Identifying and prioritizing strategies for Iran's medical tourism development

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ARTICLE INFO	ABSTRACT
Article type: Research Article **Article History:** Received 11 March 2022 Revised 02 February 2023 Accepted 15 April 2023 Published Online 18 December 2023 **Keywords:** *Health tourism,* *Medical tourism,* *Strategies,* *Thematic analysis,* *Best-worst method,* *Iran.*	Considering Iran's potential in medical tourism and being located in one of the world's most competitive health tourism regions, the present study aims to Identify and prioritize strategies for developing medical tourism in the country. The study relied on a mixed research method. In the qualitative part, solutions for Iran's medical tourism development were identified by interviewing activists and experts. The collected data were analyzed through the thematic analysis method. This process revealed four dimensions and 18 strategies. In the quantitative part, a questionnaire was developed, and experts in the Iranian medical tourism industry prioritized the identified dimensions and strategies. The analysis of the data through the best-worst method clarified that, from the perspective of the practitioners, dimensions of medical tourism development in Iran were: "marketing," "applying information and communication technologies," "human resources development," and "reinforcing infrastructures."

1. Introduction

The growing number of patients worldwide, the increasing number of medical specialists (Mahdavi et al., 2013), and the development of therapeutic technologies over the past decades (Peršićet al., 2018) have all led to the formation of a new trend called medical tourism (Zhang et al., 2022). According to the World Health Organization (WHO), the medical and health industry will become one of the largest industries worldwide, followed by tourism and leisure. Together, the two sectors will account for 22% of the gross domestic product in the world (Zhong et al., 2020).

Furthermore, this type of tourism could shape a new tourism market (Heung et al., 2011), in which people travel to use medical and health services (Aydin & Karamehmet, 2017; Gan & Frederick, 2011). It includes all activities contributing to health or recovery (Savasan et al., 2017). Most countries have considered medical tourism a profitable development strategy (Abadi et al., 2018). Health tourism has created a multi-billion-dollar market (Ridderstaat et al., 2019), remarkably impacting the world economy (Zhang et al., 2022). Thus, in their attempts to compete in this market, many countries have tried to devise solutions, develop plans, reduce obstacles, transfer knowledge, and provide quality services. Such a situation has intensified competition in this industry (Heung et al., 2011).

Iran has long been one of the most significant medical tourism destinations, considering its geographical location, history of medicine, specialized teams of treatment, low prices, and high-quality services (Mahdavi et al., 2013). More specifically, the country has been a significant health and treatment provider in Asia, especially in the Middle East. It attracts tourists annually from the Persian Gulf Basin (Abualhasani, 2017). The medical background in Iran dates back to ancient times and medical schools such as Mazdayasna, Ecbatana, Academy of Gondishapur (Zargaran et al., 2011). The country is currently among the most advanced in medical sciences, such as stem cells and repairing damaged spinal cords, infertility treatment, radiology, nephrology, hepatology (Nikraftar et al., 2016), and ophthalmology (Noori et al., 2012).

Iran currently has 900 hospitals, 4168 clinics, treatment centers, and polyclinics, 4,672 primary healthcare centers (Statistical Centre of Iran, 2020), 42,822 general practitioners, 39,822 specialists and sub-specialists, 14,314 residents studying for a specialty, and 20,051 dentists (Medical Association of Iran, 2020). Iran also hosts over 1,000 hydrotherapy springs scattered across the country and provides a competitive advantage in health tourism (Arabshahi Karizi & Aryianfar, 2013). Mud therapy is one of the potentials of Iran to develop health tourism. For instance, lake Urmia's water, salt, and mud have long been used for health and therapeutic purposes (Noori et al., 2012). Other capacities of Iran in the area of health tourism can be found in the country's salt domes (Rajabi & Shiri Tarzam, 2009), clay therapy, sand therapy, medicinal herbs, and traditional medicine (Noori et al., 2012).

The country also has competitive advantages in costs and waiting time compared to most neighboring countries (Hamidizadeh et al., 2016). Given such capabilities, Iran is a robust health and medical tourism destination. The Iranian Development Vision expects the country to be one of the leading health tourism providers by 2025 (Sakhdari et al., 2019).

However, published news, statistics, and interviews by officials in the area of medical tourism indicate that this type of tourism has been growing without following any specific orientation in Iran (Vaezi et al., 2018). Therefore, despite its high potential, medical tourism does not have a particular contribution to Iran's economy, and its revenue is inconsiderable compared to the international income in the field (Gholipour Sooteh et al., 2018). The situation suggests a shortage of well-formulated plans and policies directing health tourism in Iran. There is also a lack of academic research exploring medical tourism development strategies in Iran (Nikraftar et al., 2016).

Numerous investigations have proposed models and strategies for medical tourism development worldwide (Hall, 1998; Scheyvens, 2011; Janusz & Bajdor, 2013; Saarinen et al., 2018). However, these studies need to be more comprehensive. They have only focused on specific dimensions and aspects, such as consumers' needs and the diversity of medical tourism products (Jiang et al., 2022), the main barriers to the development of such tourism (Heung et al., 2011), medical tourism marketing measures (Zarei & Maleki, 2019) and policy implications (Johnston et al., 2015). Furthermore, as tourism development in different destinations requires place-specific plans (Peršić et al., 2018), strategies proposed for Iran's tourism context must consider its distinctive features (Asadi & Daryaei, 2011).

The literature on Iran's medical tourism also suggests that existing studies (Sakhdari et al., 2019; Asadi & Daryaei, 2011; Vaezi et al., 2018) mainly addressed development strategies for medical

tourism at urban and provincial levels. However, it seems that no effective research on a national scale has been conducted. For this reason, offering a model suitable for medical tourism development in Iran demands meticulous exploration that focuses on the specific context of the country (Gholipour Sooteh et al., 2018).

This study aims to identify and prioritize medical tourism development strategies suitable for the Iranian context. As Iran is located in one of the world's most competitive regions for health tourism (Abualhasani, 2017), it would be necessary to employ effective strategies for medical tourism development in the country (Ridderstaat et al., 2019). Of course, customized strategies could be used in countries with medical tourism conditions comparable to Iran or countries that need better plans for medical tourism development.

In addition, although the development of medical tourism has been the focus of the present study, the research findings can also be used to develop other forms of health tourism.

2. Literature review

2.1 Health tourism

Globalization of healthcare in recent years, advancements in transportation and information and communication technologies, the potential demand for medical services, improved medical insurance and infrastructure in developing countries (Guha Roy et al., 2022) have given birth to a new type of tourism, which is known as health tourism (Heung et al., 2011). Health tourism is one of the most significant types of tourism globally (Abualhasani, 2017), which draws the attention of academia (Hall, 2011) and industry. The International Union of Tourist Organizations (IUTO) (1973) describes health tourism as providing health facilities by employing the country's natural resources, especially mineral waters. Health tourism is also viewed as organized travel to places outside one's residence to recover health or enjoy mental/psychical well-being (Carrera & Bridges, 2006). It is a phenomenon shaped by the activities of tourists who travel to a region beyond their place of residence and who are willing to use medical services to overcome a medical condition, rest, or recover mental/psychical strength based on a personal decision or due to a doctor's prescription (Pessot et al., 2021).

Patients may engage in health tourism because they think referring to health/treatment centers in another country can reduce healthcare costs (Al-Talabani et al., 2019). Such efforts, plans, and measures are pursued in private and public companies/organizations (Heung et al., 2011).

Health tourism can also be described as a journey in which tourists voluntarily cross national borders to access medical or preventive services to increase their physical and mental health and temporarily live in a place other than their usual residence (Pessot et al., 2021).

Some of the most important reasons motivating health tourists are cost-effectiveness (Aniza et al., 2009), quality of tourism services, medical technological advancements, competent medical staff, high-quality equipment (Haque et al., 2018), globalization in the health sector (Heung et al., 2011), and health destinations images (Abu Hassan & Hemdi, 2016).

Health tourism includes not only the treatment of diseases and recovery of physical health but also the promotion of mental status and spiritual well-being and increasing the ability of individuals to meet their needs and perform better in the social sphere (Cheng et al., 2022) and hence, encompasses a wide range of activities generally divided into three types: curative (therapeutic), medical, and preventive (Harahsheh, 2002).

2.2 Curative tourism

Curative tourism involves any tourism activity aimed at treating specific diseases by using natural resources such as warm, mineral water fountains, salt lakes, mineral mud, radioactive sand, and climate therapy under the supervision of a medical specialist (Jallad, 2000). It benefits from thermal assets and facilities and includes natural hot spring baths, climatotherapy, rehabilitation under physician control, and nutrition programs (Jiang et al., 2022).

2.3 Preventive tourism

Preventive tourism allows tourists to have leisure experiences, rest, gain pleasure, escape everyday tensions, recover their mental/physical strength, and use medical resorts. In this type of tourism, tourists do not suffer from diseases, and activities are performed without the attendance of doctors.

Preventive tourism seeks to reinforce mental and physical abilities to prevent infections in the future (Harahsheh, 2002). Generally speaking, it is believed that there are three motivations behind travel associated with preventive tourism: being away from home, pursuing health, and staying in leisure settings (Zhong et al., 2020).

2.4 Medical tourism

Medical tourism, which connects traveling with medical interventions (Suess et al., 2018), has encouraged 14 million people worldwide who travel to receive medical services. With about 125 billion dollars of tourist expenditure annually (IHRC, 2020), medical tourism is a growing theme in the health tourism literature, which increasingly attracts the attention of researchers and planners worldwide (Campra et al., 2022).

In medical tourism, people travel to countries with high-quality and/or affordable medical facilities and services (Uygun, 2022)., searching for medical interventions (Tas& Cakir, 2022) such as surgeries to treat their illnesses (Arief et al., 2022).

Fetscherin and Stephano (2016) classified medical tourism motivations into two categories: push and pull factors. Push factors include socio-demographical factors that can stimulate the demand for medical tourism. Pull factors are related to the supply side and explain the efforts made by service providers to attract medical tourists. The supply side is critical to the success of medical tourism destinations (Zarei & Maleki, 2018). Thus, factors such as economic stability, the country's image, healthcare costs, the popularity of a destination, and the quality of medical facilities and services on the supply side can influence the country's competitive position in medical tourism (Fetscherin & Stephano, 2016).

2.5 Medical tourism planning and development

Over the past years, medical tourism has been viewed as a tool to diversify tourism products and services, generate national income, improve national healthcare systems, and increase employment opportunities and government revenues (Suess et al., 2018). Therefore, many countries attempt to develop medical tourism and compete internationally (Heung et al., 2011).

Planning is a process that involves determining goals and strategies to achieve these goals (Ezeani, 2015). Planning aims to identify suitable solutions for the key challenges and problems to optimize benefits and predict the future (Harrison et al., 2011). Tourism planning provides a framework for controlling and evaluating the destination development process. It can coherently organize and integrate elements and subsystems of the tourism industry and the fair distribution of benefits in host communities (Mason, 2003).

A literature review by Arief et al. (2022) on medical tourism studies during the last decade (2012–2021) reveals that medical tourism development has been one of the main trends in medical tourism research. However, even though various researchers have studied various aspects of medical tourism development, comprehensive strategies have yet to be proposed for the development of medical tourism. For example, Zarei and Maleki (2019) have investigated the role of marketing in developing Asian medical tourism, while Jiang et al. (2022) investigated consumers' needs and the diversity of medical tourism products.

3. Research method

The present study was exploratory mixed-method research. The population included Iranian tourism experts and practitioners, out of whom 30 were selected in the qualitative part of the study through snowball sampling. As such, the experts and practitioners with at least ten years of experience in medical tourism were identified. They are contacted within a three-month period during which the interviews were conducted. All interviews were conducted before the onset of the Covid-19 pandemic. During the interviews, which lasted 60-90 minutes on average, the participants were asked to analyze Iran's current medical tourism situation while proposing development strategies. To keep a record of their opinions, all interviews were voice-recorded upon the experts' consent. After that, the data were meticulously analyzed; the interviews were continued until the data saturation. The data were then scrutinized using the thematic analysis method to identify the medical tourism development strategies.

In the second phase, the identified strategies were arranged into a questionnaire, and eight experts

purposely selected in the previous step were asked to score the items. The data gathered through the questionnaire were analyzed through the fuzzy best-worst method (BWM) using LINGO software to prioritize the strategies.

3.1 Thematic analysis

The thematic analysis involves a systematic method for identifying and organizing the data's semantic patterns (themes) (Braun & Clarke, 2012). The process tries to detect significant themes based on the research question (Maguire & Delahunt, 2017). The method explicates the data richly and substantially while delving into various aspects of the topic under study (Braun & Clarke, 2012). This study relied on Braun and Clarke's (2012) method, in which thematic analysis involves six stages (see Figure 1).
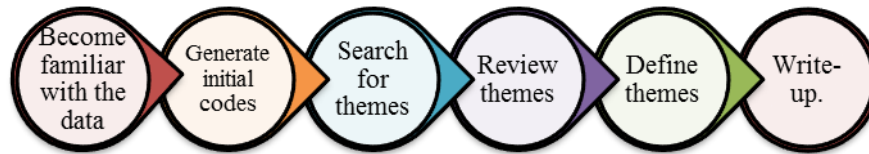

Figure 1. Stages of thematic analysis (Braun & Clarke, 2012)

The Kappa coefficient was computed to ensure the quality of the results, which was 0.92, and indicated the high level of agreement between the coders (authors and an expert in medical tourism).

3.2 Best-worst method

The BWM is a multi-criteria decision-making method (MCDM) proposed by Rezaei (2015). The distinctive feature of this method, compared to most MCDM methods, is that it requires fewer comparisons and leads to more sustainable results. The BWM algorithm was used in this study because of its minimum pairwise comparisons and lower probability of inconsistency than other methods (Rezaei, 2015). According to Guo and Zhao (2017), using fuzzy numbers would help to eliminate uncertainty in respondents' opinions. The fuzzy BWM can be conducted through the following steps:

Step 1: Determining the set of decision-making indicators: in this step, the indicators are set as $\{c_1, c_2, …, c_n\}$.

Step 2: Determining the best and the worst criteria: in this step, the best and worst criteria are generally found for decision-making by the decision-makers. The best criterion is C_b, and the worst one is C_w.

Step 3: Determining the superiority of the best criterion over the rest of the criteria by assigning a score of 1-5 (Table 1): the vector of criteria comparisons with the worst criterion is formulated as follows: $A_B = (a_{B1}, a_{B2}, …, a_{Bn})$, where a_{BJ} is the priority of the best indicator over the *J*-th indicator; It is explicit that $a_{BB} = 1$.

Step 4: Determining the priority of the worst criterion over the rest of the criteria by assigning a score of 1-5 (Tab: $A_w = (a_{1W}, a_{2W}, …, a_{nW})$, where a_{wn} designates the preference of indicator *n* over the worst indicator. It is also explicit that $a_{ww} = 1$.

Table 1. Linguistic Variables of Fuzzy BWM (Source: Guo & Zhao, 2017)

Linguistic Term	Member function	CI
Equally important (EI)	(1,1,1)	2
Weakly important (WI)	(2/3 ,1,3/2)	3/80
Fairly Important (FI)	(3/2 ,2,5/2)	5/29
Very important (VI)	(5/2 ,3,7/2)	6/69
Absolutely important (AI)	(7/2 ,4,9/2)	8/04

Step 5: Computing optimal weights (W_1^*, W_2^*, …, W_n): to determine the optimal weight of each indicator, pairs of $\frac{W_B}{W_J} = a_{BJ}$ and $\frac{W_J}{W_W} = a_{JW}$ are considered. To realize these conditions in all *Js*, a solution must be found to maximize statements $\left|\frac{W_B}{W_J} - a_{BJ}\right|$ and $\left|\frac{W_J}{W_W} - a_{JW}\right|$ for all *Js* that are minimized. It must

be noted that W_B, W_j, and W_W are triangular fuzzy numbers, which are considerably different from the best-worst values, and are preferred in some cases: $Wj=(I^w_j, m^w_j, u^w_j)$. Considering the non-negative weights and summation of the weights, the model could be formulized as follows:

$$\{\min \max\} \left| \frac{W_B}{W_j} - a_{Bj} \right|, \left| \frac{W_j}{W_w} - a_{jw} \right|$$

$$s\,t.$$

$$\sum_{j=1} R\,(Wj) = 1$$

$$1^m_j \le m^w_j \le u^w_j$$

$$1^w_j \ge 0$$

$$j = 1, 2, \ldots, n$$

After the above model is solved, the optimal values of W_1^*, W_2^*, …, W_n and ε^* are obtained (Rezaei, 2015: 51); a comparison can be entirely consistent when this relation is established as $_{Bj} \times a_{jW} = a_{BW}$. The maximum value is mentioned in Table 1 as the index.

Next, the consistency rate is calculated through *Wj* and the consistency index via equation 3.

$$\text{Consistency ratio} = \frac{Wj}{\text{Consistency index}}$$

4. Results and Discussion

The Iranian medical tourism development strategies were identified using thematic analysis (see Braun & Clarke, 2012). In doing so, primarily, the scripts of the interviews were scrutinized, and the statements associated with the research question were extracted. At this stage, 63 statements were extracted. In the next step, the statements were initially coded. A sample of the statements and initial codes can be seen in Table 2.

In the third stage, the codes were converted into initial themes. In the fourth stage, the themes were revisited, and distinct, non-recurrent, and comprehensive basic themes were identified. Table 3 shows a sample of the coding conducted.

Table 2. A sample of the statements and initial codes extracted through the interviews (first and second stages of thematic analysis)

Statements	Initial codes
One way of expanding health tourism in Iran and attracting more tourists is to use advanced tools and equipment compatible with international standards.	Using advanced tools and equipment
If we wish to develop health tourism in Iran, we must enhance the quality of services in the sector. For instance, we must focus on hoteling services offered at hospitals.	Providing hoteling services at hospitals
Tour guides will have a very effective role. Therefore, training specialized and professional tour guides must be emphasized.	Employing special medical tourism guides
Managers and policy-makers of health tourism in Iran should follow Islamic precepts in creating a health tourism brand.	Developing a health tourism brand in line with Islamic precepts
Developing e-tourism in this sector must be an operational priority.	Use of electronic tools in tourism
Establishing specialized health tourism agencies is another way of expanding the industry in Iran.	Establishing special medical tourism agencies
Tourists all around the world must be able to have online access to all health tourism services.	Providing online services

Table 3. A sample of the coding procedure in the third and fourth stages

Initial themes	Sub-themes	Initial themes	Sub-themes
Using advanced tools and equipment	Supplying and implementing modern equipment/facilities	Developing a health tourism brand in line with Islamic precepts	Developing a halal brand
Providing hoteling services at hospitals	Increasing the quality of hoteling services at hospitals	Using electronic tools in tourism	Developing e-tourism
Using special medical tourism guides	Training specialized tour guides	Establishing special medical tourism agencies	Establishing specialized agencies
Upgrading and renovating equipment	Supplying and implementing modern equipment/facilities	Providing online services	Developing e-tourism

In the fifth stage, the themes were condensed and blended into more general principles, and the network of the themes was constructed. The sub-themes (strategies) extracted in the scripts were put into similar and consistent groups, and the dimensions were identified. These dimensions were the core ideas that shaped the comprehensive theme "medical tourism development strategies." As illustrated in Figure 2, "Iran's medical tourism development" has four dimensions and 18 strategies. The final report was written after the network of the themes was verified.

After the dimensions and strategies were identified, the best and worst strategies/criteria were identified through expert opinions. Table 4 shows the best and worst strategies/criteria as rated by six experts.
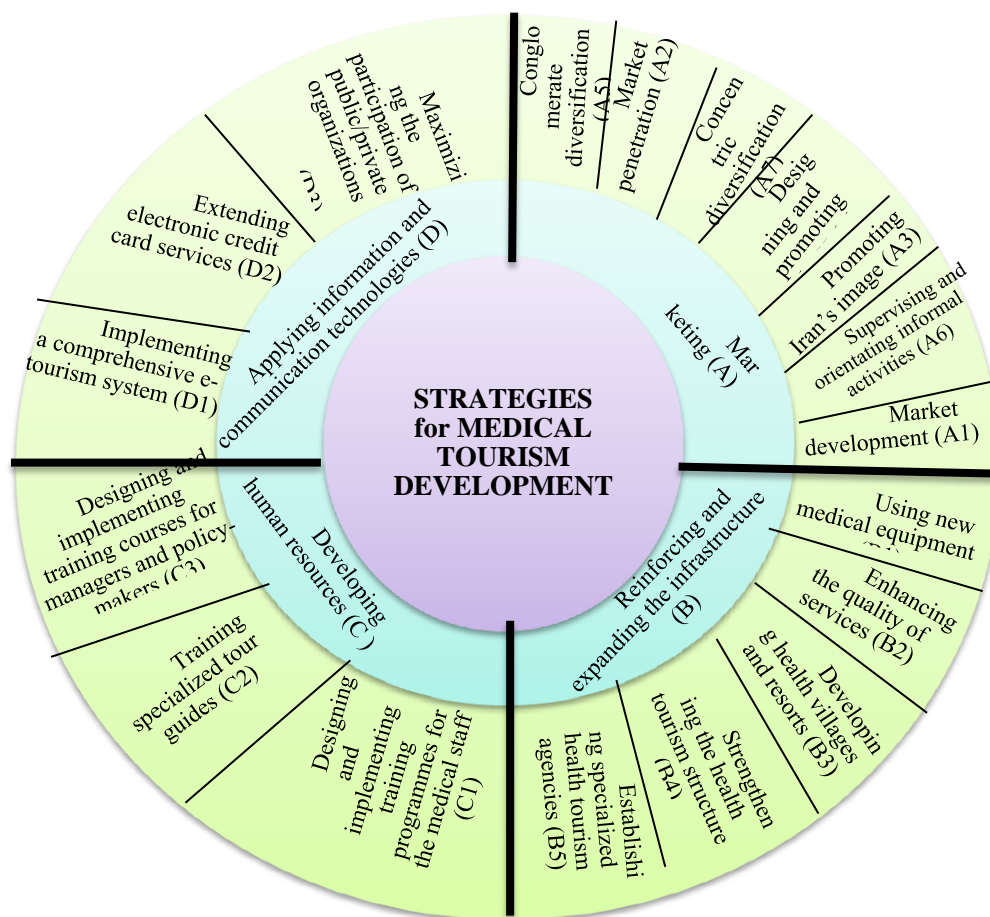

Figure 2. Medical tourism development strategies (research findings)

Table 4. Expert preferences of best and worst main dimensions and strategies.

Expert	Best/Worst	Main Dimensions	Strategies			
			Dimension A	Dimension B	Dimension C	Dimension D
E1	Best	Dimension A	A3	B2	C3	D1
	Worst	Dimension B	A6	B4	C2	D3
E2	Best	Dimension A	A3	B2	C3	D1
	Worst	Dimension B	A6	B4	C2	D3
E3	Best	Dimension A	A3	B2	C3	D1
	Worst	Dimension B	A6	B4	C2	D3
E4	Best	Dimension A	A3	B2	C3	D1
	Worst	Dimension B	A6	B4	C2	D3
E5	Best	Dimension A	A3	B2	C3	D1
	Worst	Dimension B	A6	B4	C2	D3
E6	Best	Dimension A	A3	B2	C3	D1
	Worst	Dimension B	A6	B4	C2	D3

After the best and worst strategies/criteria were identified, the experts were asked to compare the best dimension with the others through a linguistic scale based on their importance levels. Table 5 shows the views of all of the experts in terms of "marketing strategies."

Similarly, the experts compared all the dimensions with the worst ones through a linguistic scale. Table 6 shows their preferences.

Then, the dimensions and strategies identified were ranked as listed in Table 7.

Table 5. Linguistic preferences of experts in marketing strategies (Best)

Expert	Best	A1	A2	A3	A4	A5	A6	A7
E1	A3	WI	FI	EI	WI	VI	VI	FI
E2	A3	WI	WI	EI	WI	FI	VI	FI
E3	A3	EI	EI	EI	AI	WI	WI	WI
E4	A3	WI	VI	EI	WI	VI	AI	FI
E5	A3	WI	FI	EI	FI	VI	WI	WI
E6	A3	VI	FI	EI	EI	AI	WI	FI

Table 6. Linguistic preferences of experts in marketing strategies (Worst)

Expert	E1	E2	E3	E4	E5	E6
Worst	A6	A6	A6	A6	A6	A6
A1	FI	VI	VI	VI	WI	VI
A2	WI	VI	VI	WI	VI	FI
A3	VI	VI	AI	AI	FI	AI
A4	FI	VI	WI	VI	FI	AI
A5	EI	FI	VI	WI	WI	EI
A6	EI	EI	EI	EI	EI	EI
A7	WI	FI	FI	FI	WI	VI

Table 7. The most and least important dimensions and strategies

Dimensions	Weight			Ranks	Strategies	Weight			Ranks	Inconsistency index	Inconsistency rate
	U	M	L			U	M	L			
Marketing strategies (A)	0.376	0.33	0.312	1	Strategy A1	193.0	0.179	0.149	12	0.040	0.008
					Strategy A2	154.0	0.143	0.120	14		
					Strategy A3	0.209	0.195	0.161	11		
					Strategy A4	0.174	0.160	0.134	13		
					Strategy A5	0.100	0.093	0.077	18		
					Strategy A6	0.134	0.124	0.109	16		
					Strategy A7	0.141	0.125	0.105	15		
Reinforcing and expanding the infrastructure (B)	0.273	0.217	0.186	4	Strategy B1	0.258	0.219	0.١٨٤	8	0.046	0.011
					Strategy B2	0.326	0.280	0.231	5		
					Strategy B3	0.234	0.198	0.166	9		
					Strategy B4	0.219	0.195	0.166	10		
					Strategy B5	0.130	0.116	0.107	17		
Developing human resources (C)	0.239	0.203	0.187	3	Strategy C1	0.471	0.402	0.372	2	0.049	0.018
					Strategy C2	0.260	0.211	0.194	7		
					Strategy C3	0.452	0.377	0.347	3		
Applying information and communication technologies (D)	0.273	0.238	0.224	2	Strategy D1	0.515	0.452	0.419	1	0.065	0.022
					Strategy D2	0.353	0.280	0.242	4		
					Strategy D3	0.249	0.261	0.305	6		

The closer the values of the consistency rates were to zero, the more consistent the results were. Given the consistency rates observed (0.008, 0.011, 0.018, 0.022), one could conclude that the comparisons conducted were consistent and the results had the necessary validity.

The findings revealed that the dimensions were respectively: "marketing," "applying information and communication technologies," "developing human resources," and "reinforcing and expanding the infrastructure." The participants ranked "**marketing**" as the top priority for developing this type of tourism in Iran. "**Marketing**" was also crucial in other related studies (Chomvilailuk & Srisomyong, 2015; Najafi Nasab et al., 2018). In addition, marketing seems more critical in the post-covid-19 era, characterized by changes in the behaviors, needs, and demands of tourists (Bagheri et al., 2021). Experts also underscored that *"promoting Iran's image as a health tourism destination"* would have to be the first marketing strategy in developing medical tourism. Destination image represents one of the crucial components of developing this type of tourism (Altin et al., 2012), which has also been highlighted in other health tourism studies (Haque et al., 2018). *"Identifying new target markets and conducting marketing activities to enter them (market development)"* was the second most key strategy. Expanding the market and identifying new targets was also explored in other studies as a novel solution in marketing (Gardiner & Scott, 2018).

"Designing and promoting the Halal brand in health and treatment services" was the third most crucial strategy in "**marketing.**" By paying more attention to the recent expansion of the tourism market in Islamic countries, which enjoy one of the growing tourism industries in the world, Halal tourism and promoting a Halal image of tourism products could be extremely important in a destination (Yousaf & Xiucheng, 2018). Surveys also suggest that many countries worldwide have attempted to expand their Halal tourism brand (Duman, 2012; Henderson, 2016).

The fourth strategy of "**marketing**" was *"participating in and hosting international events and exhibitions while introducing Iran's medical services and capacities to target markets (market penetration)."* Participating in exhibitions and introducing capacities contribute to medical tourism development in many destinations. For instance, the surveys conducted in Turkey determined it as an essential strategy for developing health tourism (Istar, 2016). Meanwhile, "diversifying and extending health tourism services (concentric diversification)" with a focus on competitors was the fifth strategy. The significance of product and service diversification was also underscored in other studies (Bramwell, 2004; Benur & Bramwell, 2015; Moraru, 2011).

"Supervising and orientating informal tourism activities in Iran while holding violators accountable" was the sixth strategy in the dimension of "**marketing.**" A study in Hong Kong found that codifying regulations and specific policies could contribute to health tourism development (Heung et al., 2011). *"Diversifying medical tourism through combining various types (conglomerate diversification)"* was the last strategy of this dimension. This strategy was also emphasized in other studies as it could increase competitiveness and sustainability in tourism destinations (Benur & Bramwell, 2015: 213), provide a tool for synergy between tourism products (Farmaki, 2012), increase options for tourists (Bramwell, 2004), and effectively increase the number of tourists and encourage them to experience tourism products and services again (Moraru, 2011).

"**Applying information and communication technologies**" was the second dimension. The use of these technologies is more critical in the post-COVID-19 world. One of the changes created by this crisis is the increase in tourists who use information and communication technologies (Bagheri et al., 2021). The top priority in this dimension was *"designing and implementing a comprehensive e-tourism system in the health field on a national scale and performing reception, appointment scheduling, and post-treatment services through ICT."* The importance and the key function of electronic applications in developing tourism were explored in the literature from various perspectives (Andreu et al., 2011; Hikkerova, 2010). The studies explained that offering services and distributing tourism information through ICT could significantly impact tourists' behaviors (Bajpai & Lee, 2015) and contribute considerably to their loyalty (Ho & Lee, 2007).

"Extending electronic credit card services to be used in health and treatment centers" was the second most crucial factor. Taghavifard and Asadian-Ardakani (2016) also emphasized this factor. Finally, "maximizing the participation of public/private organizations in medical tourism via websites and social media" was the third strategy. Similarly, other studies expressed that using tourism websites

was one of the most effective ways of developing smart tourism (Cui et al., 2015). Today, many countries and tourism destinations actively engage in web-based activities (Heung et al., 2011).

"Developing human resources" was the third dimension of the model. Because tourism is a labor-intensive industry (Baum, 2016), the skills and abilities of human resources are taken seriously (Chesser, 2016). Training human resources are key success factor that could help achieve goals because even if excellent policies and programs are formulated, they would only be impractical if implemented in practice. The implementation would require aware, skilled, competent, and well-behaved employees (Baum & Kokkranikal, 2003). In addition, the conditions imposed on tourism organizations post-COVID-19 require staff with different skill levels (Bagheri et al., 2021). *"Designing and implementing training programs for the medical staff about interacting with tourists/patients while teaching the languages of target markets"* was the first strategy. Medical employees' interaction with tourists is a highly influential factor in tourists' perceptions and satisfaction levels (Rahman, 2019). Training employees is a necessary measure that is underscored in the literature on health tourism (Mahmoudifar et al., 2016). The importance of medical employees' familiarity with foreign languages was also emphasized in other studies (Altin et al., 2012) as a strategy contributing to developing this type of tourism (Istar, 2016).

"Designing and implementing training courses for managers and policy-makers about international tourism marketing methods" was the second strategy. The findings were in line with Chomvilailuk and Srisomyong (2015). The third strategy was "training specialized tour guides," which has also been emphasized in other studies (Io & Hallo, 2012; Weiler & Ham, 2002).

"Reinforcing and expanding the infrastructure" was the fourth dimension recommended in other studies (Ishtar, 2016; Mahmoudifar et al., 2016). The investigations suggest that about 40 countries worldwide are investing in developing their infrastructures for health tourism (Kim et al., 2019). The first strategy in this dimension was *"enhancing the quality of services in medical tourism, including hoteling in hospitals."* Patents' perceived service quality is one of the critical factors in tourism (Haque et al., 2018). The findings of the studies suggested that accommodation in specialized hospitals could increase patients' satisfaction and loyalty and contribute to dynamic business performance (Lončarić et al., 2015). The effectiveness of hoteling in therapeutic centers has also been confirmed by Han (2013).

"Supplying and using new medical equipment by modern standards" was the second most crucial strategy. Other studies also underscored this strategy (Ishtar, 2016; Mahmoudifar et al., 2016). Moreover, many treatment centers and health tourism destinations have focused on upgrading their equipment and facilities to increase their market share (Haque et al., 2018).

"Developing health villages and resorts to be utilized in various Iran provinces" was the third strategy. Other researchers also emphasized this factor (Tavakoli & Mohammadian, 2016). The fourth strategy was *"strengthening the health tourism structure."* A study in Malaysia indicated that tourism development demands creating a management system that could optimize tourism value by implementing plans to deal with industry-related challenges and issues (Ismail et al., 2014). Another strategy under this dimension was *"establishing specialized health tourism agencies."* Gan and Frederick (2011) have also emphasized this factor.

The review of the studies carried out in the field of medical tourism revealed different research foci, such as the legal aspects (Abualhasani, 2017), satisfaction (Haque et al., 2018; Lončarić et al., 2015), loyalty (Aljumah et al., 2017), tourists' current conditions (Connell, 2013), factors affecting destination selection (Kumar & Hussian. 2016), as well as studies conducted in various regions in the world including Turkey (Ishtar, 2016), Iran (Mahmoudifar et al., 2016), Jordan (Alsarayreh et al., 2017), the United Arab Emirates (Al-Talabani et al., 2019). Yet, despite the diverse aspects studied, no research tried to identify and prioritize a comprehensive set of strategies for medical tourism development by interviewing experts and practitioners in the industry, which could highlight the present study's contribution.

Similarly, to our knowledge, studies concerned with medical tourism in Iran have focused on cities and provinces (Sakhdari et al., 2019; Asadi & Daryaei, 2011; Vaezi et al., 2018), not on a national scale. This could be a further distinction of the present study. As a prerequisite for medical tourism development, it would be necessary to identify strategies that could realistically represent the existing conditions in Iran (Asadi & Daryaei, 2011; Gholipour Sooteh et al., 2018). The present study, which

framed strategies compatible with Iran's context, could partially fill the existing gaps. Furthermore, customized versions of the identified strategies could be applied to countries needing new health tourism development strategies.

5. Conclusion and implications

In recent years, medical tourism has shown a remarkably rising trend worldwide (Mahdavi et al., 2013). It has brought about many opportunities for destinations to expand their health tourism capacities (Illario et al., 2019). Meanwhile, investigating the medical tourism status in Iran revealed that medical tourism did not have a considerable contribution to the country's economy, even though the country is located in one of the most relevant (Lee et al., 2012) and competitive medical tourism regions in the world (Aljumah et al., 2017). This is contrary to Iran's rich history of medicine (Zargaran et al., 2011) and its recent remarkable medical advancements (Nikraftar et al., 2016). There has also been no coherent plan to develop medical tourism in Iran (Vaezi et al., 2018).

This study sought to Identify and prioritize strategies for medical tourism development in Iran. The findings revealed that Iran's medical tourism development strategies involved four dimensions: "marketing," "applying information and communication technologies," "developing human resources," and "reinforcing and expanding the infrastructure."

The proposed strategies could serve as a guideline for policy-makers to develop medical tourism development plans in Iran . In this regard, some practical suggestions based on the results of the research are:

- ✓ Identifying new markets through marketing research and devising marketing initiatives to target them;
- ✓ Promoting Iran's image as a medical tourism destination through advertising and introducing the country as a potential medical destination;
- ✓ Designing and promoting the Halal brand in medical services;
- ✓ Supervising and orienting informal medical tourism activities in Iran while holding violators accountable;
- ✓ Supplying and using new medical equipment under modern standards;
- ✓ Designing and implementing training programs for the medical staff about how to interact with tourists/patients;
- ✓ Teaching the languages of target markets to medical staff;
- ✓ Designing and implementing training courses for managers and policy-makers about international medical tourism marketing methods;
- ✓ Extending electronic credit card services to be used in medical and treatment centers;
- ✓ Maximizing the participation of public/private organizations in medical tourism via websites and social media.

Furthermore, it is noteworthy that medical tourism has been the dominant form of health tourism in Iran; Meanwhile, some strategies could generally be associated with health tourism. These strategies include: "promoting Iran's image as a health tourism destination," "diversifying and extending health tourism services (concentric diversification)," "strengthening the health tourism structure by establishing a health tourism council at a national level," and "establishing specialized health tourism agencies."

The present study serves as a framework for further studies. Researchers could approach Iran's medical tourism development from other perspectives. For instance, future studies could focus on regional and international competitors and explore strategies to improve Iranian health tourism competitiveness. In addition, future studies could identify strategies for developing other types of health tourism (curative/therapeutic and preventive). Also, it is possible to evaluate the suitability of the strategies proposed in this study with the post-COVID-19 conditions. Other researchers can also use the strategies identified in this study to assess the measures taken to develop medical tourism in the country.

It should be noted that this study sought to construct strategies for medical tourism development by relying on experts' and activists' views in Iran. Findings reflect Iran's specific context and participants' expertise. Given this issue, some of the strategies identified in this study differed from those suggested in other studies.

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