



Social accountable medical education: a concept analysis

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Abstract

Introduction: Considering the pervasiveness of social accountable medical education concept around the world and the growing trend of literature in this regard as well as various interpretations made about this concept, we found it necessary to analyze the concept of social accountable medical education.

Methods: In this study, the modified version of McKenna's approach to concept analysis was used to determine the concept, explain structures and substructures and determine the border concepts neighboring and against social accountability in medical education.

Results: By studying the selected sources, the components of the concept were obtained to identify it and express an analytic definition of social accountability in medical education system. Then, a model case with all attributes of the given concept and the contrary and related concepts were mentioned to determine the boundary between the main concept and auxiliary ones.

Conclusion: According to the results of this study in the field of social accountability, the detailed and transparent analytical definition of social accountable medical education can be used in future studies as well as the function and evaluation of medical education system.

Keywords: Social accountability; Social responsibility; Social obligation; Medical education

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Introduction

Social accountability is defined as accountability of individuals, groups or institutions to general beneficiaries of an organization with an acceptance of the consequences and outcomes of their responsibilities. The accountable organizations should have two major features: first, making maximum effort to identify the problems and needs of beneficiaries and second, making maximum effort to solve their problems and satisfy their needs (1). If we aim to present a definition of social accountability in the realm of health, the World Health Organization (WHO) has defined social accountability in the activities related to the public health of society as directing all educations, research and services toward

eliminating the concerns and health priorities in the society under coverage (2). In this regard, the representatives of different countries in South Africa gathered in 2010 to come to a consensus about the social accountability of medical schools. This agreement was made to train physicians to be able to be accountable for the current and future needs of the society and the challenges that may occur in the society. To this end, based on the definition of WHO of social accountability in medical education system, all medical schools are required to have programs for accountability to community with regard to education, research and services (3). Therefore, the urge for changing medical education programs based on accountability to community and the novel role

of the future century doctors has brought about changes in medical education programs so as to make the graduates more capable of identifying the healthcare problems of the community and performing and maintaining public health (4).

On the other hand, given the constant changes in the health needs of the community, there is an urgent need for the people to identify the society needs in various conditions and proceed to solve their problems. Thus, medical students should be taught to understand the needs of the society after graduation and adapt themselves to the changing expectations of the community and developments of medical sciences (5, 6). Anticipation of community needs to promote public health has been proposed as an operational strategy in order for the educational systems to be accountable to society (7).

A review of relevant literature shows that there is no unified conceptual framework about social accountability, and that everyone has presented a definition in this regard referring to some aspects of social accountability concept. Moreover, it should be pointed out that concepts in different majors and disciplines have diverse meanings, components and structures (8). Hence, considering the pervasiveness of this concept around the world and the growing trend of literature in this regard as well as various interpretations made about the concept of social accountability in medical education system and no distinction made between this concept and the relative concepts like responsiveness and responsibility in various studies, it is necessary to analyze the concept of social accountable medical education (9).

In general, concepts are a series of verbal signs or mental images that are required for effective communication among the people in society; that is, concepts are the cornerstone of the scientific knowledge and theoretical framework of any discipline (10, 11). The power of theories, which guide the disciplines, depends on the quality of concept analysis. Weakness and mistake in comprehending concepts in research and theorization reduce the validity and reliability of results. Hence, concept analysis seeks to clarify the attributes and characteristics of a concept (12). Wilson believes concepts, as communicative tools, should be critically analyzed so that their meanings become comprehensible and can be used in communications (10, 13). Walker and Avant define concept analysis as a systematic process to determine the principal characteristics of a concept. This kind of study is concentrated on the use of works and description of events (14). McKenna's definition of content analysis

is a technique or mental activity that requires a critical approach to clarifying the exact meanings of the concept (8).

Walker and Avant's emphasis is on identification of a case that includes all characteristics of the concept. They believe that presentation of an actual case indicates that this case is an example of reality and reality is not context-dependent, but it has an independent identity. Walker and Avant emphasize the real case and its differentiation from the alternative cases that completely determine the boundaries of the concept, accept it as an independent reality and indicate realistic ontology and objective epistemology, fitting into the positivism paradigm (13, 15). From the perspective of realists, concepts change over time and the meaning of a concept in a specific time in all contexts and domains of knowledge is equal as a fact (16, 17).

McKenna's approach, an adapted and edited version of Walker and Avant's, is located in positivism paradigm in terms of methodology and emphasis on the presented cases and determination of the specific boundaries for concept as well as reference to discovery of meaning versus construction of meaning (8). In this study, considering the ontology and viewpoints of researchers about reality and selecting McKenna's approach as a concept analysis method, the research paradigm is mostly positivism, which consequently constitutes the philosophical background of the research in terms of realist ontology and objectivist epistemology.

According to the above mentioned point, the researchers' ontological and epistemological perspective is in accordance with the McKenna's approach. McKenna also stressed the importance of the context in which the concept is defined. Therefore, since the context is very important in the sense of social accountability, the McKenna's concept analysis method was chosen for this study.

Methods

In this study, the modified version of McKenna's approach to concept analysis was used to determine the concept, explain structures and substructures, and determine the border concepts neighboring and against social accountability in medical education system. To this end, databases were searched as much as possible. The meanings of the intended concept were extracted from the existing resources and each extracted meaning was named as a term or a short phrase. Then, the primary characteristics obtained with similar meanings were classified in one category, and the obtained categories were named in a higher abstraction level. This inductive process was

performed in three levels by the tables designed for this study to accurately address the acquired features, and the characteristics of the concept were identified. Next, necessity test was run to ensure the attachment of attributes to the concept in order to confirm the correlation of characteristics and attributes obtained with the given concept. A case with all attributes of the given concept was mentioned. Then, the contrary, related and illegitimate concepts were identified to determine the boundary between the main concept and auxiliary concepts. Precedents and outcomes are the concepts whose determination contributes to clarification and accurate identification. Finally, the components of the concept were obtained to identify it and express an analytic definition of social accountability in medical education system (8).

Based on the given concept and the questions posed for searching different databases and sites like "Google scholar", "PubMed", "CINAHL", "Elsevier", "Springer", the keywords "Social Responsibility", "Social Responsiveness" and "Social Accountability" were used individually and in combination with other keywords like "Service", "Research" and "Education". Since the research was about medical education system, the terms "Medical Education" and "Medical School" were taken into account during the searching process.

In the first phase of searching, many articles were found. After analyzing the titles of articles, many of them were excluded from the study and a total of 110 articles, books and documents were selected for analysis. In the second phase, the abstracts were studied and the articles on social accountability in medical education were chosen for their full-text analysis. A total of 52 full-text articles were studied. Finally, 14 articles with a detailed description of the given concept were selected for concept analysis (2, 3, 6, 7, 18-27). Although data saturation was reached through the concept analysis of 10 articles, all 14 articles were completely subjected to concept analysis.

Results

First step: Select the concept of interest

The first step in concept analysis is choosing a concept that not only is the concern of researchers but also is able to describe a novel and practical event in a domain of knowledge. The intended concept can be located on a continuum, from fully experimental to fully abstract. However, the chosen concept should be to some extent abstract so that it can be managed and its constituents and semantic borders can be identified (8).

This concept was chosen because three

key terms, including "responsibility", "responsiveness" and "accountability" were observed by studying the relevant literature in this domain. Unfortunately, some documents and articles have not distinguished these terms from each other and have used them interchangeably. On the other hand, this issue is so important that top international communities like WHO have taken some measures in this regard. However, since this issue is new around the world and its components and characteristics are not known, it seems that any activity in this domain will not yield the expected results. This has been confirmed in the study of Yamani et al., in which the necessity of concept analysis regarding social accountability in medical education has been emphasized (9).

Second step: Define the aims of the analysis

Concepts are the foundation and basis of knowledge and theoretical frameworks of different disciplines. The strength of theories underlying a discipline depends on the quality of concept analysis. Thus, using the weak concepts and concepts with unknown components and substructures in research, theorization and modeling give out poor outcomes in terms of validity and reliability (8, 11). Since social accountability in medical education system is a complex concept, with other concepts being used interchangeably, the current study was performed to determine the basic components of social accountability in medical education through concept analysis in order to come up with an analytic and clear definition.

Third step: Identify meanings of the concept

This stage does not aim to explain and describe the concept. It aims to discover different meanings from among the relevant literature (8). After studying and reviewing the resources accurately, various defining domains in the realm of social accountability in medical education system were determined. However, these domains were basic and were modified afterwards during concept analysis. Then, the statements and phrases helpful in discovering the meanings of concept were taken from the resources and presented in relevant tables in their own defining domain, taking into account the encoding process and ascertaining their resources. This process was carried out for all selected sources. The defining domains were obtained through repeated studies of the resources and were modified during the third step, where the expressions containing connotations about the concept were extracted. Finally, five defining domains were determined

as follows:

1. The objectives of social accountability in medical education
2. The requirements of social accountability in medical education
3. The outcomes of social accountability in medical education
4. The working process of social accountability in medical education
5. The assessment of social accountability in medical education

Fourth step: Determine the defining attributes

In this stage, the expressions and statements extracted from the literature in the previous stage were subjected to an abstraction process, out of which the potential defining attributes and characteristics were obtained. Then, the features with common semantic load were identified and classified into specific categories. Next, each category was given a more abstract title that involved the meanings of that class of attributes and features, the same major features of the concept. These are specific attributes of the concept that can differentiate the intended concept from similar concepts and can determine the defining domain of the concept (8). After summarizing and classifying the defining attributes of the concept, the categories and subcategories were obtained, as presented in Table 1.

Analytical definition of social accountability in medical education system

Based on the defining attributes and features of concept obtained during the former stages, an analytic definition of social accountable medical education system can be presented in this stage:

The purpose of social accountability in medical education system is satisfying the needs, and solving the health problems of the society and training responsible forces with a systemic viewpoint that provides the society with the best-quality services by concentrating on the community health. To this end, the medical education system regularly evaluates and prioritizes the needs of society, applies the necessary changes on the dynamic and community-based curriculum and provides the society with a proper education. In addition, an education system accountable to the needs of society employs inter-sectoral leadership, involves various parts of the organization in the community, proceeds to attract the participation of society in different domains in order to maintain and promote the people's health and assesses the effect of measures taken in the society. Social accountability in medical education system requires a shared extra-organizational vision and an integrated intra-organizational function.

Table 1: Defining attributes of social accountable medical education

Goal	●	Resolve problems of social health
Process	●	Receiving, and prioritizing community signals
	○	Community needs assessment
	○	Continuous surveillance of community's health problems and issues
	○	Priority setting of community health problems
	●	Community responsive education
	○	Competency based curriculum
	○	Special focus on professional development
	○	Community oriented education (Curriculum)
	○	Community based education
	○	Dynamic curriculum
Requirement	●	Visionary leadership of healthcare system
	○	Intra-sectoral governance
	●	Community engagement
	○	Community oriented / Based research
	○	Community oriented / Based services
	○	Health literacy initiatives
	○	Inter-sectoral leadership
	●	Community participation
	●	Shared vision
	●	Integrated structure,
●	Cross-boundary policy management (Functional integration)	
Outcome	●	Accountable, health focused, community oriented, system based HCPs
	○	Social perspective and commitment,
	○	Advocacy skills,
	○	Policy & system awareness
	○	Duty awareness
Evaluation	●	Community focused high quality services
	●	Impact assessment

Fifth step: Identify a model case

The typical case or model is a perfect example in which the given concept has been completely used and contains all the defining attributes and features of the concept. The typical case can be a hypothetical case of a real event or a real example of all defining characteristics of the concept. If the presented case is real, the validity and clarity of the concept definition will increase (8). In the following part, an example of a medical university with all attributes and features of a socially accountable medical education system is presented.

With the mission of satisfying the needs and solving the health problems of society, medical university has a structure and policies which are in line with training forces with a systemic perspective and commitment, are community-oriented, have a focus on public health and are accountable to the community. To train these forces, the organization receives messages from the community regularly, identifies the needs and priorities of society, and presents community-oriented education accordingly. Taking the responsibility of extra-organizational leadership to accomplish its mission, medical university needs the cooperation of other organizations as well as involvement of the members of organization in the society and participation of people as much as possible. Medical university, in line with its objectives, in addition to sharing a common perspective with other organizations, has an integrated intra-organizational structure and function, the result of which is production of community-based knowledge and presentation of the best-quality services and public education to enhance the health knowledge of people. To this end, the organization constantly evaluates and validates its programs and their efficacy in

the community.

Sixth step: Identify alternative cases

The alternative cases include instances that do not involve social accountability in medical education system. They include contrary cases, related cases, borderline cases and illegitimate cases.

Contrary case

The contrary cases include those that have none of the characteristics of the given concept and their differences with the main concept are conspicuous for the individuals (8).

Aiming to absorb more students, medical university has a structure and policies in line with education and issuing academic degrees in all levels and graduating forces that may not have any efficiency in the society. To train these forces, an organization formulates the priorities and educational objectives based on the viewpoint of the university teachers and authorities and presents education in classrooms. Medical university acts completely concentrated and has no interaction with other organizations. Within the organization, every deputy or department is merely following its objectives and acts independently both structurally and functionally. The product of this university is merely graduates that have earned a degree in a field of study and have no impact on the public health in their future career.

Related case

Related cases are very much similar to the given concept but do not have all features of the main concept, and include only some of their attributes (8). Some of the related concepts in this domain are shown in Table 2.

Table 2: Related cases

Intermediate concepts	Similarity of the concept with social accountability	Difference of the concept with social accountability
Responsibility	Community needs assessment is performed and planning is carried out accordingly.	Although educational planning is designed based on the community needs and problems, implementation of the program and training the learners are not performed in the community.
Responsiveness	Based on the community needs assessment, planning is done and implemented in the community.	Educational programs are implemented in the community, but the effects of their outcomes on the community are not evaluated.
Community orientation	Community needs assessment is done and planning is performed accordingly.	The emphasis is merely on the community-oriented planning, and education is not presented in the community.
Community engagement	Based on community needs assessment, planning is performed and implemented in the community.	Although all components of the program are involved in the community, there is no program to evaluate its effects on the community.
Health orientation	Personal motivation is for promotion of health-related attitudes, beliefs and activities, which can be considered as a part of accountability concept.	This concept is individual-oriented, while social accountability is a systemic concept, and an organization should be committed to it.

In the following section, a case indicating the concept of “responsibility” in medical education system is discussed.

With the mission of fulfilling the needs and solving the problems of community, medical university has a structure and policies to train forces whose concentration is on promotion of public health. To train these forces, the organization constantly performs needs assessment and prioritization and formulates the curriculum of different disciplines accordingly. Trainings in this university are presented according to the formulated curriculum in the classrooms and treatment centers. The medical university has not much connection with other organizations and acts independently. The product of this university is the graduates that possess a social perspective and their focus is on the needs of community but have no practical experience in this regard. The knowledge produced in this university, despite being community-oriented, is not in line with accountability to the real needs and problems of society. To accomplish these objectives, the organization regularly assesses and validates itself and its programs.

Seventh step: Identify antecedents and consequences

Determining the antecedents and consequences is one of the most important findings of concept analysis. These results contribute to a better identification of a concept and more understanding of the context in which the concept is used (8).

Antecedents are situations, events and happenings that take place before the occurrence of the given concept (28). Antecedents may help the occurrence of the concept or be involved in it, but they are not considered its cause. However, their presence may be necessary for the emergence of the intended concept (8).

Consequences are events or results that happen after the occurrence of the intended concept. Both antecedents and consequences contribute to better understanding of the context in which the concept is used. Therefore, this result helps the refinement of

the main features and attributes of the concept (29).

Eighth step: Consider context and values

It should be noted that concepts have different meanings and characteristics based on the context in which they are proposed. Thus, considering the intended society and common cultures and values in each society, social accountability in medical education system can have various attributes. Given the uniqueness of medical education system in Iran and considering the organizational integration of health and medical education and formation of ministry of health and medical education and consequently university of medical sciences and health services, all community- and patient-oriented healthcare tasks as well as training the public health personnel are performed in one organization, which can be a step taken toward social accountability (30). However, this integration does not account for the accountability of universities to the needs of community, and because this integration has led to emergence of a new organization that can be found nowhere in the world and is a new experience, it requires a specific planning apart from the education system of other countries.

Ninth step: Identification of empirical indicators

Empirical indices include conspicuous criteria for measurement of the concept or evaluation of the presence of the concept. In this stage, a concept reaches operationalization stage by identification of these indices (8). In the concept under the study, social accountability in medical education system, the obtained attributes and characteristics are fully operational through which the given concept can be identified and assessed. For instance, some defining attributes with their empirical indicators are presented in Table 3 (31-34).

Discussion

This analysis was done to explore the concept of social accountability in medical education, with the ultimate goal of clarifying the meaning and definition of social accountable medical

Table 3: Empirical indicators for defining attributes of social accountable medical education

Defining attributes of concept	Empirical indicators
Receiving and prioritizing community signals	Meetings with the community, Survey, Interview, Focus group, Recourse assessment, Panel discussion, Table of daily activities
Community responsive education	Logic model
Visionary leadership of healthcare system	Evaluation 360°
Community engagement	Customer satisfaction surveys, Community feedback, Support services satisfaction, Feedback from government agencies
Community participation	Survey participants, Booklet (log) of events and activities, Interviews with key individuals, Focus groups, Observation of sessions, Documents review

education, reducing ambiguities, and promoting consistency in using the concept in health care system, research, and policy making. The other main result of this study is definitional attributes that include comprehensive effort to identify the needs and problems of social health, curriculum development based on needs assessment, training students in the community, working with other relevant organizations to provide the highest quality services and consideration of justice in access to services and consequently resolving problems of social health.

It should be noted that medical schools are responsible for three main tasks: teaching, research and service delivery. Medical education system cooperates with other areas such as research and service delivery (35, 36). Achieving the common goal of resolving the health needs of the society, the accountability mission and a shared vision with other areas of the health system should also be defined in order to obtain the mentioned cooperation.

Another issue in the social accountable educational system is the community-related education. As to developing different curricula, this study shows that the first step in educational goals is considering needs assessments and prioritizing community health problems. Secondly curriculum should be implemented in the society and finally its impact on society should be monitored and evaluated. It seems that ignoring any of the above steps causes inefficiency of the educational system regarding social accountability.

Considering the definitional attributes of the concept, in evaluating educational programs, defects in each step of the program (needs assessment, curriculum development and implementation in Community) would be readily identified and proper measures can be taken at the right time to solve them.

Conclusion

According to the results of this study, in the field of social accountability, social accountability putting priorities and concerns of society on the organizational vision and goals, and planning and appropriate action to address them are of importance. To achieve this aim the first step is to identify and clarify the concept of social accountability in medical education system. Therefore, accurate identification of this concept helps the educational system to have great planning and implementation to achieve the ultimate goal. On the other hand, the detailed and transparent analytical definition of social accountable medical education as well as the

function and evaluation of medical education system can be used in future studies.

Another result of the study was obtained from the separation of the concept of social accountability in medical education with other related concepts such as the responsibility and responsiveness. Then, from now on policymaking and program development in accordance with the intended purpose can use the proprietary concept which reflects their specific characteristics.

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