MEDICAL TOURISM: A POST-TRAVEL STUDY MEASURING THE IMPACT OF PUSH & PULL FACTORS ON THE PERCEIVED QUALITY OF THE MEDICAL TOURISM EXPERIENCE

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SIGNATURE PAGE

THESIS: MEDICAL TOURISM: A POST-TRAVEL STUDY MEASURING THE IMPACT OF PUSH & PULL FACTORS ON THE PERCEIVED QUALITY OF THE MEDICAL TOURISM EXPERIENCE

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ABSTRACT

Medical tourism has gained intense momentum within the past two decades, and is now a multi-billion dollar a year industry. More Americans than ever before are seeking medical care from international alternatives. Although there has been extensive researching regarding the patient-customers' pre-travel motivations for medical tourism, there is a distinct gap of empirical research when it comes to customers' overall perception of their post-travel medical tourism experience.

Thus, a post-travel study has been conducted with the intent of measuring the relationship between experienced American medical tourists' "push" and "pull" factors, and the overall "perceived quality" of their medical tourism experience. This study surveyed medical tourists who have sought any type of medical care outside of the United States, and whom were primarily living in the United States of America at the time of their medical trip abroad. The research investigates respondents' perception of the destination location, medical tourism experience, and overall perceived quality. The relationship between push and pull factors and post-travel, perceived quality will be evaluated using exploratory factor analysis and multiple regression. Empirical research will be presented regarding respondents' post-travel experience, with respect their overall perceived quality.

Keywords: medical tourism, international travel, medical service quality, push and pull, quality, multiple regression, factor analysis

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CHAPTER 1

INTRODUCTION

Overview

We have all heard the old adage: "travel is the best medicine". However, it was not proven until fairly recently just how true this idiom really is. Recent studies have shown that traveling is linked to decreased risks of heart attacks and depression, as well as increased brain health (Erskine, 2013). Even more literally, what about the multitudes of tourists travelling across the world with the specific intent of accessing medical care? For many medical tourists, travelling truly is their best medical option. Once considered to be a dangerous undertaking, medical tourism is quickly becoming a common option for eager patients (Turner, 2007). Standards of care have improved worldwide (Bookman & Bookman, 2007; Herrick, 2007), and information is more plentiful and easier to access than ever before (Horowitz et al., 2007). Medical tourism is shaking off its murky image as hospitality's dark underbelly, and a new, brighter image has emerged -- one that summons images of clean hospitals, fast and affordable care, and the opportunity for an exotic vacation.

In today's society, every market is undergoing a consumer-centered transformation, and the health and wellness field is no different (Kim et al., 2008). The health and wellness tourism market is growing rapidly, in regards to services as well as consumers (Mair, 2005). One of the fastest-growing niches of the health and wellness market is medical tourism (Hudson & Li, 2012). In fact, medical tourism is now a multi-billion dollar a year industry (Goldbach & West, 2010). In 2014, the market was

estimated to be between a $50 billion to $65 billion dollar per-year industry (Frost & Sullivan, 2014).

Unlike classic destination tourism (where travel is a main focus), the consumer's primary motivation for medical tourism is to secure specific medical care; thus, the elements of travel are merely the conduit towards securing these services (Singh, 2013). Although once considered to be a last-resort for desperate patients, medical tourism is quickly gaining mainstream acceptance (Crooks et al., 2010) especially as more American insurance companies may soon be expanding their customer coverage to include international medical procedures. (Carroll et al., 2013).

Definition and Scope

Medical tourism is defined as when the consumer – i.e., the medical tourist – opts to obtain medical care through international alternatives (Puczko & Smith, 2009). Essentially, medical tourism is "travel with the express purpose of obtaining care abroad" (Crooks et al., 2010). Medical tourism was once considered a separate entity from wellness tourism, and was traditionally defined "the process of traveling to another country to receive medical, dental, and surgical care" (Hume & DeMicco, 2007). However, the term has evolved and expanded to also include wellness services – in part because it is becoming more common to travel for a variety health-related reasons (Shapiro, 2011), and also perhaps because medical and wellness treatments often go hand-in-hand (Hudson & Li, 2012). Instead of nitpicking whether a treatment qualifies as either "health" or "wellness" as a way to categorize tourism, a contemporary definition of medical tourism instead considers both health and wellness treatments, but separates medical tourism services into three areas: invasive, diagnostic, and lifestyle (Bookman &

Bookman, 2007). For the sake of this research, medical tourism will be defined as traveling to obtain any health or wellness treatment that may be considered invasive, diagnostic, or lifestyle-related.

Thus, medical tourism may involve any type of medical care or treatment, ranging from surgical procedures (such as heart bypasses and cosmetic surgery), to dental care, to holistic care (such as acupuncture and chiropractic treatments) (Puzcko & Smith, 2009). The most popular treatments for medical tourists include: cosmetic surgery, dentistry, cardiovascular, orthopedics, cancer treatments, weight loss treatments, and general tests and health checkups (Patients Beyond Borders, 2014).

Top Destinations, Accreditation and Treatments

Some of the most popular medical tourist destinations worldwide are Thailand, India, Singapore, Costa Rica, South Korea, and Mexico (Forbes, 2014). The Mexico Tourism Board projects that by 2016 medical tourism will generate more than $3 billion in revenue for the country's economy (Figueroa, 2014). Mexico's Secretary of Tourism reported that, of the 12 million international visitors who travelled to Mexico in 2013, 6.5 million of the visitors were from the U.S. (Medical Tourism Association, 2014).

Accreditation and standards of care are largely responsible for these destinations' popularity, as many international hospitals view international accreditation as a strong attractor for American medical tourists (Turner, 2007). For example, the World Health Organization (WHO) ranked the world's health systems in the year 2000, placing Costa Rica higher than the U.S. at number 36 (World Health Report, 2000). Data from the Council for International Promotion of Costa Rica Medicine (PROMED) shows that in 2012, Costa Rica attracted nearly 50,000 medical tourists (mostly from the U.S. and

Canada) and each one spent an average of $7,000 (Medical Tourism Association, 2014). Close to half of these medical travelers were said to be dental, followed by orthopedics, weight loss surgeries, gynecology and plastic surgery (Medical Tourism Association, 2014). According to PROMED, Medical tourism generated some $338 million in revenue for the country that year (Medical Tourism Association, 2014). In Costa Rica, there are two Joint Commissioned International (JCI) accredited hospitals – the largest accreditation organization in the United States, and considered by many to be the "gold standard" when it comes to medical tourism. Thailand has 37 JCI-accredited hospitals (The Joint Commission, 2014; Warf, 2010). As of 2012, the JCI has approved 469 distinct accredited hospitals in 50 countries (Akitunde, 2012).

Medical tourism is an increasingly popular option for patients who are looking to access procedures that are unavailable, unaffordable, or have a long wait time in their home country (Crooks et al., 2010). Although once considered to be a last resort for desperate patients, medical tourism is quickly gaining mainstream acceptance – especially in the United States (Carroll et al., 2013). According to Dr. Stream, president of the American Academy of Family Physicians, "historically, wealthy people have travelled to the U.S. for treatments… what we're seeing now is American citizens going in the other direction" (Schapiro, 2011).

Purpose of Study

A review of existing research indicated a lack of empirical data regarding medical tourists' post-travel, perceived quality of their experiences (Crooks et al., 2010); thus, further investigation was required. Previous literature suggested a relationship between pre-travel, motivational attributes and destination perception – push and pull factors –

and the overall perceived quality (Baker & Crompton, 2000; Parasuraman et al., 1985; Kim et al., 2008). Thus, the aim of this research is to explore the implied relationship between push and pull factors and perceived quality of the medical tourism experience, from a post-travel perspective.

1: Do push and pull factors significantly affect the perceived quality of respondents' medical tourism experiences?

Research Question 2: If push and pull factors significantly affect perceived quality, what is the relationship between these constructs?

In order to answer these research questions, a post-travel study was conducted to measure push and pull factors, and their relationship to the perceived quality of the medical tourism experience. Figure 1 illustrates the conceptual model of this study.
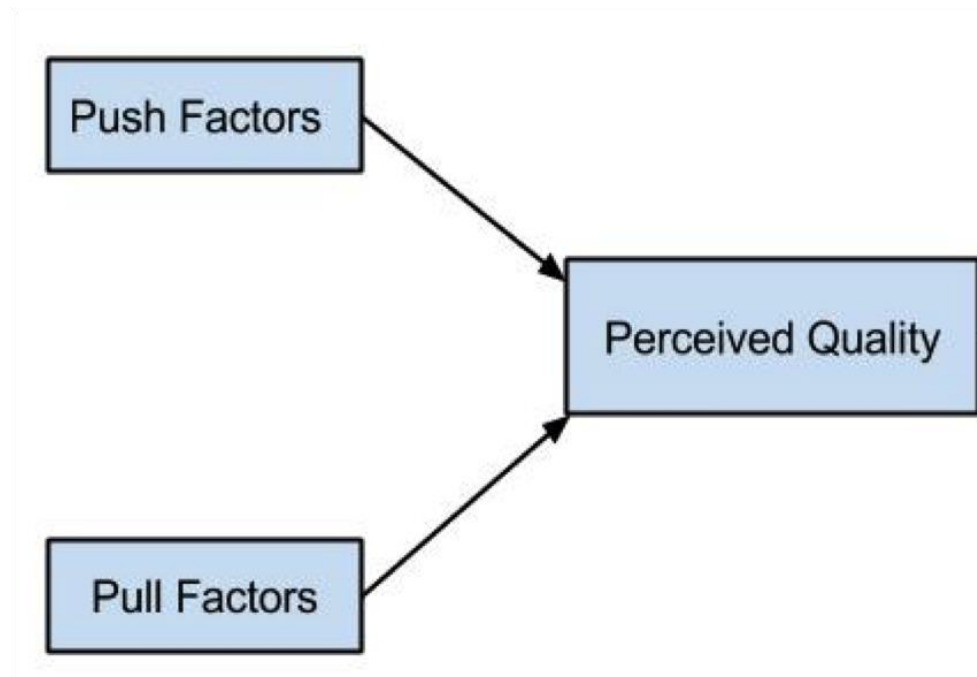

Figure 1. Conceptual model illustrating research constructs

Significance of Study

Despite the de-stigmatization of medical tourism, there is still a sizeable data gap when it comes to medical tourists' experiences (Heung et al., 2010). As aforementioned, the majority of current research has focused on pre-travel motivations; most post-travel research has been speculative or anecdotal, and severely lacking in empirical data (Crooks et al., 2010). This lack of empirical data was exemplified in a recent article in the New York Daily News, when 25-year-old American medical tourist Jeff Mulligan stated: "Everybody was saying, you're going to this shack in the jungle in Costa Rica and there's going to be a witch doctor there. I got there and it looked like the Starship Enterprise. It was beautiful ... and the dentist was probably the best dentist I had ever been to." (New York Daily News, 2014).

The current deficient of empirical data is problematic for the consumer, as well as industry professionals and academics (Crooks et al., 2010). Empirical information about medical tourists' experiences is not only helpful for industry professionals looking to tap into the emerging medical tourism market (Smith & Forgione, 2007) -- it is essential for potential medical tourists looking to minimize risk and make informed decisions (Heung et al., 2010). Data regarding actual experiences is integral to understanding the process, variables, and risks involved (Burket, 2007). This research will attempt to contribute to the relevant data regarding the topic of medical tourism, with a specific focus on relevance to American medical tourists.

A June 2009 MTA Patient Survey found almost 90% of patients or their companions engaged in tourism activities, and that 86% of US patients said they would travel internationally again to obtain medical care (Medical Tourism Association, 2014).

It is clear that medical tourism has a significant magnitude for Americans, but are these medical tourists obtaining the level of care they are travelling across the world for?

The aim of this research is to contribute to the advancement of medical tourism, specifically by providing empirical data regarding medical tourists' perceived quality with their experience of international medical tourism. An analysis of Americans' international medical tourism experiences will provide insight for the medical tourism industry -- an under-researched area of tourism and hospitality (Lunt, 2010). This research will affect medical tourism industry professionals, teachers, and future researchers. Applications of this type of data include: furthering our general knowledge of the medical tourists' experience to help professionals understand the US medical tourism market, the reduction of the risk factors and increase of knowledge for potential medical tourists, a smoother facilitation of medical tourism travel (through medical travel agencies and intermediaries, hospitals, host-country suppliers, and many other venues) (Crooks et al., 2010). This study will also provide insight into important push-pull factors that mold the patient-customer's decisions, which may in turn aid industry professionals in more efficiently capitalizing from this lucrative field of tourism (Caballero-Danell, 2007), as well as improving domestic healthcare options.

In order to contribute to the deficit of empirical data concerning medical tourism, a post-travel was conducted to measure the relationship between experienced American medical tourists' "Push" and "Pull" factors (i.e., their motivations for travelling) with the "Perceived Quality" of their medical trip abroad.

CHAPTER 2

LITERATURE REVIEW

America's Increase in Outbound Medical Tourism

Medical tourism is an especially hot topic in the United States right now, as more Americans are going abroad for care than ever before (Carroll et al., 2013). It is estimated that a million Americans went abroad for medical care in 2014 – up from 750, 000 in 2013 (Howard, 2014). This is due to a variety of factors, including: the inflated cost medical care in developed countries such as the United States (Smith & Forgione, 2007), the modern ease of international travel, rapidly improving medical technology and standards of care worldwide, and the proven safety records of medical care in many developing countries (Bookman & Bookman, 2007) (Connell, 2006).

According to sources (Patients Beyond Borders, 2014) (Wachter, 2006) cost is a hugely significant factor. Just how drastic are these differences in cost? While a patient would typically pay $144,000 for a heart bypass in the United States, the average cost for the same procedure in India is only $5,200; a face lift in America may cost upwards of $15,000, but is available for $4,900 in Mexico (Medical Tourism Association, 2013) – decidedly more affordable for patients, especially those who may be paying out of pocket. It is projected that there is a 40% - 90% savings versus the cost of domestic care (Woodman, 2008). This is illustrated in Figure 2, which shows a cost breakdown of common medical tourism treatments in popular destinations, compared to the United States (Medical Tourism Association, 2009).

Medical procedure	USA	Costa Rica	Colombia	India	Jordan	S. Korea	Mexico
Heart Bypass	$123,000	$27,000	$14,800	$7,900	$14,400	$26,000	$27,000
Angioplasty	$28,200	$13,800	$7,100	$5,700	$5,000	$17,700	$10,400
Heart Valve Replacement	$170,000	$30,000	$10,450	$9,500	$14,400	$39,900	$28,200
Hip Replacement	$40,364	$13,600	$8,400	$7,200	$8,000	$21,000	$13,500
Hip Resurfacing	$28,000	$13,200	$10,500	$9,700	$9,000	$19,500	$12,500
Knee Replacement	$35,000	$12,500	$7,200	$6,600	$9,500	$17,500	$12,900
Spinal Fusion	$110,000	$15,700	$14,500	$10,300	$10,000	$16,900	$15,400
Dental Implant	$2,500	$800	$1,200	$900	$900	$1,350	$900
Lap Band	$14,000	$9,450	$8,500	$7,300	$7,000	$10,200	$6,500
Gastric Sleeve	$16,500	$11,500	$11,200	$6,000	$7,500	$9,950	$8,900
Gastric Bypass	$25,000	$12,900	$12,200	$7,000	$7,500	$10,900	$11,500
Hysterectomy	$15,400	$6,900	$2,900	$3,200	$6,600	$10,400	$4,500
Breast Implants	$6,400	$3,500	$2,500	$3,000	$4,000	$3,800	$3,800
Rhinoplasty	$6,500	$3,800	$4,500	$2,400	$2,900	$3,980	$3,800
Face Lift	$11,000	$4,500	$4,000	$3,500	$3,950	$6,000	$4,900
Liposuction	$5,500	$2,800	$2,500	$2,800	$1,400	$2,900	$3,000
Tummy Tuck	$8,000	$5,000	$3,500	$3,500	$4,200	$5,000	$4,500
Lasik (both eyes)	$4,000	$2,400	$2,400	$1,000	$4,900	$1,700	$1,900
Cornea (per eye)	$17,500	$9,800	N/A	$2,800	$5,000	N/A	N/A
Cataract surgery (per eye)	$3,500	$1,700	$1,600	$1,500	$2,400		$2,100
IVF Treatment	$12,400	N/A	$5,450	$2,500	$5,000	$7,900	$5,000

Figure 2. Average medical costs for select surgeries in USA vs. overseas.
Reprinted from "Compare Prices" by Medical Tourism Association, 2015. Retrieved from
http://medicaltourism.com/Forms/price-comparison.aspx on May 29, 2015. Copyright 2015 by Medical Tourism
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Increased wait times for procedures and a lack of available doctors domestically

also play a considerable role in motivating American patients to seek care internationally

(Hopkins et al., 2010). The evolution of medical travel agencies has profoundly impacted

the rapid pace of growth of medical tourism (Singh, 2013) as it is now made easier and

safer than ever before under the guidance of third parties (Bookman & Bookman, 2007).

America's privatized healthcare system has resulted in many Americans unable to

get the medical coverage they need (Turner, 2007). A 2013 MTA Medical Tourism

Patient Survey found that nearly 80% of the demand for medical travel is driven by cost

savings. The cost savings associated with medical tourism can make a huge difference for

uninsured adults (Turner, 2007). In 2010, it was estimated that 16.5% of Americans

between the ages of 45-65 were uninsured (DeNavas et al., 2011). A June 2009 MTA Patient Survey found that 64% of patients that traveled abroad for care did not have health insurance. (Medical Tourism Association, 2014). In light of a faltering health care system, American insurance companies are exploring coverage expansion to include international medical procedures (Carroll et al., 2013; Pitts & Battiste, 2013). American insurance provider Blue Cross has even created a subsidiary to provide certain clients with the option of international medical procedures at accredited hospitals in Mexico, Thailand, Turkey, Ireland, Costa Rica and India (York, 2008). Employer-sponsored medical care is also on the rise, with some companies are already offering their employees the option of travelling abroad for medical care (Turner, 2007). In fact, a 2010 MTA Survey revealed that 71% of insurance companies and employers believed that Affordable Care Act healthcare reform would have a positive effect on the medical tourism industry (Medical Tourism Association, 2014).

HSM, an American furniture and auto parts manufacturer, claims to have saved over 10 million dollars in health care costs by outsourcing employee's medical care over the past five years (Pitts & Battise, 2013). There are even organizational intermediaries for potential medical tourists, such as Josef Woodman's Patients Beyond Borders, and the Medical Tourism Association. These groups are aiming to provide information about current, "top of the line" procedures and affordable alternatives to domestic care (Pitts & Battise, 2013).

These developments suggest that even more of an increase in outbound medical tourism is on the horizon for America. The environment is primed for an increase of medical tourists (Bies & Zacharia, 2007). In the next section, the motivational attributes

that contribute to a consumer's decision to participate in medical tourism will be discussed.

Motivational Attributes of Medical Tourism

Though financial incentives are a leading motivator for medical tourists (Turner, 2007), there are many other motivational factors to consider (Crooks et al., 2010; Hopkins et al., 2010). Though many people's initial impression of the term "medical tourism" may bring to mind traveling solely for necessary or semi-urgent surgeries (Carroll et al., 2013), the term may encompass a variety of services. Medical tourism involves travelling to seek any *type* of therapeutic and rehabilitation care, as well as surgical treatments -- including cosmetic surgery (Puczko & Smith, 2009). For this reason, the personal motivations of medical tourist are varied in nature: a patient travelling for rhinoplasty or a sex-change may value secrecy, while a patient travelling for heart surgery may be primarily focused on risk-reduction, for example (Horowitz et al., 2007).

According to a US News article (Woodman, 2008) based on research gleaned from Patients Beyond Borders, common motivational factors for medical tourists were: cost savings, better quality care, excluded treatments and specialty treatments (i.e., services and surgeries not covered by domestic healthcare plans), shorter waiting periods, more "inpatient friendly" (longer recovery time in hospitals), and "the lure of the new and different." This last factor is tangential to the more classic destination-travel motivations, such as lodging, food, and other amenities available to the traveler (Dann, 1981). Some experts in the medical field propose that there is an emerging niche of medical tourists who travel not out of necessity (financial or otherwise), but instead due

to a desire for travel and new experiences (Constantinides, 2013). This is an under-researched segment of the market that is worth noting, especially in regards to the hospitality industry.

A study was conducted by Singh (2013) to analyze the motivations of *potential* medical tourists – patients who had not yet traveled internationally for care, but who would consider doing so in the future. A demographic profile of respondents took into account their age, gender, and health insurance situation. Major themes regarding the most important motivational factors were ease of travel, perceived risk, quality of facilities and services. Though this study was limited to pre-travel motivations, these themes are a viable foundation for measuring the satisfaction of post-travel medical tourists.

Crooks et al. (2010) conducted a content-analysis study on 216 sources of academic literature and Canadian media coverage related to medical tourism, and several key motivational patterns were identified. Medical tourists deemed cost and affordability highly important factors; risk (and methods of risk reduction) was also considered highly important. The study broke down results into three types of risk: "risks to patients health", "risks of travel", and "risks pre and post-operatively in the home country" (Crooks et al., 2010).

Literature suggests that, in addition to risk, major themes that summarized patients' overall post-travel experiences included "motivations related to procedure, travel, and cost"(Crooks et al., 2010). Thus, it is important to analyze the push-pull factors not only pertaining to international medical care, but for the elements of travel as well (Veerasoontorn & Rian, 2010). This could include factors such as: the availability of

transportation once the destination has been reached, quality of hotels and food, safety (Burket, 2007), and ease of post-care treatment (Henderson, 2003). The aspects of travel, tourism and hospitality are important in regards to the destination image (Crompton, 1979), and the overall medical tourism experience (Horowitz, 2007). A June 2009 MTA Patient Survey found almost that 90% of patients or their companions engaged in tourism activities during their medical trip abroad (Medical Tourism Association, 2014).

Another emergent theme was "first-hand accounts of the positive and negative components of medical tourism, sensationalized issues, and post-recovery life." (Crooks et al., 2010). This suggests that attention should be given to how external sources, media, and knowledge available pre-travel affected the medical tourists' perception of experience (Lunt et al., 2010), and ultimately their level of satisfaction (Rad et al., 2010), as this may have a more significant impact than has been previously noted in current research. The study by Crooks et al. (2010) also emphasized that "research attention needs to be give to understanding how information sources [are] consulted and evaluated by patients prior to departure… It would be useful to better understand how patients understand the risks of assessing care abroad at this point and time." Thus, it is important to collect data that reflects patient's understanding and knowledge of their experience pre-travel (Lunt & Carrera, 2010), and how this differs from their post-travel perception, in order to fully comprehend their overall experience (Yoon & Uysal, 2005). Intermediary sources such as Patients Beyond Borders and the Medical Tourism Association offer encouragement guidance for potential medical tourist in the United States (Hohm & Snyder, 2015); however, much of the media coverage and informal Internet resources available to medical tourist offer primarily anecdotal (and often

sensationalized) information (Crooks et al., 2010; Cormany & Baloglu, 2010). This may be a substantial factor in terms of influencing patent's medical decisions, as well as how they may judge their own medical tourism experience.

Demographics of American Medical Tourists

Though there is limited empirical data regarding medical tourism**,** a 2013 MTA Medical Tourism Patient Survey discovered that nearly 27% of medical tourists had previously traveled to a non-domestic country to receive medical treatment. Of this sample, all were American. Most were female, and all were between 45 to 64 years of age. Half had household incomes between $50,000 and $100,000, and half had health insurance (50%), while the other half had none (Medical Tourism Association, 2014).

It is estimated that the surge of American medical tourists within the last decade has been largely comprised of middle-class citizens (Sharpiro, 2011). Though medical tourism is not limited by age, there has been an increase in baby boomers traveling for medical tourism (Akitunde, 2012). Josef Woodman, the founder of Patients Beyond Borders, speculates that the number of baby boomers who will embark on a medical trip abroad will grow 15% to 20% annually as boomers age.

Push and Pull Factors

Tourists' motivations shape their perceptions of a destination and its attributes (Baloglu & Brinberg, 1997; Dann, 1996; Gartner, 1993). These perceptions and motivations are the basis for push and pull factors and the destination's image (Mohammad et al., 2010; Connell, 2013; Whittaker, 2008). Push and pull factors are motivations and that influence whether or not to travel, as well as where to go and the destination's perceived image (Mohammad et al., 2010; Saisprasert, 2011). These factors

are based on the motivational attributes: push and pull factors dictate the "how, when, where, and why" decisions when it comes to travelling.

Previous literature supports the push-pull model (Dann, 1977; Dann, 1981; Crompton, 1979; Zhang & Lam, 1999; Jang & Cai, 2002; Hsu & Lam, 2003). Push factors are defined as the internal motivations lead tourists to seek activities that may reduce their needs. In the case of medical tourism, "push" factors are those which drove a patient away from care in their home county (Crooks et al., 2010). For example, the domestic cost of a desired procedure may be too expensive in a patient's home country, leading them to look for an international alternative (Constandines, 2013). Pull factors are destination-driven, and formed by the tourists' perception and knowledge of the destination location (Gnoth, 1997). A destination's appeal and perceived resources form pull factors (Klenosky, 2002; Uysal & Jurowski, 1994). Pull factors are what draw patients to other countries; these are the attributes that guide destination choice, as well as the destination's perceived image. To exemplify, a destination's reputation of their care facilities may draw a patient to a specific location (Horowitz, 2007). Thus, according to literature, push factors catalyze the desire to travel, whereas pull factors guide the destination choice (Bello & Etzel, 1985; Crompton, 1979; Prayag & Ryan, 2011).

In the case of medical tourism, the push and pull model must consider traditional tourism and travel resources, as well as medical services and facilities (Crooks et al., 2010; Veerasoontorn & Rian, 2010). These decision-making factors affect the destination choice (Prayag & Ryan, 2011), For example: a consumer decides that the waiting time for a procedure is too long in their home country, but finds that the same treatment is offered in a destination country that boasts a considerably shorter waiting

time. The push factor is that the waiting time is too long or the domestic treatment, and the pull factor is that the destination promises a shorter waiting time. The push and pull factors lead to the consumer's decision to travel, destination choice, and pre-travel expectation that the destination will offer a shorter waiting time. How well the destination meets this expectation will determine the perceived quality of the experience.

Perceived Quality of the Medical Tourism Experience

Perceived quality is, essentially, how accurately the consumer's perception of the experience met their pre-travel expectations (Li et al., 2011). Quality of performance refers to the attributes of a service that is primarily controlled by a supplier; it is the output of a tourism provider (Baker & Crompton, 2000). Evaluations of the quality of performance are based on tourists' perceptions of the performance of the provider. (Baker & Crompton, 2000). That is to say, quality of performance depend on the consumer's perception of how well the provider performed their service.

Parasuraman et al. (1985) proposed measuring service quality through recognized performance by consumer's "discordance of expectations" based on five dimensions of service quality: tangibles, reliability, responsiveness, assurance, and empathy. Anchored by these five dimensions of service quality, the SERVQUAL service quality rating system was created. Woodside et al. (1989) adapted SERVQUAL for medical service quality, defining quality as the gap between consumer's expectations and the provider's actual performance.

Several researchers have applied since Parasuraman's SERVQUAL model to hospital and care facilities (Kim et al., 2008; Lertwannawit et al., 2011); however, this only takes into account the quality of the provided service at the specific facility. In order

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to gain a fuller scope of the medical tourism experience, quality must be measured in several areas: quality of the medical service providers, quality of the destination (including lodging as well as the care facility), and the overall process. However, the core idea – that quality is the gap between expectation and the provider's performance – provides the basic framework for this research project.

Using the push and pull factors distilled from motivational attributes, the perceived quality of the post-travel experience may be measured (Devesa et al., 2010; Yoon & Uysal, 2005; Zabkar et al., 2010.) The push and pull factors incorporate attributes pertaining to service quality of the care providers, as well as destination perception, the travel process, and the medical tourism experience as a whole (Crooks et al., 2010). Based on this review of available literature, emergent themes impacting the perceived quality of medical tourists' experiences appear to be: cost, insurance status, quality of care received, risk reduction, importance of privacy, desirability of the travel destination, desire for travel and new experiences, clarity and access to information (concerning not only the treatment as well as travel and administrative procedures), ease of logistics (regarding both travel and medical processes), and ease of visa procedures. Important demographics to consider are: gender, age, location, medical procedure(s) obtained during travel, travel destination, income, and insurance options. These factors will provide the conceptual framework for this proposed study's methodology.

Hypothesis Development

The literature review has shown that push-pull factors shape tourists' destination choice, as well as their pre-travel perception of the destination (Prayag & Ryan, 2011; Klenosky, 2002; Uysal & Jurowski, 1994). These pre-travel motivations and perceptions shape the tourists' expectations of the destination (Baker & Crompton, 2000; Prayag & Ryan, 2011). Push factors have been defined as motivational attributes, whereas perceived destination attributes are defined pull factors (Bello & Etzel, 1985; Crompton, 1979; Prayag & Ryan, 2011). Destination, facilities, costs and insurance, visa procedures, domestic unavailability and a concern for privacy emerged as among the most significant push and pull factors that guided medical tourists' decisions (Crooks et al. 2010; Henderson, 2003; Hopkins et al. 2010; Horowitz, 2007).

Quality is determined by how well the tourists' experience of the destination met with their preconceived expectations (Baker & Crompton, 2000; Parasuraman et al., 1985; Kim et al., 2008), i.e. the push and pull factors (Devesa et al., 2010; Yoon & Uysal, 2005; Zabkar et al., 2010). Research suggests that travel and medical-related expenses and logistics, quality of the destination, and quality of medical service are among the most significant measurements of quality when it comes to medical tourism (Crooks et al., 2010; Horowitz, 2007; Kim et al., 2008; Lertwannawit et al. 2011; Turner, 2007).

The push and pull model (Dann, 1996; Gartner, 1993) and its relationship to overall perceived quality (Devesa et al., 2010; Yoon & Uysal, 2005; Zabkar et al., 2010) provided the framework for the proposed hypotheses of this study. The push and pull factors derived from the literature review are the independent variables in this study. These factors include attributes associated with destination, facilities, costs, visa

procedures, domestic unavailability and a concern for privacy. Perceived quality is the dependent variable in this study. Within the dependent variable of quality, there are three factors that have been labeled as: quality of service, quality of destination, and logistics (including medical and travel-related expenses and processes). These variables were labeled based on pre-existing measurements from the literature review.

The effect of the push and pull factors (the independent variables) on quality (the dependent variable; categorized by three factors within the variable: logistics, destination, and service) will indicate the relationships between these constructs. Thus, the following sets of hypotheses are as follows:

H1: Push and pull factors will have a significant effect on the perceived logistics quality.

H2: Push and pull factors will have a significant effect on the perceived quality of the destination.

H3: Push and pull factors will have a significant, positive effect on the perceived quality of service.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

Overview

A post-travel study was conducted to measure push, pull, and perceived quality of the medical tourism experience. Descriptive analyses were used to illustrate the demographic characteristics of the respondents, as well as information about their medical tourism experience. ANOVA tests were used to further explore the relationship between the respondents and their medical tourism experiences.

Exploratory factor analysis was utilized to determine the underlying factors for the independent variables Push and Pull, and the factors within the dependent variable of Quality (Choi et al., 2004; Saha et al., 1999; Saipraset, 2011). Exploratory factor analysis was used to group correlated attributes together, and categorized the factors into single variables. These variables were labeled based on pre-existing measurements from the literature review (Choi et al., 2004; Crooks et al., 2010; Saipraset, 2011).

Multiple regression was then used to determine the relationship between these constructs. Three multiple regression models were utilized in order to determine whether or not a relationship exists between the pre-travel push and pull factors, and post-travel perceived quality.

Survey Design and Attributes to be Measured

A survey instrument was created based on previous, existing literature (Choi et al., 2004; Crooks et al. 2010; Saha et al., 1999; Saipraset, 2011;Vandemme & Leunis, 1993). Questions measured attributes such as: cost, ease of travel, satisfaction with elements of travel (transportation, hotels), risk reduction strategies (such as the facilities' concern for safety, and the facilities' malpractice liability) (Bookman & Bookman, 2007; Crooks et al., 2010), reputation of facilities and services, privacy, access to information, travel and lodging, transportation, and ease of visa procedures (Crooks et al., 2010). Secondary demographic information of participants was collected, including: age, gender, destination location, information sources consulted, type of care obtained, income, and insurance (Crooks et al., 2010; Guiry & Scott, 2011; Singh, 2013). The survey was then evaluated by faculty and cohorts to further establish validity of the instrument, and phrasing and was refined for clarity.

The survey questions were divided into four general categories: basic information about medical travel, motivational attributes (push factors) and perceived destination attributes (pull factors), perceived quality of their medical tourism experience, and basic demographic information. The first section of the survey contained questions that related to the medical trip, such as: how many times the respondent had travelled for medical tourism, what their destination country was, what type of treatment they received, and how they arranged the trip. The second section explored push and pull factors: these questions related to the respondents' perception of the destination, as well as their perception of medical tourism in their chosen destination. The third section explored the respondent's post-travel perception of the quality of their medical tourism experience;

these questions related to the quality of service, facilities, pricing and payment option, and ease of travel. Participants were asked to rate attributes on a 5-point Likert scale, phrased in the form of, "When it comes your medical trip abroad, the destination offered…" with the anchors of 1 = "Strongly Agree" and 5 = "Strongly Disagree". The following table shows the attributes to be measured, categorized as the constructs Push, Pull and Quality.

Table 1

Attributes to be Measured: Push, Pull and Quality

Attributes	Construct	Previous Study/Application
1. Shorter waiting time for medical service than in the USA	Push	Choi et al., 2004
2. Less expensive medical treatment than in the USA	Push	
3. Type of medical treatment that is not allowed in the USA	Push	Crooks et al., 2010
4. Type of medical treatment not covered by medical insurance in USA	Push	
5. Opportunity to combine medical service with a vacation.	Push	Kim et al., 2008
6. Preference of privacy and confidentiality	Push	
7. Reasonable price; a significant amount of money saved	Push	Saha et al., 1999
8. Opportunity for person who has limited or no USA medical insurance	Push	
9. Ease of accessibility when traveling from the United States	Push	Saipraset, 2011
10. The process for setting up the procedure/appointment was simple	Push	
11. Ease of medical treatment arrangements	Push	Vandemme &
12. Various types and availability of medical services	Push	Leunis, 1993
13. Ease of visa procedures	Pull	
14. Recognized hospital/medical facility reputation	Pull	
15. International hospital/medical accreditation	Pull	
16. High standard level of medical facilities	Pull	
17. High standard level of medical staff	Pull	
18. Recognized, positive reputation of physicians	Pull	
19. Western experienced/trained physicians	Pull	
20. A great place for relaxation after medical treatment	Pull	
21. Positive reputation as a tourist destination	Pull	
22. Political stability	Pull	
23. Variety of existing tourist attractions for recuperating patients	Pull	
24. Tourism safety from crime and/or terrorist attack	Pull	
25. Ease of travel arrangements	Pull	
26. Ease of lodging arrangements	Pull	
27. Ease of transportation	Pull	
28. Friendliness and helpfulness of the local people	Pull	
29. No language barriers in traveling to your destination	Pull	
30. Medical records and information was easily assembled and transmitted.	Pull	
31. Short waiting time for the medical examination from the physician	Quality	
32. The physicians adequately explained my condition, examination results, and medical process	Quality Quality	
33. Physicians allowed me to ask enough questions to clarify everything	Quality	
34. The medical staff had good communication skills	Quality	
35. Medical staff was polite and friendly	Quality	
36. The hospital had state-of-the-art facilities and equipment	Quality	
37. Hospital care facilities (laboratory, doctor's office) were easy to find	Quality	
38. The hospital/medical facilities' amenities were conveniently located.		
39. The hospital/medical facility had a strong concern for patient safety	Quality	
40. The medical facility valued and respected patients' privacy, confidentiality, and disclosure	Quality Quality	
41. The medical facility had acceptable protection against malpractice	Quality	
42. The payment procedure was quick and simple	Quality	
43. Package pricing demonstrated price transparency	Quality	
44. Provided assistance with financial arrangements, such as: advance estimates for fees, deposits, and payments	Quality	
45. Provided convenient hospital transportation arrangements	Quality	
46. Provided arrangement for language interpretation service	Quality	
47. Effective coordination of arrangements between the patient, hospital, third-party insurance companies, and/or other involved businesses	Quality Quality	
48. Traveling to the medical destination was simple and without hassle	Quality	
49. The destination location offered good hospitality services (lodging, transportation, dining, and/or tourism activities)	Quality	
50. The destination was a good place to relax after treatment	Quality	
51. The destination was a good place for a vacation	Quality	
52. Costs associated with medical treatment were lower than in America		

The fourth section of the survey measured demographic information, including: gender, marital status, age group, region of the United States that they travelled from, and occupation. The final question on the survey was an open-ended, optional question where respondents could state and comments of suggestions regarding medical tourism.

Data Collection

Participants were given an online survey. Data were collected via Qualtrics, a third-party data collection service. An online survey was seen as the best instrument, as it was able to reach a large, eligible sample of respondents across the nation. It also provided flexibility, convenience, and anonymity for the participants.

Qualtrics, the third-party data collection service, screened for potential respondents who met the following criteria: the individual must have been primarily living in the United States of America at the time of their medical trip, and they must have taken an international trip (anywhere outside the United States of America, including other North American destinations) to obtain any type of medical treatment/care (dental, surgical, rehabilitative, etc.).

Before participating in the study, respondents were presented with an informed consent form explaining the purpose of the research, as well as their status as a voluntary participant. Confidentiality and privacy were emphasized, due to the potentially sensitive nature of sharing information regarding medical history, insurance, and income.

After accepting the terms of the study, as well as confirming their age of 18 years of older, participants were again asked the two screening questions -- thus, verifying that they had taken an international trip to receive medical care, and that there were primarily living in the United States of America at that time. Participants who negatively answered

were automatically redirected to the end of the survey; participants who positively answered were able to continue on.

Additionally, there were two questions asking the participant "If you are paying attention, please select…" and a random number, in order to filter out participants who may be clicking through the quiz without actually reading the questions. If they did not answer correctly, Qualtrics filtered out their response.

Qualtrics initially screened 80,827 individuals, of whom 4,637 qualified for inclusion in the sample of this study. Qualtrics generated 261 completed responses from the qualified group. One outlier was screened out, as they were stationed abroad at a military base (and thus were not primarily living in the United States at the time of their medical treatment). This left a sample of 260 completed responses. The sample was comprised of medical tourists who have previously travelled internationally to obtain medical care, and whom were living in the United States of America at the time of their international medical trip.

CHAPTER 4

RESEARCH FINDINGS

Results of Descriptive Statistics

A total of 260 useable data responses were included in this study. Tables 2 and 3 illustrate the descriptive statistics of the sample. The results of the descriptive statistics illustrates respondents' demographics as well as the characteristics of their medical trips abroad.

Demographics of Respondents

Basic demographic information about the respondents was collected, such as: gender, age, and income level. Occupation and marital status were included, as these factors may affect insurance coverage. Respondents were also asked which region of the United States they were living in at the time of their medical trip abroad.

The sample was comprised of 145 men (55.8%) and 115 women (44.2%). The majority of the respondents were between ages 26-35 (42.3%); the lowest age demographic in this sample was the 56-65 demographic (6.5%). The most common income bracket for this sample was between $50,000 - $99,999 (45%).

Out of this sample, 70% were married, 21.9% were single, and 8.1% were divorced. The most common occupational group was professional/technical (30.8%), followed by self-employed (18.8%); the least common occupational group was government/military (1.9%). The sample seemed to be fairly evenly dispersed through the nation, with 30.4% hailing from the West, 25.4 from the South, 25% from the Northeast, and 19.2% from the Midwest. The following table illustrates the categorical data of the sample's demographic profile.

Table 2

Demographics of Medical Tourists: Categorical Data (N=260)

Variable	*Frequency*	Percentage (%)
Gender		
Male	145	55.8
Female	115	44.2
Age Group (in years)		
18-25	29	11.2
26-35	110	42.3
36-45	58	22.3
46-55	19	7.3
56-65	17	6.5
Above 65	27	10.4
Marital Status		
Single	57	21.9
Married	182	70.0
Divorced	21	8.1
Occupation		
Government/military	5	1.9
Teacher	20	7.7
Professional/technical	80	30.8
Production/manufacturing	15	5.8
Self-employed	49	18.8
Retired	33	12.7
Other	58	22.3
Average Annual Income		
Less than $19,999	10	3.8
$20,000-$49,000	55	21.2
$50,000-$99,999	117	45.0
$100,000-149,999	45	17.3
$150,000-$199,999	25	9.6
$200,000-$249,999	4	1.5
More than $250,000	4	1.5
Region of the USA		
West	79	30.4
Midwest	50	19.2
South	66	25.4
Northeast	65	25.0

Characteristics of Respondents' Medical Trips Abroad

The majority of the respondents (48.8%) took their medical trip abroad within six months of participating in the survey; only 15.8% had travelled more than two years prior to participating. In this sample, 36.2% travelled once for medical tourism, 29.6% have travelled twice, and 20.8% have trave67.3% had domestic medical insurance, 9.2% had insurance in their destination location, and 23.5% had no type of insurance.

Dental (32.3%), medical checkups (16.2%) and cosmetic treatments (11.9%) were the most popular types of treatments sought. Mexico was the most-frequented destination (16.5%), followed by the UK (13.5%) and Canada (12.7%), perhaps due to locational proximity to the United States as well as language preferences. The most popular method of consulting information before the trip was doctor's advice (30.8%), followed by word-of-mouth (26.2%) and intermediary websites (13.5%). The following table illustrates the categorical data of the sample's medical trip profile.

Table 3

Profile of Medical Trip Abroad: Categorical Data (N=260)

Variable	*Frequency*	Percentage (%)
Number of trips taken for the purpose of medical tourism.		
One	94	36.2
Two	77	29.6
Three	54	20.8
Four or more	35	13.5
When did the medical trip occur		
Past 6 months	127	48.8
Past year	70	26.9
Past 2 years	22	8.5
More than 2 years ago	41	15.8
Primary Purpose of trip		
Obtain medical care	156	60.0
Pleasure/ vacation	58	22.3
Business/ work	17	6.5
Convention	4	1.5
Visiting friends/ family	25	9.6
Type of treatment sought		
Dental	84	32.3
Cosmetic	31	11.9
Sight	19	7.3
Heart	15	5.8
Medical checkup	42	16.2
Orthopedics	11	4.2
Reproductive care	5	1.9
Weight loss	9	3.5
Sexual reassignment	3	1.2
Alternative care	12	4.6
Other	29	11.2
Possessed insurance		
Yes, in USA	175	67.3
Yes, in destination	24	9.2
No	61	23.5
Primary information source consulted before trip		
Doctor's advice	80	30.8
Word of mouth	68	26.2
Intermediary website	35	13.5
Hospital's website	23	8.8
Online med communities	11	4.2
Med-tourism blogs	4	1.5
Reading other's testimonies	7	2.7
News source	2	0.8
Other	30	11.5

Table 3

Profile of Medical Trip Abroad: Categorical Data (N=260), continued

Variable	Frequency	Percentage (%)
Chosen destination		
Thailand	22	8.5
Mexico	43	16.5
India	13	5.0
Phillipines	8	3.1
Brazil	12	4.6
Costa Rica	13	5.0
Singapore	24	9.2
South Korea	11	4.2
Canada	33	12.7
UK	35	13.5
Other	46	17.7
Other destination considered		
Thailand	26	10.0
Mexico	28	10.8
India	10	3.8
Phillipines	8	3.1
Brazil	21	8.1
Costa Rica	7	2.7
Singapore	26	10.0
South Korea	10	3.8
Canada	29	11.2
UK	42	16.2
Other	53	20.4
Method of arranging treatment		
Directly through hospital	183	70.4
Through intermediary	50	19.2
Other	27	10.4
Sought other types of tourism		
Yes	212	81.5
No	48	18.5
Days spent on medical treatment		
1-3 days	91	35.0
3-5 days	69	26.5
5-15 days	71	27.3
15-30 days	20	7.7
More than a month	9	3.5
Days spent on non-med activities		
1-3 days	77	29.6
3-5 days	80	30.8
5-15 days	64	24.6
15-30 days	22	8.5
More than a month	17	6.5

Exploratory Factor Analysis

Factor analysis is a statistical method used to describe variability among observed, correlated variables in terms of a potentially lower number of unobserved variables called factors. The relationship of each variable to the underlying factor is expressed by the factor loading; the variable with the strongest association to the underlying latent variable (Kim & Mueller, 1978). Using SPSS statistical analysis software to execute factor analysis, the push and pull factors (i.e., the independent variables) were sorted into five different factors.

The variables were labeled based on the literature review. Push and pull factors were categorized into five independent variables: Destination (Factor 1), Facilities (Factor 2), Costs (Factor 3), Availability/Privacy (Factor 4), and Visa Procedures (Factor 5). Quality, the dependent variable, was found to have three factors within it: Logistics (Factor 1), Quality of Destination (Factor 2), and Quality of Service (Factor 3). The following tables illustrate how each of the attributes were categorized into these five factors through exploratory factor analysis.

Table 4

Results of Factor Analysis: Push and Pull factors (independent variables) (N=260)

Items	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Coefficient Alpha
Factor 4: Availability/Privacy (unavailable domestically; desire for discretion)						
Shorter waiting times than in the United States. (Q1)				0.577		0.905
Type of medical treatment that is not allowed in the United States. (Q3)				0.740		0.912
Type of medical treatment not covered by medical insurance in your country. (Q4)				0.646		0.912
Preference of privacy and confidentiality. (Q5)				0.735		0.905
Factor 3: Costs (costs, insurance, treatment arrangements)						
Less expensive medical treatment than in the United States. (Q2)			0.809			0.905
Reasonable price; a significant amount of money saved. (Q6)			0.779			0.904
Opportunity for person who has limited or no medical insurance in the United States. (Q7)			0.607			0.905
Ease of medical treatment arrangements. (Q16)			0.451			0.902
Factor 2: Facilities (reputation of medical care and staff)						
Various types and availability of medical services. (Q8)		0.506				0.903
Recognized hospital/medical facility reputation. (Q10)		0.571				0.900
International hospital/medical accreditation. (Q11)		0.738				0.901
High standard level of medical facilities. (Q12)		0.708				0.901
High standard level of medical staff. (Q13)		0.777				0.900
Recognized, positive reputation of physicians. (Q14)		0.616				0.902
Western experienced/trained physicians. (Q15)		0.468				0.902
Factor 1: Location (desirable destination/ hospitality)						
A great place for relaxation after medical treatment. (Q17)	0.665					0.901
Positive reputation as a tourist destination. (Q18)	0.754					0.901
Political stability. (Q19)	0.684					0.902
Variety of existing tourist attractions for recuperating patients. (Q20)	0.726					
Opportunity to combine medical service with a vacation. (Q21)	0.670					
Tourism safety from crime and/or terrorist attack. (Q22)	0.680					0.901
Ease of travel arrangements. (Q23)	0.705					0.901
Ease of lodging arrangements. (Q24)	0.613					0.901
Ease of transportation. (Q25)	0.625					0.901
Friendliness and helpfulness of the local people. (Q26)	0.569					0.901
No language barriers in traveling to your destination. (Q27)	0.417					0.905
Ease of accessibility when traveling from the United States. (Q28)	0.559					0.902
Factor 5: Visa Procedures						
Ease of visa procedures. (Q9)					0.680	0.904
Eigenvalue	8.979	2.473	1.960	1.483	1.169	
Variance (%)	20.00%	14.3%	8.98%	8.92%	5.42%	
Cumulative Variance (%)	20.00%	35.03%	43.02%	51.94%	57.36%	
Cronbach's Alpha (Reliability)	0.899	0.845	0.717	0.70	0.806	

Table 5

Results of Factor Analysis: Quality factors (dependent variables) (N=260)

Items	Factor 1	Factor 2	Factor 3	Coefficient Alpha
Factor 1: Logistics(medical and travel related expenses and logistics, administrative process)				
The process for setting up the medical procedure appointment was simple and easy. (1)	0.638			.0932
Medical records and information was easily assembled and transmitted. (2)	0.426			0.932
Short waiting time for the medical examination from the physician. (3)	0.726			0.933
The physicians adequately explained my condition, examination results, and medical process. (4)	0.667			0.932
The physicians allowed me to ask many questions, enough to clarify everything. (5)	0.645			0.932
Hospital care facilities (laboratory, doctor's office) were easy to find. (9)	0.536			0.932
The medical facility valued and respected patients' privacy, confidentiality, and disclosure. (12)	0.494			0.931
The payment procedure was quick and simple. (14)	0.751			0.932
Package pricing demonstrated price transparency. (15)	0.484			0.931
Costs associated with medical treatment were lower than in America. (24)	0.693			0.932
Factor 2: Quality of Destination (hospitality and medical destinations)				
The medical staff had good communication skills. (6)		0.643		0.931
Medical staff was polite and friendly. (7)		0.623		0.931
The hospital had state-of-the-art facilities and equipment. (8)		0.565		0.931
The hospital/medical facilities' amenities (cafeteria, public telephone, etc.) were conveniently located. (10)		0.436		0.931
The hospital/medical facility had a strong concern for patient safety. (11)		0.609		0.931
Traveling to the medical destination was simple and without hassle. (20)		0.569		0.931
The destination location offered good hospitality services (lodging, transportation, dining, and/or tourism activates). (21)		0.698		9.931
The destination was a good place to relax after treatment. (22)		0.732		0.931
The destination was a good place for a vacation. (23)		0.692		0.932
Factor 3: Quality of Service (medical and travel; risk reduction)				
The medical facility had acceptable protection against medical malpractice and liability. (13)			0.627	0.933
Provided assistance with financial arrangements, such as: advance estimates for fees, deposits, and payments. (16)			0.649	.934
Provided convenient hospital transportation arrangements. (17)			0.677	0.933
Provided arrangement for language interpretation service. (18)			0.764	0.935
Effective coordination of arrangements between the patient, hospital, third-party insurance companies, and/or other involved businesses. (19			0.739	0.933
Eigenvalue	9.88	1.943	1.139	
Variance (%)	19.93	19.29	14.77	
Cumulative Variance (%)	19.953	39.24	54.02	
Cronbach's Alpha (Reliability)	0.889	0.889	0.787	

Multiple Regression

Multiple regression was used to test whether or not the independent variables (push and pull) had a effect on the dependent variable (quality) derived from the exploratory factor analysis. The dependent variable was found to have three factors within it; thus, three separate regression models were utilized. In all three models, push-pull factors were found to have a significant effect on perceived quality.

Model 1 illustrates the effect of the Push and Pull independent variables (Costs, Destination, Facilities, Availability/Privacy, Visa Procedures) on Logistics. It was found that 40% of change in the dependent variable was due to push-pull factors, and that all push-pull factors impacted Logistics. Costs had the most significant effect on Logistics (β=0.488, p=0.000). Destination (β=2.44, p =0.000) and Facilities (β =0.223, p = 0.000) had nearly the same impact on Logistics. Availability/Privacy (β =-0.182, p = .000) and Visa Procedures (β =1.62, p =0.001) were also found to be statistically significant, but had the lowest effect on perceived Logistics. Table 6 illustrates the results of Model 1.

Model 2 illustrates the effect of the Push and Pull independent variables (Costs, Destination, Medical Facilities, Availability/Privacy, Visa Procedures) on the Quality of Destination. It was found that 43% of change in dependent variable was attributed to the push-pull factors. Destination had the largest effect on the perceived Quality of Destination (β=0.806, p=0.000). Push and pull factors associated with Facilities (β=0.305, p=0.000) and Availability/Privacy (β= -1.49, p=0.002) were also found to have a statistically significant relationship to Quality of Destination. The results of Model 2 may be seen in Table 7.

Model 3 illustrates the effect of the Push and Pull independent variables (Costs,

Destination, Facilities, Availability/Privacy, Visa Procedures) on the Quality of Service.

It was found that 38% of change in Quality of Service attributed to push-pull factors.

Availability/Privacy was the most significant factor (β =0.489, p=0.000). This model also

indicates that Facilities (β =0.284, p=0.000) and Destination (β=0.261, p=0.000) also had

a significant effect on the Quality of Service. The results of Model 3 may be seen in

Table 8.

Table 6

Summary of Multiple Regression Analysis: Effects of Push and Pull on Logistics

(N =260)

Variable	*B*	SE B	β	t	Sig.	VIF
Factor 1: Destination	0.244	0.48	0.244*	5.044	0.00	1.000
Factor 2: Facilities	0.223	0.048	0.243*	4.608	0.00	1.000
Factor 3: Costs	0.488	0.048	0.488**	10.108	0.00	1.000
Factor 4: Availability/Privacy	-0.182	0.048	-0.182*	-3.773	0.00	1.000
Factor 5: Visa Procedures	0.162	0.048	0.162*	3.353	0.01	1.000

*p<0.05 **p<0.05; Largest Beta
Adj. R^2 = 0.395, p<0.01
F(5,254)=34.865, p<0.05
Model 1
Dependent variable: Logistics
Predictors: Costs, Destination, Facilities, Availability/Privacy, and Visa Procedures

Table 7

Summary of Multiple Regression Analysis: Effects of Push and Pull on Quality of

Destination (N=260)

Variable	*B*	SE B	β	t	Sig.	VIF
Factor 1: Destination	0.572	0.47	0.572**	12.260	0.00	1.000
Factor 2: Facilities	0.305	0.047	0.305*	6.537	0.00	1.000
Factor 3: Costs	-0.10	0.047	-0.10	-0.220	8.26	1.000
Factor 4: Availability/Privacy	-0.149	0.047	-0.149*	-3.190	0.02	1.000
Factor 5: Visa Procedures	0.063	0.047	0.063	1.346	0.180	1.000

*p<0.005 **p<0.05; Largest Beta
Adj. R^2 = 0.436, p<0.01
F(5,254)=41.018, p<0.05
Model 2
Dependent variable: Quality of Destination
Predictors: Costs, Destination, Facilities, Availability/Privacy, Visa Procedures

Table 8

Summary of Multiple Regression Analysis: Effects of Push and Pull on Quality of Service

(N =260)

Variable	*B*	SE B	β	t	Sig.	VIF
Factor 1: Destination	0.261	0.049	0.261*	5.335	0.00	1.000
Factor 2: Facilities	0.284	0.049	0.284*	5.807	0.00	1.000
Factor 3: Costs	-0.078	0.049	-0.078	-1.597	0.111	1.000
Factor 4: Availability/ Privacy	0.489	0.049	0.489**	10.014	0.000	1.000
Factor 5: Visa Procedures	0.012	0.049	0.012	0.012	0.811	1.000

*p<0.05 **p<0.05; Largest Beta
Adj. R^2 = 0.382, p<0.01
F(5,254)=33.014, p<0.05
Model 3
Dependent variable: Quality of Service
Predictors: Costs, Destination, Facilities, Availability/Privacy, Visa Procedures

CHAPTER 5

DISCUSSIONS AND CONCLUSIONS

After presenting the results of this research in Chapter Four, the research objective of this study may be reexamined. In addition, new empirical data regarding the characteristics of medical tourists trip abroad may be discussed.

Characteristics of Medical Tourists' Post-travel Experience

The demographics were compared to the statistics found in the literature review (Medical Tourism Association, 2014) (Patients Beyond Borders, 2014). While the MTA study found that only 50% of their respondents had domestic insurance, 67% of this study's sample was insured. Though literature suggested that the most common age bracket is the 56-65 demographic, this proved to be the lowest in this sample; the most common age group was 26-35. The most common income was $50,000 - $99,999 (45%) – also found to be the most common income bracket in the 2013 MTA study.

The data revealed that the most popular medical treatments were dental and general check ups, and that the majority of these visitors possessed domestic health insurance. The dental statistics correspond with previous literature, as many American insurance plans do not cover dental. 67.5% of respondents had insurance in the USA; 23.5% had no insurance, and only 9.2% arranged insurance in the destination location. The majority of respondents were travelling to obtain dental care (32.3%). The data revealed that, of the 84 respondents who travelled to obtain dental care, only 24 did not have any type of insurance. This is likely due to the fact that most American insurance plans do not provide dental coverage (Patients Beyond Borders, 2014). Other popular treatments in this sample included: general medical checkup (16.2%) and cosmetic

procedures (11.9%). However, of the 42 respondents who obtained a medical check up,

only 5 had no insurance, and 3 had insurance at the destination – the remaining 34 had

insurance in the USA, despite medical checkups being covered by most insurance

domestic companies. This would be an interesting area to explore further.

The most popular method of consulting information before the trip was doctor's

advice (30.8%), followed by word-of-mouth (26.2%) and intermediary websites (13.5%).

This implies that there is a deficit of empirical data to rely on, as most medical tourists

appear to base their decision on information from individuals they know personally.

While the primary purpose of travel for the majority was to obtain medical

treatment (60%), 22% of respondents were travelling primarily for pleasure. 81.5% of

respondents sought out other types of (non-medical) tourism during their trip. 30.8%

spent 3-5 days on non-medical related activities, and 24.6% spent 5 – 15 days on non-

medical related activities. While the primary purpose of travel for the majority was to

obtain medical treatment (60%), 22% of respondents were travelling primarily for

pleasure. 81.5% of respondents sought out other types of (non-medical) tourism during

their trip. 30.8% spent 3-5 days on non-medical related activities, and 24.6% spent 5 – 15

days on non-medical related activities. As shown in the literature review, there appears to

be a significant market for traditional tourism and hospitality-related services within the

sphere of medical tourism.

Mexico was the most-frequented destination (16.5%), which corresponds to the

literature review. However, it was followed by the UK (13.5%) – which has not

previously been considered a primary medical tourism destination. Canada was the third

most popular destination location (12.7%), perhaps due to locational proximity to the

United States. Future research into Canada and the UK as medical tourism destinations is warranted, as it is outside the scope of the previous literature review. Further research into the importance of language, culture, and proximity to the domestic country may be considered worthy of future study. This suggests a market for hospitality and tourism providers, as there is a niche for medical tourists who want to combine a vacation with their medical care.

A series of ANOVA tests were performed to further explore the relationship between age and the push, pull, and quality attributes. Post hoc comparisons using the Tukey HSD test indicated several significant relationships between age and certain push-pull attributes. It was shown that there was a significant relationship between age and the attribute "destination offered shorter waiting times than in the USA" [$F(5,254)=12.818$, $p=0.037$); this attribute was most significant for medical tourists over 36 years of age. It was indicated that there is a significant relationship between age and the attribute "treatment not allowed in the USA" [$F(5,254)=12.165$, $p=0.000$]; this attribute was most significant for medical tourists between $26 - 35$ years of age. A significant relationship was also found to exist between age and the attribute, "treatment not covered by medical insurance" [$F(5,254)=5.980$, $p=0.000$]; this attribute was most significant for patients between $18 - 45$ years of age. Additionally, a significant relationship was determined between age and the attribute "preference for privacy" ($F(5,254)=13.552$, $p=0.00$]; this was found to be most significant for patients between $26 - 35$ years of age. This implies that older medical tourists' are more motivated by waiting times, whereas younger medical tourists may be motivated by access to treatments that are unavailable domestically, not covered by insurance (thus, potentially elective), and a concern for

privacy. This implies that age is a significant indicator regarding the types of treatment sought, as well as the destination choice.

Revisiting the Research Objective

Let us re-examine the research questions:

- Do push and pull factors significantly affect the perceived quality of respondents' medical tourism experiences?
- If push and pull factors significantly affect perceived quality, what is the relationship between these constructs?

The data supports the research hypotheses that a significant relationship does exist between push and pull factors and the perceived quality of the medical tourism experience. In all three of the regression models, the Push-Pull factors were found to significantly impact Quality. The results of the data analysis may now be evaluated with respect to the research hypotheses set discussed in Chapter 2.

Push and pull factors were categorized into five different independent variables. It was discovered that the dependent variable, Quality, contained three factors within it. Thus, the relationship of push and pull factors was measured in three separate models. Push and pull factors had a significant effect on Logistics. Regarding the perceived quality Logistics, Cost was the most significant factor. However, all push-pull variables significantly influenced Logistics. This is likely due to medical tourists' expenditures and necessary logistical processes outside of the procedure itself, such as the cost of transportation, hospital amenities and general travel expenses, administrative and travel logistics, etc. Thus, the hypothesis that push and pull factors significantly affect Logistics (H1) is supported; the attributes corresponding with Cost have the most significant effect.

Regarding the Quality of the Destination, the Destination variable had the most significant impact. Facilities and Availability/Privacy were also shown to have a significant impact. This suggests that, when it comes to medical tourism, the destination image has more pull to it than just a desirable location. Other important factors include the reputation of the medical facilities, the ease of access to the facilities and treatments unavailable in the United States, as well as desire for privacy and discretion. Thus, the hypothesis that push-pull factors significantly affect Quality of Destination (H2) is supported; the attributes corresponding to Destination have the most significant effect.

Regarding the perceived Quality of Service, Availability/Privacy had the strongest impact. This was followed by Facilities, and then Destination. Though the literature review would imply that reputation of facilities would be a stronger influence due to the desire to reduce risk, this was not reflected by this study. Instead, it appears that the primary motivator is to obtain a service unavailable in the United States, and/or to maintain discretion while receiving the treatment. This data implies that medical tourists are willing to prioritize access to a treatment that may be unavailable domestically (either due to a lack of availability, or a need for privacy) over the reputation of a medical facility. Thus, the hypothesis that push and pull factors significantly effect Quality of Service (H3) is supported; the attributes corresponding with Availability/Privacy have the most significant effect. Therefore, the data supports the research theory that a relationship exists between push-pull factors and perceived quality, as well as the nature of the relationships between these constructs.

Limitations

Though the data analysis was able to illustrate the relationship of motivations and destination image on perceived quality, the scope did not cover constructs such as value, satisfaction, or revisit intent. The scope of the questions was also quite large, and some nuances were likely conflated by using exploratory factor analysis. Thus, the results should be seen as a general approach to gaining a fuller understanding of the relationship between push and pull factors on quality, in regards to medical tourism.

Another possible limiting factor of the data in this study was that the demographic of the respondents appeared to be considerably younger than the average found in the literature review. This may be due to the nature of the data collection method (an online survey), which may primarily appeal to younger participants. Though use of an online survey allowed for a nation-wide sample, it should perhaps be noted that this method might possibly skew towards an uncharacteristically younger group of respondents.

Future Research

Future research may be built on the findings of this study. The characteristics of the samples' medical trips abroad raised questions that warrant additional examination. The UK had an uncharacteristically high amount of visitors. American medical tourists' desire to travel to places with similar language/culture for medical purposes could be explored further.

Likewise, future study may include a closer, more detailed look into the role of insurance, and how this affects treatment choice. While the results of the statistical case study were mostly in line with findings from the literature review, the large number of

insured medical tourists who travelled for check-ups may imply a preference for non-domestic doctors or medical facilities.

Further investigation into the significance of the motivational factors associated with treatment's domestic unavailability and medical tourists' concern for privacy may be further investigated. This research has shown these factors to be more significant than a medical facilities' reputation– a departure from the information gleaned form the literature review. Additionally, although this study included risk-related questions in regards to facilities' and destination' reputations, a closer look at perceived risk and its relationship to perceived quality may be considered.

Finally, the push and pull model may be used to "go deeper" with the study of post-travel medical tourism. A more complex model may be used to explore the relationship to quality, value, and satisfaction. This line of study would be valuable in regards to re-visit intention.

Conclusion

After conducting a post-travel study measuring the effect of push and pull factors on the perceived quality of the medical tourism experience, the data has revealed that a relationship between these constructs exist. More specifically, the attributes found to be the highest predictors of the overall perceived quality of the experience were those associated with the costs, destination, and opportunity to obtain treatment that was unavailable domestically or posed a privacy concern.

Although medical tourism has surged in the last two decades, the majority of medical tourists still rely on information and first hand accounts from people they are familiar with. By contributing empirical information regarding authentic travel

experiences, potential medical tourists will be able to make more advised decisions about their medical trips abroad. Likewise, medical tourism suppliers may more accurately provide for medical tourists -- hopefully leading to better service quality and increased revenue. As the medical tourism market continues to grow, research regarding post-travel experiences will be invaluable for the medical tourist as well as the service providers.

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APPENDIX

Survey

Q1 Have you traveled internationally to obtain any type of medical treatment?
- ○ Yes (1)
- ○ No (2)

Q2 At the time of your medical trip abroad, were you primarily living in the United States of America?
- ○ Yes (1)
- ○ No (2)

Q3 How many times have you traveled for the purpose of medical tourism?
- ○ Once (1)
- ○ Twice (2)
- ○ 3 times (3)
- ○ 4 times or more (4)

Q4 When did you most recently travel abroad to obtain medical care?
- ○ In the past 6 months (1)
- ○ In the past year (2)
- ○ In the past 2 years (3)
- ○ More than 2 years ago (4)

Q5 What was the primary   purpose of your medical trip abroad?
- ○ To obtain medical treatment (1)
- ○ Pleasure/ vacation (2)
- ○ Business/ work (3)
- ○ Convention/ exhibition (4)
- ○ Visiting friends and/or relatives (5)

Q6 What type of medical service did you seek during your trip abroad?
- ○ Dental surgery/treatment/restorative (1)
- ○ Cosmetic/plastic/reconstructive surgery (2)
- ○ Sight treatment/Lasik (3)
- ○ Cardiovascular/heart surgery (angioplasty, CABG, transplant), etc. (4)
- ○ Comprehensive medical checkup (5)
- ○ Orthopedics (joint, spine, sports medicine, etc.) (6)
- ○ Reproductive care. (7)
- ○ Weight loss/LAP-BAND/gastric bypass (8)
- ○ Sexual reassignment surgery (9)
- ○ Alternative care (acupuncture, chiropractic, etc.) (10)
- ○ Other (11)

Q7 Did you have any type of health or medical insurance coverage on this type of treatment?
- ❍ Yes, in the United States (full or partial coverage) (1)
- ❍ Yes, in the destination country (full or partial coverage) (2)
- ❍ No medical insurance coverage (3)

Q8 What was the primary source of information you consulted before making the decision to embark on this medical trip?
- ❍ Advice of your domestic doctor/physician (1)
- ❍ Word-of-mouth from friend or family (2)
- ❍ Medical tourism intermediary's website (3)
- ❍ Website of the hospital/ medical facility you traveled to (4)
- ❍ On-line medical communities (5)
- ❍ Medical tourism blog (6)
- ❍ Reading the testimonies of other patients who had surgery abroad (7)
- ❍ News source (television, magazine, etc.) (8)
- ❍ Other (9)

Q9 What destination did you travel to for medical treatment?
- ❍ Thailand (1)
- ❍ Mexico (2)
- ❍ India (3)
- ❍ Philippines (4)
- ❍ Brazil (5)
- ❍ Costa Rica (6)
- ❍ Singapore (7)
- ❍ South Korea (8)
- ❍ Canada (9)
- ❍ UK (10)
- ❍ Other (11)

Q10 Besides your chosen destination, did you consider any of the following countries for your medical treatment?
- ❍ Thailand (1)
- ❍ Mexico (2)
- ❍ India (3)
- ❍ Philippines (4)
- ❍ Brazil (5)
- ❍ Costa Rica (6)
- ❍ Singapore (7)
- ❍ South Korea (8)
- ❍ Canada (9)
- ❍ UK (10)
- ❍ Other (11)

Q11 How did you arrange for this medical treatment?
- ❍ Directly with the hospital/ care facility (1)
- ❍ Through medical travel intermediaries' website(s) (2)
- ❍ Other (3)

Q12 Besides the medical treatment, did you do any other type of tourism activities at the travel destination?
- ❍ Yes (1)
- ❍ No (2)

Q13 How many days of your trip were spent on your medical treatment?
- ❍ 1 - 3 days (1)
- ❍ 3 - 5 days (2)
- ❍ 5 - 15 days (3)
- ❍ 15 - 30 days (4)
- ❍ More than a month (5)

Q14 How many days of your trip were spent on other activities besides your medical treatment (example: sightseeing, tourism activities, relaxation)?
- ❍ 1 - 3 days (1)
- ❍ 3 - 5 days (2)
- ❍ 5 - 15 days (3)
- ❍ 15 - 30 days (4)
- ❍ More than a month (5)

Q15 When it comes to your medical treatment, the destination that you traveled to offers:	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
Shorter waiting times than in the United States. (1)	❍	❍	❍	❍	❍
Less expensive medical treatment than in the United States. (2)	❍	❍	❍	❍	❍
Type of medical treatment that is not allowed in the United States. (3)	❍	❍	❍	❍	❍
Type of medical treatment not covered by medical insurance in your country. (4)	❍	❍	❍	❍	❍
Preference of privacy and confidentiality. (5)	❍	❍	❍	❍	❍
Reasonable price; a significant amount of money saved. (6)	❍	❍	❍	❍	❍
Opportunity for person who has limited or no medical insurance in the United States. (7)	❍	❍	❍	❍	❍
Various types and availability of medical services. (8)	❍	❍	❍	❍	❍
Ease of visa procedures. (9)	❍	❍	❍	❍	❍
Recognized hospital/medical facility reputation. (10)	❍	❍	❍	❍	❍
If you are reading carefully, please select disagree. (11)	❍	❍	❍	❍	❍
International hospital/medical accreditation. (12)	❍	❍	❍	❍	❍
High standard level of medical facilities. (13)	❍	❍	❍	❍	❍
High standard level of medical staff. (14)	❍	❍	❍	❍	❍
Recognized, positive reputation of physicians. (15)	❍	❍	❍	❍	❍
Western experienced/trained physicians. (16)	❍	❍	❍	❍	❍
Ease of medical treatment arrangements. (17)	❍	❍	❍	❍	❍

Q16 When it comes to your traveling and tourism experience, the destination you traveled to offered:	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
A great place for relaxation after medical treatment. (1)	❍	❍	❍	❍	❍
Positive reputation as a tourist destination. (2)	❍	❍	❍	❍	❍
Political stability. (3)	❍	❍	❍	❍	❍
Variety of existing tourist attractions for recuperating patients. (4)	❍	❍	❍	❍	❍
Opportunity to combine medical service with a vacation. (5)	❍	❍	❍	❍	❍
Tourism safety from crime and/or terrorist attack. (6)	❍	❍	❍	❍	❍
Ease of travel arrangements. (7)	❍	❍	❍	❍	❍
Ease of lodging arrangements. (8)	❍	❍	❍	❍	❍
Ease of transportation. (9)	❍	❍	❍	❍	❍
Friendliness and helpfulness of the local people. (10)	❍	❍	❍	❍	❍
No language barriers in traveling to your destination. (11)	❍	❍	❍	❍	❍
Ease of accessibility when traveling from the United States. (12)	❍	❍	❍	❍	❍

Q17 Regarding the quality of your overall medical tourism experience:	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
The process for setting up the medical procedure appointment was simple and easy. (1)	❍	❍	❍	❍	❍
Medical records and information was easily assembled and transmitted. (2)	❍	❍	❍	❍	❍
Short waiting time for the medical examination from the physician. (3)	❍	❍	❍	❍	❍
The physicians adequately explained my condition, examination results, and medical process. (4)	❍	❍	❍	❍	❍
The physicians allowed me to ask many questions, enough to clarify everything. (5)	❍	❍	❍	❍	❍
The medical staff had good communication skills. (6)	❍	❍	❍	❍	❍
Medical staff was polite and friendly. (7)	❍	❍	❍	❍	❍
The hospital had state-of-the-art facilities and equipment. (8)	❍	❍	❍	❍	❍
Hospital care facilities (laboratory, doctor's office) were easy to find. (9)	❍	❍	❍	❍	❍
The hospital/medical facilities' amenities (cafeteria, public telephone, etc.) were conveniently located. (10)	❍	❍	❍	❍	❍
The hospital/medical facility had a strong concern for patient safety. (11)	❍	❍	❍	❍	❍
The medical facility valued and respected patients' privacy, confidentiality, and disclosure. (12)	❍	❍	❍	❍	❍
The medical facility had acceptable protection against medical malpractice and liability. (13)	❍	❍	❍	❍	❍
The payment procedure was quick and simple. (14)	❍	❍	❍	❍	❍

Q17 Regarding the quality of your overall medical tourism experience:	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
Package pricing demonstrated price transparency. (15)	❍	❍	❍	❍	❍
Provided assistance with financial arrangements, such as: advance estimates for fees, deposits, and payments. (16)	❍	❍	❍	❍	❍
Provided convenient hospital transportation arrangements. (17)	❍	❍	❍	❍	❍
Provided arrangement for language interpretation service. (18)	❍	❍	❍	❍	❍
Effective coordination of arrangements between the patient, hospital, third-party insurance companies, and/or other involved businesses. (19)	❍	❍	❍	❍	❍
If you are reading carefully, please select agree (20)	❍	❍	❍	❍	❍
Traveling to the medical destination was simple and without hassle. (21)	❍	❍	❍	❍	❍
The destination location offered good hospitality services (lodging, transportation, dining, and/or tourism activates). (22)	❍	❍	❍	❍	❍
The destination was a good place to relax after treatment. (23)	❍	❍	❍	❍	❍
The destination was a good place for a vacation. (24)	❍	❍	❍	❍	❍
Costs associated with medical treatment were lower than in America. (25)	❍	❍	❍	❍	❍

Q18 What is your gender?
❍ Male (1)
❍ Female (2)

Q19 What is your marital status?
- ○ Single (1)
- ○ Married (2)
- ○ Divorced/ Widowed/ Separated (3)

Q20 What is your age group?
- ○ 18 – 25 years old (1)
- ○ 26 – 35 years old (2)
- ○ 36 – 45 years old (3)
- ○ 46 – 55 years old (4)
- ○ 56 – 65 years old (5)
- ○ Above 65 years old (6)

Q21 What is your current occupation?
- ○ Government Official/ Military (1)
- ○ Teacher/ Instructor/ Professor (2)
- ○ Professional/ Technical position (3)
- ○ Production/ Manufacturing (4)
- ○ Self-employed (5)
- ○ Retiree/ Not in the workforce (6)
- ○ Other (7)

Q22 What is your average, yearly household income (before taxes)?
- ○ Less than $19,999 (1)
- ○ $20,000 - $49,999 (2)
- ○ $50,000 - $99,999 (3)
- ○ $100,000 - $149,999 (4)
- ○ $150,000 - $199,999 (5)
- ○ $200,000 - $249,999 (6)
- ○ More than $250,000 (7)

Q23 What region of the United States do you live in?
- ○ West (1)
- ○ Midwest (2)
- ○ South (3)
- ○ Northeast (4)

Q24 Do you have any additional comments of suggestions regarding medical tourism?