Journal of Korea Trade Vol. 25, No. 2, April 2021, 1-21
https://doi.org/10.35611/jkt.2021.25.2.1
ISSN 1229-828X

A Framework of Medical Tourism as a Niche Trade Item: A System Approach*

Tae-Gyou Kho†
Department of Business Management, Hallym University, South Korea

JKT 25(2)
Received 2 September 2020
Revised 30 October 2020
Accepted 20 November 2020

Abstract

Purpose – The purpose of this research is to develop two medical tourism system models which explain medical tourism phenomenon with a systemic approach.

Design/methodology – This research was conducted by using a qualitative data analysis which mainly refers to previous references of medical tourism in the areas of tourism and medicine. Leiper's tourism system model was utilized as a conceptual framework. In-depth interviews with experts in the field were conducted in order to pretest the models.

Findings – This research suggests a medical tourism system framework and a medical service provision framework. The first model presents medical tourism components and their relationships within a framework presented in a diagram. The second model shows the relationships among medical services required by medical tourists, the service providers, and service human resources along with movements of medical tourists.

Originality/value – The first model presents a spatial composition of medical tourism components and their relationships, whereas the second model shows the linkage among medical services, the service providers, and relevant service human resources along with time sequential steps of medical tourists. These two models are complementary and may be used as useful tools to observe medical tourism phenomenon with a systemic and holistic approach. These two models may enable stake holders avoid unnecessary confusions and conflicts that result in duplication of government policies and a waste of budget and human resources.

Keywords: Medical Tourism, Medical Tourism Industry, Medical Tourism Service Linkage Framework, Medical Tourism System Framework, System Approach
JEL Classifications: L83, Z31

1. Introduction

In recent times, medical tourism has emerged in many countries as a new form of trade item or value-added tourist product. These countries have been actively developing this industry through government investment and support in order to earn foreign exchange. The global medical tourism industry is expanding as many countries, especially emerging economies, promote it. Furthermore, the growing presence of low-cost carriers and availability of viable information related to medical tourism are driving its growth (Market and Research, 2019a).

According to United Nations World Tourism Organization (2019), total exports from international tourism reached US$ 1.7 trillion in 2018. As a worldwide export category, tourism ranks third after chemicals and fuels, and ahead of automotive products (UNWTO, 2019). In many developing countries, tourism is the top export category. Tourism is an

* This research was conducted by the 2020 Hallym Research Fund (HRF-202008-007).
This paper is an amendment to what was presented at the 2019 KTRA Hanoi International Conference.
† **First and Corresponding author:** tgko@hallym.ac.kr

important component of export diversification both for emerging and advanced economies, with a strong capacity to reduce trade deficits and compensate for weaker export revenues from other goods and services (UNWTO, 2019).

The revenue from medical tourism as a part of tourism products is also counted as an export category (Bull, 1992). In the medical tourism system, medical tourists travel from one country to another to receive higher quality and advanced healthcare. Better quality refers to modernized hospitals, more experienced surgeons, advanced medical equipment and supplies, better prescription drugs and medications, or healthcare facilities that specialize in certain medical treatments (Stephano and Edelhet, 2010). When a patient from Country A purchases medical services from Country B with US dollars, it is treated as foreign currency in Country B. This can be seen as Country B's medical industry exporting medical services to patients in Country B.

In 2017, the total medical tourists around world was 14~16 million and their expenditure was US$ 440billion which implies the export effect of the same amount of medical services (Dalen and Alpert, 2019). Another report shows other indicators of the rapid growth of medical tourism. No less than 20 million medical tourists travel across the world every year to receive healthcare services, spending an average of US$ 3410 per visit (Edelheit, 2019). This expenditure includes medical related expenditure, inpatient stay, transportation, accommodation, and food and beverage. Technavio's analysts forecast that the global medical tourism market will grow by 12.6% during the period 2017-2021(Market and Research, 2019a). The Korean medical tourism industry also attracted 380,000 medical tourists and earned US$ 582million in 2017 (Ministry of Health and Welfare, 2018).

However, despite the high levels of interest in medical tourism in the public and private sectors, there is a lack of theoretical research or models that systematically and comprehensively explain the relationships between medical tourism industry and its components in academia and the mainstream media. As a result, there is much room for confusion and conflicts between industry stakeholders, governments, corporations, academia, research institutes and insurers. Thus, a theoretical model that can comprehensively and holistically cover the medical tourism industry is required, and a systemic approach is a vital component of this theoretical foundation.

The principal reason for the confusion and conflicts between stakeholders in this industry is that the medical tourism industry is not a single composite industry but a complex composite industry. This means that services for medical tourists are provided by a number of businesses such as medical facilities, tourism businesses, transportation, accommodation, food and beverage, travel agencies, government services and so on. If a stakeholder observes the medical tourism phenomenon with a singular perspective, it is difficult to understand, and a proportion of services will end up being neglected. As argued by Getz (1986), a system approach may improve coordination among stakeholders in a tourism destination and contribute to establishing an effective policy.

In order to explain medical tourism phenomena with a system approach, this study aims to develop a medical tourism system framework (MTSF – Fig. 2) and medical tourism service provision framework (MTSPF – Table 2). Using a spatial framework, MTSF can explain the relationships between the components (medical tourists, medical tourist generating regions, medical tourist destination regions, suppliers of medical tourism products, intermediaries, and medical tourism services supplied by the medical tourism industry). MTSPF can present the relationships among the services required by medical tourists, service suppliers, and related human resources corresponding to the time sequential steps of medical tourists' movements. In practice, these models will aid in resolving conflicts among the stakeholders in the medical tourism industry and will contribute to the formation of rational policies

regarding medical tourism and to the theory building process of medical tourism.

2. Literature Review

It is necessary to review relevant previous literature in order to formulate a medical tourism system framework (MTSF – Fig. 2) and medical tourism service provision framework (MTSPF – Table 2). This is because the concepts of medical tourism supporting the MTSF and MTSPF models require fundamental information in relation to system theory (approach) to show the six components of medical tourism services; medical tourists; medical tourist generating regions (MTGR); medical tourist destination regions (MTDR); medical tourism products and product providers; medical tourism intermediaries; and medical tourism services. These components are systematically connected to each other and they are holistically influenced by each other. This implicates that these components are essential factors to construct the MTSF and MTSPF models.

2.1. Concepts of Medical Tourism

Dalen and Alpert (2019) note that patients who travel to another country to seek health care are referred to as medical tourists. However, the concept is not as simple as it seems. Along with the growth of this industry in the past decades, research on the concept of medical tourism or tourists has been expanding. The increase of customers pursuing quality and cheap medical services, as well as tourists attempting to improve their health has produced a special niche product known as medical tourism (Connell, 2006). The term is being used casually in the general market and academia, despite not being an accurate reflection of medical services in tourist destinations or the experiences of the tourist (Horowitz, Rosensweig and Jones, 2007). The American Medical Association (AMA) also uses the term in an official capacity, while the majority of hospitals, insurance companies, corporations, facilitators, doctors, and the media accept and use the term (Edelheit, 2008).

There is still much difficulty in gathering empirical findings regarding real world experiences of tourists who engage in medical tourism by their own accord using their own resources, and the actual implications of the medical tourism phenomenon are still unclear (Lautier, 2008). Many countries are offering medical services at relatively low prices, but reliable data regarding the number of medical tourists and other indices is significantly lacking. Discussion regarding issues such as the market, preferred destinations, treatment effects, quality and safety of services, and ethical and legal problems are limited to narrative reviews, which cannot be considered as evidence (Lunt and Carrera, 2010). This lack of reliability, data and policies may be partly due to a lack of a theoretical foundation regarding medical tourism as a phenomenon.

According to Reed (2008), there are two definitions to the term "medical tourism" that can be found in literature or the internet. One refers to travel for the purpose of receiving health care services, and the other is a more general term used in the corporate and media fields, which is also appearing in both medical and tourism literature. The former definition is related to medical travel where doctors or nurses travel to developing countries in order to provide health services voluntarily, while the latter is the definition that matches up with the phenomenon discussed today in academia and the industry. Discussion on the concept of medical tourism thus far has placed it on an equal level with health tourism or subsumed it as a part of health tourism. Smith and Puczko (2009) classifies health tourism into medical tourism and wellness tourism, placing these two concepts under a broader term of health

tourism. Health tourism refers to tourist destinations attracting tourists by using medical facilities or services outside of traditional tourist attractions (Goodrich and Goodrich, 1987). As it can be seen, health tourism and medical tourism can both overlap and be mutually exclusive. Lunt and Carrera (2010) offer a more concrete explanation of the relationship between medical and health tourism. According to their research, medical tourism, when viewed broadly, is a derivative of health tourism. They see the two as a combined phenomenon, though with different weight levels of each. Health tourism has been seen as a planned trip away from one's home with the purpose of improving, maintaining and recovering individual wellbeing. Therefore, health tourism includes medical tourism which is planned travel away from one's domestic health service system to another nation in order to improve or maintain one's health. As Connell (2006) claims, there is a tendency for some researchers to place all health-related tourism under the term health tourism, but tourism involving specific medical treatments or procedures are better served by being seen as medical tourism.

As examined above, there are differences in perceptions of the concepts of medical tourism by the stakeholders involved. In particular, the tourism industry and the medical industry share different views. While the tourism industry views medical tourism as a combination of medical services and tourism services (Connell, 2013; Mathijsen, 2019), the medical industry is less optimistic on the combination of medical and tourism services (Balaban and Marano, 2010; Gaines and Lee, 2019; Lunt and Carrera, 2010). The reason behind this that each side approaches the concept from their own areas of specialization, which produces observations that are not fully-rounded. The concept of medical tourism differs according to which perspective is taken, and an all-inclusive definition lacks persuasive power. Thus, a systemic and comprehensive observation of the medical tourism phenomenon is required for an accurate understanding of the concept.

2.2. System Theory (Approach)

This paper's research approach is centered on 'system theory' or 'system approach' in order to form a medical tourism system that can comprehensively explain the medical tourism phenomenon. As a concept and method, system theory has been used in a variety of contexts to articulate a feasible common purpose. According to Bell and Morrison (1998, p. 81), "a system is perceived whole whose elements 'hang together' because they continually affect each other over time and operate toward a common purpose." System theory started in the 1930s, but Bertalanffy was the first to systemize this theory and attempt to link it to other fields of study (Leiper, 1979). Bertalanffy believed that contact with theories of other academic fields was required to further understanding of his field of work, biology. He observed those that were considered ignored or bypassed in the past and systemized system theory. System theory begins from the assumption that even the most complex phenomenon can be conceptualized into a mutually connected system. The advantage of this system approach is that it can clearly define complex phenomena. Because of this, system theory was adopted in many academic fields, including tourism. Capra (1983, 1881, 1996) is one of the explorers of this approach. He attempts to mix traditional Western science (matter) and Eastern Mysticism (mind and soul), arguing all components, including matter and mind, in the universe are connected within a web. Ten Brink, Hosper, and Colijin (1991) used this approach in order to describe and assess marine ecosystem sustainability with an AMOEBA model. Cuervo was the first to utilize system theory in tourism (Leiper, 1979).

Leiper (1979/ 1995) explains tourism phenomena with five components of the tourism industry: tourists as a subject of travel; tourist generating regions, transit route, and tourist

destination region where tourists move; and the tourism industry who provides relevant services required by tourists. Furthermore, political, economic, socio-cultural, environmental factors which impact the tourism industry are also incorporated in the tourism system. His research contribution is to suggest a first holistic system model which is effective in explaining the phenomena of tourism industry with a spatial framework, presenting the relationships between the components, and incorporating political, economic, socio-cultural, environmental factors which impact the tourism industry.

The tourism industry is made up of a combination of various industries, and as a result system theory is emphasized by many researchers (Goeldner and Ritchie, 2008; Gunn and Var, 2002; Leiper, 1979, 1995; Mill and Morrison, 2009). The system theory can be applied to medical tourism, as it is useful for understanding the roles, mutual connections and relationships among the various suppliers and customers participating in the medical tourism industry. Taking into account that the medical tourism industry is a complex composite industry with a common goal of attracting medical tourists, the system approach may be useful in studying and understanding the various phenomena in the medical tourism industry.

2.3 Components of the Medical Tourism Industry

The components that make up the medical tourism industry are the medical tourists, the medical tourist generating regions (MTGR), medical destination regions (MTDR), and the service-providing medical tourism industry, which includes medical tourism products, suppliers, intermediaries and related services.

2.3.1. Medical Tourists

Medical tourists, who are the consumers of medical tourism products and related services, can be divided into a variety of types, all of which have distinct qualities. Medical tourists are the core of the medical tourism system and have considerable influence on the system. The types of medical tourists can be divided differently according to the researcher's goals (type of treatment/procedure, motivation for travel, length of stay, travel budget and so on). According to the American Medical Tourism Association (MTA), there are six types of medical tourists according to different medical tourism products (Cormany, 2008). Major surgery tourists are those that require major surgery on the heart, spine, joints, and other parts of the body. Minor surgery tourists are those that require dental work or other minor surgeries. Cosmetic or plastic surgery tourists are those that desire these kinds of aesthetic procedures, while diagnostic service tourists are those that do not have a specific illness but wish to receive a general appraisal of their health. Tourists for alternative therapy treatments are those involved in alternative treatments such as Ayurveda or traditional Chinese medicine. Finally, wellbeing tourists travel in order to receive services regarding wellbeing or lifestyle remodeling.

If patients are classified according to motivation for receiving treatment in another country, they are grouped into the following six categories (Horowitz et al., 2007): Price-oriented: This type of medical tourist avoids the high costs of domestic medical care and looks for low-cost services in other countries. Many are not covered by insurance or have a low coverage rate. A recent report by the Gallup National Health and Well-being Index revealed that 13.7 percent of American adults were uninsured in the last quarter of 2018 (Edelheit, 2019). This implies that more than 30 million American adults do not have health insurance (Edelheit, 2019). Non-insured treatments: These medical tourists seek procedures that are not covered by their domestic insurance policy, such as birth control treatments (Sethna and Doull, 2012) or

gender reassignment surgery (Aizura, 2010; Wilson, 2011). Displeased with medical policy: Dissatisfied with the public health care systems in countries such as Canada and the United Kingdom, some patients choose to receive treatments overseas to avoid long wait times or low quality of health care services (Medhekar, Wong, and Hall, 2019). Controversial issue related: There are medical tourists who wish to receive certain treatments or procedures but cannot because of legal, moral, cultural, and social restrictions. This is especially true in developed nations such as the United States, where stem cell treatments are of great issue (Caplan, 2019; Cohen and Cohen, 2010). Countries such as the United Kingdom forbid abortion, and as a result couples seeking to abort a baby must travel overseas (Connell, 2006). In vitro fertilization (Horowitz, 2007) is another of such procedures and an even more extreme case is traveling to a country where euthanasia is allowed (Connell, 2006). Switzerland, the Netherlands, and some States of the USA have been attractions for so-called "death tourists" for their policies regarding euthanasia (Gautier et. al., 2015; Pratt, Tolkach, and Kirillova, 2019). Protection of privacy: The protection of privacy can also spur medical tourism. Patients that require secrecy regarding certain procedures such as birth overseas (Jaramilo, Goyal, and Lung, 2019), gender reassignment, drug addiction therapy (Crush and Chikanda, 2015; Kavenská and Simonová, 2015), and hair regrowth therapy (Cohen and Cohen, 2010) have an option to receive treatment overseas, where they will not be spotted by someone they know. Tourism and leisure: Some patients relish the opportunity to spend their vacation at a resort in a foreign country, and thus elect to receive certain medical procedures overseas (Connell, 2006). Although the tourism aspect is emphasized by travel agencies to potential tourists, oftentimes it is still the medical procedure that is of priority.

2.3.2. Medical Tourist Generating Region (MTGR)

Medical tourist generating regions refer to the countries or cities that produce medical tourists. This means that MTGRs become importing countries of medical tourism products. Medical tourism agencies and insurers or corporations naturally form relationships to send medical tourists to medical tourist destination regions (MTDRs). Because of this, MTGRs become target markets for MTDRs and are subject to marketing and promotion. Before the 2000s, the medical tourism phenomenon was largely comprised of the wealthy classes in developing countries that were seeking high quality health care services in the United States or Europe that were not available in their homelands (Goodrich and Goodrich, 1987).

However, this trend has now been reversed, and customers from developed countries are seeking health care, and sometimes tourism and leisure services, in developing countries (Horowitz et al., 2007). It is not only those from developed countries that are seeking medical tourism services. Surprisingly, many medical tourists hail from developing countries with high purchasing power (Connell, 2006). The wealthy from regions such as Africa, Asia and the Middle East are also major customers in medical tourism. This diversity in MTGRs indicates that the medical tourism industry is undergoing rapid globalization.

Other factors also contribute to the increasing numbers of medical tourists. As Garcia-Altes (2005) points out, medical tourism is most accessible to the baby boom generation, which has the highest income rates and the highest tendencies to take vacations. They are less sensitive to price and are more interested in the various factors such as destination, quality, and secrecy that make up marketing strategies (Garcia-Altes, 2005). The lifestyle of this generation is promoting the demand for aesthetic clinics, spas, retirement communities, fitness centers and rehabilitation clinics (Edelheit, 2019). In addition, those in developed countries today already tend to have experience in tourism, and many are seeking out new and differentiated tourism products.

2.3.3. Medical Tourist Destination Region (MTDR)

Medical tourist destination regions refer to the country or city attracting medical tourists from overseas markets. This means that MTDRs become exporting countries of medical tourism products. MTDRs must select target markets from various MTGRs and conduct appropriate marketing promotions. An incorrect choice of target market could bring about a waste of budget, time and manpower. Therefore, marketing strategies must be formed with great effort and precision in analysis of market opportunities, market segmenting, targeting, and positioning with marketing mix and promotion mix.

Currently many nations are supporting their medical tourism industries in order to target MTGRs. In terms of region, Asia, the Americas and Europe are the most active in this business (Horowitz et al., 2007). In Asia, the primary MTDRs are India, Israel, Jordan, Malaysia, Singapore, South Korea, the Philippines, Thailand, and the United Arab Emirates. The competition among these nations has been increasing, especially among India, Singapore, South Korea, and Thailand. The Asian medical tourism market is anticipated to cross US$ 14 billion mark by 2022 (Market and Research, 2019b). In the Americas, Argentina, Barbados, Brazil, Canada, Costa Rica, Cuba, Jamaica, Mexico, and the United States are the well-known destinations. The United States in particular has been a primary MTGR market, but at the same time has utilized its traditionally strong medical care quality to remain one of the most desired MTDRs. In Europe, Belgium, the Czech Republic, Germany, Hungary, Italy, Poland, Portugal, and Spain are noted MTDRs. For example, Sopron in Hungary is famous for drive-in and out dental services. Eastern European nations such as Hungary are pursuing price-competitiveness in order to attract patients from Western Europe. Germany receives many wealthy patients from the Middle East. In the other regions, South Africa and Tunisia are the notable MTDRs, and Australia and New Zealand are the largest medical tourism markets in Oceania.

Despite the growth of medical tourism industry, there remains many obstacles to the export of medical services by MTDRs. Garcia-Altes (2005) identifies the following as the main obstacles to the growth of the global medical tourism industry: restrictions on foreign hospitals' entry into markets, restrictions on direct foreign investment in medical services, regulations on the medical industry, lack of facilities, capacity limitations, manpower and excessive competition.

2.3.4. Medical Tourism Products and Product Providers

Medical tourism products can be divided into groups based on the patient's goals or type of service offered by the suppliers of medical tourism services. The MTA separates products according to the types of service offered by suppliers of medical services (Cormany, 2008): major surgeries, minor surgeries, cosmetic/plastic surgeries, diagnostic services, alternative therapy treatments, and wellbeing/lifestyle services. The first three services are called surgery style services, whereas the last three services are called non-surgery services. The first four services are called hospital style services, whereas the last two services are called non-hospital style services. As well as hospital style products, non-hospital style products are also rapidly growing. The market is set to grow 4.9% from 2017 to 2021, with total inbound spending reaching US$ 310.5 million by 2021(Market and Research, 2019c).

There are a variety of models dealing with how the medical tourism industry provides patients with medical services in MTDRs. The MTA lists the following medical service models (Cormany, 2008). The hospital service model is the most standard model that involves the patient receiving diagnosis and treatment at a hospital, then recovering and resting at the hospital, a hotel or a resort. Examples include Thailand's Bumrungrad International Hospital, Singapore's Raffles Hospital Group, and India's Apollo Hospital Group. The medi-resort

service model involves treatment and recovery occurring in a resort that is equipped with medical facilities. Malaysia's Palace of the Golden Horses and Thailand's Chiva-som Spa Resort are the more well-known facilities. The fly-in & airport service model involves treatment at a hospital inside the airport at which the patient lands, such as M-Hospital in Munich International Airport in Germany. Patients do not have to travel long distances, but such facilities are limited in capacity. The cruise ship model involves treatment and rest inside a cruise ship. Renaissance Cruises is an example of such a model. Oftentimes a patient can receive all the necessary treatments and recovery procedures during the same cruise but can also board the cruise after receiving treatment at a nearby hospital. Johns Hopkins Hospital offers such linked services with cruises. The drive-in and out model involves driving to a neighboring country to receive simple treatments (e.g. dental clinics) or to buy certain pharmaceuticals and then returning. Los Algodones, Mexicali, and Tijuana are located on the US-Mexico border, and are a prime example of such a model. Sopron in Hungary is another destination for dental clinic treatment for Western patients. The airline-hospital joint model involves receiving diagnoses during the flight on an appropriately equipped airplane, and the results of the diagnoses are directly sent to the hospitals in the MTDR before the patient arrives, speeding up the treatment process. Emirates Airlines offers such services, but only on certain routes.

2.3.5. Medical Tourist Intermediaries

Intermediaries serve as a link between the specialists of various fields involved in medical tourism. The government forms policies on medical tourism, improves systems, and supports budgets to intervene in the medical tourism industry, and can even send its own citizens to overseas hospitals, as is done by the British Healthcare Service (Horowitz et al., 2007). This is done to minimize wait times and costs that would be required for expanding medical infrastructure and relevant human resources. Since 2005, BHS has subsidized medical costs for citizens traveling overseas (within five hours by air) to receive treatments (Horowitz et al., 2007). Insurers and labor unions can also play the role of intermediary. Insurance companies and corporations with their own insurance policies are examining outsourcing medical services as a way to reduce costs and are offering incentives to those who travel overseas for treatments (Reed, 2008). Reduced insurance rates, cashbacks, travel cost subsidies for even traveling companions are also offered (Reed, 2008). Tourism-related associations and groups are also important intermediaries. The MTA provides a broad range of information for potential consumers, contributing to the growth of the global medical tourism market. For this development to occur, intermediaries must play an important role in connecting suppliers and consumers. Whether they receive commissions or provide free services, intermediaries introduce and connect a wide range of services to the medical tourist.

In particular, agencies play a large role for both consumers and suppliers by planning medical tourism products and engaging in marketing promotions. Medical tourism agencies are those that provide specialist services for overseas consumers who wish to receive medical treatment (Woodman, 2008). They may also be called medical(health) travel(tourism) agents, medical travel planners, medical travel facilitators, medical travel brokers, and medical travel expediters. Medical tourism agencies have many different roles, with some being part of a large corporation, while others are mom-and-pop operations (Woodman, 2008). Some specialize in a certain type of procedure or product and are located in a country that is known for such products, while others deal with multiple types of services in many different countries (Woodman, 2008).

2.3.6. Medical Tourism Services

The components of medical tourism services can be largely divided into four groups. These may change according to the researchers, but the MTA identifies four categories that the (American) consumers of medical tourism take into account when selecting overseas MTDRs (Table 1, Cormany, 2008). These categories must be taken into consideration by the service suppliers in MTDRs when forming marketing strategies or products. Medical facilities and related services, accommodations and F & B (food and beverage) services, tourist facilities and services, and government policies and sociocultural elements are such categories. Each of the four major groups have many subcategories. Only MTDRs that can prepare accordingly to supply these services to medical tourists will be able to succeed in attracting customers and grow.

Table 1. Factors of each destination mechanism which may boost or weaken an MTDR's appeal toward the medical tourists

Types of Services	Services Required by Medical Tourists
Medical Facilities and Services	Costs-medical; Labor available-medical; Facilities: capacity, accreditation, licensure of staff, specializations, staff vs patient ratio, ambulance service; Training available - medical (medical schools, nursing programs); Medications: availability, safety of medication quality, parallels to US medication; English commonly spoken among medical staff; Equipment available for rental (e.g., oxygen and wheelchair); Ease of medical record transfer back to the home country; Private nurses available for hire; Privately operated facilities; Operation of "aftercare" facilities; Indigenous disease threats
Hotel and Food/ Beverage Services	Costs-lodging; Costs-food and beverage; Hospitality labor availability; Number of 3/4/5 diamond rooms available; Hospitality training available; English commonly spoken among hospitality staff; Dietary accommodations available (gluten-free, low-sodium, and doctor-prescribed); Internet availability; Availability of potable water in facilities; Reliability of electricity in facilities; Licensure & regulation for: hotel accommodations, food & beverage operations, and spa facilities; Hotel accommodations: disability and special services accommodations, room service availability (24 hours), private baths, elevators, proximity to hospitals, heat/air conditioning. Value for services provided ratio; Presence of spa services: spa treatments, medical personnel associated with spa, traditional treatments, instruction in relaxation, diet and wellness programs, diagnostic services, exercise/workout facilities
Tourism Support Facilities and Services	Costs-general labor; Availability of educated translators; Commonality of spoken and written English; Airport: direct service from major cities in MTGRs, frequency of flights, airfare rates, airline servicing area, accommodations for disabilities; Local transportation: safety of available transport options, availability of taxis and limos, buses and other public transport types; Accommodation for disabled available; Reliability of infrastructure: public service, electric service, waste management; Local political stability; Safety from crime; Distribution of service for: the Internet, cell phones; Ease of limited mobility maneuverability (e.g., wheelchair, pedestrian-friendly areas); Destination appeal: city offerings, sightseeing, relaxation, culture, education, traditional medicine as supplement/ alternative; Weather appeal for recovery and vacation
Governmental Services	Political stability of country; Currency fluctuations; Access to money/credit; Stability of labor force -union strike potential; Safety of country; Respect of individual rights: protection of disabled, culture of tolerance, freedom from unreasonable arrest, gender equality; Legal system: protection of patients, established laws, evenness of enforcement, malpractice recognized, legal recourse, accounting and tax system, financial disclosure; Ease of access: need for visa, visa access, visa processing time; Type of market: capitalism, privatization, regulation/deregulation of areas impacting healthcare and tourism; Cultural strain: host country's citizens' attitudes toward source country, likeness of source and host country culture, current awareness/image of locale by visitors

Source: Modified from Cormany (2008: 36).

Because the primary purpose of medical tourism is receiving medical services, how a

MTDR is able to reinforce trust and safety of its medical care services in medical tourists' minds becomes one of the most important aspects (Kunwar, 2019). In particular, medical tourists are always apprehensive of the standard of medical technology of MTDRs, and thus additional levels of care and detail are required in this area when compared to the other three categories. Along with the fame of its medical staff, the level of medical facilities is of most importance to medical tourists (Nikbin et. al., 2019). The bed capacity, the presence of JCI (Joint Commission International) certification and other international standards, registration of doctors and nurses, level of expertise in certain areas, doctor-patient ratio, and ambulance services are some of the factors that customers take into account (Watson, 2008). With the growth of the global medical tourism industry hospitals all around the world are increasing international marketing activities. Medical tourists, when subjected to this, are curious about how these international hospitals compare to those in their home country. One way for overseas hospitals to prove their high standards is receiving certification from the International Society for Quality in Healthcare (ISQua) (Watson, 2008).

The accommodation and food, and the related services, are also of great importance for an MTDR when it meets the needs of sensitive and vulnerable medical tourists. Because medical tourists also are restricted in mobility and diet during treatment and recovery, additional attention must be paid to these customers, and the following factors can be taken into account by medical tourists when choosing a MTDR (Sadeh and Garkaz, 2019): placement of medical staff at the spa facility, possibility of a health diagnosis, treatment programs inside the spa, traditional treatment methods (yoga, acupuncture and so on), rest, diet, well-being education (tai chi, yoga and so on), and exercise facilities. Facilities that can meet the dietary requirements recommended by doctors to patients are also required.

Tourism and leisure facilities and services are also very important for medical tourists. Aside from the medical tourists that receive services related to their surgeries, medical tourists and their companions have a high possibility of pursuing recreational activities after their medical care. A survey of patients at Thailand's Bumrungrad Hospital revealed that 85% of patients or their companions experienced at least one kind of tourism service during their stay (Medical Tourism Association, 2010). Utilizing local travel agencies or travelling to famous tourist spots, shopping and other culture activities by oneself is also possible. Therefore, tourist and leisure facilities and services must also be developed continually to attract medical tourists (Zarei and Maleki, 2019).

Finally, political and social circumstances as well as government policies regarding visas, and the attitude of the local population to foreigners are also important factors in MTDR choice. In particular, visa policies have a great effect on MTDR selection (Chinai and Goswami, 2007).

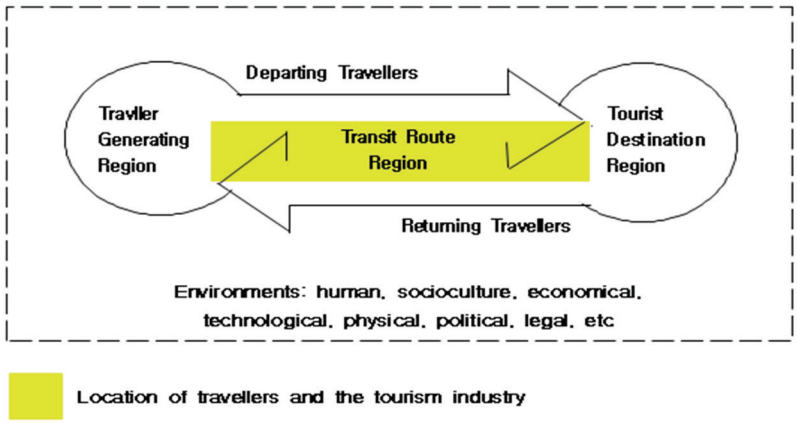
Human resources in medical tourism services are also required in order to offer appropriate services to customers. There are four major categories of specialists: medical service specialists, accommodation and F & B service specialists, tourism service specialists, and government related service specialists. More specifically, medical service specialists include international doctors, nurses, physical therapists, medical coordinators etc. Accommodation and food services require the expertise of floor services, room services, food services, leisure and sports specialists, therapists, and lifestyle remodelers. Tourism service specialists include coordinators, guides, operators, interpreters, and translators. Government service specialists include customs officers.

3. Research Methods

The starting point of this study design is to develop a tool to easily explain to medical tourism stakeholders how various industries come together to provide complex inter-related services through the visualization of the spatial and temporal structure. The author determined that the system approach reviewed in the literature review was optimal for explaining the interests of stakeholders with the common goal of attracting medical tourists and enhancing the level of satisfaction with the services provided. Therefore, a research framework was developed as follows. First, use the system approach. Second, select a tourism system approach that deals with tourists from the system approach. Third, apply the tourism system approach to medical tourism. Finally develop two models using the medical tourism system approach: a medical tourism system framework (MTSF) and a medical tourism service provision framework (MTPSF).

According to this research model, Leiper (1991)'s tourism system model (Fig. 1) was applied as a conceptual research framework to develop the first model of the medical tourism system framework (MTSF). Leiper explains the tourism system by using the concept of geographic space composed of tourist generating regions (TGR), where tourists originate, tourist destination regions (TDR), where tourists arrive at their destinations, and transit routes. For this system to exist, there must be at least one tourist, at least one TGR, one TDR, and a tourism industry that provides tourist services. The system is also influenced by political, economic, socio-cultural, legal and institutional, and natural environmental factors.

Fig. 1. Tourism System Model



Source: Leiper (1995, p. 25).

Applying an existing model and creating another new model is a research method commonly used in qualitative research (Veal, 1999). This research method is mainly used to study cases with similar structures and characteristics to those studied using the existing model. In particular, when new industries emerge, this research method is often used to apply existing useful models to explain their structure and phenomena (Veal, 1999). Therefore, the structure and phenomenon of the medical tourism industry, which is attracting attention as a new power industry, can be explained more easily with the application of the existing tourism system model.

Since medical tourists are also tourists for medical treatment purposes, the types of medical tourists, their route of travel, and the type of medical tourism services they require can be

spatially placed on the figure (see Fig. 2). Based on the concept of the Leiper model (Fig. 1), it is possible to display the type of medical tourist, the type of service, the intermediary, and the place of marketing promotion. This systemic framework allows us to describe the structure and phenomenon of medical tourism between two specific regions (TGR and TDR) in one geographical and spatial model. The medical tourism phenomenon can be easily understood by using this framework because it is created by the combined action of the four components of the medical tourism system, that is medical tourists, generating regions (MTGR), medical tourist destination regions (MTDR), and the medical tourism industry. These four elements were placed on this framework (see Fig. 2) by considering their characteristics and roles. The medical tourism industry was divided into four types of services (in MTDR) and agencies (in both MTGR and MTDR separately). According to this model, medical tourists, MTGR, MTDR, and the medical tourism industry are the basic components of the medical tourism system. A detailed description of the nature and role of these components is provided in detail in 'system components of the medical tourism industry' (see II. Literature Review).

The second model (Table 2), the medical tourism service provision framework (MTSPF), was conceived by integrating Leiper's travel system model with the concept of time of travel in the work manual used in the international patient centers of medical tourism hospitals. Leiper did not directly mention the concept of time in his model other than the concept of geographic space, but the traveler's 'travel' inherently implies the attribute of the 'flow of time'. The flow of medical tourism service, therefore, may be classified into three steps (step 1: MTGR → step 2: MTDR → step 3: MTGR) in line with the time stages of travel of medical tourists (see Table 2).

As shown in Table 2, this MTSPF model provides an overview of medical tourists over time by organically connecting the services needed by medical tourists according to the stage of travel, relevant industries that provide the services, and the service personnel. The linkage among them was presented to provide a comprehensive view of services. The MTSPF model was designed to fulfill the role of complementing the MTSF model (Fig. 2), which explains the structure and phenomenon of medical tourism as a spatial concept. Therefore, when these two models are used at the same time, the role and linkage between the spatial arrangement of medical tourism components and the time sequential movements of medical tourists can be more easily understood.

In-depth interviews with experts in medical tourism industry were conducted to pretest both models. In the model development process, the two models were tested through in-depth interviews with industry experts from the first stage of development to completion of the models. There were three interviewees, each interviewed twice. The interviewees were two team managers at the international patient centers of hospitals in Seoul and a team manager of a medical travel agency in Seoul; interview locations were the team managers' offices. The test period was from October 1, 2017 to September 30, 2018. The interviews continuously improved the models by addressing vulnerabilities and resolving problems until completion. They identified several weaknesses and suggested valuable comments in order to improve the quality of the models.

4. Research Result 1: Medical Tourism System Framework

The medical tourism system framework (MTSF) can be drawn as presented in Fig. 2, using the concepts of Leiper's tourism system (Fig. 1) and the components of medical tourism mentioned in the literature review. MTSF is a diagram designed to explain the relationships

between the components of the system by placing them on the same plane and showing the services and their suppliers according to the routes of the medical tourists. The medical tourism phenomenon can then be explained using four components of the medical tourism system: medical tourists, medical tourist generating regions (MTGR), medical tourist destination regions (MTDR), and medical tourism services supplied by the medical tourism industry, including medical tourism agencies. Each component is mutually connected and interdependent in their mechanisms.

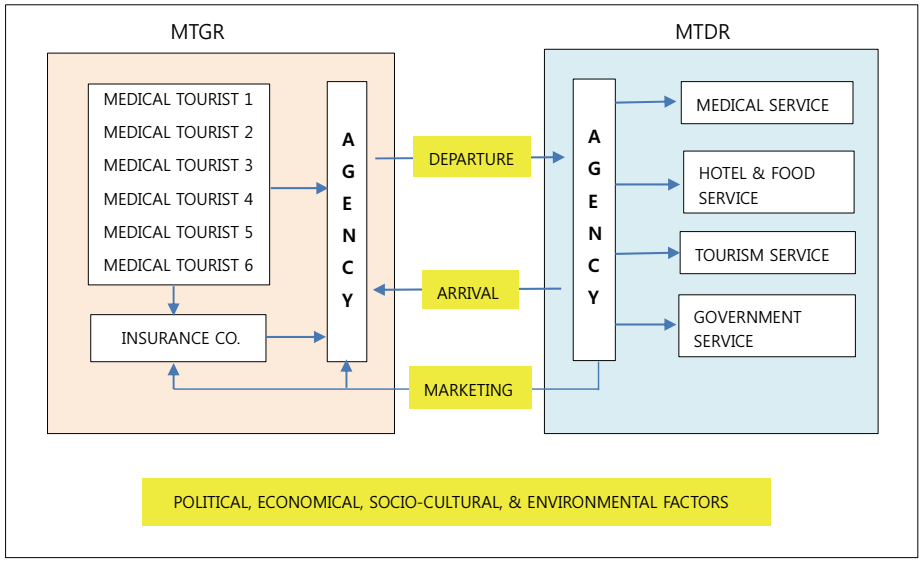
The relationships of each component are as follows (See Fig. 2). The first step is in which a medical tourist contacts an agency in MTGR. At the second step, the agency contacts and sends his/her customer to an agency in MTDR. On the third step, the agency in MTDR contacts the relevant service providers and coordinates the services required by his/her customer with the providers. During the fourth stage, the four service providers (medical service, accommodation and food service, tourism service, and government service) supply the relevant services to their customer. After completing medical treatment the medical tourist returns to MTGR, completing the fifth stage. When attracting customers in MTGR, the agency in MTDR should consider various marketing activities towards agencies or insurance companies in MTGR. In addition, political, economic, socio-cultural, environmental factors are closely related to these medical tourism system components.

The ability of a country or city to attract medical tourists in the medical tourism system is influenced not only by these direct components but also other external circumstances (Leiper, 1979/1995). The political, economic, social and cultural situation can all play a role, as can environmental changes, exchange rates, visa policies, labor markets, openness towards foreigners, and outbreaks of diseases (Cormany, 2008). Fundamentally, the tourism industry is sensitive to political and social factors (UNWTO, 2018). For example, the difficulty of gaining entry into the United States for those from the Middle East after the September 11 attacks forced many of these people to change their MTDR to Singapore, Thailand and other Southeast Asian nations (Connell, 2006). Hong Kong's mass protests that occurred during 2019 lead to many tourists avoiding the country.

Furthermore, various financial setbacks and crises such as the Asian financial crisis in 1997 and the global economic depression in 2008 have made many tourists less likely to travel (UNWTO, 2018). The fact that medical tourists take into account the local attitudes towards foreigners or sociocultural similarity when selecting MTDRs indicates that social and cultural factors do play a role in decision making. Environmental factors also play a role, as seen with the 2004 tsunami in Indonesia having a heavy impact on tourism in the region. The 2010 volcanic eruptions in Iceland forced the cancellation of most air traffic in Europe for a period of time and caused significant economic damage to the European tourism industry (Bird, Gisladottir, and Dominey-Howes, 2010). The movement of tourists, as a part of services provided by the tourism industry, is thusly affected by environmental factors.

In terms of exchange rate, if the currency of the MTDR falls, or if the currency of the MTGR rises, the number of medical tourists increases (Export increase effect) (Bull, 1992; Dogru, Isik, and Sirakaya-Turk, 2019). Furthermore, if the visa application process in the MTDR is difficult or time-consuming, tourists tend to select other destinations (Chinai and Goswami, 2007). Issues with labor movements and strikes that can affect airports and public transportation systems are also detrimental to medical tourists, as are outbreaks of diseases such as SARS and H1N1 influenza. The Asian tourism industry was greatly affected by the SARS outbreak in 2003, and the global tourism market shrunk as a result of the H1N1 influenza outbreak (UNWTO, 2017).

Fig. 2. Medical Tourism System Framework



*MTGR: Medical Tourist Generating Region
*MTDR: Medical Tourist Destination Region
*medical tourist 1 - 6: medical tourists for major surgeries, manor surgeries, plastic surgeries, diagnostic services, alternative treatments, and well -being therapies.

To summarize, the medical tourism system includes the following components: at least one medical tourist, a MTGR, a MTDR, and the medical tourism industry that provides the related services. In addition to these components, external factors mentioned above can greatly affect the trends and flexibility of this system.

5. Research Result 2: Medical Tourism Service Provision Framework

MTSPF (Table 2) is developed to complement the weakness of MTSF (Fig. 2), transferring the spatial framework of the medical tourism components and their relationships to a time sequential framework. As presented by the MTSPF, at each phase of the medical tourist's travels from the MTGR (the 1st Step) to MTDR (the 2nd Step) and back to the MTGR (the 3rd Step), the services demanded and supplied are different. Much preparation is required before initially leaving the MTGR, which entails many different services. Before departure, the selection of a medical travel agency, destination, treatment options, companions, hospitals and doctors are required, as is the organization of medical records, whether the patient will engage in tourism activities, and airline and accommodation arrangements. Specialists aiding in this process include local doctors and travel agents. At this stage, MTDRs must form efficient marketing strategies towards their target markets.

Table 2. Medical Tourism Service Provision Framework

Travel path of medical tourists	Services required by medical tourists	Services provided by suppliers	Relevant human resources	Reference points
1st S Step: MTGR:	consulting & selecting of treatment option	support for treatment option	Doctor in MTGR	marketing promotion is needed
	selecting of MTDR	consulting for selection of MTDR	Doctor/Agency in MTGR	
	selecting agencies	consulting for selection of agencies	Doctor/Agency	
	selecting of travel partners	consulting for selection of travel partners	Doctor/Agency	more than 75% of medical tourists travel with partners in Thailand (MTA, 2010)
	search for Drs in MTDR	support for searching a Dr.	Doctor/Agency	on-line marketing promotion is needed
	search for hospitals in MTDR	support for searching hospitals	Doctor/Agency	
	search for information of Drs in MTDR	support for information of Drs	Doctor/Agency	
	preparation of patients medical record	support for preparation of patients medical record	Agency	
	planning for treatment, recovery, recuperation	support for planning of treatment, recovery, recuperation	Agency	establishment of a communication channel between Drs in MTGR and MTDR
	planning for travel	support for planning of travel	Agency	
	reservation for an airline & a hotel	support for reserving & ticketing of an airline & a hotel	Agency	
	confirm of relevant papers & materials	support for relevant papers & materials	Agency	
	moving to an airport & depart procedure	support for transport to an airport & depart procedure	Agency	
	boarding & travel to MTDR	service of an airline	airline staff	

Table 2. (Continued)

Travel path of medical tourists	Services required by medical tourists	Services provided by suppliers	Relevant human resources	Reference points
2nd Step: MTDR	arrival to an airport	reception of patients	coordinator	translator in case
	moving to a hotel	support for local transport	coordinator	some hospitals support transport in Asia. translator in case
	arrival to a hotel	support for check-in	coordinator/hotelier	
	departure & arrival to a hospital	support for local transport	coordinator	
	check-in	support check-in	hospital staff/medical coordinator/coordinator	some hospitals have medical coordinators in Asia. translator in case
	interview with a Dr.	support for interviews with a Dr.	Dr./Nurse/medical coordinator/coordinator	translator in case
	treatment or surgery	support for treatment or surgery	Dr./Nurse/medical coordinator/coordinator	communication between Drs in MTGR and MTDR
	check-out	support check-out	hospital staff/coordinator	translator in case
	recovery in hospital	interview with a Dr./nursing/care/rehabilitation etc	Dr./Nurse/medical coordinator/ coordinator/therapist /nutritionist	tourism plan for a long-term patient's partners
	change of stay place after surgery	support for local transport	coordinator	translator in case
	recovery & recuperation in a hotel, spa, or resort	support for check-in, nursing, care, rehabilitation etc	(personal)nurse/coordinator/therapist/nutritionist/hotel, spa, resort staff	tourism plan for a long-term patient's partners
	tourism or leisure activities	support for tourism or leisure activities	coordinator/travel agency/ tourism or leisure service staff	Dr.'s permission is required
	personal businesses	support for personal businesses	coordinator	translator in case
	final Dr. interview & check-out	support for final Dr. interview & check-out	Dr./Nurse/medical coordinator/coordinator	communication between Drs in MTGR and MTDR
	moving to an airport, check-in procedure	support for transport & check-in	coordinator	translator in case
	boarding & departure	airline service	airline staff	

Table 2. (Continued)

Travel path of medical tourists	Services required by medical tourists	Services provided by suppliers	Relevant human resources	Reference points
3rd Step: MTGR	reception in an airport	support for transport	agency in MTGR	
	interview with a Dr. in MTGR	support for an interview with a Dr.	Dr. in MTGR	communication between Drs in MTGR and MTDR
	after treatment (in case of side effect)	support for treatment or surgery	Dr./nurse	
	in case of medical accidents	support sue procedure	lawyer/agency	MTGR or MTDR

Even more specialists and services are required as the patient arrives at the MTDR. Unlike regular tourists, medical tourists are in states of physical and mental weakness and additional attentive services should be provided. Services required at this phase include airport pickups, hotel check-in, transportation to hospitals and check-in, diagnosis and treatment by doctors, recovery and rest, check-out procedures, tourism activities (when possible), and departure process. Specialists here include coordinators, translators, hotel resources, local doctors and nurses, other medical staff, therapists, nutritionists, spa and resort staff, and tour guides.

Once treatment is finished, the patient returns to the MTGR. Even after returning, the medical tourist requires careful attention and service. Consulting with a local doctor regarding the treatment received overseas is required, as is further rest and recovery. Return trips to the destination for additional treatments may be required in the case of side effects, infections or complications resulting from the treatments, which requires more support from the medical travel agency. In the case of legal issues, local and overseas legal services may be required (Deora, 2019).

6. Conclusion

This study was conducted in order to describe and explain medical tourism phenomena with a systemic approach and resulted in the development of MTSF (Fig. 2) and MTSPF (Table 2). Findings of this study are as follows. MTSF, as a spatial framework, interprets the medical tourist in MTGR as consumer and MTDR as supplier to build the basic structure, and categorizes the six types of medical tourists and four types of services within this framework. Additional focus has been placed on the agency as an intermediary between consumer and supplier. MTSPF, as a time sequential framework, systematically presents the relationship between the services, suppliers and specialists required at each phase of a medical tourist's trip, complementing the weakness of MTSF. According to these two models, it is evident that services required by medical tourists are not provided by a single business but multiple entities. This implies that the medical tourism industry is a complex composite industry. In conclusion, these models support the purpose of this research which sought to observe medical tourism phenomena with a systemic approach and to contribute to a theory-building process of medical tourism.

The author suggests the following theoretical contributions of these two models. Firstly,

the MTSF and MTSPF can be used as a theoretical framework for discussion or analysis of medical tourism. As mentioned above, there is a lack of theoretical models that can comprehensively and systematically explain the medical tourism phenomenon. As a result, there is potential for unwarranted misunderstandings and conflicts between various stakeholders. These models can also be used to resolve these problems and understand other industries connected to the medical tourism industry. Secondly, the models are not only for the theoretical use in the tourism field but can also be of relevance to other academic fields for interdisciplinary research and study. For example, these models can apply to system theory, economics, business management, geography, medicine, medical businesses. As the medical tourism industry continues to grow, these related fields can utilize the theoretical resources in this study to investigate how the phenomena impacts them.

Further practical contributions of these two models are as follows. Firstly, the MTSF describes the geographical nature of the industry, and any country or city interested in medical tourism can play the role of MTGR and MTDR. Therefore, the model can be used to comprehensively and systematically explain the medical tourism phenomenon occurring between two countries or cities. Secondly, the MTSF and MTSPF can be used to understand the medical tourism phenomenon from a different perspective from existing research. Studies up until now have primarily focused on the MTDR but taking the perspective of the MTGR is also important in identifying issues and precedents in attracting medical tourists on the part of MTDRs. In particular, these models may be of help in identifying target market MTGRs and forming related marketing strategies.

Introduction of these two models implicates that the stakeholders in the medical tourism industry should make a consensus to produce the best satisfaction level of their customers, medical tourists. To achieve this, it is important to understand that medical tourism providers have to supply the best medical tourism programs and their customers have a positive patient experience. Therefore, the providers must understand the whole structure of these two models, the functions of stakeholders, and the relationships between them in order to accomplish their business goals. Medical tourists not only have their own individual reasons for travelling to foreign countries to receive medical tourism services, but also their own individual expectations (Stephano and Edelhet, 2010). Those expectations need to be understood by the medical tourism service providers. The medical tourism providers need to understand why each individual medical tourist is travelling for medical services and what their individual expectations are in order to have a successful medical tourist experience (Stephano and Edelhet, 2010). The providers also need to understand what political, economic, socio-cultural, environmental, and governmental issues are in effect to meet the needs and requirements of customers. These two models introduced in this paper will lead the medical tourism providers to their successful business goals.

Clayton and Redcliffe (1996, p. 211) has claimed that "models are servants, not masters." This indicates that one specific model cannot perfectly explain a complex and dynamic social phenomenon. The MTSF and MTSPF are no exception, in that they cannot offer complete solutions to the issues facing the medical tourism industry, although they are designed to aid comprehensive understanding of these issues. Instead, they may be used as a complementary tool to the fundamental management systems of the medical tourism industry. There are many issues that cannot be explained by one or two models in the medical tourism phenomenon. The experiences and knowledge attained by the people working in this industry may be even more effective in explaining or resolving such issues.

There is much potential for future studies using these models. Studies on the relationship between the suppliers and consumers of the medical tourism industry, or those on the formation of marketing strategies according to target market or consumer group. Studies on

the business situations between MTGR agencies and MTDR agencies, between agencies and insurers and employers would also have significance. Furthermore, strategies of affiliation between the four service subtypes in MTDRs could provide fruitful subjects for future studies.

References

Aizura, A. Z. (2010), "Feminine Transformations: Gender Reassignment Surgical Tourism in Thailand", *Medical Anthropology,* 29(4), 424-443.

Alizadeh, K. (2019), "Commentary on: Surgical Management of Cosmetic Surgery Tourism-Related Complications: Current Trends and Cost Analysis Study of the Financial Impact on the UK National Health Service (NHS)", *Aesthetic Surgery Journal*, 39(7), 792-793.

Balaban, V. and C. Marano (2010), "Medical Tourism Research: A Systematic Review", *International Journal of Infectious Diseases,* 14(1), 135.

Beladi, H., C. C. Chao, M. S. Eh and D. Hollas (2019), "Does Medical Tourism Promote Economic Growth? A Cross-Country Analysis", *Journal of Travel Research,* 58(1), 121-135.

Bell, S. and S. Morse (1999), *Sustainability Indicators: Measuring the Immeasurable,* London: Earthscan.

Bird, D. K., G. Gisladottir and D. Dominey-Howes (2010), "Volcanic Risk and Tourism in Southern Iceland: Implications for Hazard, Risk and Emergency Response Education and Training", *Journal of Volcanology and Geothermal Research*, 189(1-2), 33-48.

Bies, W. and L. Zacharia (2007), "Medical Tourism: Outsourcing Surgery", *Mathematical and Computer Modelling*, 46, 1144-1159.

Bull, A. (1992), *The Economics of Travel and Tourism,* Melbourne: Pitman.

Caplan, A. I. (2019), "Mesenchymal Stem Cells in Regenerative Medicine", In A. I. Caplan (Ed.), *Principles of Regenerative Medicine,* NY: Academic Press, 219-227.

Capra, F. (1983), *The Turning Point: Science, Society and the Rising Culture,* NY: Bantam Books.

Capra, F. (1991), *The Tao of Physics: An Exploration of the Parallels between Modern Physics and Eastern Mysticism,* 3rd ed., Boston: Shambhala Publications.

Capra, F. (1996), *The Web of Life: A New Synthesis of Mind and Matter,* London: Harper Collins.

Chinai, R. and R. Goswami (2007), "Medical Visas Mark Growth of Indian Medical Tourism", *Bulletin of the World Health Organization*, 85, 164-165.

Clayton, A. M. H. and N. J. Redcliffe (1996), *Sustainability: A System Approach,* London: Earthscan.

Cohen, C. B. and P. J. Cohen (2010), "International Stem Cell Tourism and the Need for Effective Regulation: Part I: Stem Cell Tourism in Russia and India: Clinical Research, Innovative Treatment, or Unproven Hype?", *Kennedy Institute of Ethics Journal,* 20(1), 27-49.

Connell, J. (2006), "Medical Tourism: Sea, Sun, Sand and Surgery", *Tourism Management,* 27, 1093-1100.

Connell, J. (2013), "Contemporary Medical Tourism: Conceptualization, Culture and Commodification. *Tourism Management*, 34, 1-13.

Cormany, D. (2008), "Taking a Pulse on Potential Medical Tourism", *Medical Tourism,* 7*,* 34-37.

Crush, J. and A. Chikanda (2015), South–South Medical Tourism and the Quest for Health in Southern Africa", *Social Science & Medicine,* 124, 313-320.

Dalen, J. E. and J. S. Alpert (2019), "Medical Tourists: Incoming and Outgoing", *The American Journal of Medicine,* 132(1), 9-10.

Deora, H. (2019), "Emerging Legal Issues in Medicine and Health-Care", *Neurology India*, 67(2), 626.

Dogru, T., C. Isik and E. Sirakaya-Turk (2019), "The Balance of Trade and Exchange Rates:

Theory and Contemporary Evidence from Tourism", *Tourism Management*, 74, 12-23.
Edelheit, J. S. (2008), "Defining Medical Tourism or Not?", *Medical Tourism,* 5, 9-10.
Edelheit, J. S. (2019), *State of the Medical Tourism Industry.* Avail from https://www.medicaltourismmag.com.
Gaines, J. and C. V. Lee (2019), "Medical Tourism", In J. Gaines (Ed.), *Travel Medicine,* Oxford: Elsevier, 371-375.
Garcia-Altes, M. (2005), "The Development of Health Tourism Services", *Annals of Tourism Research,* 32(1), 262-266.
Gauthier, S., J. Mausbach, T. Reisch and C. Bartsch (2015), "Suicide Tourism: A Pilot Study on the Swiss Phenomenon", *Journal of Medical Ethics,* 41(8), 611-617.
Getz, D. (1986), "Models in Tourism Planning: Towards Integration of Theory and Practice", *Tourism Management,* 7(1), 21-32.
Goeldner, C. R. and J. B. R. Ritchie (2008), *Tourism: Principles, Practices, Philosophies*, 11th ed., NY: John Wiley & Sons.
Goodrich, J. N. and G. E. Goodrich (1987), "Healthcare Tourism - An Exploratory Study", *Tourism Management,* 8(3), 217-222.
Gunn, C. A. and T. Var (2002), *Tourism Planning: Basics, Concepts, Cases,* 4th ed., NY: Routdge.
Habibi, A. and A. A. M. Ariffin (2019), "Value as a Medical Tourism Driver Interacted by Experience Quality", *Anatolia,* 30(1), 35-46.
Horowitz, M. D. (2007), "Medical Tourism-Health Care in the Global Economy", *Physician Executive*, 33(6), 24.
Horowitz, M. D., J. A. Rosensweig and C. A. Jones (2007), "Medical Tourism: Globalization of the Healthcare Marketplace", *Medscape General Medicine,* 9(4), 33-42.
Jaramillo, J., D. Goyal and C. Lung (2019), "Birth Tourism among Chinese Women", *The American Journal of Maternal/Child Nursing,* 44(2), 94-99.
Kavenská, V. and H. Simonová (2015), "Ayahuasca Tourism: Participants in Shamanic Rituals and Their Personality Styles, Motivation, Benefits and Risks", *Journal of Psychoactive Drugs,* 47(5), 351-359.
Kunwar, R. R. (2019), "Medical Tourism and Hospitality in Hospital", *Journal of Tourism and Hospitality*, 10(1), 67-123.
Lautier, M. (2008), "Export of Health Services from Developing Countries: The Case of Tunisia", *Social Science & Medicine,* 67, 101-110.
Leiper, N. (1979), "A Framework of Tourism", *Annals of Tourism Research,* 6, 390-407.
Leiper, N. (1995), *Tourism Management,* Melbourne: Collingwood, RMIT Press.
Lunt, N. and P. Carrera (2010), "Medical Tourism: Assessing the Evidence on Treatment Abroad", *Maturitas,* 66(1), 27-32.
Market & Research (2019a), *Medical Tourism: Market Outlook and Trends.* Avail at https://www.reportlinker.com.
Market & Research (2019b), *Asia Medical Tourism Market and Forecast to 2022.* Avail at https://www.reportlinker.com.
Market & Research (2019c), *Global Health and Wellness Tourism.* Avail at https://www.reportlinker.com.
Mathijsen, A. (2019), "Home, Sweet Home? Understanding Diasporic Medical Tourism Behavior: Exploratory Research of Polish Immigrants in Belgium", *Tourism Management*, 72, 373-385.
Medhekar, A., H. Y. Wong and J. E. Hall (2019), "Factors Influencing Inbound Medical Travel to India", *Journal of Health Organization and Management*, 33(2), 155-172.
Medical Tourism Association (2010), "Patient Survey - Bumrungard International", *Medical Tourism*, 14, 22-25.
Mill, R. C. and A. M. Morrison (2009), *The Tourism System,* 6th ed., Dubuque: Kendall Hunt.

Ministry of Health and Welfare (2018), *2018 Report of Statistics for Foreign Patients Attraction.* Avail at http://www.mohw.go.kr/react/index.

Nikbin, D., A. Batouei, M. Iranmanesh, K. Kim and S. S. Hyun (2019), "Hospital Prestige in Medical Tourism: Empirical Evidence from Malaysia", *Journal of Travel & Tourism Marketing,* 36(4), 521-535.

Pratt, S., D. Tolkach and K. Kirillova (2019), "Tourism & Death", *Annals of Tourism Research,* 78, 102758.

Reed, C. M. (2008), "Medical Tourism", *The Medical Clinics of North America,* 92(6), 1433-1446.

Sadeh, E. and M. Garkaz (2019), "Interpretive Structural Modeling of Quality Factors in Both Medical and Hospitality Services in the Medical Tourism Industry", *Journal of Travel & Tourism Marketing*, 36(2), 253-267.

Sethna, C. and M. Doull (2012), "Accidental Tourists: Canadian Women, Abortion Tourism, and Travel", *Women's Studies*, 41(4), 457-475.

Smith, M. and L. Puczko (2009), *Health and Wellness Tourism,* Oxford: Elsevier.

Stephano, R. M. and J. Edelheit (2010), *Medical Tourism: An International Healthcare Guide for Insurers, Employers and Governments*, Global Health Insurance Publications.

Ten Brink, B.J.E., S. H. Hosper and F. Colijn (1991), "A Quantitative Method for Description and Assessment of Ecosystems: the AMOEBA – Approach", *Marine Pollution Bulletin,* 23, 265-270.

Veal A.J. (1997), *Research Methods for Leisure and Tourism: A Practical Guide*, 2nd ed. London: Pitman.

UNWTO (2007), *Tourism Highlights 2007 Edition,* Madrid: UNWTO.

UNWTO (2018), *Tourism Highlights 2018 Edition,* Madrid: UNWTO.

UNWTO (2019), *Tourism Highlights 2019 Edition,* Madrid: UNWTO.

Watsom, E. (2008), "Accreditation of Overseas Hospitals: JCI or ISQua", *Medical Tourism,* 2, 12.

Wilson, A. (2011), "Foreign Bodies and National Scales: Medical Tourism in Thailand", *Body & Society,* 17(2-3), 121-137.

Woodman, J. (2008), *Patients Beyond Borders: Everybody's Guide to Affordable World-class Medical Tourism,* NC: Healthy Travel Media.

Zarei, A. and F. Maleki (2019), "Asian Medical Marketing: A Review of Factors Affecting Asian Medical Tourism Development", *Journal of Quality Assurance in Hospitality & Tourism,* 20(1), 1-15.