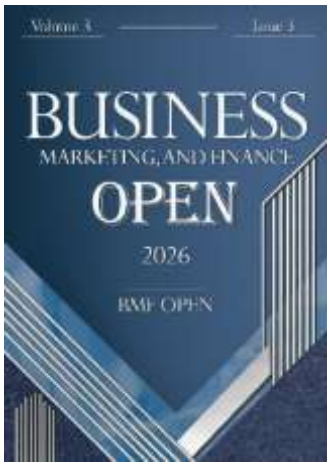
Identifying the Factors Influencing the Development of Medical Tourism from a Marketing Mix Perspective in Gilan Province

Seyyed Ali Tabaei[1], Seyyed Mahmoud Shabgu Monsef [2,*], Narges Delafrooz [3] and Ali Gholipour Soleimani [4]



[1] Department of Business Management, Ra.C., Islamic Azad University, Rasht, Iran;
[2] Department of Business Management, Ra.C., Islamic Azad University, Rasht, Iran;
[3] Department of Business Management, Ra.C., Islamic Azad University, Rasht, Iran;
[4] Department of Business Management, Ra.C., Islamic Azad University, Rasht, Iran;

* Correspondence: shabgoomonsef@iaurasht.ac.ir

Abstract: The purpose of this study is to identify the factors influencing the development of medical tourism from the perspective of the marketing mix in Gilan Province. This research was conducted based on grounded theory using a qualitative and quantitative approach. In the qualitative phase, data were collected through in-depth interviews. The interview transcripts were analyzed in three stages: open coding, axial coding, and selective coding. The sampling method was snowball sampling. At this stage, the factors affecting the development of medical tourism from the marketing mix perspective were identified by conducting 18 semi-structured interviews with provincial experts in the field of medical tourism. The qualitative data were analyzed using MaxQDA software. Finally, the identified factors were analyzed using structural equation modeling with SPSS 24 and Smart PLS 3 software. This research identified 12 factors influencing the development of medical tourism in Gilan Province, including the province's potential, cultural and social issues, empowerment, economic stability, political and security issues, elements of the medical tourism marketing mix, travel facilities, infrastructure, environmental factors, policies, laws and regulations, managerial factors, and marketing strategy.

Keywords: Marketing Mix, Tourism Development, Health Tourism, Medical Tourism

Citation: Tabaei, S. A., Shabgu Monsef, S. M., Delafrooz, N., & Gholipour Soleimani, A. (2026). Identifying the Factors Influencing the Development of Medical Tourism from a Marketing Mix Perspective in Gilan Province. *Business, Marketing, and Finance Open*, 3(3), 1-15.

Received: 17 June 2025
Revised: 01 October 2025
Accepted: 07 October 2025
Initial Publication: 07 October 2025
Final Publication: 01 May 2026

1. Introduction

Health tourism—encompassing the travel of individuals to access medical, wellness, and preventive services abroad—has emerged as a powerful dimension of global tourism and health systems integration. Over the past two decades, the combination of rising healthcare costs in developed nations, the pursuit of high-quality yet affordable treatments, and the increasing availability of advanced medical infrastructure in emerging destinations have transformed this sector into a strategic economic and social development driver [1, 2]. The World Health Organization and related industry reports highlight that medical tourism is no longer a peripheral niche but a fast-growing field influencing international competitiveness, health service exports, and national branding [3, 4]. Countries that recognize the multidimensional nature of health tourism—covering marketing, infrastructure, safety, and cultural experience—can leverage it to diversify their economies and enhance global health equity [5, 6].

For Iran and its northern provinces, including Gilan, health tourism offers both challenges and opportunities. Iran's medical expertise, cost-effective services, and cultural proximity to neighboring regions have long positioned it as an attractive destination [1, 7]. However, the global medical tourism industry has become highly competitive, requiring destinations to adopt innovative strategies to differentiate and sustain growth [8, 9]. Recent empirical studies emphasize that success in this market depends not only on clinical excellence but also on integrated marketing mix strategies, strong infrastructural support, digital competitiveness, and supportive policy frameworks [10-12]. Gilan Province—with its unique natural attractions, mild climate, and geographical proximity to Central Asia and the Caucasus—possesses significant potential to emerge as a regional hub for medical tourism [13, 14]. Yet realizing this potential requires a systematic understanding of the factors shaping its health tourism ecosystem.

A foundational element in advancing medical tourism is the marketing mix, traditionally conceptualized as product, price, place, and promotion, but now extended to include people, process, and physical evidence in service-driven sectors [10, 15]. Studies show that destinations must design service packages that combine clinical care with hospitality, cultural adaptation, and digital communication to attract international patients [8, 16]. For Iran, research has indicated that competitive pricing, transparent quality standards, and branding supported by international certifications can build trust among foreign patients [7, 11]. Similarly, tailored promotions, especially through online channels and multilingual platforms, have been shown to impact medical tourist decision-making significantly [9, 12]. Digital transformation—ranging from AI-driven patient support to virtual hospital tours—is now regarded as indispensable in modern medical tourism marketing [8, 12].

Infrastructure and institutional support remain equally vital. Without high-quality hospitals, specialized clinics, reliable transportation, and seamless visa facilitation, marketing efforts fail to convert interest into actual visits [14, 15]. Scholars stress that infrastructure includes both tangible assets such as International Patient Departments (IPDs) and intangible enablers such as multilingual staff and patient-centric processes [6, 17]. In Gilan, developing such integrated infrastructure could leverage the province's rich cultural and natural attractions while meeting the expectations of international patients [13, 18]. Accessibility, from flight connections to financial transaction systems, also influences patient flow [5, 19].

Policy and governance are another decisive layer shaping health tourism. National and local regulations around licensing, insurance, malpractice standards, and investment incentives directly impact the sector's stability and credibility [15, 20]. Evidence suggests that consistent, transparent, and supportive policies increase both investor confidence and patient trust [20, 21]. Countries like the United Arab Emirates have successfully advanced medical tourism through policy harmonization and cross-sectoral governance [6], offering useful models for Iranian provinces. In Gilan's context, clear strategic direction from regional health authorities combined with collaborative public-private partnerships can accelerate the alignment of marketing, infrastructure, and clinical quality [15, 22].

Cultural and social factors play an equally critical role in health tourism's growth trajectory. Cultural affinity, shared language, and religious sensitivity are important determinants for patients traveling to receive care [21, 23]. Studies indicate that patients from neighboring countries often seek familiarity and trust beyond medical competence alone [3, 19]. For Gilan, which shares cultural ties with the Caspian and Caucasus regions, leveraging cultural capital can become a competitive advantage when integrated into the marketing mix [2, 18]. However, effective cultural integration requires empowerment of local service providers through training, communication skill-building, and hospitality management [10, 12]. Empowerment ensures that patient experience is seamless from arrival to post-treatment follow-up, which significantly influences word-of-mouth reputation [9, 11].

Economic stability and destination branding are intertwined with medical tourism competitiveness. Research highlights that fluctuations in currency exchange and political risk perceptions can shape patient decisions [5, 21]. Destinations with stable macroeconomic conditions and clear investment climates foster both supply-side growth and patient confidence [15, 17]. Iran's recent macroeconomic challenges necessitate targeted marketing strategies that communicate cost-effectiveness while assuring quality and safety [7, 16]. Gilan can leverage relative local stability and competitive pricing but must counter external perceptions through credible digital branding and partnerships with international facilitators [8, 9].

Emerging scholarship also underlines the transformative potential of innovation in health tourism marketing. Experiential marketing—designing holistic patient journeys that connect medical services to leisure, culture, and personalized experiences—has shown to enhance patient satisfaction and loyalty [8, 10]. Developing "healing destinations" where the environment contributes to well-being is a growing global trend [2, 5]. Gilan's lush landscapes and wellness resources (e.g., natural hot springs, organic cuisine, coastal retreats) provide a strong basis for this experiential approach [13, 18]. Incorporating these unique assets into integrated packages could differentiate Gilan from larger metropolitan hubs such as Tehran while meeting the rising demand for holistic health travel [11, 22].

Digitalization further revolutionizes marketing in health tourism. Patients increasingly rely on online reviews, teleconsultations, and AI-assisted recommendations before choosing a destination [9, 12]. Iranian hospitals and regional authorities are beginning to adopt digital channels but still face gaps in visibility, multilingual content, and seamless patient interfaces [11, 22]. Investment in e-learning and digital skill-building among health tourism marketers can strengthen competitiveness [12]. Integrating big data analytics, patient experience platforms, and secure digital payment solutions would also align with international best practices [4, 8].

At the theoretical level, developing a robust model for medical tourism in Gilan demands combining grounded qualitative insights with quantitative validation. Prior studies have highlighted the need for context-specific frameworks that account for local strengths and vulnerabilities [11, 19]. Applying a mixed-methods design—first mapping determinants through expert interviews and then validating them via structural equation modeling—helps ensure relevance and reliability [15, 20]. Such models can guide both policymakers and industry stakeholders in aligning investments, training, and marketing with actual patient expectations [14, 23].

In sum, the literature suggests that Gilan's success in health tourism will depend on the integration of a sophisticated marketing mix with cultural sensitivity, robust infrastructure, stable policy frameworks, and innovative experiential strategies [1, 3, 5]. By leveraging its natural and cultural assets, investing in digital and managerial capabilities, and fostering supportive regulations, the province can become a competitive player in the global medical tourism market [7, 8, 15]. This study aims to fill the knowledge gap by systematically identifying and validating the factors that shape the development of medical tourism in Gilan Province from a marketing mix perspective.

2. Methodology

This study, in terms of purpose, is classified as fundamental in its qualitative part because it seeks to identify dimensions, components, and indicators to understand the nature of phenomena and the relationships among variables and to design a model for the variables of interest. By doing so, it contributes to expanding the boundaries of knowledge in the relevant scientific field. Methodologically, this research employs a mixed-methods approach, which involves combining qualitative and quantitative methods. Furthermore, it follows a sequential exploratory

design, in which the qualitative method—grounded theory—serves as the basis for extracting the components and indicators of the study, and the quantitative method is used to validate the model developed through the qualitative phase.

To achieve this, in the first stage, the preliminary conceptual model for the research subject—design and identification of factors influencing the development of medical tourism in Gilan Province—was prepared by reviewing the available literature and resources. Subsequently, the components of the model were identified using a qualitative approach and exploratory interviews. In the final stage, the model developed in this research was tested using quantitative data collection.

In terms of purpose, the qualitative part of this research is fundamental and aims to gain a deep understanding of the nature of phenomena and the relationships among variables by identifying the dimensions, components, and indicators of medical tourism development in Gilan Province and to design a model for the variables of interest. The qualitative method employed is based on the grounded theory approach, in which exploratory interviews were conducted with 18 experts in the field of medical tourism in Gilan Province to extract the components and indicators of the study. The sample included individuals with experience, study, and expertise in medical tourism in Gilan who were selected as key informants. The qualitative phase served as the basis for developing the initial conceptual model of the research subject.

In the quantitative part, a questionnaire was designed based on the items derived from the qualitative phase and the literature review. The questionnaire's content validity was confirmed by experts, and a pilot study was conducted to ensure its reliability. The statistical population in the quantitative phase consisted of managers and healthcare personnel of hospitals and International Patient Departments (IPDs) affiliated with the Gilan University of Medical Sciences. Using convenience sampling, 130 participants were selected. The data collected in this phase were analyzed statistically to validate the proposed model and test the relationships among the variables.

3. Findings and Results

This section presents the results of the analyses. First, the findings are organized into concepts, subcategories, and main categories, and then they are presented within the systematic model framework, which includes causal conditions, the core category, contextual factors, intervening conditions, action–interaction strategies, and consequences.

The proposed model illustrates, considering the relationships among these elements, the factors and components influencing the marketing mix for medical tourism in Gilan Province and clarifies the connections between each element and the others.

In the quantitative part of the report, dedicated to validating the proposed model, statistical analyses are provided in detail, including the evaluation of the construct validity of the questionnaire factors and the application of structural equation modeling to study the conceptual model and examine the relationships among the factors.

Axial coding is the second stage of analysis in grounded theory. Its purpose is to determine the relationships among the categories generated during the open coding stage. In axial coding, the researcher identifies the central or core phenomenon, describes causal conditions, specifies actions and reactions, identifies intervening conditions and context, and determines the outcomes and consequences of the strategies related to this phenomenon. This process follows the paradigm model and facilitates the development of the theoretical framework.

Table 1 shows the results of open and axial coding in this study.

Table 1. Main Categories, Subcategories, and Concepts Derived from Open and Axial Coding

Row	Open Coding (Concepts)	Axial Coding (Subcategories)	Main Categories
1	Product/Service: quality of service delivery	Elements of the marketing mix	Core category
2	Price		
3	Place		
4	Promotion (advertising)		
5	Human resources (medical staff)		
6	Process		
7	Physical evidence: international hospital certifications, equipment		
8	Provincial tourism attractions: nature, cuisine	Provincial potential	Causal conditions of the marketing mix
9	Geographical location		
10	Demand from neighboring countries		
11	Medical infrastructure in the province		
12	Cultural and linguistic similarities	Cultural and social issues	
13	Cultural richness of the province		
14	Effective communication: common language	Empowerment	
15	Creating a tourism culture		
16	Presence of hospital IPD teams		
17	Availability of medical tourism guides		
18	Exchange rate	Economic stability	Political and security issues
19	Political stability		
20	Security assurance		
21	Need to improve provincial infrastructure	Infrastructure	Contextual conditions of the marketing mix
22	Availability of accommodation facilities		
23	Adequate amenities for patients and companions		
24	Launching and strengthening facilitator companies	Travel facilities	
25	Ease of obtaining medical visas		
26	Availability of appropriate insurance		
27	Creating suitable tourism packages		
28	Financial transaction facilitation		
29	Development and strengthening of medical tourism offices		
30	Existence of brokers	Environmental factors	Intervening conditions of the marketing mix
31	Outbreaks of contagious diseases		
32	Presence of domestic and international competitors		
33	Sanctions		
34	Reforming processes and procedures	Policies, laws, and regulations	Marketing mix strategies
35	Adopting unified policies		
36	Resolving legal issues		
37	Policymakers' and implementers' attitudes toward medical tourism	Managerial factors	
38	Proper training		
39	Planning and setting standards		
40	Inter-sectoral coordination		
41	Accurate statistics and information		
42	Market segmentation	Marketing strategy	
43	Target market selection		
44	Positioning		
45	Economic benefits: income growth, employment creation	Medical tourism development	Consequences of the marketing mix
46	Medical benefits: improved quality of services		
47	Infrastructure benefits: provincial infrastructure growth and development		

To explain the relationships among the factors influencing medical tourism as presented in the drawn paradigm model, a theoretical narrative derived from the data can also provide a concise interpretation:

The province's potential, cultural and social issues, empowerment, economic stability, and political and security factors form the basis for shaping the medical tourism marketing mix in Gilan Province. Considering the importance of infrastructure and travel facilities and their influence, these elements lead to the formation of action–interaction strategies, policies, laws and regulations, managerial factors, and marketing strategies. These strategies are influenced by environmental factors and ultimately result in the development of medical tourism in the province.

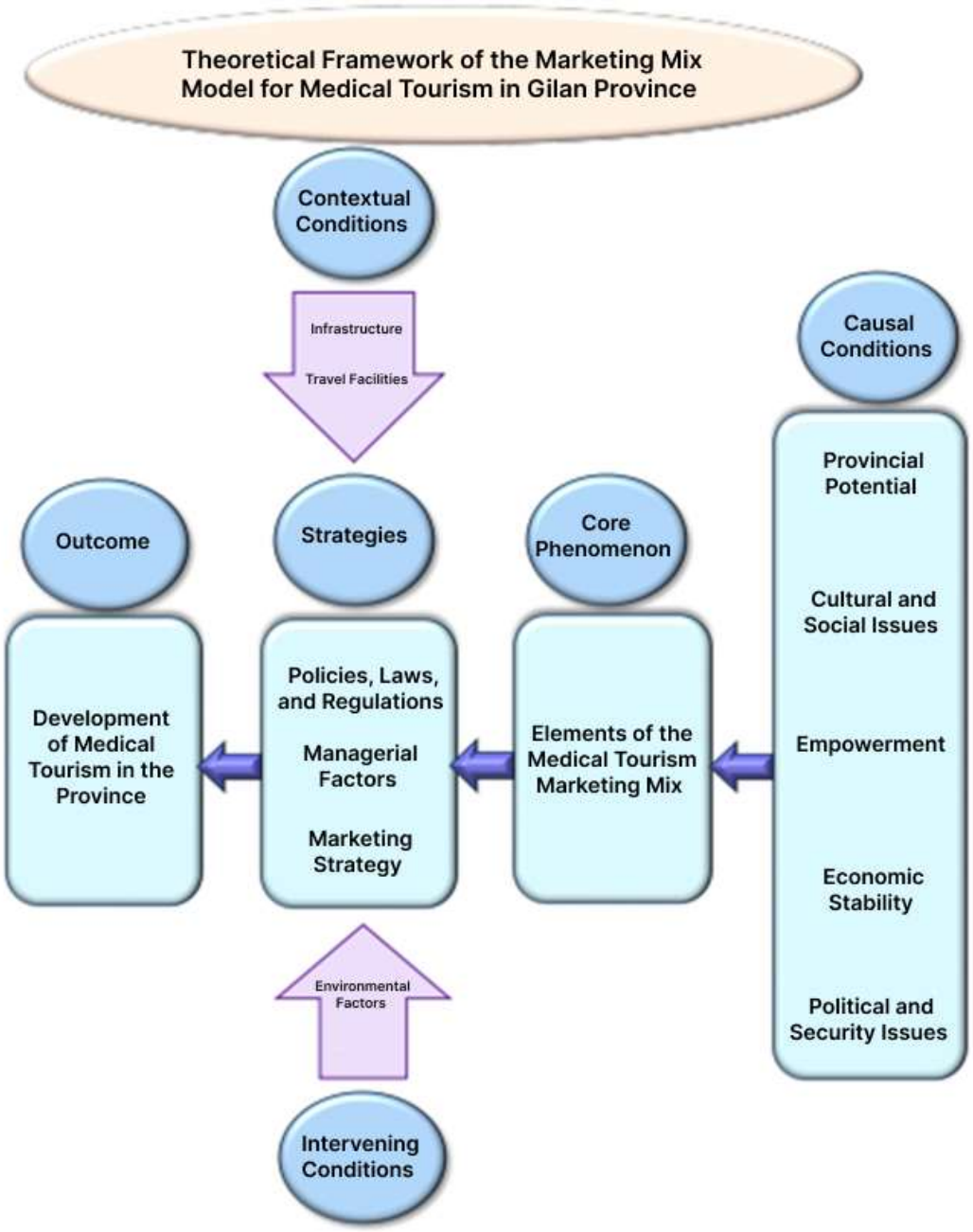


Figure 1. Paradigm Model of Factors Influencing Medical Tourism in Gilan Province

The statistical analysis of the quantitative phase of this research included two parts. In the first part, factor analysis was applied to examine the construct validity of the questionnaire factors and to confirm the items extracted from the qualitative stage of the study. This was performed using PLS software.

In the second part, structural equation modeling was applied to analyze the conceptual model and examine the hypothesized relationships among the validated factors.

Factor loadings were calculated by determining the correlation between the indicators of a construct and the construct itself. If the factor loading is equal to or greater than 0.40, it indicates that the variance shared between the construct and its indicators is greater than the measurement error variance, meaning the reliability of the measurement model is acceptable. However, some authors, such as Hair et al. (2010), have suggested 0.50 as the benchmark for acceptable factor loadings.

Table 2 shows the standardized factor loadings and t-values of the first-order latent variables' indicators. As shown, all items have factor loadings greater than 0.50, confirming their acceptability.

Table 2. Standardized Factor Loadings and t-values Between Latent Variables and Corresponding Items

Variables	Factor Loading	t-value	Significance Level	Result
AM1 ← Managerial Factors	0.751	14.261	0.001	Acceptable and significant
AM2 ← Managerial Factors	0.774	15.996	0.001	Acceptable and significant
AM3 ← Managerial Factors	0.765	16.066	0.001	Acceptable and significant
AM4 ← Managerial Factors	0.779	16.006	0.001	Acceptable and significant
AM5 ← Managerial Factors	0.804	20.914	0.001	Acceptable and significant
AM6 ← Managerial Factors	0.847	27.662	0.001	Acceptable and significant
AM7 ← Managerial Factors	0.682	10.507	0.001	Acceptable and significant
AM8 ← Managerial Factors	0.812	23.279	0.001	Acceptable and significant
AM9 ← Managerial Factors	0.718	12.849	0.001	Acceptable and significant
EA1 ← Elements of the Medical Tourism Marketing Mix	0.776	17.899	0.001	Acceptable and significant
EA2 ← Elements of the Medical Tourism Marketing Mix	0.679	10.572	0.001	Acceptable and significant
EA3 ← Elements of the Medical Tourism Marketing Mix	0.739	15.289	0.001	Acceptable and significant
EA4 ← Elements of the Medical Tourism Marketing Mix	0.706	11.863	0.001	Acceptable and significant
EA5 ← Elements of the Medical Tourism Marketing Mix	0.692	12.136	0.001	Acceptable and significant
EA6 ← Elements of the Medical Tourism Marketing Mix	0.834	22.933	0.001	Acceptable and significant
EA7 ← Elements of the Medical Tourism Marketing Mix	0.770	15.917	0.001	Acceptable and significant
EA8 ← Elements of the Medical Tourism Marketing Mix	0.758	14.787	0.001	Acceptable and significant
EA9 ← Elements of the Medical Tourism Marketing Mix	0.759	14.134	0.001	Acceptable and significant
EB1 ← Marketing Strategy	0.804	20.815	0.001	Acceptable and significant
EB10 ← Marketing Strategy	0.799	19.925	0.001	Acceptable and significant
EB11 ← Marketing Strategy	0.748	13.461	0.001	Acceptable and significant
EB12 ← Marketing Strategy	0.781	16.885	0.001	Acceptable and significant
EB2 ← Marketing Strategy	0.770	16.377	0.001	Acceptable and significant
EB3 ← Marketing Strategy	0.713	13.722	0.001	Acceptable and significant
EB4 ← Marketing Strategy	0.662	10.971	0.001	Acceptable and significant
EB5 ← Marketing Strategy	0.730	14.023	0.001	Acceptable and significant
EB6 ← Marketing Strategy	0.769	17.511	0.001	Acceptable and significant
EB7 ← Marketing Strategy	0.727	13.498	0.001	Acceptable and significant
EB8 ← Marketing Strategy	0.706	13.336	0.001	Acceptable and significant
EB9 ← Marketing Strategy	0.788	18.685	0.001	Acceptable and significant
EM1 ← Environmental Factors	0.844	32.960	0.001	Acceptable and significant
EM2 ← Environmental Factors	0.779	17.541	0.001	Acceptable and significant
EM3 ← Environmental Factors	0.806	21.419	0.001	Acceptable and significant
EM4 ← Environmental Factors	0.778	16.898	0.001	Acceptable and significant
MF1 ← Cultural and Social Issues	0.878	35.768	0.001	Acceptable and significant

MF2 ← Cultural and Social Issues	0.883	37.846	0.001	Acceptable and significant
MS1 ← Political and Security Issues	0.893	36.646	0.001	Acceptable and significant
MS2 ← Political and Security Issues	0.888	39.378	0.001	Acceptable and significant
PO1 ← Provincial Potential	0.881	66.196	0.001	Acceptable and significant
PO2 ← Provincial Potential	0.835	22.891	0.001	Acceptable and significant
PO3 ← Provincial Potential	0.814	20.209	0.001	Acceptable and significant
PO4 ← Provincial Potential	0.743	15.188	0.001	Acceptable and significant
PO5 ← Provincial Potential	0.846	24.296	0.001	Acceptable and significant
PO6 ← Provincial Potential	0.797	19.644	0.001	Acceptable and significant
SE1 ← Economic Stability	1.000	—	0.001	Acceptable and significant
SG1 ← Policies, Laws, and Regulations	0.768	14.843	0.001	Acceptable and significant
SG2 ← Policies, Laws, and Regulations	0.800	19.070	0.001	Acceptable and significant
SG3 ← Policies, Laws, and Regulations	0.826	25.947	0.001	Acceptable and significant
SG4 ← Policies, Laws, and Regulations	0.820	24.509	0.001	Acceptable and significant
TG1 ← Medical Tourism Development	0.880	36.134	0.001	Acceptable and significant
TG2 ← Medical Tourism Development	0.849	31.266	0.001	Acceptable and significant
TG3 ← Medical Tourism Development	0.744	16.168	0.001	Acceptable and significant
TG4 ← Medical Tourism Development	0.832	21.081	0.001	Acceptable and significant
TR1 ← Travel Facilities	0.710	13.127	0.001	Acceptable and significant
TR2 ← Travel Facilities	0.743	14.770	0.001	Acceptable and significant
TR3 ← Travel Facilities	0.772	16.683	0.001	Acceptable and significant
TR4 ← Travel Facilities	0.728	13.128	0.001	Acceptable and significant
TR5 ← Travel Facilities	0.798	17.520	0.001	Acceptable and significant
TS1 ← Empowerment	0.759	16.485	0.001	Acceptable and significant
TS2 ← Empowerment	0.902	59.880	0.001	Acceptable and significant
TS3 ← Empowerment	0.812	22.014	0.001	Acceptable and significant
TS4 ← Empowerment	0.725	13.204	0.001	Acceptable and significant
TS5 ← Empowerment	0.792	18.335	0.001	Acceptable and significant
ZS1 ← Infrastructure	0.734	13.224	0.001	Acceptable and significant
ZS2 ← Infrastructure	0.839	24.790	0.001	Acceptable and significant
ZS3 ← Infrastructure	0.823	21.955	0.001	Acceptable and significant
ZS4 ← Infrastructure	0.815	24.298	0.001	Acceptable and significant

As is clear from the above table, the t statistic and the significance level between the items and their corresponding latent variables, in all cases, are respectively greater than 1.96 and less than the 0.05 error level. Therefore, the significance of the relationships between the items and their corresponding variables is confirmed. In addition, the standardized factor loading for all questionnaire items is greater than 0.50, and there is no need to remove any item from the model. Indicator reliability, which is the square of a standardized factor loading, shows how much of the variance in an item is explained by the construct (latent variable) and refers back to the variance extracted from an item.

The most basic criterion for assessing the relationships between constructs in the model (the structural part) is the t significance values. If these values are greater than 1.96, this indicates the correctness of the relationship between the constructs and, consequently, the confirmation of the study's hypotheses. Of course, t values only show the correctness of the relationships, and the strength of the relationships between constructs cannot be measured by them. Figure 2 and Figure 3 show the study's structural model in the standardized coefficient estimation state and the t-value estimation state, respectively. Table 3 presents the t significance coefficients for the relationships between the constructs under study.

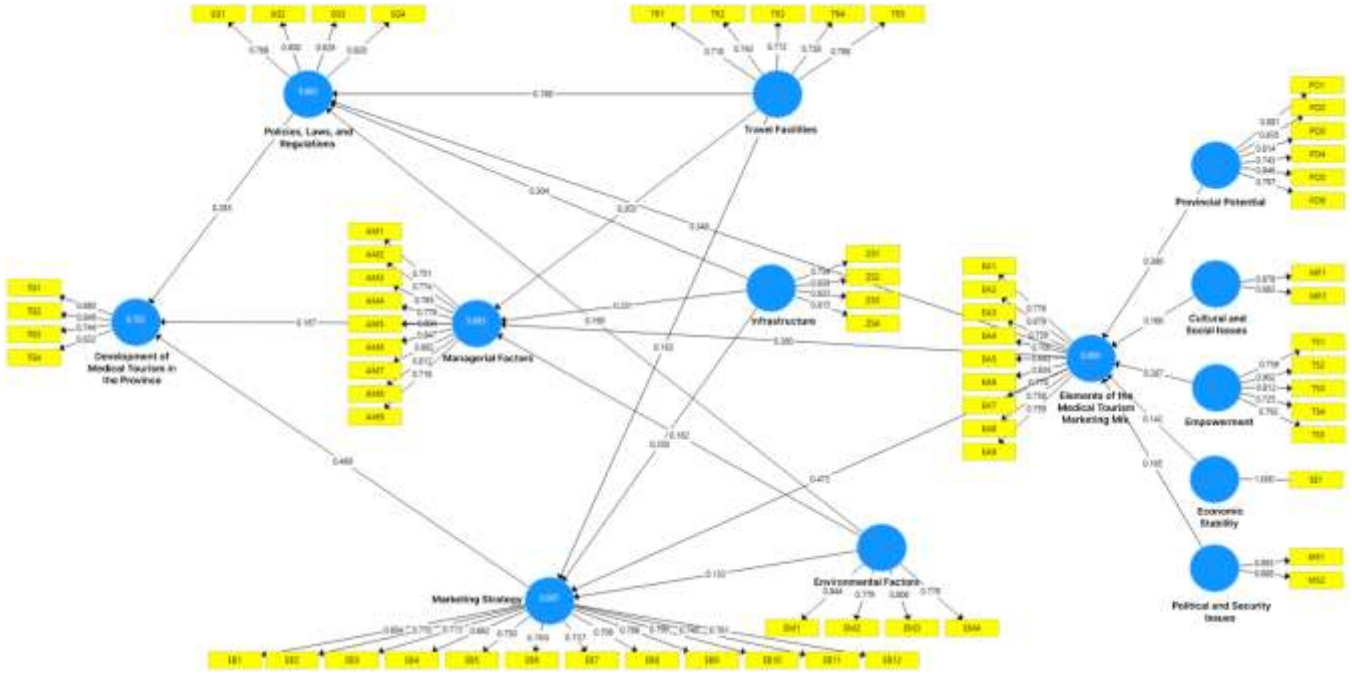


Figure 2. Structural model in the standardized coefficient estimation state

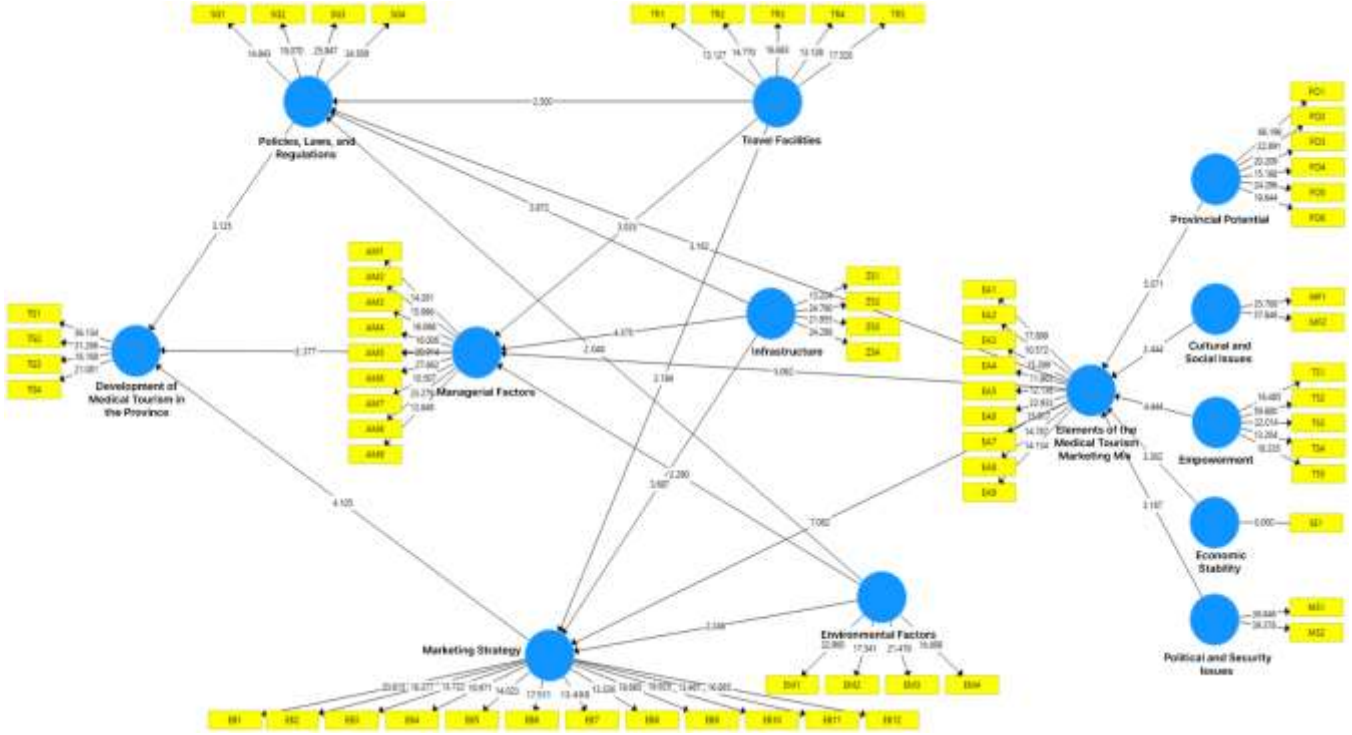


Figure 3. Structural model in the t-value estimation state

Table 3. Path Coefficients and t Significance Values for the Relationships Between the Study Constructs

Row	Variable Relationships	β	t-value	Result
1	Provincial potential ← Elements of the medical tourism marketing mix	0.390	5.571	Positive and significant
2	Elements of the medical tourism marketing mix ← Cultural and social issues	0.168	2.444	Significant
3	Elements of the medical tourism marketing mix ← Empowerment	0.287	4.444	Significant
4	Elements of the medical tourism marketing mix ← Economic stability	0.142	3.362	Significant
5	Elements of the medical tourism marketing mix ← Political and security issues	0.165	3.167	Significant
6	Policies, laws, and regulations ← Elements of the medical tourism marketing mix	0.348	3.162	Significant
7	Managerial factors ← Elements of the medical tourism marketing mix	0.380	5.062	Significant

8	Marketing strategy ← Elements of the medical tourism marketing mix	0.473	7.062	Significant
9	Policies, laws, and regulations ← Travel facilities	0.198	2.500	Significant
10	Managerial factors ← Travel facilities	0.203	3.033	Significant
11	Travel facilities ← Marketing strategy	0.163	3.184	Significant
12	Infrastructure ← Policies, laws, and regulations	0.304	3.872	Significant
13	Infrastructure ← Managerial factors	0.251	4.375	Significant
14	Infrastructure ← Marketing strategy	0.230	3.687	Significant
15	Environmental factors ← Policies, laws, and regulations	0.143	2.048	Significant
16	Environmental factors ← Managerial factors	0.162	2.290	Significant
17	Environmental factors ← Marketing strategy	0.133	2.246	Significant
18	Medical tourism development ← Policies, laws, and regulations	0.283	3.125	Significant
19	Medical tourism development ← Managerial factors	0.167	2.377	Significant
20	Medical tourism development ← Marketing strategy	0.469	4.105	Significant

Based on the results in the path coefficient table, the coefficient for the relationship between provincial potential and the elements of the medical tourism marketing mix equals 0.390, and the t-value equals 5.571. Considering the significance level is less than 0.05, this relationship is positive and significant. This means that enhancing the province's capabilities has a direct impact on strengthening the elements of medical tourism marketing.

The elements of the medical tourism marketing mix have an effect on cultural and social issues with a coefficient of 0.168 and a t-value of 2.444. This relationship is significant and indicates that improving the marketing mix elements can influence the culture and social issues of the community.

The path coefficient between the medical tourism marketing mix elements and empowerment equals 0.287, and the t-value equals 4.444, which is significant. This result indicates that strengthening the marketing mix elements leads to the enhancement of the capabilities of relevant organizations.

The path coefficient between the medical tourism marketing mix elements and economic stability equals 0.142, with a t-value of 3.362, which is significant. This means improving the marketing mix elements plays an effective role in increasing economic stability.

The medical tourism marketing mix elements have a significant relationship with political and security issues, with a coefficient of 0.165 and a t-value of 3.167; therefore, the effective formation of marketing elements influences political and security conditions.

Policies, laws, and regulations, with a coefficient of 0.348 and a t-value of 3.162, have a positive and significant impact on the medical tourism marketing mix elements. This result indicates that developing proper policies plays a key role in shaping the elements of medical tourism marketing.

Managerial factors, with a coefficient of 0.380 and a t-value of 5.062, significantly affect the medical tourism marketing mix elements. This means that improving managerial processes can enhance the effectiveness of the marketing elements.

Marketing strategy, with the highest path coefficient of 0.473 and a t-value of 7.062, plays a very important and significant role in the medical tourism marketing mix, demonstrating that marketing success depends on appropriate strategy.

Policies, laws, and regulations, with a coefficient of 0.198 and a t-value of 2.500, have a positive and significant effect on travel facilities. This shows the importance of developing effective regulations and policies to improve travel services.

Travel facilities, with a coefficient of 0.203 and a t-value of 3.033, significantly affect managerial factors; meaning better travel facilities help improve the related management.

Marketing strategy, with a coefficient of 0.163 and a t-value of 3.184, influences travel facilities and reflects the role of marketing planning in developing travel-related services.

Policies, laws, and regulations, with a path coefficient of 0.304 and a t-value of 3.872, have a positive and significant effect on infrastructure; coherent regulations can strengthen medical tourism infrastructure.

Managerial factors, with a coefficient of 0.251 and a t-value of 4.375, significantly affect infrastructure; better management promotes infrastructure development.

Marketing strategy, with a coefficient of 0.230 and a t-value of 3.687, has a significant impact on infrastructure; thus, effective marketing planning facilitates the development of medical tourism infrastructure.

Policies, laws, and regulations, with a coefficient of 0.143 and a t-value of 2.048, have a positive and significant effect on environmental factors, indicating that proper regulations can improve environmental conditions.

Managerial factors, with a path coefficient of 0.162 and a t-value of 2.290, have a positive and significant effect on environmental factors; this means effective management influences the surrounding environment.

Marketing strategy, with a coefficient of 0.133 and a t-value of 2.246, plays a significant role in environmental factors; marketing planning improves environmental indicators.

Medical tourism development, with a coefficient of 0.283 and a t-value of 3.125, has a significant impact on policies, laws, and regulations; the growth of the medical tourism industry can strengthen the need to create and revise policies.

Medical tourism development, with a coefficient of 0.167 and a t-value of 2.377, has a positive and significant relationship with managerial factors and leads to growth and improvement in management.

Medical tourism development, with a coefficient of 0.469 and a t-value of 4.105, has a significant impact on marketing strategy, indicating the decisive role of this industry's growth in creating and improving marketing strategies.

Overall, all the examined relationships are statistically significant and demonstrate the substantial role of each variable in the success and development of medical tourism from the perspectives of marketing, management, policy, infrastructure, and environmental factors.

4. Discussion and Conclusion

The results of this study revealed a comprehensive and interconnected model of medical tourism development in Gilan Province, emphasizing the critical role of the marketing mix and its interactions with cultural, economic, managerial, and infrastructural dimensions. Among the most notable findings was the significant positive impact of provincial potential on strengthening the elements of the medical tourism marketing mix. This aligns with previous research indicating that natural attractions, geographical accessibility, and a region's socio-cultural capital are foundational to health tourism competitiveness [1, 13]. Gilan's abundant natural resources, including its climate, landscapes, and hospitality culture, serve as unique selling points that differentiate it from other Iranian destinations and can be harnessed to enhance the "place" and "product" components of the marketing mix [2, 18].

The analysis also indicated that the marketing mix elements have measurable effects on cultural and social issues, empowerment, and economic stability. This supports studies showing that marketing activities, when culturally attuned, shape local community perceptions and readiness to engage in health tourism [3, 21]. By adapting communication strategies and service delivery to local cultural norms and linguistic expectations, destinations build trust and increase patient satisfaction [19, 23]. The relationship between the marketing mix and empowerment suggests that when service providers receive proper training and tools—ranging from digital skills to patient-

centered hospitality—the overall quality and responsiveness of the health tourism ecosystem improves [10, 12]. Empowered stakeholders are better able to innovate, co-create experiences, and deliver services that match the expectations of international patients [9, 11].

Economic stability emerged as another key outcome associated with robust marketing mix design. This is consistent with previous findings that successful health tourism strategies can contribute to local economies by creating jobs, stimulating auxiliary industries, and encouraging foreign currency inflows [5, 14]. In turn, stable economic conditions reinforce destination attractiveness and investment in medical infrastructure [15, 17]. The bidirectional relationship here suggests that marketing efforts not only rely on but also help sustain economic stability by attracting a steady flow of international patients.

Political and security considerations were also found to be significantly linked to the effectiveness of the marketing mix. This corresponds to research showing that patient safety, destination image, and political risk perception directly influence medical travel decisions [3, 6]. Establishing coherent health tourism policies, robust security frameworks, and clear communication of safety standards is essential to attract risk-averse international clients [20, 21]. In the Iranian context, where geopolitical perceptions can affect travel decisions, Gilan's relatively stable local environment combined with transparent policy communication could mitigate external concerns [7, 15].

One of the most powerful relationships observed was the effect of marketing strategy on the entire model, particularly its strong impact on the marketing mix and downstream elements such as infrastructure and travel facilities. This reinforces the assertion that marketing strategies—especially digital and experiential approaches—serve as the operational engine of health tourism [8, 10]. Contemporary marketing goes beyond advertising treatments; it integrates storytelling, patient journey mapping, and digital presence to influence trust and choice [9, 12]. For Gilan, developing sophisticated marketing strategies can help overcome limited international visibility and capitalize on its comparative advantages.

Infrastructure and travel facilities were validated as essential contextual factors. The results show that clear policies, managerial efficiency, and marketing strategies collectively strengthen the province's infrastructure and logistical readiness. This is aligned with the consensus that health tourism cannot flourish without seamless patient pathways from arrival to departure [6, 14]. Studies from comparable destinations underscore the importance of International Patient Departments, specialized transport services, and insurance compatibility [17, 19]. For Gilan, addressing gaps in physical facilities, visa facilitation, and patient guidance services would directly enhance its competitiveness.

Environmental and external conditions were found to moderate the implementation of marketing and managerial strategies. This resonates with research emphasizing that destinations must remain resilient to external shocks such as sanctions, pandemics, and fluctuating patient flows [2, 5]. Integrating environmental scanning and risk management into marketing strategy development can help Gilan maintain adaptability and service continuity even in volatile circumstances [4, 15].

Another significant finding is the reciprocal effect of medical tourism development on upstream factors, such as policy creation and managerial quality. This suggests a feedback loop where industry growth prompts better regulations, standardization, and managerial innovation [7, 20]. As Gilan's medical tourism sector matures, it could attract more policy support, encourage private sector participation, and professionalize service delivery [11, 22]. This dynamic perspective is vital for understanding how to sustain long-term growth and competitiveness.

Overall, these findings confirm and expand upon global frameworks while providing localized insight into Gilan's unique positioning. They validate the multi-layered nature of medical tourism development—where marketing, governance, infrastructure, socio-cultural alignment, and economic stability reinforce one another [3, 5, 10]. Moreover, the study advances previous work by contextualizing international models to the specific opportunities and constraints of an Iranian province, filling a gap identified in earlier research that called for region-specific empirical evidence [15, 23].

This research, despite its robust mixed-method design, has several limitations. First, the qualitative phase relied on expert interviews within Gilan Province, which may have introduced regional bias and limited the diversity of perspectives from other provinces or international stakeholders. Second, the quantitative sample was restricted to managers and clinical staff in local hospitals and International Patient Departments, potentially omitting views from other actors such as travel facilitators, insurance providers, and patients themselves. Additionally, the cross-sectional nature of the data prevents capturing long-term dynamics and seasonal fluctuations in medical tourism demand. The reliance on self-reported perceptions rather than actual patient flow data may also limit the precision of causal inferences. Finally, geopolitical and macroeconomic variables were not directly modeled but are known to influence health tourism significantly.

Future studies should expand the scope to include multi-stakeholder perspectives, incorporating voices from patients, international facilitators, and private sector investors to enrich the understanding of demand-driven dynamics. Longitudinal research could capture how macroeconomic stability, political developments, and infrastructure investments influence the evolution of medical tourism competitiveness over time. Comparative analyses between Gilan and other emerging health tourism hubs in Iran or the wider Middle East could uncover best practices and transferable strategies. Integrating advanced analytics, such as big data and AI-driven patient sentiment analysis, could provide deeper insights into market behavior. Furthermore, investigating the role of sustainability—environmental, social, and ethical—in shaping patient choice and destination branding would add to the emerging global discourse on responsible health tourism.

For practitioners and policymakers, these findings underscore the need for integrated and adaptive strategies. Regional authorities should invest in modern infrastructure, patient-friendly travel services, and digital marketing capabilities while simultaneously strengthening regulatory frameworks and quality assurance systems. Hospitals and clinics must prioritize cultural and linguistic adaptation, empowering staff through specialized training and cross-cultural communication skills. Collaborative partnerships between public and private sectors can accelerate branding and global visibility. Risk management systems should be embedded into marketing and operational planning to ensure resilience to external shocks. By aligning these practical steps with the identified model, Gilan can position itself as a competitive, trusted, and sustainable health tourism destination.

Authors' Contributions

Authors equally contributed to this article.

Ethical Considerations

All procedures performed in this study were under the ethical standards.

Acknowledgments

Authors thank all participants who participate in this study.

Conflict of Interest

The authors report no conflict of interest.

Funding/Financial Support

According to the authors, this article has no financial support.

References

[1] M. Cooper, K. Vafadari, and M. Hieda, "Health Tourism in Iran," in *Current Issues and Emerging Trends in Medical Tourism*: IGI Global, 2015, p. 352.
[2] C. Suessa, S. Baloglub, and J. Buss, "Perceived impacts of medical tourism development on community wellbeing," *Tourism Management,* pp. 232-245, 2018, doi: 10.1016/j.tourman.2018.06.006.
[3] S. T. Thelen and B. Yoo, "The impact of country image and patient cosmopolitanism on medical tourism," *Health Marketing Quarterly,* vol. 40, no. 1, pp. 98-118, 2023, doi: 10.1080/07359683.2023.2167260.
[4] H. Vazifehdoust, A. Ghasemi, A. Rahimi Nik, and V. Mirabi, "The Effect of Dynamic and Static Marketing Capabilities on International Marketing Performance in the Health Tourism Industry," in *International Conference on Health Tourism Marketing*, Mashhad, 2022. [Online]. Available: https://en.civilica.com/doc/1564443/.
[5] Q. Zhong and W. Chan, "Developing sustainable medical tourism: a framework for developing countries," *Journal of Sustainable Tourism Development,* 2024.
[6] H. Al-Talabani, H. Kilic, A. Ozturen, and S. Othman Qasim, "Advancing Medical Tourism in the United Arab Emirates: Toward a Sustainable Health Care System," *Sustainability,* 2019, doi: 10.3390/su11010230.
[7] M. Ahmadi, "Effective Factors on the Development of Health Tourism in Iran," *Journal of Tourism Management,* vol. 10, no. 2, pp. 123-140, 2021.
[8] A. Aviruthaa and P. Komenjumrus, "Innovative Strategies in the Marketing Mix to Enhance Health and Wellness Tourism Satisfaction: A Case Study of Thailand's Digital Competitive Edge," *Ramkhamhaeng International Journal of Science and Technology,* vol. 8, no. 1, pp. 8-21, 2025.
[9] S. U. Mallick, "Promoting Tourism through Digital Marketing," *The American Journal of Agriculture and Biomedical Engineering,* vol. 5, no. 10, pp. 62-85, 2023, doi: 10.37547/tajmei/Volume05Issue10-06.
[10] A. Fakur, S. Jalali, and F. Taherikia, "Designing an Experiential Marketing Model in the Health," *Business, Marketing, and Finance Open,* vol. 2, no. 3, pp. 34-45, 2025, doi: 10.61838/bmfopen.2.3.4.
[11] A. Bagheri, A. Rousta, L. Forozandeh, and F. Asayesh, "Presenting the Marketing Model of Health Tourism Development in Tehran Using Grounded Theory Method," *Urban Economics and Planning,* vol. 4, no. 3, pp. 6-21, 2023, doi: 10.22034/uep.2023.401857.1373.
[12] H. Heidari, E. Doshman Ziari, N. Barzegar, B. Faghiharam, and A. H. Mehdizadeh, "Designing an E-Learning Model for Health Tourism Marketing Case Study: Educational Healthcare Centers of Islamic Azad University, Tehran," *International Journal of Innovation Management and Organizational Behavior (IJIMOB),* vol. 4, no. 1, pp. 20-27, 01/01 2024, doi: 10.61838/kman.ijimob.4.1.3.
[13] R. Einlou, "Health Tourism Accounts for 14% of Incoming Tourists in 10 Months of 2023," ed, 2023.
[14] A. Rezaei, "The Role of Infrastructure and Marketing in the Development of Medical Tourism," *Journal of Regional Development,* vol. 8, no. 1, pp. 45-60, 2022.
[15] M. Bagheri, A. A. Mobasheri, F. Shekari, Z. Moaven, and A. Nikbakht, "Identifying and prioritizing strategies for Iran's medical tourism development," *Interdisciplinary Journal of Management Studies,* vol. 17, no. 1, pp. 331-345, 2024.
[16] S. Saberi, A. Miri, and M. Zakipour, "Analyzing Factors Influencing Health tourism Marketing A case study of Tehran city," (in Fa), *journal of urban tourism,* vol. 10, no. 1, pp. 57-75, 2023. [Online]. Available: https://www.magiran.com/paper/2639326.
[17] M. Ghasemi, A. Movahed, and S. Kadkhodaei, "A NOVEL CONCEPTUAL MODEL FOR CAPACITY DEVELOPMENT OF MEDICAL," *International Journal Health Management and Tourism,* vol. 4, no. 2, pp. 82-95, 2019, doi: 10.31201/ijhmt.530031.
[18] A. Mohammadi and M. Ghafarian, "Identifying and Prioritizing Effective Factors for Health Tourism Development (Case Study: Dehloran Hot Springs)," *Scientific-Research Quarterly of Tourism and Development,* vol. 13, no. 1, pp. 293-305, 2024.
[19] S. Motaghi, H. Makhmali, S. Talei, and F. Sadeghi, "An Analysis of Influential Indicators on Attracting Medical Tourists to Iran from Selected Asian Countries," *Tourism Planning and Development,* vol. 12, no. 44, pp. 57-77, 2023.

[20] A. K. Hosseiny, Z. Aryakian, and Z. Aryakian, "Study of Effective Factors and Policies on the Development of Health Tourism in Iran as a Developing Country," *Shiraz E-Medical Journal*, vol. 26, no. 1, 2024, doi: 10.5812/semj-154350.

[21] S. Alizadeh, "The Impact of Cultural and Security Factors on Health Tourism," *Journal of Social Sciences and Tourism*, vol. 5, no. 3, pp. 78-95, 2021.

[22] K. Rahimi Mohammad, T. Shefaqat, A. Beiginia, and H. Jafari, "An Examination of the Status of Health Tourism Marketing in Selected Public and Private Hospitals in Yazd in 2021," *Journal of Health Research in the Community*, vol. 8, no. 1, pp. 68-60, 2022. [Online]. Available: https://jhmi.sums.ac.ir/article_48897.html.

[23] A. Tajzadeh Namin, M. Salimi, and A. Tajzadeh Namin, "Antecedents of Attracting Medical Tourists to Isfahan's Health Cities," *Scientific-Research Quarterly of Tourism and Development*, vol. 12, no. 2, pp. 1-14, 2023.