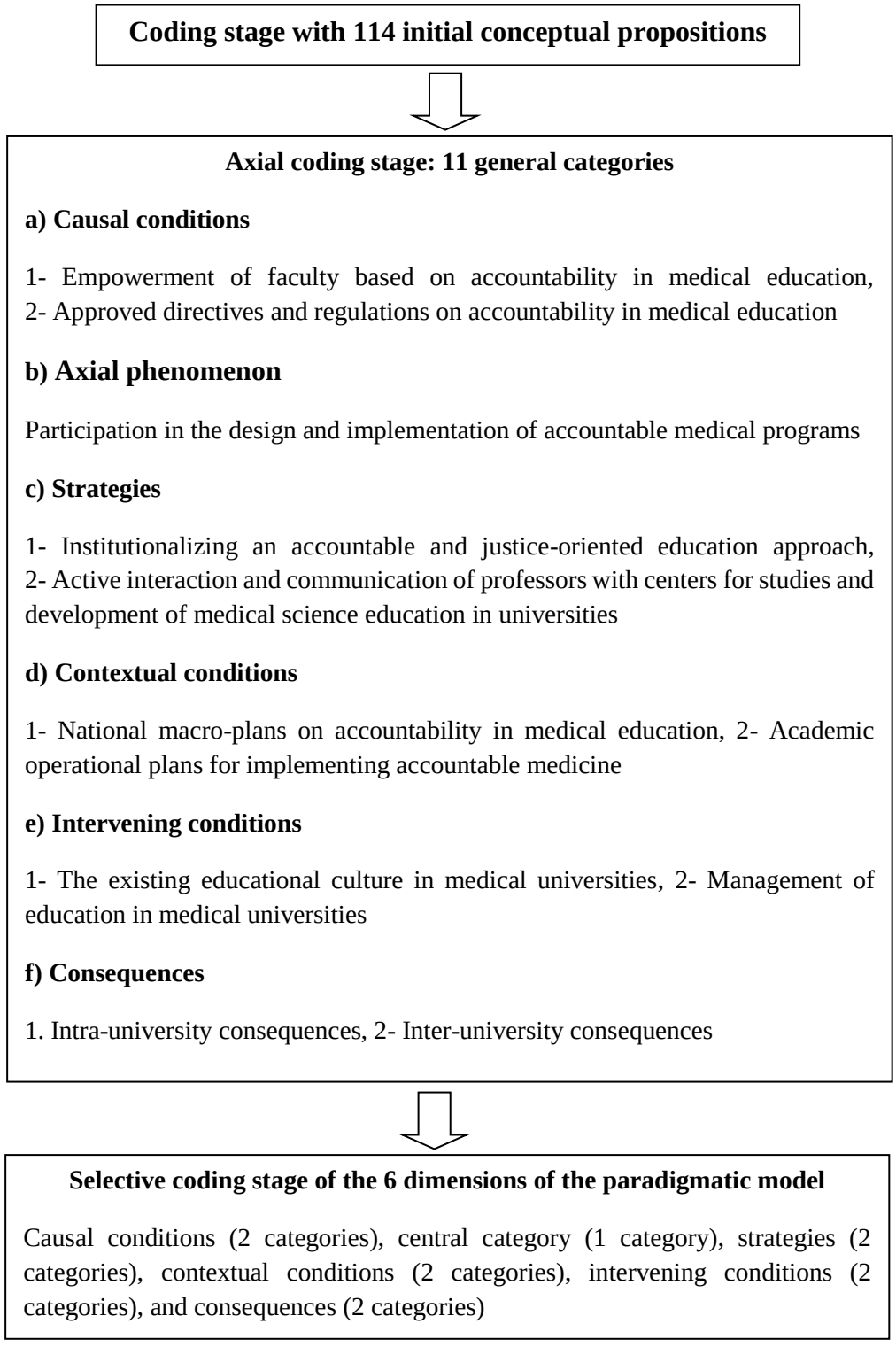

Figure 1. The coding and reduction process of data

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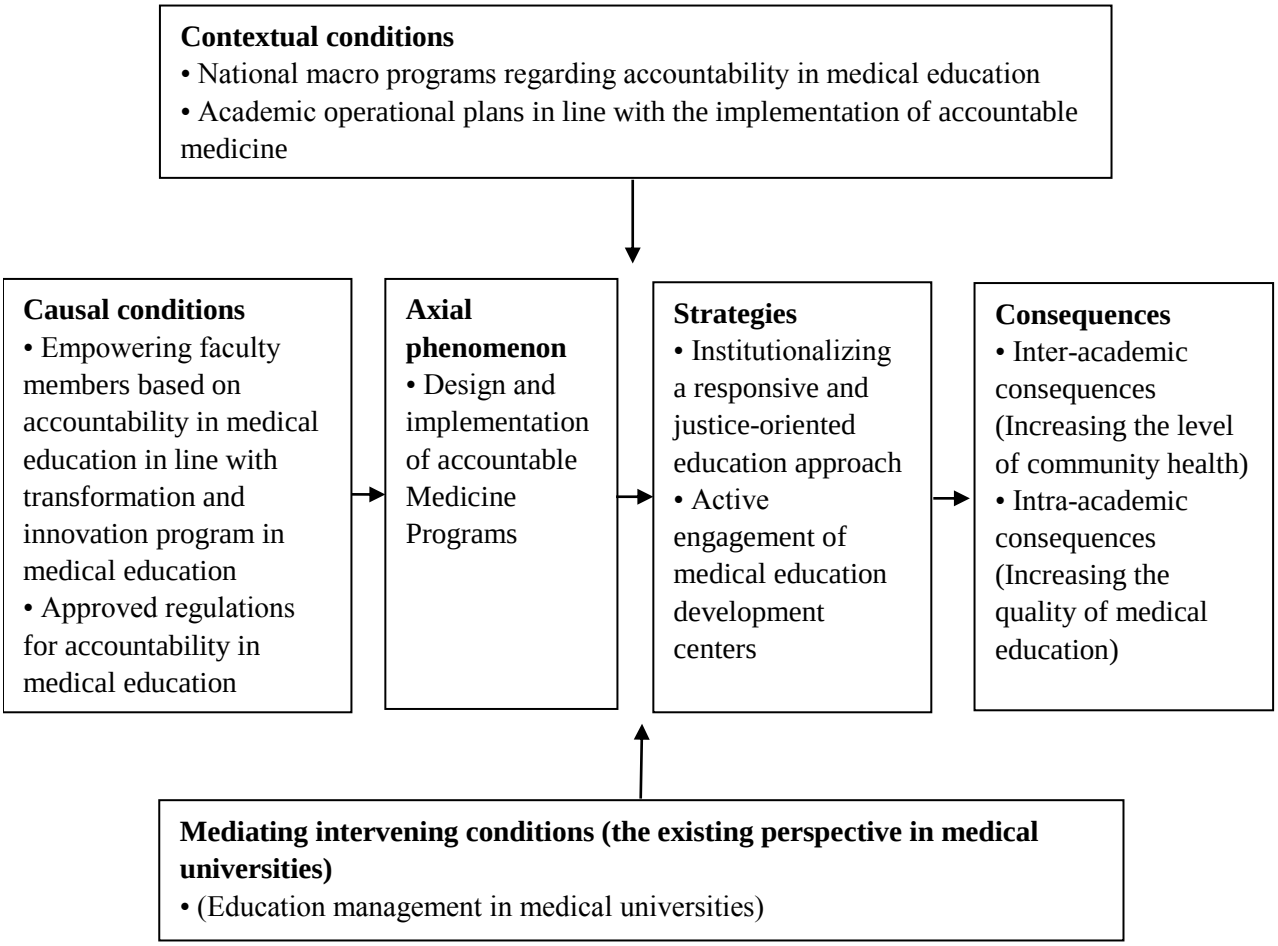

Figure 2. Graphical model of implementing an accountable medicine program in universities

Discussion

The results of the present study show that the participation of faculty members in the design and implementation of accountable medical education programs is influenced by various factors, including causal conditions, axial phenomenon, strategies, contextual conditions, intervening conditions, and consequences.

Empowering faculty members to be accountable in medical education, particularly through transformation and innovation programs, is a key factor in the success of accountable medical programs. Beyond teaching, faculty members play a guiding role in the areas of professional ethics and social accountability (9). National policies and regulations also play a role in creating a culture of accountability in medical education and help develop curricula that are aligned with the health needs of the community (10, 11).

The axial phenomenon of this study, the involvement of faculty members in the design and implementation of accountable medical education programs, emphasizes their vital role in shaping curricula that are relevant to the needs of society. As educational leaders, faculty members should educate students in the areas of medical ethics, critical thinking, and social responsibility. This is consistent with the new global approaches to competency-based education that consider responsiveness to social needs as a

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key competency (12). Creating a culture of accountability in universities, supported by national policies and faculty empowerment programs, can improve the quality of medical education and its alignment with the health needs of society, leading to positive outcomes for students and satisfaction of faculty members (13, 14).

Intervening conditions, such as the culture and management of medical schools, can facilitate or constrain the implementation of accountable medical programs. Changes in management practices and organizational culture are essential to institutionalize accountability in medical education (15).

The findings of this study are consistent with other studies. A study by Abdalla et al. emphasized on social accountability as a critical component of medical education and emphasized the need for structured professional development programs to promote accountable education (16). Another study also highlighted the role of technology in the implementation of social medical education, which is consistent with this model's focus on utilizing modern tools to enhance education (17).

However, there are also disagreements. One study noted a decline in interest in family medicine among medical students in Kyrgyzstan, suggesting that institutional culture can negatively impact students' understanding of specific medical specialties (18). This suggests a gap in the current model's ability to fully address cultural and systemic biases within medical institutions. The systemic challenges raised in another study on health care access inequalities also suggest that the model needs to be improved by incorporating strategies that promote collaboration between medical educational institutions and health systems (19).

This study is in line with the CBME (Competency-Based Medical Education) approach and proposes an outcome-based medical education system that ensures that societal needs are met (20).

The consequences of implementing accountable medical education programs include improving the quality of medical education, strengthening critical thinking and developing professional ethics in students at the university level (13), and increasing public health and reducing health inequalities at the community level (14). Overall, this study provides a comprehensive framework for understanding the factors influencing the implementation of accountable medical education programs. Empowering faculty members, supported by national policies and university strategies, is crucial in creating a culture of accountability and equity in medical education. For the successful implementation of these programs, sufficient attention must be paid to the contextual and intervening conditions. By strengthening collaboration between faculty members and medical education development centers, universities can ensure the training of health professionals who are both scientifically and socially accountable. It is suggested that this model be used as a basis for developing similar programs in other medical universities to move the education system towards higher levels of accountability.

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