

Original Article



# Evaluation Strategies of Iran's Medical Education Policies

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## Abstract

**Background:** The critical nature of the medical field necessitated an investigation into the evaluation of Iran's medical education policies. This study aimed to identify strategies for evaluating medical education policies in Iran.

**Methods:** This research, a mixed-method study, was conducted using grounded theory and a cross-sectional survey. Interviews were carried out with 17 individuals, including members of parliament, policymakers, and policy professors, using non-random method methods. Questionnaires were developed from the coded and validated interviews using the triangulation method. A total of 200 individuals were selected for this study. This mixed-method research was conducted using grounded theory and a cross-sectional survey. Interviews were carried out with 17 individuals, including members of parliament, policymakers, and policy professors, using non-random method methods. Questionnaires were developed from the coded and validated interviews using the triangulation method. A total of 200 individuals were selected for this study.

**Results:** The results revealed that the strategies for evaluating medical education policies encompass a range of factors. These include a simultaneous focus on institutional and non-institutional agendas, prioritization of social benefits, implementation of economic strategies, updating of resources and information, precise definition and design of policies, executive strategies, and policy considerations.

**Conclusion:** In the evaluation of policies, it is essential to adopt a community-oriented approach, with a focus on decentralization and public interests. This approach ensures that the objectives and general health needs of the population are met in a reasonable manner.

## Introduction

Education, as the university's paramount mission is the basis for sustainable human development.<sup>1</sup> The educational endeavors of any nation can be viewed as an investment made by one generation for the benefit of the next.<sup>2</sup> Medical universities play a pivotal role in advancing public health.<sup>3</sup> The evaluation of medical education policies is of great importance. Researchers in political, economic, and social transformation must pay more attention to higher education in the policy sector.<sup>4</sup> In our ever-evolving society, the demands for constant change and progression necessitate a continuous restructuring of higher education across all dimensions. This includes a radical rethinking of educational approaches.<sup>5</sup>

Policy forms are affected by various stakeholders at the global, national, and local levels.<sup>6</sup> Kante and Ndayizigamiye,<sup>7</sup> demonstrate that several issues, including a workforce shortage in the healthcare sector, climate change, demographic shifts, and changing lifestyles, pose significant challenges for policymakers in developing

countries. To address these concerns effectively, it is crucial to establish policies that not only propose practical solutions but also provide clear guidelines for their implementation and utilization.

For decades, the definition of evidence, its roles in policy and practice, and the ways to enhance and support these roles have been the subject of discussions among research funders, users, and producers.<sup>8</sup> The evaluation of the policymaking process and its outcomes is conducted through a limited-scope experimental implementation or primary performance. This involves data collection, which can be either quantitative, qualitative or a combination of both methods. The main criteria for evaluating educational policies are the educational objectives. These objectives serve as the key indicators for policy evaluation.<sup>9</sup> Broadfoot stated that politicians worldwide are turning to changes in assessment practices to influence policy decisions related to the conduct and desired outcomes of education. They have recognized that if the stakes are high enough, with individual life chances

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hinging on the results of these assessments, any alterations in the form or content of what is being measured will lead to corresponding shifts in curriculum emphasis.<sup>10</sup> Studies in Europe showed that the reform of higher education policies had increased the importance of prestige and reputation for European higher education institutions (HEIs).<sup>11,12</sup> Policies are expertly interpreted and changed in the field of action, and rhetoric, literature, and the meanings of policymakers are not always executed directly and explicitly in institutional ways. There is resistance against policies, and sometimes they are implemented incorrectly or simply not applicable.<sup>13</sup>

In addition to providing health care services, medical universities have an important role in training expert and skilled manpower needed by different sections of society.<sup>8</sup>

Medical education has gained astonishing developments simultaneously with the change in the entire higher education system of the world. The efforts of Abraham Flexner from the 1910s to 1940s sparked the first wave of medical education reform in Western countries, the result of which was an emphasis on curriculum standards and the provision of a planned learning experience. The second wave of reform took place from the 1960s until the 1980s in medical education of the world, which was influenced by the tremendous progress made in the andragogy learning theories. Scientists have noticed fundamental differences between the learning approaches of pedagogy and andragogy. The results of the second wave of reforms were the changes in educational methods and positions.<sup>14</sup> The concern about evaluating public policies or programs is something that has recently been incorporated into the political agenda, since administrators' priority was channeled into the policy formulation process, with little emphasis on the other stages of the cycle.<sup>8,15</sup>

The history of formal university education in Iran has a rich heritage, dating back to 1700 years ago. However, the journey of science and technology policymaking in Iran embarked on a new path approximately 100 years ago.<sup>16</sup> The Ministry of Health and Medical Education in Iran formulates legislation in collaboration with the Islamic Parliament of Iran, aligning with overarching documents such as general policies and the 20-Year Perspective Document for Iran. Policies in the realm of medical education have been delineated since the inception of the Ministry of Health and Medical Education, keeping pace with global advancements. These policies have been adapted at various times to meet the specific needs of the country's medical sciences, which the most important ones are as follows<sup>17</sup>:

- General policies of the health system
- Comprehensive scientific health plan
- University strategic plan in medical education
- Transformation and renovation document of Iranian medical education

The transformation and renovation document of Iranian medical education was another policymaking

experience in medical science education, compiled in 2011 by the Deputy of Education, Ministry of Health and Medical Education. This document, which emphasized the scientific and ethical foundations of the evolution and improvement of medical education, was not approved by any of the legal authorities inside or outside the Ministry of Health and remained within the limits of theoretical definitions.<sup>18</sup>

Over the past 25 years, medical education in the country has experienced substantial quantitative growth. This progress has effectively addressed the shortage of health care providers in the nation. The expansion of medical universities, the introduction of educational programs leading to certification, and the maximization of educational capacity have all contributed to this achievement.<sup>19</sup> Evidence shows that there are concerns about learning in medical education today,<sup>20</sup> which needs further investigation for its evaluation. Medical education has not been fundamentally revised in the last 30 years, and administrative reports or news interviews of some university presidents in recent years have emphasized the need to improve policymaking processes and adopt clear policies in this regard. Furthermore, the integration of medical education with the health system is still one of the points of disagreement among the policymakers and implementers of this education, and it seems that one of the solutions to sufficiently convince the implementers is to use appropriate policy approaches and strategies in policy evaluation. The current study looks for the identification of strategies for evaluating medical education policies qualitatively and quantitatively. It is hoped that it would pave the way toward real solutions in this field at the community level by showing the hidden and apparent aspects of medical education policy evaluation strategies. The results of this study can lead to improved policies and provide superior strategies in the field of medical education by presenting strategies for evaluating medical education policies.

### Materials and Methods

This study aimed to identify strategies for evaluating medical education policies in Iran. In this regard, this research has been conducted in two qualitative (grounded theory) and quantitative (cross-sectional survey) phases.

The grounded theory method was used to identify, and determine medical education policy evaluation strategies. The statistical population at this stage includes policy-making managers and professors of East Azarbaijan province, who were selected purposefully and non-randomly with two approaches, intensity and snowball.

Eligibility criteria include work experience in policy groups and decision-making councils, specialized education of at least a doctorate, teaching experience in specialized higher education courses in the field of educational sciences, higher education, health management and general medical treatment, fields of

study, dentistry and there have been similar areas. A semi-structured interview is used to collect data in the qualitative phase. It is tried to focus on the subject of the interview and maintain the flow of the interview continuously, with prior coordination and preliminary agreement in terms of choosing the time and place of the interview. The average duration of the interview was 35 minutes, a minimum of 16 minutes, and a maximum of 52 minutes. Examples of interview questions are: In your opinion, what strategies should be used to evaluate medical education policies? What are the ways to implement these strategies? The semi-structured interview with the experts continued until the saturation of the information, and three interviews were conducted after feeling the saturation of the data and not receiving new information to ensure the saturation of the data and new codes. A total of 17 interviews were conducted individually with 17 experts. The demographic characteristics of the participants are reported in Table 1.

Interviewees were 17 physicians and medical professors. They were 40-55 years old. The method of Strauss and Corbin was used to code the texts of the interviews. Among the reasons for using this method, we can mention the transparency of the steps of this method and the tendency of most of the grounded theory researchers in health sciences to use this method. This method consists

of three basic steps: (1) open coding; (2) axial coding; (3) Selective coding (Table 2).

To validate the results of this stage of the research, both the validation by the participants and the four criteria of Lincoln and Guba's qualitative research evaluation have been taken into consideration.

In the second stage of the research, the results of coding the texts of the interviews based on themes and subthemes in the form of a 5-degree questionnaire with 61 items were designed and provided to the research sample. The statistical population at this stage included professors and educational managers of medical education in East Azarbaijan province. The more basic ratio for determining the sample size in factor analysis is the ratio of 20/1, that is, at least 20 samples for each variable. Since we had 9 variables, 180 samples were confirmed in the first stage, and considering that the minimum sample size in factor analysis using the maximum likelihood method is 200 people. therefore, a total of 200 professors and educational managers of medical education in East Azarbaijan province, were chosen. To validate the strategies at this stage, first and second-order confirmatory factor analysis tests have been used.

This research was conducted following ethical principles and the ethical requirements included obtaining the informed consent of the participants in the research and

**Table 1.** Demographic characteristics of participants in the qualitative stage of the research

No.	Gender	Age	Education	Job records
1	Male	49	Subspecialty physician	University professor, Dean of the Faculty
2	Male	48	Physician	Vice-Chancellor for Education, University Professor
3	Male	45	Physician	University Vice-Chancellor, University Professor
4	Male	38	Infectious diseases specialist	Consultant, University Professor
5	Male	51	Specialty physician	University Professor
6	Male	44	Subspecialty pain	Subspecialty Physician
7	Male	50	Gynecologist	University Professor
8	Male	55	General physician	Assistant Professor
9	Female	40	Specialty physician	Scientific Board Member of University
10	Male	46	Physician	Vice-Chancellor for Education University Professor
11	Male	48	General physician	University Instructor
12	Female	46	Endocrinologist	Physician, University Professor
13	Female	45	Dentist	Subspecialty Pediatric Dentistry
14	Male	42	General physician	University Professor
15	Male	39	Gynecologist	University Professor
16	Female	41	Physician	Physician and University Professor
17	Male	55	General physician	Full Professor

**Table 2.** Coding sample by Strauss and Corbin method

Selective coding	Axial coding	Open coding	Interview text
Related strategies	Updating resources and information	- Considering the completeness of information and resources. - Precise definition of information resources.	Unfortunately, it has not been defined in the information resource system. Managerial information systems are not active, or if they are active, their information is not complete and correct. Information systems must be able to be a means of decision-making.

maintaining the confidentiality of the relevant information. Moreover, the ethical identifier of the research is IR.SSRC.1399.079.

## Results

The research findings are presented separately for the qualitative stage of the research, including answering the research questions, the quantitative stage of the study including the demographic characteristics of the studied sample, and the validation of the results of the quantitative analysis. In the qualitative phase of the study, the strategies for evaluating medical education policies and their components after coding the interview texts are as [Table 3](#).

Demographic characteristics of the studied sample in quantitative research: Ninety-six persons (48%) out of 200 statistical samples in this study were females, and 104 persons (52%) were males, of which seven persons (3.5%) had less than five years of experience, 68 persons (34%) had work experience of 5 to 10 years, 68 persons (34%) had a work experience of 15 to 20 years, and 16 persons (8%) had a work experience of more than 20 years. The strategies obtained from the qualitative research were provided to the respondents through a questionnaire, and the results of the first and second-order confirmatory factor analysis are as follows: Nine strategies and 61 items were used in the research factor analysis to examine the strategies related to the evaluation of medical education policies. Strategies for simultaneous attention to institutional and non-institutional agenda were examined with questions (1-6); Prioritizing social interests were examined with questions (7-10); Economic strategies were examined with questions (11-16); Updating resources and information were examined with questions (17-21); Precise definition and design of policies were examined with questions (22-28); Executive strategies were examined with questions (29-37); Systematic policy was examined with questions (38-44); Monitoring and evaluation strategies were examined with questions (45-52); Policy research was examined with questions (53-61). The criterion for validating factors and items related to each factor in the confirmatory factor analysis is that the amount of factor load is above 0.3. Accordingly, the observed factor burden of systematic policymaking and monitoring and evaluation was less than 0.3, which was not acceptable. The t-value also confirmed this result. Then, valid strategies in the validation phase were examined by eliminating systematic policy strategies and monitoring and evaluation as follows: Factor analysis of strategies related to the evaluation of higher education policies in the medical field after the elimination of invalid strategies:

In factor analysis, after eliminating systematic policy strategies, Monitoring, and Evaluation, seven strategies with 46 items were entered into the analysis as the related strategies. Each item is displayed with q1 to q2 indices. The factor load observed in all cases is a value greater than 0.3, which indicates that the correlation between hidden

variables and visible variables is acceptable. A significant test was performed after the correlation of variables was identified ([Figure 1](#)).

The T-value statistic was used to evaluate the significance of the relationship between variables. Based on the findings of [Figure 2](#), the t-value of the measurement indices of each of the scales used at the 95% confidence interval is more significant than 1.96 (except question 40), which means that the observed correlations are meaningful ([Figure 2](#)).

Normal chi-square fitting indices are desirable if the value is between 1 and 5.<sup>21</sup> In this study, the normal chi-square is equal to 1.99, and therefore the result is desirable. The root mean square error of approximation (RMSEA) index is also used as the main fit index in most confirmatory factor analyses and structural equation models. If the value of this index is less than 0.1, the fit of the model is excellent.<sup>22</sup> In the present model, this index is equal to 0.074, which shows that the fit of the model is also desirable.

Determining the priority and factor load of the model components: [Table 4](#) shows the factor load of all the studied items in the item number order. According to this item, entering the field of postgraduate education in priority fields of medical sciences needs to be facilitated, which is part of the executive strategy and has the highest factor load among all items. As a result, it can be found that this variable was the most important from the respondents' point of view.

## Discussion

The results of the research revealed that the strategies related to medical education policy evaluation strategies include components of simultaneous attention to institutional and non-institutional agenda; Prioritizing social interests; Economic strategies; Updating resources and information; Precise definition and design of policies; Executive strategies; Policy research is one of the related strategies for evaluating higher education policies in medical fields. Systematic thinking provides the health system with important theories, models, and approaches to understanding and assessing complexity. However, the utility and application of systems thinking for solution generation and decision-making is uncertain at best, particularly amongst health policy-makers.<sup>23</sup> In the current study, systematic thinking in the evaluation model of medical science policies was eliminated.

Decentralization has become the buzzword of health policy over the last decades. Decentralization is thus seen as a response to poor efficiency, slow innovation, and lack of responsiveness.<sup>24</sup>

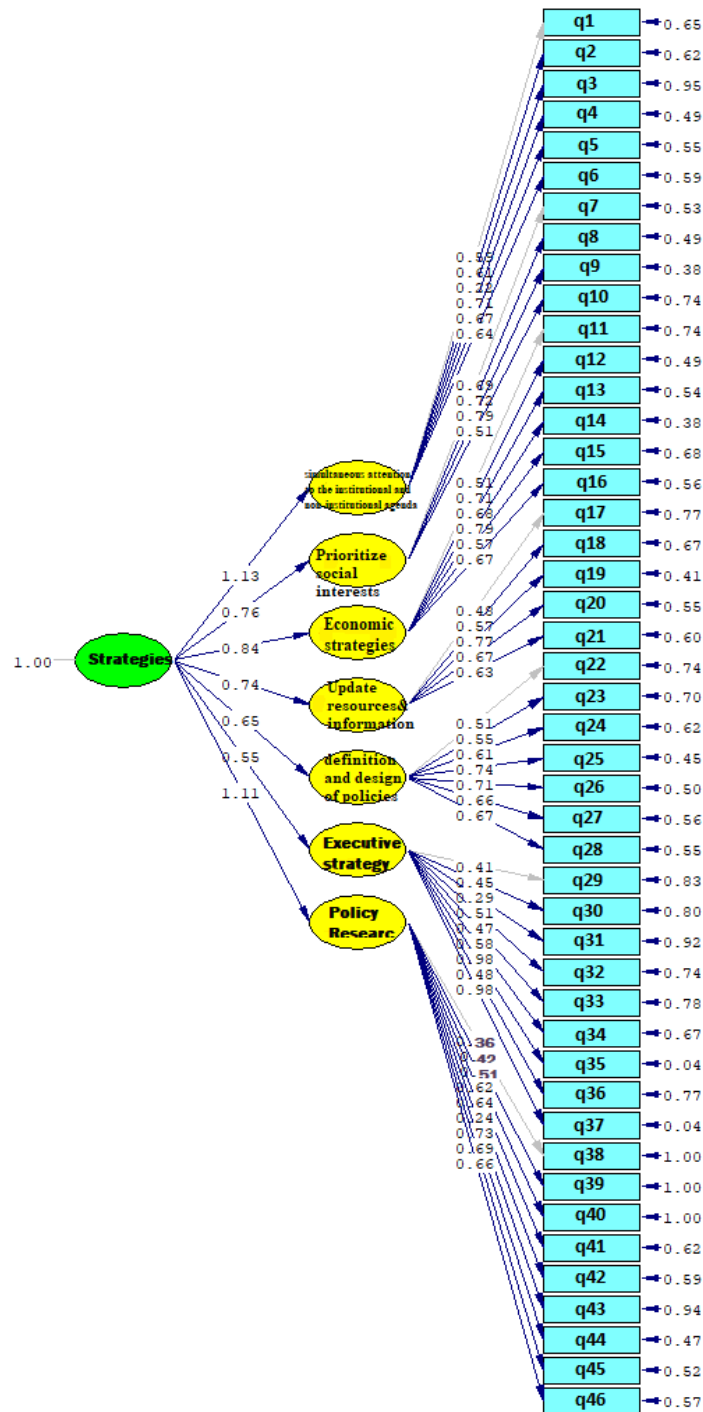
Common interests in the study of Kheiry et al,<sup>25</sup> also should be considered in the implementation of the policy and executive criteria for the organization of higher health education in the Islamic Republic of Iran, which is consistent with the results obtained, including prioritizing social interests in evaluating medical higher

**Table 3.** Medical education policy evaluation strategies

Strategies	Open codes (concepts)
Simultaneous attention to institutional and non-institutional agenda	<ul style="list-style-type: none"> <li>- Community-oriented policies</li> <li>- Family support for higher education policies</li> <li>- Government support for higher education policies</li> <li>- Normative selection from existing policies</li> <li>- Decentralization in the higher health education system</li> <li>- Offloading educational processes in various fields of admission, supervision, evaluation, etc, to academic medical universities.</li> <li>- Facilitate the presence of the private sector in higher medical education at all levels</li> </ul>
Prioritizing social interests	<ul style="list-style-type: none"> <li>- Conformity of public issues with the proposed policies</li> <li>- Focus on social interests</li> <li>- Paying attention to the dimensions of justice</li> <li>- Paying attention to the general needs of people and the country</li> <li>- Institutionalizing a responsive higher education approach in the health system</li> </ul>
Economic strategies	<ul style="list-style-type: none"> <li>- Paying attention to the type of universities and budget and facilities</li> <li>- Cost-benefit detection and estimation</li> <li>- Diagnosis and estimation of efficiency – effectiveness</li> <li>- Alignment of goals and interests</li> <li>- Simultaneous calculation of the capacity and productivity of different departments of medical education to make good use of available facilities</li> <li>- Using different and diverse fields of industries in the province to educate university medical students</li> </ul>
Updating resources and information	<ul style="list-style-type: none"> <li>- Paying attention to the completeness and updating of information and resources</li> <li>- Precise definition of information sources</li> <li>- Defining information communities</li> <li>- Decisions based on actual financial information</li> <li>- Identify different options for funding higher medical education</li> <li>- Developing new knowledge with an emphasis on interdisciplinary areas and focus on new science and technologies in both disciplines</li> </ul>
Precise definition and design of policies	<ul style="list-style-type: none"> <li>- Designing the right goals</li> <li>- Designing the comprehensive map</li> <li>- Paying attention to policy priorities</li> <li>- Typology of network policy type</li> <li>- Organizing policies</li> <li>- Paying simultaneous attention to the quantity and quality of higher education policies</li> <li>- Eliminating redundant regulations</li> <li>- Paying attention to institutional infrastructure</li> <li>- Taking advantage of the opinions of consultants and international policies</li> <li>- Improving educational processes in hospitals and academic centers</li> </ul>
Executive Strategies	<ul style="list-style-type: none"> <li>- Formation of executive working groups</li> <li>- Collecting executive information</li> <li>- Gathering relevant information to predict results</li> <li>- Using expert decisions</li> <li>- Having an executive commitment</li> <li>- Cleverly determine policy implementation</li> <li>- Expanding the context of clinical education in medical education</li> <li>- Diversification of student admission, recruitment, and evaluation methods</li> <li>- Development of distant and virtual education patterns in both medical and non-medical disciplines</li> <li>- Facilitate the process of entering the field of higher education in priority fields of medical sciences</li> <li>- Strengthening the equipment infrastructure of universities and educational hospitals in connection with education</li> </ul>
Systematic policymaking strategy	<ul style="list-style-type: none"> <li>- Determining the program of policies with execution ability</li> <li>- Analysis and option making</li> <li>- Predicting the desired and unwanted results</li> <li>- Dynamic policymaking</li> <li>- Regional planning of disciplines</li> <li>- Effective presence in the fields of regional and global education in higher health education</li> <li>- Utilization of hospital information management systems in the field of higher medical education</li> <li>- Identify existing national, regional, and global capacities in the medical education system to create knowledge-based wealth</li> <li>- Signing a letter of intent with industries related to medical science education to strengthen knowledge-based education</li> </ul>
Monitoring and evaluation strategies	<ul style="list-style-type: none"> <li>- Institutional and realistic evaluations</li> <li>- Pay attention to continuous evaluations</li> <li>- Accurate evaluation of higher education performance</li> <li>- Comprehensive feedback and correction</li> <li>- Following evaluations</li> <li>- Use of technical experts in the evaluation</li> <li>- Use of internal and external evaluations</li> <li>- Normative oversight of existing policies</li> <li>- Strengthen evaluation mechanisms in terms of technology and human resources</li> <li>- Determining the correct indicators for evaluations</li> <li>- Conclusion and follow-up of evaluations until actual results are achieved</li> <li>- Evaluate policy defaults</li> <li>- Evaluation of expected results</li> <li>- Attention to localization in higher health education to distribute human resources fairly</li> <li>- Establishment of a professional ethics monitoring system in higher medical education</li> <li>- Using monitoring, evaluation, and cross-assessment teams in the field of university pole</li> </ul>

Table 3. Continued.

Strategies	Open codes (concepts)
Policy research strategy	- Futurology
	- Development of policies based on the results of scientific studies and research
	- Politician participation
	- Futurism
	- Establishment of a medical education land management system
	- Diversification of admission systems for international students in medical education
	- Supporting top universities to enter international competitions in the field of medical sciences
	- Strengthen the delegation of authority to medical universities based on the land use planning model
	- Creating knowledge-based wealth in the field of the higher medical education system
	- Production and localization of valid scientific evidence for the promotion of higher medical education (education research)



Chi-Square=1963.98, df=982, P-value=0.00000, RMSEA=0.074

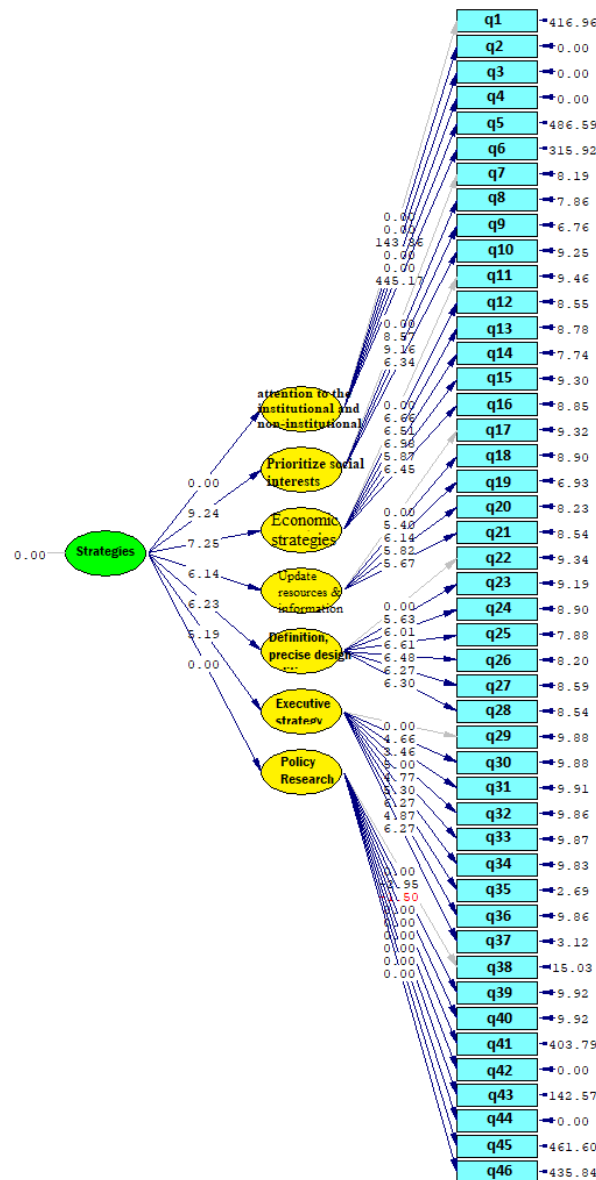
Figure 1. Standard coefficients test components of strategies related to the evaluation of medical education policies

**Table 4.** Factor burden of strategies related to the evaluation of medical education policies

Strategies	Items	Factor load	Status
Simultaneous attention to institutional and non-institutional agenda	1. The higher medical education policies should be holistic.	0.55	Approved
	2. Family and government support for medical higher education policies are beneficial to the community.	0.61	Approved
	3. To obtain valuable policies, a normative choice must be made from the existing policies in higher education in medical disciplines.	0.42	Approved
	4. Decentralization in the higher health education system needs to be further explored.	0.71	Approved
	5. The policies of entrusting educational processes in various fields of admission, supervision, evaluation, etc., should be assigned to medical universities.	0.67	Approved
	6. Policies to facilitate private sector participation in higher medical education at all levels can be effective.	0.64	Approved
Prioritizing social interests	7. Focusing on the public interest in medical higher education policies is a priority.	0.69	Approved
	8. In medical higher education policies, more attention should be paid to the dimensions of justice.	0.72	Approved
	9. Paying attention to the public needs of the people and the country in medical higher education policies can solve related problems.	0.79	Approved
	10. Institutionalization policies of a responsive higher education approach to the health System can be even more beneficial.	0.51	Approved
Economic strategies	11. Medical higher education policies should address the type of universities and the budget and facilities.	0.51	Approved
	12. Cost-Benefit Estimation - Benefit should be more specialized in medical higher education policies.	0.71	Approved
	13. To identify and assess the effectiveness of higher education policies, all aspects must be considered by experts and consultants.	0.68	Approved
	14. The alignment of goals and interests in higher education policies should be considered more than ever.	0.79	Approved
	15. Simultaneous calculation of the capacity and productivity of different departments of medical education in the university is possible by carefully evaluating the policies.	0.57	Approved
	16. Creating policies to use different and diverse fields of facilities and industries of the provinces for educating medical students at the university	0.67	Approved
Updating resources and information	17. In Medical higher education policies, attention to the completeness and updating of information and resources is one priority.	0.48	Approved
	18. Medical higher education policies require more robust information resources	0.57	Approved
	19. Medical information societies must be defined for detailed educational policies.	0.77	Approved
	20. It should be possible to access financial resource information for credible and accurate educational policies.	0.67	Approved
	21. Development of new knowledge with an emphasis on interdisciplinary fields and focus on science and new technologies in the field of medical sciences	0.63	Approved
Precise definition and design of policies	22. Medical higher education policies need to design the right goals.	0.51	Approved
	23. A comprehensive plan is needed for medical higher education policies.	0.55	Approved
	24. The typology of the policy network is one of the needs of successful policy in medical higher education.	0.61	Approved
	25. Medical higher education policies must be organized to achieve successful policies.	0.74	Approved
	26. Simultaneous attention to the quantity and quality of medical higher education policies leads to their accurate design in the current situation of the country.	0.71	Approved
	27. To formulate effective policies, more attention should be paid to institutional infrastructure.	0.66	Approved
	28. The opinions of consultants and international policies should be used more in formulating medical higher education policies.	0.67	Approved
	29. The formation of executive working groups in medical higher education policy should be discussed more than before.	0.72	Approved
Executive	30. Executive information must be collected regularly to implement medical higher education policies better.	0.41	Approved
	31. Review of executive commitment in medical higher education policymaking should be a priority.	0.45	Approved
	32. Implementation programs of medical higher education policies must be intelligent.	0.49	Approved
	33. Policies to expand the clinical education platform in higher medical education need to be taken more seriously.	0.51	Approved
	34. Diversification of admission, recruitment, and evaluation methods for medical students should be a priority.	0.47	Approved
	35. The development of distance and virtual education models in medical higher education policies should be made more than before.	0.58	Approved
	36. The process of entering higher education in the priority fields of medical sciences needs to be facilitated.	0.98	Approved
	37. The equipment infrastructure of universities and training hospitals needs to be Strengthened concerning education.	0.48	Approved

Table 4. Continued.

Strategies	Items	Factor load	Status
	38. Futurism is one of the requirements of successful policymaking in the field of medical higher education.	0.42	Approved
	39. Developing policies based on the results of scientific studies and research reduces repetitive errors in the field of medical higher education policy.	0.41	Approved
	40. Experts, specialists, and professors related to medical higher education must be engaged in policy research in that field.	0.00	Disapproved
	41. The land management system of medical education should be established to study the policy of higher education in the medical field.	0.62	Approved
Policy research	42. The strategy of diversifying the admission systems of international students in medical education should be given more attention.	0.64	Approved
	43. Policies to support top universities require standard criteria to enter international competitions in the field of medical science.	0.44	Approved
	44. Devolution policies for medical universities based on the land use planning model should be strengthened.	0.73	Approved
	45. The importance of creating knowledge-based wealth in the medical field of higher education policy should be more than ever.	0.69	Approved
	46. The production and localization of credible scientific evidence for the promotion of higher medical education (education research) should be at the forefront of policymaking.	0.66	Approved



Chi-Square=1963.98, df=982, P-value=0.00000, RMSEA=0.074

Figure 2. Statistics of the t-value test for components of strategies related to medical education policies



education policies. In the research of Pourabbasi et al,<sup>26</sup> critical issues in higher health education policy in Iran include implementing programs in the context of land management, attention to international standards, and planning for actions at the international level, which is consistent with the results obtained. In the study of Barimani et al,<sup>27</sup> reviewing policy in higher education based on knowledge market requirements, adapting curricula to the needs of society and industry and paying more attention to the social responsibility of the university, and providing educational and motivational programs for professors, students and staff and university administrators concerning the requirements of globalization and the components of the knowledge market and their empowerment are necessary, which is consistent with the results obtained in terms of updating resources and information. The results of this study are in line with the model of Ellahi and Zaka,<sup>28</sup> in terms of prioritizing social interests in strategies for evaluating medical education policies, which refers to public opportunities (stakeholder participation) in the evaluation model of the higher education policy framework. "Variety of educational programs", "Inclusive", and "Creating equal and continuous learning opportunities" in Kamyabi et al<sup>29</sup> were identified as some of the basic policies of medical education that need to be reviewed, and this finding is consistent with the results of the current study with a precise definition and design of policies that executive policies are part of the strategies related to the evaluation of medical education policies.

### Conclusion

Based on the strategies identified in this research as well as related research, in a general conclusion it can be said that improving medical education based on policies and evaluating policies requires contexts such as: appropriate use of expert human resources, decentralization, community-oriented, use of private sector facilities, respect for justice, attention to ecological features, compliance with information validation standards and information sources, new technologies, organization of existing policies, improvement of institutional infrastructure, dynamics in policy making, communication with industry, continuous evaluation, organization of evaluation mechanisms, supportive policies and future research.

By having such requirements, it is possible to ensure the correct evaluation of educational policies and hope for the improvement of educational policies through their revision based on the results of the evaluation, and provide effective and efficient implementation results in the medical education system. To solve the problems related to policymakers, it is suggested to adopt policies that can make more use of the bachelor's degree and higher health education in medical universities. Medical education policymakers can take advantage of the hospital information system in medical education to make the

necessary arrangements to solve the problems in this area. By creating a solid health-oriented policymaking body, steps can be taken to eliminate functional weaknesses in medical education policymaking and remove political constraints. It is also possible to strengthen the medical education infrastructure by building a specialized network in policymaking of the medical education system. It can be more effective in providing economic strategies by identifying and estimating more cost-benefit in medical education policies. Strengthening the equipment infrastructure of universities and teaching hospitals connected with medical education using new and up-to-date technologies can be one of the executive strategies of medical education policy. The strategy of updating information and resources by developing new medical knowledge, while emphasizing interdisciplinary areas and focusing on new science and technologies in the country and the world, can be proposed in medical sciences.

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### Authors' Contribution

**Conceptualization:** Behnam Talebi.

**Data curation:** Behnam Talebi, Hakimeh Ansari.

**Investigation:** Behnam Talebi.

**Methodology:** Behnam Talebi, Hakimeh Ansari.

**Project administration:** Behnam Talebi.

**Resources:** Behnam Talebi, Hakimeh Ansari.

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Authors declare no conflict of interests in this research.

### Ethical Approval

This study was approved by sport sciences reserch institute(ssri) research ethics certificate with the ethics Approval ID of IR.SSRC.1399.079.

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