



Challenges of Medical Education Development Centers: A Content Analysis of Authorities' Views

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Received 2018 October 23; Revised 2019 July 06; Accepted 2019 July 14.

Abstract

Background: The main objective of medical education development centers is to improve the quality of medical education. However, after more than two decades since the formation of these centers, they are still facing numerous challenges.

Objectives: Given the importance of these centers, this study was conducted to identify their challenges.

Methods: A qualitative study was carried out in 2013 on 40 managers of Iranian medical education development centers. Data was collected during a national conference held in Tehran in the form of a questionnaire and analyzed using content analysis.

Results: Key challenges of the centers were identified to be resource shortage, continuous modifications in policies, weak management, structural problems, lack of communication, regulatory problems and centralization in decision making. The key challenges were divided into 17 sub-challenges.

Conclusions: Although decades have passed since the formation of medical education development centers, they are still facing serious challenges. To unveil the true potential of these centers in improving the quality of education, integrated interventions were addressed in this study to help reduce identified challenges.

Keywords: Medical education development centers, challenge, quality, medical education

1. Background

Human resources should be regarded as the most leading development factor for each country (1). This factor is even more prominent in healthcare, to the extent that the World Health Organization, in 2000, reported that one of the main duties of health systems was to produce resources, in particular human resources (2). If this duty is best fulfilled, the performance of each health system will improve and the health status of societies will be promoted. Undoubtedly, human resources can be increased in medical sciences by enhancing the number of medical universities and employing a large number of faculty members.

Despite employing numerous expert faculty members in recent decades, the quality of medical education has been faced with challenges due to inadequate teaching skills of some faculty members (3). To resolve this problem, the Ministry of Health of Iran, similar to successful coun-

tries in medical education, has established education development centers in medical universities (4).

These centers have focused their specialized services on students, faculty members, educational processes and learning styles, and graduates. They also work in the five main areas of curriculum planning, teacher training, continuous education, research in education and evaluation (5). After 2003, education development offices (EDOs) were founded as executive arms of education development centers (EDCs) in schools and educational hospitals, recruiting more than fifty faculty members. EDOs were formed to accelerate activities regarding medical education development in all universities (6).

Despite the fact that all EDCs of Iranian universities of medical sciences have made several attempts to promote the qualifications of academic staff and the quality of their education, there still exist serious challenges in the type and method of their performance (6). Haghdoost et al.

studied certain challenges of EDCs, including integration in education and healthcare delivery; trend of health sector privatization; weaknesses in policy making, supervision and evaluations; inappropriate organizational charts; pitfalls in processes, communication, and science; and lack of human resources or experience (7). Kalantari concluded that some of the tasks assigned to EDCs did not fully match their performance (8).

Medical universities are responsible for training efficient human resources; thus, literacy and skills of faculty members play an important role in educating students. Due to the insufficient proficiency of some faculty members, appropriate training of students and thus provision of appropriate services to patients become challenging. Since EDCs are responsible for enhancing the quality of faculty members' teaching skills, it is essential to monitor activities in these centers and resolve their challenges.

2. Objectives

This study aimed to evaluate basic reasons for failures and challenges of EDCs in Iranian universities of medical sciences from the perspective of EDC authorities.

3. Methods

This qualitative study was conducted in 2013 on all managers of Iranian EDCs, who participated in an annual conference in Tehran. The data collection tool was a questionnaire consisting of two open-ended questions on main challenges of EDCs and reasons for their failure, developed by two experts in the field of medical education. The questionnaire items are open-ended so that respondents can describe challenges and reasons without any prejudices. For this purpose, a researcher-designed questionnaire using the opportunistic method was distributed among all the 40 managers of the EDCs affiliated to Iranian universities of medical sciences. All the participating managers completed and returned the questionnaires. In the next step, the questionnaires were numbered so that the opinions could be separately presented in the results. Content analysis was used to analyze the data. Over the past years, content analysis has been widely applied in health studies and been regarded as a flexible option in the analysis of textual data (9, 10). In this method, the researcher avoids application of predefined classifications and allows classifications and concepts to come out of the data. Therefore, the researcher deeply ponders over the data to reach a noble concept or insight into the studied topic. To analyze the data in the current study, the first level coding was conducted to extract sentences containing the answers. Then,

topics were given to main intellectual sections of the sentences. After comparing the topics, a list was developed of main topics and subtopics. In the second level coding, the main topics and subtopics were reviewed and main topics with similar concepts were placed in one category. Afterwards, the topics were coded, defined and compared with each other. In case of any conflicts, finalized topics were defined after further discussion.

4. Results

After analysis of the data collected via the questionnaires, main challenges of the EDCs affiliated to Iranian universities of medical sciences were categorized into six main concepts and 17 subgroups (Table 1).

Table 1. Challenges of the EDCs Affiliated to Iranian Universities of Medical Sciences

Concept	Details
Concept 1: Shortage of resources	1-1: shortage of financial resources
	1-2: shortage of human resources
	1-3: shortage of physical space and facilities
Concept 2: Continuous modifications in policies and weakness in management	2-1: continuous changes in policies and defective statutes
	2-2: university presidents unfamiliar with EDCs' lists of duties
	2-3: low stability of management
	2-4: low motivation and support by managers
	2-5: managers unfamiliar with medical education
Concept 3: Structural problems	3-1: lack of appropriate organizational charts and structures
	3-2: a vast spectrum of vague duties allotted to EDCs
	3-3: unspecified duties of EDOs
Concept 4: Weakness in interrelationships	4-1: weakness in interrelationships with the ministry
	4-2: weak interrelationships between EDCs, EDOs and other sectors of universities
Concept 5: Centralization in decision making	5-1: centralization in decision making
Concept 6: Problems in supervision	6-1: lack of a standard evaluation system for assessment of faculties
	6-2: defective follow-ups of duties in EDCs and EDOs
	6-3: weakness in providing feedbacks in different related layers (from the ministry to EDCs and from EDCs to EDOs)

4.1. Concept 1: Shortage of Resources

Shortage of resources was among the challenges in EDCs. The topics presented in this category included shortage of financial and human resources, physical space, and facilities. Regarding shortage of financial resources, one of the managers mentioned, “in addition to the fact that the budget allocated to these centers is insufficient and inappropriate, it is not clearly programmed” (P 27). Another manager participating in the study stated, “EDCs centers do not have an independent source of funding” (P 18).

Another challenge related to EDCs was shortage of human resources including experts and faculty members (with related medical education expertise in particular) to carry out activities pertinent to the activities of EDCs. In this respect, one of the managers noted, “in addition to the shortage of human resources, some existing faculty members do not have enough expertise. Moreover, due to the shortage of human resources, some key positions are occupied by those passing their social service duties” (P 33). Another manager of the participating group mentioned, “inappropriate cooperation with EDCs by some faculty members is a great challenge, resulting from shortage of financial and moral incentives” (P 8). Another important issue in this regard is inappropriateness of physical atmosphere, facilities, and information technology; accordingly, one of the respondent managers reported, “in addition to shortage of facilities and space, defects in information technology prevents effective collaborations between different parts of EDCs in general, and advancement in education methods, in particular” (P 17).

4.2. Concept 2: Continuous Modifications in Policies and Weakness in Management

This concept included challenges in continuous modifications in policies, weak points in statutes, unfamiliar university presidents with reference to duties of EDCs, low stability of management, lack of incentives and support from management teams and managers unfamiliar with medical education. Concerning continuous changes in policies, one of the managers mentioned, “a problem is continuous changes in policies. This probably originates from the absence of a single definite supporting statute defining duties in the ministry; it should be added that even the current statutes are not updated” (P 37). Furthermore, some authorities believed that certain university presidents and their deputies in educational affairs were not familiar enough with the duties and characteristics of EDCs. Accordingly, another one of the managers noted, “this fact that some university presidents and their deputies are unfamiliar with the duties of EDCs causes EDCs not to be in the right position of authority” (P 11).

However, the other managers put forward varying challenges and pointed out, “some managers of certain centers are not familiar with medical education; this results in failure in achieving their main goal, i.e. promotion of the quality of education” (P 19). Another one of the managers expressed, “there is no stability in management in universities; sometimes, it is seen that a head of a certain section is changed before they get to know their duties” (P 23).

4.3. Concept 3: Structural Problems

One other important challenge in EDCs was structural problems. This included myriad concepts such as lack of appropriate structure and organizational charts, assignment of a vast range of duties to EDCs, vagueness of duties, and unspecified duties of EDCs. One of the experts added, “EDCs are not given a clear place in universities and due to lack of an appropriate organizational chart, promotion in the quality of education and use of experts’ potential talents are not feasible. Moreover, tasks assigned to EDCs are not in accordance with facilities, human resources, and credits available to them” (P 20). Another one of the managers noted, “vagueness in duties of EDCs has led to the fact that EDCs meet challenges in their duties” (P 18). Furthermore, lack of a suitable structure, appropriate planning and supervision imposed another challenge. One of the manager stated, “EDCs are getting far from their main duty, medical education, and are engaged in other tasks such as research” (P 4).

4.4. Concept 4: Weakness in Interrelationships

The findings demonstrated that EDCs did not have good interrelationships with the ministry and other parts of universities. One of the authorities noted, “EDCs are not on good terms with other parts of universities, particularly education and research sectors, and even with EDOs. Some parts of universities do not take EDCs serious and consequently do not invite their members to meetings crucial for EDCs” (P 31). Moreover, the participants of this study pointed out another challenge, which was a weak interrelationship between EDCs of different universities. One of the experts mentioned, “EDCs cannot apply the best of each other’s experiences since they are not in contact with one another” (P 39).

4.5. Concept 5: Centralization in Decision Making

One more challenge faced by EDCs was centralization in decision making. In this regard, one of the managers expressed, “sometimes, innumerable attempts and correspondences are established in order to perform a minor task, which requires much energy; this undermines willingness to cooperate with EDCs” (P 33).

4.6. Concept 6: Problems in Supervision

Another major challenge in EDCs was problems in supervision. This implies lack of an evaluation system to assess faculty members' performance, lack of a follow-up system for duties of EDCs, and poor feedbacks from the ministry to EDCs and from EDCs to EDOs. One of the managers noted, "no appropriate evaluation system exists to measure faculties' performance; hence, we cannot give them suitable feedbacks" (P15). Moreover, EDCs were not well followed up with respect to their duties; accordingly, one of the experts stated, "universities do not monitor EDCs' performance" (P 30). A further main challenge was the defective supervision of the ministry on EDCs' activities. One of the experts believed, "the ministry is poorly monitoring EDCs; it is better to say that there is no supervision at all" (P 28). Moreover, EDCs and EDOs did not match each other. One participating expert mentioned, EDCs are not well monitoring EDOs under their control" (P 24).

5. Discussion

It should be mentioned that education development centers were firstly founded to develop medical education in the fields of research in education, education of faculties, continuous medical education of graduates, and evaluation and supervision on educational activities. In order to accomplish the aforementioned tasks, EDCs face certain challenges such as shortage of resources, continuous modifications in policies and defective management, weakness in interrelationships, centralization in decision making, and problems in supervision and structures.

Undoubtedly, in order to properly execute the programs of each organizational sector including EDCs, adequate resources are necessary. Hence, one of the major challenges in EDCs is shortage of financial resources. Due to vagueness in the determined budget, managers of EDCs are strongly dependent on universities to meet their financial needs, which decelerates the process of developing their plans. They are also unable to motivate faculties for further cooperation, leading to a shortage of human resources. It must be added that shortage of expert human resources is only partially due to shortage of financial resources; this could also originate from the inability of authorities to attract expert human resources. Hence, it is observed that only few experts work in EDCs, except for the managers. In other words, people working in EDCs sometimes do not consider the quality of their duties due to all the aforementioned reasons. All these issues lead to challenges in achieving goals assigned to EDCs. Haghdoost et al. reported similar results, indicating that one of the main problems of EDCs was shortage of expert human resources

(7). Another study revealed that although evolution in the quality of education led to the foundation of EDCs, shortage of educated human resources decreased the efficacy of these centers (11).

Among the challenges in EDCs are inappropriate physical space and shortage of facilities and educational equipment. A study by Torabian et al. conducted on some fields in Iranian universities of medical sciences showed that these fields did not have sufficient educational facilities (12). In order to attract prominent faculty members and thus improve the quality of education, it is highly essential to meet their needs. Changiz et al. reported in their study that providing educational spaces in accordance with modern methods of education was among the expectations from faculty members (13).

As another barrier, bureaucracy is inevitable in EDCs, leading to deceleration of processes and disappointment of active members, eager faculties in particular. EDCs are also concerned about continuous modifications in their policies, as well as about the list of their duties and goals. This is important because as soon as authorities decide to focus on a particular domain, the importance of this domain alters due to instability of policies.

University presidents unfamiliar with the quality and list of duties in EDCs are another concern of high importance. This causes presidents not to seriously consider EDCs and thus to allocate a small percentage of the budget to them. Moreover, such presidents do not invite EDC managers to meetings where they could be influential.

Disappointment observed among EDC managers is also a critical challenge in these centers. It could be due to several factors such as insufficient facilities and lack of knowledge or dominance on affairs related to EDC missions. A research by Heidari showed that faculties in universities of medical sciences do not have positive viewpoints about EDCs and EDOs; in other words, the place and activities of EDCs are not yet clear for faculty members (14).

Another problem in EDCs is absence of organizational charts and structures. While the place of EDCs is not well clarified, their duties are not known as well. The vagueness of EDC duties causes EDC agents in universities to be confused about what needs to be accomplished. Haghdoost et al. concluded that absence of an appropriate organizational chart was one of the greatest challenges in EDCs. They concluded that the best solution was development of a comprehensive organizational chart for EDCs and EDOs by national headquarters according to type of university (7).

Interrelationships play an important role in the promotion of organizations; an acceptable level of organizational interrelationships between sectors can facilitate useful interactions between centers. EDCs, however, have

an extremely poor relationship with each other and with the ministry. Similarly, the ministry does not have serious control over EDCs.

This internal problem in universities takes place when EDCs are not appropriately monitoring EDOs due to poor interrelationships between EDCs. Another major challenge is a poor relationship between EDCs and other sectors of the same university and also EDCs of other universities. This causes EDCs to be unaware of their achievements. Haghdoost et al. believed that poor relationships and inappropriate interactions within universities, particularly in educational fields, were among the most important challenges of EDCs (7).

It should be noted that one of the issues resulting from inadequate supervision and vagueness in the main duties of EDCs is diminishing the quality of education due to spending much time on extra activities. According to the study conducted by Tehran University, the majority of the faculties in this university claimed that paying much attention to research undermined the role of education in the promotion of the faculties. Consequently, education, as the main duty of the faculties, was negatively affected. Hence, they suggested to focus more on the quality of education (15). Moreover, Ranjbar and Vahidshahi claimed that the role of education was declining due to multiple reasons, such as absence of educational criteria during the employment of faculty members (16).

Clause 1-17 of the standards of accreditation of EDCs published by the ministry of health has described that “the centers should have a clear program for evaluating their output and the outcome of their activities”; yet, evaluation of EDCs is fraught with difficulties and the main issue in this respect is the definition of development indices (17). Therefore, a problem mentioned in the present study was that the follow-up of EDCs’ activities was not possible, and the main reason, as discussed in Clause 1-17, was the vagueness of development indices.

The absence of a standard evaluation system to assess faculty members’ performance is another challenge faced by EDCs. Undoubtedly, in case an appropriate evaluation system exists, faculties are more inclined to promote the quality of their activities to reach a better quality of education. Moreover, some studies have denoted that continuous evaluation and valid feedbacks play crucial roles in the promotion of education (13, 18-20).

5.1. Conclusions

According to our results, although several decades have passed since the foundation of EDCs, these centers are still facing serious problems. The most important challenges of EDCs are insufficient resources, constant change

of policies and managerial weaknesses, structural problems, weaknesses in communication, centralization in decision making, and supervisory problems. Using the potential of EDCs to improve the quality of education requires a coherent program and a serious determination to minimize the problems identified in this study. In order to resolve the challenges of EDCs, this program requires a systematic view to change the current situation and develop a long-term approach in strengthening EDCs so that they could accomplish their mission, i.e. improving the quality of medical education in the country.

5.2. Limitation of the Study

Due to the press of time and large number of the participants, the data was collected in written form through questionnaires. To triangulate the study findings, it is recommended to replicate the study using other methods of data collection such as interviews.

Acknowledgments

The authors would like to express their sincere gratitude to all managers of EDCs who kindly participated in the study.

Footnotes

Conflict of Interests: None declared.

Ethical Approval: The study was approved by the Ethics Committee of Kerman University of Medical Sciences (ethical code: IR.KMU.REC.1398.339).

Funding/Support: There was no support.

References

1. Kalantari A, Amiresmaili M, Ghazizadeh M, Zareei J, Hosseini S. [Job satisfaction of the staff of Kerman blood centers]. *Sci J Iran Blood Transfus Organ*. 2016;**13**(2):114-21. Persian.
2. WHO. *Health systems: Improving performance*. Geneva: WHO; 2000.
3. Rezaei B. [Quality of clinical education (A case study in the viewpoints of nursing and midwifery students in Islamic Azad University, Falavarjan Branch)]. *Educ Strategy Med Sci*. 2016;**9**(2):107-17. Persian.
4. Jalili Z, Nouhi E, Malekzadeh A. [Activities of Medical Educational Development Center from the views of the faculty members of Kerman Medical Sciences University]. *Strides Dev Med Educ*. 2004;**1**(1). Persian.
5. Esteghamati A, Shoghi Shafagh Aria F. [Educational development centers in universities of medical sciences and health services: Past, present]. *Iran J Med Educ*. 2002;**2**:22-3. Persian.
6. Momtazmanesh N, Shoghi Shafagh Aria F. [Educational development centers (EDCs) in universities of medical sciences: Treatment and medical education, roles, position and achievements]. *Teb va Tazkiyeh*. 2010;**76**:59-64. Persian.

7. Haghdoost AA, Emami M, Dehnavieh R, Momtazmanesh N, Shoghi Shafagh Aria F, Mehroliassani MH. [Evaluation of education development centers for medical sciences: Challenges and strategies]. *Strides Dev Med Educ*. 2015;11(4):407-19. Persian.
8. Kalantari AR, Rafiee N, Hosseini S, Noori Hekmat S, Haghdoost AA, Dehnavieh R. Evaluation of the task compliance of medical education development centers from the viewpoint of the managers of the centers. *Strides Dev Med Educ*. 2019;15(1). doi: [10.5812/sdme.58885](https://doi.org/10.5812/sdme.58885).
9. Graneheim UH, Lundman B. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Educ Today*. 2004;24(2):105-12. doi: [10.1016/j.nedt.2003.10.001](https://doi.org/10.1016/j.nedt.2003.10.001). [PubMed: [14769454](https://pubmed.ncbi.nlm.nih.gov/14769454/)].
10. Hsieh HF, Shannon SE. Three approaches to qualitative content analysis. *Qual Health Res*. 2005;15(9):1277-88. doi: [10.1177/1049732305276687](https://doi.org/10.1177/1049732305276687). [PubMed: [16204405](https://pubmed.ncbi.nlm.nih.gov/16204405/)].
11. Azizi F. *Medical education mission, vision and challenges*. 1st ed. Tehran: Ministry of health and medical education; 2003.
12. Torabian S, Vosugh Mogadam A, Sedaghat Syahkal M. [Evaluation of some aspects of educational inputs and outputs of community medicine departments in Iran medical sciences schools and universities]. *Strides Dev Med Educ*. 2007;3(2):95-101. Persian.
13. Changiz T, Shater Jalali M, Yamani N. [Exploring the faculty members' expectations from educational development centers in medical universities: A qualitative research]. *Iran J Med Educ*. 2013;12(12):947-64. Persian.
14. Heidari AA, Shoeibi A, Pourhaji F, Pourhaji F, Movaffaghi Z. [Investigating the awareness, attitude, and rate of satisfaction of Mashhad University of Medical Sciences Board of Education about the mission and position of the studies and Education Development Organization (EDO) and the Educational Development Center (EDC)]. *Future Med Educ J*. 2014;4(4):20-3. Persian.
15. Majdzadeh S, Nejat S, Gholami J, Rashidian A. [Satisfaction and opinions of Tehran University of Medical Sciences academic members on its development programs, 2006]. *Payavard*. 2008;2(1 and 2):6-17. Persian.
16. Ranjbar M, Vahidshahi K. [Effective factors on faculty members' job satisfaction in Mazandaran University of Medical Sciences, School of Medicine, 2006]. *Strides Dev Med Educ*. 2008;4(2):92-9. Persian.
17. Ministry of Health and Medical Education; Educational Development Center. [Accreditation standards of educational development center]. 2010, [cited 2011 March 25]. Persian. Available from: <http://edc.behdasht.gov.ir/index.aspx?siteid=180&pageid=20246>.
18. Fattahi Z, Mousapour N, Haghdoost A. [The trend of alterations in the quality of educational performance in faculty members of Kerman University of Medical Sciences]. *Strides Dev Med Educ*. 2006;2(2):63-71. Persian.
19. Aghamolaei T, Abedini S. [Comparison of self and students' evaluation of faculty members in School of Health of Hormozgan University of Medical Sciences]. *Iran J Med Educ*. 2008;7(2):191-9. Persian.
20. Ghafourian Borujerdi M, Shakournia A, Elhampour H. [Evaluation results feed back to faculty members of Ahvaz Medical University and its effect on improving the quality of teaching]. *Iran J Med Educ*. 2003;3(2):41-6. Persian.