# **Review Article**

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# **Identifying the themes of medical tourism business in Iran: A systematic review**

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### Abstract:

**BACKGROUND:** Nowadays, medical tourism reports impressive growth in terms of number of persons, income, and number of countries involved in cross-border flows. It refers to people traveling abroad (from home to a target country) to obtain medical treatment. The present study aimed to identify the themes and codes of the medical tourism business in Iran.

**MATERIALS AND METHODS:** We searched international databases (such as PubMed, Scopus, Embase, and Web of Science) and Iranian bibliography thesaurus and repositories (namely, Scientific Information Database and Magiran) using keywords such as medical tourism, international medical travel, and medical tourism business in the English and Persian literature, published between January 2000 and December 2019, identified with no restriction on the type of the studies. The data were analyzed based on the content analysis method.

**RESULTS:** Out of 1054 articles, 14 were finally selected. In the end, eight themes of the medical tourism business including competitive pricing, safety and security, information and communication technology, labor market and human resources, structure management, leading the way in medical tourism, infrastructure, and exchange with the international world were identified which on the whole contain 45 codes. Most of the articles were quantitative. Four of the themes (competitive price, labor market and human resources, structure management, and infrastructure) were most frequent and of the highest importance.

**CONCLUSION:** The themes and codes identified in this study helps companies and individuals who want to work in the field of medical tourism. According to this study, all 8 themes and 45 codes are of high value, but still, some themes are of higher value than others and special attention should be paid to them.

### Keywords:

Business, Iran, medical tourism, systematic review

# Introduction

Tourism is one of the most important economic activities around the world, which has significant direct impacts on the countries' gross domestic product (GDP) and accounts for more than 9.5% of the countries' GDP.<sup>[1]</sup>

The tourism industry is undergoing a substantial change. The advance in new technologies and a skilled and demanding

consumer target means that the organizations and destinations need new marketing and management tools to meet the modern tourists' expectations and the industry's requirements for innovation.<sup>[2]</sup>

According to the latest report on Travel and Tourism Competitiveness in 2017, Iran is located 93<sup>rd</sup> out of 136 countries in terms of competitiveness of the tourism industry. Among Iran's competitive pillars, the best performance belongs to the price competitiveness pillar, ranking as the top one. Moreover, the weakest performances

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belong to environmental sustainability pillar, ranking as 119, and prioritizing travel and tourism pillar, ranking as 117.<sup>[3]</sup>

In recent years, medical tourism has become one of the fastest-growing industries in the world.<sup>[4]</sup> It is estimated that the income of every case of medical tourism is three times that of a typical tourist.<sup>[5]</sup>

The following items can be listed as the main reasons for people's travel to other countries: healthcare, consumer values changing, population aging and increasing need for healthcare, high costs of treatment in the home country, and the possibility of taking a vacation while receiving treatment.<sup>[6,7]</sup>

The number of patients in India, Malaysia, Taiwan, and South Korea in 2017 was 495,056, 150,000, 1,414,000, and 321,574, respectively.<sup>[8-12]</sup> Given the growing number of international medical tourists in Asia and the Pacific, the region's market revenue was worth \$4.8 billion a year.<sup>[13]</sup>

In contrast to other countries, while the cost of Iran's medical services is very low, its quality and its equivalence with the latest methods of medical science in the world are the most important reasons that can promote medical tourism in Iran. However, statistics show that our country has not yet made much progress in this area<sup>[14]</sup> and is severely weak in attracting domestic and foreign tourists.<sup>[15]</sup>

Considering the themes of new businesses in the health-care sector in various countries, many benefits include improving the quality of medical services, increasing efficiency, reducing costs, and increasing revenue.<sup>[16-21]</sup>

Medical tourism, like many other businesses, should be profitable. One of the essential codes of a medical tourism business model is the cost and, on the whole, revenue stream.<sup>[22,23]</sup> By examining the benefits of new technology on the tourism business, Law and Huang have stated that as an essential combination to tourism, a hospital needs to pay more attention to its business model and revise its main and strategic processes.<sup>[24]</sup>

Zott and Amit have said that business executives have also sought to change the elements of their business model to gain a competitive position. New business models should focus on value chains, support activities, and how to generate revenue.<sup>[25]</sup>

Kimble has argued that the business model can be used by researchers and regulatory agencies to assess the opportunities and risks of medical travels and help medical tourism service providers to develop international programs.<sup>[26]</sup> Despite the conducted studies, statistics show that there has been no business tourism research in the country so far. Taking into account the numerous capacities for attracting medical tourists,<sup>[14]</sup> the severe weaknesses in attracting foreign tourists,<sup>[15]</sup> and the lack of a proper framework for medical tourism business,<sup>[25,26]</sup> this study aims to identify the main codes of medical tourism business through a systematic review in Iran.

# **Materials and Methods**

This systematic review adhered to the "Preferred Reporting Items for Systematic Reviews and Meta-Data Analysis" guidelines.<sup>[27]</sup>

## Literature search

Several scholarly international databases, namely the PubMed, Scopus, Web of Science, as well as Iranian bibliographic thesaurus and repositories (namely, Scientific Information Database and Magiran), and databases using simple search terms "medical tourism" or "business model in medical tourism" or "medical travel" OR "wellness tourism" (to ensure that all pertinent citations were searched), along with searching the reference lists of identified articles for additional pertinent articles. The entire review process took place between September 2018 and January 2019.

## **Study selection**

The selection process electronic search results collected were in an Endnote library (for de-duplication of records). Finally, 14 studies were extracted for study.

First, one of the authors (NK) screened all article references based on title and abstract to identify potentially eligible articles, and another author (ST) independently cross-checked the initial results on the basis of the following inclusion criteria:

Only studies that concern medical tourism/business medical tourism were included in the selection. The aim is to identify codes that are important in medical tourism. The reasons why patients seek medical care abroad were not of interest. Original researches were a case study, and we excluded conference proceedings, commentaries, editorials, and letters. Moreover, we gather English or Persian language articles and excluded articles published in other languages.

## Methodological quality assessment

Then, two of the authors (ST and NK) independently screened remaining articles' complete full text to confirm eligibility and then independently rated the included studies using Critical Appraisal Skills Programmer checklists as a quality appraisal tool. Inter-rater reliability (for both study selection and quality appraisal

processes) was assessed applying the Kappa statistic.<sup>[28]</sup> Substantial agreement was observed between raters for the full-text review and quality appraisal of the included articles. Whenever one of them was doubtful about eligibility or quality, an agreement was reached through discussion.

### **Data extraction**

A data extraction form was designed before data collection. One author (NK) independently extracted study characteristics (name of the first author, publication year, country, study design, and research objective) as well as key findings related to the business model of tourism medical to a destination country from included articles, and another reviewer (ST) verified the data extracted. In any event of disagreement between them, the consensus was reached through discussion and using a third reviewer (KA) as required. For mixed-methods studies, we extracted only the qualitative components.

### **Data synthesis**

The collected data were analyzed using the content analysis method, which is a way of identifying, analyzing, and reporting themes within a particular. Data were reviewed several times for familiarization. There was no specific grouping before the analysis, and codes and themes were developed according to their repetition within the text. The analysis and coding steps consisted of getting familiar with the data by reading it several times, identifying and extracting primary codes, merging the codes to build themes, reviewing and completing the themes, naming and defining the themes, and assuring reliability of the codes and themes by reaching an agreement between the two coders.

### Results

Our search strategy resulted in 1054 records; the number of records after screening titles and abstracts was 595, 93 full-text articles were reviewed, and finally, 14 studies were chosen to be included in this systematic review. All eligible articles were considered to be of good quality. The search and selection studies are pictorially shown in Figure 1.

The themes and codes related to medical tourism business were extracted as it follows and the numbering are based on Tables 1 and 2 and Figure 2.

### **Theme 1: Competitive price**

One of the most important factors in attracting medical tourism is price. Given the fact that Iran is in a boycott situation, so its price is very competitive (1, 3–10, and 14–12). In addition to the cost of healthcare, the price of amenities is also important to the patient (3, 5, 7, and 13).

Medical tourists are dissatisfied with the lack of price

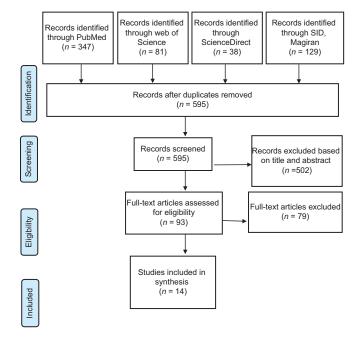


Figure 1: Preferred Reporting Items for Systematic Reviews and Meta-Data Analysis flow diagram for screening and selection of the included studies

transparency. The manner and amount of payment should be clear, and there should be no weakness in the financial transaction system (3 and 12). On the other hand, it is important for the senior authorities to standardize the costs of healthcare and tourism (14).

### Theme 2: Safety and security

A foreign patient wants a peaceful country for healthcare (8). To protect his/her privacy, the patient chooses a country free from crime, corruption, and terrorist incidents, a country that its laws will protect him/her (1, 2, 8, and 5). He/she also wishes confidentiality between himself/herself and his/her physician (8).

# Theme 3: Information and communication technology

In recent decades, with the advances made in all businesses, medical tourism and hospitals are expected to equip themselves with high technology and high bandwidth internet (1, 13, and 14). Using ICT is important in the process of recruitment, marketing, and transactions (4, 10, and 12). On the other hand, since the moment of deciding to choose the destination country until his/her return to his/her home country, the patient expects to be supported via the internet and it is necessary to take effective steps (3 and 7).

### Theme 4: Labor market and human resources

A successful business needs committed and competent people, and medical tourism is no exception (1–9 and 13). Medical tourism staff should get the necessary training and be able to communicate well with the patient (1, 4, 5,

1 Strept (2013) <sup>10</sup> Exploring the codes Web-based Microsoft on readicit later and services in provide accompany of medican or chronical laters. and or patients and services in provide accompany of medican or chronical laters. and or patients and services in provide accompany of medican or chronical laters. and or patients. and or pati	Bow	Row Authors (years)	Title	Type of study Audience/ location	Audience/ location	Purpose of the study	Row Authors (years) Title Type of study Audience/ Purpose of the Findings regarding this study location study	Conclusions and suggestions for future studies
Caramodations in holes, deary accommodations in the dearnation, welter appeal dearnation appeal dearnation accommodations in accommodation and benerge accords. The potential actingtican actingtica stability of the country, legal protection of the generemts in a dearnating actingtica stability of the country in a dual tactions in holes, deary laws, accommodations in action actingtica stability of the country actingtica stability of the country actingtica stability of the country action actingtica stability of the country action and action action actingtica stability of the country action ac		Singh (2013) <sup>[29]</sup>	Exploring the codes influencing the travel motivations of US medical tourists	s Web-based and f quantitative electronic surveys	American tourists	Examining the codes that medical tourists in the united states consider when choosing a destination country	Σ	Major factors that impact the medical tourist's trip: Medical facilities and services; hotel accommodations and food and beverage; the general tourism supply; and governmental laws and policies at the international destination
Martinez Álvarez Martinez Martinez Martinez Martinez Martinez Martinez Mona Mon							Quality of hotels and food and beverages Accommodation costs, food and beverage costs, hospital staff, availability of internationally renowned hotels, spa treatments, proximity of hotels to hospitals, disability dietary accommodations in hotels, dietary accommodations in hotels and food and beverage outlets, availability of internet access, availability of traditional treatments, exercise and workout facilities Tourism supply of the international destination	Further research needs to be conducted to further our understanding of both supply and demand of this type of tourism. It is hoped that more qualitative and quantitative studies can be conducted so that this territory can be mapped further
Martínez Álvarez The potential Qualitative India and UK How to collaborate or medical tourism are area system   et al. (2011) <sup>[30]</sup> for bi-lateral Qualitative study on medical tourism personnel competence, entrepreneurial facilitators in India and UK How to collaborate or medical tourism personnel competence, entrepreneurial facilitators in India and UK   et al. (2011) <sup>[30]</sup> for bi-lateral Qualitative study of this process and political stability of the country, quality of hospital services, regulation and litigation perspectives from the UK and India   Mona How to collaborate Row to collaborate Row medical tourism personnel competence, entrepreneurial facilitators of stakeholder   Mona How to collaborate Row to collaborate Row to collaborate Row to collaborate   Mona How to collaborate Row to collaborate Row to continuity of care Procedures, lack of continuity of care   Mona How to collaborate Row to collaborate Row to continuity of to care Procedures, lack of continuity of care   Mona Hos titl and tourism Row to continuity of tare Procedures, lack of continuity of care   Mona Hos titl and tourism Row to continuity of to cospital services, regulation and litigation   Mona Hos titl and tourism Row							General costs of tourist's attractions, fluency of the general public or host community in English, airport services, local transportation services, reliability of public services, safety from crime, local political stability, technological advancement in the destination, weather appeal, destination appeal (sightseeing, culture, etc.), attitude of locals toward Americans, receptive nature of locals to Americans Governmental policies and laws Political stability of the country, legal protection of patients, legal system for malpractice, safety laws, access to money/credit, currency fluctuations, tax	
MonaHospital ability toStudying theMedicalPropose a model toResource-based view hospital attributes <i>et al.</i> (2011) <sup>[31]</sup> attract internationalhybrid methodand tourismassess the abilityHospital reputation (employees, especially physicians), type of hospital (teaching, general or perations) <i>et al.</i> (2011) <sup>[31]</sup> attract internationalhybrid methodand tourismassess the abilityHospital reputation (employees, especially of hospitals in physicians), type of hospital (teaching, general or peration general or people)A conceptualpeople)attracting foreignspecialty), hospital size (the number of beds in the hospital), the number of countries that the hospital is promoting its services in, and the number of referral	N	Martínez Álvarez <i>et al.</i> (2011) <sup>[80]</sup>	The potential for bi-lateral agreements in medical tourism: A qualitative study of stakeholder perspectives from the UK and India	Qualitative	India and UK	How to collaborate on medical tourism in India and UK	Government support, infrastructure, medical Government support, infrastructure, medical personnel competence, entrepreneurial facilitators of this process and political stability of the country, quality of hospital services, regulation and litigation procedures, lack of continuity of care	Policymakers should consider medical tourism as an option to improve their health services It is suggested to research in the field of medical tourism marketing, service pricing, various forms of agreements
	<i>с</i> о	Mona <i>et al.</i> (2011) <sup>[31]</sup>	Hospital ability to attract international patients: A conceptual framework		Medical and tourism experts (15 people) participated	Propose a model to assess the ability of hospitals in attracting foreign patients	Resource-based view hospital attributes Hospital reputation (employees, especially physicians), type of hospital (teaching, general or specialty), hospital size (the number of beds in the hospital), the number of countries that the hospital is promoting its services in, and the number of referral	A set of complementary hospitals with effective synergy can attract medical tourism by using appropriate strategies Every country must rely on its capabilities to attract medical

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Tab	Table 1: Contd						
Rov	Row Authors (years)	Title	Type of study	Audience/ location	Purpose of the study	Findings regarding this study	Conclusions and suggestions for future studies
				in group		agreements the hospital has with physicians or	tourism
				discussions		hospitals	It is suggested to identify the
				and in-depth		International competence	factors in the leading countries
				interviews		Attracting and providing care to foreign patients management commitment	for medical tourism
						The number of foreign patients per year the hospital sets as a goal in its strategic plan, the number of employees whom the hospital has assigned exclusively for international patient services (such as translators), and the monetary expenditures the hospital incurs	
						Institutional environment, government support and promotion, social codes, economic codes Availability of resources: Trained workforce, medical	
						equipment, and pharmaceutical products	•
4	Maboodi and Hakim ) 2016) <sup>[32]</sup>	Determinant codes on medical	Descriptive -analytic	30 academic specialists	Identifying and prioritizing internal	Modern medical equipment, quality of medical services, well-trained and qualified staff, good	In this research, the emphasis is on quality and compliance
		tourism (case studv: Iran)		in the field of tourism	codes that affect the attractiveness of	recreation centers, brand positioning, diversification of medical services national medical tourism	with standards, and the price factor is the second priority
		(m		and medical	medical travelers	coordination center, service prices, catering	On the other hand the paper
				tourism, doctors and hospital		services, accommodation services, good publicity, transportation system, and the elimination of the	suggests the following factors: Medical resources, improving
				managers			corninumication, skills integrated management
വ	Morovati- Sharifabadi and Asadian-	presentation of health tourism development model	Quantitative (interpretive structural	Yazd Province	Providing a comprehensive framework for	Staff accountability, good physician-patient relationship, up-to-date knowledge of medical staff, English speaking medical staff how cost medical	This study show that health tourism and its development in Vazd province needs to satisfy
	Ardakani (2014) <sup>[33]</sup>	Ardakani (2014) <sup>[33]</sup> with fuzzy tops is			identifying and	services, facilities, lectronic payment, tourist	patients requirement, This
		integrated approach and interpretative			surveying direct and indirect impacts of	auracitoris lor medical travelers, good communication mechanism, security, warm residents, quality of	will be possible by investing in equipping and updating
		structural modeling in Yazd Province			any codes affecting the development of	medical services, modern medical equipment, high standards of hospitals and medical centers,	hospitals and developing the skills of hospital staff
					the tourism industry	international health insurance, tourist attractions, criminal proceedings, botels near medical providers	The model designed in this
					Province	low-cost transportation	research can be vanuated using statistical methods such as
							structural equations and path
							model can be extended
							using techniques such as meta-synthesis."
9	Anabestani and	Codes affecting	Descriptive-	Medical tourism Identifying the	Identifying the	Low-cost medical services, access to advanced	The city of Mashhad has
	(2015) <sup>[34]</sup>	Mashhad as a	anany ito. Questionnaire-		the selection of	rare drugs, high-quality medical facilities	respect to health tourism
		medical tourist	based survey		Mashhad as	International health insurance, recognized as a medical tourist destination	including competitive price and
							France

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Row	Row Authors (years)	Title	Type of study	Audience/ location	Purpose of the study	Findings regarding this study	Conclusions and suggestions for future studies
		destination			the destination of international patients	Effective advertising, religious centers, business and leisure centers, affordable housing Short waiting list, warm hospitality of locals, good behavior of medical staff, hotel amenities	product, easy accessibility, and high-quality medical service
~	Bayat <i>et al.</i> (2015) <sup>[35]</sup>	Attracting codes identification of medical tourists in hospitals of Tehran Citv	Quantit Medical to (questionnaire) specialists	Medical tourism specialists	Identifying the health tourism status in Iran from two aspects of destination	Hospital credibility: Internationally accredited hospitals, international reputation of hospitals, international reputation of medical experts, and websites	According to this study, political and economic stability , medical tourism infrastructure are effective in attracting medical tourism
					characteristics and characteristics of health centers	Coost. Anotocaute interlocat expenses, anotocaute accommodation and fravel expenses, diverse package Identifying other factors and of services, and low-cost recreational activities challenges in the developme Quality of care: High-quality medical equipment, short waiting times, and medical staff skilled in using advanced medical equipment Hospital staff training: Highly trained medical staff, medical tourism courses for medical staff, and knowledge of the cultural backgrounds of different countries	e Identifying other factors and challenges in the development of medical tourism is recommended.
						Situation and political environment: Supervisory policy in medical tourism, provision of special insurance for international patients, effective medical records of foreign patients, easy travel arrangements, and close collaboration with different parts of the country to attract foreign patients Hospital infrastructure and location: Access to tourist attractions, affordable housing near hospitals, access to good transportation services and quiet hospital	
ω	Abd Manaf <i>et al.</i> (2015) <sup>[36]</sup>	Country perspective on medical tourism: the Malaysian experience	Case study/ Questionnaire	International patients (the majority of whom were Indonesians)	Explore the perception of international patients in Malaysia as a medical tourism destination country	Five themes were evaluated for future intention and to predict satisfaction of non-Malaysian patients Hospital and staff: International hospital accreditation, recognized hospital reputation, high-standard level of medical staff, ease of medical treatment arrangements, high-standard level of medical facilities, recognized reputation of physicians, western experienced/trained physicians, tourists safety from crime and terrorist attack, shorter waiting time for medical service than in your country Country factor: Ease of travel arrangements, ease of visa and immigration procedures, ease of accessibility from your country, friendliness and helpfulness of the local people, no language barriers in traveling in Malaysia, political stability Combining tourism and health services: Great place	The most important factor in attracting foreign patients to Malaysia is standard hospitals and good staff

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Tab	Table 1: Contd						
Row	Row Authors (years)	Title	Type of study	Audience/ location	Purpose of the study	Findings regarding this study	Conclusions and suggestions for future studies
						for relaxation after medical treatment, availability of many tourist attraction, preference of privacy and confidentiality, well-reputed as a tourist destination, opportunity to combine medical service with a vacation, various types and availability of medical service Cost-saving: Reasonable price and significant amount of money savings, opportunity for person who has no or limited medical insurance in his/her country, less expensive medical treatment than in your country Insurance and unavailability of treatment: Type of medical treatments that are not allowed in your country, type of medical treatments not covered by medical insurance in your country	
თ	Nemati <i>et al.</i> (2016) <sup>[37]</sup>	Assessing barriers to the development of medical tourism	Case study	Ardabil	Investigating barriers to medical tourism development	Barriers to information and marketing systems, policy, legislation and infrastructure barriers, product and quality development barriers, government attitude barriers, human resource barriers, social, cultural, and economic barriers	It is necessary to pay attention to the following factors: ICT, marketing, policy and legislation, infrastructure, service quality, government attitude, human resource, sociocultural and economic barriers
10	Goodarzi <i>et al.</i> (2014) <sup>[38]</sup>	Development of medical tourism in Shiraz	Surveying - cross- sectional	Shiraz Metropolis	Aiming at planning and development of medical tourism in Shiraz Metropolis (with emphasis on medical tourism)	Taking the following measures will promote medical tourism in shiraz metropolis: Transparency in the prices of health services and tourism, enhancing quality of health services and tourism, enhancing the culture of tourism, utilizing medical and tourism facilities, services and equipment with high technology and international standards, and utilizing information and communication technology for advertising and marketing in medical and tourism fields	The research showed that the facilities, capabilities, and medical tourism equipment are key factors in barriers of developing medical tourism
÷	Jabbari <i>et al.</i> (2012) <sup>[39]</sup>	Current medical tourism in Iran: A case study	Qualitative	Whole country	Aimed to show the current status of medical tourism in Iran	Iran faces some challenges in the terms of basic and medical infrastructure, efficient government support, having a well-established medical tourism development plan, cross-sectoral and operational coordination, having internationally accredited healthcare providers, promoting and coherent marketing	Iran must be able to use its capabilities to achieve the goals of medical tourism in the Iran Vision 1404 document
12	Maleki and Tavangar (2016) <sup>(40]</sup>	Analyzing health tourism challenges in Mashhad from the perspective of foreign patients	Surveying - Cross- sectional	Selected hospitals of Mashhad	Surveying the Mashhad health tourism status from the perspective of foreign patients and identifying the weaknesses	Weak marketing and notifying systems in Mashhad's admissions and treatment processes, weak electronic patient admission system, weak financial transaction system in hospitals for paying the costs, lack of foreign language support in hospitals, lack of comprehensive health tourism packages, and problems concerning the obtaining a visa and inter-city transport	In Mashhad health tourism, the existing processes should be modified to improve the quality of medical services

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Montane (your)   Tips of faulty   Additions   Endings regarding this study   Conclusion and augretions     13   Freedom (your)   Appelied and (source)   Selected   Cheach home   Cheach home   Conclusion   Conclonand   <	Table 1: Contd						
Armidizadeh Analysis di the Analysis di the Analysis di the administration escanta in the process of attracting acrocia si di tracting acrocia si di tracting acrocia si di tracting and tracting and tracting and tracting and tracting and the Analysis di t	Row Authors (years)	Title		Audience/ location	Purpose of the study	Findings regarding this study	Conclusions and suggestions for future studies
Hamidizadeh hantysis of the Analysis of Tenhan, and Analysis of the Analysis of the Analysis of Tenhan, and Analysis of Tenhan, analysis of Tenhan, and Analysis of Tenhan, and Analysis of Tenhan, and Analysis of Tenhan, and Analysis of Tenhan, analysis of Tenhan, analysis of Te					of health tourism sector in the process of attracting and providing medical services and health tourism to foreign patients		
In terms of cost, visitation and medication costs, visitation and medication costs, visitation and medication costs, visitation and medication costs were important and potential and operation costs were important. Waiting time for visas and visits are of high importance in operation of astancial costs, visitation of astancial costs, visitatia astancia costs, visitation of astancial costs, visitatia a		Analysis of the health tourism marketing management In Iran's competitive advantage in medical tourism marketing Iran	σ	Selected hospitals of Tehran, Mashhad, and Shiraz	Determining the codes involved in creating competitive advantage of medical tourism marketing of Iran		Iran has competitive advantages such as highly qualified doctors, low cost, short waiting time. However, Iran is not in a favorable competitive position in the field of hospital services and technology, especially operating room equipment, quality of services and welfare facilities
Saraei and Evaluation of Descriptive Mashhad The purpose of The diversity of historical, religious, natural, and Afsharipour medical tourism survey survey this study was cultural tourism attractions. Modern-equipped and this study was tructure based on the Porter and internationally renowned medical centers with attraction attractions of the medical centers with the metropolis of Mashhad model in the metropolis of Mashhad mashhad mashhad the metropolis of Mashhad mashhad mashhad mashhad mashhad mashhad medical tourism programes, inefficient government support for medical costs and hospital accreditation, lack of coherent and effective cross-sectoral collaboration on the operational medical tourism is under the metropolis of the metropolis o						In terms of cost, visitation and medication costs, visas, accommodation, and hospital and operation costs were important. Waiting time for visas and visits are of high importance in operating room equipment, and quality of services and amenities are of utmost importance in the technology and services of hospital	
		Evaluation of medical tourism structure based on the Porter diamond model in the metropolis of Mashhad	ptive	Mashhad	The purpose of this study was to evaluate the structure of medical tourism based on Porter's diamond in Mashhad	The diversity of historical, religious, natural, and cultural tourism attractions. Modern-equipped and internationally renowned medical centers with specialist human resources, low cost of medical care on the global and regional scale, the necessity of development in competitive strategy, lack of medical tourism programs, inefficient government support for medical tourism, basic infrastructures, and therapies requiring upgrades, lack of standardization of medical costs and hospital accreditation, lack of coherent and effective cross-sectoral collaboration at macrolevels, lack of necessary cross-departmental collaboration on the operational level, lack of coherent and effective impossibility of transferring medical tourism, insurance	To attract tourists, the city of Mashhad should take action to honor the client, increase the quality of services and offer competitive prices

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Figure 2: Dimensions of medical tourism business

6, and 8) and be familiar with the language and culture of the destination country (1, 3, 5, 7, 9, and 12). The number of staff in this sector is significant, and the ratio of clinical staff to patients should be sufficient (1 and 9). The existence of some renowned specialist physicians is a competitive advantage for the host country of medical tourism (7 and 8).

### **Theme 5: Structure management**

Foreign patients, especially European ones, choose the countries that have the permits for medical tourism hospital admissions (5, 7, 8, 10, 12, and 14). Having a complete package of services that cover the cost of medical and tourism is satisfactory to the patient, and hospitals and companies operating in the field are expected to define a complete package of services (1, 3, 7, 10, 12, and 14).

The government should better supervise and delegate the provision of tourist and health services to the private sector and to the facilitating companies (1, 2, and 12). Although short waiting queues and providing specific services are a competitive advantage in Iran (6, 7, 8, and 13), good insurance coverage and an attractive site for medical tourism have not been defined (7 and 14).

### Theme 6: Leading the way in medical tourism

A country can be a leader in medical tourism that enjoys government support; policies and laws of government should be in line with this sector (1, 2, 7–9, and 14). Political stability is important for the health tourism recipient country (1, 2, 7, and 8). The government should facilitate the legislation in this sector, and it is expected to reduce the cost of setting up this business and invest at a large level (7–10 and 14).

### **Theme 7: Infrastructure**

Proper infrastructure in all businesses is essential. In the field of health tourism, the infrastructure of the treatment sector must be fully accessible. That is to say, and there

# Table 2: Themes and related codes identified in reviewed studies on medical tourism business

n	Themes	Codes
1	Competitive price	Competitive price, transparency of medical and tourism prices, standardized costs
2	Safety and security	Medical tourist's legal immunity, index of terrorist incidents, crime and violence, privacy, safe accommodation
3	Information and communications technology	Telemedicine, digital marketing, up-to-date equipment, high bandwidth internet usage, proper system
4	Labor market and human resources	Committed and worthy physicians, nurses, and staff, access to sufficient human resources, trained personnel, famous doctors, staff familia with the culture and language of the destination country
5	Structure management	Having accreditation licenses at the hospital level, comprehensive service package, outsourcing of health and tourism services, establishment of medical tourism facilitation companies, short waiting queue, providing specific health care, insurance coverage in the health tourism sector, attractive website design
6	Leading the way in medical tourism	Having a strategic plan, political stability, government support, government investment in this area, the low cost of starting up a medical tourism business, easy to get a license, having large-scale cross-sectoral cooperation
7	Infrastructure	Equipped and high-tech medical centers, standardizing hospitals and having the necessary licenses, proximity between hotel and hospital, creating a hospital hotel, convenient amenities, having a translator and driver fluent in foreign languages, specialist doctor's attendance in hospitals 24 h a day, provision of specific departments or hospitals specialized in medical tourism
8	Exchange with the international world	Issuance of visa at least cost and in shortest time, having two-way airlines, participation in exhibitions, establishment of international offices in the home, good urban and suburban transportation system

should be modern and authentic medical centers and hospitals with proper facilities and equipment which meets the latest standards and also a well-equipped inpatient department ward in each hospital (1–3, 5–14). Proximity between the hotel and the hospital is important to a foreign patient, and hospitals that are near the international hotels or give services as a hospital hotel have a competitive advantage over others (1, 2, and 5–11). Existence of other amenities (translator, driver fluent in English, and food and drink with good quality) is also valuable to foreign patients (1,5–8, 10, and 11).

## Theme 8: Exchange with the international world

One of the most important problems for medical tourists in the country of destination is the issuance of visas. Visa issuance for patients should take place in the least possible time and with the least cost and obstacles (8, 12, and 13). Lack of coherent marketing and lack of

participation in international fairs to introduce the country and hospitals are international problems in this field (14).

## Discussion

This study was conducted by reviewing (14 selected) articles related to the medical tourism business. Through analyzing the selected articles, 8 important themes and 45 codes involved in medical tourism business were identified; important themes such as competitive price, safety and security, information and communication technology, labor market and human resources, structure management, leading the way in the field of medical tourism, infrastructure, and exchange with the international world.

The themes identified in this study are in line with the research aspects of e-business in the field of treatment conducted in Iran. Paying attention to socioeconomic codes and providing important technological, communicational, telecommunication, legal, and administrative infrastructure have been considered as important issues. Moreover, the differences were in its emphasis on e-business in the field of treatment.<sup>[43]</sup> In another study,<sup>[44]</sup> codes influencing the choice of destination for medical tourists were identified, all of which were considered either as themes or codes in our study.

One of the most important themes of the medical tourism business is the competitive price. Thanks to the boycott, Iran currently has a competitive advantage in price. According to a study conducted in South Korea, the factor of reasonable price played a moderating role and had no direct impact on the return of medical tourists.<sup>[45]</sup> Although this study emphasizes the importance of price, it does not consider it to be critical. The findings of the study were compatible with the findings of a study by Lee and Shih,<sup>[46]</sup> who emphasized pricing strategy in today's increasingly competitive therapeutic settings.

In a research conducted by Rezaee and Mohammadzadeh, it was noted that from the perspective of the researcher, the following items were effective codes involved in Iran's medical tourism: macro-operational cooperation and collaboration, appropriate equipment, development of basic and therapeutic infrastructures, and comprehensive and coherent medical tourism.<sup>[47]</sup>

Jabbari *et al.* have stated that infrastructure quality is a crucial factor in health tourism, and in the present study, the medical tourists' views are in line with the findings of this study.<sup>[39]</sup>

The results of the study conducted by Jabbari *et al.* have shown that effective advertising, infrastructure development and the use of quality management systems significantly promote the development of medical tourism in Iran.<sup>[48]</sup> Jabbari *et al.*'s results are in line with the results of the present study.

Badie *et al.* have shown that the enhancement of private participation in the development of medical tourism in Golestan province, the establishment of hospitals and clinics specialized in medical tourism and participation, and support of the public sector plays an important role in the development of this industry.<sup>[49]</sup>

The results of the present study highlight the importance of safety and security, infrastructure, leading the way in medical tourism, and structure management. These themes have contributed to the improvement and success of the medical tourism business and are in line with the study of Jabbari *et al.*, Rezaee and Mohammadzadeh, and Badie *et al.*<sup>[39,47-49]</sup>

Since medical tourism is one of the fastest-growing industries globally, and Iran has great potential, one should think of the medical tourism business more scientifically. As defined in this study, Iran has the potential in some aspects of the business and should place greater emphasis on its strengths and do its marketing on that basis. On the other hand, by focusing on its weaknesses, it should also do proper planning.

Researchers of this study tried to extracted related articles, but some of them were not available. To overcome this limitation, some similar articles were used. In this study, using a systematic review, the dimensions and themes of the medical tourism business have been identified. For future research, it is suggested to use other methods such as meta-synthesis to identify the dimensions of the medical tourism business.

# Conclusion

Medical tourism is one of the most important industries in the world, and all countries are seeking to have a greater share of this market. By acquainting the businesspeople with the important aspects of this business and basing their business on it, this study tries to be a gateway to medical tourism business activists. At present, the public sector (hospitals) and the private sector (companies and agencies) involved in medical tourism have not to find a proper position due to the lack of paying attention to important aspects of business and especially to its themes and components that are vital to the business in terms of country and business conditions.

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### **Conflicts of interest**

There are no conflicts of interest.

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