



Factors Affecting Health Tourism Development in Khuzestan Province in 2019

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Received 2020 December 17; Revised 2021 May 30; Accepted 2021 May 31.

Abstract

Background: To succeed in the health tourism industry, a developing market that is able to annually generate over \$60 billion in income, the factors playing an important role in this industry need to be strengthened and developed.

Objectives: Thus, the present study was aimed at identifying the factors affecting health tourism development in Khuzestan Province in 2019.

Methods: This was a mixed methods study conducted in 2019 in two stages. The first stage aimed to identify and categorize the factors affecting health tourism development by reviewing the articles in the health tourism field during 2000 - 2019. The second stage aimed at prioritizing the identified factors through the hierarchical analysis method. The study population included academic and executive experts in the field of health tourism in Khuzestan Province who were chosen using the purposive nonprobability sampling method. Data were analyzed using Expert Choice software and SPSS version 22.

Results: The first stage led to identifying six main criteria, including socio-cultural, facilities and infrastructure, policymaking and planning, effective marketing, political-legal, and economic, and 38 sub-criteria. Prioritizing the factors in the second stage also indicated that the facility and infrastructure criterion with 0.268 and the political-legal criterion with a score of 0.07 had the highest and lowest relative importance, respectively. Also, the economic criterion with 0.231, policymaking and planning with 0.176, effective marketing with 0.144, and socio-cultural criterion with a score of 0.105 were ranked second to fifth, respectively.

Conclusions: In sum, improving medical and non-medical facilities and infrastructure in Khuzestan Province is of high priority. Therefore, it is emphasized to empower medical staff along with using the capacity of start-ups related to tourism development in this province.

Keywords: Tourism, Health Tourism, Development Factors, Khuzestan

1. Background

Health care has become one of the most important issues with the increasing population of the world and the rising level of human expectations for social welfare (1). Growing health services and their globalization have led to a new concept called health tourism, which can be defined as a journey to promote the mental, physical and spiritual health of individuals, families, and groups (2). The World Tourism Organization views health tourism as a service that improves health and increases a person's morale at a place of residence that lasts more than 24 hours and less than a year (using mineral water, weather, or medical interventions) (3). Health tourism includes the capabilities and facilities of health centers in the field of health tourism (e.g., hospitals, clinics, diagnostic centers, offices, medicinal plants, and hot springs). Capabilities and fac-

ilities of service centers in the field of health tourism (e.g., air, rail, and sea transportation, agencies, hotels, tour operators, financial institutions, insurance companies, banks, etc.) are the obstacles in this field (4).

One of the most profitable markets for the developing countries is health tourism. Health tourism is a developing industry that can annually generate more than \$60 billion in income. Numerous developing countries consider health tourism as a gold mine and are strongly looking for the growth and development of the health tourism industry and are increasingly competing in it (5). In addition, experts predict that the tourism industry will become the world's most profitable industry by 2020 (6). In addition to increasing the country's income, tourism incomes are widely distributed throughout the society, and with the expansion of the tourism industry, in addition to improving living standards in touristy areas, their cultural standards

will also improve significantly (7). Medical tourism is recognized by several countries as a potential source of funding for the health sector (8). As the World Trade Organization points out, investing in the tourism industry is a major resource for the developing countries (9).

Iran has a high capacity for tourist attraction due to its natural, cultural, scientific, and religious attractions (10). Also, due to Iran's unique features such as high quality medical services, low cost of medicine and treatment, access to advanced services and equipment, and the presence of skilled professionals, this country are able to meet the medical needs of tourists. Global statistics show that Arab countries are one of the best options for attracting medical tourists. The population of 245 million people in 17 Arab countries and the lack of adequate specialized services have made thousands of Arab patients travel to other countries each year. Iraq is witnessing a low presence of health care investors within its borders due to security concerns; therefore, it is a suitable platform for attracting people to use Iran's medical services (11, 12). This is while the problems of the country in the field of medical tourism industry include the weakness of the health tourism information system, the existence of problems at the level of policymakers and managers, the presence of brokers as patients-medical centers intermediaries and patient dissatisfaction, lack of insurance laws according to international standards and marketing programs, the constant change of modern technologies in the world, weak laws in the field of medical crimes, and the appearance of medical centers and hospitals (11, 13). Thus, medical tourism in Iran has not grown much and needs further planning (10).

In 2012, Iran accounted for 0.35% of the world's tourism revenue and ranked 53rd in attracting medical tourism in the world. However, according to the Vision 1404 document, Iran is one of the main centers of medical tourism in the region based on geographical divisions (8). Health tourism is market-based and is shaped by the complex interactions of medical, economic, social, and political factors. In fact, health tourism is a different kind of market with specialized features (14). Several countries are making attempts to succeed in the medical tourism market by providing a variety of medical, surgical, and dental services with modern facilities (15). Therefore, it is necessary to strengthen and develop the factors playing a critical role in success in this industry and take the necessary measures while emphasizing the most principal issues according to the existing physical position and capacities (16).

A large body of studies has been conducted in the field of health tourism inside and outside the country. Zarei and Maleki (17) believed that the most important factors in attracting medical tourists include understanding the quality of services and satisfaction with them, and the main ob-

stacles to medical travel include the lack of coordination between medical market stakeholders, the quality of medical services, and lack of insurance coverage and effective laws. Medhekar et al. (18) identified important factors affecting tourist's decision to travel abroad for treatment or surgery as shorter waiting times for surgery, higher quality of health care and accreditation degree, staff/surgeons' specialization, health care information, hospital facilities and services, patient safety, travel risk, surgical costs, and holiday opportunities. Goodarzi et al. (19) also stated that the factors of price, high quality of services, culture, facilities, and information and communication technology affect medical tourism development both directly and indirectly.

Khuzestan, as one of the southwestern provinces of Iran with high medical capacities including well-known physicians, reasonable costs, and high quality of medical services, as well as proximity with Arab countries and having common culture and language with most of them, has a high potential to become one of the health tourism hubs of the country and the region to attract medical tourists from all over the world. But so far, no coherent planning and coordination has been conducted in this field.

2. Objectives

Therefore, this study was conducted to identify and prioritize the effective factors in the development of health tourism in Khuzestan Province in 2019.

3. Methods

This mixed methods study (quantitative-qualitative) was conducted in two stages. The first stage was performed with the aim of identifying and categorizing the factors affecting health tourism development by referring to library resources and searching six databases, including Science Direct, PubMed, Scopus, Google Scholar, SID, and Magiran, using the keywords of "Health Tourism" and "Medical Tourism" in Persian and English. All texts pertaining to the topic of health tourism published during 2000 - 2019 in all countries were retrieved. Then, factors affecting health tourism development were identified based on review of the articles that had the most thematic relationship with this research. Afterward, the identified factors were classified into main criteria and subcategories.

The second stage was conducted using the analytical hierarchy process (AHP) method and with the aim of prioritizing the factors affecting health tourism development in Khuzestan Province. The AHP is one of the most comprehensive methods designed for decision making with

multiple criteria that allows the problem to be formulated as hierarchical. Also, considering different quantitative and qualitative criteria in the problem, it involves several decision-making options and allows for the analysis of sensitivity in “criteria” and “sub-criteria”. Moreover, it facilitates judgment and calculations based on paired comparisons (20).

The research population in the second stage included academic specialists and executive experts. The inclusion criterion for academic specialists was educational and research experience in the field of health tourism, and for officials and experts, it was research experience or work experience of at least one year in medical tourism units and medical centers providing medical tourism services in the universities of medical sciences of Ahvaz and Abadan. Sampling was performed using the purposive non-probability method with the opinion of the supervisors and advisors.

The instrument was the AHP standard questionnaire, which through pairwise comparisons were conducted, and the factors affecting the development of health tourism in Khuzestan Province identified in the previous stage were prioritized in the three levels of goal, main criteria, and sub-criteria. These comparisons were made using the paired comparison matrix (row-to-column valuation), such that the higher the value given in these comparisons, the greater the importance of the row compared to the column. Fuzzy numbers were used for the paired comparison of options. A five-point scale was used for scoring (in the form of: same preference = 1, slightly better = 3, better = 5, much better = 7, and quite better = 9). At the end of this stage, the incompatibility rate of comparisons was calculated, and if the incompatibility rate was less than 0.1, the compatibility of the comparisons was acceptable, otherwise the comparisons were conducted again. Then, the weight was calculated based on the geometric mean and weight normalization. The concept of normalization and the weighted average were used to determine the priority of the criteria. After normalization, the mean values of each row were weighed. Expert Choice software was used to conduct all the analyses of this step.

4. Results

4.1. First Stage

Using the articles review method at this stage, valid domestic and foreign articles and upstream documents were searched, and among the 160 articles reviewed, 19 articles with the most information on the requirements, components, and structure of medical tourism were used at the end. Having carefully investigated the articles, we extracted the factors affecting the health tourism development from each article. Then, by conforming the factors

extracted with each other and the confirmation of the experts, 38 factors were identified. At the end, the identified factors were classified into two main and sub categories through consultation with the experts (Table 1).

4.2. Second Stage

At this stage, with the aim of prioritizing the factors affecting health tourism development in Khuzestan Province, the factors identified in the previous stage were designed in the form of AHP standard questionnaire and based on the nine-degree pairwise comparisons table. The score of the questions was between 1 - 9. A score of 1 indicated the similar importance of the two factors, and a score of 9 indicated a very high importance of one factor compared to another factor.

The AHP questionnaires were completed by 13 academic specialists and executive experts. After completing the mentioned questionnaire, using Expert Choice software, the hierarchical structure (decision-making tree) was drawn as presented in Figure 1.

Figure 2 illustrates the main criteria affecting the development of health tourism. The compatibility rate of these criteria was 0.04, indicating the acceptable accuracy of the paired comparison. Among the six main criteria studied, the criteria of facilities and infrastructure with a score of 0.268, economic with a score of 0.231, policymaking and planning with a score of 0.176, effective marketing with a score of 0.144, socio-cultural with a score of 0.105, and legal political with a score of 0.077 were ranked first to sixth, respectively.

After comparing the main factors, the sub criteria underwent paired comparison. The results of the comparisons indicated that in evaluating the criteria of facilities and infrastructure, the sub-criterion of using the latest treatment methods with a score of 0.2 had the highest relative importance, while the sub-criterion of the comprehensive system for collecting information related to the entry of medical tourists with a score of 0.099 had the lowest relative importance compared to other sub-criteria. In evaluating the economic criterion, the sub-criterion of cost-effective medical services with a score of 0.3 had the highest relative importance, and the sub-criterion of the special rate of medical travel tours with a score of 0.1 had the lowest importance. Also, in evaluating the policymaking and planning criterion, the sub-criterion of appropriate policymaking by creating modern and equipped centers with a score of 0.221 had the highest relative importance, whereas the sub-criterion of definition and promotion of standards with a score of 0.109 had the lowest relative importance.

In evaluating the effective marketing criterion, the sub-criterion of having a medical tourism brand criterion with a score of 0.213 was of the highest significance, and

Table 1. Identified Factors Affecting the Development of Health Tourism by Criteria and Sub-criteria

Criterion	Sub-criteria
Policy and planning	Define a specific budget
	Specific tasks and instructions
	Define and upgrade standards
	Appropriate policymaking by creating modern and well-equipped centers
	Existence of specialized committees in responsible organizations
	Suitable program for training human resources
	Suitable program for using telemedicine
Political-legal	Political stability
	Global positive view
	Clear rules regarding standards
	Travel and entry facilities
	Issuance of medical visas for applicants
	Suitable and varied insurance plans
	Transparency in pricing plans
Facilities and infrastructure	Existence of suitable physical space and valid international medical equipment
	Existence of medical centers with international accreditation degree
	Professional staff fluent in international languages
	Proper accommodation infrastructure, transportation and flights
	Use the latest therapies
	Existence of information and communication technology for patient data transmission
	Existence of a comprehensive system for collecting information related to the entry of medical tourists
Economic	Affordable medical services
	Special rate for medical travel tours
	Extensive variety in the price of treatment methods
	Appropriate transportation, accommodation, and visa fees
	Sustainable economic Medical facilities
Socio-cultural	Use facilities appropriate to the culture
	Use facilities appropriate to the religion
	Use of tourist attractions
	Use of amenities in accordance with climatic conditions
	Existence of recreational facilities in medical tourism areas
Effective marketing	Electronic and multimedia marketing
	New and dynamic advertising methods
	Access to medical tourism website
	Having a medical tourism brand
	Informing patients and tourists about services
	Appropriate public awareness of the existence of health tourism services
	Availability of services

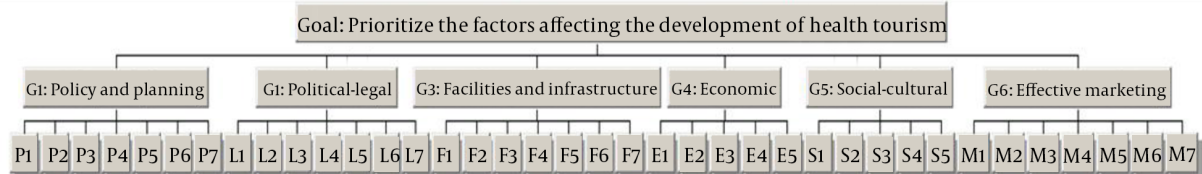


Figure 1. Hierarchical structure of the factors affecting health tourism development in Khuzestan Province

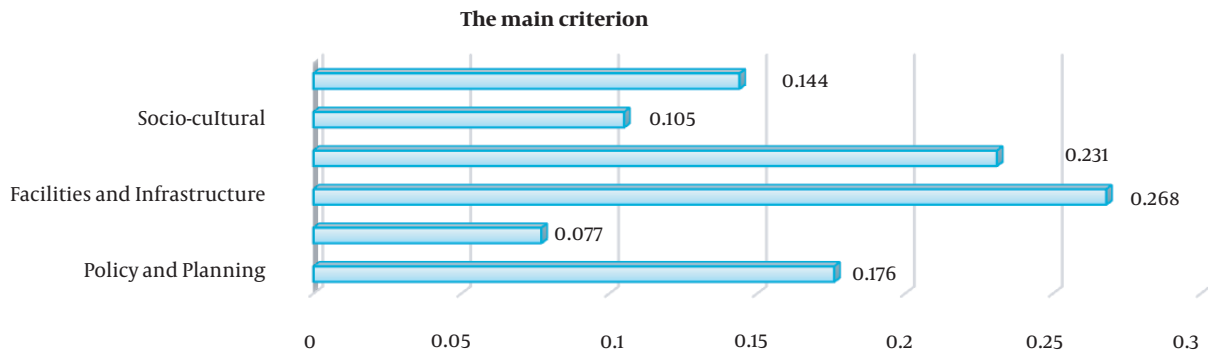


Figure 2. Prioritization of the main criteria affecting the development of health tourism

the sub-criterion of access to the medical tourism website with a score of 0.106 had the least importance. In evaluating the socio-cultural criterion, the sub-criterion of using tourist attractions with a score of 0.3 had the highest importance, and the sub-criterion of using facilities tailored to the religion with a score of 0.104 had the least prominence compared to the other sub-criteria, and in evaluating the political-legal criterion, the sub-criterion of political stability of the country with a score of 0.167 was of the highest relative importance, and the sub-criterion of the existence of clear and transparent laws in relation to standards with a score of 0.106 was of the lowest relative importance compared to the other sub-criteria. [Figure 3](#) indicates the results of the comparison of the sub-criteria separated by the criteria with the first to sixth priority. The compatibility of the sub-criteria was confirmed by calculating the incompatibility rate of less than 0.1 ([Figure 3](#)).

To prioritize the sub-criteria for health tourism development in Khuzestan Province, “the priority vector” was used by considering all judgments at all the hierarchy levels.

5. Discussion

In general, the six criteria of facilities and infrastructure, economic, policymaking and planning, effective marketing, socio-cultural and political-legal criteria are the main factors affecting the medical tourism industry in Khuzestan Province, which is consistent with the results of Naserpour et al. (20). The researchers stated that economic, cultural, infrastructure, governance, and general factors have a significant positive impact on health tourism.

In evaluating the criterion of facilities and infrastructure as the most critical criterion in the development of tourism in Khuzestan Province, the sub-criteria of using

the latest medical methods, medical centers with international accreditation degree, suitable infrastructure for accommodation, transportation, and flights, the existence of suitable physical space and valid international medical equipment, the existence of professional staff fluent in international languages, the existence of information and communication technology for the transmission of patient information, and the existence of a comprehensive system for collecting information related to the entry of medical tourists were in the first to seventh ranks, respectively, which is consistent with the results of Farhadi’s research (21). He stated that the underlying factors such as laws, non-medical costs, security, research and development of tourism infrastructure, and socio-cultural factors are as significant as the technical and specialized factors such as human resources, performance indicators, infrastructure, quality standards, and treatment costs (21).

In evaluating the economic criterion as the second effective criterion in health tourism development in Khuzestan Province, the sub-criteria of cost-effective medical expenses, appropriate transportation costs, residence and obtaining a visa, sustainable economic medical facilities, wide variety in the price of treatment methods, and the existence of special rates for medical travel tours were ranked first to fifth, respectively. In the study of Goodarzi et al. (19) conducted in 2013, all the factors of quality, culture, facilities, and information and communication technology had a direct and positive relationship with the development of medical tourism, and the price factor had a negative and inverse association with medical tourism development, that is, as prices rise, medical tourism development decreases and vice versa.

In evaluating the policymaking and planning criterion as the third effective criterion in health tourism development in Khuzestan Province, appropriate policymaking sub-criteria by creating modern and equipped cen-

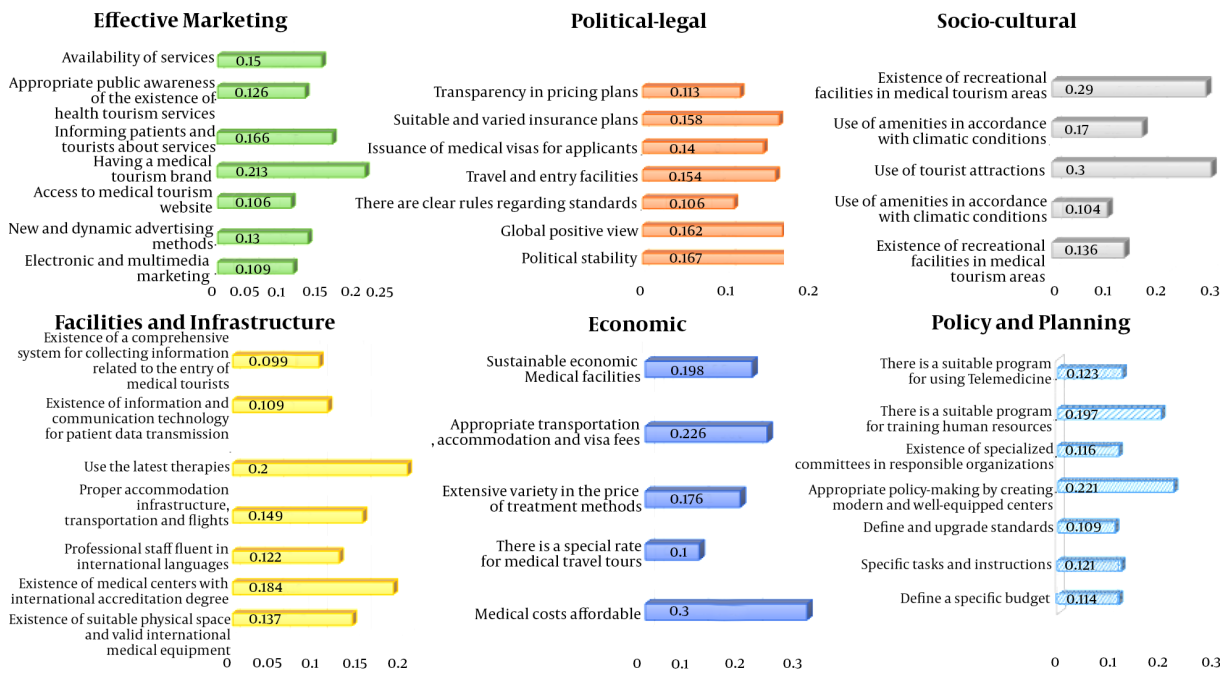


Figure 3. Results of pairwise comparisons of the sub-criteria by the main criteria separately

ters, the existence of a suitable program for training human resources, the existence of a suitable program for using telemedicine, tasks specific guidelines, the existence of specialized committees in the responsible organizations, the definition of a specific budget, and the definition and promotion of standards were ranked first to seventh, respectively. Zare Mehrjerdi and Faregh (22) also, in their research conducted in 2014, stated that the existence of long- and short-term planning along with strategic planning can provide the necessary grounds for the development and expansion of this industry and the private sector. It can lead to the dynamism of medical tourism in the country by building specialized centers that are in line with the world sciences, creating medical tourism offices, and providing information to medical tourists (22).

In evaluating the effective marketing criterion as the fourth criterion effective in health tourism development in Khouzestan Province, the sub-criteria of having a medical tourism brand, informing patients and tourists about services, availability of services, new and dynamic advertising methods, appropriate awareness of the community of health tourism services, e-marketing and multimedia marketing, and access to the medical tourism website were ranked first to sixth, respectively, which were consistent to the results of a study by Seyyedjavadin et al. in 2013. They stated that transforming Iran as a brand in the field

of health tourism is one of the leading factors in the health tourism development (23).

In evaluating the socio-cultural criterion as the fifth criterion effective in health tourism development in Khouzestan Province, the sub-criteria of using tourist attractions, the existence of recreational facilities in medical tourism areas, the use of welfare facilities appropriate to climatic conditions, the use of cultural facilities, and the use of religious-appropriate facilities were ranked first to fifth, respectively, which was consistent to the results of a study by Veisi and Mehmandoost in 2015. They showed that local and ethnic cultural conflicts of Iranian subcultures and international tourists and the existence and implementation of religious rulings such as hijab and the prohibition of some drinks and foods do not hinder the development of tourism in Iran (24).

In evaluating the political-legal criterion as the least important criterion affecting health tourism development in Khouzestan Province, the sub-criteria of political stability of the country, the positive global view to the domestic climate, appropriate and diverse insurance plans, facilities for traveling and entering the country, medicine visa issuance for applicants, transparency in pricing plans, and the existence of clear and transparent rules regarding standards were ranked first to seventh, respectively. The results of this study were consistent with the results of Farhadi's

research (21) in 2011 based on which the country's tourist infrastructure, the location of the medical centers, and cultural, social and political factors have the least effect on the prosperity of the health tourism industry (21).

According to the comparison of the sub-criteria in this study, the appropriate policymaking sub-criteria with the development of modern and well-equipped centers, political stability of the country, use of the latest treatment methods, affordable medical services, use of tourist attractions, and having a medical tourism brand is one of the most important sub-criteria affecting health tourism development in Khouzestan Province.

5.1. Conclusions

Numerous countries are making attempts to succeed in the medical tourism market by offering a variety of medical, surgical, and dental services with state-of-the-art facilities. Therefore, it is necessary to identify, strengthen, and develop the factors playing a key role in the success of this industry (16).

In the present study, the criteria of facilities and infrastructure, economic, policymaking and planning, effective marketing, socio-cultural, and political-legal were identified as the most important factors affecting the health tourism industry. Among the six main criteria identified in this study, the criterion of facilities and infrastructure was the most important factor influencing the health tourism development in Khouzestan Province, indicating the necessity of officials' attention to creating and strengthening tourism infrastructure in the province and the political-legal criterion was identified as the least important criterion for experts in this field. In addition, the results of evaluations of the sub-criteria of each of the main criteria indicated that the appropriate policymaking sub-criteria, including the development of modern and well-equipped centers, political stability of the country, use of the latest treatment methods, economical medical expenses, the use of tourist attractions, and having a medical tourism brand in the field of providing medical services to health tourists can cause the growth and development of the health tourism industry.

5.2. Research Limitations

- 1) Lack of cooperation of some officials in conducting the research.
- 2) Lack of sufficient information about the number of active tourism centers in the province.
- 3) Non-return of some distributed questionnaires.

The present article was extracted from a research project entitled "Identifying Strategies for the Health Tourism Development in Khouzestan Province in 2019" and

with the tracking code no. 330094565 and with the code of ethics IR.AJUMS.REC.1398.170.

The research project "Identification of health tourism development strategies in Khouzestan province: 2019" with a total cost of 24,100,000 Rials was approved by the Research Council of the Health Services Management Faculty in 2018. In 2019, the Research Ethics Committee of the university approved the study.

Footnotes

Authors' Contribution: Study concept and design: EJ and MD. Analysis and interpretation of the data: EJ, MD, and VR. Drafting of the manuscript: MD. Critical revision of the manuscript for important intellectual content: EF, AT, and ZN. Statistical analysis: EJ and MD.

Conflict of Interests: None declared.

Ethical Approval: This research was approved by the Research Council of the Health Services Management Group on 2018 and also in the meeting of the Research Ethics Committee of the University dated 2019. It was proposed and it was agreed to do so.

Funding/Support: The research project "Identification of health tourism development strategies in Khouzestan province: 2019" with a total cost of 24,100,000 Rials.

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