



## Research article

# Understanding the multidimensional role of medical travel facilitators: A study on competencies and a proposed model

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## ABSTRACT

The recent exponential growth of medical tourism has illuminated the essential but relatively unexamined role of medical travel facilitators (MTFs). MTFs play a crucial role in the success of medical tourism by acting as a bridge between patients and healthcare providers. However, there is a lack of understanding and standardization of the competencies needed to excel in this profession. Therefore, this study aims to reveal and categorize the key MTF competencies through a professional competency model. The research methodology involved a combination of competency classification and thematic content analysis, leveraging insights from 30 healthcare experts. The study is processed through a computer-aided analysis to identify 14 distinct themes and 35 MTF competencies. These findings build up an innovative MTF competency model. This novel model extends the understanding of MTF competencies and is a practical tool for individuals aspiring for MTF roles, promoting their professional development. The findings also suggest a standard for delivering high-quality patient care and meeting the diverse needs of industry stakeholders. The research contributes to both theoretical advancements and practical improvements in the medical tourism industry, with an emphasis on enhancing patient satisfaction and upholding industry standards.

## 1. Introduction

Medical tourism refers to the practice of tourists traveling to a foreign country in order to receive medical services while also engaging in travel activities during their journey [1]. Medical tourism implies a form of tourism that focuses on high-value medical services. In 2020, medical tourism was valued at 54.4 billion U.S. dollars. Despite the disruption caused by the coronavirus pandemic, it is projected that medical tourism will experience significant growth, reaching a value of 200 billion U.S. dollars by 2027 [2].

In times where healthcare is a priority for individuals, the importance of medical tourism, also referred to as health tourism, has increased significantly. Several factors influence the decision of medical tourists to travel for healthcare, including seeking advice from experienced individuals, accessing more affordable services compared to their home country, being attracted to travel destinations, and considering the reputation and quality of both medical and tourism services in the destination country [3]. It can be seen that one of the important factors contributing to the growth of medical tourism is the quality of services. Especially for tourists traveling to unfamiliar destination countries. Receiving good advice is one of the deciding factors in choosing the medical service [4].

Medical tourism, a rapidly growing sector, relies heavily on medical travel facilitators (MTFs) services [5]. In addition to providing

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patient support, these professionals navigate complex processes, such as travel logistics, medical billing, and insurance [6,53]. The resource-based view theory posits that unique resources and capabilities primarily determine a firm's competitive advantage [7]. MTFs with specialized knowledge and abilities that assist organizations in adapting to changes can foster great customer connections and boost competitiveness [8,54]. Their competencies are invaluable [9].

However, there is a scarcity of academic exploration into MTF competencies. A lot of research has been done on their roles [10–13] as well as their digital presence [14–17], legal issues [18–20], influential factors [21,22], and impact on patients [3,10,23,24]. Yet, the analysis of MTF competencies within a holistic model is significantly missing.

Based on the earliest mentions, the medical tourism industry has great potential and growth. Several nations are expediting the advancement of medical technology, services, and workers to facilitate business expansion. It is important to look at the MTF's competencies for a number of reasons. The medical tourism industry needs trust and reliability in the market [25]. MTFs act as intermediaries connecting patients with healthcare providers in the fast-expanding medical tourism sector [12]. Understanding the required skills and abilities for this profession helps ensure that standards of service quality are sustained. Additionally, the proficiency of MTFs directly influences the safety and quality of patient care [26]. MTFs must possess a strong foundation of medical expertise to effectively evaluate patients' requirements and direct them to suitable medical providers. In view of adjusting to emerging technologies, MTFs must employ technological advancements to enhance the quality of their services [27]. Being able to use these tools well will make operations run more smoothly and allow good services to be provided. Lastly, MTFs possess the expertise to differentiate the organization or agency they represent in the market for the purpose of enhancing the reputation and market position of a brand [21].

Current models provide a varied range of MTF perspectives while failing to place enough emphasis on competency education, leaving a gap for human resource improvements [28–31]. A robust MTF competency model promises service quality, patient satisfaction, and fostering industry growth [4]. Conversely, neglecting competency education might cause service gaps, patient dissatisfaction, and unfavorable health consequences. Such outcomes could potentially reduce the industry's appeal to prospective medical tourists [22].

This study, therefore, addresses this research gap by employing the professional competency model of Cheetham and Chivers [32] to investigate critical MTF competencies. The model includes cognitive, functional, personal, and ethical competencies. According to academic literature, the model is well-recognized and applicable across many professions. This wide acknowledgment and applicability lend robustness and validity to the study. As a result, the model makes the quality of the analysis higher and the findings about MTF competencies more relevant.

The research explores two questions: 1) What are the critical MTF competencies? 2) How can these competencies be clustered and classified? The study uses thematic content analysis and quantitative statistics to analyze interview data from 30 experienced industry workers [33]. The resulting MTF competency model provides a guideline for practitioners, ensuring better patient care and industry stakeholder satisfaction. This study offers a unique contribution to theoretical development by integrating thematic content analysis, competency classification, and the professional competency model.

## 2. Literature review

### 2.1. Medical tourism: an overview

Medical tourism, commonly known as medical travel, refers to a burgeoning industry where people travel to a foreign country to receive medical care [34]. By 2032, medical tourism is predicted to reach an impressive world market value of 346.1 billion US dollars [35]. The rising popularity of medical tourism can be attributed to the improved affordability and accessibility of overseas healthcare treatments. Furthermore, many prospective patients find it alluring to experience a foreign culture while obtaining essential therapy [3].

The journey of a medical traveler is typically complex, involving several steps and engagements with various stakeholders [36]. These include, but are not limited to, healthcare providers, tourism providers, collaborative organizations, and the patients themselves [37]. Additionally, a crucial part of this journey is the participation of intermediaries known as MTFs [38,39]. Despite the industry's extraordinary expansion, it is vital to consider the ethical implications, risks, and potential effects that medical travel may have on the healthcare systems of both the home and destination countries [5,40].

### 2.2. Role and competency of medical travel facilitators

Whether as individuals or as part of an organization, MTFs serve a crucial role in the medical tourism industry. They provide the bridge that links international patients with healthcare providers in the host country, managing critical aspects such as medical patients, travel, and accommodation needs [10,41]. MTFs perform these tasks by providing a wide range of services, including information, consultation services, handling booking arrangements, developing networking ties, and offering comprehensive assistance to the industry [10,11].

From a career perspective, various types of MTFs (Medical Task Forces) have been classified according to their working relationships. Dalstrom [12] classifies MTFs into three types: full-service, referral service, and individual service. Full-service MTFs provide comprehensive support to patients, including travel visas, transportation, physician selection, medical facility choices, post-operative care, translation services, and cultural guidance. Referral service MTFs assist patients in coordinating with healthcare providers for essential functions such as scheduling appointments, arranging transportation, and providing information on medical providers. Individual service MTFs act as intermediaries, offering information, translation, and guidance to patients seeking medical

providers.

As a whole, MTFs have a tremendous impact on patients, healthcare systems, and the medical travel industry [13]. However, the competencies or skills required to carry out these roles are not well defined or sufficiently explored in the existing literature, and this presents an intriguing opportunity for further scholarly examination and discussion.

### 2.3. Evaluation and comparison of competency models for MTFs

MTFs require a distinctive set of skills to effectively navigate the complex landscape of global healthcare. This competency includes a deep understanding of medical procedures, cultural awareness, and the ability to operate complex healthcare systems in different countries [4,42].

Four notable models attempt to define and standardize these competencies: ISO 22525:2020 [29], Todd's Guide [28], Global Healthcare Accreditation (GHA) [30], and Thailand Professional Qualification Institute (TPQI) [31]. However, there is a glaring hole in the literature. The effectiveness and applicability of these models for MTFs have not been compared or evaluated.

ISO 22525:2020 is a standard that provides guidelines for organizations involved in medical tourism [29]. It applies to all service providers in this sector, offering a functional perspective on the roles of MTFs. The standard outlines competences needed for MTFs, broadly divided into two concepts: general and specific competences.

- 1) General competences include:
  - Information sharing
  - Cooperation
  - Insurance and legal compliance
  - Confidentiality and data protection
  - Risk management
  - Quality management
  - Visa arrangements
- 2) Specific competences entail:
  - Process division preparation
  - Facilitator knowledge
  - Documentation and contractual agreement
  - Pre-travel and pre-treatment phase management
  - Quotation and services
  - Treatment phase management
  - Post-treatment phase management
  - Follow-up services

From the analysis, it was determined that ISO 22525:2020 does not provide distinct categorizations, but rather presents a comprehensive overview of the roles and responsibilities of MTFs. This standard is crucial for ensuring quality and efficiency in medical tourism services.

Todd [28] proposed a detailed framework for individuals or organizations involved in facilitating medical tourism services. This guide encompasses various aspects:

- 1) Role and responsibilities of the facilitator: This includes managing the process of arranging medical care, considering legal and ethical issues, understanding business models for medical tourism, and developing marketing and customer service strategies.
- 2) MTF competencies as practices: Todd described these competencies in three main areas:
  - Knowledge: This involves a comprehensive understanding of the medical tourism industry, international health protocols and systems, medical services, terminology, anatomy, physiology, pharmacology, basic health history taking, general medical training, health care resource management, medical service products, and travel planning (including immigration, visa details, airline ticketing issues, hotel, and ground transportation reservations).
  - Personnel skills: Skills needed include understanding situations, problem-solving, handling unexpected situations, evaluating, and continuously monitoring the effectiveness of facilitation plans to ensure that client-desired outcomes and goals are achieved.
  - Job-specific competences: This refers to performing complete activities across the supply chain of the medical tourism business.

Todd's framework thus provides a comprehensive guide for MTFs, highlighting the necessary knowledge, skills, and specific competencies required to effectively facilitate medical tourism services.

The Global Healthcare Accreditation (GHA) is recognized for its expertise in accreditation and certification, with a focus on workplace safety, health, well-being, medical, and wellness travel [30]. In 2022, GHA outlined a set of standards tailored for medical travel programs within healthcare settings and offered professional certification for healthcare providers and medical travel professionals. The competencies of the MTF profession identified by GHA are considered interdependent and encompass various aspects:

- Leadership and management roles and responsibilities
- Facilitator commitment statement

- Client services
- Strategic planning, including goals, objectives, and targets
- Oversight of outside contracts and agreements
- Sustainability and quality improvement
- Cultural competency and language assistance
- Staffing, staff training, and competency
- Client communication and education
- Documentation management
- Risk management
- Business ethics
- Financial transparency
- Marketing transparency
- Safeguarding clients’ protected personal information

In summary, the GHA model emphasizes a modular approach to competency, highlighting the importance of knowledge and expertise, ethical conduct, effective communication and coordination, risk management, and quality management in the MTF profession.

The Thailand Professional Qualification Institute (TPQI), an autonomous public organization in Thailand as of 2023, is tasked with managing the professional qualifications system in the country [31]. This involves setting professional standards, developing assessment methods, and authorizing individuals or organizations to assess against these standards. TPQI has issued Professional Qualification and Occupational Standards specifically for MTF, comprising 10 main competency units along with the elements for each unit. There are ten main competency units that TPQI lists. They are:

- Destination orientation
- Appointment coordination
- Quotation preparation
- Travel and appointment scheduling
- Arrival assistance
- Health services access facilitation
- Post-treatment coordination
- Continuation of care
- Pre-post travel assistance
- Sustained care support

These units collectively cover the entire scope of responsibilities of an MTF, with a primary focus on job competency as categorized according to the medical tourism supply chain. This framework by TPQI emphasizes the importance of a comprehensive skill set for professionals in the medical tourism industry.

In Table 1, we look at four competency models in the medical tourism sector and compare them in terms of who they apply to, how they are structured, and what their limitations are.

- ISO 22525:2020: This standard applies to all service providers in the MT sector, offering general implementation guidelines. However, it lacks a clear categorization structure, which poses challenges for adding new competencies.
- Todd [28]: Todd’s model is tailored for Medical Tourism Facilitators (MTFs) and, like ISO 22525:2020, provides general guidelines but does not have a clear framework for integrating new competencies.

**Table 1**  
A comparative table showcasing different aspects of the four competency models for MTFs.

Dimensions	MTF competency models			
	ISO 22525:2020	Todd [28]	GHA	TPQI
Model scope	Use for medical related provides	Specific to MTFs		
Total competencies and sub-elements	Not specified		15 competencies	10 competencies/25 elements
Ease of Implementation	Provide a general guideline		Modular competency	Primarily job-focused
	Lack of categorization		Lack of categorization	Follow medical service activities
Evolution and Flexibility (room for adding new competencies)	Do not show the framework			Possible to add a new or sub-element
Reference theory, model, or framework	Hard to add a new competency			
	Not mentioned			

- Global Healthcare Accreditation (GHA): Also specific to MTFs, GHA clearly outlines its competencies, featuring 15 units. Despite its explicit structure, the model faces similar challenges in integrating new competencies due to the lack of a clear categorization framework.
- Thailand Professional Qualification Institute (TPQI): Designed for MTFs, TPQI details 10 main units with 25 elements. Its structure is more adaptable, allowing the addition of new elements or sub-elements in line with changes in MT activities. However, it tends to focus more on job-specific skills, with less emphasis on individual abilities. TPQI's model is particularly tailored for the context of Thailand.

A common limitation across these models is the absence of a specific underlying theory. This gap indicates an area for future research. While each model has its benefits, such as TPQI's adaptability and the comprehensive guidelines provided by ISO, Todd, and GHA, they also have limitations in terms of categorization flexibility and acknowledgment of individual competencies, highlighting the need for further development in this field.

In conclusion, while various models attempt to define and standardize MTF competencies, no single model encapsulates all necessary competencies through a holistic view, leaving room for more comprehensive development and globally applicable models. This study aims to fill this gap by comparing these models to develop a more comprehensive MTF competency model.

#### 2.4. Refining the professional competency model for MTFs

A professional competency model can be seen as a structured model defining the requisite skills, knowledge, abilities, and behaviors required for effective performance in a specific role or field [43,44]. These models usually encompass an array of competencies, including technical skills, problem-solving abilities, communication skills, leadership qualities, ethical standards, and continuous learning. These models can serve as a reference point for evaluating and developing professionals, adapting to different fields and professions as necessary [45]. Each competency model may consist of core competencies that are universally applicable and specialized competencies specific to certain roles or domains within the profession [46]. Cheetham and Chivers [32] proposed a professional competency model and identified four essential components for one's career success.

Knowledge and Cognitive Competency (KCC) pertain to understanding and critical thinking abilities. For MTFs, this might encompass knowledge of healthcare systems, procedures, logistics, and international regulations [39]. Personal and Behavioral Competency (PBC) involves effectively understanding and managing emotions, thoughts, and behaviors. In the case of MTFs, PBC may include emotional intelligence and empathetic communication abilities needed when dealing with patients in stressful situations [3]. Functional competency (FC) concerns the ability to perform specific tasks and responsibilities. For MTFs, this might involve effectively coordinating healthcare and travel services [4]. Finally, Values and Ethical Competency (VEC) refers to the ability to make ethical decisions and act on them consistently. Given the sensitive nature of healthcare, MTFs must prioritize patient confidentiality and unbiased advice and always act in the patient's best interest [47].

##### 2.4.1. Identifying and addressing the gaps in current literature

Although several competency models exist for MTFs, a clear gap in the literature emerges when seeking a competency model for MTFs that is grounded in theoretical principles. Although Cheetham and Chivers' [32] model is thorough, it still needs to be improved to be fully applicable to the unique requirements and functions of MTFs within the medical tourism industry. The current literature lacks a model that integrates all the unique facets of an MTF's job, including details of personal skills, ethical considerations, multi-stakeholder management, cross-cultural communication, and logistics coordination. As a result, it allows researchers to look further into these characteristics and construct a comprehensive, theory-based model that may serve as a guide for future MTF training and development. It will not only standardize the services provided by MTFs but also ensure a higher quality of care for patients participating in medical tourism.

#### 2.5. Applying thematic content analysis to research

Thematic content analysis is a widely recognized qualitative research method for identifying and analyzing patterns, themes, and relationships within data [48]. The process involves several stages, including familiarizing oneself with the data, generating initial codes, searching for themes, reviewing potential themes, defining and naming themes, and finally, producing the report [33].

Despite its merits, thematic content analysis is not without potential issues, primarily concerning data interpretation [49]. The presence of researcher bias is a perennial concern, which can be mitigated by adopting measures to ensure high-quality data collection and maintaining a reliable and consistent coding process. One method of verifying the reliability of the thematic content analysis is to conduct inter-rater reliability tests, which assess the degree of agreement between two or more researchers independently coding the same data [50].

Therefore, this study uses the Cheetham and Chivers [32] professional competency model in conjunction with a thematic content analysis, which offers a suitable framework for this investigation.

### 3. Methodology

This study employed thematic content analysis as per the guidelines set forth by Braun and Clarke [33] due to its utility in exploring complex phenomena. Thematic content analysis offers several advantages, including the ability to handle large amounts of qualitative

data and to systematically identify and organize detailed themes within the data, providing a rich, detailed account of the data. This approach is well-suited to the current study's focus on exploring MTF competency. The analytical procedure was performed by QDA Miner software version 2.0.9, enabling the researchers to rigorously process and analyze the extensive data generated by the interviews.

### 3.1. Data collection

Experienced workers in the medical tourism industry were targeted for this study due to their active involvement in MTF functions or their engagement in coordination with MTFs. The snowball sampling technique was employed, a method that is particularly beneficial when the population of interest is difficult to locate or access [51]. Snowball sampling allowed researchers to access experienced professionals in the medical tourism industry through initial contacts, which led to a rich, diverse, and experienced sample pool. A total of 30 participants were selected from Thai hospitals that provide medical services to foreign patients.

Data collection was facilitated through semi-structured interviews, which were designed to explore MTF competency. The interview process was structured in three stages: pre-interview, during-interview, and post-interview to ensure reliability [52]. The questionnaires sought to learn about participants' demographics, medical tourism experience, and critical competencies related to the MTF profession.

The 20–40-min interviews, which took place between January and February 2023, were recorded. Participants gave their informed consent, and the interviews were carried out face-to-face or via telephone. Comprehensive participant profiles can be found in Appendix A.

### 3.2. Gaining familiarity with the data

After data collection, the first step of the analysis involved the researchers familiarizing themselves with the data. This step was accomplished through an iterative process of reading and re-reading the interview transcripts, where the researchers looked for patterns, noteworthy features, and areas of commonality and divergence, thereby gaining a holistic understanding of the data content.

### 3.3. Generating initial codes

This study employed 'open coding' to extract labels from the raw data, following a rigorous examination of the interview text files. Researchers focused on identifying keywords and phrases pertinent to MTF competency. This process was grounded in Cheetham and Chivers' [32] professional competency model, which provided strategic direction to identify meaningful insights within the responses. Table 2 outlines the coding direction across the four components of the competency model.

The labels were identified from interview text files. Researchers merged 30 text files and then used text analyzer software to find the words or phrases based on their frequency. After analyzing 17,533 words, the results yielded several keywords and phrases that indicate MTF competencies. The method for assigning labels is done by opening each interview transcript, focusing on the overview of words, close words, and similar-meaning words, and then assigning labels. For example, the words *communicate with patients*, *communication with doctors*, and *health communication skills* display the meaning of medical communication. These words are assigned to the *medical communication* label. Table 3 shows the sample keywords for coding. Coders use Tables 2 and 3 as guidelines for label initiation.

### 3.4. Searching for themes

Once the initial coding was completed, the next step involved identifying potential themes and subthemes. The process was not merely about the frequency of certain codes but also about their relevance to the research questions and their potential to offer a rich and detailed explanation of the data. It allowed researchers to ensure that the emergent themes accurately represented the data. Table 3 shows themes, subthemes, and sample keywords. The subthemes in this study are critical competencies for MTFs.

### 3.5. Reviewing potential themes

Following potential theme identification, these were then reviewed and refined through a collaborative process involving two coders. Themes were examined for their internal homogeneity and external heterogeneity to ensure their distinctness, coherence, and accuracy for the entire data set. The inter-rater reliability is tested using Cohen's Kappa (k) formula [50]. In practice, the acceptable

**Table 2**  
Coding directions for MTF competency based on the professional competency model.

Components	Coding direction
Knowledge and Cognitive Competency (KCC)	Capacity to comprehend and apply expert knowledge in the MTF field
Personal and Behavioral Competency (PBC)	Ability to regulate emotions and exhibit interpersonal skills, self-management, and effective communication
Functional Competency (FC)	Ability to perform specific tasks required in the MTF role, including profession-specific actions
Values and Ethical Competency (VEC)	Ability to make ethical decisions and consistently act in accordance with personal values and principles

**Table 3**  
Codebook themes, subthemes and sample keywords for MTF competency analysis.

Themes	Subthemes	Sample keywords
Building partnerships	Collaboration with MT stakeholders Working with medical teams	collaboration skills, efficient coordination, coordination with customers, cross-functional coordination, embassies/consulates communication internal and external coordination with the hospital, country-specific interpreters, pre-hospital coordination, case management coordination, working with doctors and nurses
Communication	Language proficiency Medical communication Presentation	language skills, English, third language, language proficiency, language for work proper medical language, medical communication skills, communicating in medical terms, communication with doctors, medical communication through written email writing, effective presentation, sales communication, effective explanation, communication across generations
Customer focus	Cultural learning Facilitating customers	understand cross-cultural norms, dos and don'ts, customers' beliefs and values, customer touchpoints patient convenience, patient assistance, customer reception, customer convenience, medical and health service convenience
Healthcare knowledge	Healthcare provider information Medical knowledge	healthcare provider data, medical expertise, trustworthiness of provider, standard compliance, physician's abilities, healthcare products and services medical knowledge, diseases, initial symptoms, medical history, medical terms
Honesty and transparency	Building trust Consent awareness Law control	establish trustworthiness, create experiences, ensure accuracy, instill patient confidence, be reliable and trustworthy, create a comforting atmosphere consent document, complaint prevention, treatment consent, information disclosure consent, boundary and confidentiality in information disclosure understand basic laws, focus on international laws, apply destination country laws, inform essential legal information, know how to apply PDPA
Information Technology	Email Information system Social media	email usage, create a formal email, reply to an email, write an email, connect with a patient through email data management skills, data protection, data analysis, understanding IT, telemedicine technology, digital literacy social media management, digital platforms and communication, use social media, patient social channels, connect patients through social media
Legal knowledge	Insurance knowledge Law knowledge	insurance company, insurance coverage, claims and reimbursements, insurance policies, national insurance systems legal knowledge, medical laws, country-specific laws, legal awareness, legal knowledge for healthcare professionals
Marketing and commercial	Advertisement Persuasiveness	advertising, sales skills, marketing communication, digital marketing, market research and data analysis persuasiveness, credibility, reputation, developing approaches for credibility, negotiation, building rapport
Medical service planning and organizing	Document management Medical process management Translation management	manage documents, patient documents, check the documents for accuracy, know the required documents, use documents as the basis for work efficient planning and management, quality work processes, medical and nursing skills, appointment management skills, project management skills translation process, interpretation, be careful when translating, understand that the client needs an interpreter, work with interpreters
Personal character	Adaptability Attention to detail Attitude Continuous learning Good personality Responsibility Service mind and empathy	adapt to work, be flexible, be creative, adjust to new conditions, adapt to each other realize important information, focus on pre-travel details, travel precautions, restricted medications, details of activities and impacts positive attitude, working mind, global awareness, open-mindedness, resilience, working under pressure continuous learning, self-learning, learning responsibility, being proactive, learning new knowledge good personality, friendly personality, healthy appearance, socializing, dressing, good character, gentle accountability, high responsibility, taking responsibility for actions, taking ownership for mistakes, immediate customer response good human relations, a service-oriented mindset, continuity of care, sharing information with customers, taking action to meet customer needs, understanding the patient's pain
Problem-solving and Decision-making	Deal with the problem Decision and delegation	identify the problem, understand issues, gather information, do not procrastinate, deal with the problem from a patient's perspective. make decisions, select potential solutions, make informed decisions, use reason, formulate clear decision criteria
Professional ethic	Ethical and moral decision Liability and risk acceptance	ethical conduct, non-disclosure of secrets, non-sale of data to external companies, professional ethics, medical ethics, patient confidentiality, avoidance of misinformation error correction and risk coordination, understanding treatment side effects, service risks, perception and vigilance skills, future potential negative impacts
Tourism knowledge Tourism planning and organizing	Travel and leisure Travel and accommodation management	travel knowledge, visas, travel restrictions, climate, geography, food, and accommodation plan and management of accommodation, airfare, booking, contract, discounts, hospital, medical travel, patient, transportation, travel, weather

value of  $k$  should be greater than or equal to 0.70. In this study, the overall coding reliability between the two coders was found to be  $k = 0.72$ , which was acceptable. The  $k$  value indicates that the assigned label is different between coders. However, the robustness of the themes was ensured by resolving discrepancies in topic identification between the two coders through discussion and agreement.

### 3.6. Defining and naming themes

Once the themes were reviewed, defined, and refined, they were confirmed through consultation with two medical experts (selected from experienced interviewees). These experts provided their perspectives on the identified themes and their relevance to the MTF profession. Their contributions were critical in refining and finalizing the themes, ensuring that the identified competencies were consistent with professional practice.

### 3.7. Producing the report

In presenting the results, researchers employ descriptive statistics to offer a detailed interpretation of the data. The findings are discussed in relation to the research questions, and themes will be presented with supporting numbers of cases and mentions. Themes and subthemes are depicted in tabular form for clarity, but a narrative style will also be employed to ensure a comprehensive understanding of the findings. The discussion links the findings to the existing literature, exploring similarities, contradictions, and new insights offered by this study.

## 4. Result

### 4.1. Demographic of interviewees

The sample comprised 30 medical tourism-experienced professionals. Table 4 delineates demographic details divided by gender, age group, industry experience, and position level. Most interviewees were female (80 %), with the 40–49 age range being the most common (57 %). Half of the participants had medical tourism experience ranging from 1 to 5 and 11–15 years. 63 % of the participants held staff-level positions, and 37 % held managerial positions.

### 4.2. Analysis result of themes and subthemes

The result of this section is to address research question number one. The thematic analysis yielded 14 themes and 35 subthemes, as depicted in Table 5. The identified MTF competencies were classified into broad thematic categories or competency groups, each encompassing a variety of competencies or subthemes. These collectively outline the requisite abilities, skills, or knowledge under each overarching theme. The distribution and frequency of each theme and subtheme underscore their relevance within the field.

The communication theme reflects 100 % of total cases, followed by healthcare knowledge (93.30 %). Customer focus, medical service planning and organizing, and personal character are listed as the third, accounting for 25 cases, or 83.3 % of all cases. More than 20 interviewees mentioned themes such as honesty, transparency, and developing partnerships.

By view of subthemes or individual competencies, language proficiency and medical knowledge stand out equally as the most mentioned (53 times), followed by medical process management (46 mentions), collaboration (39 mentions), and facilitating customers (35 mentions). Table 5 presents the detailed breakdown and frequency of MTF competency groups, sorted by the number of cases identified.

The key findings from the thematic analysis are detailed below, reflecting the competency groups and their practical implications:

**Communication (30 cases, 100 % of total cases):** This theme underscores the pivotal role of communication, representing a cornerstone of the MTF profession. MTFs act as a conduit between the patient and healthcare providers, necessitating strong communication skills, including language proficiency, medical vocabulary comprehension, and the ability to transmit information. The universal significance of communication within the MTF role is evidenced by its mention across all cases.

**Healthcare Knowledge (28 cases, 93.3 % of total cases):** This theme highlighted a foundational competency of MTFs, including

**Table 4**  
Demographic information of the interviewees (n = 30).

Variables	Frequency (s)	Percentage of totals	Variables	Frequency (s)	Percentage of totals
<i>Gender</i>			<i>Industry experience (years)</i>		
Female	24	80 %	1–5	8	27 %
Male	6	20 %	6–10	6	20 %
			11–15	7	23 %
<i>Age</i>			16–20	2	7 %
20–29	5	17 %	21 and above	6	20 %
30–39	7	23 %			
40–49	17	57 %	<i>Position level</i>		
50–59	1	3 %	Staff	19	63 %
			Manager	11	37 %



**Table 5**  
Distribution and frequency of MTF competency groups sorted by cases display.

Theme (Competency group)	Cases (n = 30)	% of total cases	Subtheme (Competencies)	Mentions (n = 592)	% of total mentions
Communication	30	100.00 %	Language proficiency	53	9.00 %
			Medical communication	22	3.70 %
			Presentation	8	1.40 %
Healthcare knowledge	28	93.30 %	Medical knowledge	53	9.00 %
			Healthcare provider information	16	2.70 %
Customer focus	25	83.30 %	Facilitating customers	35	5.90 %
			Cultural learning	24	4.10 %
Medical service planning and organizing	25	83.30 %	Medical process management	46	7.80 %
			Document management	11	1.90 %
			Translation management	7	1.20 %
Personal character	25	83.30 %	Service mind and empathy	28	4.70 %
			Attention to detail	14	2.40 %
			Attitude	11	1.90 %
			Good personality	7	1.20 %
			Continuous Learning	6	1.00 %
			Adaptability	5	0.80 %
			Responsibility	4	0.70 %
Honesty and transparency	23	76.70 %	Building trust	18	3.00 %
			Law control	16	2.70 %
			Consent awareness	10	1.70 %
Building partnerships	22	73.30 %	Collaboration with MT stakeholders	39	6.60 %
			Working with medical teams	10	1.70 %
Marketing and commercial	15	50.00 %	Advertisement	21	3.50 %
			Persuasiveness	8	1.40 %
Tourism planning and organizing	15	50.00 %	Travel and accommodation management	28	4.70 %
			Information system	17	2.90 %
Information Technology	14	46.70 %	Email	10	1.70 %
			Social media	8	1.40 %
			Law knowledge	10	1.70 %
Legal knowledge	14	46.70 %	Insurance knowledge	7	1.20 %
			Deal with problem	10	1.70 %
Problem-solving and Decision-making	11	36.70 %	Decision and delegation	4	0.70 %
			Ethical and moral decision	12	2.00 %
Professional ethic	10	33.30 %	Liability and risk acceptance	6	1.00 %
			Travel and leisure	8	1.40 %
Tourism knowledge	8	26.70 %			

possessing a thorough understanding of medical terminologies, medical report interpretation, procedural knowledge, and the specifics of healthcare providers. It underlines that MTFs, at their core, guide patients on their medical tourism journey confidently and accurately.

**Customer Focus (25 cases, 83.3 % of total cases):** This theme focuses on the capacity to comprehend and adapt to each patient's unique needs. It holds critical importance in the medical tourism industry, where patients often grapple with particular challenges arising from unfamiliar healthcare environments. Interviewees stressed the need for MTFs to understand and respect patient cultures to foster positive interactions and enhance patient satisfaction and loyalty.

**Medical Service Planning and Organizing (25 cases, 83.3 % of total cases):** This theme draws attention to the requisite skills of MTFs to effectively manage and coordinate the full spectrum of medical procedures, from initial consultations to aftercare. For medical tourists, an enjoyable and hassle-free experience depends on accurate document management and language barrier-climbing abilities.

**Personal Character (25 cases, 83.3 % of total cases):** This theme underlines the need for MTFs to exhibit certain personality traits like empathy, attention to detail, and a service-minded attitude. These traits significantly influence the MTFs' interactions with patients and their ability to navigate the complex medical tourism industry landscape.

**Honesty and Transparency (23 cases, 76.7 % of total cases):** This theme reinforces how important it is to be honest and transparent, particularly when patients entrust their health to foreign providers. Interviewee responses suggest MTFs must clearly communicate legal implications, treatment outcomes, and information confidentiality to overseas patients.

**Building Partnerships (22 cases, 73.3 % of total cases):** This theme highlights the need for MTFs to establish robust relationships with stakeholders, including healthcare providers, travel agencies, and insurance companies. It underlines that advocacy for patients within the medical community is a key aspect of the MTF's role.

**Marketing and Commercial (15 cases, 50 % of total cases):** This theme highlights the importance of MTFs' abilities in effectively marketing their services and negotiating with various stakeholders. Proficiency in digital marketing strategies is emphasized as a significant aspect of modern MTF competencies.

**Tourism Planning and Organizing (15 cases, 50 % of total cases):** This theme focuses on MTF's role in planning and managing travel and lodging logistics. A smoothly executed travel plan ensures an untroubled experience for medical tourists and precludes potential disruptions to medical procedures due to travel issues.

Information Technology (14 cases, 46.7 % of total cases): This theme emphasizes the importance of MTFs' understanding and utilization of digital platforms. Proficiency in technology enables MTFs to engage effectively with patients and stakeholders and deliver up-to-date information.

Legal Knowledge (14 cases, 46.7 % of total cases): This theme necessitates MTFs to understand the legal aspects of medical treatments, empowering them to guide patients through their journey's legal maze and advocate for their rights when needed.

Problem-Solving and Decision-Making (11 cases, 36.7 % of total cases): This theme accentuates the MTF's role as intermediaries tasked with navigating unforeseen situations and making critical decisions under pressure. An adept problem-solving skill set is crucial for ensuring patient safety, satisfaction, and medical tourism process integrity.

Professional Ethic (10 cases, 33.3 % of total cases): This theme highlights the need for ethical behavior within the MTF profession. Adherence to a moral code, coupled with the acceptance of accountability and risks, can foster trust, respect, and credibility with patients and stakeholders.

Tourism Knowledge (8 cases, 26.7 % of total cases): This theme underscores the significance of MTFs being well-versed in travel and leisure. Recognizing the desire of many patients to combine treatment with recreational activities in the destination country, MTFs' understanding of local attractions, culture, and logistics can significantly enhance the overall medical tourism experience.

#### 4.3. Classification and clustering of MTF competencies

The result of this section is to address research question number two. A thematic clustering approach accompanied by domain knowledge was used to address the study subject completely. The qualitative clustering method utilized manual categorization guided by a professional competency model and in-depth subject area knowledge. The process involved grouping themes according to their relevance and association with predefined categories within the MTF competency model.

Data from Tables 2 and 3 and the findings highlighted in Table 5 served as inputs to continue the theme content analysis. This clustering approach facilitates the comparison and integration of the study's findings with established professional competency models. Aligning the emerging themes with globally acknowledged professional competency categories improves the interpretability and practical implementation of the findings by anchoring them to modern professional development theories and models. Table 6 delineates the MTF competency clustering outcome with the group and competency ratios.

MTF-PBC emerged as the most prevalent among MTF competencies, underscoring the importance of interpersonal and behavioral skills like communication, service mind, empathy, and attention to detail for MTF efficacy. MTF-FC followed as the second most prevalent category, indicating the significance of functional competencies, such as managing medical processes, document management, translation management, and travel and accommodation management in the MTF role. MTF-KCC and MTF-VEC equally represent individual skills, underlining the importance of knowledge and ethical values in the MTF profession.

Fig. 1 provides a synoptic view of the identified MTF competencies cluster, group, and details. The illustration is organized from general requirements to the most specific ones. This figure is innovative, presenting a clear, quantifiable distribution of MTF competencies within a professional competency model, giving a comprehensive overview of the most pertinent areas of competency for MTFs. Utilizing a professional competency model for classification bolsters the robustness and validity of the findings. Furthermore, this approach enables comparisons with other professions where similar models have been employed, thereby contributing to a broader understanding of professional competencies in diverse professional contexts.

## 5. Discussion

### 5.1. MTF competencies

This research sheds light on the competencies pivotal to the role of MTFs. Through an extensive analysis of experiences and insights from industry professionals, the study identifies 14 thematic areas and 35 competencies central to MTFs. The findings underscore the diverse range of skills, knowledge, and abilities necessary for MTFs, including medical expertise, a service-oriented mindset, and empathetic qualities.

Communication and healthcare knowledge have been validated as critical competencies for MTFs, agreeing with previous investigations by GHA [30] and TPQI [31]. This reaffirms the notion that MTFs must effectively navigate complex healthcare systems. Beyond this consensus, the study delves deeper to elaborate on specific competencies within these areas, such as language proficiency, medical communication, and presentation skills. This refined focus contributes to a more nuanced understanding of the breadth and depth of these competencies in a practical setting. Moreover, it supports the argument that healthcare knowledge is integral to medical tourism, necessitating the integration of medical, travel, and patient-care expertise. This echoes the roles outlined by Yusof and Rosnan

**Table 6**  
Classification of MTF competencies across the professional competency model.

MTF competency cluster	Total mentions	Count MTF competency group	%	Count MTF competency	%
MTF-Personal and Behavioral Competency (MTF-PBC)	221	4	28.57 %	14	40.00 %
MTF-Functional Competency (MTF-FC)	215	5	35.71 %	11	31.42 %
MTF-Knowledge and Cognitive Competency (MTF-KCC)	94	3	21.43 %	5	14.29 %
MTF-Values and Ethical Competency (MTF-VEC)	62	2	14.29 %	5	14.29 %

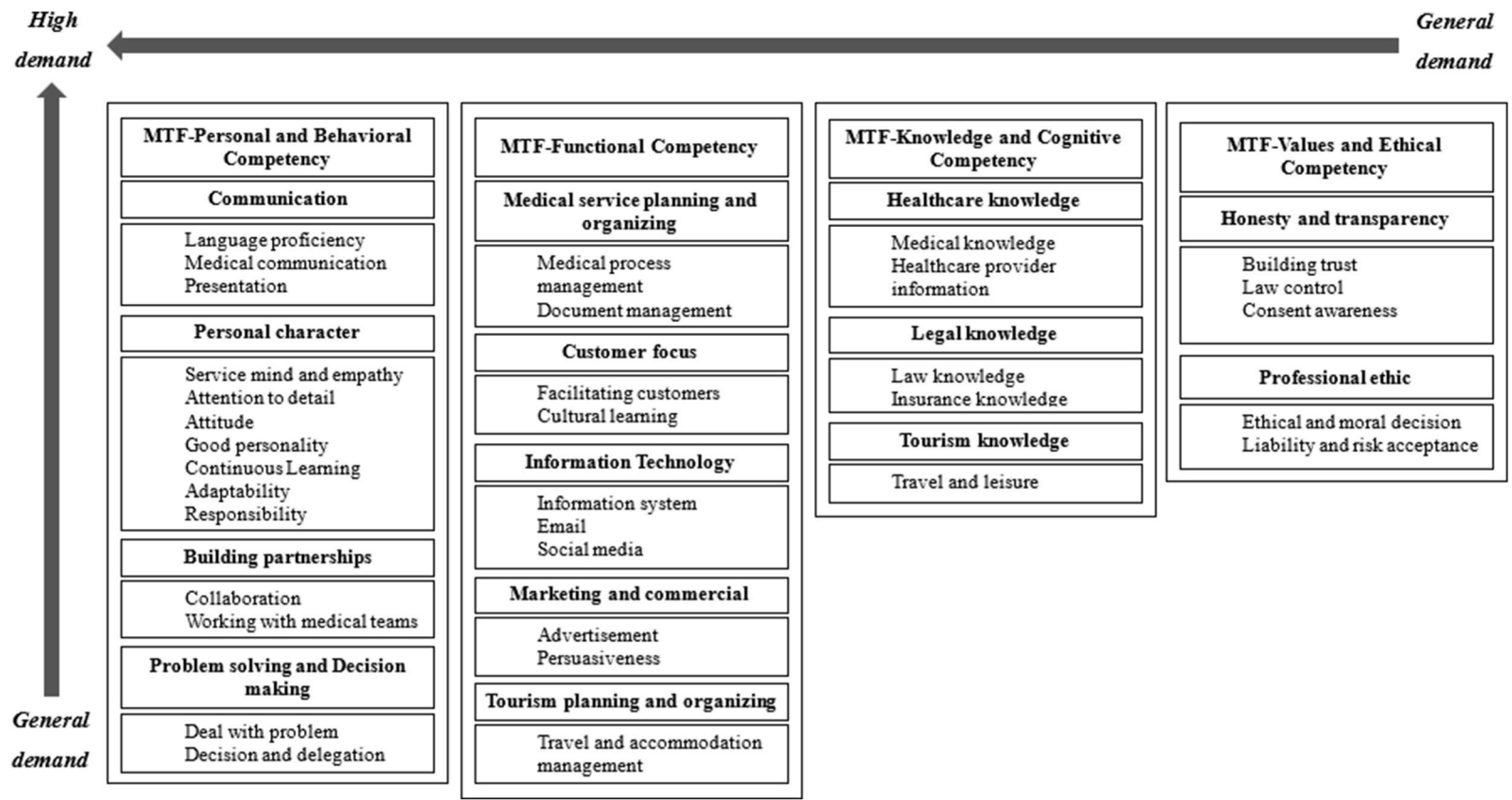


Fig. 1. Proposed MTF competency model.

[11] and Rydback [10], who emphasize the importance of MTFs comprehending medical products and health provider information. MTFs with a thorough awareness of healthcare providers can provide accurate information about provider qualifications, experience, and track record, facilitating informed decision-making for patients [22]. In situations of medical complications or unexpected events, this knowledge is pivotal for effective crisis management and emergency care coordination [18,20].

The significance of customer focus is a salient finding of this research. Respecting and navigating diverse health beliefs, values, and practices is paramount to overcoming language barriers and fostering effective communication. This competency contributes to trust, enhances patient satisfaction, and ensures a positive medical tourism experience [5].

The study's emphasis on personal character strengthens existing literature that underscores the importance of MTF functions and soft skills. The identified competencies, such as service mindset, empathy, attention to detail, and attitude, align with Cheetham & Chivers [32], endorsing that these personal skills lay the foundation for other MTF competencies.

Medical service planning and organizing emerged as another vital area. The study uncovers how MTF coordination with clients, healthcare providers, and travel agents, as well as handling financial aspects, can significantly enhance patient satisfaction. Conversely, inefficiencies, miscommunication, and treatment delays resulting from a lack of this competency can adversely impact patient experience, health outcomes, and MTF's reputation. This competency group aligns with the four competency models [28–31].

In contrast to existing models, this study identifies novel competencies, such as building partnerships, marketing and commercial acumen, tourism planning and organizing, information technology proficiency, and legal knowledge. These findings indicate potential nuances of the MTF profession that existing models may have overlooked. By breaking down each theme into specific subthemes, the study provides a granular understanding of each competency, highlighting areas for potential improvement not captured in the existing, broader competency models. When juxtaposed with Table 1, this work classifies competencies with reference models, facilitating future application and enhancement. The empirical data-driven approach quantifies the importance of each theme and subtheme, lending a level of objectivity and precision not commonly found in existing competency models.

## 5.2. Theoretical implications

This study extends the current theoretical frameworks in professional competency models by incorporating new competencies and emphasizing specific attributes. The competencies span across healthcare, customer service, and cross-cultural communication. Previous models have demonstrated the importance of healthcare knowledge, good communication skills, and a focus on medical tourism service. For instance, the GHA model possess an understanding of healthcare systems. The model enhances understanding to benefit patients seeking medical care abroad. However, the theories about medical tourism are regularly updated to match the industry's changing nature and the varied needs of medical tourists. Our study on MTF competency contributes to this evolving area. The findings offer fresh insights on what makes for effective practice in this field. Our findings offer different perspectives compared to the ISO 22525:2020 models and Todd's research. These models outline the roles and responsibilities of MTFs, rather than specifying their exact skills and abilities.

Fourteen thematic areas and thirty-five competencies for MTFs were identified. The attributes intersect significantly with existing theories and models in the professional competency domain. The emphasis on healthcare knowledge and communication skills supports existing models, such as those proposed by the GHA and TPQI. Additionally, our model encompasses the functional skill categories specified in ISO 22525:2020. Our research, on the other hand, expands on these theories by getting into more specific and detailed competencies. For example, identifying competencies such as language competence, medical communication, and presenting skills provides a greater understanding of how these competency categories are applied in the MTF environment. This narrowed focus challenges the existing theoretical understanding by highlighting the need for specialized skills within the overall framework.

Furthermore, the inclusion of competencies such as IT proficiency, legal knowledge reflects the evolving nature of the MTF role in a digital and globalized healthcare environment. These competencies are not typically highlighted in traditional models. The findings suggest a paradigm shift in the competency framework for MTFs that aligning with the dynamic demands of the medical tourism industry. For example, knowing how to use computers shows how important digital literacy is becoming for keeping track of patient information, coordinating care, and making it easier for people to talk to each other across countries. This competency represents the move toward a more technologically integrated approach to healthcare facilitation. It goes against traditional models that focus mostly on people skills and office management. Similarly, legal knowledge encompasses issues such as patient rights, data protection, and international healthcare regulations. This expansion not only aligns with the contemporary demands of the medical tourism industry but also sets the way for future theoretical developments in professional competency models.

The focus on personal character, including traits such as service mind and empathy and attention to detail, brings a human-centric approach to the MTF competency model. This shift brings interpersonal skills to the forefront in a role traditionally centered on technical and administrative skills. It deepens our understanding of what constitutes an effective MTF. Customer focus is a crucial finding for MTFs. It stresses respecting varied health beliefs and practices. This aspect broadens existing theoretical models in the field. It highlights cultural sensitivity and personalized care as vital in medical tourism. Such competencies are essential due to the frequent cross-cultural interactions in the medical tourism sector. From a strategic point of view, this study provides the ability to plan medical services. It also includes organizing services and combining healthcare with trip logistics. The competency gives a complete picture of traditional competency models.

Future theories in medical tourism should focus on the interaction between technology and human-centered care in MTF roles, particularly how digital tools can enhance patient experiences. In addition, legal and ethical considerations should be integrated into the development of comprehensive models, as their significance continues to grow in the field.

### 5.3. Managerial implications

The managerial implications of our study offer practical insights for practitioners in the MTF field. The proposed MTF competency model offers a roadmap for enhancing service quality and operational efficiency in medical tourism. The model, reflecting contemporary trends, highlights four critical competency clusters that meet the diverse and dynamic challenges of the medical tourism industry.

Managers should focus on developing personal and behavioral competencies (MTF-PBC) like communication, service mind and empathy, as these enhance patient interactions and satisfaction. MTFs need training in medical communication. This competency enhances the quality of patient care and service delivery. Effective communication in a medical setting not only ensures that patient concerns and needs are accurately understood but also fosters a sense of trust and safety in medical tourism business.

Functional competencies (MTF-FC) are also the key to efficient operation and patient care. Particularly in terms of IT competency, practitioners should receive training in healthcare management software, digital communication tools, and data security. IT skills enable practitioners to streamline processes, enhance user engagement, and ensure data integrity. And in strategic management, the group of planning competencies shows practitioners should develop competencies in medical process management in both health and tourism services. Enhancing this competency ensures seamless patient experiences, from initial contact to post-treatment follow-up.

Knowledge in both medical and tourism fields (MTF-KCC) is vital for handling international patients effectively. Practitioners have to refresh their knowledge and stay current in these fields. This can ensure efficient service and a deeper understanding of medical tourist needs. Lastly, following moral standards and laws (MTF-VEC) keeps trust and respect in the medical tourism sector. MTFs must focus on transparency and professional ethics. Having workshops or seminars on healthcare law will equip practitioners to navigate these challenges effectively. This skill helps reduce legal risks and enhance compliance.

## 6. Conclusion

The research presented a detailed analysis of the MTF competency model. It revealed a comprehensive structure with 35 competencies. These competencies are distributed across 14 themes within four clusters. This structure led to the formation of the proposed MTF Competency Model. These competencies, derived from healthcare experts who are MTFs or work closely with them, enrich the overall understanding. Competencies are crucial for effective performance in the medical tourism industry.

The newly proposed MTF Competency Model reflects the intricate balance of functional, personal behavioral, cognitive, and ethical competencies required for successful performance in the MTF role. Notably, the model highlights the high demand for operational tasks and personal interaction skills while underscoring the critical significance of cognitive knowledge and ethical values.

The theoretical implication contributes to the growing body of knowledge in the field of medical tourism. The study used a specific methodological approach. It incorporated thematic content analysis and a professional competency model. This approach became a powerful tool in developing the MTF Competency Model. The model sheds light on the complex competencies in the MTF profession. It also confirmed the importance of these competencies using empirical data.

The managerial implications suggest using the MTF Competency Model as a practical guide. The model can guide MTF recruitment, training, and evaluation, enhancing recruitment processes, staff development programs, and performance evaluation criteria. It also supports the development of targeted professional development programs, elevating the overall service delivery standard in the medical tourism industry.

The study has three main limitations. First, regional or cultural factors in the sample may impact the interview results' wider applicability. Second, thematic content analysis, while effective, can lead to subjective interpretations of themes. Researchers might analyze the same data differently, resulting in varied themes. Lastly, the study assumes MTF competencies are unchanging. However, evolving technology, healthcare practices, and tourism trends mean these competencies might need to adapt over time.

Future research should aim to overcome these identified limitations. This involves engaging a broader and more varied sample, employing diversified coding methodologies to decrease subjectivity, and recognizing the fluid nature of MTF competencies. Moreover, future studies should examine the inclusion of quantitative methodologies to enrich the depth and breadth of understanding. These proposed directions not only align with the ongoing refinement of the MTF Competency Model but also mark a critical step towards a greater exploration of the MTF profession in the context of evolving global healthcare trends.

### Data availability

This study acknowledges the significance of data transparency in research. However, due to specific constraints, there are limitations on the availability of the raw data. The data associated with our study has not been deposited in a publicly available repository. For any inquiries regarding our data and its availability, please contact the corresponding author.

### Consent for publication

The financial sponsor had no influence on the research methodology or the structure of the study. The responsibility for executing the research in compliance with approved guidelines rests solely with the research team.

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## CRedit authorship contribution statement

**Veeraporn Siddoo:** Writing – review & editing, Writing – original draft, Validation, Methodology, Funding acquisition, Data curation, Conceptualization. **Worawit Janchai:** Writing – review & editing, Validation, Supervision, Formal analysis, Conceptualization. **Orawit Thinnukool:** Writing – review & editing, Validation, Supervision, Project administration, Formal analysis.

## Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Veeraporn Siddoo reports financial support was provided by Ministry of Higher Education Science Research and Innovation, Thailand. If there are other authors, they declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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## Appendix A

### Demographics of interview participants

Case	Position	Gender	Age	Industry experience (year)
C1	Part-time Tour Guide	M	25	5
C2	Sports Medicine Nurse	F	29	7
C3	Training Specialist	F	45	20
C4	Aesthetic Surgery Nurse	F	35	15
C5	Strategy Department Manager	F	42	18
C6	Foreign Marketing Coordinator	M	39	13
C7	Head Nurse	F	29	2
C8	Utilization Management Nurse	F	46	19
C9	Marketing Coordinator	M	45	15
C10	Personnel Recruiter	M	46	11
C11	Coordinator of Outpatient Clinic	F	28	8
C12	Nurse in the Geriatric Department	F	44	23
C13	Business Development Department Officer	F	40	10
C14	Medical Records Officer	F	48	5
C15	Health Tourism Marketing Officer	F	27	1
C16	Heart Clinic Nurse	F	44	4
C17	Medical Tourism Promotion Committee	F	48	3
C18	Head of Eye Clinic	F	45	25
C19	Head of Dentistry Department	F	42	14
C20	Free Lance Clinic Nurse	F	44	5
C21	Wellness Manager	F	49	25
C22	Outpatient Department Administrative Staff	F	39	13
C23	Head of Physical Therapy Department	F	38	10
C24	Head of Marketing Department	M	35	10
C25	Nurse Trainer	F	46	25
C26	Manager of Reception and Customer Service	F	44	25
C27	Head of Online Marketing Department	F	32	5
C28	Interpreter	F	52	15
C29	Marketing Manager	M	47	23
C30	Pharmacist	F	32	7

## References

- [1] J. Connell, Medical tourism: sea, sun, sand and... surgery, *Tourism Manag.* 27 (6) (2006) 1093–1100.

- [2] J. Yang, Medical Tourism Global Market Size, from 2016 to 2020 with a Forecast for 2027, 2023, 11 30. Retrieved 12 2, 2023, from Statista, <https://www.statista.com/statistics/1084720/medical-tourism-market-size-worldwide>.
- [3] S.P. John, R. Larke, An analysis of push and pull motivators investigated in medical tourism research published from 2000 to 2016, *Tourism Rev. Int.* 20 (2–3) (2016) 73–90.
- [4] J.-K. Park, J. Ahn, S.-L. Han, K.-J. Back, M. An, Exploring internal benefits of medical tourism facilitators' satisfaction: customer orientation, job satisfaction, and work performance, *J. Healthc. Manag.* 65 (2) (2020) 90–105.
- [5] A. Collins, A. Medhekar, H.Y. Wong, C. Cobanoglu, Factors influencing outbound medical travel from the USA, *Tour. Rev.* 74 (3) (2019) 463–479.
- [6] L.L. Gan, J.R. Frederick, Medical tourism facilitators: patterns of service differentiation, *J. Vacat. Mark.* 17 (3) (2011) 165–183.
- [7] C.J. Collins, Expanding the resource based view model of strategic human resource management, *Int. J. Hum. Resour. Manag.* 32 (2) (2021) 331–358.
- [8] H.K. Lee, Y. Fernando, The antecedents and outcomes of the medical tourism supply chain, *Tourism Manag.* 46 (2015) 148–157.
- [9] F.N. Otoo, Human resource management (HRM) practices and organizational performance: the mediating role of employee competencies, *Employee Relat.* 41 (5) (2019) 949–970.
- [10] M. Rydback, Role of facilitators in the medical tourism industry—a study of medical tourism facilitators in an emerging market, *Serv. Market. Q.* 43 (2) (2022) 129–145.
- [11] N. Yusof, H. Rosnan, From the lens of healthcare facilitators: a multi-stakeholder involvement model for the medical tourism industry in Malaysia, *Global Business and Management Research* 12 (2) (2020) 64–79.
- [12] M. Dalstrom, Medical travel facilitators: connecting patients and providers in a globalized world, *Anthropol. Med.* 20 (1) (2013) 24–35.
- [13] J. Snyder, V.A. Crooks, K. Adams, P. Kingsbury, R. Johnston, The 'patient's physician one-step removed': the evolving roles of medical tourism facilitators, *J. Med. Ethics* 37 (9) (2011) 530–534.
- [14] L. Turner, Beyond "medical tourism": Canadian companies marketing medical travel, *Glob. Health* 8 (16) (2012) 1–11.
- [15] Á. Maguire, S. Bussmann, C.M. Köcker, S.E. Verra, L.A. Giorgi, K. Ruggeri, Raising concern about the information provided on medical travel agency websites: a place for policy, *Health Policy and Technology* 5 (4) (2016) 414–422.
- [16] M. Samadbeik, H. Asadi, M. Mohseni, A. Takbiri, A. Moosavi, A. Garavand, Designing a medical tourism website: a qualitative study, *Iran. J. Public Health* 46 (2) (2017) 249–257.
- [17] A. Baghbanian, R. Safdari, L. Erfannia, M. Zokaei, The medical tourism industry in Iran: a review of websites designed for cross-border patients, *Health Scope* 10 (1) (2021) 1–6.
- [18] V.A. Crooks, L. Turner, I.G. Cohen, J. Bristeir, J. Snyder, V. Casey, R. Whitmore, Ethical and legal implications of the risks of medical tourism for patients: a qualitative study of Canadian health and safety representatives' perspectives, *BMJ Open* 3 (2) (2013) 1–8.
- [19] O.A. Makinde, Physicians as medical tourism facilitators in Nigeria: ethical issues of the practice, *Croat. Med. J.* 57 (6) (2016) 601–604.
- [20] K. Penney, J. Snyder, V.A. Crooks, R. Johnston, Risk communication and informed consent in the medical tourism industry: a thematic content analysis of Canadian broker websites, *BMC Med. Ethics* 12 (2011) 1–9.
- [21] W.N. Mohamad, A. Omar, M.S. Haron, The moderating effect of medical travel facilitators in medical tourism, *Procedia-Social and Behavioral Sciences* 65 (2012) 358–363.
- [22] L. Skountridaki, Barriers to business relations between medical tourism facilitators and medical professionals, *Tourism Manag.* 59 (2017) 254–266.
- [23] T.-H. Cham, Y.-M. Lim, B.-C. Sia, J.-H. Cheah, H. Ting, Medical tourism destination image and its relationship with the intention to revisit: a study of Chinese medical tourists in Malaysia, *J. China Tourism Res.* 17 (2) (2020) 163–191.
- [24] M. Fetscherin, R.-M. Stephano, The medical tourism index: scale development and validation, *Tourism Manag.* 52 (2016) 539–556.
- [25] A.S. Hyder, M. Rydback, E. Borg, A. Osarenkhoe, Medical tourism in emerging markets: the role of trust, networks, and word-of-mouth, *Health Market. Q.* 36 (3) (2019) 203–219.
- [26] T. Xu, W. Wang, J. Du, An integrative review of patients' experience in the medical tourism, *Inquiry: The Journal of Health Care Organization, Provision, and Financing* 57 (2020) 0046958020926762.
- [27] A. Rejeb, J.G. Keogh, H. Treiblmaier, The Impact of Blockchain on Medical Tourism, *WeB2019 Workshop on e-Business*, Munich, Germany, 2019.
- [28] M.K. Todd, *Handbook of Medical Tourism Program Development: Developing Globally Integrated Health Systems*, CRC Press, 2011. FL.
- [29] ISO, *ISO 22525:2020(en) Tourism and related services-Medical tourism-Service requirements*, 2020, 12. Geneva, Switzerland.
- [30] **GHA, Medical travel facilitator certification**, Retrieved 06 19, 2023, from *Global Healthcare Accreditation*: <https://www.globalhealthcareaccreditation.com/medical-travel-facilitator-certification>, 2022.
- [31] **TPQI, Medical and wellness travel facilitator**, Retrieved 06 19, 2023, from *Thailand Professional Qualification Institute*: <https://tpqi-net.tpqi.go.th/qualifications/4868>, 2023.
- [32] G. Cheetham, G. Chivers, Towards a holistic model of professional competence, *J. Eur. Ind. Train.* 20 (5) (1996) 20–30.
- [33] V. Braun, V. Clarke, Using thematic analysis in psychology, *Qual. Res. Psychol.* 3 (2) (2006) 77–101.
- [34] N. Lunt, P. Carrera, Medical tourism: assessing the evidence on treatment abroad, *Maturitas* 66 (1) (2010) 27–32.
- [35] **Precedence Research, Medical tourism market. (Precedence research)**, Retrieved 03 19, 2023, from <https://www.precedenceresearch.com/medical-tourism-market>, 2023, 01.
- [36] E. Cohen, Medical tourism in Thailand, *AU-GSB e-journal* 1 (1) (2008) 24–37.
- [37] W. Janchai, A. Bouras, V. Siddoo, An ontology model for medical tourism supply chain knowledge representation, *Int. J. Adv. Comput. Sci. Appl.* 13 (4) (2022) 232–240.
- [38] F.G. Alberti, J.D. Giusti, F. Papa, E. Pizzurno, Competitiveness policies for medical tourism clusters: government initiatives in Thailand, *Int. J. Econ. Pol. Emerg. Econ.* 7 (3) (2014) 281–309.
- [39] A. Kamassi, N.H. Manaf, A. Omar, The identity and role of stakeholders in the medical tourism industry: state of the art, *Tour. Rev.* 75 (3) (2020) 559–574.
- [40] N. Singh, H. Gill, Exploring the factors that affect the choice of destination for medical tourism, *J. Serv. Sci. Manag.* 4 (3) (2011) 315–324.
- [41] A. Medhekar, Role, rules, and regulations for global medical tourism facilitators, in: M.C. Dhiman, V. Chauhan (Eds.), *Handbook of Research on International Travel Agency and Tour Operation Management*, IGI Global, 2019, pp. 81–100.
- [42] H.L. Chee, A. Whittaker, H.H. Por, Medical travel facilitators, private hospitals and international medical travel in assemblage, *Asia Pac. Viewp.* 58 (2) (2017) 242–254.
- [43] M. Mulder, Conceptions of professional competence, in: S. Billett, C. Harteis, H. Gruber (Eds.), *International Handbook of Research in Professional and Practice-Based Learning*, 2014, pp. 107–137.
- [44] R.S. Mansfield, Building competency models: approaches for HR professionals, *Hum. Resour. Manag.* 35 (1) (1996) 7–18.
- [45] R.J. DeFillippi, M.B. Arthur, The boundaryless career: a competency-based perspective, *J. Organ. Behav.* 15 (4) (1994) 307–324.
- [46] D. Guerrero, I.D. Ríos, Professional competences: a classification of international models, *Procedia-Social and Behavioral Sciences* 46 (2012) 1290–1296.
- [47] K. Nopphareskawat, Legal measures on controlling medical tourism facilitator, *Thammasat business law journal* 6 (2016).
- [48] M. Vaismoradi, H. Turunen, T. Bondas, Content analysis and thematic analysis: implications for conducting a qualitative descriptive study, *Nurs. Health Sci.* 15 (3) (2013) 398–405.
- [49] S. Elo, M. Kääriäinen, O. Kanste, T. Pölkki, K. Utriainen, H. Kyngäs, Qualitative content analysis: a focus on trustworthiness, *Sage Open* 4 (1) (2014) 1–10.
- [50] M.L. McHugh, Interrater reliability: the kappa statistic, *Biochem. Med.* 22 (3) (2022) 276–282.
- [51] C. Parker, S. Scott, A. Geddes, Snowball sampling, in: P. Atkinson, S. Delamont, A. Cernat, J.W. Sakshaug, R.A. Williams (Eds.), *SAGE Research Methods Foundations*, SAGE Publications Ltd, 2019.

- [52] H. Kallio, A.-M. Pietilä, M. Johnson, M. Kangasniemi, Systematic methodological review: developing a framework for a qualitative semi-structured interview guide, *J. Adv. Nurs.* 72 (12) (2016) 2954–2965.
- [53] A. Afthanorhan, F.S. Z. Awang, P. Ghazali, N.J. Rashid, The effect of product quality, medical price and staff skills on patient loyalty via cultural impact in medical tourism, *Management Science Letters* 8 (12) (2018) 1421–1428.
- [54] R.A. Ainuddin, P.W. Beamish, J.S. Hulland, M.J. Rouse, Resource attributes and firm performance in international joint ventures, *J. World Bus.* 42 (1) (2007) 47–60.