

# Developing Accreditation Standards for Undergraduate Health Professions in Iran

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## Abstract

**Background:** Program accreditation is one of the approaches to improve the quality of educational programs and is increasingly used in medical science education. Considering the lack of a program accreditation model at the undergraduate level of medical sciences in Iran.

**Objectives:** The present study was conducted to develop accreditation standards for educational programs at the undergraduate level.

**Methods:** This descriptive cross-sectional study was conducted in 2020-2021 using a mixed qualitative-quantitative method in two phases. In the first and qualitative phase, the qualitative opinions of nine experts in the basic fields and standards (assessed by the research team in the previous descriptive-comparative study) were obtained by holding a focus group (semi-structured interview). In the second and quantitative phase, the obtained accreditation domains and standards were prepared as an online questionnaire and sent to 16 Iranian experts to confirm the final standards. After analyzing the data, the accreditation standards for undergraduate educational programs were proposed.

**Results:** According to our results, 12 domains and 69 criteria were proposed as accreditation standards for educational programs. The results of the analysis of content validity ratio and content validity index showed that the values of all 12 domains and 69 criteria were higher than 0.49 and 0.7, respectively. As a result, all domains and criteria were approved. Moreover, the intraclass correlation coefficient (ICC) in all 12 domains was higher than 0.96, indicating an excellent ICC in the proposed domains.

**Conclusion:** Providing the framework of local program accreditation standards and criteria helps improve and promote the quality of medical science educational programs and leads to the higher trust of domestic and foreign stakeholders in these programs.

**Keywords:** Program Accreditation, Medical Science Educational Programs, Focus Group, Delphi Method

## Background

In recent years, the Ministry of Health and Medical Education has witnessed an increasing growth quantitatively in both the number of faculties/universities of medical sciences and the variety of fields created. In this regard, maintaining and improving the quality of education and research and providing services have been among the main concerns of policymakers (1). Therefore, it is necessary to pay more attention to the quality of education as the main mean of providing the healthcare needed in the country and, finally, to enhance the health level of the society (2). In order to achieve this goal, continuous evaluation of the quality of the educational system and improving various educational courses and programs seems vital

(3). Studies worldwide confirm that higher education centers require a codified, scientific, and institutionalized evaluation system to assess the quality and accreditation of educational and curriculum programs (4-10). Several evaluation models have been considered to investigate the quality of higher education, among which the accreditation model has been accepted internationally and has been used almost as the exclusive evaluation model of higher education in many countries and universities (11).

Accreditation is the verification of the achievement of organizations and educational programs to predetermined standards, which is carried out by an independent external peer review assessor group of the same organizational level (12). The result of this

process is “granting credit, recognizing, and sometimes issuing an activity license whose validity period has a time limit” (13). In developing the accreditation model, developing standards is of central importance because these standards are instructions and guidelines for universities to which they must conform (14).

In order to be implemented, these standards must be in compliance with the political system, executive structure, and legal duties of higher education institutions in each country. Therefore, accreditation standards cannot be a translation of the standards of other countries at all (1). In Iran, the Secretariat of the Council for Medical, Health, and Specialized Education is directly responsible for evaluating and revising the curricula. The review of the current documentation and structure at this level shows that the accreditation of educational programs has mainly focused on the general doctoral level (15, 16).

In addition, a review of various studies dealing with the formulation and development of accreditation standards in Iran shows that limited studies have addressed the development of accreditation standards for undergraduate educational programs, which have mainly focused on nursing and midwifery fields. The evaluation of these investigations reveals the necessity of formulating and developing national and codified standards for integrating the accreditation of undergraduate educational programs in Iran (10, 17-22). Sharifi et al. (2021) in their study extracted the domains and accreditation standards of undergraduate educational programs using a comparative method (23). However, the evaluation of the mentioned extracted model and development of the proposed standards, as well as determination of the validity and reliability of these standards seem necessary from experts' perspective. According to the need to improve the health level of the society and move towards transformation in the field of medical science education, which is one of the major policies of the Ministry of Health, Treatment and Medical Education, as well as the need to be accountable, guarantee the quality and responsibility of the higher education system, the need to develop the national system, consistent and continuous quality assurance is felt. In this regard, integrated, coordinated, national criteria and standards compatible with local and regional culture for the accreditation of educational programs of various fields and levels of medical sciences would be helpful.

### Objectives

The present research was conducted using the model extracted by the researchers in the previous study (23), aiming at developing and quantitatively and

qualitatively evaluating the accreditation standards of educational programs in the clinical and non-clinical fields of the undergraduate level in medical sciences.

### Methods

This descriptive cross-sectional study with a mixed method in terms of data collection was conducted in two phases. The first phase of the research was performed qualitatively using the focus group technique. The focus group is one of the qualitative interview techniques designed to create interaction between group members to provide motivation for deeper discussion and reveal different and new aspects of the topic under discussion. This method, in its simplest definition, is a type of interview in the presence of a moderator who guides the discussion based on a preset guide (24).

In the present study, a group discussion meeting was held in the presence of nine accreditation experts. The meeting participants included prominent professors of Islamic Azad Universities and Kerman University of Medical Sciences who were experienced in the fields of institutional and program accreditation and entered the research using the purposeful sampling method. To this aim, a letter of invitation was sent to the participants by email stating the meeting objectives. The number of participants in a group discussion meeting depends on the topic, characteristics of the desired phenomenon, and data saturation. As a result, the number of individuals for a group discussion meeting is considered 4-8 and sometimes 8-12 people (25). At the beginning of the meeting, the objectives of the meeting were explained to the participants. Afterwards, the meeting facilitator presented the domains and criteria for the accreditation of the undergraduate level educational programs resulting from a comparative study that examined the accreditation standards of other countries in the world (23). Following the discussion and exchange of ideas between the participants regarding the proposed accreditation domains and criteria, the initial framework of standards was extracted. Therefore, the required reforms and changes regarding the content necessity and appropriateness, appropriate domains and standards, and the used literature and their writing style were identified and applied. At the end, 12 domains and 69 criteria were finalized.

In the second phase of the research, the information of the findings regarding the accreditation frameworks and standards, which was compiled as a semi-structured questionnaire, was adjusted online using the Porsline questionnaire maker software (<https://porsline.ir>). Next, in order to verify the

information obtained using the Delphi method, the questionnaire was sent to the medical sciences experts of the country via email on two occasions to determine the final factors and criteria. Finally, the data were analyzed and summarized.

The Delphi method was initially designed and implemented in the 1950s by the Rand Aerospace Corporation to examine the experts' opinions and predict future events. The popularity of this method is mostly for its high potential to obtain the opinions of experts who are far from each other (due to using computer or sending consecutive questionnaires) and are not possible to be gathered in one place for various reasons. By using successive rounds and controlled feedback, this method seeks to reach a reliable consensus from the opinions of experts in a field (26). The Delphi method is intended to use the positive features of group interaction. This method has prominent features, such as anonymity, repetition, controlled feedback, and statistical aggregation of responses (27). At this stage, the sampling method was purposeful and snowballed, and a number of experts in the field of accreditation that had responsibility and experience in the accreditation of educational institutions and programs were included in the study. The number of participants in the Delphi method is often less than 50 people, and 10-15 people are enough in homogeneous groups (26). Consequently, the mentioned questionnaire was sent on a three-point Likert scale (completely suitable, suitable, and unsuitable) to 21 accreditation experts and was completed and returned by 16 people. After receiving the completed questionnaires in the first round, organizing the answers, and applying the comments, a new questionnaire was sent to the participants through the Porsline software to collect the opinions and suggestions of experts regarding the compatibility of the proposed standards with the country's educational conditions and to achieve a relative agreement (26).

Following collecting the questionnaires of the second stage of Delphi, data were analyzed to verify the developed standards. For this purpose, content validity ratio (CVR) and content validity index (CVI) were used (28-30). Given the number of study participants ( $n=16$ ), items with a CVR higher than 0.49 were accepted, and items with a CVR lower than 0.49 were removed from the questionnaire (31).

In the present study, items with a CVI higher than 0.79 were considered acceptable, those with a CVI lower than 0.7 were considered inappropriate and removed, and items with a CVI of 0.7-0.79 were modified (32). The intraclass correlation coefficient (ICC) was used to determine the reliability of the questionnaire. The ICC was first introduced by Fisher in 1954 as a modification of the Pearson's correlation coefficient; however, the modern ICC is calculated by the mean square (e.g., estimating population variance based on variability among a given set of criteria), which is obtained through the analysis of variance (ANOVA). Today, ICC is a widely used reliability index in the assessment of interrater and intrarater reliability (33).

Koo and Li (2016) suggested the general guidelines for interpreting ICC values as follows:

Values of <0.5, 0.5-0.75, 0.75-0.9, and >0.9 indicate poor, moderate, good, and excellent reliability, respectively. For example, at a 95% confidence interval, if the ICC estimate is 0.83-0.94, the level of reliability can be considered "good" to "excellent" (34).

## Results

According to the demographic characteristics, 70% of the focus group interview participants (the first phase) were female, and 56.3% of the Delphi phase (the second phase) respondents were male. The participants in the first and second phases were experts in educational psychology, curriculum planning, educational management, medical education, nursing education, health services management, health information management, health policy-making, health in disasters, and Occupational Health and Safety. In the first phase of the study, to evaluate the initial framework of the proposed standards, including 14 domains and 78 criteria, the "course evaluation" domain was removed from the main domains. The "continuous review and quality assurance" domains were proposed to be integrated into a single domain, and the "top and executive management" was renamed to "organizational management and structure." Other minor changes were also made to the title of some domains. Moreover, out of the 78 proposed criteria, nine were deleted, 24 were modified based on opinions, and 45 were left unchanged. Table 1 shows the primary standards resulting from the focus group.

**Table 1.** The primary proposed domains resulting from the focus group

Number	Titles of the Primary Domains	Criteria Number	Titles of the Domains Resulting from the Focus Group	Criteria Number
1	Mission and goals	7	The program's perspective, mission, goals, values, and strategies	7
2	Educational program	12	Educational and curriculum program	8
3	Teaching and learning	4	Teaching and learning processes	4
4	Student evaluation	3	Student evaluation	3
5	Students	6	Students	6
6	Faculty	8	Faculty members and human resources	8
7	Educational resources	7	Educational resources (space, facilities, and equipment)	7
8	Top and executive management	4	Organizational management and structure	6
9	Continuous review	3	Continuous review and quality assurance	5
10	Graduates	4	Graduates	5
11	Research and scholarship	5	Research and scholarship	5
12	Stakeholders' satisfaction and expectations	5	Stakeholders' satisfaction and expectations	5
13	Quality assurance	6		
14	Course evaluation	4		

Based on the second phase to determine the final accreditation standards for the educational programs using the experts' opinions by the Delphi method, the CVR and CVI of all 12 domains and 69 criteria were higher than 0.49 and 0.70, respectively; hence, they were approved. However, the "communication with graduates after graduation" criterion in the "graduates" domain and the "extra-group activities" criterion in the "organizational management and structure" domain, which had CVI of 0.70 and 0.79, respectively, were modified and reviewed as "educational communication with graduates" and "interdisciplinary educational and research activities of the educational department members." Finally, the experts approved 12 domains and 69 criteria. At the end of this stage, the ICC was used to determine the reliability of the questionnaire and the rate of ICC (inter-raters). The findings showed that the ICC was higher than 0.96 in all domains. According to the instructions for interpreting this coefficient (0.05-0.75 = moderate reliability, 0.75-0.90 = good reliability, and >0.90 = excellent reliability), the results showed an excellent ICC in the studied domains. Also, the ICC in 65 of the 69 examined criteria was obtained higher than 0.90, indicating an excellent ICC, and was higher than 0.85 in four criteria, indicating a good and acceptable ICC (Table 2). Finally, all 12 domains and 69 criteria were approved at this stage.

## Discussion

The current research aimed to provide local and appropriate criteria by developing accreditation standards for undergraduate educational programs of Iran's medical sciences to improve the quality of the medical science education programs and enhance the trust of domestic and foreign stakeholders in these programs. The study of established accreditation

systems in other countries has shown that the accreditation commissions in those countries have defined program and institutional accreditation standards to help the institution achieve quality and effective education and promote participation (1). Many domestic and international studies have confirmed eight out of the 12 domains in this study, including "mission and goals, educational program, students, educational resources, student evaluation, faculty, organizational management and structure (top and executive management), and continuous review and quality assurance (continuous review)" (4, 7, 9, 10, 17-19, 21, 22, 35). The review of the accreditation models of the countries investigated in the present study also confirms these results. For example, the above eight domains have been included in the nine domains accepted by the national standards of the general medical course of Iran, the World Federation of Medical Education (WFME), and Kazakhstan (16, 36, 37).

The Subcommittee of Undergraduate Medical Education of the Medical Council of Malaysia has developed seven standards for nursing accreditation, which, apart from the mission and goals, cover the other seven domains mentioned above (38). Therefore, it seems that the 12 domains mentioned in this study will cover all aspects of an educational program in the accreditation process.

The proposed accreditation model in the present study includes four innovative domains for the first time in Iran's accreditation standards of educational programs: (1) teaching and learning processes, (2) graduates, (3) research and scholarship, and (4) stakeholders' satisfaction and expectations.

### 1. Teaching and Learning Processes

Examining the contemporary sources regarding learning and teaching in higher education denotes briefly

that one of the missions of higher education is teaching how to learn and providing conditions for student learning. Teaching and learning mean “interaction between the faculty member and the student,” aiming to make a favorable change in the student’s performance and behavior. Students are one of the subcomponents of the teaching and learning processes that should be evaluated in the best manner (39).

Although the “teaching and learning processes” domain was not used as an independent domain in the reference standards investigated in this study, it was one of the main domains of the accreditation models of Australia, South Africa, and the European Union and also a subdomain and criterion in other investigated models, e.g., in the United States, the United Arab Emirates, Malaysia, and Caribbean countries (38, 40-45). The research team decided to add the “teaching and learning processes” domain to the main domains of the proposed model (10, 17, 18, 35, 46).

## 2. Graduates

Identifying graduates as the most important output of the higher education system creates a correct understanding of the concept of graduation, recognizes the graduates’ characteristics, needs, attitudes, goals, and expectations, helps universities in reforming customer-oriented policies and becoming a responsive organization, and promotes the graduates’ scientific level and society’s progress. Therefore, the university’s inattention to graduates and the lack of planning to identify and communicate with them will create an incomplete relationship and a vicious cycle between the educational system and its main elements, Depriving both parties of the extensive benefits of continuous communication (47). According to Konzak and Teague, creating a strong connection between the university and graduates is essential for the university’s success and development.

**Table 2.** Content validity ratio, content validity index, and intraclass correlation coefficient of questionnaire domains and criteria

Domains and Criteria	CVR <sup>a</sup>	CVI <sup>b</sup>	ICC <sup>c</sup>
The first domain: The program’s perspective, mission, goals, values, and strategies	0.713	0.857	0.970
A1: The program’s perspective, mission, goals, values, and strategies	0.667	0.834	0.838
A2: Compatibility/appropriateness of the program’s perspective, mission, and goals with the supporting institution (university/faculty) and national and global upstream documents	0.708	0.854	0.824
A3: Designing the program’s set of perspectives, missions, goals, values, and strategies	0.679	0.839	0.932
A4: The participation of all related people (stakeholders) in developing the program’s mission and goals	0.750	0.875	0.800
A5: Periodic assessment of the program’s goal achievement level	0.689	0.844	0.841
A6: Periodic evaluation and review of the program’s mission and goals	0.625	0.813	0.875
A7: Social accountability	0.875	0.938	0.811
The second domain: Educational and curriculum program	0.850	0.925	0.986
B1: The program’s quality and adequacy (competency)	0.734	0.867	0.928
B2: The program’s educational content	0.750	0.875	0.870
B3: The program’s design and implementation	0.860	0.930	0.942
B4: Educational strategies	0.812	0.907	0.837
B5: Training clinical sciences and skills	0.875	0.938	0.941
B6: Distance (virtual) learning	0.732	0.866	0.856
B7: Curriculum	0.967	0.984	0.951
B8: Curriculum evaluation processes	0.813	0.907	0.924
The third domain: Teaching and learning processes	0.839	0.923	0.988
C1: Teaching-learning methods	0.857	0.929	0.978
C2: Educational materials and tools	0.918	0.960	0.932
C3: Learner-trainer interaction	0.777	0.889	0.966
C4: Learning and teaching methods in clinical and practical environments	0.829	0.915	0.917
The fourth domain: Student evaluation	0.839	0.931	0.974
D1: Student evaluation system	0.912	0.956	0.911
D2: Evaluation methods and tools	0.778	0.914	0.952
D3: Analysis and improvement of tests	0.846	0.923	0.957
The fifth domain: Students	0.825	0.907	0.993
E1: Student’s admission and selection	0.692	0.885	0.956
E2: Advising and supporting students	0.819	0.909	0.984
E3: Participation of student representatives	0.784	0.892	0.954
E4: Student services	0.846	0.923	0.985
E5: Extracurricular activities	0.815	0.908	0.963
E6: Students’ academic progress and performance	0.846	0.923	0.969



The sixth domain: Faculty members and human resources	0.746	0.893	0.988
F1: Characteristics and composition of faculty members	0.670	0.908	0.904
F2: Faculty members' activities (a: Educational activities; b: Executive activities)	0.846	0.923	0.955
F3: Faculty and non-faculty members' professional qualifications	0.786	0.905	0.960
F4: Administrative and technical staff	0.790	0.895	0.958
F5: Rank promotion, professional development, and empowerment of professors	0.884	0.942	0.957
F6: Assistant clinical instructors and laboratory experts	0.810	0.923	0.967
F7: Recruitment and employment conditions of faculty members	0.624	0.819	0.975
F8: Faculty members' evaluation	0.703	0.879	0.974
The seventh domain: Educational resources (space, facilities, and equipment)	0.763	0.888	0.993
G1: Physical resources	0.754	0.877	0.981
G2: Clinical and educational resources (hospitals, healthcare centers, and laboratories)	0.615	0.847	0.962
G3: Library	0.858	0.929	0.975
G4: Computer facilities and services	0.820	0.910	0.970
G5: Clinical skills center and simulated department	0.784	0.892	0.942
G6: Educational and teaching aids	0.846	0.923	0.989
G7: Information technology	0.637	0.836	0.947
The eighth domain: Organizational management and structure	0.666	0.849	0.983
H1: Top and executive management	0.810	0.929	0.926
H2: Administrative organization	0.622	0.846	0.919
H3: Interdisciplinary educational and research activities of the educational department members	0.500	0.750	0.875
H4: Crisis management	0.718	0.859	0.946
H5: Development of department's resources	0.590	0.831	0.942
H6: Financial sources and budget	0.615	0.824	0.946
The ninth domain: Continuous review and quality assurance	0.736	0.865	0.992
I1: Program monitoring and evaluation system	0.775	0.904	0.967
I2: Program review and development	0.739	0.870	0.968
I3: Quality assurance policies and procedures	0.739	0.870	0.970
I4: Quality assurance unit	0.615	0.808	0.980
I5: Management of quality assurance processes	0.750	0.875	0.963
The tenth domain: Graduates	0.621	0.854	0.968
J1: Graduates' education continuation	0.692	0.846	0.951
J2: Educational communication with graduates	0.500	0.750	0.943
J3: Graduates' research activities	0.539	0.846	0.924
J4: Graduates' employment status and specialized skills (from the employers' and service recipients' perspective)	0.667	0.861	0.929
J5: Analyzing graduates' performance	0.670	0.908	0.884
The eleventh domain: Research and scholarship	0.742	0.878	0.977
K1: Strategies and policies	0.824	0.912	0.943
K2: The output of research studies and scholarly activities	0.661	0.866	0.856
K3: Participation of professors and students in research	0.846	0.923	0.962
K4: Research facilities and equipment	0.641	0.845	0.911
K5: Scholarship	0.648	0.846	0.940
The twelfth domain: Stakeholders' satisfaction and expectations	0.766	0.887	0.979
L1: Stakeholders' expectations	0.644	0.878	0.929
L2: Students' satisfaction	0.852	0.926	0.961
L3: Faculty members' satisfaction	0.924	0.962	0.953
L4: Employers' satisfaction	0.700	0.850	0.924
L5: Other external stakeholders' satisfaction	0.633	0.817	0.976

<sup>a</sup>Content validity ratio, <sup>b</sup>Content validity index, <sup>c</sup>Intraclass correlation coefficient

The "graduates" factor was not among the independent domains in the reference models used in the research; however, as some models recognized it as a criterion of the main domains, such as the accreditation models of the United Arab Emirates, Malaysia, and Kazakhstan (8, 10, 17), it was proposed as an independent domain in the current research.

### 3. Research and Scholarship

By definition, scholarship refers to any outstanding scientific activity in the areas of discovery, education,

application of the results of original studies, integration of information obtained from different components of a field or different fields, research and innovation in each of the above areas, performing an outstanding activity to solve the problem, expanding the boundaries of knowledge, and entering new arenas. Educational scholarly activities include all educational activities at different levels, such as teaching, educational planning, guidance, counseling, educational management and leadership, and learners' evaluation (48).

The important aspect of scholarship is its educational aspect. Hence, publishing and expanding the process and the results of the performed activities provides the possibility of criticism and evaluation by other individuals and guides the educational community to take its next steps based on these results. Although the faculty members are first hired as teachers, they are evaluated in the role of researchers, and the functions of teaching and learning are diminished in the shadow of the research orientation governing the university. Research governance and the weakening of other roles of faculty members also exist in most universities in the world (49).

Since the academic research activities are extensive and some research components in the university are necessary for the promotion of faculty members, it can be said that after education, research is an inseparable part of the functioning of the university system and should be considered in the evaluation of educational institutions (50). Therefore, the third domain that was considered the main domain in the proposed model for the first time was the “research and scholarship” factor (5, 8, 17, 19, 50-52).

#### 4. Stakeholders' Satisfaction and Expectations

The fourth factor proposed in this model as an independent and main domain is the “stakeholders' satisfaction and expectations” domain. In the literature, only the European Union accreditation model had included a criterion called “students' satisfaction with the program” in the two “continuous review” and “information management” domains (42), and the Saudi Arabia accreditation model had placed the “students' satisfaction” criterion in the “facilities and equipment” domain; however, other investigated models did not have such a domain. Also, only Blouin (2020) proposed the “stakeholders' satisfaction” and “

Shouri Bidgoli et al. presented five approaches “based on the goal, evaluating the program's actual results, ensuring the stakeholders' satisfaction, complying with educational standards and artistic criticism and educational expertise” to evaluate educational effectiveness (53).

Knowing the stakeholders' expectations and satisfaction causes knowing the society's needs and level of satisfaction, which, in turn, leads to better communication between the health area and society. On the other hand, the stakeholders' satisfaction and expectations affect the quality of healthcare services provided by medical science graduates. Hence, it seems this factor in the proposed accreditation model is necessary due to the simultaneous use of the opinions of internal (main) stakeholders, such as officials of educational-medical-health centers, faculty members,

students, graduates, professional activists, and officials of the health system, and external stakeholders, such as patients, community members such as recipients of healthcare services, representatives of other health care professions, relevant institutions such as the medical system and insurances, specialized scientific associations, and relevant officials of the relevant ministry.

By examining the selected models investigated in this research, many accreditation systems were found, some of which had standards while some were qualitative. Some were focused on generalities, and some dealt with the smallest details, such as the area of laboratories in square meters (18). These differences can be because accreditation standards are purposeful and need-based. It is clear that since the educational system of developed countries is advanced, there is no need to include broad domains and criteria with specific and measurable indicators in accreditation models. In contrast, developing countries probably require broad domains and criteria with specific and measurable indicators due to poor educational facilities, educational and clinical spaces, and unfavorable quality of education provided by educational institutions (54).

Due to the technological advances and the high expansion of basic science knowledge, medical science educational programs, which depend on these continuous changes, must be updated simultaneously following the changes in the healthcare service delivery system after evaluation, validation, and recognition of deficiencies. In order to respond to the health needs of society, the policy-makers and designers of the educational programs of the health system should perform long-term planning and macro-educational policy-making considering social conditions and awareness of existing educational facilities. Thus, the first step toward realizing this issue is to evaluate the educational programs using national and local standards appropriate to the sociocultural conditions and considering the facilities available in the educational system of medical sciences in Iran.

Finally, it is suggested that the proposed standards of the present study be implemented as a pilot by formulating scientific and accurate processes for carrying out activities related to accreditation and training expert evaluators with sufficient knowledge and skills for program accreditation. Also, it is recommended to conduct more research to improve the proposed standards' capabilities, especially their flexibility and modernity.

## Conclusion

Due to the high importance of health in societies, evaluating and measuring the status of medical science educational programs using standards is desirable and of particular importance. Therefore, the results of the present research aiming to integrate the accreditation standards of undergraduate educational programs can be provided to policy-makers, decision-makers, and those involved in medical science education and accreditation of educational programs in the country to pay special attention to the accreditation process of educational programs. It is hoped that this will improve the quality of medical science education.

**Supplementary Material(s):** is available here [To read supplementary materials, please refer to the journal website and open [PDF/HTML](#)].

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