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Original Research Article

Designing a Health Tourism Development Model
(A Study of Mashhad Metropolis)

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Abstract | Health tourism is a global and growing phenomenon. Mashhad, with its combined advantages of religious tourism and medical capabilities, has a unique capacity to become a regional hub. Still, the lack of a comprehensive local model has prevented the optimal exploitation of these capacities. This research aims to design a health tourism development model in the Mashhad metropolis, with an emphasis on management, infrastructure, and marketing dimensions. This research is descriptive-exploratory in its fundamental-applied purpose and qualitative in its data collection method. Data were collected through 19 in-depth, semi-structured interviews with experts and managers (hospitals, University of Medical Sciences, Astan Quds Razavi, cultural heritage, municipality, private sector) using purposive and snowball sampling until theoretical saturation. We analyzed the data using grounded theory and three-stage coding. Qualitative reliability was confirmed with parallel coding and Scott's Pi index (0.88). In this study, 16 subcategories and then 6 main categories were extracted from 342 open codes. The paradigmatic model includes causal conditions (superiority of medical capabilities, competitive price advantage, strategic linkage with religious tourism, positive international image), central phenomenon (transforming Mashhad into an international health tourism hub with a unique composite identity), strategies (development of integrated infrastructure and services, international marketing and branding, facilitating policy and legal frameworks, improving service quality and innovation), contextual conditions (transportation and accommodation, security, favorable cultural environment, complementary attractions), intervening factors (international economic and financial challenges, weak integration with global health systems, branding challenges, regional competition pressure), and consequences (economic, socio-cultural, organizational-managerial, environmental-physical).

Keywords: *Health tourism, Mashhad metropolis, Development model, Grounded theory*

Introduction| Health tourism, as a strategic sub-sector of the tourism industry, has become a global and growing phenomenon. Analysis of the factors influencing this trend shows that, on the one hand, rising public awareness and growing health concerns (especially after the COVID- 19 pandemic) have stimulated demand (Kazakov & Oyner, 2021; Wang et al., 2022). On the other hand, high medical costs in countries of origin, long waiting lists, and low service quality have driven people to cross-border destinations (Goodarzi et al., 2014; Monjazi et al., 2020). In contrast, factors such as competitive costs, medical staff expertise, hospital reputation, and destination security play a decisive role in health tourists' final choice (Çapar & Aslan, 2020). Because of its profound impact on physical and mental well-being, this industry has tremendous development potential (Jiang et al., 2022). Statistics show that the average expenditure of a medical tourist is 5 to 10 times that of ordinary tourists (Drius et al., 2019). In Iran, out of more than 6 million 254 thousand international tourists arriving in 2023, over 1 million 500 thousand were health tourists. Mashhad metropolis is known as Iran's health tourism showcase due to its unique geopolitical location and blend of "pilgrimage and health" (Dehghan et al., 2021). Despite these capacities, an obvious contradiction is seen: "the abundance of super-specialty hospitals and first-rate doctors versus the lack of a systematic development model". Key challenges include: disruption in the value chain and the dominance

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of informal intermediaries (Marvail, 2023; Tahmasbi & Malekzadeh Shafaroudi, 2022), weakness in the digital marketing ecosystem (Cristobal-Fransi et al., 2023), inter-institutional incoherence (Rezapour et al., 2021), and vulnerability to crises (Wang et al., 2023). Despite hosting more than 30 million pilgrims annually, having relatively developed medical infrastructure, and possessing specialized human resources, Mashhad's share of the regional and global health tourism market remains insignificant. The main reason for this is the lack of a comprehensive and indigenous development model, which has led to the dispersion of measures, institutional incoherence, weakness in the integrated information and international marketing system, insufficient standardization, lack of ancillary infrastructure, and on the other hand, external challenges such as intense competition with leading countries (Turkey, India, UAE) and limited international image of Iran. Considering limitations such as the diversity of stakeholders, international sanctions, and the need to simultaneously comply with global standards and cultural-religious requirements of Mashhad, the main goal of this research is to design a local, multifaceted, and feasible model that, by creating a strategic link between religious and health tourism, utilizing the capacity of holy places in promoting mental health, and synergizing key institutions in the form of an operational roadmap, answers the fundamental question of what the optimal model for the development of health tourism in Mashhad is, with an emphasis on management, infrastructure, and marketing dimensions, and how it can be operationalized for stakeholders.

Theoretical Framework and Research Background

Tourism is the largest industry in the service sector, and its importance lies in the dynamics of the local and international economy (Tahmasebpour et al., 2021). As tourism expands, specialized sub-sectors such as health tourism have emerged (Khazaee-Pool et al., 2024). A domestic health tourist spends 150%, and a foreign health tourist spends 65% more than other tourists (Sorkhedehi, 2023). Health tourism is defined as an activity for health improvement, diagnosis, treatment, and prevention (Han et al., 2018) and has great potential for development (Jiang et al., 2022). This type of tourism has been emphasized as an activity that can effectively improve tourists' physical and mental health (Loh, 2014). Iran has high potential with its "natural resources", "specialized equipment", and "skilled human capital", but it faces challenges such as weak international marketing and a lack of a comprehensive model (Zarei, 2023). The literature on health tourism initially developed theoretically through conceptual definitions and the separation of sub-sectors, then gradually moved toward demand, destination, and policy frameworks, and in recent years toward integrated, spatial, and sustainable approaches. The conceptual roots of this field can be seen in the initial definitions of "healthcare tourism" and "medical tourism" in the late twentieth century; later, the health-oriented nature of travel expanded to "health maintenance and promotion" (Qian & Shang, 2022). A review of 802 papers from 1970 to 2020 shows that three main theoretical clusters include markets, destinations, and development environments, and that the focus of research has shifted from tourist behavior and demand to destination development and promotion, and then to policies and consequences (Zhong et al., 2021). A 40-year analysis of China also shows this evolution in four stages and three sectors: wellness tourism, health and wellness, and medical tourism, and emphasizes that the field has become more industrialized, diversified, and systematic under the guidance of new policies (Zhong et al., 2022). At the same time, more recent studies have addressed the lack of explicit theorizing and advocated using theories such as protection motivation theory to explain tourists' behavioral intentions, as well as interdisciplinary and complexity frameworks to further mature theory in wellness tourism (Seow et al., 2021). Further, post-COVID and sustainability literature has expanded the theoretical scope to integrate health and tourism, mental health, and sustainable development; however, the evidence still describes this area as relatively fragmented and in need of greater conceptual coherence (Chen & Deng, 2023). Regarding the components influencing the regional development of health tourism, the evidence is relatively convergent across studies, showing that this sector develops through the interaction of natural and therapeutic resources, infrastructure, policy, human capital, market, and destination image. At the destination level, cultural, historical, religious, and natural attractions; security; diversity and quality of services; ease of travel; geographical proximity; and marketing are key factors in attracting health tourists (Khazaee-Pool et al., 2024). At the institutional level, factors such as laws and standards, political stability, national programs, intersectoral cooperation, and government support play a pivotal role; Part of the government's influence is also exerted through internal and external infrastructures such as service quality, cost, medical technology, and economic and cultural variables (ibid., 2024). Regional studies in China show that economic growth, human resource education, market development, technological investment, and financial investment all enhance the integration of tourism and health. Still, the weight of these factors varies across regions, and in less developed regions, poor transportation, low social development, and lack of human talent have a stronger inhibitory effect (Qian & Shang, 2022). On the other hand, climatic resources, mineral waters, mud therapy, and accommodation-therapeutic infrastructure are also important for regional advantage (Pasichnyk & Ilina, 2021).

Successful strategy-making should be region-oriented and clustered, as differences in regional production, tourist flows, and spatial linkages shape each region's development trajectory (Didenko & Kravets, 2023). In conclusion, regional health tourism development is explained not by a single factor, but by the synergy of policy, infrastructure, local resources, demand motivation, and coordination between health and tourism (Jalali et al., 2025). Yuangngoen et al. (2025) showed that Generation X's decision-making is influenced by "trust in the quality of healthcare infrastructure". Numerous domestic and foreign studies have been conducted: Hedayatnia et al. (2025) designed an international marketing model based on four axes: "branding", "digital technologies", "customer-tailored service packages", and "strategic partnerships". Fakour et al. (2025) validated the experiential marketing model with six main categories and a fit of 0.866. Dryglas & Smith (2025) identified "flexibility", "market diversification" and "focus on wellness" as factors for survival in a crisis. Baydeniz et al. (2024) showed that "sensory experience", "emotional experience" and "quality of interaction with healthcare staff" have the greatest impact on behavioral tendencies. Hunjet et al. (2024) identified "rich natural resources" and "low-cost skilled workforce" as the most important advantages using the SWOT model, and "seasonality", "infrastructure deterioration" and "bureaucracy" as the main challenges. Spoladore et al. (2023) proposed the "quadruple helix" model (interaction between academia, government, industry, and society) and the "health ecosystem roadmap" for exploiting natural resources with digital technologies.

Research Methodology

This research is descriptive-exploratory in its fundamental-applied purpose and qualitative in its data-collection method. The innovation of this research is in its specialized focus on the ecosystem of Mashhad metropolis as a strategic hub for religious-therapeutic tourism in the region. Based on the paradigm of grounded theory, the main question is: What is the development pattern of health tourism in Mashhad? What are the causal factors, central phenomenon, underlying and intervening conditions? What are the conceivable economic, social, and infrastructural strategies and consequences?

The statistical population of the research includes all experts, senior managers, and decision-makers in the fields of health tourism, health service management, tourism policy-making, and urban planning in Mashhad, including hospital managers, the University of Medical Sciences, Astan Quds Razavi, cultural heritage, the municipality, related unions, and university professors. Sampling was carried out using a purposive and snowball method with a theoretical saturation criterion. Inclusion criteria included at least 10 years of relevant experience and direct responsibility; the final sample comprised 19 in-depth, semi-structured interviews (Table 1).

In the exploratory phase, the model components were extracted using two tools: documentary review and semi-structured interviews. In the documentary review, the Khorasan Razavi Province Planning Document (approved in 2016 by the Khorasan Razavi Province Planning and Development Council) was studied, in which Article 2 states "realizing sustainable and creative tourism such as health tourism" as the fundamental goal and "a center for providing health tourism services in the east of the country in Mashhad city" as the key role of the province (Khorasan Razavi Province Planning Document, 2016, 3-4). In the section on established strategies, "developing and strengthening ecotourism infrastructure and coordinating executive actions in the supply chain of tourism services, especially stabilizing religious tourism" and "comprehensive promotion of public health and social welfare" are recognized as key strategies (ibid., 9). Also, the strategic health tourism program of Mashhad University of Medical Sciences (2021), which is referred to in the article by Maleki and Tavangar (Maleki & Tavangar, 2016), including the vision, strategic goals, and operational plans, was reviewed, referring to the requirements of the fourth development program and emphasizing quantitative goals for attracting foreign patients. In addition, reputable scientific articles were searched in the databases of Science Direct, Scopus, PubMed, Springer, Google Scholar, Magiran, Noormags, and SID during 1390-1404 (2011-2025) using specialized keywords. Reference books such as "Health Tourism and Hospitality: Spas, Wellness, and Medical Travel" by Melanie Smith and László Puczkó, "Medical Tourism in Developing Countries: A Contemporary Approach" edited by Chaudhary et al. (2024), and "Medical Tourism: Historical Foundations, Contemporary Contexts, and Emerging Trends" edited by Huang (2025) were used as theoretical and methodological resources. The second tool was semi-structured interviews, whose questions were designed based on a systematic literature review, upstream documents, and previous research, and were confirmed for face and content validity by three expert professors. Sample questions included causal factors, central phenomenon, contextual conditions, intervening factors, strategies, consequences, the role of religious tourism, and operational suggestions. Interviews lasted 45 to 75 minutes, were recorded and transcribed with informed consent, and purposive and snowball sampling continued until theoretical saturation. Theoretical saturation was achieved when new data did not add new information; from interview 19 onward, new codes

decreased, and concepts were repeated, so the process stopped after 19 interviews. To ensure the reliability of the research, measures including researcher sensitivity, methodological coherence, and sample suitability (Eisenhardt, 1989) were taken. Qualitative reliability was also calculated using the "parallel coding" method and Scott's Pi agreement index in MAXQDA software version 2020, as shown in Table 2. For this purpose, four interviews (interview numbers 3, 8, 12, and 15) were purposively selected at random from the 19 interviews conducted to cover a diverse range of stakeholders (private sector, academic sector, Astan Quds, legal sector).

Research Findings

Data analysis was conducted using the grounded

Table 1. Demographic characteristics of participants in the qualitative part of the study (grounded theory). Source: Authors.

Row	Gender	Stakeholder group/specialty area	Relevant experience (years)	Education level	Interviewee profile
1	Male	Senior Hospital/Private Medical Center Management	18	Doctor of Medicine	CEO of a private specialized hospital with an active international department
2	Male	Health Management, University of Medical Sciences	22	Specialized Doctorate	Deputy for International Affairs at Mashhad University of Medical Sciences
3	Female	Health Tourism Management (Private Sector)	12	Master's Degree	Founder and manager of a travel agency specializing in medical tourism
4	Male	Tourism Policy Making (Government Organization)	15	Doctorate	Director-General or former deputy director of the Provincial Cultural Heritage and Tourism Organization
5	Male	Visitor Services Management (Astan Quds Razavi)	20	Master's Degree	Director of a deputy directorate related to providing services to international pilgrims
6	Female	Specialist Physician (Surgeon, International Patient Attractor)	25	Specialized Doctor of Medicine	University professor and physician with a significant foreign patient record
7	Male	International Marketing of Medical Centers	10	MBA	Director of international marketing of a well-equipped and advanced clinic
8	Female	Urban Planning and Economic Development	19	Doctorate	University faculty member and municipal advisor in the field of health economy development
9	Male	Hotel Chain Management (Patient Admission)	14	Master's Degree	Director of a hotel that has a cooperation agreement with medical centers
10	Female	International Health Insurance Management	11	Doctorate	Director of an insurance company active in the field of accepting foreign patients
11	Male	Researcher and University Professor (Tourism)	16	Medical Doctorate	Associate professor of the Tourism Management Department, author of numerous articles in the field of health tourism
12	Female	Medical Management of Astan Quds Razavi	23	Doctorate of Biomedical Engineering	Director of a hospital managed by Astan Quds Razavi
13	Male	Private Sector Activist (Medical Equipment/Telemedicine)	9	Doctorate of Nursing	CEO of a health technology company focusing on services for non-Iranian patients
14	Female	International Nursing Management	17	Doctor of Laws	Director of a central nursing service that accepts foreign patients.
15	Male	International Health Law and Standards	21	Master's Degree	Lawyer and legal advisor specializing in international medical contracts

Rest of Table 1.

Row	Gender	Stakeholder group/specialty area	Relevant experience (years)	Education level	Interviewee profile
16	Female	Medical Conference Center Management	13	Doctorate	Executive director of an international conference center hosting medical congresses
17	Male	Public Relations Manager of Large Hospitals	8	Master's Degree	Public relations and communications manager of a leading university hospital
18	Female	Health Economics	20	Doctor of Medicine	Health economics faculty member and consultant to planning institutions
19	Male	Related Transportation Management (Airport/Air Ambulance)	15	Specialized Doctorate	Director of a company providing health logistics and patient transportation services

theory method in three stages: open coding (the results of which are not included in the article due to their extensiveness; only some quotes are included in Table 3), axial coding, and selective coding. The coding process was not based solely on interviews. Still, library and document studies (including the Khorasan Razavi Province Planning Document, the Health Tourism Strategic Plan of Mashhad University of Medical Sciences, reputable scientific articles, and specialized books in the field of health tourism) were also used as complementary sources in addition to the interviews. The extracted codes resulted from combining data from field interviews and library studies. In the open coding stage, 342 open codes were extracted. In the axial coding stage, the open codes were first grouped into 113 more detailed subcategories based on conceptual similarities and semantic connections. These categories were then aggregated into 16 first-level subcategories. In the selective coding stage, the 16 first-level subcategories were organized into six main categories, including causal conditions, axial phenomenon, strategies, contextual conditions, intervening factors, and consequences, and the relationships between them were organized around the axial phenomenon. In other words, the coding process was carried out hierarchically, reducing 342 open codes to 113 detailed subcategories, then to 16 first-level subcategories, and finally to six main categories.

• **Causal conditions**

Causal conditions refer to a set of factors that facilitate, intensify, or cause the occurrence or change of the phenomenon under study and appear as prerequisites or causal contexts for forming the main category in the paradigmatic model. Table 4 lists the identified concepts and categories related to causal conditions.

• **Contextual conditions**

Contextual conditions in grounded data analysis refer to the specific environmental, temporal, spatial, cultural, or structural contexts, characteristics, and contexts within which actors' actions and interactions are shaped and influence how the central phenomenon is encountered, without directly causing that phenomenon. Table 5 presents the contextual conditions of the health tourism development model in Mashhad.

• **Intervening conditions**

Intervening conditions in grounded analysis refer to factors that, in a specific context, affect actors' strategies and actions in dealing with the central phenomenon; these effects can facilitate, limit, or change the course of action. Table 6 lists these conditions.

• **Central phenomenon**

The central phenomenon in grounded analysis is the central and core concept around which all other data and categories (causal, contextual, intervening conditions, strategies, and consequences) are organized and, as the focus of research, explains the processes of action and meaningful interactions of actors. Table 7 lists the concepts and categories identified as related to the central phenomenon in the health tourism development model.

• **Strategies**

Strategies in grounded analysis are actions, reactions, and operational measures that actors employ when faced with a central phenomenon and influenced by causal, contextual, and intervening conditions to purposefully manage, control, or respond to that phenomenon, ultimately leading to specific consequences. Table 8 lists the identified concepts and categories related to the strategies of the health tourism development model.

• **Consequences**

In grounded analysis, consequences are the objective and subjective results of actors' implementation of strategies in addressing the central phenomenon. Table 9 shows the consequences of implementing strategies in the health tourism development model in Mashhad.

The findings from data analysis in the form of a paradigmatic model of grounded theory include six main categories as follows: Causal conditions include four subcategories: "superior medical and therapeutic capabilities" (with components such as specialized

Table 2. Table of results of calculating qualitative reliability with Scott's Pi index. Source: Authors.

Interpretation of the level of agreement	Scott's Pi	Number of unique codes used	Number of coded text fragments	Number of interviews
Excellent Agreement	0.89	14	27	Interview 3
Excellent Agreement	0.85	17	32	Interview 8
Excellent Agreement	0.87	15	24	Interview 12
Excellent Agreement	0.92	13	21	Interview 15
Excellent Agreement	0.88	15	26	Total Mean

Table 3. Sample quotes extracted from interviews. Source: Authors.

Row	Participant code	Sample interview transcript	Subcategory	Main category
1	P1	The cost of heart surgery in Mashhad ($3,000) is much lower than in Turkey ($10,000) and Europe ($30,000), which is a decisive factor for patients in the middle-income region.	Competitive price advantage	Causal conditions
2	P5	Hosting 30 million pilgrims has created potential customers for health care; attracting even one percent (300,000 patients) is an unparalleled capacity, but many pilgrims are unaware that doctors and super-specialty hospitals exist.	Strategic link with religious tourism	Causal conditions
3	P19	Direct flights to 15 countries and specialized hotels equipped with convalescent beds, nursing services, therapeutic nutrition, and medical centers have increased Mashhad's attractiveness for short-term medical trips.	Transportation and accommodation infrastructure	Contextual conditions
4	P8	A German patient felt safer in Mashhad than in some European cities, a vital advantage for patients in an unfamiliar cultural environment that can be emphasized in international marketing.	Security as a platform for development	Contextual conditions
5	P10	Limitations in the banking system and limited acceptance of international credit cards forced Iraqi patients to use non-transparent exchange offices, which, in addition to financial risk, impose additional costs and undermine patient trust.	International economic and financial challenges	Intervening conditions
6	P1	The number of JCI-accredited hospitals in Mashhad is limited, and compared with Turkey, where almost all international hospitals meet the standard, the lack of reliable approvals reduces foreign patients' trust.	Weakness in integration with global health systems	Intervening conditions
7	P6	Instead of entering all fields sporadically, we should focus on a few fields where we have relative capabilities (cardiac surgery, orthopedics, infertility, dentistry) to become a regional hub through targeted investment.	Development of specialized medical tourism	Central phenomenon
8	P1	Foreign patients should not be confused; assigning a "medical travel manager" to coordinate from arrival to departure (transfers, accommodation, coordination with the doctor, document translation) fundamentally transforms the patient's experience and satisfaction.	Creating an integrated service ecosystem	Central phenomenon
9	P15	Facilitating the issuance of medical visas (similar to Turkey in 24 hours) and drafting a comprehensive law "supporting health tourists" are essential for legal transparency; without them, foreign patients become hesitant and worried.	Facilitating policy and legal strategies	Strategies
10	P14	Arab patients are accustomed to direct contact with a doctor, while European patients are accustomed to a file-based system and email; designing personalized programs for each target group increases quality and satisfaction.	Strategies for improving the quality and innovation of services	Strategies

Rest of Table 3.

Row	Participant code	Sample interview transcript	Subcategory	Main category
11	P18	The cost of a health tourist is at least five times that of a regular tourist; attracting 100,000 people annually in Mashhad generates foreign exchange income of more than $500 million and leads to business prosperity, employment, and sustainable urban development.	Economic consequences	Consequences
12	P11	Patients treated in Mashhad become cultural ambassadors of Iran and present a humane, peaceful image of Iran by sharing positive experiences in their home countries; the media or political currents cannot distort this public diplomacy.	Socio-cultural consequences	Consequences

human resources, advanced technology, diversity of services, successful track record in complex treatments, and quality standards), "competitive price advantage" (including low service prices, affordable ancillary costs, competitive exchange rates, savings in waiting time, and low hidden costs), "strategic linkage with religious tourism" (including attracting a ready audience of pilgrims, combination packages, taking advantage of a sense of spiritual trust, developing health services for pilgrim companions, and two-way advertising), and "positive international image" (including regional reputation, word-of-mouth advertising, attendance at exhibitions, publishing scientific articles, and the role of international Persian-language media). The central phenomenon of the research is "transforming the metropolis of Mashhad into an international health tourism hub with a unique composite identity," which itself includes four dimensions: "Development of

Table 4. Identified concepts and categories related to causal conditions. Source: Authors.

Open codes summary	Subcategory	Main category
Renowned surgeons in organ transplantation, heart and cosmetic surgery; Nurses fluent in foreign languages; Experienced paramedical staff in post-operative care	Internationally qualified and experienced human resources	Superior medical and therapeutic capabilities
MRI and PET-SCAN machines; Smart operating rooms; Surgical robots in advanced centers	Advanced technology and equipment	
Low-cost world-class dentistry; Infertility and gynecology centers; Skin, hair and laser clinics	Diversification and specialization of medical services	
High statistics in open-heart and kidney transplantation; Reputation in reconstructive surgery and burns; Cancer treatment with up-to-date protocols	Successful track record in complex treatments	
International certificates (JCI); Infection control according to standards; Integrated quality management system	Quality and accreditation standards	
Much lower cost than in Europe; All-inclusive treatment packages with fixed and transparent prices	Low prices for surgical services	Competitive price advantage
Cheap accommodation in nearby hotels; Convenient domestic transportation; Prices of consumables with the possibility of choosing a brand	Affordable ancillary costs	
Increase tourists' purchasing power by converting dollars and euros; possibility of paying in multiple currencies.	Competitive exchange rates	
Quick turn-taking versus long queues; Reduced time from diagnosis to surgery	Savings on waiting time	
No expensive consultation fees; Low cost of document translation and administrative matters	Low hidden costs	

Rest of Table 4.

Open codes summary	Subcategory	Main category
Millions of pilgrims as potential customers; Possibility of quick check-ups and dental services for pilgrims	Attracting a ready audience (pilgrims)	Strategic link with religious tourism
"Pilgrimage + Treatment" and "Pilgrimage + Rest Therapy" tours; Advertising in pilgrims' hotels	Creating combination packages	
Sense of security and peace as the city of Imam Reza (AS); Positive impact on treatment decision-making	Taking advantage of the sense of trust and spiritual security	
Spa, massage and natural treatments for companions; Small clinics in the vicinity of the shrine	Developing health services for pilgrim companions	
Benefit of medical centers from the reputation of the religious city; Religious tourism boom in the health sector	Two-way advertising	
Becoming known in neighboring countries (Iraq, Afghanistan, Pakistan); Trust in Iranian doctors by CIS countries.	Regional reputation in medicine	Positive image and international reputation
Satisfaction of foreign patients, attracting new patients; Online groups to introduce Mashhad doctors	Successful word-of-mouth advertising	
Having a booth at exhibitions in Dubai, Baku and Istanbul; Liaison with foreign agencies.	Presence in international health exhibitions	
Articles by doctors in reputable journals; Invitation to speak at international congresses	Publishing scientific articles and achievements	
News coverage of successes on Press TV; Documentation of successful treatment cases of tourists	The role of international Persian-language media	

specialized medical tourism" (focusing on advanced surgeries, polarization in specific areas, attracting patients with complex conditions, developing comprehensive check-up centers, and integrating diagnostic and treatment services), "Development of health tourism and complementary medicine" (revival of traditional Iranian-Islamic medicine, development of hydrotherapy and spa centers, stress reduction and meditation centers,

Table 5. Identified concepts and categories related to contextual conditions. Source: Authors.

Open codes summary	Subcategory	Main category
Direct flights to target countries; Airport visa for patients and companions	International air access	Transportation and accommodation infrastructure
Telephone taxi and car request applications; Air ambulance for special patients	Intercity transportation network	
Hotels equipped with recovery rooms; Hospital hotels with nursing services	Coordinated hotels and accommodation centers	
24-hour pharmacies; Courier services for food and necessities	Access to support services	
High-speed urban and hospital internet; Online visit and consultation before travel; Online reservation of visit and bed	Digital infrastructure	
Feeling of security for female tourists; Presence of law enforcement in tourist and medical areas	Public and life safety	Security as a platform for development
Low level of medical errors; Quality control of medicines and equipment; Infection control protocols	Medical and health security	
Health standards of restaurants and hotels; Safe drinking water; International restaurants	Food security	
Domestic stability compared to turbulent countries; Mashhad as a peaceful city; Facilitative government policies.	Relaxed regional political stability	
Transparency of medical contracts; Possibility of judicial follow-up; International law offices for consultation	Financial and contractual security	

Rest of Table 5.

Open codes summary	Subcategory	Main category
Respectful behavior of medical staff; Local community welcomes health tourists	Rich culture of hospitality	Favorable cultural and social environment
Acceptance of Shiites, Sunnis, and other religions; Respect for the hijab and personal beliefs of patients	Coexistence of religions and cultures	
Doctors and nurses fluent in English; Multilingual offices (Arabic, Turkish, Urdu)	Language and communication	
Calm and low-stress public spaces; Parks and green spaces for recovery	Lifestyle and etiquette	
Charity associations for foreign patients; Emotional support groups; Guidance for Iranians living abroad	Social support networks	
Holy Shrine of Imam Reza (AS); Goharshad Mosque and historical sites; Possibility of prayer for patients and companions	Unique religious attractions	Complementary tourist attractions
Mausoleum of Ferdowsi; Historical houses and museums of Astan Quds; Traditional Bazaar of Reza	Historical and cultural attractions	
Water parks; Torqaba, Shandiz, Zeshk with clean air; Therapeutic mineral water springs	Natural and recreational attractions	
Large complexes (Alandar, Taban, Almas Sharq); International brands and luxury goods	Shopping centers and modern markets	
International food festivals; Handicraft exhibitions; Special religious ceremonies (Muharram, Ramadan, etc.)	Events and festivals	

detoxification and weight loss programs, and elderly tourism), "Creating an integrated service ecosystem" (value chain from patient reception to return to health, customizable service packages, comprehensive support system, integration of regular and health tourism services, and participation of multiple stakeholders), and "Creating a unique composite identity" (combining advanced medical expertise with the wisdom of traditional medicine, combining physical health with peace of mind in a religious city, linking the treatment experience with the cultural-historical experience, and creating the brand "Mashhad: The meeting place of health and spirituality).

Table 6. Identified concepts and categories related to intervening conditions. Source: Authors.

Open codes summary	Subcategory	Main category
Lack of access to SWIFT; Difficulty paying with credit cards; Need for risky exchange methods	Banking and money transfer restrictions	International economic and financial challenges
Severe exchange rate fluctuations; Difference between official and unofficial rates and confusion in the final cost	Currency fluctuations and pricing risk	
Lack of contracts with global insurers; Need for cash payments and complicated claim tracking	Weaknesses in international insurance systems	
Difficulty in bringing in foreign capital; Reluctance of hotel chains; Lack of attractive tax incentives	Limitations in attracting foreign investment	
Competition with other sectors for facilities; Priority for domestic treatment; Irregular budget allocation	Competition over subsidies and domestic resources	
Limited number of JCI-accredited hospitals; High cost and time to obtain international certificates	Obstacles to accreditation and standardization	Weak integration with global health systems
Lack of connection to global health networks; Difficulty in transferring electronic records; Data confidentiality issues	Challenges in exchanging medical information	
Lack of formal agreements; Lack of recognition of medical documents; Complicated process of verifying certificates	Lack of membership in regional health agreements	
Lack of a national coordinating body; Lack of an official online platform for introducing centers and doctors	Lack of a structured international referral system	
Lack of transparency in medical liability for foreign patients; Difficulty in enforcing judgments in the patient's country	Complex legal and regulatory issues	

Rest of Table 6.

Open codes summary	Subcategory	Main category
Reflection of political issues and sanctions; Lack of coverage of Iran's scientific and medical achievements in major media	Negative global media coverage	
Lack of budget and integrated strategy; Lack of presence on specialized platforms; Poor translation of website content	Weakness in targeted marketing and advertising	
Branding power of Turkey, India, and Thailand; High advertising costs of the UAE and Saudi Arabia	Intense competition with established brands	Challenges of branding and international image
Lack of coordination between the Ministry of Health, Tourism, the private sector, and the media; Emphasis solely on price instead of quality	Lack of coordination in narrative creation	
Differences in patient expectations; Communication misunderstandings; Cultural sensitivities regarding the gender of doctors and nurses	Cultural understanding and expectations gap	
Emirates' investment in "health cities"; Saudi Arabia's development in Vision 2030; Turkey's focus on Europe and the US	Emergence of new powerful competitors	
Fast-track medical visa; Attractive financial and insurance packages; Direct advertising in the traditional Iranian market (CIS)	Aggressive policies of competitors	
Higher accommodation and leisure services in Dubai and Istanbul; Greater social freedoms; Better air access	Quality of non-medical services of competitors	The pressure of increasing regional competition
Post-treatment follow-up systems; New patient referral incentive programs; Continuous communication through applications	Loyalty of patients to competitors	
Turkey's dominance in beauty and hair transplantation; India's dominance in cardiology and orthopedics; Thailand's focus on gender and dental services	Competitors' focus on specific markets	

Table 7. Concepts and categories identified related to the central phenomenon. Source: Authors.

Open codes summary	Subcategory	Main category
Complex cardiovascular surgeries; Neurology and tumors; Laparoscopy and robotics	Focus on advanced elective surgeries	
Dental and implant center; Infertility and IVF treatment; Plastic and reconstructive surgery with natural results	Polarization in specific areas	
Patients without treatment options in their own country; Rare diseases with multidisciplinary teams; Providing reliable secondary options	Attracting patients with complex conditions	Development of specialized medical tourism
Multi-day check-up packages with advanced devices; Targeting regional managers; Combining with recreational and pilgrimage programs	Developing comprehensive check-up centers	
Reducing the distance from diagnosis to treatment; specific treatment paths for international patients; collaboration between radiology, pathology, and clinics.	Integrating diagnostic and treatment services	
Traditional medicine clinics for chronic diseases; Cupping, ablation, and leech therapy; Nutritional counseling based on Iranian medicine	Reviving traditional Iranian-Islamic medicine	
Utilizing hot mineral springs; Luxury spas with flower therapy and aromatherapy; Massage therapy and relaxation	Developing hydrotherapy and spa centers	
Secluded spaces on the outskirts of the city; Mindfulness and yoga courses; Combining the spiritual atmosphere of the shrine with psycho-spiritual programs	Stress reduction and meditation centers	Developing health tourism and complementary medicine
Multi-week detoxification camps; Use of mineral waters and medicinal herbs; Combination with sports and nature tourism	Detoxification and weight loss programs	
Long-term stays for older people in the region; day care, physiotherapy, and occupational therapy; group programs for social connection.	Senior tourism	

Rest of Table 7.

Open codes summary	Subcategory	Main category
Coordinating body between agencies, hospitals, and hotels; Designing a therapeutic journey from consultation to follow-up; Quality standards in each circle	Value chain from "patient reception" to "health return"	Creating an integrated service ecosystem
Standard packages for high-demand treatments; Possibility of combining components by the patient; Complete price transparency from the beginning	Customizable service packages	
Dedicated interface for each patient; 24-hour multilingual call center; Mobile application for accessing the program and reports	Comprehensive support and communication system	
Cooperation between medical and tourism agencies; Training tour guides about patients' needs; Discounts on complementary services	Integrating regular and health tourism services	
Mashhad Health Tourism Council; Joint code of ethics; Joint investment in marketing and exhibitions	Multiple stakeholder participation	
Integrated approach to technology and indigenous medicine; Integrated clinics with modern and traditional doctors; "Holistic" treatment model as a point of distinction	Combining "advanced medical expertise" with "traditional medicine wisdom"	Creating a unique composite identity
The slogan "Treatment in the city of Imam Reza (AS)"; Designing spiritual programs as part of the health process	Combining "physical health" with "peace of mind" in a religious city	
Integrating visits to historical attractions into the recovery program; Using Iranian cultural elements in the design of medical centers and hotels.	Linking "treatment experience" with "cultural-historical experience"	
A single brand for the city in the global market: creating a narrative around "Return to health, in the embrace of security and spirituality"	Creating the brand "Mashhad: the meeting place of health and spirituality"	

The background conditions include four categories: "transportation and accommodation infrastructure" (air access, intra-city transportation network, aligned hotels, access to support services and digital infrastructure), "security as a platform for development" (public security, healthcare, food, political stability and financial and contractual security), "favorable cultural and social environment" (hospitality culture, coexistence of religions, language and communication, lifestyle and support networks), and "complementary tourism attractions" (religious, historical, natural attractions, shopping centers and events). Intervening factors were also identified in four categories: "international economic and financial challenges" (banking system constraints, currency fluctuations, insurance weakness, and limitations in attracting foreign investment), "weakness in integration with global health systems" (accreditation barriers, challenges in exchanging medical information, lack of membership in regional agreements, and lack of a structured referral system), "international branding and image challenges" (negative media coverage, weakness in targeted marketing, competition with established brands, and cultural understanding gap), and "increasing regional competitive pressure" (emergence of powerful competitors, aggressive policies of competitors, quality of non-medical services, and patient loyalty). Regarding strategies, four categories were proposed: "Developing integrated infrastructure and services" (health city, national digital system, mandatory standardization, human resource training, and coordination and support center), "International marketing and branding" (focusing on target markets, story-based marketing, attending exhibitions, developing targeted public relations, and smart digital advertising), "Policymaking and facilitating legal frameworks" (facilitating medical visas, transparent legal framework, insurance cooperation, tax incentives, and inter-agency coordination), and "Improving service quality and innovation" (telecare, personalization of the treatment experience, research and development, professional ethics, and exceptional services). Finally, the consequences of implementing the model have been predicted in four dimensions: "economic" (increasing foreign exchange earnings, employment, reducing foreign exchange outflows, private sector prosperity, and economic diversification), "socio-cultural" (improving the quality of domestic health services, strengthening public diplomacy, cultural exchange, creating national pride, and developing education and research), "organizational and managerial" (professionalizing management, inter-sectoral cooperation, transparency of government institutions, strengthening the supervisory system, and developing new business models), and "environmental-physical" (sustainable development of infrastructure, improving the urban landscape,

smart resource management, reducing pollution, and protecting natural heritage). In the selective coding stage, five theoretical propositions were formulated based on the research paradigm model that explains the cause-and-effect relationships between the categories. The first hypothesis is that causal conditions (superior medical capabilities, price advantage, connection with religious tourism, positive international image), when combined, accelerate the central phenomenon. The second hypothesis is that favorable contextual conditions (infrastructure, security, cultural environment, complementary attractions) provide the basis for the growth of the central phenomenon and increase the effectiveness of strategies. The third hypothesis is that intervening conditions (economic challenges, weakness in global integration, branding challenges, regional competition) threaten the realization of the central phenomenon if not actively managed. The fourth hypothesis is that coordinated implementation of the four strategies is essential to stabilize and sustainably develop the central phenomenon. The fifth hypothesis is that realizing the central phenomenon leads to economic, socio-cultural, organizational, and environmental consequences. Therefore, the paradigmatic model of health tourism development is presented as follows.

Discussion

The current research aimed to design a health tourism development model for the Mashhad metropolis, emphasizing managerial, infrastructural, and marketing dimensions. Based on qualitative data analysis from 19 in-depth interviews with health tourism experts and managers in Mashhad, as well as library and documentary studies, a paradigm model of health tourism development was designed using a systematic grounded theory approach. This comprehensive model includes six main

Table 8. Identified concepts and categories related to strategies. Source: Authors.

Open codes summary	Subcategory	Main category
Complex includes multinational hospitals, hospital hotels, complementary medicine clinics, research and residential centers; Attracting investment with global brands; Design based on LEED standards and accessibility for people with disabilities.	Establishing Mashhad International Health City	Integrated infrastructure and service development strategies
Official multilingual portal; Integration of electronic medical visa, hotel reservation and transfer; Live communication with medical consultants and managers	Developing Iran's National Digital Platform for Health Tourism	
Requirement to obtain international certificates; Internal ranking system for medical centers; Continuous monitoring of the quality of non-medical services	Standardization and Mandatory Accreditation	
International health and medical tourism management courses; Language training and intercultural skills; Training of health tour guides	Training and Empowering Human Resources	
Physical office at the airport and 24-hour call center; Emergency legal, financial, and instant translation services	Establishing a Health Tourist Coordination and Support Center	
First market: Persian-speaking and Shiite neighboring countries (emphasis on religious connection and low cost); Second market: CIS countries (acceptable quality and competitive price); Third market: Persian Gulf countries (proximity, medical expertise and luxury services)	Focusing on Priority Target Markets	International marketing and branding strategies
Documentation of successful treatment stories; Use of health influencers on social networks; Production of high-quality video content of surgeries and hospital environments	Using Story-Based Marketing	
Consistent presence in international health tourism exhibitions; Hosting medical congresses by inviting global experts; Establishing a permanent "Health of Iran" booth at airports and exhibitions	Active Presence in Specialized Exhibitions and Scientific Events	
Inviting journalists and health bloggers from target countries; Cooperation with TV networks to produce reports; Regular publication of medical achievements in journals and portals.	Developing Targeted Public Relations and Media	
Targeted advertising on social networks; Optimization of websites for search engines in Arabic, Russian, English, and Turkish; Use of smart chatbots	Smart Digital Advertising	

Rest of Table 8.

Open codes summary	Subcategory	Main category
Fast-track medical visa with multiple-entry validity and the possibility of accompanying; Issuing visas at the airport for emergencies; Eliminating or reducing visa fees	Facilitating the Issuance of Medical Visas	Facilitating policy and legal strategies
Approval of the "Health Tourist Support" law; Specialized arbitration system for resolving disputes; Requirement of a transparent standard contract in two languages	Creating a Transparent and Supportive Legal Framework	
Negotiations with global insurers for direct contracts; Joint guarantee fund for financial risks; Introduction of medical travel insurance policies	Developing International Insurance Cooperation	
Tax exemption of income from health tourism; Facilitation of import of medical equipment and special medicines at preferential rates; Reduction of duties on high-quality consumables	Providing Tax and Customs Incentives	
Establishment of a "Mashhad Health Tourism Command Headquarters" with representatives of relevant ministries; Definition of the role and responsibilities of each institution; Single window for issuing permits; Reporting to the governor and the president	Inter-agency Coordination and Eliminating Parallel Work	
Initial remote medical assessment; Support system after the patient's return; Smart devices for remote monitoring	Developing Remote Care and Follow-up Services	Strategies for improving service quality and innovation
Treatment and accommodation program tailored to clinical conditions, culture, and budget; Attention to the needs of companions; Providing choice in detail (type of room, menu, gender of doctor)	Personalizing and Customizing the Treatment Experience	
Specialized research institute at Mashhad University of Medical Sciences; Continuous market research studies in target countries; Research on combining modern methods and traditional medicine	Investing in Health Tourism Research and Development	
Common code of ethics for all service providers; Prohibition of receiving illegal commissions; Public publication of service tariffs in multiple languages	Institutionalizing Professional Ethics and Transparency	
VIP service at the airport; Personal contact for coordinating non-medical matters; Attention to spiritual and emotional details	Creating Distinction Through Exceptional Services	

components (causal conditions, central phenomenon, strategies, contextual conditions, intervening factors, and consequences) and 16 subcategories. Content analysis of interviews and library studies yielded 342 open codes, which were organized into 16 first-level subcategories and 6 main categories after central and selective coding. The 342 open codes reflect the richness of experts' views and the comprehensiveness of their perspectives on various dimensions of health tourism development. In the following section, the results of the research are presented based on the research questions:

• **Answer to the first question: What is the optimal model for the development of health tourism in Mashhad with an emphasis on management, infrastructure, and marketing dimensions?**

The optimal model for developing health tourism in Mashhad is a paradigmatic model based on grounded theory, in which "transforming the metropolis of Mashhad into an international health tourism hub with a unique composite identity" is identified as the central phenomenon. This model consists of six main components and 16 subcategories, and the relationships between them were drawn as a paradigmatic model. The composite identity of "pilgrimage and health" as the central core of the model indicates Mashhad's unique competitive advantage compared to other health tourism destinations in the region and, unlike the purely economic approaches in competing countries (such as Turkey, India, and the UAE), emphasizes the integration of physical treatment and spiritual peace. This finding is consistent with the results of studies by Siahsarani Kojuri (2024), which emphasized the importance of "destination image" and "trust" in the success of marketing models, and Khazaee-Pool et al. (2024), which emphasized "indigenous community participation" and "local trust" as key factors for development. It is also consistent with the results of international studies by Wang et al. (2023), which emphasized the role of "level of economic development", "industrial specialization", and "government support", and Kim et al. (2019), which identified "advanced medical technology" and "cultural brand strength" as key factors for success.

Table 9. Identified concepts and categories related to consequences. Source: Authors.

Open codes summary	Subcategory	Main category
Direct foreign exchange inflow; employment creation for doctors, nurses, translators, guides and drivers; boom in pharmacies and sales of medical equipment	Increasing foreign exchange income and creating direct and indirect employment	Economic consequences
Investment in the renovation of hospitals and clinics; Improvement of hotels, restaurants and transportation; Development of construction projects such as airports and roads	Developing and upgrading urban and medical infrastructure	
Maintaining capital domestically and circulating cash in the domestic economy; Increasing national confidence in the healthcare system.	Reducing foreign exchange outflow for Iranians to receive treatment abroad	
Incentive for private sector investment; Attracting foreign investment; Growth of knowledge-based companies in the field of health equipment and software	Promoting the private sector and attracting investment	
Reducing dependence on seasonal religious tourism; Stable income stream throughout the year; Increasing economic resilience to fluctuations in the pilgrimage market.	Diversifying the city's economy and reducing dependency	
Standardizing and improving the quality of hospitals; Citizens' access to up-to-date doctors and equipment; Increasing sensitivity to medical ethics and patient rights.	Improving the quality of medical services for domestic citizens	Sociocultural implications
Creating a positive, humanitarian image of Iran; expanding people-to-people contacts and trust; using it as a tool of soft diplomacy.	Strengthening public diplomacy and Iran's international image	
Interacting with different cultures and nationalities; Increasing intercultural skills; Strengthening the spirit of hospitality and tolerance	Cultural exchange and increasing social tolerance	
Pride and self-confidence in the medical staff; Formation of a new identity of "Health City" alongside "City of Religion"; Modeling for other cities	Creating national pride and local identity	
Strengthening medical disciplines with an international orientation; Motivation for students and researchers; Exchange of knowledge and technology with global centers	Developing education and research	
Moving from traditional management to international business; Establishment of quality assurance and CRM systems; Attracting international managers.	Professionalizing the management of medical centers and tourism services	Organizational and managerial implications
Cooperation networks between the health sector, tourism, municipality and private sector; Exchange of experience and organizational learning; Emergence of specialized unions	Creating cross-sectoral cooperation and networking	
Increasing expectations for transparency and efficiency; More effective monitoring mechanisms based on international feedback; Improving governance indicators	More transparency and accountability of government institutions	
Development of laws in the field of international medical liability and privacy; Establishment of specialized judicial procedures and arbitration; Increasing legal experience in international cases	Strengthening the regulatory and legal system	
Emergence of digital health mediation startups; Shared revenue model for follow-up; Developing the advantages of successful models to other cities	Developing new business models	
Adhering to environmental standards in the health city; using renewable energy; careful management of medical waste; paying attention to the city's carrying capacity.	Sustainable and responsible development of infrastructure	Environmental and physical consequences
Beautifying and improving public spaces and urban facades; increasing green spaces and parks; improving public health.	Improving the urban landscape and public services	
Optimal water consumption in hotels and medical centers; smart energy control systems; creating a culture of saving	Smart management of water and energy resources	
Planning for the development of public transportation; principled management of sewage and hazardous waste in medical centers	Reducing pollution resulting from unbalanced development	
Identifying and protecting hot and mineral springs; cultivating and developing native medicinal plants in the form of organic and demonstration farms.	Protecting and introducing natural therapeutic heritage	

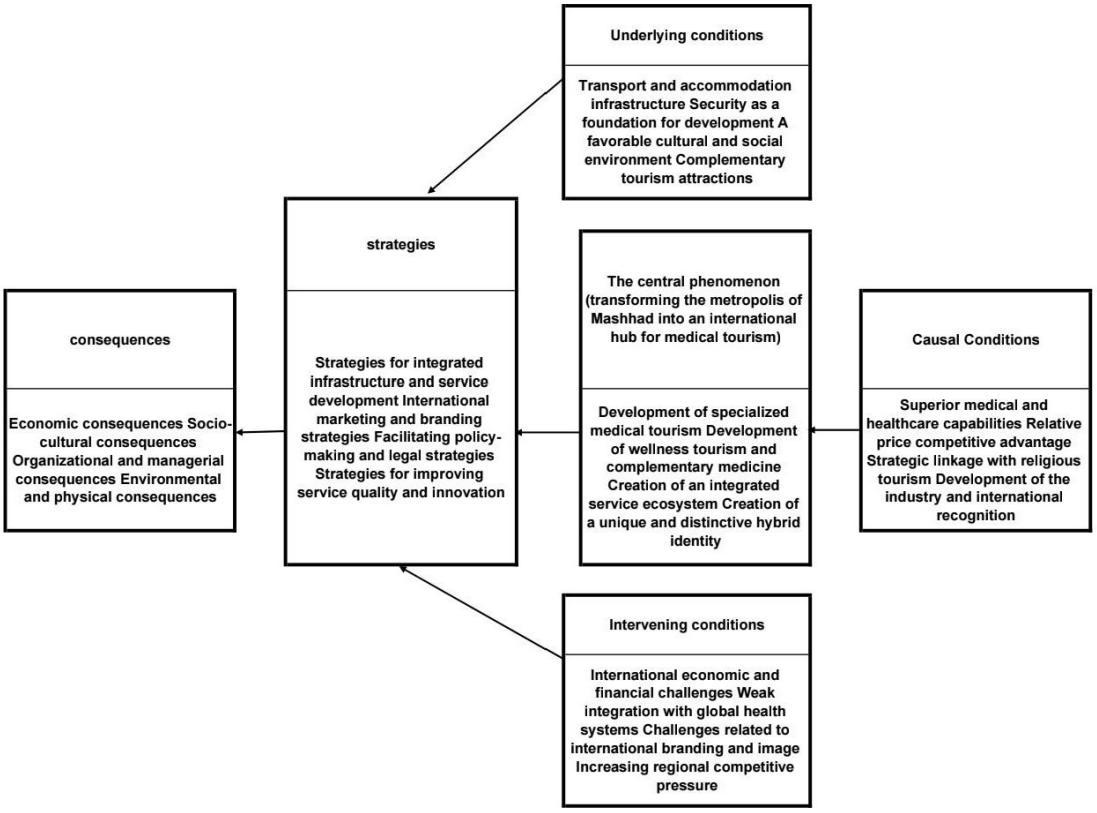


Fig. 1. Paradigmatic model of health tourism development. Source: Authors.

• Answer to the second question: What are the causal factors, the central phenomenon, the contextual conditions, and the intervening factors?

Causal factors were identified in four main categories: superiority of medical and therapeutic capabilities (expert human resources, advanced technology, variety of services, successful track record in complex treatments, and quality standards), competitive price advantage (low service prices, affordable ancillary costs, competitive exchange rates, saving on waiting time), strategic linkage with religious tourism (attracting a ready audience of pilgrims, combination packages, leveraging a sense of spiritual trust), and positive international image (regional reputation, word-of-mouth advertising, presence at exhibitions, publication of scientific articles). These factors are consistent with the findings of Aksu and Bayar (2019). Identifying "strategic linkage with religious tourism" as a key causal factor indicates a deep understanding of Mashhad's unique comparative advantage and its potential to transform pilgrims into health tourists. The central phenomenon was defined as "transforming the Mashhad metropolis into an international health tourism hub with a unique composite identity" and includes four dimensions: the development of specialized medical tourism (advanced surgeries, polarization in specific areas such as dentistry and infertility, comprehensive check-up centers), the development of health tourism and complementary medicine (revival of traditional Iranian-Islamic medicine, hydrotherapy, stress reduction centers, elderly tourism), the creation of an integrated service ecosystem (value chain from patient reception to return to health, customizable packages, comprehensive support system), and the creation of a unique composite identity (combining advanced medical expertise with the wisdom of traditional medicine, combining physical health with peace of mind in a religious city). This definition is consistent with the findings of Siahsarani Kojuri (2024) and Spoladore et al. (2023). The focus on "combined identity" indicates mature strategic thinking and differentiates Mashhad from competitors that focus solely on price or technology. The contextual conditions include four categories: transportation and accommodation infrastructure (air access, intracity transportation, compatible hotels), security as a platform for development (public security, healthcare, food, political stability, contractual security), favorable cultural and social environment (hospitality, coexistence of religions, language and communications), and complementary tourism attractions (religious, historical, natural attractions, shopping centers). These conditions align with the safety findings of Imeni Gheshlagh & Ashghali Farahani (2023) and Hunjet et al. (2024). The existence of "safety" as an independent category indicates an understanding of its importance in health tourists' decision-making. Intervening factors were divided into four categories: international economic and financial challenges (banking restrictions, currency fluctuations, insurance weakness), weakness in integration with global health systems (accreditation

barriers, challenges in exchanging medical information), challenges in branding and international image (negative media coverage, weakness in targeted marketing), and increasing regional competitive pressure (emergence of powerful competitors, aggressive policies of competitors). These challenges are consistent with the findings of Jalali et al. (2025) and Khanal & Shimizu (2019) (Fig. 1).

• **Answer to the third question: What are the conceivable economic, social, and infrastructural strategies and consequences?**

Key strategies were categorized into four areas: developing integrated infrastructure and services (health city, digital platform, mandatory standardization, human resource training), international marketing and branding (focusing on target markets, story-based marketing, exhibition presence, smart digital advertising), facilitating policy and legal frameworks (facilitating medical visas, transparent legal framework, insurance partnerships, tax incentives, interagency coordination), and improving service quality and innovation (telecare, personalization of the treatment experience, research and development, professional ethics). These strategies align with the suggestions of Dehghan et al. (2021) and Cristobal-Fransi et al. (2023). The consequences of implementing the model were predicted in four dimensions: economic (increased foreign exchange earnings, employment, reduced foreign exchange outflows, private sector prosperity), socio-cultural (improving the quality of domestic health services, strengthening public diplomacy, cultural exchange, creating national pride), organizational and managerial (professionalization of management, inter-sectoral cooperation, transparency of government institutions), and environmental-physical (sustainable development of infrastructure, improvement of the urban landscape, smart resource management). These consequences are consistent with the findings of Rezapour et al. (2021) and Araújo Vila et al. (2020).

Conclusion

The findings of this study are consistent with previous studies in some aspects and differ in others, indicating the local and context-based nature of the model. In the section on causal conditions (superior medical capabilities, price advantage, and positive image), the findings are consistent with Khazaee-Pool et al. (2024) and Aksu & Bayar (2019). In the contextual conditions (infrastructure, security, and attractions), the findings are consistent with Imeni Gheshlagh and Ashghali Farahani (2023) and Hunjet et al. (2024). In the intervening factors (economic challenges, weak regional integration, and competition), the results are consistent with Jalali et al. (2025) and Khanal & Shimizu (2019). On strategies, the results align with Hedayatnia et al. (2025) on branding and digital technology and with Fakour et al. (2025) on patient experience management. Regarding consequences, the results align with Rezapour et al. (2021) and Araújo Vila et al. (2020). Internationally, the findings are consistent with Wang et al. (2023) on economic development, specialization, and government support; Kim et al. (2019) on advanced technology and cultural brand power; Yuangngoen et al. (2025) on trust in infrastructure and competitive costs; and Baydeniz et al. (2024) on sensory, emotional experience, and quality of interaction with healthcare staff. The most important distinction of this research from previous studies that have focused mainly on economic, infrastructure, and marketing factors (Hedayatnia et al., 2025; Fakour et al., 2025; Kim et al., 2019) is the identification of "strategic linkage with religious tourism" as a key causal factor and "creation of a unique composite identity" as part of the central phenomenon. The findings show that in the context of Mashhad, spiritual and religious components play a central role, and the integrated approach of "pilgrimage and health" as a combined identity is considered a fundamental innovation of the research, which has not been seen before. This distinction confirms that health tourism development models should be designed in accordance with each region's cultural and religious ecosystem and that generalizing experiences from other countries is not enough. This finding is in line with the research of Esmaeili Mahyari et al. (2026) on "personalized patient experience" and "sustainability" as well as with the results of Dryglas & Smith (2025) on "flexibility of business models" and "focus on health tourism". The present study faced two categories of limitations. Methodologically, the qualitative nature of the research limits the statistical generalizability of the findings to the context of Mashhad. The sample size (19 interviews), despite theoretical saturation, may not have covered the full diversity of stakeholders (especially foreign patients). The cross-sectional design did not allow examination of developmental trends, and limited access to some senior managers reduced data richness. In terms of content limitations, focusing solely on Mashhad does not allow for comparison with other potential cities in Iran. Also, some key challenges, such as sanctions and banking system restrictions, are beyond academic research, and their resolution requires national determination and cross-sectoral cooperation at the macro level. Findings from 19 expert interviews show that the lack of a comprehensive, indigenous model is the most important obstacle to developing health tourism in Mashhad. The presented model, emphasizing the combined identity of "pilgrimage and health" and an integrated ecosystem, provides an operational roadmap for transforming Mashhad into a top destination in the region. This finding, while consistent with the background (Khazaee-Pool et al., 2024; Aksu & Bayar, 2019), by identifying religious-cultural components, helps

to localize the model and is in line with international research (Spoladore et al., 2023; Kim et al., 2019) on the necessity of combining medical capabilities with cultural advantages. Future research should quantitatively validate the model using multivariate methods and conduct a comparative study with other cities in Iran and the region. The research's practical suggestions are formulated in four areas: In the area of infrastructure and technology, the creation of an integrated national digital system with reservation capabilities, remote consultation, and electronic payment; the establishment of an international health city with green standards and accessibility for people with disabilities; and the development of telemedicine and aftercare are suggested. In the legal and policy areas, it is recommended to facilitate medical visas with multiple entries and airport issuance, approve a law to protect health tourists, offer tax exemptions and reduce customs duties on advanced equipment, and establish a health tourism command headquarters with interagency coordination. In the educational and cultural areas, the report recommends language training and intercultural skills for medical staff and hotels, designing international health and medical tourism management courses, and setting up a 24-hour multilingual call center. In the marketing and branding areas, designing combined pilgrimage and treatment packages with transparent prices, developing a ranking system for medical centers, a narrative marketing campaign with health influencers, a coherent presence in international exhibitions, holding an annual specialized exhibition in Mashhad, and creating a single brand of "Mashhad: The Meeting Place of Health and Spirituality" are recommended.

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