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Developing an Indigenous Model of Customer Experience in Health Tourism in Mazandaran Province Using an Exploratory Mixed-Methods Approach

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A B S T R A C T

The present study aimed to design and explain an indigenous model of customer experience in health tourism in Mazandaran Province using an exploratory mixed-methods approach. Given the growing competition among medical centers and the critical importance of patient experience in retaining and attracting health tourists, there is a need for a localized model that aligns with the country's cultural and organizational conditions. The research was conducted in two stages. In the qualitative stage, the thematic analysis method was used to extract the main dimensions and components of customer experience. In the quantitative stage, the proposed model was tested using confirmatory factor analysis. The statistical population in the qualitative stage consisted of 18 experts in the field of health tourism and managers of medical centers who were selected through purposive sampling. In the quantitative stage, data were collected from 384 health tourist patients. The findings revealed that the final model comprises four main dimensions—quality of medical services, emotional experience, cultural–social experience, and process convenience—along with twelve sub-indicators. This model can serve as a framework for assessing and enhancing customer experience in Iran's health tourism industry.

Keywords: *Customer Experience, Health Tourism, Indigenous Model, Mixed-Methods Approach, Mazandaran Province*

1. Introduction

Health tourism has emerged as a strategically important niche at the intersection of healthcare delivery, hospitality, and destination management—one that is increasingly shaped by how patients perceive and remember their end-to-end experiences before, during, and after care. In competitive health tourism markets, customer experience (CX) not only conditions immediate satisfaction but also mediates loyalty, word-of-mouth, and the longer-term positioning of cities and regions as credible care destinations. The literature has moved from a transactional focus on price differentials and procedure availability toward a relational, journey-based understanding of value

co-creation across multiple touchpoints—digital discovery, information search, booking and travel logistics, admission, clinical pathways, discharge, and post-treatment follow-up—each of which can amplify or erode trust (Gaines & Lee, 2019; Lemon & Verhoef, 2016). For regions like Mazandaran and its capital Sari, which combine medical capabilities with rich natural amenities and a dense tourism ecosystem, understanding and managing CX systematically is both a development lever and a policy imperative (Khazai et al., 2016; Rasouli et al., 2025; Rasouli, Rajabi, et al., 2024a, 2024b; Rasouli, Yazarlu, et al., 2024).

Globally, health tourism demand has diversified, with travelers motivated by elective surgeries, diagnostic services, rehabilitation, wellness, and complementary therapies. Comparative studies document how national systems and regional clusters compete by orchestrating clinical quality, waiting-time relief, bundled packages, and credible aftercare arrangements, all underpinned by transparent information and culturally attuned service scripts (Béland & Zarzeczny, 2018; Lee et al., 2020; Ulusoy & Tosun, 2020). Turkey's ascent as a regional hub illustrates how scale, accreditation, and marketing alignment across providers can produce a coherent value proposition for international patients, while simultaneously elevating expectations about access, logistics, and post-operative continuity that other destinations must meet or exceed (Engül & Hakan, 2020; Sag & Zengul, 2019). European experience likewise highlights the role of governance, standards, and cross-border information asymmetries in shaping perceived risk and perceived value along the patient journey (Ulusoy & Tosun, 2020).

The COVID-19 pandemic reconfigured this landscape by tightening travel corridors, foregrounding infection control, and intensifying patients' evaluation of safety, reliability, and contingency planning. Evidence from pandemic-era analyses points to an expanded definition of quality that integrates clinical outcomes with biosecurity protocols, real-time communication, and resilience of partner networks across borders (Ananchenkova, 2021; Manna et al., 2020). In such conditions, the meaning of CX becomes inseparable from reassurance, empathy, and credibility: patients attend not only to the technical core (competence, outcomes) but also to the "surround" (information clarity, linguistic support, hospitality practices, spiritual and privacy accommodations), which together reduce anxiety and build trust (Gaines & Lee, 2019; Lemon & Verhoef, 2016). These themes resonate strongly in Iran's market, where heterogeneity in provider capabilities and service design across provinces necessitates localized models that capture cultural specificities and the realities of inter-organizational coordination (Ghasemi et al., 2018; Rezvani & Colleagues, 2021).

From a development perspective, health tourism is often framed as a platform for regional revitalization and diversification, creating backward and forward linkages across transportation, accommodation, local food systems, rehabilitation facilities, and cultural attractions. Actor-network and institutionalist perspectives underscore that durable performance depends on how actors—public agencies, hospitals, hospitality providers, intermediaries—stabilize roles, standards, and data flows that make the "journey" legible and manageable (Béland & Zarzeczny, 2018; Dedeke, 2017). Destination marketing scholarship further suggests that converting first-time patients into advocates requires choreographing credible promises (pre-arrival) and fulfilling them consistently (on-site and post-discharge), with special attention to moments of truth (admission, anesthesia, discharge instructions) where uncertainty peaks (McNickel, 2019; Shafei, 2019). In this regard, Sari's ongoing regional planning initiatives—linking sustainability, participation, and tourism—provide a policy backdrop for embedding CX metrics into urban and health cluster governance (Rasouli et al., 2025; Rasouli, Rajabi, et al., 2024a, 2024b; Rasouli, Yazarlu, et al., 2024).

At the same time, empirical studies from Iran highlight persistent experience gaps: inconsistent information about costs and clinical pathways; fragmented booking and referral processes; asymmetry of language and cultural mediation; and variability in post-discharge contact, all of which can degrade perceived reliability and spark negative word-of-mouth even when clinical outcomes are acceptable (Rezvani & Colleagues, 2021; Sanavi Grossian et al., 2018; Sorkhossara et al., 2018). Conceptual work on business ecosystems in health tourism—particularly at the provincial level—argues for models that place patients at the center of an aligned set of actors and rules, with explicit interfaces (APIs, protocols, service blueprints) to reduce frictions during inter-organizational handoffs (Ghasemi et al., 2018; Sachmeforosh et al., 2018). The "experience-based marketing" literature complements this by linking sensory and affective cues in hospitality and nature settings to satisfaction and loyalty, especially relevant in destinations where patients conjoin treatment with ecotourism or recovery in restorative natural environments (Lee et al., 2020; Pouya et al., 2020). In desert and rural systems, strategic planning emphasizes sustainability and residential

system resilience, reminding planners to calibrate growth with carrying capacities and community well-being, themes that translate to coastal Mazandaran's environmental sensitivities (Alipuri et al., 2016).

Building a cumulative knowledge base requires methodological pluralism. Foundational Persian-language references on qualitative and mixed methods have guided localized constructs and measurement designs that fit Iranian organizational and cultural contexts (Bazargan, 2018; Farastkhah, 2016). These approaches support exploratory–confirmatory sequences in which thematic analysis elicits grounded dimensions (e.g., clinical quality, emotional experience, cultural–social experience, process convenience) that are then operationalized through reflective indicators and validated via reliability and convergent validity diagnostics. Such design logic is consonant with comparative work from Italy and Portugal, where health/wellness products are managed via partnership architectures that require co-definition of indicators and shared learning across tourism and healthcare stakeholders (Da Costa Guerra et al., 2021; Manna et al., 2020). In Turkey's experience, building an internationally recognizable "center" for care involved multi-scalar coordination that, from a patient's vantage point, simplifies choices into transparent bundles with credible guarantees and accessible redress channels (Engül & Hakan, 2020; Sag & Zengul, 2019).

Marketing strategy is a recurrent thread. Studies across manufacturing and services show that managerial attitudes toward market presence strategies shape metric selection and, ultimately, what organizations optimize in their day-to-day operations; when applied to health tourism, this implies that if CX metrics are not prioritized, organizations may over-weight volume or short-term financials at the expense of trust, empathy, and transparency (Shafei, 2019). Research on the role of marketing in developing health tourism in Iran and on the relationship between strategic marketing and sustainable development similarly emphasizes segmentation, positioning, credible signaling (certifications, accreditations), and content localization (language, imagery, faith-sensitive scripts) as key to conversion and retention (Bestam et al., 2016; KhoshTaynet & Sabahi, 2017). Recent Iranian work on health villages and provincial marketing models adapts these principles to spatially distributed assets, proposing integrative frameworks where clinics, hotels, and community services co-brand and co-monitor experience indicators (Ghasemi et al., 2018; Zekavati et al., 2023). The green marketing literature adds environmental credibility and technological mediation (e.g., teleconsultation, digital check-in, CRM-enabled follow-ups) as dimensions that modern health tourists increasingly expect, particularly in the wake of pandemic learning and carbon-conscious travel behaviors (Aramesh et al., 2020).

Social impact scholarship broadens the lens to community externalities, social trust, and equity. Tourism's social impacts—perceived by residents and workers—can either reinforce a welcoming, dignifying service climate or seed ambivalence and resistance, which subtly surface in frontline interactions and thus in patient affective experience (Motegh, 2021). Work on participation and civic engagement in tourism policy processes in Sari suggests that inclusive planning and transparent benefit-sharing correlate with more consistent, empathic service encounters that patients interpret as "authentic hospitality," strengthening the cultural–social dimension of CX (Rasouli, Yazarlu, et al., 2024). Parallel streams on strengthening tourism in cities and rural areas stress connective infrastructure (transport, digital platforms), safety, and social order—preconditions for reliable logistics and perceived security in the patient journey (Mousaviyan & Mousavi, 2017). Case studies on loyalty among foreign tourists underline how perceived fairness, clarity of pricing, and reliability of aftercare mediate the link between satisfaction and advocacy, with especially strong effects when language services and culturally literate scripts are present (Motouripour et al., 2018).

Within Mazandaran, provincial analyses have documented both promise and constraint. Early assessments framed potential clinical and environmental assets but flagged fragmentation, uneven information quality, and insufficiently integrated packages as experience risks (Khazai et al., 2016). Subsequent studies in the city of Sari have nested tourism within regional development, recommending measurable sustainability indicators and participatory governance to ensure alignment between urban systems and the tourism–health cluster (Rasouli, Rajabi, et al., 2024a, 2024b). More recent work proposes operational models for sustainable tourism, including indicator sets and social participation metrics that could be repurposed to monitor health-tourism CX across the customer journey (Rasouli et al., 2025; Rasouli, Yazarlu, et al., 2024). These developments dovetail with international calls to treat health tourism not as an opportunistic revenue silo but as an institutionally embedded service system that must harmonize with domestic health priorities and equity considerations (Béland & Zarzeczny, 2018).

From a managerial standpoint, brand-experience thinking pushes providers to choreograph consistent cues across media and on-site touchpoints, maintaining alignment between promises (advertising, clinic websites, aggregator portals) and delivery (actual wait times, bedside manner, privacy observance, discharge clarity) (Gaines & Lee, 2019; McNickel, 2019). Experience-based marketing research on nature tourism in Iran shows how sensory calm, aesthetic environment, and staff comportment can attenuate anxiety and elevate perceived quality—mechanisms directly translatable to pre-op and post-op settings where stress is high (Pouya et al., 2020). At the product-system level, designing viable business models for provincial health tourism requires articulating revenue logic, risk-sharing (e.g., refund policies), and data governance (e.g., interoperable EMR summaries for follow-up), which then anchor transparent, confidence-building communications to international patients (Da Costa Guerra et al., 2021; Sachmeforosh et al., 2018). Strategy contributions from protected-area tourism and sustainability remind us that long-run viability depends on stewardship—of ecosystems and of community goodwill—lest over-commercialization degrade the very assets (natural, cultural, social) that differentiate the destination (Alipuri et al., 2016; Dedeke, 2017).

Theoretically, CX in health tourism can be decomposed into at least four interacting dimensions that map closely to both international literature and Iran-specific evidence: (1) quality of medical services (accessibility/responsiveness; clinical competence/safety; infrastructure/equipment; patient-centered communication; assurance and transparent pricing), (2) emotional experience (assurance, calm, empathy), (3) cultural–social experience (cultural competence, effective communication, understanding expectations of international patients; hospitality; privacy and faith accommodations), and (4) process convenience (information access; integrated booking and referrals; admission speed; payment/insurance clarity; post-treatment support) (Aramesh et al., 2020; Engül & Hakan, 2020; Ghasemi et al., 2018; Lemon & Verhoef, 2016; Manna et al., 2020; Rezvani & Colleagues, 2021; Sag & Zengul, 2019; Zekavati et al., 2023). Empirically, building and validating an indigenous model requires not only importing constructs but also adjusting measurement to local semantics and service routines, a task for which grounded theory and mixed-methods designs in Iranian scholarship provide robust scaffolding (Bazargan, 2018; Farastkhah, 2016). Equally, strategic marketing and policy literatures emphasize aligning organizational incentives with journey-based metrics so that leaders track and improve what patients actually value—in effect, closing the "experience gap" documented in Iranian service settings (Bestam et al., 2016; KhoshTaynet & Sabahi, 2017; Rezvani & Colleagues, 2021).

Finally, cross-sectoral partnership management emerges as a recurrent success factor: destinations that formalize roles and reciprocity among hospitals, hotels, travel intermediaries, municipalities, and civil society are better positioned to deliver consistency, reduce handoff frictions, and respond adaptively to shocks—be they public-health, logistical, or reputational (Da Costa Guerra et al., 2021; Ulusoy & Tosun, 2020). For Sari and Mazandaran, this implies integrating CX into regional development plans, co-designing indicators with stakeholders, and institutionalizing transparent information and complaint-resolution mechanisms. Doing so aligns with studies linking social participation to more legitimate and durable tourism policies and with research demonstrating that well-grounded, locally adapted models can translate global best practice into operational improvements in the Iranian context (Harandi & Mirzaian Khamsa, 2017; Mohammad Alipour Kanari & Amirdehi, 2017; Rasouli et al., 2025; Rasouli, Rajabi, et al., 2024a, 2024b; Rasouli, Yazarlu, et al., 2024). In addition, macro-level analyses of income–expenditure relations in tourism and city–rural connectivity remind policymakers to appraise spillovers and balance distributional effects as part of a comprehensive experience-centric strategy (Mousaviyan & Mousavi, 2017; Sorkhossara et al., 2018).

Taken together, the international and Iranian literatures converge on a practical agenda: define the indigenous CX construct with sensitivity to cultural and regulatory context; instrument it with reliable, valid indicators; and embed it in the managerial routines and inter-organizational agreements that shape patients' lived journeys. Accordingly, the present study aims to develop and empirically validate an indigenous, mixed-methods model of customer experience for health tourism in Mazandaran Province.

2. Methods and Materials

This study is applied in purpose and exploratory mixed in method, conducted in two qualitative and quantitative stages. In the qualitative stage, through thematic analysis and semi-structured interviews with 18 experts in the fields of health and tourism, four main dimensions and twelve sub-

indicators were identified. In the quantitative stage, the derived model was tested using a researcher-made questionnaire and data collected from 384 health tourists in Mazandaran Province. Data analysis was conducted using SPSS and AMOS software, and the results indicated that construct reliability, with a Cronbach's alpha higher than 0.80, was confirmed. The model fit indices were satisfactory with GFI = 0.91 and RMSEA = 0.05, indicating an acceptable model fit.

3. Findings and Results

In this research, which employed an exploratory mixed-methods approach to "develop an indigenous model of customer experience in health tourism in Mazandaran Province," theoretical and purposive sampling was used and continued until theoretical saturation was reached. Data collection and analysis were performed concurrently, and after identifying and initially coding the data, codes were categorized into concepts and then into themes, leading to the extraction of a theoretical model.

The sample population consisted of academic and non-academic specialists in health tourism, managers with executive experience, and experts from municipal organizations related to health tourism. Initially, 45 individuals were targeted, of whom 18 participated in person. For ethical reasons, participants were reported using numerical codes instead of names. Code 1: (Experts 1, 2, and 3) – Code 2: (Experts 4, 5, and 6) – Code 3: (Experts 7, 8, and 9) – Code 4: (Experts 10, 11, and 12) – Code 5: (Experts 13, 14, and 15) – Code 6: (Experts 16, 17, and 18).

Data were collected through in-depth exploratory interviews, recorded and documented during the sessions. Selective coding and logical analysis of the categories led to the formation of the indigenous theoretical model of customer experience in health tourism.

To answer the research questions, the in-depth exploratory interviews were transcribed, analytical units were identified, and 19 open codes were extracted. Through axial coding, codes with shared meanings were organized into criteria and indicators of health tourism. The findings were structured around four main themes: quality of medical services, emotional experience, cultural–social experience, and process convenience. These themes were refined and clustered into main and sub-themes, summarized in tables. A total of 18 experts participated, and their identities were kept confidential through numerical coding.

Table 1

Main and Sub-Themes Identified (Quality of Medical Services)

Main Theme	Sub-Theme	Participant Codes and Extracted Meanings
Quality of Medical Services	Accessibility and Responsiveness of Services	Quick access to appointments and emergency services (Codes 1, 4); electronic appointment system and reduced waiting times (Codes 2, 5); flexible working hours aligned with tourists' schedules (Codes 3, 6); presence of patient transport and transfer network (Codes 1, 3).
	Clinical Competence and Safety	Clinical expertise and specialization of doctors and nurses (Codes 2, 5); adherence to infection control and patient safety protocols (Codes 3, 6); clinical quality monitoring and compliance with care standards (Codes 1, 4).
	Infrastructure and Medical Equipment	Updated and reliable diagnostic and treatment technologies (Codes 1, 3); safety and quality of treatment spaces and operating rooms (Codes 4, 6); patient and companion comfort and accommodation facilities (Codes 2, 5).
	Patient-Centered Communication and Care	Transparent information and pre-/post-treatment counseling (Codes 2, 4); respectful behavior, empathy, and preservation of patient dignity (Codes 1, 5); post-discharge follow-up and therapeutic support services (Codes 3, 6); linguistic and cultural guidance for health tourists (Codes 2, 6).
	Cost Transparency and Service Packages	Clear communication about tariffs and expenses (Codes 5, 6); combined medical–accommodation packages with specified prices and services (Codes 1, 4); payment, insurance, and financial facilitation mechanisms for patients (Codes 2, 3).

Based on Table 1, the quality of medical services was explained in five key dimensions: accessibility and responsiveness (e-appointment, emergency, patient transfer), clinical competence and safety (staff expertise, infection control, quality supervision), infrastructure and equipment (diagnostic tools, safety of facilities, patient comfort), patient-centered communication and care (information, empathy, follow-up, linguistic support), and cost transparency and service packages (clear pricing, bundled offers, insurance mechanisms). Strengthening each of these—particularly scheduling efficiency, clinical and infrastructural standards, patient-centered care, and financial transparency—can enhance satisfaction, trust, and repeat health tourism experiences in Mazandaran.

Table 2

Main and Sub-Themes Identified (Emotional Experience)

Main Theme	Sub-Theme	Participant Codes and Extracted Meanings
Emotional Experience	Satisfaction and Trust	Satisfaction with treatment outcomes and symptom improvement (Codes 1, 4); trust in the professional competence of healthcare providers (Codes 2, 5); satisfaction with service coordination and post-discharge follow-up (Codes 3, 6).
	Anxiety, Fear, and Stress	Concerns about treatment side effects and uncertain results (Codes 1, 3); stress from traveling for medical purposes and being away from family (Codes 2, 4); anxiety related to language barriers and cultural differences during treatment (Codes 5, 6).
	Sense of Security and Calmness	Feelings of safety due to compliance with safety and infection control protocols (Codes 2, 5); tranquility resulting from a pleasant medical environment and supportive services (Codes 1, 4); assurance of crisis-response mechanisms (Codes 3, 6).
	Emotional Connection and Empathy of Staff	Experiencing respectful and empathetic interactions (Codes 1, 2); effect of empathetic counseling and communication on anxiety reduction (Codes 4, 5); feeling of being cared for by the medical team (Codes 3, 6).
	Expectations, Discrepancies, and Emotional Feedback	Discrepancy between pre-travel expectations and service reality (Codes 1, 5); frustration due to lack of transparency in cost or scheduling (Codes 2, 3); emotional inclination to return and recommend the destination after a positive experience (Codes 4, 6).

According to Table 2, emotional experience involves trust in outcomes and service coordination, stress and fear due to side effects, separation, or language barriers, security and comfort from safety protocols and supportive settings, empathy and communication of healthcare staff, and expectation discrepancies and emotional feedback. Enhancing transparency in cost and scheduling, improving staff empathy and communication skills, and ensuring clinical safety standards can reduce anxiety, strengthen trust and satisfaction, and increase return and recommendation rates among health tourists.

Table 3

Main and Sub-Themes Identified (Cultural–Social Experience)

Main Theme	Sub-Theme	Participant Codes and Extracted Meanings
Cultural–Social Experience	Cultural Competence and Language Support	Availability of translators and linguistic/cultural services (Codes 2, 5); staff training on patients' cultural norms and sensitivities (Codes 1, 4); multilingual informational resources about treatment processes (Codes 3, 6).
	Local Hospitality and Host Community Interaction	Welcoming behavior of local communities and accommodations (Codes 1, 2); role of local guides in fostering positive cultural–social experiences (Codes 4, 5); opportunities to participate in post-treatment tourism and local activities (Codes 3, 6).
	Religious Considerations and Privacy Norms	Provision of facilities aligned with religious needs (prayer rooms, suitable meals) (Codes 2, 4); respect for privacy in care and accommodation according to cultural norms (Codes 1, 5); scheduling aligned with religious ceremonies and holidays (Codes 3, 6).
	Cultural Adaptation of Services and Social Expectations	Adapting treatment and service processes to cultural expectations (Codes 1, 3); revising educational and informational materials in line with local cultural perspectives (Codes 2, 5); sensitivity to the role of family in treatment decisions (Codes 4, 6).
	Social Consequences, Stigma, and Perceptual Issues	Concern about social stigma or labeling from certain medical procedures (Codes 1, 4); importance of confidentiality between society and medical institutions (Codes 2, 5); influence of positive/negative cultural–social experience on word-of-mouth marketing and recommendations (Codes 3, 6).

The cultural–social experience includes five key aspects: cultural competence and language support (translation, multilingual communication, staff training), local hospitality and host interaction (welcoming behavior, local participation), religious and privacy considerations (religious amenities, privacy respect), cultural adaptation of services and expectations (process alignment, family sensitivity), and social consequences or stigma (confidentiality and perception management). Focused attention on these—through translation and cultural training, service adaptation, and confidentiality assurance—can improve satisfaction, trust, and recommendation intentions of health tourists in Mazandaran.

Table 4

Main and Sub-Themes Identified (Process Convenience)

Main Theme	Sub-Theme	Participant Codes and Extracted Meanings
Process Convenience	Integrated Appointment and Booking	Online booking platforms and rapid scheduling (Codes 1, 4); reservable combined medical–accommodation packages (Codes 2, 5); reduced waiting time and simple cancellation procedures (Codes 3, 6).
	Interdepartmental Coordination and Medical Referral	Clear referral pathways among institutions (Codes 1, 3); communication network linking medical, tourism, and local services (Codes 2, 4); secure patient file transfer and follow-up (Codes 5, 6).
	Administrative, Insurance, and Payment Facilitation	Quick admission and discharge with organized documentation (Codes 1, 5); transparent insurance and international settlement systems (Codes 2, 4); electronic payment facilities and clear invoicing (Codes 3, 6).
	Guidance and Information Accessibility	Multilingual guides and patient information booklets (Codes 2, 5); clear communication about procedures, costs, and expectations (Codes 1, 4); pre- and post-travel telephone/online support (Codes 3, 6).
	Logistics and Accommodation Coordination	Airport transfer and dedicated patient transport (Codes 1, 3); suitable accommodation coordination for patients and companions (Codes 2, 5); ancillary services such as translation, accompaniment, and post-treatment tourism programs (Codes 4, 6).

The process convenience dimension encompasses five major domains: integrated booking and scheduling (online platforms, combined packages, easy cancellation), interdepartmental coordination and referrals (referral protocols, communication networks, patient follow-up), administrative, insurance, and payment facilitation (fast admission/discharge, transparent insurance, electronic payments), guidance and information access (multilingual support, transparency, online assistance), and logistics and accommodation (airport transfers, lodging coordination, auxiliary services). Strengthening these elements can streamline the patient journey, reduce administrative and communication barriers, and by ensuring continuity of care and smoother experiences, enhance satisfaction and return intentions among health tourists visiting Mazandaran.

The obtained findings—derived from participants' interviews and analytical effort—fulfilled the main research objective of presenting an indigenous model of customer experience in Mazandaran's health tourism sector, providing a comprehensive and in-depth understanding of the phenomenon. In this stage of the selected approach, the main themes were emphasized to highlight their significance. The following section presents detailed textual descriptions explaining each extracted theme based on participants' interview data.

Quality of Medical Services

The first main theme extracted by the researcher is the quality of medical services. From the perspective of the participants in this study, the quality of medical services includes five sub-themes: (1) accessibility and responsiveness of services, (2) clinical competence and safety, (3) medical infrastructure and equipment, (4) patient-centered communication and care, and (5) cost transparency and service packages. Selected participant remarks are as follows:

Accessibility and Responsiveness of Services

Exemplar 1 (Code 1): "In emergency cases, when a patient arrives from distant areas, the lack of a coordinated transfer network caused several patients to lose critical time; we have an urgent need for patient transfer services and coordination among centers so that access to emergency care is facilitated."

Exemplar 2 (Code 2): "A client said they waited in line for hours to get an appointment; if there were an electronic appointment system and intelligent scheduling, waiting time would decrease and access quality for health tourists would improve dramatically."

Clinical Competence and Safety

Exemplar 1 (Code 2): "Many clients initially come to us for specialized treatment and consistently emphasize that the scientific capability and experience of the physician is the main basis of their trust; when a physician with appropriate tenure and specialty explains the case carefully and clarifies the course of treatment, patients feel more at ease and better outcomes are reflected."

Exemplar 2 (Code 5): "In one center I observed that strict implementation of infection-control protocols, instrument sterilization, and adherence to the operating-room checklist directly reduced postoperative complications; likewise, the presence of oversight processes and clinical quality audits (audits and adverse-event reporting) shows that standards are truly followed, not just on paper."

Medical Infrastructure and Equipment

Exemplar 1 (Code 1): "Several patients, after an initial diagnosis, had to be referred to other provinces for

supplementary tests and advanced imaging; the absence of up-to-date diagnostic devices (such as MRI and precise laboratory analyses) increases both costs and time for clients and lowers trust in local centers."

Exemplar 2 (Code 5): "One of the problems reported by foreign clients and their companions was the lack of appropriate comfort facilities within the medical complex; the absence of suitable rest areas, nearby accommodations, and companion services (meals, accessible restrooms, wheelchair access) adversely affected the overall treatment experience and sometimes even disrupted recovery."

Patient-Centered Communication and Care

Exemplar 1 (Code 2): "Before the procedure, a comprehensive counseling session was provided; all steps, risks, and post-discharge follow-up were transparently explained, and even a multilingual brochure and a follow-up phone number were given, which greatly reduced the patient's anxiety."

Exemplar 2 (Codes 3, 6): "After discharge, the assigned nurse called twice to monitor medication use and recovery, and in cases where the patient had limited language proficiency, the center's interpreter handled the calls and coordinated care so that no problems would arise in continuing treatment."

Cost Transparency and Service Packages

Exemplar 1 (Code 5): "A patient was upset because additional invoices and unexpected costs appeared after the operation; they said no transparent price list or pro forma invoice had been provided, which led to disappointment and mistrust."

Exemplar 2 (Codes 1, 3): "In one center, a package including surgery, accommodation, and post-discharge follow-up was offered at a transparent price, and the pro forma invoice, insurance settlement procedure, and installment options were clearly specified for the patient; this transparency made decision-making easier for clients."

Emotional Experience

The second main theme extracted by the researcher is emotional experience. From the perspective of the participants, emotional experience includes five sub-themes: (1) satisfaction and trust, (2) anxiety, fear, and stress, (3) sense of security and calmness, (4) emotional connection and empathy of staff, and (5) expectations, discrepancy, and emotional feedback. Selected participant remarks are as follows:

Satisfaction and Trust

Exemplar 1 (Code 1): "One client reported after treatment: 'My symptoms decreased significantly, and I feel the treatment outcome exceeded expectations; this made my family and me completely satisfied with choosing this center.'"

Exemplar 2 (Code 3): "An expert stated: 'Regular follow-up after discharge and coordination among units made the patient feel continuously supported; the patient said these follow-ups increased their trust in the facility and that they would return if needed.'"

Anxiety, Fear, and Stress

Exemplar 1 (Code 1): "The patient repeatedly asked whether there might be side effects and said: 'I don't know what the treatment outcome will be; every day I worry that the operation might have no effect or my condition could worsen.'"

Exemplar 2 (Code 6): "A client with limited proficiency in Persian said: 'When I cannot precisely explain my intention to the doctor or correctly understand the instructions, I feel intense anxiety and fear that a mistake might occur in the treatment process.'"

Sense of Security and Calmness

Exemplar 1 (Code 2): "When I entered the center, I saw staff working with full protective equipment, disinfection notices and protocols displayed, and nurses disinfecting their hands before each action; such strict adherence to protocols reduced my anxiety and increased my sense of security."

Exemplar 2 (Code 4): "The inpatient ward was quiet, tidy, and well-lit, and we were told that in case of any problem there was an emergency contact number and a defined response process; when an urgent situation occurred, the team acted quickly, and this coordinated response demonstrated the presence of crisis-response mechanisms and reassured us."

Emotional Connection and Empathy of Staff

Exemplar 1 (Codes 1, 2): "The nurse addressed me by name in a calm and respectful tone, explained each examination step, and listened empathetically to my concerns; this humane interaction immediately made me feel safe and reduced my anxiety."

Exemplar 2 (Codes 4, 5): "Before the operation, the physician took time to empathetically answer my concerns and questions and explained the post-discharge follow-up process; that supportive counseling and the team's warm follow-up reduced my anxiety and strengthened my feeling of being cared for."

Expectations, Discrepancy, and Emotional Feedback

Exemplar 1 (Codes 1, 3): "Before traveling, the center's advertisements said all steps were pre-coordinated and schedules were precise, but here I found appointments were

irregular, and I had to return for some services; also, after the operation, additional costs appeared that had not been disclosed— I felt my expectations were not met and was disappointed by the experience."

Exemplar 2 (Codes 4, 6): "One patient said: 'If tariffs and schedules are transparent and there is coordination among units, I will return with peace of mind and will definitely recommend this center to acquaintances; a positive experience makes me revisit.'"

Cultural–Social Experience

The third main theme extracted by the researcher is the cultural–social experience. From the perspective of the participants, the cultural–social experience includes five sub-themes: (1) cultural competence and language support, (2) local hospitality and host-community engagement, (3) religious considerations and privacy norms, (4) cultural alignment of services and acceptance of social expectations, and (5) social consequences, stigma, and perceptual issues. Selected participant remarks are as follows:

Cultural Competence and Language Support

Exemplar 1 (Code 2): "When a foreign patient arrived, the center's interpreter accompanied them and explained all treatment stages in their language; having an interpreter and multilingual brochures enabled quicker consent and reduced communication errors."

Exemplar 2 (Code 5): "In a training session that was held, staff were instructed on clients' cultural customs— for example, observing gender-related considerations in examinations and providing meals consistent with religious dietary rules— which reduced cultural tensions and increased patient trust."

Local Hospitality and Host-Community Engagement

Exemplar 1 (Codes 1, 2): "The hospitality of local people and hotels was remarkable; the guesthouse owner welcomed us like family, guided us about routes and local restaurants, and even helped with transportation to and from the medical center— this reception reduced the patient's sense of loneliness and made the stay more comfortable."

Exemplar 2 (Codes 4, 5): "A local guide arranged a brief program of cultural visits and local markets after discharge; participating in those activities not only created a positive cultural experience but also improved the patient's spirits and connected them with the host community."

Religious Considerations and Privacy Norms

Exemplar 1 (Code 2): "That center provided a dedicated prayer room and meals suitable for patients' religious diets; the patient said knowing they could comfortably perform prayers and receive appropriate food reduced their worries and increased satisfaction with the amenities."

Exemplar 2 (Codes 1, 5): "One companion emphasized that respecting privacy and the option to choose the provider's gender (for examination and hospitalization) is very important; in cases where this was not observed, the patient felt discomfort and said it would be better if service scheduling were aligned with religious holidays and rituals to reduce psychological pressure."

Cultural Alignment of Services and Acceptance of Social Expectations

Exemplar 1 (Codes 1, 3): "For some patients, following the treatment plan did not concern only the patient; the family had to be present at the briefing session, and if an examination was needed, the patient's request for a same-gender physician was honored— when processes are aligned with cultural expectations, treatment acceptance and family cooperation improve significantly."

Exemplar 2 (Codes 2, 5): "We realized that brochures and consent forms lacking local images and language felt unfamiliar to foreign or certain local groups; therefore, we rewrote educational materials, adapting them with local examples and vocabulary, and conducted information sessions so companions could participate in decision-making— this reduced confusion and increased trust."

Social Consequences, Stigma, and Perceptual Issues

Exemplar 1 (Codes 1, 4): "One patient said: 'If local people find out what treatment I came for, I'll be stigmatized and my reputation will be harmed; that's why I preferred to go to a more distant center to remain anonymous.'"

Exemplar 2 (Codes 3, 6): "An expert stated: 'Whenever confidentiality is maintained and society responds receptively, patients willingly recommend their experience to others; but if information is disclosed or there is social stigma, the patient not only will not return but will also dissuade others from seeking care.'"

Process Convenience

The fourth main theme extracted by the researcher is process convenience. From the perspective of the participants, process convenience includes five sub-themes: (1) integrated appointment and booking, (2) interdepartmental coordination and medical referral, (3) facilitation of administrative, insurance, and payment procedures, (4) guidance and information accessibility, and (5) logistics services and accommodation coordination. Selected participant remarks are as follows:

Integrated Appointment and Booking

Exemplar 1 (Code 1): "Patients often have to call each center separately to book and manually coordinate times; the absence of an integrated booking platform means the operation date is not aligned with flights and accommodation, increasing logistical concerns."

Exemplar 2 (Code 2): "When the center offered combined packages including surgery, accommodation, and transfer, many clients said they were able to finalize everything with a single reservation; these packages simplified trip planning and reduced the likelihood of cancellations."

Interdepartmental Coordination and Medical Referral

Exemplar 1 (Codes 1, 3): "Some centers lack defined referral pathways, and the patient becomes shuttled among several facilities for complementary services; the absence of clear referral routes and protocols led to treatment delays and repeated diagnostic processes."

Exemplar 2 (Codes 2, 6): "By creating a network among the hospital, travel agencies, and local institutions, we were able to ensure secure patient transfers, coordinate accommodations, and follow up on medical records; this interdepartmental communication accelerated referrals and prevented medical information from being lost."

Facilitation of Administrative, Insurance, and Payment Procedures

Exemplar 1 (Codes 1, 5): "Patient admission sometimes takes hours because registration is manual, and at discharge, the medical documentation is incomplete and disorganized; a companion said that due to an incomplete file, insurance payment was delayed and they had to return, which complicated their experience."

Exemplar 2 (Codes 2, 3): "At another center, a transparent pro forma invoice was issued before surgery, electronic payment was available, and the finance officer explained the international settlement process with the insurer; the patient said this transparency and electronic payment tools greatly facilitated administrative procedures and reduced financial concerns."

Guidance and Information Accessibility

Exemplar 1 (Codes 2, 5): "The center gave me a multilingual booklet containing treatment steps, pre- and post-operative care, and a follow-up phone number in my native language; in addition, they had 24/7 online support that quickly answered any question I had and reduced my worries."

Exemplar 2 (Codes 1, 4): "When I arrived at the center, there was no multilingual guide or written information, and I became confused about fasting times, required documents, and the discharge follow-up process; the support phone line either did not answer or provided contradictory information— it seems that a clear guide and telephone/online support are essential."

Logistics Services and Accommodation Coordination

Exemplar 1 (Codes 1, 3): "When I arrived from the airport, no transfer had been arranged, and I had to take a public taxi; unreliable transportation and the lack of special services for patients led to delayed admission and considerable stress."

Exemplar 2 (Codes 4, 6): "The center we chose provided airport transfers, arranged suitable accommodations for companions, and an interpreter accompanied us— they even offered a short post-discharge sightseeing program, which made the treatment experience much smoother and more pleasant."

Based on the findings from the qualitative section and the theoretical studies of the present research, the resulting indicators are presented in Table 5.

Table 5

Dimensions and Indicators Affecting the Indigenous Customer Experience Model in Health Tourism in Mazandaran Province

Dimension	Indicator	Measure
Quality of Medical Services	Reliability	The services delivered were performed in accordance with what I was told or promised prior to treatment.
		The clinical team consistently and reliably pursued and implemented the therapeutic actions.
		The medical information and results communicated by the care staff were accurate and trustworthy.
	Responsiveness	Clinical staff responded to my requests and needs promptly and in a timely manner.
		The waiting time for consultation, interventions, or receiving responses was appropriate and acceptable.
		Staff answered my questions and concerns within a reasonable time and provided the necessary assistance with a collaborative attitude.
	Assurance (Service Assurance)	The medical center transparently displayed its credentials, licenses, and certifications, which contributed to my trust in service quality.

		Written information or contracts (including an explanation of the treatment pathway, expected outcomes, and refund/guarantee policy) were provided to me.
		Post-treatment support and follow-up services (a guarantee of post-discharge care or access to follow-up visits) were available and dependable.
Emotional Experience	Sense of Assurance	I felt safe and reassured throughout the stages of treatment.
		I trusted and had confidence in the competence and qualifications of the clinical staff.
		I was certain that, if a problem occurred, the necessary support and assistance would be provided in a timely manner.
	Feeling of Calm	I felt calm and comfortable during my presence in and receipt of services from the medical center.
		The physical environment (space, lighting, quietness, cleanliness) and the center's amenities helped reduce anxiety and create calm.
		Clear information and explanations from the clinical staff about the treatment process reduced my worries and increased my sense of calm.
	Staff Empathy with the Patient	Staff listened carefully to my concerns and emotions.
		Staff demonstrated that they understood my pain and anxiety and empathized with me.
		The verbal and nonverbal behavior of staff made me feel supported and at ease.
Cultural–Social Experience	Respect for Cultural Differences	Staff respected my cultural customs, practices, and dress.
		The center's services and procedures (such as gender segregation, appropriate scheduling for religious observances, or food options aligned with cultural considerations) were adapted to my cultural needs.
		Staff behavior and communication were sensitive and dignified toward my cultural beliefs and traditions.
	Effective Communication	Staff presented clinical information and explanations in simple, understandable language.
		Communication and coordination among the center's different units (e.g., admissions, treatment, follow-up) were transparent and unambiguous.
		In communicating with me, staff considered my cultural and social context and tailored messages accordingly.
	Understanding the Expectations of International Patients	Before arrival or during admission, staff asked about—and took into account—my expectations and needs as an international patient.
		The services and processes provided were adapted to my cultural, linguistic, and therapeutic expectations as an international patient.
		Background information (on costs, treatment stages, scheduling, and required documents) was provided in line with my expectations and needs as an international patient.
Process Convenience	Access to Information	Information about clinical services, specializations, and the capabilities of medical centers was readily and quickly accessible to me.
		Information on costs, treatment stages, and required documents was provided transparently and comprehensively.
		Channels for accessing information (website, telephone, online support, brochures, etc.) were practical and suited to my needs (in terms of language and format).
	Admission Speed	The time required to complete admission and registration procedures was short for me.
		The interval between arriving at the center and the first encounter with the clinical team was brief.
		Admissions staff admitted me quickly and efficiently, and administrative procedures were completed without unnecessary delay.
	Post-Treatment Support	Accessing medical follow-up services after discharge (such as follow-up visits, phone calls, or online consultations) was easy for me.
		Post-treatment instructions (how to take medications, required care, and warning signs) were provided clearly and completely.
		If a problem or question arose after discharge, I received timely responses and support from the center.

Table 6 presents the reliability and convergent validity indices for the four components related to quality of medical services. At the overall level, "Quality of Medical Services" shows Cronbach's alpha = 0.858, construct reliability (rho_A) = 0.863, composite reliability (CR) = 0.914, and AVE = 0.780, indicating a very strong status—reflecting high reliability and strong convergent validity for the overall construct. "Responsiveness" likewise is evaluated as acceptable to desirable with alpha = 0.778, rho_A = 0.778, CR = 0.871, and AVE = 0.693.

Table 6

Assessment of Relationships Among Indicators Related to Quality of Medical Services

Indicator	Cronbach's Alpha	Construct Reliability (rho_A)	Composite Reliability (CR)	Average Variance Extracted (AVE)
Assurance (Service Assurance)	0.659	0.675	0.815	0.597
Reliability	0.270	0.352	0.684	0.446
Responsiveness	0.778	0.778	0.871	0.693
Quality of Medical Services (overall)	0.858	0.863	0.914	0.780

Among the subcomponents, differences are observed: although "Assurance (Service Assurance)" has a Cronbach's alpha of 0.659 (slightly below the conventional 0.70 threshold), its CR = 0.815 and AVE = 0.597 indicate an acceptable status in terms of composite reliability and convergent validity, making it admissible in exploratory studies or amenable to modest strengthening. In contrast, "Reliability" is not in a favorable condition—alpha = 0.270 and rho_A = 0.352 reveal severe weakness in the internal correlation of items and reflective reliability; although CR = 0.684 is close to the threshold, AVE = 0.446 (< 0.50) signals weak convergent validity and suggests that the items of this indicator may be weak or that its structure requires revision. The overall "Quality of Medical Services" construct demonstrates strong reliability and convergence (alpha = 0.858, rho_A = 0.863, CR = 0.914, AVE = 0.780), indicating desirable coherence among items in representing the concept. Among the subconstructs, "Responsiveness" performs acceptably (alpha = 0.778, CR = 0.871, AVE = 0.693), and while "Assurance" has a borderline alpha (0.659), its CR = 0.815 and AVE = 0.597 show relative convergence. The notable weakness pertains to "Reliability" (alpha = 0.270, rho_A = 0.352, AVE = 0.446).

Figure 1

Relationship Among Indicators Related to Quality of Medical Services

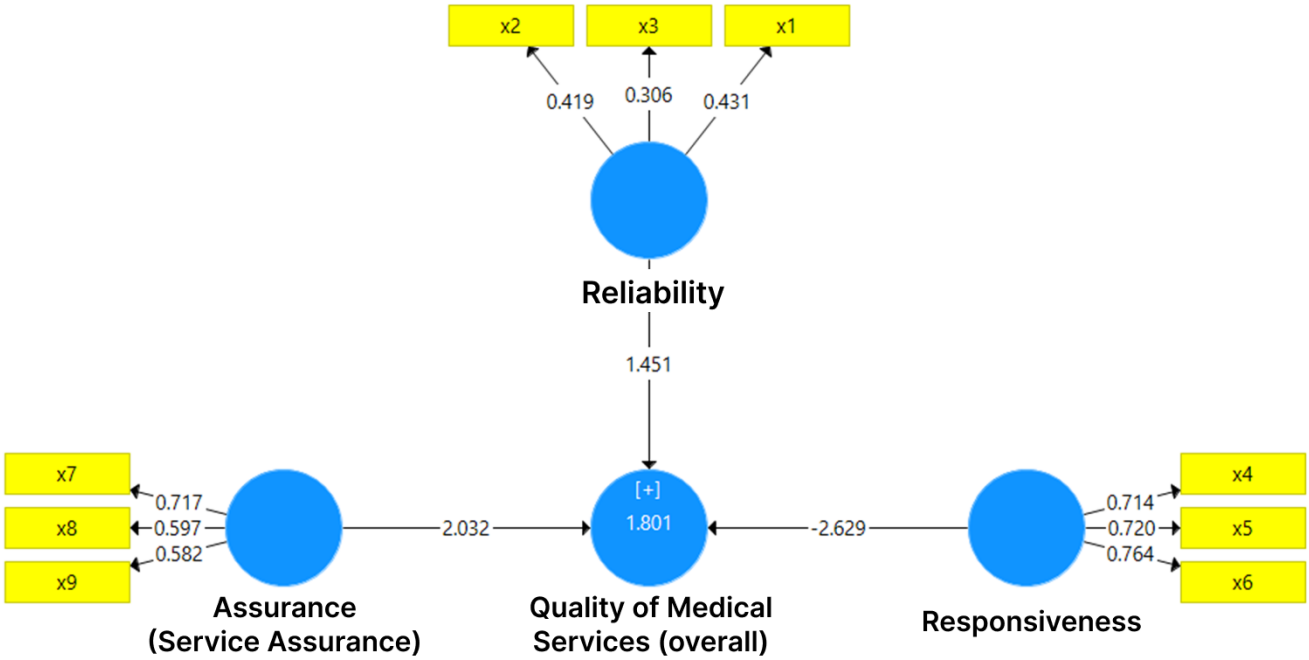


Table 7 shows the reliability and convergent validity status of the four sub-constructs related to "Emotional Experience." The overall construct of "Emotional Experience" has α = 0.713, rho_A = 0.734, and CR = 0.724, which places it at an acceptable level in terms of reliability; however, AVE = 0.470 is slightly below the conventional 0.50 threshold, indicating that convergent validity is not fully achieved. In other words, overall the construct is

defensible but needs improvement to enhance convergent validity.

Table 7

Assessment of Relationships Among Indicators Related to Emotional Experience

Indicator	Cronbach's Alpha	Construct Reliability (rho_A)	Composite Reliability (CR)	Average Variance Extracted (AVE)
Sense of Assurance	0.623	0.748	0.664	0.425
Feeling of Calm	0.720	0.729	0.725	0.469
Staff Empathy with the Patient	0.548	0.588	0.559	0.306
Emotional Experience (overall)	0.713	0.734	0.724	0.470

At the sub-construct level, a meaningful divergence is observed: "Sense of Assurance" has α = 0.623 and CR = 0.664, both below the 0.70 threshold (with a relatively higher rho_A reported), and AVE = 0.425 indicates weak convergence; thus, this sub-construct has borderline reliability and convergence. "Feeling of Calm" shows α, rho_A, and CR around 0.72 (reliability at an acceptable level) but AVE = 0.469 is still somewhat low; that is, convergence is near the threshold but not yet complete. "Staff Empathy with the Patient" has the weakest status (α = 0.548, rho_A ≈ 0.588, CR = 0.559, and AVE = 0.306), indicating low inter-item correlation, insufficient reliability, and very weak convergence, and it should be revised. The overall "Emotional Experience" construct is acceptable in terms of reliability (α = 0.713, rho_A = 0.734, CR = 0.724) but AVE = 0.470 is below the 0.50 threshold, indicating incomplete convergence. The sub-constructs are heterogeneous: "Sense of Assurance" and "Feeling of Calm" range from borderline to acceptable (Sense of Assurance: α = 0.623, CR = 0.664, AVE = 0.425; Feeling of Calm: α = 0.720, CR = 0.725, AVE = 0.469), whereas "Staff Empathy" is weak (α = 0.548, CR = 0.559, AVE = 0.306) and requires revision.

Figure 2

Relationship Among Indicators Related to Emotional Experience

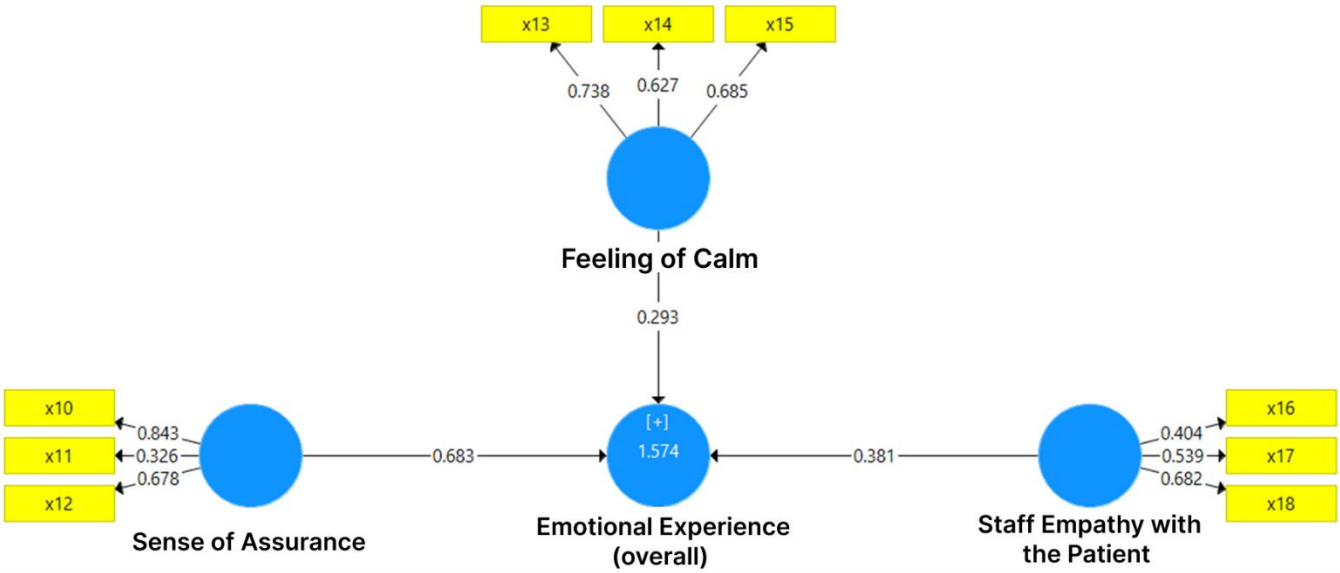


Table 8 indicates an asymmetrical and somewhat inconsistent status among the sub-constructs of cultural–social experience; the overall construct of "Cultural–Social Experience," with α = 0.755, rho_A = 0.786, CR = 0.767,

and AVE = 0.528, is, on the whole, acceptable in terms of reliability and convergence, but the substantial fluctuation across individual sub-construct indices is a cautionary signal for interpreting details.

Table 8

Assessment of Relationships Among Indicators Related to Cultural–Social Experience

Indicator	Cronbach's Alpha	Construct Reliability (rho_A)	Composite Reliability (CR)	Average Variance Extracted (AVE)
Respect for Cultural Differences	0.335	0.571	0.501	0.272
Effective Communication	0.030	0.806	0.558	0.460
Understanding the Expectations of International Patients	0.879	0.884	0.001	0.713
Cultural–Social Experience (overall)	0.755	0.786	0.767	0.528

Specifically, "Respect for Cultural Differences" is weak (α = 0.335, rho_A = 0.571, CR = 0.501, AVE = 0.272), indicating low inter-item correlation and insufficient convergence; "Effective Communication" also has a very low alpha (0.030) alongside a relatively high rho_A (0.806), which is a strong sign of problems in the items (e.g., few items, reverse-coded items, or data-entry errors), and CR = 0.558 and AVE = 0.460 indicate borderline convergence. For "Understanding the Expectations of International Patients," alpha and rho_A are high (0.879 and 0.884) and AVE is strong (0.713), but CR = 0.001 appears practically impossible and is likely due to a computational or data-entry error; therefore, there is a necessity to recheck the CR value and calculations. The overall construct of "Cultural–Social Experience" has acceptable reliability and convergence (α = 0.755, rho_A = 0.786, CR = 0.767, AVE = 0.528). However, the sub-constructs are heterogeneous: "Respect for Cultural Differences" has weak internal correlation and convergence (α = 0.335, AVE = 0.272), and "Effective Communication" shows a very low alpha (0.030) alongside a high rho_A, indicating item or calculation issues. "Understanding the Expectations of International Patients" is also highly suspect due to CR = 0.001, which is not feasible.

Figure 3

Relationship Among Indicators Related to Cultural–Social Experience

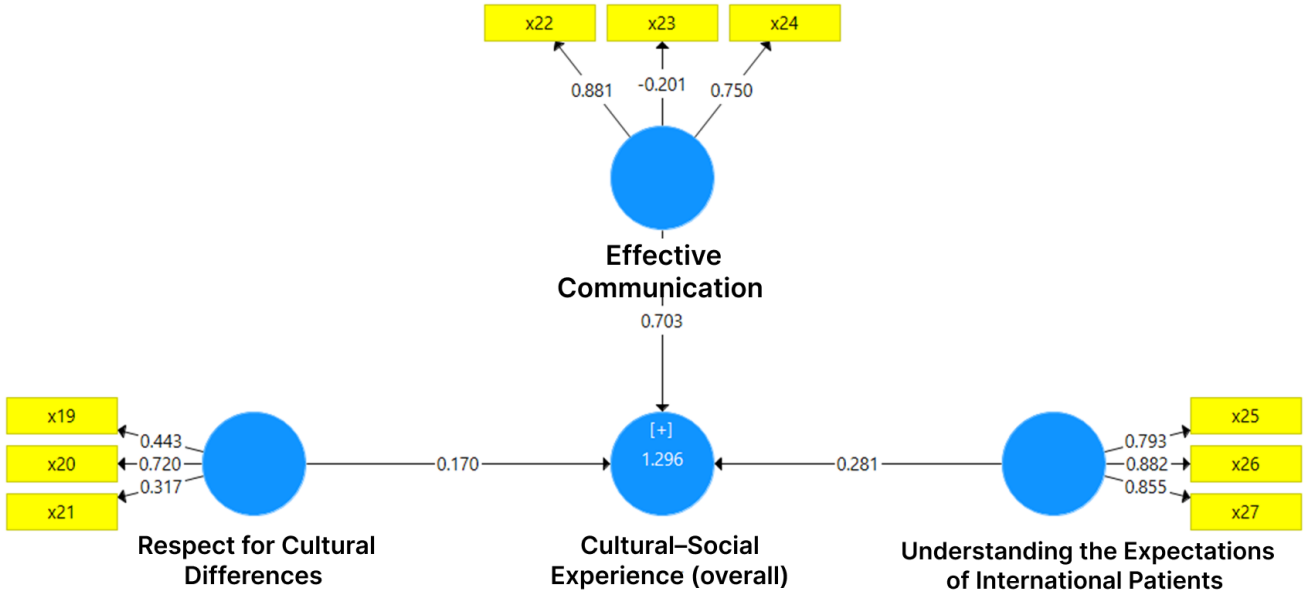


Table 9 shows an excellent overall status for "Process Convenience"; the overall construct, with Cronbach's alpha = 0.901, rho_A = 0.906, composite reliability = 0.903, and AVE = 0.758, is evaluated as strong in terms of internal

reliability and convergent validity, indicating high item coherence in representing the overall concept of process convenience.

Table 9

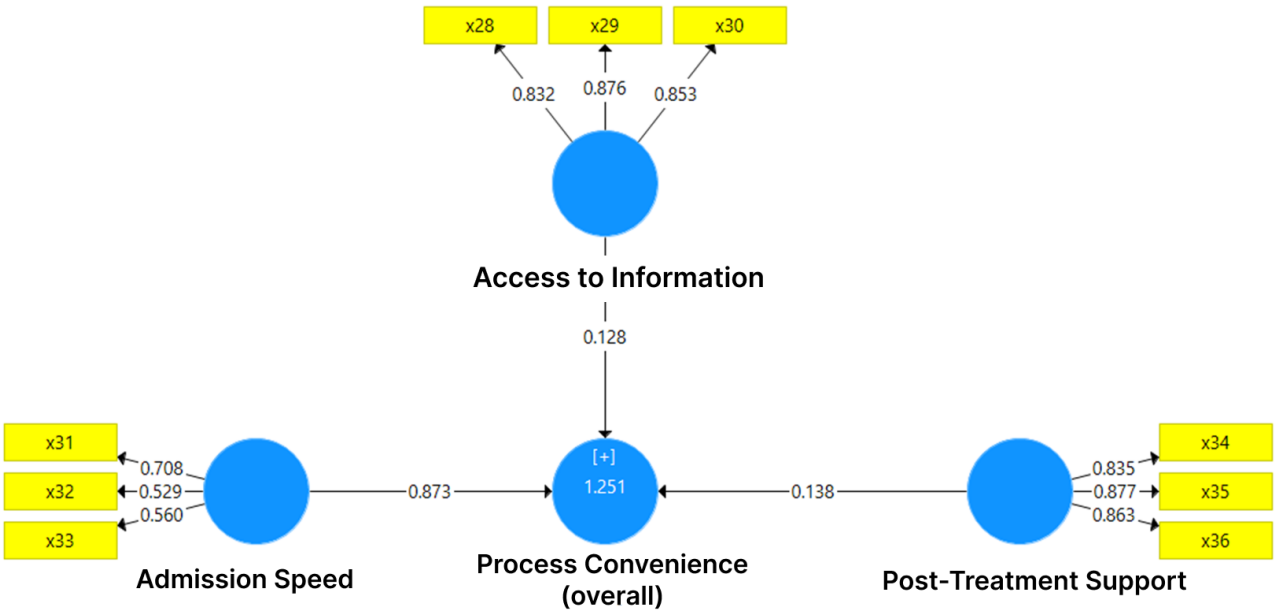
Assessment of Relationships Among Indicators Related to Process Convenience

Indicator	Cronbach's Alpha	Construct Reliability (rho_A)	Composite Reliability (CR)	Average Variance Extracted (AVE)
Access to Information	0.890	0.890	0.890	0.729
Admission Speed	0.636	0.643	0.629	0.365
Post-Treatment Support	0.894	0.894	0.894	0.737
Process Convenience (overall)	0.901	0.906	0.903	0.758

Among the sub-constructs, "Access to Information" (α / rho_A / CR = 0.890, AVE = 0.729) and "Post-Treatment Support" (α / rho_A / CR = 0.894, AVE = 0.737) both have very good status, indicating that items related to multilingual information provision, guide booklets, and post-discharge support are measured with convergence and credibility. In contrast, "Admission Speed" is weaker: α = 0.636, rho_A = 0.643, and CR = 0.629 are all near or below the conventional 0.70 threshold, and AVE = 0.365 is below 0.50, indicating weak item convergence and the need to review or augment the items in this dimension. The overall "Process Convenience" construct is strong in terms of reliability and convergence (α = 0.901, rho_A = 0.906, CR = 0.903, AVE = 0.758), indicating high item coherence in representing the concept. The sub-constructs "Access to Information" and "Post-Treatment Support" are excellent (both with α ≈ 0.89 and AVE > 0.72), showing high convergence and dependability. In contrast, "Admission Speed" is weak (α = 0.636, CR = 0.629, AVE = 0.365), so items in this dimension need revision or strengthening, and results related to it should be interpreted with caution.

Figure 4

Relationship Among Indicators Related to Process Convenience



This study aimed to assess the status of various health tourism dimensions in Mazandaran Province and determine the degree of deviation of each dimension from the desired criterion using the one-sample t-test.

Table 10

Results of the One-Sample t-Test Regarding Health Tourism Dimensions in Mazandaran Province

Dimension	N	Mean	Standard Deviation	t-value	df	Sig. (p-value)
Quality of Medical Services	384	3.5231	0.74705	13.723	383	0.000
Emotional Experience	384	3.6013	0.57112	20.631	383	0.000
Cultural–Social Experience	384	3.2315	0.60612	7.484	383	0.000
Process Convenience	384	3.8053	0.86122	18.323	383	0.000

The one-sample t-test results show that for all health tourism dimensions in Mazandaran Province, the observed means differ significantly from the benchmark value (in the one-sample test) (t with df = 383 and $p < 0.001$ for all variables). This indicates that the sample's opinions (n = 384) regarding each dimension differ significantly from the hypothetical baseline, and this statistical difference is very strong. In terms of mean values, "Process Convenience," with a mean of 3.8053, has the highest score, indicating a relatively positive and prominent evaluation in this dimension; "Emotional Experience," with a mean of 3.6013, also shows a favorable status. "Quality of Medical Services" has a mean of 3.5231, indicating an overall positive evaluation but somewhat lower than the previous two dimensions, and "Cultural–Social Experience," with a mean of 3.2315, has the lowest mean. Regarding dispersion, the smallest standard deviation pertains to "Emotional Experience" (0.571), indicating greater homogeneity of opinions in this dimension, and the largest standard deviation pertains to "Process Convenience" (0.861), indicating greater variability of views in that dimension. In summary, the data reflect a generally positive evaluation by the sample regarding the dimensions of health tourism, but the differences among dimensions are notable: the cultural–social dimension appears weaker than the others and requires attention and improvement, while process convenience and emotional experience are considered relative strengths. Given the strong significance of the results and the adequate sample size, it is recommended that planning and policy efforts focus on enhancing cultural–social aspects and, to maintain or strengthen the strengths (process convenience, emotional experience, and quality of medical services), supportive measures should be considered.

4. Discussion and Conclusion

The present study aimed to design and validate an indigenous model of customer experience (CX) in health tourism within Mazandaran Province, emphasizing the four interrelated dimensions of quality of medical services, emotional experience, cultural–social experience, and process convenience. Findings from the qualitative and quantitative phases collectively highlight that patients' perceived experiences in health tourism are multidimensional, evolving from clinical performance to emotional and cultural touchpoints that determine the perceived value and satisfaction of international and domestic health tourists. The results confirm that among all dimensions, process convenience exhibited the highest mean score (M = 3.80), followed by emotional experience (M = 3.60), quality of medical services (M = 3.52), and finally cultural–social experience (M = 3.23). These findings provide new empirical evidence that while patients acknowledge satisfactory technical and process-related aspects, they perceive substantial room for improvement in cultural adaptation and social engagement in the province's health tourism services.

The prominence of process convenience aligns with the global literature emphasizing operational smoothness and integrated coordination as critical determinants of customer satisfaction in medical tourism (Engül & Hakan, 2020; Ulusoy & Tosun, 2020). Factors such as ease of booking, accessibility of information, payment flexibility, and post-treatment follow-up were consistently rated high by respondents. This supports prior findings that transparent and coordinated processes reduce patient anxiety, especially among international tourists navigating complex administrative and linguistic systems (Béland & Zarzeczny, 2018; Rezvani & Colleagues, 2021). The high internal reliability ($\alpha = 0.901$) and strong convergent validity (AVE = 0.758) of this construct suggest that Mazandaran's medical centers and associated tourism institutions have made tangible strides in digitizing administrative flows, improving information systems, and simplifying payment and insurance processes. These advancements mirror the international trend toward patient-centric service architecture, evident in Turkey's and Portugal's health tourism networks that integrate hospital logistics with hospitality and travel intermediaries (Da Costa Guerra et al.,

2021; Sag & Zengul, 2019). However, despite these successes, the subdimension of "admission speed" displayed weaker validity (α = 0.636; AVE = 0.365), revealing that bureaucratic bottlenecks and admission delays continue to undermine the overall experience—a recurring operational gap also identified in earlier Iranian research (Khazai et al., 2016; Rezvani & Colleagues, 2021).

The second major finding concerns the strong yet partially convergent construct of emotional experience, which achieved acceptable reliability (α = 0.713) but sub-threshold convergence (AVE = 0.470). Emotional reassurance and calmness emerged as core affective outcomes that shape patients' sense of safety, trust, and belonging. This result resonates with prior theoretical models suggesting that emotional cues—such as empathy, tone of interaction, and atmosphere—mediate the translation of clinical quality into perceived satisfaction (Lemon & Verhoef, 2016; Pouya et al., 2020). In the present study, "feeling of calm" and "sense of assurance" were rated moderately high, whereas "staff empathy" underperformed (α = 0.548; AVE = 0.306), pointing to an empathy gap in interpersonal service delivery. This observation aligns with findings from Iran's broader service sectors, where training deficits and high staff workloads limit empathic communication (Bestam et al., 2016; KhoshTaynet & Sabahi, 2017). Comparable patterns were noted in Italy's post-pandemic recovery phase, where emotional experience regained salience as travelers prioritized psychological comfort and staff attentiveness over purely functional benefits (Manna et al., 2020). Thus, the Mazandaran context reflects a transitional stage in which infrastructural and procedural efficiency outpaces the affective and interpersonal components of CX.

The quality of medical services dimension, although demonstrating strong overall reliability (α = 0.858; AVE = 0.780), showed uneven internal consistency across subcomponents. "Responsiveness" and "assurance" were relatively strong, but "reliability" exhibited low internal correlation (α = 0.270; AVE = 0.446), suggesting inconsistencies between promised and delivered services. This echoes Rezvani et al.'s (Rezvani & Colleagues, 2021) analysis of Iranian hospitals, which revealed mismatches between pre-treatment communication and post-service performance as a key driver of distrust among medical tourists. At the global level, comparative studies emphasize that reliability—defined as consistent, error-free service delivery—is foundational to clinical trust, yet also the hardest dimension to institutionalize due to varying standards and fragmented oversight mechanisms (Béland & Zarzeczny, 2018; Ulusoy & Tosun, 2020). Turkish and Thai models have mitigated this challenge through accreditation systems and transparent outcome reporting (Engül & Hakan, 2020). For Mazandaran, similar institutional solutions—such as standardized protocols, published performance dashboards, and digital follow-up systems—could enhance perceived reliability. Moreover, the integration of green and technology-mediated health services, as highlighted by Aramesh et al. (Aramesh et al., 2020), may further reinforce both quality assurance and brand credibility by linking eco-ethical conduct with patient well-being.

Despite moderate-to-strong performance across three dimensions, the cultural–social experience construct scored the lowest (M = 3.23; α = 0.755; AVE = 0.528), underscoring that cultural sensitivity and intercultural communication remain underdeveloped components of Iran's health tourism system. Sub-constructs such as "respect for cultural differences" (α = 0.335; AVE = 0.272) and "effective communication" (α = 0.030; AVE = 0.460) reflected weak internal consistency, signaling limited preparedness among staff to accommodate diverse linguistic, dietary, and religious needs of international patients. This result corroborates prior observations that cultural competence is a critical differentiator in patient satisfaction and destination loyalty (Harandi & Mirzaian Khamsa, 2017; Zekavati et al., 2023). Studies in Mashhad and Yazd similarly identified deficits in cross-cultural communication and the lack of multilingual materials as major barriers to expanding inbound medical tourism (Sachmeforosh et al., 2018; Sanavi Grossian et al., 2018). International comparisons reinforce this view: destinations such as Turkey and Malaysia have institutionalized training programs and multilingual assistance as pillars of their competitive advantage (Engül & Hakan, 2020; Sag & Zengul, 2019). The weak reliability of these cultural indicators in Mazandaran suggests that while infrastructure and treatment quality have matured, the "soft" dimensions—communication, empathy, and cultural fluency—lag behind.

These findings are consistent with the sociological view that tourism systems evolve unevenly: physical and procedural infrastructures are often modernized before corresponding social and cultural competencies are developed (Farastkhah, 2016; Motegh, 2021). The relatively strong emotional and procedural dimensions compared to cultural experience may therefore reflect the current modernization trajectory of Iran's provincial healthcare and tourism systems. Moreover, the significant t-values ($p <$

0.001) for all dimensions demonstrate that respondents perceive real differences between actual and expected performance, supporting the assertion that expectation management and transparency remain pivotal. Similar expectation–experience gaps have been recorded in Iran's national analyses (Rezvani & Colleagues, 2021) and in comparative research on European and East Asian destinations, where mismatched marketing promises exacerbate post-service dissatisfaction (Gaines & Lee, 2019; Lee et al., 2020). Therefore, an integrated CX strategy must align pre-arrival communication, clinical performance, and post-treatment engagement to maintain credibility across the entire patient journey.

Another interpretation concerns the systemic interplay between tourism development and governance. Prior studies in Sari city emphasized the necessity of embedding tourism within regional development frameworks that balance economic growth with social participation and sustainability (Rasouli et al., 2025; Rasouli, Rajabi, et al., 2024a, 2024b). The current findings indirectly validate this argument: provinces that invest in coordinated governance—through digital systems, stakeholder partnerships, and participatory planning—tend to score higher on process convenience and service quality, both of which depend on cross-sectoral alignment (Da Costa Guerra et al., 2021). Conversely, cultural–social experience, which depends more on micro-level interactions and social capital, benefits less directly from top-down infrastructure improvements and more from bottom-up capacity building, staff training, and cultural literacy programs (Malmir et al., 2023). Thus, strengthening Mazandaran's health tourism ecosystem requires multi-level interventions that combine institutional integration with individual empathy training and cultural adaptation.

The positive correlations between emotional assurance, service quality, and loyalty observed here echo international research linking trust-based relationships with repeat visits and word-of-mouth promotion (Dedeke, 2017; Motouripour et al., 2018). Studies in Isfahan and Kurdistan have shown that tourists' sense of safety, empathy, and environmental aesthetics significantly predict loyalty behaviors and intention to recommend (Alipuri et al., 2016; Pouya et al., 2020). These findings, in combination with the present results, underscore that emotional and experiential factors are as influential as economic incentives in shaping destination competitiveness. Furthermore, the alignment between emotional satisfaction and perceived process convenience reflects the service-dominant logic of marketing, in which value is co-created through interaction and not merely delivered through service transactions (Lemon & Verhoef, 2016; Shafei, 2019). Consequently, improving cultural and emotional experience is not ancillary but central to sustainable health tourism management.

From a methodological perspective, the study's multi-phase design validates the usefulness of mixed-methods and grounded approaches for local model construction, consistent with prior Iranian methodological contributions (Bazargan, 2018; Farastkhah, 2016). The triangulation between qualitative thematic analysis and quantitative confirmatory testing enabled the identification of latent constructs and the assessment of their psychometric robustness. While the reliability results of most dimensions were acceptable to strong, the inconsistent coefficients in subdimensions such as empathy and cultural respect indicate the necessity for refinement of item wording, response scaling, and contextual interpretation. These outcomes reaffirm the argument advanced by Ghasemi et al. (Ghasemi et al., 2018) that localized measurement frameworks must reflect the linguistic, institutional, and sociocultural realities of Iranian healthcare settings rather than uncritically adapting Western models.

In summary, the results of this study extend the theoretical and empirical understanding of CX in Iran's health tourism sector. They reveal that Mazandaran Province is progressing toward a mature, integrated service system with strong procedural and emotional pillars but still underdeveloped cultural–social competencies. These findings corroborate earlier calls for holistic strategic marketing and governance interventions that encompass training, certification, partnership management, and transparent communication (Bestam et al., 2016; Da Costa Guerra et al., 2021; KhoshTaynet & Sabahi, 2017; Rasouli, Yazarlu, et al., 2024). Ultimately, this research contributes a validated indigenous model that can guide benchmarking, policy evaluation, and service innovation toward a more inclusive and competitive health tourism ecosystem in northern Iran.

This study, while comprehensive in design, is subject to several limitations. First, its empirical data were collected from a single province—Mazandaran—which limits generalizability to other Iranian or regional health tourism destinations with different infrastructural and cultural profiles. Second, the self-report nature of the survey may have introduced response biases such as social desirability or halo effects, especially given the high involvement and emotional context of medical treatments. Third, certain subdimensions (e.g., empathy and cultural respect) exhibited

low internal consistency, which could result from limited sample heterogeneity or item translation nuances. Fourth, cross-sectional design precludes causal inference; therefore, relationships among constructs (e.g., between process convenience and emotional assurance) should be interpreted as correlational. Finally, contextual disruptions such as post-COVID adjustments and seasonal tourism fluctuations might have affected perceptions during data collection, and their effects were not isolated statistically.

Future studies should replicate this model across multiple provinces and at the national level to test structural invariance and enhance external validity. Longitudinal designs could capture dynamic shifts in patient experience as technological, regulatory, and socio-cultural conditions evolve. Researchers should also employ multi-source data, including provider-side evaluations and observational audits, to triangulate self-reported measures. Expanding the model to include new constructs such as digital engagement, environmental sustainability, and social trust could better reflect the post-pandemic evolution of health tourism. Additionally, comparative cross-country studies with destinations like Turkey, India, and Malaysia could contextualize Iran's performance within global benchmarks. Finally, qualitative follow-up studies focusing on empathy training, intercultural communication, and narrative experience mapping could uncover deeper insights into the emotional and cultural dimensions of medical travel.

Practitioners and policymakers should prioritize staff development programs in cultural competence, empathy, and multilingual communication. Establishing a unified provincial health tourism portal integrating hospitals, accommodation providers, and logistics services could further enhance process convenience and information accessibility. Accrediting medical facilities for transparency in pricing and quality assurance can strengthen perceived reliability. Collaboration among tourism boards, healthcare authorities, and educational institutions should aim to co-create standardized training and evaluation frameworks for health tourism professionals. Finally, sustained investment in patient feedback systems and digital follow-up channels will not only improve service quality but also transform positive experiences into lasting advocacy, positioning Mazandaran as a trusted, empathetic, and culturally adaptive health tourism destination.

Authors' Contributions

Authors contributed equally to this article.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethics Considerations

In this research, ethical standards including obtaining informed consent, ensuring privacy and confidentiality were considered.

References

Alipuri, E., Alipour, A., & Behrmand, S. (2016). Strategic planning of health tourism in line with the sustainability of the residential system of desert and desert areas, a case study (Isfahan province). 4th International Conference on Civil Engineering, Architecture and Urban Development with Sustainable Development Approach,

Ananchenkova, P. I. (2021). The impact of COVID-19 pandemic on medical tourism development. *Problemy Sotsial'noi Gigieny, Zdravookhraneniiai Istorii Meditsiny*, *29*(2), 203-205. https://doi.org/10.32687/0869-866x-2021-29-2-203-205

Aramesh, H., Tabavar, A. A., Yagubi, N., & Derakhshan, A. (2020). The impact of green marketing on medical tourism with the mediating role of technology. *Journal of Business Management Perspective*, *19*(74), 137-155. https://doi.org/10.52547/jbmp.19.41.137

Bazargan, A. (2018). *An introduction to qualitative and mixed research methods*. Didar Publications.

Béland, D., & Zarzeczny, A. (2018). Medical tourism and national health care systems: An institutionalist research agenda. *Globalization and Health*, *14*(1), 1-7. https://doi.org/10.1186/s12992-018-0387-0

Bestam, H., Moadi Ghalibaf, M. M., & Ameli, A. (2016). The role of marketing in the development of health tourism in Iran. *Journal of the Army School of Nursing*, *16*(30), 10-17. https://civilica.com/doc/898720

Da Costa Guerra, R. J., Gonçalves, E. C., & Figueiredo, V. (2021). *Managing partnerships between tourism and hospitality*

stakeholders: The case of health and wellness products in Portugal. IGI Global. https://doi.org/10.4018/978-1-7998-5691-7.ch019

Dedeke, A. N. (2017). Creating sustainable tourism ventures in protected areas: An actor-network theory analysis. *Tourism Management*, *61*, 161-172. https://doi.org/10.1016/j.tourman.2016.10.003

Engül, C., & Hakan, O. R. A. (2020). Healthcare tourism in second decade of 21st century: A review of Turkey as the new global center for international patients. *Journal of Health Systems and Policies*, *2*(1), 56-86. https://dergipark.org.tr/en/pub/jhesp/issue/54021/683545

Farastkhah, M. (2016). *Qualitative research method in social sciences with emphasis on grounded theory*. Aghat Publications.

Gaines, J., & Lee, C. V. (2019). *Medical tourism*. Elsevier. https://doi.org/10.1016/B978-0-323-54696-6.00039-2

Ghasemi, M., Movahed, A., & Kodkhodaei, S. (2018). An analysis of theoretical models and presentation of a conceptual model for capacity development of medical tourism in Iran. 14th Congress of the Geographical Society of Iran,

Harandi, A., & Mirzaian Khamsa, P. (2017). Explaining the health tourist attraction model: Using a classical foundational data theory strategy. *Urban Tourism Journal*, *4*(1), 87-98. https://doi.org/10.22059/JUT.2017.61997

Khazai, N., Amiri Bashli, M., Rasouli, S. H., & Gorgani, G. A. (2016). Analysis and Effects of Health Tourism Industry Development in Mazandaran Province. 2nd Annual Conference on Research in Civil Engineering, Architecture, Urbanism, and Sustainable Environment,

KhoshTaynet, B., & Sabahi, A. (2017). The relationship between strategic marketing and the sustainable development of health tourism in Iran. 5th National Conference on Applied Research in Management and Accounting,

Lee, T. J., Han, J. S., & Ko, T. G. (2020). Health-oriented tourists and sustainable domestic tourism. *Sustainability*, *12*(12), 4988. https://doi.org/10.3390/su12124988

Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the customer journey. *Journal of Marketing*, *80*(6), 69-96. https://doi.org/10.1509/jm.15.0420

Malmir, M., Salehi, K., Moghadam Zadeh, A., & Dehghani, M. (2023). Meaning and concept of quality culture based on the view of stakeholders at Tehran University. *Organizational Culture Management*. https://doi.org/10.22059/jomc.2023.364285.1008585

Manna, R., Cavallone, M., Ciasullo, M. V., & Palumbo, R. (2020). Beyond the rhetoric of health tourism: Shedding light on the reality of health tourism in Italy. *Current Issues in Tourism*, *23*(14), 1805-1819. https://doi.org/10.1080/13683500.2019.1650726

McNickel, D. (2019, May). Hands on brands. Marketing Magazine,

Mohammad Alipour Kanari, A., & Amirdehi, S. (2017). Factors affecting the development of health-medical tourism in the hospitals of Mazandaran province and its prioritization. 3rd National Conference on Organizational Transformation and Innovation, Mashhad.

Motegh, H. (2021). Evaluating the Social Impacts of Tourism from a Sociological Perspective. *Sociological studies*, *19*(53), 91-109. https://journals.iau.ir/article_682476.html

Motouripour, R., Emadzadeh, M., & Mahmoudi Ghasare, S. (2018). Investigating factors affecting the loyalty of foreign tourists (case study: Isfahan). 2nd International Conference on Modern Researches in Management, Economics, Accounting and Banking, Georgia-Tbilisi.

Mousaviyan, M., & Mousavi, S. A. (2017). Examining and presenting appropriate solutions to strengthen tourism in the development of cities and rural areas of the country. 1st Conference on Examining Challenges and Presenting New Urban Management Solutions, Tehran.

Pouya, A., Soltanpanah, H., & Irandoost, M. (2020). The Role of Experience-Based Marketing Strategies on Nature Tourists' Loyalty (Case Study: Ecotourism in Kurdistan Province). *Consumer Behavior Studies*, *7*(1), 1-12. https://www.sid.ir/paper/964265/fa

Rasouli, S. H., Rahmani, S., Gholami Pouya, M. R., & Emamgholivand, F. (2025). Explaining Effective Indicators on Sustainable Tourism in Sari City. *Scientific Journal of Spatial Economy Organization*, *7*, 85-106. https://sanad.iau.ir/Journal/jose/Article/1208574/FullText

Rasouli, S. H., Rajabi, A., & Motavali, S. a.-D. (2024a). Examining the Status of Sustainable Tourism in Sari City in the Context of Regional Development. *Scientific Journal of Urban Planning and Development*, *4*(16). https://sanad.iau.ir/Journal/juep/Article/1122643

Rasouli, S. H., Rajabi, A., & Motavali, S. a.-D. (2024b). Explaining a Tourism Model Centered on Regional Development (Case Study: Sari City). *Regional Geography Journal*, *22*(2), 139-168. https://jgrd.um.ac.ir/article_44705.html

Rasouli, S. H., Yazarlu, H., Pouriani, J., & Khamsai, S. (2024). Measuring Social Participation in the Development of the Tourism Industry and Its Application in Urban Planning Literature (Case Study: Sari City). *Scientific Journal of Social Issues and Politics*, *2*(7), 1-21. https://sanad.iau.ir/Journal/jsp/Article/1127173

Rezvani, H., & Colleagues. (2021). Analyzing the Customer Experience Gap in Health Tourism in Iran. *Journal of Service Management*, *13*(2), 85-102.

Sachmeforosh, L., Zanzerchi, S. M., & Zare Ahmadabadi, H. (2018). Designing a business model in health tourism using the business ecosystem model in Yazd province. 4th International Industrial Management Conference,

Sag, I., & Zengul, F. D. (2019). Why medical tourists choose Turkey as a medical tourism destination? *Journal of Hospitality and Tourism Insights*, *2*(3), 296-306. https://doi.org/10.1108/JHTI-05-2018-0031

Sanavi Grossian, V., Mirabi, V. R., Kordloui, H. R., & Hasanpour Ghoroghchi, E. (2018). Identification and ranking of factors affecting the marketing of services in the field of health tourism in Mashhad using fuzzy TOPSIS technique. *Tourism Management Studies Quarterly*, *14*(45), 249-269. https://doi.org/10.22054/tms.2019.30077.1870

Shafei, R. (2019). Studying the influence of market presence strategies on managerial attitudes and their relationship with the selection of marketing metrics in industrial manufacturing companies. *Scientific Research Quarterly of Modern Marketing Research*, *2*(7), 81-104. https://sid.ir/paper/477038/fa

Sorkhossara, A., Nasrollahi, K., & Azerbaijan, K. (2018). Analyzing and Reviewing the Relationship Between Income and Expenditure in the Tourism Sector with Economic Growth. *Scientific-Research Journal of Tourism and Development*, *7*(3), 1-24.

Ulusoy, H., & Tosun, N. (2020). *Comparisons of health tourism within the EU countries*. Springer International Publishing. https://doi.org/10.1007/978-3-030-36126-6_42

Zekavati, F., Andrevaj, L., & Zarin Joy, S. (2023). Designing a health tourism marketing model in health villages. *Iran Journal of Health Education and Health Promotion*, *11*(1), 81-93. https://doi.org/10.52547/ijhehp.11.1.81