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# Strengths of Iran for internationalization of medical sciences education

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**Abstract:**

**INTRODUCTION:** Internationalization of higher education involves mutual exchanges as well as a consensus based. Political, economic, sociocultural, and scientific reasons recommend the need to move toward the internationalization of higher education. The current study highlights the strengths of the internationalization of Iran's medical sciences education.

**MATERIALS AND METHODS:** This descriptive exploratory study was carried out in 2016–2017 in Iran. The techniques used for data collection included review of articles, interview with subject experts, and the focus group and the nominal technique group to explore the views of various stakeholders. The data were analyzed with the qualitative content analysis method.

**RESULTS:** The inductive qualitative content analysis of all data generated 13 categories and 88 subcategories. The categories were geographical and geostrategic position of Iran; the historical, cultural, religious, and tourist attractions of Iran; the security of Iran; priority to internationalization policies and programs in Iran's macro plans; the existence of regulations, laws, and approvals for international activities; same language with neighboring and regional countries; the low cost of studying and living in Iran; the ability of Iranian faculty members and experts for internationalization; the background, reputation, and the progress of medical education, health, and care in Iran; the cheaper forces of Iran and their welcome to foreigners; the existence of motivation, zeal, and belief for internationalization; the existence of proper infrastructure; and the existence of a suitable capacity for internationalization.

**CONCLUSIONS:** Iran has some positive points that can be used to promote international activities, provided it does some good advertising in this regard. It is suggested that the challenges, opportunities, and threats to Iran's internationalization should be collated from the perspective of the various stakeholders.

**Keywords:**

Education, internationality, Iran, medicine, qualitative research

## Introduction

Internationalization of higher education involves mutual exchanges as well as a consensus-based, preplanned process in three areas, including teaching, research, and services, between universities, colleges, and higher education institutions of different countries.<sup>[1]</sup> It is different from globalization.<sup>[1]</sup> Knight sees internationalization as a process

of integrating its various dimensions, including international and intercultural, into education, research, and practical services at the Institute.<sup>[2]</sup> Knight also distinguishes between the internationalization and the globalization concepts and states that internationalization is changing the world of higher education, while globalization is a change in the world of internationalization.<sup>[3]</sup> Internationalization refers to the relationship between governments and nations, in

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a way that encourages recognition and respect for differences and traditions; however, the phenomenon of globalization does not tend to respect the differences and boundaries, undermines the foundations of many governments, and pursues homogeneity and harmonization.<sup>[4,5]</sup>

Internationalization has many components, two of which are international students and international collaborations in writing articles.<sup>[6]</sup> In the context of international students, the British Council stated in 2003 that there would be an estimated 5.8 million international students in 2020, and 90% would be registered in the Organization for Economic Co-operation and Development (OECD) countries.<sup>[7]</sup> The United States, the United Kingdom, Germany, France, and Australia will be the main recipient countries of international students.<sup>[7]</sup> The OECD predicted that there will be 8 million international students in the world by 2025.<sup>[8]</sup> European, American, and Caribbean higher education institutions are placing priority on internationalization.<sup>[9]</sup> Different countries have different future goals for attracting international students, including Australia, Germany, the United States, the United Kingdom, France, and Canada. Australia aims to record one million international students by 2025.<sup>[10]</sup> Germany's target is to attract 350,000 international students by 2020.<sup>[10]</sup> It is anticipated that the United States will register 1,064,400, 1,096,400, 1,140,200, and 1,185,800 international students in 2016–2017, 2017–2018, 2018–2019, and 2019–2020, respectively.<sup>[8]</sup> International students are expected to annually grow by 3.7% in the UK by 2020.<sup>[11]</sup> England plans to grow the percentage of international students from 15% to 20% in the next 5 years.<sup>[10]</sup> It is anticipated that the number of international students in institutions outside British or in the virtual format (transnational) will reach 2,750,000 in 2022.<sup>[12]</sup> France aims to have 470,000 international students by 2025, and Canada's goal is to attract 450,000 international students by 2020.<sup>[10]</sup>

In the past two decades, internationalization has increased among Asian countries. For instance, in 1983, Japan set up a program for 100,000 international students until 2003, and in 2003, it had recorded more than 100,000 international students.<sup>[13,14]</sup> The Japanese government launched its Global 30 Scheme in 2009 with the motive to enhance the number of international students to 300,000 by 2020.<sup>[15]</sup> China was able to achieve its goal of reaching 300,000 international students by 2015, and China's new aim to attract 500,000 international students by 2020.<sup>[7,10,11]</sup> By targeting the country as the main center of higher education in Southeast Asia in 2011, Taiwan designed a bold plan.<sup>[16]</sup> Singapore and Malaysia also emphasized international education and established international education canters at their universities to become

international education hubs.<sup>[17]</sup> Malaysia aims to attract 250,000 international students by 2025.<sup>[10]</sup>

We mentioned that internationalization has many components, and one component is international collaboration in writing articles. In this regard, a study carried out in 50 medical institutes in India found that international collaborations had grown four times during the period 2003–2012.<sup>[18]</sup> In this regard, the results of a study in Iran revealed that there was no increase in the number of the country's international collaborations in medical sciences articles from 1960 to 2001; however, the data indicated an incremental growth between 2001 and 2016. This study also reported that in 2016, the percentage of Iran's international collaboration articles was 15/2 and was expected to reach 19/9 in 2025.<sup>[19]</sup>

There are several reasons for moving toward the internationalization of higher education, including human resource development, strategic partnerships, income generation and economic trade, nation and organization building, cultural and social development, mutual understanding, improving quality, creating strategic relationships, producing research and knowledge, and meeting the needs of nations and the world. In general, it can be said that political, economic, sociocultural, and scientific reasons recommend the need to move toward the internationalization of higher education.<sup>[20-22]</sup> Internationalization has become a quality indicator of an institution of higher education.<sup>[23]</sup>

Despite the increasing attention to internationalization of higher education in many countries and the many benefits that this process has had, the serious risks, challenges, and problems associated with this multifaceted phenomenon are increasing.<sup>[24]</sup>

Given the benefits of internationalization of education, Iran plans to improve the internationalization of medical sciences. This process has been underway in some Iranian universities for some years, and other universities intend to use their capacities in this regard. The question is whether the educational facilities of Iranian universities have the capacity to do so? Iran needs to recognize its status in terms of internationalization of higher education.

Therefore, the current study highlights the strengths of the internationalization of Iran's medical sciences education.

## Materials and Methods

This descriptive exploratory study was carried out in 2016–2017 in Iran. Four techniques were used to collect the data, including a review of articles, interviews of

subject experts, and the focus group and the nominal technique group to explore the views of stakeholders. The data were analyzed with the qualitative content analysis method.

The review of articles was done in the first half of 2016. To explore the strengths of internationalization of Iran's medical sciences education from articles, Scientific Information Database, Magiran database, and Google Scholar were searched with keywords such as globalization, scientific exchange, international cooperation, curriculum exchange, student exchange, faculty exchange, multinational cooperation, transnational cooperation, and collaborative research. The articles, used in this study, were in Persian and were devoted to the strengths of the internationalization of Iran's medical sciences education between 2001 and 2016. The criterion of discarding the articles was duplicity.

For interviews with the subject experts, first, the stakeholders were identified. The stakeholders of the internationalization of Iran's medical sciences education were the Director of International Affairs of the Ministry of Health and Medical Education, the dean of International Relations Office of medical sciences universities, users experienced in dealing with the international environment, users experienced in accomplishing international programs, chief executive officers in the field of medical education, executive directors of the University of Medical Sciences, professors and IT specialists, authorities of the medical sciences universities, and travel agents. The sampling was purposeful with a maximum variation. The selected informants had maximum diversity in terms of age, years of work, place of service, and cultural, social, economic, and professional backgrounds. At least five people from each group were included in the study. The inclusion criteria were people's willingness to participate in the research, their psychological readiness for interviewing, and 1 year's work experience according to the type of stakeholders. The exclusion criterion was an unwillingness to continue to participate in the study. Second, the planning to conduct an individual interview was carried out. The coordination was done with the individual respondent, and after the informed consent was obtained, the interview began. The interviews were conducted in person and on the phone. Each of the semi-structured interviews lasted 15–45 min. All the interviews were recorded. After an interview, its transcription was carried out. The inductive approach used for the analysis included open coding, creating categories, and abstraction.

After individual interviews to obtain the opinion of the stakeholders, five focus groups were carried out with the dean of International Relations Office of medical sciences

universities, users experienced in the accomplishment of international programs, executive directors of the University of Medical Sciences, professors, and IT specialists. In one meeting, the viewpoints of 32 deans of International Relations Office of medical sciences universities, chief executive officers in the field of medical education, and executive directors of the University of Medical Sciences were explored with the focus group and the nominal technique group.

Data were analyzed using the Granhim and Landmann method. Notes and headings were written in the text while reading it. Written material was re-read and many of the titles were written on the margin of the page to describe the aspects of the content. The headings were collected from the margins on to the coding sheets, and the categories were freely generated at this stage. After this open coding, the lists of categories were grouped under higher-order headings. The data were reduced by collapsing those that were similar or dissimilar into broader higher order. Then, a general description of the research topic was formulated by generating categories. Each category was named using content-characteristic words. Subcategories with similar events and incidents were grouped together as categories, and categories were grouped as main categories. The abstraction process continued as far as was reasonable and possible. All the interviews were conducted, recorded, verbatim typed, reviewed, coded, and immediately analyzed by the first researcher. The data collection process was continued until data saturation when adding further data showed no new information and the extra collected data were redundant. The coding of interviews was carried out with MAXQDA software version 10.

For trustworthiness of the study, the criteria used included credibility, dependability, conformability, and transferability cited by Lincoln and Guba.<sup>[25]</sup> Credibility was achieved with member check, observers' reviews, researcher's prolonged engagement with the subject matter, integration in research, and credibility of researchers. For dependability, the researcher demanded an external observer to review and examine the research process and the data analysis to ensure that the findings were consistent and could be repeated. Conformability was achieved with congruence between the external observer and the researcher about the data's accuracy, relevance, or meaning. For transferability, the details from sampling to the process of collecting and analyzing the data were fully described. Furthermore, the use of a maximum variation of sampling helped in translating the findings to others.

The study protocol was approved by the Ethical Committee of Isfahan University of Medical Sciences.

## Results

Following a review of the articles, 118 articles were ultimately selected for content analysis. The flow diagram of the review of articles is shown in Figure 1.

To obtain the opinion of the stakeholders, 16 informants were interviewed individually and five focus groups were carried out with participant. The nominal technique group was used for exploration of the data. The participant profiles of the individual interviewees are presented in Table 1.

As shown in Table 1, three of the participants were females and 13 of them were males.

The findings of the inductive qualitative content analysis of all the data are listed in Table 2.

As shown in Table 2, the inductive qualitative content analysis of all data generated 13 categories and 88 subcategories. The categories were geographical and geostrategic position of Iran; the historical, cultural, religious, and tourist attractions of Iran; the security of Iran; priority to internationalization policies and programs in Iran's macro plans; the existence of regulations, laws, and approvals for international activities; same language with neighboring and regional countries; the low cost of studying and living in Iran; the ability of Iranian faculty members and experts for internationalization; the background, reputation, and the progress of medical education, health, and care in Iran; the cheaper forces of Iran and their welcome to foreigners; the existence of motivation, zeal, and belief for internationalization; the existence of proper infrastructure; and the existence of a suitable capacity for internationalization. Respectively, the first to the 13<sup>th</sup> categories have 5, 5, 2, 4, 11, 2, 6, 6, 7, 2, 13, 8, and 17 subcategories.

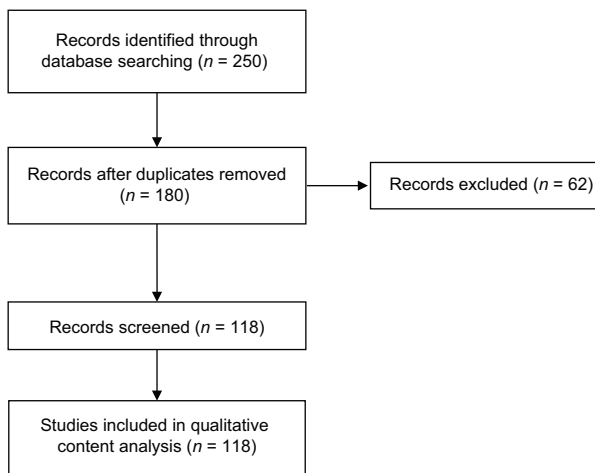


Figure 1: Flow diagram of articles review

## Discussion

The aim of the current study was to highlight the strengths of internationalization of Iran's medical sciences education. As many as 13 categories were extracted as being the strengths of internationalization of Iran's medical sciences education. These categories were different from the categories extracted in other countries.<sup>[26]</sup> This is evident because while some countries are at the beginning of internationalization, some have been doing this for several years.

The main important category extracted was the geographical and geostrategic position of Iran. Iran lies in the Middle East. The Middle East is a region in Southwest Asia that includes countries between Iran and Egypt. These include Jordan, Israel, the United Arab Emirates, Iran, Bahrain, Turkey, Palestine, Syria, Iraq, Saudi Arabia, Oman, Qatar, Kuwait, Lebanon, Egypt, and Yemen. The unique geographic location has made the Middle East a strategic area because it is located in the center of three continents – Asia, Europe, and Africa – and the shortest airways and waterways from Europe to Asia pass through this area. The critical importance of the Middle East is because the coastal curves are drawn up by the Black Sea, the Mediterranean, and the Indian Ocean. It is the center of the emergence of religions such as Islam, Christianity, Judaism, and Zoroastrianism, and several tribes such

Table 1: Participant profiles of individual interviewees

| Row | Sex    | Post  |
|-----|--------|---|
| 1   | Male   | International Advisor to the Ministry of Health and Medical Education                                       |
| 2   | Male   | Director of International Affairs of Ministry of Health and Medical Education                               |
| 3   | Male   | Head of Foreign Students of Isfahan Province  |
| 4   | Male   | International assistant director of health faculty of Tehran University of Medical Sciences                 |
| 5   | Male   | Research Vice-Chancellor of the Islamic Culture and Communication Organization and Chinese cultural advisor |
| 6   | Male   | Iranian medical student studying abroad   |
| 7   | Male   | Iranian medical student studying in the country   |
| 8   | Male   | Pharmacist foreign student studying in the country  |
| 9   | Female | Faculty member of Medical Sciences University in the field of medicine with international experience        |
| 10  | Female | Faculty member of Medical Sciences University in the field of pharmacy with international experience        |
| 11  | Female | Faculty member of Medical Sciences University in the field of medicine with international experience        |
| 12  | Male   | Faculty member in the field of educational science with international experience                            |
| 13  | Male   | Faculty member in the field of educational management with international experience                         |
| 14  | Male   | IT Engineering (web mining expert)  |
| 15  | Male   | IT Engineering (web mining expert)  |
| 16  | Male   | Head of Isfahan Chamber of Commerce   |

**Table 2: Subcategories, categories and main category extracted from all the data**

| Main category  | Categories   | Subcategories   |
|--|--|---|
| Strengths of Iran's medical sciences education for internationalization        | Geographical and geostrategic position of Iran   | Geographical and geopolitical position of Iran in the world   |
|  |  | Geographic and geostrategic location of Iran in the Middle East   |
|  | Historical, cultural, religious, and tourist attractions of Iran   | Iran's regional position in the Persian Gulf  |
|  |  | Suitable climate for residence and education (four seasons being the same time in Iran)   |
|  |  | Plenty of air, rail, and land communication channels with other countries   |
|  | Security of Iran   | Historical attraction of Iran   |
|  |  | Tourist attractions in Iran   |
|  | Priority of internationalization policies and programs in Iran's macro plans   | Common culture and religion with neighboring countries  |
|  |  | Common culture and religion with Muslim countries   |
|  | The existence of regulations, laws, and approvals for international activities   | Security of Iran  |
| Internal stability and security despite regional threats                       |  |   |
| Priority of internationalization policies and programs in Iran's macro plans   |  | Security of Iran in relation to the countries of the region   |
|  |  | Attention to internationalization in the fifth development plan   |
| The existence of regulations, laws, and approvals for international activities |  | Emphasis on international effects in the country's comprehensive science map  |
|  |  | Separating territorial plan for international communication and the distinctness of the task of international communication for each university |
|  |  | The existence of a package of internationalization in the plan for development and innovation in medical sciences education                     |
|  |  | The existence of a joint program regulation   |
|  |  | The existence of regulation for an adjunct professor  |
|  |  | Possibility for faculty members to leave the country with a mission, without additional jobs  |
| The same language with neighboring and regional countries                      | Delegation of authority for presidents of universities in joint programs   |   |
|  | No constitutional constraint on international cooperation  |   |
| Low cost of studying and living in Iran  | Ability to redefine the tuition fee scale by the university's trusteeship board  |   |
|  | Ability to accept a foreign student by different types of universities   |   |
| The ability of Iranian faculty members and experts for internationalization    | Permission for any university to advertise for accepting international students  |   |
|  | License to enroll foreign students for all disciplines   |   |
| The ability of Iranian faculty members and experts for internationalization    | License to enroll foreign students for postdoctoral studies  |   |
|  | The same per capita for an Iranian student and a foreign student and money granted to the universities by the ministry of health and medical education |   |
| The ability of Iranian faculty members and experts for internationalization    | The same language with neighboring countries (languages of Kurdistan, Azerbaijan, Mashhad, Ahvaz is the same)  |   |
|  | The same language with regional countries (the same language with Persian language countries)  |   |
| The ability of Iranian faculty members and experts for internationalization    | Low cost of education in Iran compared to neighboring countries  |   |
|  | Cheap medical education in Iran compared to the world  |   |
| The ability of Iranian faculty members and experts for internationalization    | Cheap accommodation in Iran  |   |
|  | Low cost of international student tuition in Iran compared to other countries  |   |
| The ability of Iranian faculty members and experts for internationalization    | No need to pay the cost of research by a foreign student in Iran   |   |
|  | The low price of retraining points in the country  |   |
| The ability of Iranian faculty members and experts for internationalization    | High ability of Iranian experts to attract foreign students  |   |
|  | The ability of Iranian faculty members to recruit students from the Middle East  |   |
| The ability of Iranian faculty members and experts for internationalization    | The ability of Iranian faculty members to recruit students from Asia   |   |
|  | The presence of capable faculty members to enter the internationalization debate   |   |
| The ability of Iranian faculty members and experts for internationalization    | The presence of internationally recognized faculty members in Iran   |   |
|  | The ability of faculty members to read English books and texts   |   |

*Contd...*

**Table 2: Contd...**

| Main category | Categories   | Subcategories  |
|---------------|--|--|
|               | Background, reputation, and progress of medical education, health and care in Iran | <p>The existence of a strong medical education in Iran</p> <p>The superiority of Iranian doctors over Western doctors in terms of performance</p> <p>Background of medical sciences education in Iran</p> <p>Iran's advances in medical sciences, health, and care</p> <p>More attention to clinical rounds in Iran than in some other countries</p> <p>Advantage of health and medical education in Iran than in countries of the region</p> <p>High reputation of Iran in terms of medicine in the region</p>  |
|               | The cheaper forces of Iran and their welcome of foreigners                         | <p>Welcome to Iranian forces from foreign systematic review teams because of cheapness</p> <p>Cheaper forces in Iran than in other countries</p>   |
|               | Existence of motivation, zeal, and belief for internationalization                 | <p>The existence of national zeal for anything, including internationalization</p> <p>The motivation of universities to go for internationalization</p> <p>Carrying out international activities by faculty members to satisfy their personal motivations</p> <p>The presence of faculty members interested in entering the internationalization debate</p> <p>Desire of faculty members to take an international student for the post of PhD to carry out research work and grants</p> <p>Desire of faculty members to get students from foreign institutions that help them</p> <p>Desire of faculty members to work with more scientifically advanced foreign students and learning from them</p> <p>Desire of faculty members to connect with technologically advanced countries</p> <p>The concern of policy makers of higher education in Iran about the quality of education</p> <p>The Ministry of Health and Medical Education welcomes joint unique programs</p> <p>The belief of senior managers at the ministry of health and medical education in internationalization</p> <p>The belief of senior executives in universities, especially presidents of universities, in internationalization</p> <p>The emphasis of politicians and policymakers on cooperation with Islamic countries</p> |
|               | The existence of proper infrastructure   | <p>The existence of a virtual university in Iran</p> <p>The existence of virtual education system in most universities</p> <p>The existence of an international deputy in some universities of Iran (such as Tehran Medical Sciences University)</p> <p>Availability of educational and research facilities in Iran</p> <p>The existence of an office of Foreign Students Affairs in universities</p> <p>A large number of medical sciences universities in Iran</p> <p>A large number of educational courses in Iran</p> <p>Proximity from the university to the dormitory in Iran's universities</p>   |
|               | Existence of a suitable capacity for internationalization                          | <p>Empty capacity of universities in some majors</p> <p>The existence of a sister agreements between universities in Iran and the world</p> <p>Uniformity of lessons in Iran and abroad</p> <p>Sincere encounter and hospitality of Iranians toward foreigners</p> <p>Patience of Iranian patients</p> <p>The convenience of patients to talk over their heads</p> <p>Convenience of patients with examination</p> <p>The suitability of the quality of life of foreign students in the universities</p> <p>Appropriate quality of universities curriculums for foreign students</p>   |

*Contd...*

**Table 2: Contd...**

| Main category | Categories | Subcategories  |
|---------------|------------|--|
|               |            | The existence of intersectoral cooperation among the separate territories<br>Integration of healthcare activities with medical education<br>Having the power to force people to attend retraining courses<br>Ability to export to developed countries in specialized courses in the field of medicine, research, and screening systems (for example, how to set up a low-budget hypothyroidism screening system), the status of contaminants, genetic data, the behavioral pattern, epidemiological data, the work done by the health system, lifestyle data, risk factors data, and primary healthcare education<br>Ability to export to developing countries in the field of basic science and education in primary health care<br>Capacity in basic pharmaceutical science in the field of pharmaceutical technology<br>High power of the country in the field of serum and stem cells<br>The possibility of internationalization in interdisciplinary and applied topics |

as Arabs, Iranians, Afghanis, Turkish, Africans, and Kurdish live in this region.<sup>[27,28]</sup>

This is an advantage for Iran as well as beneficial for other countries in the region. For example, the results of one study in Pakistan cited that the country has an ideal location and regional vicinity.<sup>[20]</sup>

Since the language of the majority in the region is Arabic, it could also pose a threat to Iran. If Iran wants to turn this threat into strength, it must be able to hold courses in Arabic or joint programs with Arab countries. Due to his position in the Middle East, Iran has plenty of air, rail, and land communication channels with other countries. Iran in the north is neighbored with Azerbaijan, Armenia, and Turkmenistan, in the east with Afghanistan and Pakistan, in the west with Turkey and Iraq, and also from the north to the Caspian Sea and from the south to the Persian Gulf and the Oman Sea. Iran shares more than 6000 km of land border with Afghanistan, Pakistan, Turkmenistan, Turkey, Armenia, Azerbaijan, and Iraq. Iran also has 2700-km-long maritime borders on the Caspian Sea, the Persian Gulf, and the Oman Sea. Of the 31 provinces in Iran, 16 are border provinces, of which nine provinces have only land border (Ardebil, East Azerbaijan, West Azerbaijan, Kermanshah, Kurdistan, Ilam, North Khorasan, Khorasan Razavi, and South Khorasan), three have only maritime borders (Mazandaran, Hormozgan, and Bushehr), and four provinces have both land and maritime boundaries (Gilan, Golestan, Sistan and Baluchestan, and Khuzestan). The provinces of Gilan, Ardebil, and East Azerbaijan share borders with the Mainland of the Republic of Azerbaijan and the provinces of East Azerbaijan and West Azerbaijan with the Autonomous Republic of Nakhchivan (Azerbaijan). East Azerbaijan is the only province in the country that shares borders with Armenia. The provinces of Khorasan Razavi, South Khorasan, and Sistan and Baluchestan

have a common border with Afghanistan. The province of Sistan and Baluchestan is the only Iranian province that is bordered by Pakistan. Golestan, Northern Khorasan, and Khorasan Razavi have a common border with Turkmenistan. West Azerbaijan is the only province in the Islamic Republic of Iran which shares borders with Turkey. The provinces of West Azerbaijan, Kurdistan, Kermanshah, Ilam, and Khuzestan have a common border with Iraq. Gilan, Mazandaran, and Golestan provinces share borders with other countries through the Caspian Sea. The provinces of Khuzestan, Bushehr, and Hormozgan are neighbors with other countries through the Persian Gulf. The provinces of Sistan and Baluchestan and Hormozgan are neighbors with other countries through the Oman Sea. Furthermore, Iran has a lot of foreign flights to Asian, European, African, Australian, and South American countries. It must be a tool to verify if the countries that are better off geographically and strategically, attract more students, or engage in more international activities. It should be examined whether the countries that are better off geographically and strategically, attract more students, or engage in more international activities. Owing to four seasons, Iran also has a suitable climate for residence and education. Iran is a land of four. This means that at any time of the year, you can see the different weather in a city of Iran and it is as if you are in your favorite season. In winter, there are cities in Iran that experience summer, some spring, and some autumn. This story is true at any time for each of the seasons in this land, but there are towns and villages that, despite their small areas, alone have a four-weather climate.<sup>[27,29,30]</sup>

One of the important categories is the historical, cultural, religious, and tourist attractions of Iran. Iran has a lot of sites of tourist attractions such as Persepolis, Naqsh E Jahan Square, Isfahan Music Museum, Sheikh

Lotfollah Mosque, and Imam Reza Holy Shrine.<sup>[27,29-31]</sup> Another issue to be considered is whether the countries that attract a lot of tourists have better international activities in the field of medical sciences. Iran shares a common culture and religion with neighboring nations and Muslim countries. Sixteen provinces of Iran share borders with other countries, and therefore, they have almost common ground with them. Considering that Islam is the official religion of Iran, the country's environment offers a favorable atmosphere for Muslims. Therefore, Iran is one of the favorite Muslim countries for studies by foreign students.<sup>[27,29,30]</sup>

Security of Iran was another category extracted by the inductive qualitative content analysis. Students usually prefer to study in a country that has better security. Iran has internal stability and security despite regional threats, and it has better security in relation to the other countries in the region. The Middle East has encountered threats such as Daesh and Yemeni civil war.<sup>[32,33]</sup>

One of the extracted categories was the priority to internationalization policies and programs in Iran's macro plans. In Iran's macro plans such as the fifth development plan, the country's comprehensive science map, separate territorial plans, and the internationalization package in the plan of development and innovation in medical sciences education have drawn to internationalization.<sup>[34-37]</sup> A study among US community colleges has pointed out that the institutions' support was the most significant component of the internationalization process.<sup>[38]</sup> Therefore, this component is appropriate in the case of Iran, but it is not suitable in some neighboring countries. For example, the result of one study in Pakistan reported inadequate national and institutional policies to internationalize Higher Education Institutions (HEIs) as well as a lack of appropriate budget for internationalization.<sup>[16]</sup>

Another category was Iran having the same language with its neighboring and regional countries. Language is one of the important factors for an international student to choose a country to study.<sup>[39]</sup> Iran has the same language as Persian-language countries. Furthermore, languages of Kurdistan, Azerbaijan, Mashhad, and Ahvaz are same as neighboring countries. This has provided a suitable situation for Iran to hold courses in various international languages.

One of the main categories was the low cost of studying and living in Iran. The cost of studying and living is one of the main factors in choosing a country to continue education.<sup>[39,40]</sup> The cost of studying and living in Iran is low compared to the neighboring and other countries. The tuition fee is low for degree-based and certificate-based programs.

Another category was the background, reputation, and the progress of medical education, health, and care in Iran. The existence of upstream documents such as the 24-year perspective document in the Islamic Republic of Iran and the International Development Program for Medical Education, designed by the Deputy of Education of Ministry of Health, provides a good basis for the internationalization of medical education.<sup>[41]</sup>

The existence of proper infrastructure was one of the categories. Iran has a virtual university, and there is a virtual education system in most universities that can hold virtual international courses. There is an international deputy in some universities of Iran such as Tehran Medical Sciences University, thereby facilitating international activities. However, proper infrastructure is not available at all the universities. These results are consistent with the results of the study by Jiang and Carpenter in the UK which reported that resource allocation, communication, operational process was not good and inconsistent with a study in the Cape Coast that showed infrastructure was inadequate.<sup>[42,43]</sup>

There are few papers in the field of medical sciences that examine various aspects of internationalization in Iran. It is suggested that Iran's challenges to internationalization be extracted from the perspective of various stakeholders. It would be useful for higher education institutions to understand the fundamental needs of internationalization, and it would be useful for policymakers to develop long-term strategies as well. The results of this study can be generalized for the whole of Iran and are appropriate for the country's policymakers. The universities should also identify their strengths, weaknesses, opportunities, and threats in this context.

## Conclusions

Iran has some strong points that can be used to promote international activities, provided the country does some good advertising in this regard. Moreover, it can use many of these points for the betterment of international activities. The results of this study can be generalized for the whole country and are appropriate for Iran's policymakers. Universities should also identify their strengths, weaknesses, opportunities, and threats in this regard. In addition, it is suggested that Iran's internationalization challenges, opportunities, and threats should be extracted from the perspective of various stakeholders.

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## Conflicts of interest

There are no conflicts of interest.

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