

Original Article

Policy analysis of education transformation plan in iran's health system using walt gilson model

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Abstract

Background & Objective: Meeting the health needs of the community is the main mission of the field of medical education. Accordingly, the program of transformation and innovation in medical education has been developed as a strategic policy in the field of education in the form of 11 operational packages. Therefore, this aimed at policy analysis of the education transformation plan in the Iranian health system.

Materials & Methods: This directed qualitative study was conducted using the Walt and Gilson model. Data were collected using three stages: literature review, analysis of relevant policy documents, and semi-structured interviews. All sources and texts of the interviews were coded and analyzed in the form of categories related to the dimensions of the policy model framework.

Results: A total of 15 articles and 73 documents met the inclusion criteria and were included in the analysis in the present study. According to the analysis, 248 concepts were extracted, which resulted in 73 subclasses, 11 main subclasses, and 3 main classes after merging common concepts. The main categories included requirements of implementation, legislation, policymaking, and infrastructure management.

Conclusion: The implementation of the transformation and innovation program in the field of health system education requires paying attention to the political, legal, economic, social, and international factors as well as the existing problems. In addition, the proper implementation of this program requires the participation of internal and external stakeholders in the stages of policy-making, implementation, and evaluation.



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Introduction

The realization of an effective, accessible, sustainable, and quality health service delivery system is highly dependent on the state of the medical education system and the quality of human resources education (1). The higher medical education system in Iran has a unique structure due to its integration into the service delivery system and has faced challenges in the past (2).

Along with these challenges, the rapid growth of science, the speed of changes in the health system and the needs of society, the changes in the country's demographic structure, and the emergence of new and advanced technologies have complicated the conditions of medical education more than ever. These conditions have forced Iran's health higher education system to undergo transformation and reforms, and the reforms in this sector have been pursued as one of the most important reform programs in the medical system of Iran (1).

The medical education transformation and innovation program in Iran's universities of medical sciences is one of the steps of the transformation plan in the health system. In this program, twelve packages (11 operational packages and one monitoring program of transformational packages) were developed as the basis for educational transformation and development in 2015 following the analysis of the higher education program (3). However, the compilation of operational packages is not the final stage, and the realization of goals and macro policies through the implementation of packages depends on the translation of operational packages into projects and clear measures (4). Ahmadi et al. (2014) conducted a study to investigate the success rate of implementation of transformation plans in the field of strategic management. Their results showed a success rate of 58% for these transformation plans, and the overall

results indicated the relative realization of these goals in executive bodies and a long way to obtain the optimum system (5). On the other hand, the results of some studies suggested the failure of transformation/reform programs (6, 7).

Given the fact that the policy-making cycle is not limited to the development and implementation of the programs, and that the regular and proper evaluation of the programs will guarantee the correct implementation of organizational policies, the monitoring and evaluation program of these plans was also developed in the stage of developing medical education transformation and innovation packages, and the evaluation of the packages has been conducted along with their implementation from different perspectives (8). Given the conceptual framework of transformation programs evaluation in the health system, and regarding the fact that most studies are focused on the evaluation of the results and the executive problems of the procedure and are less focused on the investigation and analysis of policy-making procedures, it seems that at least part of investigation should be focused on the evidence-based analysis of this program in terms of policy-making.

Policy analysis provides the opportunity to meticulously examine the difficult definitions, the formulation and implementation of the policy, the allocation of resources, and the dimensions that influence the policy-making process. Walt and Gilson policy analysis model is one of these policy analysis models. This model has been especially recommended for policy-making analysis in the health sector and asks for a comprehensive analysis of health policies, especially in developing countries, in which policy analysis has been neglected despite the poor performance of the health sector and the failure of many reform plans (9). Nonetheless, it is possible to take basic steps in policy-making, developing programs, and taking appropriate measures in the future to accelerate problem-solving in the field of medical education by clarifying the nature of the subject as much as possible and analyzing the country's approach to design and criticism of past programs. In addition, the analysis and regularization of existing documents following the transformation plans will create a common language for the beneficiaries and prepare a suitable platform for the implementation of the upstream documents and the necessary interventions to improve the evaluation indicators (10). Therefore, this study aimed to analyze the policy-making in medical education evaluation plans in Iran's health system using Walt and Gilson policy analysis model.

Conceptual framework: Walt and Gilson triangle model was used to analyze the policy of education transformation plan in Iran's health system. The policy analysis triangle has three dimensions: process, content, and context, and actors (players) are at the center of this framework. This model shows how the four mentioned dimensions interact with each other in shaping and implementing a policy. "Actors" are a set of people, groups, and organizations that are involved in the implementation process and are affected by it. "Content" refers to the set of planned objectives and actions that implement the policy. "Context" refers to a set of systematic political, economic, social, and international factors that may influence policymaking in the field of health. "Process" also refers to all actions and activities carried out during the implementation of a given policy (11) (Figure 1).

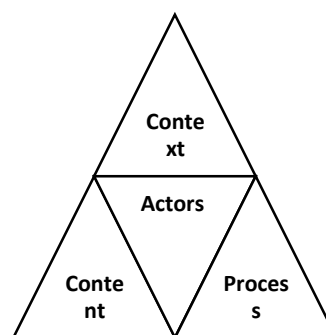


Figure 1: Model policy Walt and Gilson conceptual framework

Material & Methods

This qualitative study was conducted using the method of qualitative content analysis from November 1400 to April 1401 and was carried out to analyze the education reform policy in Iran's health system. The study sample included related articles, upstream documents, minutes of meetings, laws, regulations, bylaws, guidelines, approvals, programs, reports, articles, news, statements of meetings, and speeches delivered on the transformation plan in higher education in the field of health.

The following steps were taken to collect data from different sources and informed people. First, the literature was reviewed to find all the documents and studies conducted on the medical education transformation plan in the health system by conducting a systematic search in domestic electronic databases, such as Magiran, SID, Health Barakatks, and other electronic databases, such as Google Scholar, PubMed, Scopus, ISI in studies published between 2011 and 2022 using the

keywords such as “Education”, “Education transformation plan”, “Iranian health system”, “transformation and innovation”, “policy making”, “Medical education” “evaluation”, “Reform and Innovation” in both Persian and English languages. In order to ensure the comprehensiveness of the search, a manual search was also conducted in a number of Persian educational journals. After

reviewing the titles and abstracts of the obtained articles, irrelevant articles were removed and then the full texts of the remaining articles were studied. In the data extraction stage, a targeted method was used so that only the data that could be included in the national framework of policy-making were used and recorded. (Diagram 1)

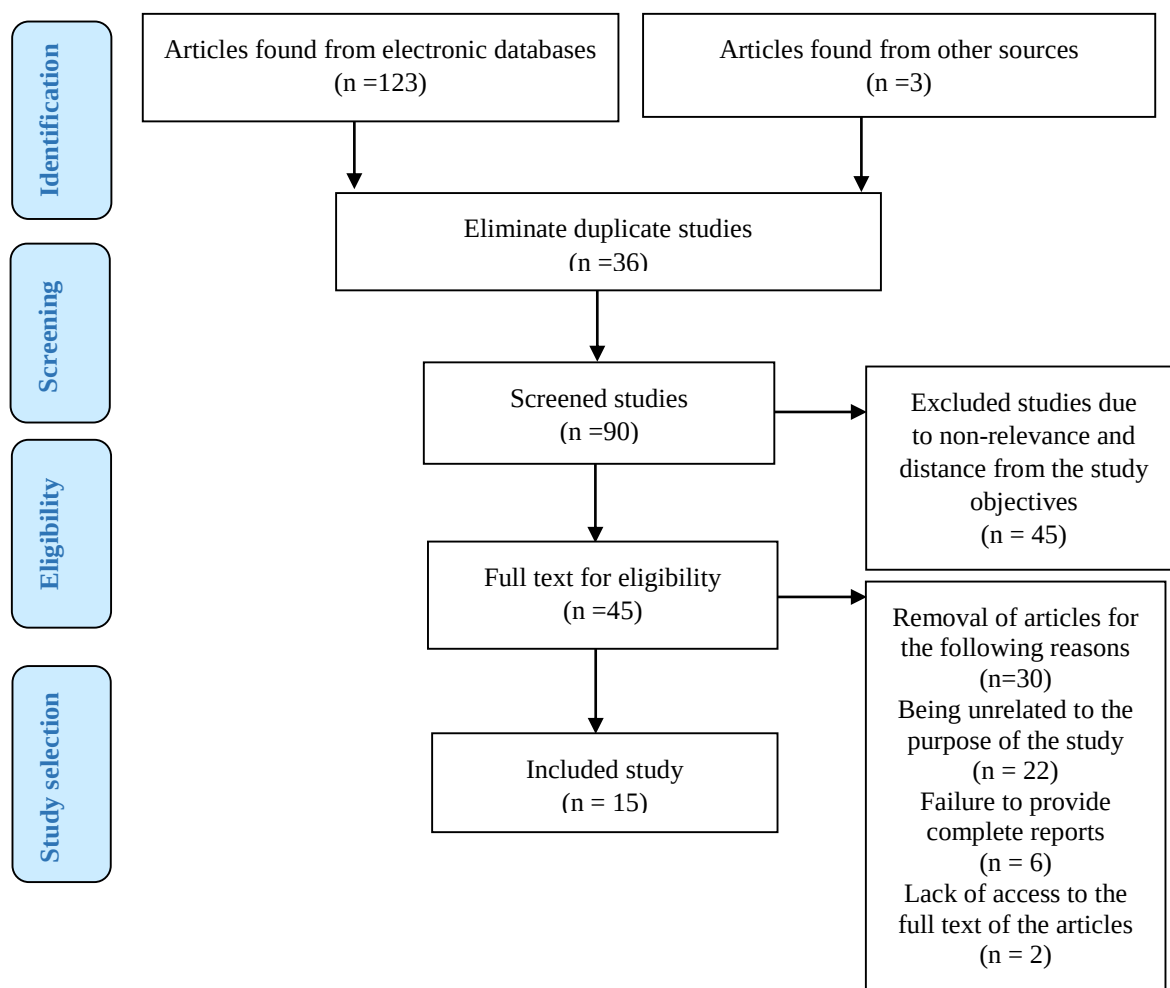


Diagram 1. Selection of studies based on PRISMA-ScR guidelines

In the next step, documents, papers, and policy documentation related to the medical education transformation plan, including upstream documents, meeting minutes, laws, regulations, by-laws, instructions, approvals, programs, reports, articles, news, statement of meetings, and speeches were identified and collected by review of literature, studies, published reports, as well as interviews with key informants. These documents were collected by referring to relevant centers, institutions, and organizations, and their data were extracted after

reliability evaluation. The process of data collection and analysis was carried out based on Krippendorff's criteria (Figure 2) (12). In this process, the relevant documents were carefully studied in the first step. In the second step, the validation of the collected documents was determined using Scott's four criteria (13) (Figure 3). Furthermore, the obtained documents were further evaluated by three knowledgeable people in this field and two people who were involved in the formulation and implementation of this policy.

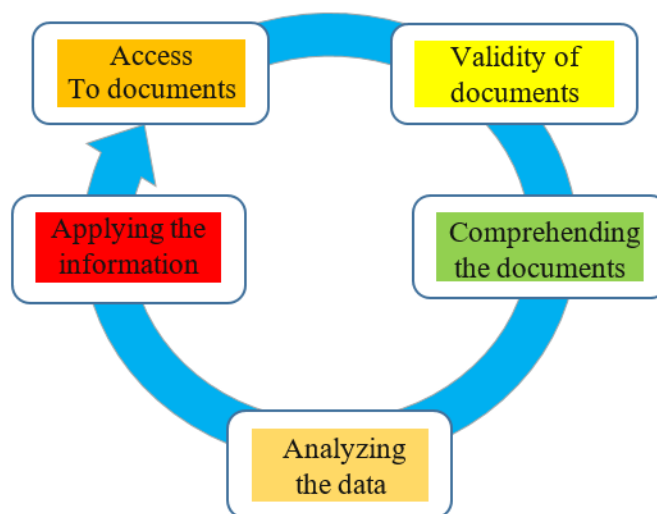


Figure 2. Krippendorff Document Analysis Criterion

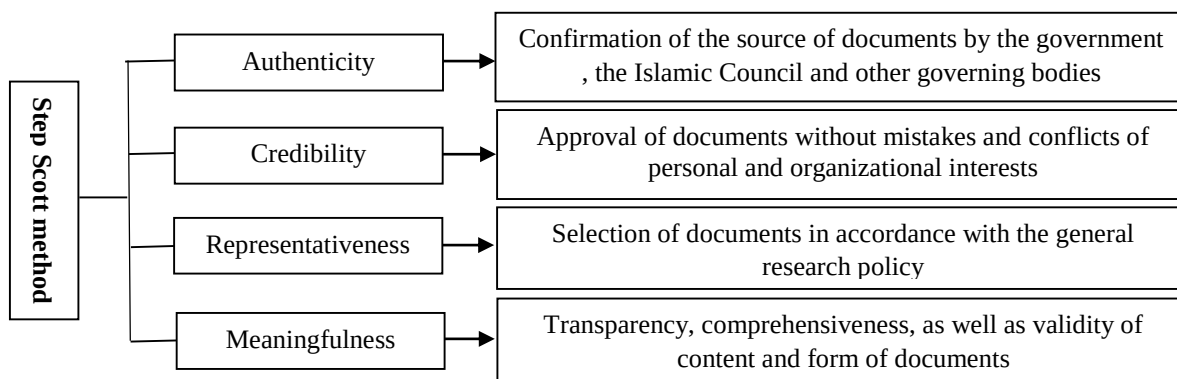


Figure 3. Scott's four criteria for validating documents

This stage was used to criticize and complete the findings that were extracted during the previous two stages. The informed people were asked to raise issues that may have been omitted and needed to be added to the study findings. In the next step, data analysis was conducted using the guided content analysis approach (Unconstrained Matrix based on the 2008 study of Elo & Kyngas (14) based on the Walt and Gilson policy triangle framework (9). The unit of analysis was “sentence” in this part of the study. First, to reach a general understanding, the text of each document was read completely and each sentence was considered as a semantic unit. A concept was extracted for each sentence and then concepts were compared based on their similarities and differences and then categorized into different subcategories. In the next step, the main categories were obtained after combining the subclasses. Data analysis steps are presented in Table 1. In addition, an example of the data analysis process is presented

in Table 2. Moreover, Lincoln and Guba’s four indicators of credibility, dependability, confirmability and transferability (15) were used in all stages of the research to ensure and increase the accuracy, reliability, and strength of data (15).

Results

According to the study objectives and the inclusion criteria in this study, 15 articles and 73 documents were selected for analysis in the present study. According to the conducted analysis, 248 concepts were extracted, which led to the identification of 73 subcategories, 11 main subcategories, and 3 main categories after merging the common concepts (Table 3). The main categories included requirements for implementation, legislation, policymaking, and infrastructure management. According to the content of the documents, the main role of the actors in the implementation of the

education transformation plan will be discussed in the following.

Table 1. Qualitative data analysis process based on Elo Kyngas method

Preparation stage	Select the unit of analysis	After converting the interviews into a text format, the explicit content (the same text of the interviews) and the hidden content (the non-verbal behavior of the participants) were analyzed and semantic units were determined.
	Find the logical connection of the data with the whole subject	In order to continuously and long-term engagement with the data, the interview text was read several times by the researcher to gain an overall understanding
	Creating an analytical matrix	Process, context, content and actors were placed as the main classes in the non-imposed matrix.
Organizing stage	Data extraction from content based on classes	The main classes were formed based on the conceptual and logical connection with other classes and finally the classes were determined based on the research framework.
	Grouping	The number of codes was reduced by merging similar codes based on their differences and similarities into more general codes.
	Classification	The formed groups were classified based on their differences and similarities (merging similar groups and forming classes).
	abstraction	The revealed classes were placed in the main and primary classes in the analytical matrix.
Reporting stage		The sampling process, participant characteristics, data collection, data analysis, and each of the main classes are reported in detail in the findings section.

Table 2. an example of data analysis

Theme	Categories	Subcategories	Quotation
Legislation and policy making	Collaborative performance	Interdepartmental communication The need for interdisciplinary cooperation	The process of the educational system requires the development of multilateral relations and cooperation with organizations and institutions and public and private assemblies. In other words, the standardization of the processes of the organization providing educational services and any organization depends on strengthening the organization's relations and its interactions with other departments. (Documents 2-5-7)

Table 3. Extracted theme, categories and sub-categories

Theme	categories	sub-categories
Requirements of implementation	Political and governmental drivers	Upstream laws and documents
		The priority of the project from the point of view of governance
		Support of political authorities
		The need for networking and decentralization in the higher health education system
		The task of producing and localizing valid scientific evidence (research)
		The important role of education along with health and treatment
		Realization of responsive and justice-oriented education
		The task of providing and training human resources
		Achieving universal health coverage
		Financial constraints and unfavorable economic situation
	Socio-economic drivers	Depreciation of the national currency
		Hyperinflation
		Various sanctions
		Health costs
	International drivers	Inadequate insurance coverage
		General concerns of society
		Unfavorable quality of health services
		Community demands
		Changing the texture and demographic pyramid of the country
		Fundamental changes in the face of diseases in the country
		Increasing burden of non-communicable diseases
		The emergence of new and advanced diagnostic and therapeutic technologies
		Global goals and programs compiled by international organizations
		Attending regional and global educational arenas
		Rapid development of science
		The emergence of new technologies and its benefits
		The speed of changes in the health system and the needs of society

Legislation, policymaking		The successful experience of some countries in implementing health system reforms The prospect of gaining scientific authority in the field of health sciences in the region Entering the field of universities of the third millennium
	Structural drives	Existence of formal and specific structures for policy making The existence of working groups, councils and specialized committees within and outside the organization The unique structure of Iran's health higher education system Integration of higher health education in the service delivery system
	Stewardship	Dispersion and extent of decision-making centers Weakness in the decision-making system Monopoly of different departments of the decision maker Need a unit coordinator
	Collaborative performance	The existence of parallel organizations Parallel work of different parts of the decision maker with each other The inconsistency of the education system with the healthcare service delivery system The need for interdisciplinary cooperation Inappropriate interdepartmental communication
	Specific planning	Lack of manpower Lack of attention to the infrastructure of the health system Inadequacy of executive organizations Flaws in evidence-based policy making Complete lack of transparency of the announced programs The transfer of managers and the resulting changes
	Supervision and monitoring	The lack of transparency of indicators indicating the quality level of medical science education Not knowing the result and output of the activities performed The responsibilities, roles, limits of duties and powers of each department are not clear Providing the basis for accreditation Weak monitoring and evaluation of approved policies and programs Weakness of regulatory laws and regulations
	Backgrounding	Development of executive policies Correction of rules and regulations Need to define some permissions Determining the limits of authority Specifying standards Creating the necessary structures
	Resource management	The need to estimate costs Determining the required budget Stability in financing Provision of physical facilities Provision of human resources
	Capacity building in society	Informing stakeholders Participation of stakeholders Organizational Culture The need for civil protection Attracting the participation of internal and external institutions Research Documentation and notification
	Infrastructure management.	

1. Requirements of implementation

Requirements of implementation in this study were focused on the contextual factors that could affect education directly and indirectly. This category consisted of four sub-categories including social economic drivers, political-governmental drivers, international drivers, and structural drivers.

1-1Economic and social drivers: Based on the available evidence, financial constraints, the

unfavorable economic situation in different parts of the country, the presence of various sanctions, the devaluation of the national currency as one of the most important determinants of health, refer to the demands of the society, false beliefs, and the culture of specialization.

1-2 Political-governance drivers: Governmental considerations, responding to the needs and demands of society, the existence of an integrated

decision-making system, appropriate interaction between macro-programs of higher education and socio-economic systems, comprehensive management and leadership, governmental credits and financial resources, and independence of academic sector, among others are the factors with highest frequency and influence on university development compared to other factors.

1-3 International drivers: these include international obligations that are formulated by international governing bodies. Adherence to these obligations is considered to be among the obligations of countries and has significant effects on the policy of the education transformation plan.

1-4 Structural drivers: One of the main challenges of the education transformation policy-making body that has been identified after studying the documents is the dominance of the government's point of view in the policy-making process and the non-participation of the non-governmental sector.

2. Legislation and policy making

This category consists of three sub-categories of supervision, collaborative performance, specific planning, and monitoring.

2.1 Supervision: This sub-category involves identification, prioritization, and empowerment of executive laws and provision of guidelines and strategies for all involved participants, interdepartmental policies, and acceptance of responsibility, macro accountability, and performance evaluation at the highest level.

2.2 Collaborative performance: This subcategory refers to the existence of various paths in the coordination of activities and programs of the educational system, which requires the development of multilateral relations and cooperation with public and private organizations, institutions, and corporations.

2.3 Specific planning: There is a need for specific planning due to the lack of complete transparency of the plans of the Ministry of Health, frequent changes in the structures, programs, and the existence of multiple programs.

2.4 Monitoring: There is a higher need for the review of the results and output of the activities, establishment of the necessary rules, regulations, and indicators, as well as provision of progress reports and feedback.

3. Infrastructure management

This category consists of three sub-categories of preparation, resource management, and capacity building in society.

3.1 Preparation: Preparation includes optimal policy making and providing legal, structural, and financial prerequisites. In this regard, the establishment of financial policies is necessary.

According to the structure of Iran's higher education system, the formulation of executive policies, the amendment of laws and regulations, and the determination of the limits of authority and standards are initiated by the development of necessary structures by the Ministry of Health, Treatment, and Medical Education, and communicated to lower levels.

3.2 Resource management: The need to estimate costs, determine the required budget, stabilize the provision of financial resources, and provide physical facilities and human resources are important issues that require more attention.

3.3 Capacity building in society: Capacity building in society will be possible through the design and implementation of public awareness programs, research development, awareness and participation of beneficiaries, paying attention to open organizational culture, the need for civil support, attracting the participation of internal and external institutions, and documentation and dissemination of information which will lead to the elimination of some irrational behaviors, changing attitudes, and correction of false belief.

Discussion

This study aimed at analyzing the education transformation policy plan in the Iranian health system using the Walt and Gilson policy analysis model. In analyzing the documents and the transformation and innovation plan packages, the findings were classified into three main categories, including the requirements of implementation, legislation, policy-making, and infrastructure management. The requirements of implementation, as the first main category of the present study, consisted of socio-economic drivers, sovereign political drivers, international drivers, and structural drivers, which refer to the influence of contextual conditions on policy making, implementation, and evaluation of the education reform plan in Iran's health system.

According to the obtained results, the political drivers of sovereignty are one of the effective contextual factors in this dimension. In politics, it is said that in today's world, "education is the fourth dimension of foreign policy", and educational cooperation is considered an investment for the future of diplomatic relations between nations. Since most of the political elites are chosen from among academics, the expansion of international scholarships and the acceptance of foreign students is a way of introducing one's culture and society to future political leaders and senior managers from other countries (16). The results of a study show that political factors are one of the most important factors

in the future of medical education, and student admission policies are among these factors. The researcher further explains that an estimate of the number of students and graduates and their employment status is not available (17). According to Al-Sawai et al., workforce planning is considered one of the important roles of health planners (18). Policymakers also play a vital role in the determination of laws, policies, and changing attitudes towards the field. The lack of a private job market is one of the concerns of the graduates for the future.

Walter and Craig believe that universities play a fundamental role in solving the problems of the labor market and industry. They can make students more competent by making changes in curricula and adding practical lessons (19). Meanwhile, the results of a study conducted in China show that the reform policies in China's education system encountered some challenges, such as the rapid increase in the number of students without the appropriate recruitment of faculty members, concerns over the decline of educational quality, outdated curriculum content, lack of attention to ethical professionalism due to limited technical training, and the increased acceptance of students who did not select medicine as their first career choice (20). Another political issue is prioritizing treatment and research over education. One of the reasons for reducing the priority of education is materialism, which can affect both treatment and student acceptance (17). An example of this can be found in virtual medical education courses. Johnson stated that the costs of virtual education include the costs of producing educational content, teaching, evaluation, and other necessary costs. On the other hand, virtual courses may have a positive effect and even lead to a reduction in educational costs (21). Therefore, it can be said that this group of factors alone can have an impact on the formulation and implementation of health policies and underline their sustainability and continuity, according to the reports on experiences of health reforms in different countries (9, 22).

Socio-economic drivers are also among the other factors affecting the reform programs in medical education. Reports show that the economic and social changes in the countries are significantly associated with the beginning or the end of the formulation and implementation of important reform policies in the health system (23). Obviously, adequate funding plays an important role in the implementation of a plan, and budget limitations lead to the incomplete design of the policy cycle and short-term decisions. Due to the government's lack of attention to higher education (it is not a priority), it does not have strong supporters in the Planning

and Budget Organization. Therefore, it is not possible to have a revolutionary view or ensure a significant increase in the budget for this issue (16). Faqih et al. reported that the economic situation of a country was one of the interesting factors for participants. Crises such as sanctions have reduced the use of sabbatical leave and international communication in all fields, including medical education (17). In a study, Vincent-Lancrin also examined the trends affecting higher education, including economic issues, financing, the importance of the market, and its governance (24). In addition, moving towards third and fourth-generation universities is one of the new concerns of all managers, policymakers, planners, and the university communities, which requires economic interactions. According to the European Union report, entrepreneurship has not yet been integrated into the curriculum of educational institutions and universities. Therefore, it is necessary to use interactive learning and teaching methods based on experience and multidisciplinary cooperation in the training of skilled and entrepreneurial people (18). Therefore, policymakers in higher education should implement strategies for the realization of the resistive economy that can create self-sufficiency and self-reliance in all fields.

According to the results obtained in the social field, social demand for education is the most important factor that has caused fundamental changes in the functions of higher education, which is the result of people's demands for education and has caused major changes in educational policies (25). The results of a study conducted by the American and Canadian Council of Higher Education Management Associations which aimed to identify the driving forces that affect the future of higher education in the next 10 years, showed that changes in demographic characteristics of students were one of the most important components of social drivers (26). Therefore, universities and higher education centers are one of the most influential organizations in developing countries. The mission of the universities has extended beyond science and research within the university to serve society. Moreover, universities are no longer institutions with a single role and have turned into multi-institutions that play multiple roles in different fields, i.e. education, research, service, publishing, and professional development (27).

The international drivers were another effective factor in the formation of the transformation program in medical education. International obligations, which are formulated by international governing bodies and adherence to them are among the obligations of countries, have significant effects

on the policy-making for the reform plans in the health system. Altbach et al. described internationalization as the specific strategies and innovations of countries and scientific institutions for aligning with global trends and includes policies for attracting international students and inter-university scientific collaborations and establishing overseas university branches (28). After analyzing 142 public universities in the United States, Hatlye and Morphey came to the conclusion that the importance of internationalization should be revealed in university statements and academic missions, and an organizational, motivational, and communicational structure should be provided for international communication (29). According to Shimmy and Yonezava, historical contexts, current conditions of universities, government programs for internationalization, and presence in global conditions are among the reform challenges faced by universities for internationalization (30). Therefore, for the internationalization of medical sciences universities, it is necessary to establish communication channels with prestigious universities worldwide, provide scientific and information exchanges with international associations on a continuous basis, and welcome new ideas in this field.

As the last sub-category of contextual factors affecting the structure of the Ministry of Health, Treatment, and Education we can refer to the available resources and facilities as important factors in the design and implementation of services. The education deputy of the Ministry of Health includes all organizations, institutions, and individuals, mainly in public and private sectors, that provide educational services. The formation of committees related to the politicization of the education reform plan and their continuous activity plays an important role in formulating the reform policy through political commitment support (31, 32). In addition to these policy structures, it creates an orderly and guiding framework by which the organization's activities are planned, organized, led, and controlled. It also defines the structure, duties, responsibilities, roles, working relationships, and communication channels in the given plan (33). The most important strong points of the method of developing a reform and innovation program for medical science education include special attention to the upstream documents of Iran's health sector, the interaction of policies, and general orientations of the comprehensive program and operational packages, and the interpretation of the twelve policies in the reform program of the health system (4). Also, the contents of the packages of education reform plans include the actual details of the policies

as well as the structural components of those policies. Each evolutionary package includes related policies, expected outputs, and the subject of the package. Khazaei et al. showed that if the policymakers and managers in the health education system and academic institutions of the country intend to make a reform in the field of educational research activities and scientific productions in the field of medical education as an important scientific field, the structural and administrative aspect of universities should be reviewed, the administrative regulations should be facilitated, and attention should be paid to the multifaceted nature of medical education and the importance of research in the field of education. Moreover, cumbersome administrative obstacles to the presence of professors in the field of educational research should be overcome and professional and motivational conditions should be provided to promote and facilitate research activities in the education of professors (34).

The second category resulting from the findings of the current study includes the legislative and policy-making category, which consists of four sub-categories of supervision, collaborative performance, specific planning, and monitoring. In Iran's health system, the Ministry of Health, on behalf of the government, is responsible for the design and accountability of the education reform plan among all actors at the highest level. The supervision of Iran's education system based on its coherent and centralized structure indicates the need for paying attention to all service-providing institutions. Actors inside and outside the government play an important role in the implementation of relevant policies. Meanwhile, paying attention to the issue of inter-disciplinary and multi-disciplinary participation and cooperation for the success and continuity of large-scale reform programs is of great importance. Walt and Gilson's model proposes the increase of internal and external communications and participation of players in increasing the awareness and participation of the community in accessing the services (9). Planning is the next subcategory of the policy-making and legislation category. The first step after the process of policymaking is decision-making and ordering. At this stage of policy-making, factors related to the issue or problem have been analyzed based on the advice of experts. These activities resulted in finding the desired options and solutions to solve the problem, which led to giving information and developing educational policies, taking into account all aspects of the problem. Developing educational policies are among the processes that can be used to make better use of the country's resources and make the educational system more efficient. Educational

planning should decide in advance about the most desirable approach for the development of the educational system (35). Mintzberg et al. and Altbach et al. emphasized planning thinking and the necessity of a development plan as a process of providing services and guidance (1, 36). Faqihi et al. (2020) suggested that social accountability is another issue that plays an important role in the future of disciplines. Then they explain that the curriculum must meet the needs of society. Various studies have been conducted on the unresponsiveness of educational curricula and their inability to train competent graduates (17).

Another study on the skills of graduate doctors in the United Kingdom showed that only 4% of graduates believed that the curricula were appropriate for creating competent doctors, and a large percentage (40%) disagreed (37). Chin et al. consider the roadmap as the most useful tool for the provision of quality services for organizations, policymakers, and researchers (38). Therefore, the role of high-level documents and programs for the transformation of the educational system and their impact on the future of this field should not be ignored.

Another important aspect in the policy-making process of the education transformation plan in the country's health system is the supervision, monitoring, and evaluation of this plan. Failure to pay attention to the need for evaluation of macro educational programs in the health system is one of the common challenges of low and middle-income countries in the field of health policy (39). However, the monitoring and evaluation of reform and innovation packages in medical science education have been done in different stages and a combination of scientific models has been used in the evaluation of these packages. The steps that have been taken in this regard include the formation of process evaluation and output-oriented committees, the development of indicators for monitoring and evaluation, and the design of the Athena system (40).

From February 2015, two stages of evaluation were implemented in the field of medical education. In order to plan for the output-based evaluation of these packages, monitoring and evaluation indicators of reform and innovation packages in medical education were compiled based on the expected outputs of each package. These indicators were reviewed in a meeting attended by administrative and university experts, and their initial revision was reviewed in the committee of reform and innovation packages in medical science education with a specialized approach. Also, these indicators were sent to the medical universities of the country for

review and the final revision was prepared after the application of all comments (4). Finally, the third level was infrastructure management, which consisted of three sub-categories of foundation building, resource management, and capacity building in society. Hussin et al. (2009) in Malaysian universities have mentioned several main factors, such as strategic development plans, government budget, providing infrastructure and facilities, and granting more authority to universities for development plans (41). In another study, the infrastructural arrangements, the geographical situation of the location of the university, the creation of interaction and communication between the macro programs of higher education and social economic systems, academic independence, and the feasibility of academic development capacities have been introduced as part of the requirements and conditions of academic development and facilitators of this process (42). According to Grauwe, the effective factors in the development of organizational capacity include human resources, financial resources, physical resources, infrastructure, management, and leadership (43). During the past two decades, this trend has been followed in our country as well, and the universities have enjoyed significant quantitative growth during this period. However, due to the lack of specialized human resources in recent years, many universities have been established and expanded regardless of the long-term needs of the community and their quantitative and qualitative levels. Furthermore, many well-established universities have also increased their capacity disproportionately (44). In this part of the model, it is suggested that necessary planning should be done to provide financial, human, and equipment resources.

The concept of community capacity development is relatively new, especially in the field of higher education management. Community capacity development is a process to develop the ability of individuals, groups, and institutions to face their development challenges and move towards the future through efficient management of resources and effective implementation of measures (45). Chaskin et al. and Naal et al. used community capacity building in the analysis of Neighborhood Family Initiatives (NFIs) (46, 47). Another study was conducted to determine how universities in developing countries can develop the capacities of communities through higher education. The researchers presented and proposed a framework for community capacity development in the field of higher education management whose main axes included the basic characteristics of community capacity, social agencies, and functions of

community capacity, facilitators, challenges, strategies, and consequences (13).

Among the effective factors, one can refer to the provision of thematic strategies and educational curricula, employee motivational strategies, community participation strategies, students, and strategies formulated to provide social facilities and infrastructures (13).

Study limitations

One of the most important limitations of the current study included the difficulty to access documents since there was no specific location for access to these documents on websites. Nevertheless, the analysis of documents can show the accomplished activities and future plans in the field of the education reform program in Iran's health system. Therefore, policymakers and managers in the country can be informed about the general view in this field.

Conclusion

The implementation of the transformation and innovation program in the field of health system education requires paying attention to political, legal, economic, social, and international factors as well as existing problems. Also, the optimal implementation of this program requires the participation of internal and external beneficiaries in the stages of policy making, implementation, and evaluation. For the successful implementation of the transformation and innovation program, it is necessary to take necessary measures to adopt supportive policies in different parts of the university and attract the participation of all employees and encourage them to teamwork, delegate authority, and grant them the independence of action and turn the discourse of reform and innovation into a common language in the universities and educational environments. This can be possible through the implementation of mechanisms such as structure and communication review, holding different training courses, and motivational programs, and making revisions in the management and leadership of educational processes for better implementation of this program. In addition, in order to achieve innovation, all levels of change and development should be taken into consideration including economic, social, political, international, legislative, and cultural levels

Ethical considerations

The current study was approved by the Research Ethics Committee of the National Center for Strategic Research in Medical Education (Nasr)

under the Ethics Code: IR.NASRME.REC.1400.422. After receiving the letter of introduction and referring to the related centers and organizations, written and verbal consent was obtained from all the participants in the study and they were assured about the confidentiality of their information, the voluntary nature of their participation, and the right to withdraw from the study at any time without consequences.

Conflict of Interests

The authors have no conflict of interest to declare.

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Contribution

Ashrafizadeh, Rokh Afrooz, Biranvand were involved in designing the study and preparing the proposal. Data collection and analysis were done by Ashrafizadeh and Biranvand. All three researchers participated in data interpretation, preparation, and final approval of the article.

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