



Designing a Public–Private Partnership Model for the Development of Metropolitan Health Tourism Networks

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Abstract

This study aimed to design a comprehensive public–private partnership model for the development of metropolitan health tourism networks based on the experiences and perspectives of relevant experts and stakeholders in Tehran. This qualitative exploratory study was conducted using a grounded theory approach. The study population consisted of experts, senior managers, policymakers, academics, and professionals active in health tourism, healthcare management, tourism management, urban governance, investment, and public–private partnerships in Tehran, Iran. Participants were selected through purposive and theoretical sampling, and data collection continued until theoretical saturation was achieved. In total, 18 participants were interviewed using in-depth semi-structured interviews lasting approximately 45–75 minutes. The interviews were recorded, transcribed verbatim, and analyzed concurrently with data collection through the constant comparative method. Data analysis proceeded through open, axial, and selective coding. Credibility, dependability, confirmability, and transferability were strengthened through member checking, peer review of coding, analytical memoing, systematic documentation, and maximum variation in participant backgrounds. Analysis of the interviews generated 412 initial codes, which were reduced to 126 focused concepts, 31 subcategories, and 14 major categories organized within six grounded-theory dimensions. The principal causal conditions were growing metropolitan health tourism demand, the need for investment and resource mobilization, fragmentation of the health tourism service chain, and increasing international competitiveness. The central phenomenon was identified as an institutionalized public–private network partnership based on shared governance and coordinated value creation. Contextual and intervening conditions included regulatory arrangements, metropolitan infrastructure, human capital, destination characteristics, bureaucratic barriers, economic uncertainty, information asymmetry, and international access constraints. The principal strategies comprised integrated network governance, contractual and financial partnership mechanisms, service-chain integration, quality assurance, digital-platform development, destination branding, specialized workforce development, and continuous monitoring. Expected consequences included improved investment, service quality, destination competitiveness, governance efficiency, social development, and network sustainability. The findings indicate that sustainable metropolitan health tourism development requires a transition from fragmented organizational practices toward an institutionalized public–private network model that integrates governance, investment, service delivery, digital infrastructure, quality assurance, and international marketing within a coordinated metropolitan ecosystem.

Keywords: *Public–Private Partnership; Health Tourism; Metropolitan Health Tourism Network; Network Governance; Grounded Theory; Tehran*

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1. Introduction

Health tourism has developed into a multidimensional field situated at the intersection of healthcare, tourism, economic development, technology, destination

management, and international service exchange. Although traveling for therapeutic and restorative purposes has a long historical background, contemporary health tourism differs substantially from its earlier forms because it is increasingly organized through complex networks of hospitals,



specialized clinics, rehabilitation centers, travel agencies, accommodation providers, insurance organizations, transportation companies, digital platforms, facilitators, and governmental institutions. The historical evolution of health tourism demonstrates a gradual transition from travel motivated primarily by access to natural healing resources and traditional therapeutic environments toward an internationally competitive service industry in which medical quality, accessibility, affordability, patient experience, destination attractiveness, and institutional reliability are simultaneously important [1]. This transformation has intensified the need for coordinated planning because health tourists no longer evaluate a destination solely according to the quality of a single medical procedure. Instead, they assess the entire journey, including access to trustworthy information, pre-travel consultation, visa and transportation arrangements, healthcare quality, accommodation, communication, cultural compatibility, complementary tourism services, and continuity of care after returning home. As a result, the competitiveness of health tourism destinations increasingly depends on the capacity to integrate multiple actors into a coherent service network rather than on the isolated performance of individual healthcare or tourism organizations.

The strategic importance of health tourism has become particularly evident during periods of economic, social, technological, and public health disruption. Recent developments have shown that the sector must simultaneously respond to changing patient expectations, geopolitical uncertainty, health crises, technological transformation, demographic shifts, and increasing international competition. The experience of health tourism development in challenging environments indicates that resilience, institutional coordination, adaptive management, and diversification of products and markets have become fundamental requirements for destinations seeking sustainable growth [2]. The COVID-19 pandemic further demonstrated the vulnerability of tourism-related service networks to sudden disruptions and highlighted the necessity of organizational preparedness, flexibility, and mindful managerial responses. Research on health tourism businesses has shown that organizational mindfulness can strengthen crisis management by improving sensitivity to emerging problems, encouraging attention to operational failures, enhancing adaptive capacity, and supporting more responsive decision-making [3]. Accordingly, post-crisis health tourism development cannot simply reproduce

previous organizational structures; it requires more resilient networks in which stakeholders share information, risks, resources, and responsibilities.

At the same time, innovation has become an essential determinant of competitiveness in the health tourism industry. The post-Coronavirus environment has increased demand for service innovation, flexible patient pathways, digitally supported communication, personalized care, and integrated medical-tourism experiences. Service innovation models developed for health tourism emphasize that organizations must redesign not only the clinical components of their offerings but also customer interaction, service delivery, value propositions, interorganizational collaboration, and supporting technologies [4]. Digital and strategic innovation has therefore become increasingly central to health tourism development, particularly where destinations seek to combine local healthcare resources with digital tools, intelligent service coordination, and new forms of value creation [5]. Evidence from innovation initiatives in health tourism also suggests that technological transformation is most effective when digital tools are incorporated into broader strategic and institutional frameworks rather than introduced as isolated technological solutions [6]. These developments have direct implications for metropolitan areas, where numerous public and private providers already possess technological and service capacities but may remain disconnected because of fragmented governance and the absence of common digital and organizational infrastructures.

Artificial intelligence and data-driven customer management further illustrate the changing structure of competition in health tourism. Contemporary tourists increasingly rely on digital channels when selecting destinations, comparing providers, requesting consultations, communicating with service organizations, and evaluating previous patient experiences. Artificial intelligence-based customer relationship management can support segmentation, personalization, communication, prediction of customer needs, and more effective digital marketing within health tourism services [7]. Similarly, the development of e-learning systems for health tourism marketing demonstrates the growing importance of continuous professional education and digital competencies among healthcare personnel and organizations engaged with international patients [8]. Emerging technologies can also support digital patient journeys, intelligent recommendations, remote consultation, electronic health communication, and integrated service management,

thereby reshaping how destinations organize and deliver health tourism services [9]. Nevertheless, the benefits of these technologies depend on institutional coordination, interoperability, financing, regulation, and stakeholder participation. Metropolitan health tourism development therefore requires governance arrangements capable of linking technological innovation with organizational responsibilities and public-sector oversight.

Marketing constitutes another essential dimension of health tourism development because high-quality medical infrastructure alone does not guarantee international demand. Destination image, branding, service reputation, communication credibility, and differentiation are important in reducing uncertainty for potential health tourists, particularly because healthcare decisions involve greater perceived risk than conventional tourism purchases. Effective image formation and branding can help destinations communicate distinctive competencies, build trust, strengthen recognition, and differentiate themselves in increasingly competitive health tourism markets [10]. Studies conducted in Tehran have similarly shown that health tourism marketing is influenced by a combination of organizational, environmental, service-related, promotional, infrastructural, and market factors, indicating that marketing performance is inseparable from the broader conditions under which health tourism services are organized [11]. A grounded-theory study of health tourism development in Tehran has also demonstrated that successful marketing requires coordinated attention to policy, service capabilities, customer expectations, communication mechanisms, infrastructure, and stakeholder relations rather than reliance on isolated promotional activities [12]. Thus, metropolitan health tourism marketing should be viewed as the outward expression of an underlying service ecosystem whose actors must be capable of delivering the promises communicated to international patients.

The importance of marketing capabilities is reinforced by evidence that both dynamic and static marketing capabilities influence international marketing performance in the health tourism industry [13]. Static capabilities provide the basic routines and resources necessary to perform marketing activities consistently, while dynamic capabilities enable organizations to sense changes in international demand, seize emerging opportunities, reconfigure resources, and respond to competitors. In metropolitan health tourism networks, however, these capabilities are distributed across multiple organizations. Hospitals may possess strong clinical reputations but limited international promotional

expertise, tourism firms may understand foreign markets but lack medical credibility, and public agencies may possess regulatory authority but limited operational flexibility. Consequently, achieving international marketing performance requires mechanisms through which these complementary capabilities can be combined. Such complementarity provides a strong conceptual basis for public-private partnership, in which the public sector contributes legitimacy, coordination, regulation, infrastructure, and destination-level planning, while private organizations contribute investment, innovation, specialized service delivery, customer responsiveness, and market intelligence.

Health tourism is also characterized by extensive differentiation among consumer groups and service requirements. For example, the elderly tourism market represents an increasingly important segment because aging populations may generate demand for preventive, rehabilitative, wellness, chronic-disease management, and medically supported tourism services [14]. Similarly, nutrition and dietetics can function as specialized components of health tourism packages, particularly when preventive care, rehabilitation, obesity management, metabolic health, or wellness services are incorporated into destination offerings [15]. These developments demonstrate that health tourism should not be treated as a homogeneous market. Successful destinations must develop diversified networks capable of assembling clinical, rehabilitation, wellness, dietary, hospitality, transportation, and leisure services according to the needs of distinct market segments. Such diversification further increases interdependence among providers and makes network coordination essential.

International and national evidence also demonstrates that health tourism development is highly dependent on local resources and place-specific drivers. A qualitative investigation in Mazandaran Province identified local capacities, stakeholder participation, community resources, infrastructure, institutional support, and destination characteristics as important elements of community-based health tourism development [16]. Natural therapeutic resources can similarly serve as important foundations for health tourism, as demonstrated by studies examining hot springs and geotourism capabilities in Iranian regions [17]. Research on the development of health tourism around Dehloran hot springs has likewise emphasized the importance of identifying and prioritizing environmental, infrastructural, managerial, economic, and promotional factors in destination development [18]. Grounded-theory

research conducted in health villages further indicates that marketing and tourist attraction are influenced by the interaction among destination capacities, institutional arrangements, service quality, promotional strategies, and market-oriented mechanisms [19]. An earlier model of health tourism marketing in health villages similarly highlighted the need for structured marketing processes capable of connecting local health resources to identified tourist markets [20]. Together, these findings indicate that successful health tourism models must be adapted to the spatial, institutional, economic, and service characteristics of the destination in which they are implemented.

For metropolitan areas, these requirements become considerably more complex. Large cities concentrate specialized healthcare facilities, universities, physicians, diagnostic technologies, accommodation facilities, airports, travel agencies, financial services, digital businesses, and tourism attractions. This concentration provides substantial competitive potential, but it also creates a fragmented institutional landscape composed of organizations with different ownership structures, objectives, regulatory environments, and decision-making processes. Tehran represents a particularly important context because it functions simultaneously as the country's principal political and administrative center, a major healthcare hub, an academic and technological center, and an important point of entry for international visitors. Available evidence indicates that health tourism constitutes a meaningful component of incoming tourism flows and therefore has economic and strategic relevance for the national tourism sector [21]. At the same time, the sustainability of health tourism development in Tehran depends on the interaction of numerous components, including environmental conditions, economic capacity, governance, social factors, service infrastructure, market characteristics, and long-term planning [22]. This implies that growth in patient numbers alone cannot be considered an adequate indicator of sustainable health tourism development.

The structure of health tourism supply chains further reinforces the need for integrated metropolitan governance. Health tourists interact with multiple organizations before, during, and after treatment, and disruption at any stage of this chain can reduce the quality of the overall experience. Research on health tourism services in Tehran has therefore emphasized supply-chain resilience as a critical requirement for maintaining continuity, adapting to disturbances, coordinating resources, and sustaining service delivery under uncertainty [23]. A resilient health tourism supply

chain requires communication among hospitals, facilitators, transportation providers, accommodation businesses, laboratories, pharmacies, rehabilitation services, insurers, tourism companies, and regulatory institutions. Yet such coordination is difficult when organizations operate independently, pursue different incentives, and lack institutionalized mechanisms for information sharing and joint decision-making. Public-private partnership can potentially provide a framework for organizing these interdependencies by establishing formal responsibilities, contractual relationships, shared performance standards, and mechanisms for risk allocation.

From a policy perspective, the development of health tourism in Iran is influenced by multiple structural and institutional determinants. Studies addressing health tourism development in Iran as a developing country have identified the importance of policy support, infrastructure, service quality, economic conditions, international relations, human resources, promotion, and institutional coordination [24]. These factors illustrate why health tourism cannot be effectively managed by either the healthcare system or the tourism sector alone. The sector requires cross-boundary governance capable of reconciling medical standards with tourism development, investment policy, international marketing, urban infrastructure, and regulatory oversight. Health tourism management therefore involves leadership across organizational boundaries and requires managers to understand stakeholder relationships, resource coordination, quality assurance, strategic planning, and the specific complexities of healthcare-related travel [25]. In metropolitan settings, where organizational density is high, the effectiveness of health tourism development depends less on the existence of isolated capacities and more on the quality of governance arrangements connecting those capacities.

Public-private partnership is particularly relevant in this context because public and private sectors possess different but complementary resources. Public institutions are generally responsible for policymaking, regulation, public infrastructure, licensing, quality oversight, destination-level coordination, and safeguarding societal interests. Private organizations, in contrast, often possess greater flexibility in investment, operational management, technological innovation, service customization, customer relationship management, international promotion, and rapid adaptation to market signals. A partnership approach can theoretically combine these capabilities, reduce pressure on public resources, mobilize private capital, accelerate infrastructure

and service development, and distribute risks among stakeholders according to their capacities. However, effective partnership requires considerably more than transferring projects to private investors. It depends on clear governance structures, contractual transparency, accountability, stakeholder trust, shared objectives, predictable regulation, performance monitoring, and a sustainable distribution of risks and benefits.

The need for such an integrated approach becomes even more important when innovation, sustainability, resilience, and market development are considered simultaneously. Health tourism destinations must create innovative services [4], use digital and strategic technologies [5, 6], develop intelligent customer relationship mechanisms [7], strengthen professional and digital marketing capabilities [8, 13], establish distinctive destination brands [10], build resilient service chains [23], and respond effectively to environmental uncertainty and crises [3]. None of these requirements can be sustainably addressed through fragmented interventions. For instance, a digital platform has limited value if participating hospitals do not share standardized information; international marketing can damage destination credibility if service quality varies considerably among providers; private investment may remain limited if regulatory responsibilities are unclear; and medical excellence may fail to generate repeat demand if transportation, accommodation, interpretation, payment, or follow-up services are unreliable. Therefore, network development must precede or accompany promotional expansion.

Previous Iranian studies have contributed important knowledge regarding individual dimensions of health tourism. Research has addressed marketing factors in Tehran [11], marketing model development [12], sustainable health tourism components [22], supply-chain resilience [23], local drivers of health tourism development [16], hot-spring and geotourism potential [17], destination development factors [18], health-village marketing [19, 20], and broad policies influencing national health tourism development [24]. These studies collectively provide a valuable foundation, but they predominantly focus on specific dimensions of health tourism rather than on the institutional architecture through which diverse public and private actors can be integrated into a metropolitan network. In particular, insufficient attention has been given to how causal pressures, contextual conditions, regulatory and economic barriers, partnership strategies, and expected outcomes interact within a unified public-private partnership framework.

This gap is significant because metropolitan health tourism development is fundamentally a network-governance problem. The presence of high-quality hospitals, skilled physicians, tourism attractions, digital infrastructure, and private investment capacity is necessary but not sufficient. The strategic challenge is to determine how these assets can be coordinated through an institutional model that defines the roles of public and private stakeholders, aligns incentives, facilitates investment, regulates service quality, integrates digital and physical service chains, supports international marketing, manages risks, and creates mechanisms for continuous performance improvement. Such a model must also accommodate the dynamic characteristics of contemporary health tourism, including changing consumer segments, technological innovation, international competition, crisis vulnerability, and increasing expectations for seamless and personalized services. It should therefore be capable of connecting the resource advantages of metropolitan areas with governance mechanisms that transform dispersed capabilities into a coherent and competitive health tourism ecosystem.

Accordingly, the aim of the present study was to design a comprehensive public-private partnership model for the development of metropolitan health tourism networks based on the experiences and perspectives of relevant experts and stakeholders in Tehran.

2. Methodology

This study employed a qualitative exploratory design with a grounded theory approach to develop a comprehensive model of public-private partnership for the development of health tourism networks in metropolitan areas. The qualitative approach was selected because the formation and effective functioning of public-private partnerships in health tourism involve complex interactions among governmental institutions, private-sector organizations, healthcare providers, tourism enterprises, policymakers, investors, and other stakeholders, and these relationships cannot be adequately understood through predetermined quantitative variables alone. Grounded theory provided an appropriate methodological framework for identifying the underlying conditions, mechanisms, strategies, contextual factors, and consequences associated with public-private collaboration and for integrating these components into a coherent conceptual model. The study population consisted of experts, senior managers, policymakers, academics, and professionals with relevant

knowledge or practical experience in health tourism, healthcare management, tourism management, urban development, public administration, investment, and public–private partnerships in Tehran, Iran. Participants were selected using purposive sampling with an emphasis on theoretical relevance and professional expertise. To ensure that the collected information reflected informed and experience-based perspectives, eligibility criteria included having academic or professional expertise related to health tourism or public–private partnership, holding managerial, policymaking, executive, consulting, or academic experience in a relevant organization or institution, having at least five years of relevant professional experience, and being willing to participate in an in-depth interview. Individuals whose professional background was not directly related to the subject of the study or who were unable to participate fully in the interview process were excluded. Sampling continued concurrently with data collection and analysis in accordance with the principle of theoretical saturation. A total of 18 participants from Tehran were ultimately interviewed. During the later interviews, the researchers continuously compared newly obtained information with previously identified concepts and categories. Recruitment was terminated when the final interviews no longer generated substantively new concepts, properties, or relationships and the major categories had achieved sufficient conceptual depth and theoretical saturation. Diversity in participants' professional backgrounds was also considered during recruitment so that the resulting model would incorporate perspectives from both the public and private sectors as well as the healthcare, tourism, investment, policymaking, and academic domains.

Data were collected through in-depth semi-structured interviews developed specifically in accordance with the objectives of the study. The interview guide was initially prepared following a review of the theoretical literature and previous research concerning public–private partnerships, health tourism, healthcare service networks, destination development, metropolitan governance, investment, and interorganizational collaboration. The initial interview questions were subsequently reviewed by experts familiar with qualitative research and the substantive field of the study to ensure clarity, relevance, and adequate coverage of the research objectives. Interviews began with broad and open-ended questions intended to encourage participants to describe their experiences and perceptions without imposing predetermined conceptual categories. Participants were asked to explain the current conditions of public–private

interaction in the development of health tourism, the major requirements for establishing an integrated metropolitan health tourism network, the responsibilities that should be assigned to governmental and private actors, the factors that facilitate or hinder cooperation between the two sectors, appropriate mechanisms for financing and investment, the role of regulatory and policymaking institutions, requirements for coordination among medical and tourism service providers, and the expected outcomes of implementing an effective partnership model. Depending on participants' responses, probing questions such as “Could you explain this further?”, “What factors contribute to this situation?”, “How should this process be implemented?”, “Which organizations should be involved?”, and “What consequences would this mechanism produce?” were used to obtain richer descriptions and clarify relationships among emerging concepts. The interview guide was flexible and was progressively refined during data collection as new concepts and categories emerged from the ongoing analysis, consistent with the principles of grounded theory. Interviews were conducted individually in Tehran at a time and location convenient for each participant and in an environment that allowed confidential and uninterrupted discussion. Each interview lasted approximately 45 to 75 minutes. With participants' permission, interviews were digitally recorded to ensure accurate documentation of the data. Immediately after each interview, the recording was transcribed verbatim, and the researchers reviewed the transcript while the content of the interview was still fresh. Field notes and analytical memos were also prepared throughout the data collection process to document contextual information, preliminary interpretations, conceptual relationships, and issues requiring further exploration in subsequent interviews. Ethical principles were observed throughout the research process. Participants were informed about the purpose of the study, the voluntary nature of participation, confidentiality of their information, and their right to withdraw from the study at any stage. Informed consent was obtained before each interview, and identifying information was removed from transcripts and research reports to preserve anonymity.

Data collection and analysis were conducted simultaneously using the constant comparative method of grounded theory. Each interview was transcribed verbatim and examined repeatedly to obtain an overall understanding of the participant's perspective before formal coding began. Analysis proceeded through open coding, axial coding, and selective coding. During open coding, interview transcripts were examined line by line and meaningful statements,

expressions, and incidents related to public–private partnership and the development of metropolitan health tourism networks were identified. Conceptual labels were assigned as closely as possible to the meaning expressed by participants, and conceptually similar codes were continuously compared and grouped into preliminary categories and subcategories. Throughout this stage, constant comparison was performed both within individual interviews and across different interviews to identify similarities, differences, recurring patterns, and variations in participants' experiences. In axial coding, the relationships among the categories generated during open coding were examined in greater depth. Categories and subcategories were reorganized around their conceptual relationships, with particular attention to causal conditions, the central phenomenon, contextual conditions, intervening conditions, strategies or actions, and consequences. This process enabled the researchers to identify how institutional, economic, legal, managerial, infrastructural, technological, cultural, and market-related conditions influenced the formation and operation of public–private partnerships and how different partnership strategies could contribute to the development of an integrated health tourism network. During selective coding, the major categories were integrated around a central phenomenon representing the core logic of the proposed public–private partnership model. Relationships among the principal categories were repeatedly examined against the original interview data, and the emerging theoretical framework was refined until it provided a coherent explanation of the mechanisms through which public and private actors could jointly contribute to the development of metropolitan health tourism networks. Analytical memos were written throughout all stages of coding to document conceptual decisions, emerging relationships, theoretical propositions, and modifications to the developing model. Data analysis continued until theoretical saturation was achieved and additional interviews no longer contributed meaningful new properties or dimensions to the established categories. To enhance the trustworthiness of the qualitative findings, credibility was strengthened through prolonged engagement with the data, continuous comparison of codes and categories, and member checking with selected participants to verify the consistency of interpretations with their intended meanings. Dependability and confirmability were supported by systematic documentation of the research process, preservation of coding decisions and analytical memos, and review of selected transcripts, codes, and category structures

by researchers or experts familiar with qualitative methodology. Maximum variation in the professional backgrounds of the participants was considered to improve the transferability and comprehensiveness of the findings. The final outcome of the analytical process was an integrated conceptual model representing the principal dimensions, determinants, strategies, and consequences of public–private partnership in the development of metropolitan health tourism networks.

3. Findings and Results

The qualitative phase of the study included 18 experts and senior professionals from Tehran whose academic and executive backgrounds were directly related to health tourism, healthcare administration, tourism management, public–private partnerships, urban governance, investment, and policymaking. Of the 18 participants, 13 were men and 5 were women. The participants ranged in age from 36 to 61 years, with the largest proportion falling within the 41–50-year age group. Regarding educational attainment, 11 participants held doctoral degrees and 7 held master's degrees. In terms of professional background, 4 participants were senior managers or policymakers in public healthcare and health-related governmental institutions, 3 were managers or experts in tourism organizations, 3 represented private hospitals or specialized medical centers, 3 were active in private investment, health-related entrepreneurship, or business development, 2 were university faculty members specializing in healthcare management, tourism, or public administration, 2 had professional experience in urban governance and metropolitan development, and 1 had specialized experience in legal and contractual aspects of public–private partnerships. The participants had between 8 and 29 years of professional experience, and most had more than 12 years of relevant managerial, academic, or executive experience. This diversity enabled the study to incorporate perspectives from both the supply and governance sides of health tourism and ensured that the emerging model reflected the interaction among healthcare providers, tourism organizations, public authorities, investors, intermediary organizations, and metropolitan management institutions.

Analysis of the 18 interviews generated a substantial body of qualitative data concerning the requirements, mechanisms, barriers, and outcomes of public–private partnership in metropolitan health tourism development. The analytical process moved from initial conceptualization of

participants' statements to the formation of more abstract categories and, ultimately, to the integration of the categories within a grounded theoretical model. During open coding, 412 initial codes were extracted from the interview transcripts. Following constant comparison, elimination of repetitive codes, and integration of conceptually similar statements, these codes were reduced to 126 focused concepts. The concepts were then organized into 31 subcategories and subsequently integrated into 14 major

categories. During axial and selective coding, the major categories were organized according to six principal dimensions consisting of causal conditions, the central phenomenon, contextual conditions, intervening conditions, strategies, and consequences. The resulting structure provided the conceptual foundation for the proposed public–private partnership model for the development of metropolitan health tourism networks.

Table 1. Overview of the Coding Process and Final Grounded Theory Structure

Stage of Analysis	Analytical Output	Number	Description
Initial data analysis	Initial open codes	412	Direct concepts and meaningful units extracted through line-by-line analysis of the interview transcripts
Code refinement	Focused concepts	126	Conceptually similar initial codes integrated after constant comparison and elimination of duplication
Conceptual organization	Subcategories	31	Related concepts grouped according to shared meaning, function, and theoretical relationships
Axial categorization	Major categories	14	Subcategories integrated into broader explanatory categories
Theoretical integration	Grounded theory dimensions	6	Causal conditions, central phenomenon, contextual conditions, intervening conditions, strategies, and consequences
Final theoretical outcome	Integrated conceptual model	1	Public–private partnership model for the development of metropolitan health tourism networks

As shown in Table 1, the analysis involved progressive abstraction from participants' direct statements toward an integrated theoretical explanation. The large number of initial open codes reflected the multidimensional nature of health tourism development and the diversity of organizational actors involved in public–private interaction. Many initial codes referred to fragmented governance, insufficient coordination between medical and tourism organizations, regulatory uncertainty, investment risk, deficiencies in international marketing, inadequate information systems, inconsistent service standards, and the absence of an integrated mechanism for directing foreign patients across the metropolitan service network. Through repeated comparison of the data, codes referring to similar phenomena were consolidated into focused concepts and

subcategories. Axial analysis subsequently demonstrated that the development of a metropolitan health tourism network could not be explained simply by expanding medical capacity or encouraging private investment. Instead, participants consistently described development as a governance and network-building process in which public institutions create legitimacy, regulation, infrastructure, and coordination mechanisms while private actors provide investment, innovation, operational capacity, specialized services, marketing capabilities, and responsiveness to market demand. The final selective coding process therefore positioned structured and network-oriented public–private partnership as the central phenomenon around which the other components of the model were organized.

Table 2. Causal Conditions and the Central Phenomenon of the Public–Private Partnership Model

Grounded Theory Dimension	Major Category	Subcategories	Representative Concepts
Causal conditions	Growing metropolitan health tourism demand	Expansion of regional medical travel; growth of specialized healthcare demand; metropolitan concentration of medical capabilities	Increasing cross-border demand for specialized treatment; attractiveness of advanced urban hospitals; demand for combined medical and tourism services; regional accessibility of Tehran
Causal conditions	Need for investment and resource mobilization	Financial limitations of the public sector; private investment capacity; need for sustainable financing	Insufficient public budgets; capital requirements for hospital modernization; need for private finance; diversification of investment mechanisms
Causal conditions	Fragmentation of the health tourism service chain	Weak interorganizational coordination; discontinuity between treatment and tourism services; absence of network governance	Separate operation of hospitals, travel agencies, hotels, facilitators, insurers, and transportation providers; unclear referral pathways; lack of coordinated patient journeys

Causal conditions	Need to improve international competitiveness	Regional competition; service quality differentiation; destination branding	Competition with established regional health tourism destinations; need for internationally recognizable standards; importance of price–quality positioning
Central phenomenon	Institutionalized public–private network partnership	Shared governance; coordinated value creation; complementary public and private roles; integrated service network	Partnership-based governance; formal role allocation; shared accountability; integrated medical-tourism service chain; coordinated decision-making
Central phenomenon	Value-based stakeholder integration	Alignment of incentives; shared economic and social benefits; long-term collaboration	Mutual profitability; public value creation; reduction of opportunistic relationships; sustainable collaboration; stakeholder commitment

Table 2 presents the causal conditions leading to the emergence of the central phenomenon identified in the study. Participants emphasized that increasing demand for health-related travel, particularly for specialized medical services concentrated in large metropolitan areas, has created an opportunity that cannot be effectively exploited through isolated organizational activities. Tehran possesses a concentration of hospitals, specialist physicians, diagnostic facilities, accommodation services, transportation infrastructure, academic institutions, and tourism-related organizations; however, the participants repeatedly argued that the existence of these resources does not automatically produce an effective health tourism destination. The principal challenge is the weak integration of these resources into a coordinated network. At the same time, the substantial capital requirements associated with hospital modernization, digital infrastructure, international accreditation, specialized accommodation, transportation, marketing, and patient-support services make exclusive dependence on public

financing impractical. Participants therefore viewed private-sector investment and managerial capacity as necessary complements to public-sector authority and infrastructure. Regional competition was another major causal factor. Experts stated that patients compare destinations not only according to medical prices but also in terms of treatment quality, reliability, international communication, travel convenience, post-treatment services, transparency, and overall patient experience. These causal conditions converged around the central phenomenon of institutionalized public–private network partnership. This phenomenon represents a transition from fragmented, project-specific cooperation toward an organized system in which public and private stakeholders participate within a common governance framework, possess clearly defined responsibilities, share information and resources, and jointly contribute to value creation throughout the complete health tourism service chain.

Table 3. Contextual and Intervening Conditions Affecting Public–Private Partnership Development

Grounded Theory Dimension	Major Category	Subcategories	Representative Concepts
Contextual conditions	Regulatory and institutional environment	Legal clarity; licensing arrangements; investment regulations; interagency coordination	Clear PPP regulations; defined responsibilities; simplified licensing; harmonization of health and tourism regulations
Contextual conditions	Metropolitan infrastructure and service capacity	Medical infrastructure; tourism infrastructure; transportation and accommodation; digital connectivity	Specialized hospitals; international patient departments; hotels; urban transportation; airport accessibility; telemedicine and digital platforms
Contextual conditions	Human capital and professional competence	Specialized clinical expertise; multilingual communication; tourism professionalism; managerial capacity	Skilled physicians; trained international patient personnel; interpreters; culturally competent staff; professional facilitators
Contextual conditions	Market and destination characteristics	Tehran's medical reputation; service diversity; cost advantages; destination image	Concentration of specialist services; competitive treatment costs; cultural attractions; urban service diversity
Intervening conditions	Governance and bureaucratic barriers	Administrative complexity; institutional overlap; instability in decision-making	Multiple decision-making bodies; lengthy administrative procedures; inconsistent policies; insufficient accountability
Intervening conditions	Economic and investment uncertainty	Financial risk; exchange-rate instability; limited access to capital; uncertain investment returns	Unpredictable costs; financing constraints; difficulty in long-term contracts; perceived investor risk
Intervening conditions	Trust and information asymmetry	Weak intersectoral trust; non-transparent information; inconsistent pricing	Limited data sharing; concerns about private-sector opportunism; lack of transparent tariffs; weak contract monitoring
Intervening conditions	International access and external constraints	Payment restrictions; international connectivity; insurance limitations; destination perception	Difficulties in financial transactions; restricted insurance arrangements; challenges in international promotion and accessibility

As indicated in Table 3, the effectiveness of public–private partnership is strongly influenced by contextual and

intervening conditions. The contextual conditions represent characteristics of the environment within which partnership

strategies are implemented. Participants identified regulatory coherence as one of the most important contextual prerequisites because health tourism lies at the intersection of healthcare, tourism, foreign investment, immigration, insurance, urban services, and international marketing. When regulatory responsibilities are distributed among several organizations without a clearly defined coordinating mechanism, even well-designed private investments may face implementation difficulties. Metropolitan infrastructure was also considered a critical contextual factor. Participants emphasized that the health tourism network extends beyond hospitals and includes airport reception, transportation, accommodation, translation, medical coordination, financial services, tourism services, follow-up care, and digital communication. Therefore, deficiencies in any part of this chain may negatively influence the total patient experience. Human capital emerged as another important contextual category, particularly the availability of internationally

competent physicians, multilingual personnel, professional facilitators, and managers capable of coordinating cross-sectoral services. At the same time, several intervening conditions were found to weaken partnership effectiveness. Bureaucratic complexity, economic instability, weak interorganizational trust, limited transparency, and external constraints on international transactions can reduce the willingness of private investors to make long-term commitments. These conditions do not necessarily prevent public–private partnership, but they can alter its effectiveness by increasing transaction costs, reducing predictability, and encouraging short-term rather than strategic collaboration. The participants consequently emphasized that successful partnership development requires not only formal agreements but also institutional measures that reduce uncertainty and strengthen trust among actors.

Table 4. Strategies for Developing a Public–Private Partnership-Based Metropolitan Health Tourism Network

Major Category	Subcategories	Strategic Components
Establishing integrated network governance	Metropolitan health tourism council; stakeholder representation; lead coordinating institution; formal role allocation	Establishing a permanent governance mechanism involving health authorities, tourism organizations, municipality, private hospitals, investors, travel-service providers, and professional associations
Developing contractual and financial partnership mechanisms	PPP contract design; risk-sharing; incentive structures; blended financing; investment guarantees	Creating transparent long-term contracts; allocating risks to actors best able to manage them; providing investment incentives; facilitating financing for infrastructure and technology
Integrating the health tourism service chain	Unified referral pathways; coordinated patient journey; service bundling; intermediary regulation	Linking medical centers, facilitators, hotels, transport providers, diagnostic services, rehabilitation centers, and tourism operators within a single coordinated network
Establishing quality assurance and accreditation	Service standards; provider certification; price transparency; performance monitoring	Developing uniform quality criteria; monitoring international patient services; establishing transparent packages and complaint-management systems
Creating an integrated digital platform	Provider database; electronic patient coordination; digital marketing; performance data	Developing a metropolitan health tourism portal; enabling service comparison and booking; integrating medical and tourism information; collecting operational data
Strengthening destination branding and international marketing	Market segmentation; destination branding; digital promotion; regional partnerships	Creating a unified metropolitan brand; targeting priority foreign markets; developing multilingual campaigns; collaborating with international agencies and healthcare networks
Developing specialized human resources	Training programs; cultural competence; language skills; network-management capabilities	Training healthcare and tourism personnel; professionalizing patient facilitation; developing multilingual and intercultural communication skills
Institutionalizing monitoring and continuous improvement	Performance indicators; stakeholder evaluation; patient feedback; policy learning	Monitoring quality, investment, patient satisfaction, network performance, and destination competitiveness and using results for continuous policy improvement

Table 4 illustrates the strategic mechanisms through which the participants believed the proposed partnership model should be operationalized. The most fundamental strategy was the establishment of an integrated metropolitan governance structure. Participants consistently argued that assigning responsibility for health tourism to a single healthcare organization, tourism authority, municipality, or private association would be insufficient because no single institution possesses all the resources and authority

necessary for network development. A metropolitan health tourism council or equivalent coordinating body was therefore proposed as an institutional mechanism through which major public and private stakeholders could jointly formulate policies, allocate responsibilities, resolve conflicts, and monitor network performance. A second major strategy involved the development of appropriate contractual and financial mechanisms. Participants emphasized that public–private partnership should not be

reduced to outsourcing public services to private companies; instead, it should involve systematic allocation of investment responsibilities, operational obligations, risks, revenues, and performance expectations. Integration of the service chain was also repeatedly emphasized because the health tourist experiences the destination as a continuous journey rather than as a collection of independent services. Accordingly, hospitals, facilitators, hotels, transportation companies, diagnostic centers, rehabilitation services, and tourism providers should operate through coordinated referral and service-delivery mechanisms. Quality assurance, accreditation, and transparent pricing were

considered essential for building international trust. Participants additionally emphasized the importance of an integrated digital platform that would enable potential patients to obtain reliable information, compare accredited providers, communicate with service organizations, coordinate treatment and travel, and access post-treatment follow-up services. Finally, sustained international marketing, specialized workforce development, and performance-based monitoring were identified as necessary strategies for transforming isolated partnerships into a durable metropolitan health tourism ecosystem.

Table 5. Consequences of Implementing the Public–Private Partnership Model

Major Category	Subcategories	Expected Outcomes
Economic and investment outcomes	Increased private investment; foreign currency revenues; employment creation; business development	Greater capital mobilization, expansion of health-related enterprises, increased metropolitan economic activity, and improved investment attractiveness
Healthcare and service outcomes	Improved service quality; infrastructure modernization; greater continuity of care; enhanced patient experience	Better international patient management, standardized service delivery, improved coordination, and higher patient satisfaction
Tourism and destination outcomes	Increased destination competitiveness; longer tourist stays; diversified tourism products; strengthened metropolitan brand	Greater regional market share, stronger destination positioning, and integration of medical and tourism attractions
Governance outcomes	Reduced institutional fragmentation; increased accountability; more efficient use of public resources; improved coordination	Clearer responsibilities, reduced duplication, stronger monitoring, and more effective cross-sectoral decision-making
Social and developmental outcomes	Knowledge transfer; employment of skilled personnel; entrepreneurial development; urban service improvement	Development of specialized employment, innovation, professionalization of services, and broader metropolitan development
Network sustainability outcomes	Stakeholder trust; long-term collaboration; organizational learning; adaptive capacity	More stable partnerships, accumulation of shared experience, increased resilience, and continuous improvement of the health tourism network

The consequences presented in Table 5 demonstrate that the proposed public–private partnership model is expected to produce outcomes extending beyond the direct increase in the number of international patients. Participants viewed economic outcomes as particularly important, including increased private investment, foreign currency revenues, employment generation, and the development of complementary enterprises in transportation, accommodation, digital health, facilitation, rehabilitation, and tourism. However, economic benefits were not considered sufficient to define the success of the model. The experts emphasized that the partnership should simultaneously improve healthcare quality by encouraging modernization, accreditation, professional service management, and continuity of care. Tourism-related outcomes were also considered important because the integration of medical services with accommodation, cultural attractions, transportation, and hospitality can

increase the overall value generated by each international visitor and strengthen Tehran's competitive position as a health tourism destination. Governance consequences included reducing duplication among institutions, clarifying responsibilities, improving accountability, and replacing fragmented decisions with coordinated metropolitan planning. Participants further emphasized social and developmental effects such as specialized employment, knowledge transfer, entrepreneurship, and professionalization of the health tourism workforce. The final category of consequences concerned network sustainability. When stakeholders perceive that benefits, responsibilities, and risks are distributed transparently and that collaboration creates mutual value, trust is expected to increase over time. This accumulated trust, combined with organizational learning and performance monitoring, can transform temporary cooperation into an adaptive and sustainable interorganizational network.

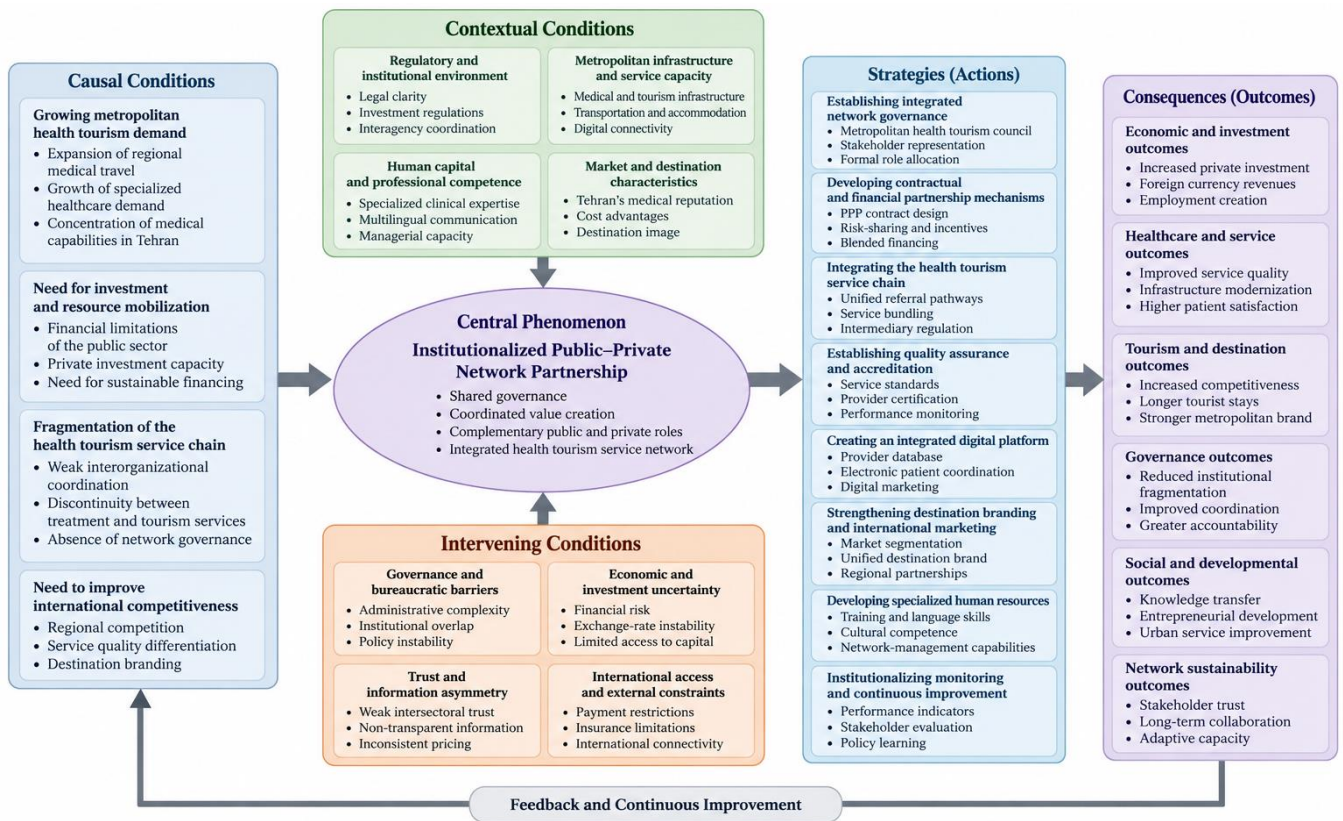


Figure 1. Paradigmatic Model of Public–Private Partnership for the Development of Metropolitan Health Tourism Networks

The final paradigmatic model integrates the findings into a sequential and relational framework in which causal conditions create the need for institutionalized public–private partnership, while contextual and intervening conditions determine the environment in which this partnership operates. Growing health tourism demand, the need for capital mobilization, fragmentation of the service chain, and increasing regional competition act as the principal causal forces encouraging the formation of a structured partnership. These forces lead to the central phenomenon of an institutionalized, value-based public–private network in which governmental and private actors assume complementary responsibilities and jointly coordinate the metropolitan health tourism value chain. The effectiveness of this central phenomenon depends on contextual conditions such as regulatory capacity, metropolitan infrastructure, human resources, and destination characteristics. At the same time, governance barriers, economic uncertainty, lack of trust, information asymmetry, and international access constraints can reinforce or weaken the relationship between partnership structures and their intended outcomes. Within this environment, the strategic actions identified in the study—

including integrated governance, formal contractual arrangements, financial mechanisms, service-chain integration, quality assurance, digital infrastructure, destination marketing, workforce development, and continuous monitoring—constitute the operational mechanisms of the model. Implementation of these strategies is expected to generate interconnected economic, healthcare, tourism, governance, social, and sustainability outcomes. Accordingly, the proposed model conceptualizes metropolitan health tourism development as a dynamic network-governance process rather than a collection of independent medical or tourism projects. Its central logic is that sustainable competitive advantage emerges when public authority and private-sector capability are institutionally integrated through transparent, coordinated, and performance-oriented partnership mechanisms.

Overall, the findings indicate that the development of a metropolitan health tourism network requires a transition from fragmented and organization-centered practices toward an integrated ecosystem based on partnership governance. The interviews revealed that the existing potential of metropolitan healthcare institutions, tourism infrastructure, medical expertise, private investment, and urban services

can generate significant health tourism value only when these resources are connected through a stable institutional architecture. Public-sector actors were primarily viewed as responsible for policy coordination, regulation, infrastructure provision, oversight, facilitation, and protection of public interests, whereas private-sector actors were viewed as the main sources of investment, operational innovation, market responsiveness, specialized service provision, technological development, and international marketing capability. The model therefore does not consider the public and private sectors as substitutes for one another. Rather, their complementarity constitutes the fundamental mechanism underlying successful health tourism network development. The findings further demonstrate that partnership effectiveness depends on transparent allocation of roles, risks, benefits, and accountability; without these elements, cooperation may remain temporary, fragmented, or vulnerable to institutional conflict. By integrating these relationships within a single grounded theoretical framework, the present study provides a comprehensive explanation of how public–private partnership can contribute to the establishment, competitiveness, and long-term sustainability of metropolitan health tourism networks.

4. Discussion and Conclusion

The present study was conducted to design a public–private partnership model for the development of metropolitan health tourism networks, and the findings demonstrated that such development should be understood as a multidimensional network-governance process rather than as the simple expansion of medical services or tourism facilities. The grounded-theory analysis identified growing metropolitan health tourism demand, the need for investment and resource mobilization, fragmentation of the health tourism service chain, and increasing pressure to improve international competitiveness as the principal causal conditions leading to the central phenomenon of an institutionalized public–private network partnership. The model further showed that regulatory and institutional conditions, metropolitan infrastructure, human capital, and destination characteristics form the main contextual conditions, while bureaucratic barriers, economic uncertainty, lack of trust and information asymmetry, and international access constraints function as important intervening conditions. The principal strategies included integrated network governance, development of contractual and financial partnership mechanisms, integration of the

health tourism service chain, quality assurance and accreditation, development of an integrated digital platform, destination branding and international marketing, specialized human-resource development, and continuous monitoring. These strategies were ultimately associated with economic, healthcare, tourism, governance, social, and network-sustainability consequences. This overall pattern indicates that the central issue in metropolitan health tourism is not the absence of individual capacities but the absence of an institutional mechanism capable of coordinating these capacities within a stable and mutually beneficial partnership framework.

One of the most important findings was that increasing demand for health tourism and the concentration of specialized medical capabilities in metropolitan areas create a strong basis for network development, but these advantages remain underutilized when healthcare and tourism services operate independently. This finding is consistent with the broader literature showing that health tourism has evolved from relatively simple forms of health-related travel into a complex system involving multiple services, organizational actors, and destination-level functions [1]. It also supports the argument that contemporary health tourism development is increasingly shaped by uncertainty, competitiveness, and changing consumer expectations, which require destinations to strengthen their coordination and adaptive capacity [2]. In Tehran, the relevance of this issue is particularly pronounced because previous evidence has shown that health tourism constitutes an important component of incoming tourism and has substantial economic potential [21]. However, the findings of the present study suggest that demand alone cannot guarantee sustainable development. Rather, health tourism demand must be translated into coordinated service delivery through institutionalized collaboration among hospitals, tourism organizations, transport providers, accommodation facilities, facilitators, insurers, municipalities, and regulatory institutions.

The identification of investment and resource mobilization as a major causal condition also reflects the capital-intensive nature of health tourism development. Internationally competitive health tourism requires continuous investment in hospital infrastructure, diagnostic technologies, digital systems, accommodation, transportation, accreditation, marketing, and patient-support services. The findings therefore suggest that exclusive reliance on public financing is insufficient and that private-sector capital and managerial capabilities must be

incorporated into metropolitan development strategies. This interpretation is consistent with studies emphasizing the role of service innovation and resource reconfiguration in the health tourism industry, particularly in the post-pandemic era [4]. It is also compatible with research showing that dynamic capabilities and market-oriented capacities are important for improving international performance in health tourism [13]. In practical terms, the public–private partnership model identified in this study provides a mechanism for combining public authority and long-term policy responsibility with private investment, innovation, and operational flexibility. Such complementarity is particularly important in an industry in which infrastructure development and market responsiveness must occur simultaneously.

The fragmentation of the health tourism service chain emerged as another central causal condition. Participants repeatedly emphasized that the health tourist experiences the destination as an integrated journey, whereas organizations often manage only one segment of that journey. This mismatch creates discontinuity between medical treatment, accommodation, transport, interpretation, travel services, post-treatment care, and communication. The finding is strongly supported by previous research on health tourism supply-chain resilience in Tehran, which has shown that continuity of services depends on the ability of multiple actors to coordinate resources and maintain service delivery under changing conditions [23]. The present study extends this argument by showing that supply-chain resilience should not be treated solely as an operational issue; rather, it should be embedded within a formal governance architecture that clarifies responsibilities and establishes mechanisms for information sharing, joint planning, and accountability. The importance of this issue became especially visible during the COVID-19 crisis, when health tourism businesses faced severe uncertainty and the need for organizational mindfulness, rapid adaptation, and coordinated crisis management [3]. Accordingly, a fragmented service chain is not only inefficient but also vulnerable to disruption.

The central phenomenon identified in the model, namely institutionalized public–private network partnership, represents an important conceptual contribution of the study. The findings indicate that public–private partnership should not be reduced to project financing, outsourcing, or contractual cooperation between a government organization and a private company. Rather, it should be understood as a network form of governance in which multiple public and

private actors participate in shared value creation and coordinated decision-making. This interpretation is compatible with the managerial perspective that health tourism requires leadership across organizational boundaries and effective coordination among healthcare, tourism, administrative, and supporting organizations [25]. It also reflects previous Iranian research indicating that health tourism development depends on a combination of policies, institutional support, infrastructure, human resources, promotion, and coordinated implementation [24]. Therefore, the effectiveness of public–private partnership depends not simply on whether private firms participate, but on whether the overall network is governed through clear responsibilities, shared goals, stable rules, and mechanisms for resolving conflicts.

The contextual role of the regulatory and institutional environment was particularly prominent in the findings. Participants emphasized that overlapping responsibilities, unclear regulations, fragmented licensing, and weak interagency coordination can substantially reduce the effectiveness of partnership arrangements. This finding supports previous studies in Iran that have identified policy coherence and institutional coordination as major determinants of health tourism development [24]. It is also consistent with local and regional studies showing that health tourism development depends on a combination of managerial, infrastructural, environmental, economic, and institutional factors rather than on a single sectoral intervention [16, 18]. The present study adds to these findings by positioning the regulatory environment within a broader partnership model and showing that institutional clarity is a prerequisite for private investment, service integration, and long-term trust. When regulatory responsibilities are unclear, private actors face higher transaction costs and uncertainty, while public institutions may encounter problems in accountability and performance oversight.

Metropolitan infrastructure and human capital were also identified as essential contextual conditions. Health tourism requires more than clinical excellence; it depends on the quality of airports, urban transportation, accommodation, digital communication, international patient departments, translation services, and specialized workforce competencies. This interpretation aligns with research showing that local resources and destination-specific drivers play an important role in shaping health tourism development [16]. It is also supported by studies of natural and regional health tourism resources demonstrating that

destination potential must be combined with appropriate infrastructure and management if it is to generate sustainable tourist flows [17, 19]. Human capital is equally important because international patients require culturally sensitive communication, language skills, professional facilitation, and specialized service management. The importance of workforce capability is reinforced by research on e-learning for health tourism marketing, which highlights the need to strengthen the knowledge and competencies of healthcare organizations and personnel involved in the international health tourism market [8].

The findings further showed that economic uncertainty, bureaucratic complexity, lack of trust, information asymmetry, and international access constraints can weaken otherwise promising partnership arrangements. These intervening conditions are particularly important because public-private partnerships are highly dependent on predictability and long-term commitment. Investors may be reluctant to participate when regulations change frequently, financial conditions are unstable, or mechanisms for revenue allocation and risk sharing are unclear. Similarly, public-sector actors may hesitate to delegate responsibilities when private-sector accountability and information transparency are uncertain. The identification of trust and information asymmetry as major intervening conditions also helps explain why fragmented health tourism markets frequently suffer from inconsistent pricing, variable service quality, and weak patient confidence. This interpretation is compatible with previous studies emphasizing destination image and branding as mechanisms for reducing uncertainty and strengthening trust among health tourists [10]. A strong destination brand, however, cannot be sustained without transparent service standards and consistent delivery, which reinforces the need for institutionalized quality assurance within the partnership network.

Among the strategies identified in the model, integrated network governance was the most fundamental. Participants proposed a metropolitan coordination mechanism through which major public and private stakeholders could participate in policymaking, planning, conflict resolution, and performance monitoring. This finding is consistent with previous research in Tehran showing that health tourism marketing development requires coordinated attention to multiple organizational and environmental dimensions [11, 12]. It also corresponds with sustainable health tourism research indicating that economic, social, environmental, governance, and infrastructural components must be considered together rather than independently [22]. The

present study suggests that a formal metropolitan governance body could act as the institutional core of the network, reduce organizational fragmentation, and provide continuity across changing projects and administrative structures. Such a governance arrangement may also facilitate more effective coordination between national health and tourism authorities and metropolitan organizations.

The strategy of developing contractual and financial partnership mechanisms reflects the need to transform cooperation from informal relationships into stable institutional arrangements. The findings indicated that effective partnerships require transparent contracts, clear role allocation, appropriate risk distribution, investment incentives, and performance-based obligations. Although the reference literature primarily focuses on health tourism development rather than PPP contracting itself, previous studies repeatedly emphasize the importance of organizational capacity, policy stability, innovation, and investment for the development of the sector [4, 24]. The present findings imply that these requirements can be operationalized through partnership contracts that align the incentives of hospitals, investors, service companies, and public authorities. Such arrangements should be designed not only around financial returns but also around service quality, patient safety, destination competitiveness, and long-term sustainability.

The integration of the health tourism service chain was another major strategic priority. This finding supports research emphasizing the importance of supply-chain resilience in Tehran's health tourism services [23]. It also corresponds with studies of specialized health tourism markets, which show that diverse patient groups require integrated combinations of medical, wellness, nutritional, rehabilitative, and hospitality services [14, 15]. The service-chain strategy identified in this study therefore goes beyond referral coordination and implies the development of standardized patient pathways, integrated packages, regulated intermediaries, and continuity from the first point of contact to post-treatment follow-up. Such integration can reduce transaction costs, improve patient experience, and increase the overall value captured by the destination.

Digitalization was also identified as a key strategy in the proposed model. Participants emphasized the need for an integrated platform that could provide reliable information about accredited providers, coordinate referrals, support electronic communication, facilitate service comparison, and generate network-level performance data. This finding

aligns strongly with research on digital and strategic innovation in health tourism [5, 6]. It is also supported by the development of artificial intelligence-based customer relationship management models, which demonstrate the potential of digital tools for personalized communication, customer segmentation, and service management in health tourism [7]. Next-generation technologies may further strengthen remote consultation, digital coordination, intelligent recommendation systems, and patient follow-up [9]. The present study adds an important governance dimension to these technological approaches by suggesting that digital platforms should be designed as shared infrastructures for the network rather than as isolated organizational technologies.

Destination branding and international marketing were also central strategies. Previous studies in Tehran have emphasized the importance of health tourism marketing factors and integrated marketing models [11, 12]. The present findings suggest that branding must be supported by service integration, quality assurance, and transparent pricing. This is consistent with the literature emphasizing image and branding as major determinants of destination credibility and differentiation [10]. Research on health villages similarly indicates that tourist attraction depends on the coordinated interaction of marketing, service capabilities, destination resources, and institutional mechanisms [19, 20]. The implication is that metropolitan branding should not be viewed as an advertising campaign but as the communicative representation of a reliable and integrated service system. If the actual patient experience is fragmented or inconsistent, promotional efforts may be ineffective or even counterproductive.

The consequences identified in the model were similarly multidimensional. Economic and investment outcomes included increased private capital, foreign currency revenues, employment, and business development. These outcomes are consistent with the recognized economic importance of health tourism and its contribution to incoming tourism flows [21]. Healthcare and service outcomes included higher quality, infrastructure modernization, improved continuity of care, and better patient experience. Tourism outcomes included stronger destination competitiveness, longer stays, and enhanced metropolitan branding, which correspond with the literature on marketing performance and destination image [10, 13]. Governance outcomes, including reduced fragmentation and increased accountability, represent a particularly important contribution because they indicate that the value of PPP

extends beyond financing. Social and developmental outcomes such as knowledge transfer, entrepreneurship, and specialized employment further demonstrate that health tourism can function as a broader urban development mechanism. Finally, the expected development of trust, organizational learning, and adaptive capacity supports the view that sustainable health tourism depends on resilient and continuously improving networks [2, 3].

Overall, the findings provide a more integrated interpretation of previous health tourism research. Earlier studies have examined sustainable health tourism [22], marketing [11, 12], digital innovation [5, 7], local drivers [16], regional resources [17, 18], crisis management [3], supply-chain resilience [23], and service innovation [4]. The present study integrates these dimensions into a single public-private partnership framework and shows how they can be connected through network governance. The central theoretical implication is that metropolitan health tourism development depends on the alignment of institutional authority, private-sector resources, service-chain coordination, digital infrastructure, market capabilities, and performance accountability. Therefore, the proposed model shifts attention from isolated development initiatives toward an ecosystem perspective in which sustainable competitiveness emerges from the quality of relationships among actors.

A number of limitations should be considered when interpreting the findings. First, the study was conducted qualitatively with 18 experts in Tehran, and although theoretical saturation was achieved, the findings reflect the institutional, economic, regulatory, and service characteristics of a specific metropolitan context. The model may therefore require adaptation before application in other Iranian cities or international destinations with different governance systems and market structures. Second, the study relied on expert perceptions and professional experiences rather than direct observation of implemented public-private partnership projects, and some participants may have emphasized issues corresponding to their organizational roles. Third, the cross-sectional nature of the interviews limited the ability to examine how partnership relationships, trust, regulatory conditions, and network performance change over time. Fourth, the study did not quantitatively test the relative importance or causal strength of the categories and relationships identified in the grounded-theory model. Finally, although participants were selected from diverse professional backgrounds, perspectives of international patients, community

representatives, insurers, and some smaller service providers were not investigated independently and in sufficient depth.

Future research should quantitatively validate the proposed model using a large sample of public- and private-sector stakeholders and employ confirmatory factor analysis or structural equation modeling to test the relationships among causal conditions, partnership mechanisms, strategies, and outcomes. Comparative studies across Tehran and other metropolitan areas such as Mashhad, Shiraz, Tabriz, and Isfahan could identify which components are context-specific and which are transferable across destinations. Longitudinal research would be valuable for examining the evolution of trust, contractual performance, network learning, and resilience after the implementation of partnership mechanisms. Future studies should also investigate the model from the perspectives of international patients and examine how network integration affects patient satisfaction, perceived risk, trust, destination loyalty, and willingness to recommend the destination. Economic evaluation studies could assess the costs, benefits, risk allocation, return on investment, and distributional effects of different PPP structures. In addition, research could develop and test digital-platform architectures, governance indicators, quality metrics, and network-performance dashboards suitable for metropolitan health tourism ecosystems.

From a practical perspective, policymakers and metropolitan managers should establish a permanent cross-sectoral governance mechanism for health tourism in which relevant health authorities, tourism organizations, municipalities, private hospitals, investors, travel companies, professional associations, and digital-service providers have clearly defined roles. A transparent regulatory and contractual framework should be developed to specify responsibilities, investment obligations, risk allocation, quality standards, pricing principles, data-sharing requirements, and performance indicators. Metropolitan health tourism should be organized around an integrated patient pathway connecting international marketing, pre-arrival consultation, treatment, transportation, accommodation, interpretation, rehabilitation, tourism services, and post-treatment follow-up. An integrated digital platform should be developed to provide reliable information, accredited provider lists, service packages, referral coordination, complaint management, and performance monitoring. Authorities should also introduce standardized quality and accreditation mechanisms for international patient services, strengthen multilingual and

intercultural training for staff, support long-term private investment through predictable incentives, and develop a unified destination brand based on demonstrable service quality rather than promotional claims alone. Continuous evaluation of patient satisfaction, provider performance, investment outcomes, network coordination, and market competitiveness should be institutionalized so that the metropolitan health tourism network can adapt and improve over time.

Authors' Contributions

Authors equally contributed to this article.

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

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

References

- [1] D. Baysal and H. Çimen, "Historical Development of Health Tourism," in *Global Perspectives on the Opportunities and Future Directions of Health Tourism*, O. Doğan Ed. Hershey, PA, USA: IGI Global, 2023, pp. 1-13.
- [2] D. Dryglas and M. K. Smith, "Introduction: the development of health tourism in challenging times-a focus on the Visegrád countries," *Worldwide Hospitality and Tourism Themes*, vol. 17, no. 2, pp. 152-158, 2025, doi: 10.1108/WHATT-01-2025-0024.
- [3] S. Abdolli, M. Tasavuri, and M. Najmi, "The role of organizational mindfulness in crisis management of Corona: A case study of health tourism businesses," *Public Management Research*, vol. 16, no. 59, pp. 111-136, 2023. [Online]. Available: https://jmr.usb.ac.ir/article_7483.html?lang=en.
- [4] S. Bastani, M. Hosseini Shakib, and A. Khamseh, "The Service Innovation Model in the Health Tourism Industry with a Focus on the Post-Coronavirus Era," *Journal of Tourism Management Studies*, vol. 19, no. 68, pp. 241-288, 2025. [Online]. Available: https://tms.atu.ac.ir/article_18057.html.
- [5] D. Spoladore, E. Pessot, and M. Sacco, *Digital and Strategic Innovation for Alpine Health Tourism: Natural Resources*,

- Digital Tools and Innovation Practices from HEALPS 2 Project*. Springer Nature, 2023, p. 130.
- [6] M. Mochlasin, N. Nurdin, S. Anwar, and E. Rusanti, "Book review: Digital and strategic innovation for Alpine health tourism: natural resources, digital tools and innovation practices from HEALPS2 project," *Rajagiri Management Journal*, vol. 18, no. 3, pp. 264-268, 2024, doi: 10.1108/RAMJ-07-2024-292.
 - [7] A. Emami, M. N. Mohammadi, S. H. Hosseini, T. Ghobaadi, and A. Aghighi, "Designing an Artificial Intelligence-Based Customer Relationship Management Model in Digital Marketing of Services in the Health Tourism Industry," (in English), *Quarterly Journal of Value Creation in Business Management*, vol. 5, no. 2, pp. 391-420, 2025.
 - [8] 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.
 - [9] Z. Baran and Ş. Karaca, "Next-Generation Technologies in Health Tourism," in *Global Perspectives on the Opportunities and Future Directions of Health Tourism*, O. Doğan Ed. Hershey, PA, USA: IGI Global, 2023, pp. 138-164.
 - [10] S. E. E. Küçükkambak, "Image and Branding in Health Tourism," in *Global Perspectives on the Opportunities and Future Directions of Health Tourism*, O. Doğan Ed. Hershey, PA, USA: IGI Global, 2023, pp. 14-39.
 - [11] 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>.
 - [12] 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.
 - [13] 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/>.
 - [14] U. Bakir and S. Y. Çakır, "Elderly Tourism Market: Elderly Consumers as a Target Group in Health Tourism," in *Global Perspectives on the Opportunities and Future Directions of Health Tourism*, O. Doğan Ed. Hershey, PA, USA: IGI Global, 2023, pp. 40-89.
 - [15] A. Ş. Kaya, "Nutrition and Dietetics Practices in Health Tourism," in *Global Perspectives on the Opportunities and Future Directions of Health Tourism*, O. Doğan Ed. Hershey, PA, USA: IGI Global, 2023, pp. 248-264.
 - [16] M. Khazae-Pool, T. Pashaei, H. Rastegar, and K. Ponnet, "A comprehensive perspective on local drivers in community-based health tourism industry development: a qualitative study of Mazandaran Province, Iran," *BMC Health Services Research*, vol. 24, no. 1, p. 910, 2024, doi: 10.1186/s12913-024-11375-4.
 - [17] M. Rajabi and F. Rangarz Farough, "Estimating the geotourism capabilities of hot springs in East Azerbaijan Province for health tourism development," *Hydrogeomorphology*, vol. 39, pp. 63-80, 2024.
 - [18] E. Mohammadi and M. Ghaffarian, "Identifying and Prioritizing Factors Affecting Health Tourism Development: Case Study of Dehloran Hot Springs," *Tourism and Development*, vol. 13, no. 1, pp. 293-305, 2024, doi: 10.22034/jtd.2024.415871.2822.
 - [19] F. Zakavati, L. Andervazh, and S. Zarinjouy Alvar, "Qualitative Model of Health Tourism Marketing and Its Effect on Tourist Attraction in Health Villages: Case Study of Dehloran Hot Springs Based on Grounded Theory," *Tourism and Development*, vol. 13, no. 1, pp. 1-18, 2024, doi: 10.22034/jtd.2023.382998.2731.
 - [20] F. Zekavati, L. Andrevaj, and S. Zarin Joy, "Designing a health tourism marketing model in health villages," *Iran Journal of Health Education and Health Promotion*, vol. 11, no. 1, pp. 81-93, 2023, doi: 10.52547/ijhehp.11.1.81.
 - [21] R. Einlou, "Health Tourism Accounts for 14% of Incoming Tourists in 10 Months of 2023," ed, 2023.
 - [22] R. Zarei, "Analyzing and evaluating key components in creating sustainable health tourism in Tehran using the Padin model," *Quarterly Journal of Tourism Management Studies*, vol. 18, no. 64, pp. 61-102, 2023.
 - [23] R. Marvi, "Resilience Model of the Supply Chain in the Promotion of Health Tourism Services in Tehran Province," *Dynamic Management and Business Analysis*, vol. 2, no. 1, pp. 26-37, 2023, doi: 10.61838/dmbaj.2.1.3.
 - [24] 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.
 - [25] S. Abela, *Management of Health Tourism in Your Department Leadership and Management in Healthcare*. Springer, Cham, 2023, pp. 209-217.