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## Article

# The level and determinants of international patient satisfaction with dental tourism in Bangkok, Thailand

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## MANAGEMENT | RESEARCH ARTICLE

# The level and determinants of international patient satisfaction with dental tourism in Bangkok, Thailand

Hnin Nu Nu Lwin<sup>1</sup>, Prattana Punnakitikashem<sup>1\*</sup> and Trin Thananusak<sup>1</sup>

**Abstract:** Along with the medical tourism industry, dental tourism has become a trending industry as many patients travel around the world to receive dental treatment. This research aims to analyze the level of international patient satisfaction with the dental tourism experience in Bangkok, and to identify the determinants that significantly influence patient satisfaction. This study applied a cross-sectional research design and a quantitative research method. The data were collected using questionnaires. A total of 106 respondents were involved in this study. Descriptive statistics, correlation and multiple linear regression analyses were performed to address the research objectives of the study. It was found that international patients are highly satisfied with their dental tourism experiences in Bangkok. In addition, the results showed that quality of dental treatment, location accessibility and destination appeal have a positive and significant influence on dental tourist satisfaction. This study provides valuable inputs for dental care providers by highlighting the determinants and their relationships to dental tourist satisfaction to overcome challenges in this competitive market.

## ABOUT THE AUTHORS

Hnin Nu Nu Lwin obtained Bachelor of Dental Surgery degree from Myanmar and a master degree candidate in Healthcare and Wellness Management from College of Management, Mahidol University, Thailand. Her research interests are management of healthcare organizations and medical tourism.

Dr. Prattana Punnakitikashem is an associate professor in management at the College of Management, Mahidol University, Thailand, where she is a program chair of healthcare and wellness management. Her research interests are in the area of sustainable healthcare and wellness management and operations management including lean management, process improvement. She has published numerous publications and has been a speaker at several international conferences.

Dr. Trin Thananusak is a lecturer at the College of Management, Mahidol University, Thailand. His research areas are sustainable entrepreneurship, family businesses and disruptive innovations.

## PUBLIC INTEREST STATEMENT

Dental tourism has shown a marked upturn in an increasingly globalized world. The high cost of dental care services, lack of insurance coverage, and dissatisfaction with available services in home countries have motivated people to seek affordable, speedy, and better quality dental care in foreign countries. Whilst travelling abroad to maintain, improve or restore their dental health, people take the opportunity to spend their vacation in the destination country. In our study, the level and determinants of international patients' satisfaction with the dental tourism experience in Bangkok were identified. The results revealed that patients were highly satisfied with Bangkok dental tourism, and the satisfaction was significantly influenced by dental treatment quality, location accessibility and destination attraction. This study provided valuable information about customer perception and appropriate recommendations to the dental care providers so as to gain larger market share and sustainability in the market.

**Subjects: Principles of Management; Service Operations Management; Tourism Management; Production, Operations & Information Management**

**Keywords: Dental tourism; dental tourists; patient satisfaction; Bangkok**

## 1. Introduction

People around the world have increasingly sought overseas medical treatments and “medical tourism” has become an upcoming trend in recent years. Medical tourism is a particular type of movement where people travel across borders with the purpose of receiving medical care (Lunt et al., 2016). Previously, people used to seek medical care in the United States or in Europe, where the health care systems are advanced compared with other global regions. Nowadays, more and more people from highly developed countries travel to less developed countries to obtain good quality health care with reasonable charges and shorter waiting times (Connell, 2013).

The medical tourism market has expanded rapidly. In 2016, it accounted for US\$ 61 billion, and by 2023, it is expected to have nearly tripled, to an estimated US\$ 165 billion (Ghosh & Mandal, 2019). This huge market is predicted to keep growing at a compounded annual rate of 15 - percent year on year (Ghosh & Mandal, 2019). Thailand, India, Singapore, Hungary, Poland and Malta are interested in attracting medical tourists and are competing to get a market share. They offer a wide variety of treatments including dental care, surgery (cosmetic, orthopedic treatment, bariatric operations, and cardiac treatment), fertility treatment, and organ transplantation (Lunt & Carrera, 2010). These countries use internationally trained physicians and modern health care infrastructures to attain competitive advantages over rival destinations (Horowitz et al., 2007).

Along with the medical tourism industry, dental tourism has also become popular for international travelers seeking dental treatment (Jaapar et al., 2017). Dental treatments are very expensive and insurances usually do not cover private dental services in some countries (Turner, 2008). People from countries like the United States, European destinations and Australia are travelling to neighboring countries or other regions to seek affordable, speedy and convenient dental treatment (Jaapar et al., 2017; Kovács & Szocska, 2013; Österle et al., 2009). There are countries that specialize in this particular dental tourism market. Among them, Mexico has become the most popular country for its high-quality care, cleanliness and affordable prices. It is also an attractive destination for Americans, who comprise the largest number of clients, due to its regional proximity. The other countries specializing in dental tourism include Hungary and India. Hungary has more European patients while India focuses on Asian markets (Dhama et al., 2016; Peručić, 2019; Stanciu et al., 2014). Previous literature found that India’s dental tourism market has grown approximately 30% annually due to the intense marketing of its all-inclusive package tours which include treatments and supporting services. The other popular dental tourism destinations in Asia and Europe are: Thailand, the Philippines, Turkey, the Czech Republic and Poland respectively (Dhama et al., 2016; Jaapar et al., 2017; Österle et al., 2009).

Thailand has a strong growth potential in the dental tourism market. Thailand’s Dental Council stated that dentistry in Thailand provides outstanding services in the health tourism industry. Dental care is ranked as the third most utilized service by international patients, accounting for 11% of health tourism in Thailand. International patients are looking for dental services such as dental checkups, full mouth rehabilitation, new teeth replacement and cosmetic dentistry. Very highly specialized and world-class Thai dentists complement the price attractiveness of dental tourism (Chongthanavanit & Kheokao, 2018). In order to sustain and gain more market share in the dental tourism market, it is important to provide services that fulfill customer satisfaction. Nevertheless, there has been limited research in this area. Therefore, this study, firstly, aims to analyze the level of international patient satisfaction with their dental tourism experience in Bangkok, the capital city of Thailand. Secondly, this study seeks to identify the determinants that significantly influence these patient’s satisfaction. This study will provide valuable information

about customer expectations and perceptions of dental care providers. The results will be useful for the improvement of dental clinic management systems, planning and decision making for appropriate operations and marketing strategies.

## **2. Literature review**

### **2.1. Medical tourism**

Several factors motivate people to seek health care abroad. First, the cost of health care has risen sharply in first world countries. Medical tourism has become a reasonable alternative for people who cannot afford expensive medical charges in their home country. The second factor is the impact of globalization. Cheaper international air fares and favorable money exchange rates facilitate the growth of medical tourism. In addition, the Internet, health care facilitators, and the rapid development of health care systems in many countries has stimulated the desire of people to seek treatment overseas (Connell, 2013).

Thailand has become one of the top destinations in Asia for the provision of medical tourism services to millions of international patients. In 2007, approximately 1.4 million foreign patients underwent treatments in Thailand. These patients include medical tourists who came to Thailand with the intention of receiving health care, general tourists who travelled for vacation and received treatments during their stay in Thailand, and international residents who live or work in Thailand. The Thai government identified the country as a medical hub in 2004 and began to target this segment formally (Fedorov et al., 2009). Medical tourism is expected to contribute about THB 48–49 billion income for Thai private hospitals in 2017, and it is expected to be growing at an annual rate of 16% during 2017–2020 (KPMG, 2018).

### **2.2. Dental tourism**

Dental tourism is a major subset of medical tourism and has grown in recent years (Hunjet et al., 2018; Kovács & Szocska, 2013; Zoltan & Maggi, 2010). Dental tourism is also known as “dental vacation” or “dental holiday” because the purpose of travelling may include touring at the destination. Dental tourists are those who travel abroad to maintain, improve or restore their dental health by staying at least one night at the destination (Jaapar et al., 2017). There are two types of dental tourists. The first type is known as a classic dental tourist, who travels to a foreign country either for the sole purpose of receiving dental treatment, or for both dental treatment and vacation. The second type is known as a migrant dental tourist, who returns to his/her native country for a holiday or to visit relatives and then accesses dental treatment during their visit (Peručić, 2019).

Similar to medical tourism, the cost is one of the major push factors for patients seeking overseas dental care. Previous studies revealed that most of the dental tourists comprise those living in highly developed countries and who seek affordable dental care in less developed countries (Kesar & Mikulić, 2017). Basically, if there is a significant difference in price between the resident and foreign country for the same or similar perceived quality of dental care, patients may seek these services abroad (Adams, Snyder, & Crooks, 2017). Long waiting times for elective dental treatments at local hospitals is also a push factor for dental tourism (Kovács & Szocska, 2013). Furthermore, lack of available services or dissatisfaction with dental services received in the home country encourages patients to choose dental tourism. Advancement in technology, low travel costs, availability of better quality dental materials, professionally trained dental specialists and the attractiveness of tourist destinations have a significant influence on dental tourists' decisions when choosing their providers (Hunjet et al., 2018; Jaapar et al., 2017; Peručić, 2019).

### **2.3. Dental tourism in Thailand**

Thailand is a popular tourism-oriented country in Southeast Asia. The country has an excellent dental care system and a great potential for further developing its dental tourism market. Thailand is ranked as the third most preferred destination for medical tourism in the world (Sutherland,

2017). Therefore, it also has a significant competitive advantage for dental services compared with other countries. The country is well known for its affordable care, the state-of-the-art technology, better efficiency and excellent service (Chongthanavanit & Kheokao, 2018; Veerasoontorn & Beise-Zee, 2010). Dental treatment is the third most utilized service by international patients in Thailand and accounts for 11% of Thailand's health tourism market (13,382 million baht or 426 USD million US). The types of treatments sought by dental tourists include:

- Dental check up
- Teeth cleaning, scaling and polishing
- Periodontal treatment (root planing, gum surgery, periodontal bone surgery)
- Filling
- Endodontic treatment (root canal treatment)
- Prosthetic restoration (crown, bridge, denture)
- Cosmetic dentistry (teeth whitening, braces, invisalign)
- Surgery (tooth removal, impacted molar removal, jaw surgery), and
- Dental implant.

In addition, there are many exotic tourist spots that can promote the country as a tourist destination (Rerkrujipimol & Assenov, 2011). The ministry of health in Thailand has set a goal of attaining the title of a main global destination for dental tourism. According to government data, about 15% of journeys for dental treatment globally are to Thailand, which is approximately 1.2 million tourists each year (Stanciu et al., 2014).

#### **2.4. Satisfaction of patients with medical tourism**

Satisfaction has long been considered as the key concept in explaining customer post-purchase behavior. As it is an important factor, health care providers need to understand medical tourist satisfaction to gain a greater market share. Patient satisfaction is a health care recipient's perception on important aspects of the context, process and results of his or her service experience (Pascoe, 1983). The level of patient satisfaction depends on the patient's evaluation of health care services as well as to the providers from his or her own subjective point of view (Ware Jr et al., 1983). Hence, satisfaction may be linked with his or her personal profile and determinant. High levels of satisfaction can lead to customer loyalty and generate a considerable positive word-of-mouth recommendation to other people (Hunjet et al., 2018).

Numerous theories have been developed and used to analyze patient satisfaction. Our study used the Medical Tourism Experience (MTEX) model proposed by (Ghosh & Mandal, 2019) to measure dental tourist satisfaction. In the original model, there are seven dimensions influencing medical tourist satisfaction: treatment quality, medical service quality, medical tourism expenses, medical tourism infrastructure, destination appeal, destination culture, and communication convenience. This model was selected as it measures patient experience in both treatment and tourism aspects. Dental tourist satisfaction relates to the whole journey experience (Loubeau, 2009). Recent literature stated that the competitive advantages of the dental tourism destination include high quality dental care, reasonable prices and attractiveness of the country (Peručić, 2019). Therefore, we modified the MTEX model according to Thailand's dental tourism context and applied it to our study.

### **3. Hypotheses development**

#### **3.1. Treatment quality**

Patients need safe and effective treatments from their health care providers (Lunt et al., 2016). Treatment quality is the principal medical product performance indicator. The presence of an excellent and skillful medical team is a major indicator of treatment quality (Han & Hyun, 2015).

It is imperative to provide accurate diagnoses and effective treatments according to professional specifications (Marković et al., 2014). Improper treatments could lead to undesirable complications and treatment failures. This is a major concern for dental tourists, who have travelled a long way to get good quality care for their teeth. Besides, if patients received poor quality treatment and needed further treatment, it would be difficult for them to return to the provider. As a result, it causes additional costs for patients when complications arise due to poor quality treatments. Hence, good quality treatments are positively related to patient satisfaction (Akarslan et al., 2009; Tin-Oo et al., 2011).

*H<sub>1</sub>: Treatment quality positively influences dental tourist satisfaction.*

### **3.2. Dental service quality**

Service quality is measured as the discrepancy between expectation and perception of customers upon services received (Marković et al., 2014). Health care service quality is assessed by the presence of empathy, friendliness, politeness, competencies and communication by the health care staff (Han & Hyun, 2015). Medical tourist satisfaction depends on the quality of services and professionalism of the staff (Abd Manaf et al., 2017; Kesar & Mikulić, 2017). Patient satisfaction will be high if doctors have a professional attitude, behavior and tidiness. In contrast, patient satisfaction will be low if there are long waiting times, language barriers, or poor communication (Manaf et al., 2015; Musa et al., 2012). To summarize, service quality is assumed to have positive relationship with dental tourist satisfaction.

*H<sub>2</sub>: Dental service quality positively influences dental tourist satisfaction.*

### **3.3. Affordability of dental tourism**

Cost is one of the major push factors for medical and dental tourists from their resident countries. The study of the behavior of the UK medical tourists in Thailand suggested that patients travel to Thailand for comparatively low-cost services (Noree et al., 2014). The perception of value in the treatment received will be high if there is a significant difference in prices between the home and destination country (Manaf et al., 2015). In addition to treatment costs, the cost of travelling, accommodation and food are also important for a dental tourist (Sultana et al., 2014). It is found that affordable tourism can increase tourist satisfaction (Jaapar et al., 2017).

*H<sub>3</sub>: Affordability of dental tourism positively influences dental tourist satisfaction.*

### **3.4. Infrastructure**

Internationally accredited hospitals are the core infrastructure of the medical tourism destination country. In Asia, hospitals in Thailand have become pioneers in achieving the Joint Commission International (JCI) accreditation for patient safety and health care quality. There are a total of 37 JCI accredited hospitals in Thailand and most of them are located in Bangkok (Wong et al., 2014). In addition, tangible assets such as medical equipment and clinical materials can provide patients with a seamless experience when they arrive at the clinic or hospital in a distressed condition (Dhama et al., 2016). It was reported that hospital facilities and doctors are the two most important factors considered by patients. Patient satisfaction will be increased if the hospital provides state of the art technology, luxury waiting areas, and disabled-friendly facilities. Moreover, clinics or hospitals should have hygienic, clean and comfortable environments for both patients and their families (Musa et al., 2012). Previous research demonstrated that patients consider the cost of medical care worth paying if the clinic or hospital provides high quality facilities such as lavish amenities and hotel-style infrastructures (Han & Hyun, 2015). Therefore, it is assumed that infrastructure has positive influence on dental tourist satisfaction.



*H<sub>4</sub>: Infrastructure positively influences dental tourist satisfaction.*

### **3.5. Destination appeal**

The destination appeal or tourist attraction is important in dental tourism development (Hunjet et al., 2018). Destination appeal includes national heritage, beautiful scenic locations, modern shopping malls and interesting cultural festivals (Singh, 2013). It, in fact, influences tourists' decisions in destination selection (Thiumsak & Ruangjanases, 2016). Past research found that international tourists are satisfied with the stunning architecture and heritage in Bangkok. Tourist satisfaction is usually enhanced by positive experiences with destination appeal during their visit. This contributes to the positive feedback given to the destination and enhances word-of-mouth recommendations to others (McDowall, 2010).

*H<sub>5</sub>: Destination appeal positively influences dental tourist satisfaction.*

### **3.6. Destination culture**

Learning culture is a factor in tourism. Many countries actively develop and promote their tangible and intangible cultural assets to attract tourists. Friendly cultures have an impact on medical tourists. Major cultural differences and unfamiliar surroundings can weaken both the physical and mental condition of medical tourists; therefore, dental tourists prefer to seek culturally similar countries as destinations for their dental treatment. A travel package including health services and activities for touring, i.e. sightseeing, shopping and enjoying the destination culture, is trending in the medical tourism market. A previous study revealed that 85% of patients at Bumrungrad Hospital in Thailand enjoyed exploring the local culture since it could make patients, and those accompanying them, feel comfortable during their journey in a foreign country (Connell, 2006).

*H<sub>6</sub>: Destination culture positively influences dental tourist satisfaction.*

### **3.7. Accessibility**

Accessibility in this study is interpreted as the ease of transportation to the medical destinations (e.g., hospitals and clinics). This factor is usually overlooked in dental tourism. However, recent literature has shown that convenient travel within the destination country has a positive influence on tourist satisfaction (Robustin et al., 2018). It is almost always challenging for a tourist to find locations in a foreign country, where he/she has never visited before. Medical tourists do not want to experience difficulties in locating clinics or hospitals; their primary intention is to receive treatment. Previous research suggested that it is important to provide proper direction, maps and brochures to the medical destinations to increase patient satisfaction (Musa et al., 2012).

*H<sub>7</sub>: Accessibility positively influences dental tourist satisfaction.*

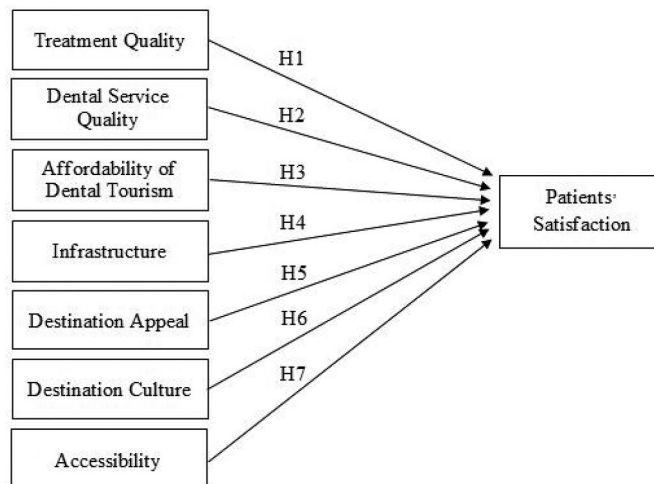
Based on the hypotheses above, this study developed the research framework as shown in Figure 1:

## **4. Methodology**

The study adopted a cross-sectional quantitative approach. The target population of the study was international patients, who travelled to Bangkok with the intention of receiving dental services and who spent at least one night at the destination. International patients, who were residing in Bangkok, were excluded in the study. The research questionnaires included three sections; the first section was related to the demographic profile; the second



**Figure 1. Research framework.**



section explored the determinants of patient satisfaction; and the last section examined patient satisfaction.

We developed a survey instrument to assess the determinants of patient satisfaction based upon the extant literature. Validated items were adapted from prior studies and revalidated for this study (e.g., Ghosh & Mandal, 2019; Musa et al., 2012). The key items were based on the existing literature in which the items and responses appear on a five-point Likert scale ranging from (1) “Strongly Disagree” to (5) “Strongly Agree” and “Highly dissatisfied” to “Highly satisfied” were used to describe the level of agreement and satisfaction. Treatment quality was measured using items adapted from (Ghosh & Mandal, 2019). Additionally, the scales for assessing dental service quality were adapted from measures outlined by (Han & Hyun, 2015; Manaf et al., 2015; Musa et al., 2012). The scales for measuring affordability of dental tourism were adapted from (Ghosh & Mandal, 2019; Manaf et al., 2015). Infrastructure was measured using items modified from (Musa et al., 2012; Ghosh & Mandal, 2019). Destination appeal items were adapted from (McDowall, 2010; Ghosh & Mandal, 2019). Destination culture items were based on, 2019. Accessibility was measured using modified items from; Musa et al., 2012; Ghosh & Mandal, 2019). Finally, we assessed patient satisfaction with existing scales from previous literature, i.e., (Ghosh & Mandal, 2019). The research project was granted an ethical approval from the Institutional Review Board, Institute for Population and Social Research (IPSR-IRB), Mahidol University with COA. No. 2020/03-121, IORG Number: IORG0002101; FWA Number: FWA00002882; IRB Number: IRB0001007.

The questionnaires were prepared in two forms; paper-based and electronic-based forms. The paper-based questionnaires were distributed to participants via administration staff at five private dental clinics and a dental hospital in the Bangkok area. To achieve more samples, the questionnaires were also prepared using Google and distributed to participants via email. The data collection used a convenience-sampling method and took approximately two months. A total of 106 questionnaires were received for data analysis.

All collected data were entered, coded, and analyzed using Microsoft Excel 2007 along with Statistical Package for Social Sciences (SPSS) version 20. The study used frequency and percentage for descriptive statistics, correlation and multiple linear regression analysis for hypotheses testing. Cronbach’s alpha value was also computed to examine the reliability of the questionnaires.

## 5. Results/findings

### 5.1. Descriptive statistics

The demographic profiles of respondents were presented in Table 1. A total of 61 males and 45 females responded to the survey. Most of their ages ranged between 51 and 60 years (31.1%), followed by 21 to 30 year olds, and 31 to 40 year olds contributing 19.8% of respective responses. Patients aged below 21 years old and aged above 70 years old showed the lowest response rate to the survey, 0.9% and 3.8% respectively. The respondents came from different countries including Australia (17.9%), Britain (15.1%), the United States (14.2%), France (10.4%), and other nations (42.4%). For the education status, the majority of the respondents were bachelor degree graduates (34.9%) and master degree graduates (32.1%).

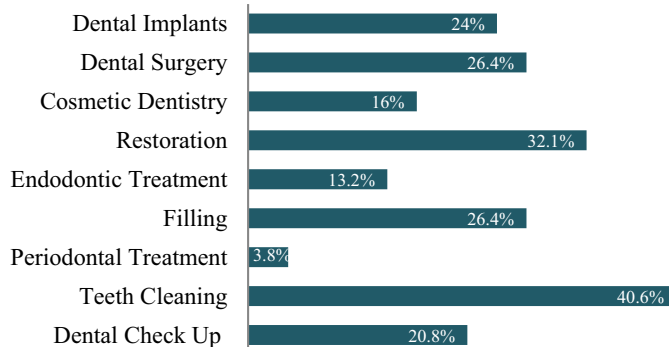
In addition to Table 1, results revealed that in terms of examining the number of visits, 70% of the respondents were first-time visitors to Bangkok for dental treatment while the other 30% had visited more than once. For sources of information about dental tourism, half of the respondents (52.8%) searched data from the Internet. About one quarter of the respondents (23.5%) received word-of-mouth recommendations from friends and relatives, who had visited Bangkok or were living in Bangkok. The other 18.9% contacted their travel agencies and the remaining 4.7% were referred by local dentists. Regarding their travel companions, 29.2% travelled alone for dental tourism, while 25.5% travelled with family/relatives, 21.7% with spouses, 19.8% with friends, and 3.8% with business associates.

Dental tourists had received several dental treatments at a time. The treatments included dental implants (24%), dental surgery (26.4%), cosmetic dentistry (veneers/whitening) (16%), restoration

**Table 1. Respondents' demographic profile (n = 106)**

Gender	N (%)	Nationality	N (%)
Male	61 (57.5)	Australian	19 (17.9)
Female	45 (42.5)	British	16 (15.1)
	<b>106 (100)</b>	American	15 (14.2)
		France	11 (10.4)
Age Group	<b>N (%)</b>	German	7 (6.6)
Below 21 years old	1 (0.9)	Canadian	7 (6.6)
21–30 years old	21 (19.8)	Swiss	6 (5.7)
31–40 years old	21 (19.8)	Brazilian	4 (3.8)
41–50 years old	13 (12.3)	Chinese	4 (3.8)
51–60 years old	33 (31.1)	New Zealander	3 (2.8)
61–70 years old	13 (12.3)	African	2 (1.9)
Above 70 years old	4 (3.8)	Italian	2 (1.9)
	<b>106 (100)</b>	Vietnamese	2 (1.9)
		Arab	1 (0.9)
Education	<b>N (%)</b>	Burmese	1 (0.9)
No Formal Education	1 (0.9)	Cambodian	1 (0.9)
High School	8 (7.5)	Czech	1 (0.9)
Certificate/Diploma	10 (9.4)	Egyptian	1 (0.9)
Bachelor Degree	37 (34.9)	Finnish	1 (0.9)
Master Degree	34 (32.1)	Singaporean	1 (0.9)
PhD	16 (15.1)	Swedish	1 (0.9)
	<b>106 (100)</b>		<b>106 (100)</b>

**Figure 2. Dental treatments received by dental tourists in Bangkok.**



**Table 3. Reliability statistics**

Factors	Cronbach's Alpha	Number of items
Treatment Quality	0.811	3
Dental Service Quality	0.814	5
Affordability of Dental Tourism	0.826	4
Infrastructure	0.828	4
Destination Appeal	0.825	3
Destination Culture	0.838	3
Accessibility	0.808	4
Patient Satisfaction	0.776	8

(crowns/bridges) (32.1%), endodontic treatment (13.2%), fillings, periodontal treatment (26.4%), teeth cleaning (40.6%), and dental checkups (20.8%). The statistical data is presented in [Figure 2](#).

## 5.2. Hypotheses testing

Before hypotheses testing was employed, all the independent and dependent variables were checked for their reliability. The test results are shown in [Table 3](#). A good reliability score is

**Table 4. Mean of patient satisfaction and destination loyalty**

Factor	Mean
<b>Patient Satisfaction</b>	
(1) Dental Treatment Quality	4.76
(2) Dental Service Quality	4.79
(3) Dental Treatment Prices	4.44
(4) Thailand's Safety and Cleanliness	4.61
(5) Beautiful Scenery of Thailand	4.54
(6) Thai Culture	4.49
(7) Transportation Services available in Thailand	4.56
(8) Your overall satisfaction with dental tourism in Bangkok	4.70
<b>Destination Loyalty</b>	
(1) My willingness to revisit Thailand for dental treatments was high.	4.37
(2) My willingness to recommend Thailand to others was high.	4.34

obtained if the alpha value is greater than 0.7. Therefore, all the variables in the study fulfilled the reliability criteria because their Cronbach's alpha value exceeded 0.7.

After testing reliability, the mean was used to measure the level of dental tourist satisfaction. The data was collected in the form of a five-point scale measurement. The mean values are shown in Table 4, and each value represented the level of patient satisfaction towards the dental tourism experience. As illustrated in Table 4, all the mean values showed above 4.00 for patient satisfaction and destination loyalty. Therefore, it can be concluded that international patients were highly satisfied with the overall dental tourism experience in Bangkok and they were willing to revisit Thailand again.

Correlation analysis was used to examine whether there were any associations among the variables. Table 5 illustrated the test result of the correlation analysis. There were statistically significant associations ( $p < 0.05$ ) between all the independent variables and patient satisfaction. Moreover, independent variables also had associations with each other, particularly the coefficient between treatment quality and dental service quality showed a high value (0.793). This can lead to multi-collinearity problems in the regression model. Therefore, we excluded the treatment quality or dental service quality factors incrementally when running the multiple linear regression analysis.

After we ran several models for multiple regression analysis by removing treatment quality factors or service quality factors, we chose the best fit model with the highest  $R^2$  value to explain the highest percentage of variation in the dependent variables. In our selected model shown in Table 6, the service quality factor was omitted. Findings showed that treatment quality, destination appeal and accessibility factors had statistically significant positive relationships with patient satisfaction. Accessibility showed a Beta coefficient of 0.689 and it had the highest impact on patient satisfaction. It was followed by treatment quality factors, whose Beta coefficient was 0.638, and destination appeal, whose Beta coefficient was 0.356. The other factors, however, had no statistically significant impact on patient satisfaction.

Based on our analysis, three hypotheses can be supported while the other hypotheses were rejected. The result of the hypotheses testing is presented in Table 7.

**Table 5. Correlations between variables**

	1	2	3	4	5	6	7
(1) Treatment Quality							
(2) Service Quality	.793*						
(3) Affordability	.468*	.331*					
(4) Infrastructure	.474*	.315*	.615*				
(5) Destination Appeal	.221	.301*	.266	.257			
(6) Culture	.157	.154	.291*	.150	.441*		
(7) Accessibility	.440*	.474*	.281*	.376*	.395*	.327*	
Patient Satisfaction	.651*	.575*	.486*	.525*	.545*	.400*	.756*

\*Sig. (2-tailed) < 0.05

**Table 6. Regression analysis**

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
<b>Constant</b>	2.268	2.862		.792	.430
<b>Treatment Quality</b>	.638	.119	.313	5.361	.000
<b>Affordability</b>	.090	.076	.076	1.187	.238
<b>Infrastructure</b>	.267	.183	.093	1.458	.148
<b>Destination Appeal</b>	.356	.089	.223	4.017	.000
<b>Destination Culture</b>	.104	.083	.069	1.257	.212
<b>Accessibility</b>	.689	.088	.451	7.807	.000

**Table 7. Hypotheses testing results**

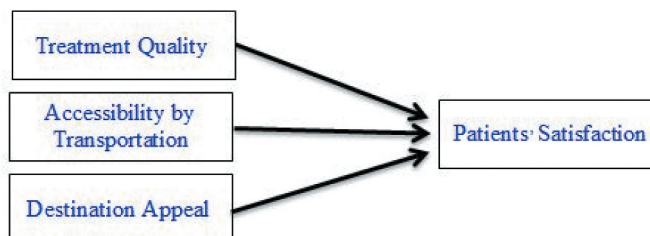
Hypothesis	Content	Result
H1	Treatment quality positively influences dental tourist satisfaction.	Accepted
H2	Dental service quality positively influences dental tourist satisfaction.	Rejected
H3	Affordability of dental tourism positively influences dental tourist satisfaction.	Rejected
H4	Infrastructure positively influences dental tourist satisfaction.	Rejected
H5	Destination appeal positively influences dental tourist satisfaction.	Accepted
H6	Destination culture positively influences dental tourist satisfaction.	Rejected
H7	Accessibility positively influences dental tourist satisfaction.	Accepted

## 6. Discussion

Patient satisfaction depends on the patient's personal evaluation of health services and providers that they experienced (Gill & White, 2009). Researchers and marketers are interested in the study of satisfaction because it can encourage customer loyalty and word-of-mouth recommendation (Hunjet et al., 2018). Basically, it is important for long-term success and sustainability of an organization. In our research, we tried to fill the knowledge gap in understanding the international patient's satisfaction with Bangkok as a dental tourist destination.

Based on our findings, most of the dental tourists who participated in our study were highly satisfied with Bangkok's dental tourism. As illustrated in Table 4, the levels of satisfaction were high in all factors; treatment quality, service quality, affordability, infrastructure, destination appeal, destination culture and accessibility. Hence, it can be assumed that international patients were satisfied with the whole experience of dental tourism in Bangkok. Moreover, it was also found that the levels of patient willingness to revisit Thailand and to recommend other people were high. This implied the outcomes of patient satisfaction related to loyalty and recommendation.

**Figure 3. Bangkok dental tourism—determinants influencing dental tourists’ satisfaction model.**



From the multiple linear regression analysis, our study identified three important factors that significantly influenced international patient satisfaction. They are accessibility factors, treatment quality factors and destination appeal factors. The highest impact to satisfaction was found to be the accessibility factor. Figure 3 presents a determinants influencing dental tourists’ satisfaction model found in our research.

Ease of accessibility to dental clinics and availability of well-organized transportation services at the destination country influenced the level of patient satisfaction significantly. (Kim, 2014) explained that inconvenient transportation systems at the destination country, time consumed to reach desired locations, and difficulty in travelling around cities caused the development of negative memorable experiences for tourists. In Thailand, the Thai language is the primary language for local people. This may be a barrier for communication between international tourists and some local Thai people. However, English is the second spoken language, and English is provided in almost all transportation signage facilitating tourists to go from one place to another. Moreover, there are several transportation modes for travelling especially in Bangkok including taxis, limousines, private vans, buses, sky train (BTS), subway (MRT), motorcycles, etc. Currently, transportation technology and platforms like Grab or Lineman play important roles in helping tourists to travel around the city. Tourists can choose to ride with Grabcar, Grabtaxi, Grabbike, Grabvan or LineTaxi. Tourists may find it easy to visit clinics and travel around. In addition, dental tourists expect easy access to dental clinics without stressful journeys to the clinics. Our finding supported previous literature that the presence of varied modes of transportation in the destination country improved the level of tourist satisfaction (Hasegawa, 2010; Robustin et al., 2018).

Undoubtedly, treatment quality has positively influenced dental tourist satisfaction. “The cure” is every patient’s goal (Goedhart et al., 1996) and the practitioners should provide high quality professional treatments. Treatment quality here means the core medical products, that is competence and skillfulness of the dentists. In the study of dental tourism by (Lunt et al., 2016), it was mentioned that dental tourists travel to international destinations to seek effective and safe treatments. If there is a lack of accountability by the practitioner, complications and treatment failure can occur. Consequently, it can cost patients more through the need to travel again or for urgent need of further care at expensive local clinics (Barrowman et al., 2010). Our study showed that levels of international patient satisfaction increased as the treatment relieved or solved their dental problems. With high-quality treatment, the cost of treatment was not a concern for patients. It was essential to deliver effective dental care within the patient’s visit to Thailand and this effectiveness will increase the satisfaction and enhance the revisit for future dental care. Since dental treatments might not finish within one visit, patients might need to come back to complete the treatment after several months. If patients satisfy with the received treatment, they are likely revisit to complete the treatment.

The third factor that had a significant positive influence on dental tourist satisfaction was destination appeal. Patients travel to Thailand not only to receive dental treatment but also to enjoy the travel experience. Despite clinical factors, the level of dental tourist satisfaction is affected by the presence of tourist attractions, interesting local festivals and modern shopping facilities in the destination country (Asgarnezhad Nouri et al., 2019; Tavitiyaman & Qu, 2013).

Thailand is a kingdom, with unique architecture, beautiful culture, ancient palaces, and delicious Thai food which tourists can enjoy exploring alone or with their travel companions. People in Thailand are also kind in nature, and tourists find travel both safe and friendly. Additionally, Bangkok is a popular shopping paradise in Asia and tourists can find a wide range of fashion products to suit all price ranges. Such tourist attractions enhance international patient satisfaction (Nguyen, 2016).

In our final model of multiple regression analysis, we excluded the dental service quality factor due to the multicollinearity effect. However, the dental service quality showed strong association with patient satisfaction in the correlation analysis as illustrated in Table 5. Therefore, we should not ignore the importance of the dental service quality factor in dental tourism contexts. Furthermore, even though the cost is stated as a major motivating force for dental tourism in the literature, we discovered that the affordability factor has no significant impact on patient satisfaction in the Thai context. This could be due to one of two reasons. First, it is interesting to note that the top seven dental tourist nationalities (accounted for 76.5%) came from more developed countries with high costs of living including Australia, the United Kingdom, the United States of America, France, Germany, Canada and Switzerland. Receiving dental treatment in Thailand would cost less than those treatments performed in their home countries (Noree et al., 2014). The second reason is that patients tend to be more concerned with the treatment quality as their main value than the cost. If patients are satisfied with the quality of treatment received, they are happy to pay for the high cost of care.

## 7. Managerial implications

Since international patients are satisfied with the overall dental tourism experience in Bangkok, clinic managers should aim to maintain their services and focus on the highlights of the study to increase the market share. As for the practical implications, the recommendations for dental clinic managers are outlined below:

Location accessibility is the most important factor for dental tourists. Hence, new clinics should open at the right location, which can be easily accessed by different modes of transportation and which is not far from desirable tourist accommodation. The facilities map should illustrate simple ways to travel to clinics via multiple routes. In this digital era, the clinic should be correctly and clearly pinpointed on Google Maps not only to guide patients to the clinic but also to prevent patients travelling to the wrong clinic. Furthermore, the maps should be prepared in multiple languages so that they can be understood by tourists and local taxi drivers.

As for quality control, it is crucial to keep up-to-date and effective treatment protocols that are not time consuming or complicated. Treatments should be able to meet patients' needs within their stay in the destination country.

We also found that dental tourist satisfaction was significantly improved by the destination attractions. Therefore, the providers should offer all-inclusive packages for the whole trip. The providers can also form partnerships with tourism agencies so that customers can seamlessly experience both treatments and tours. The Internet is a major source of information for dental tourists. Therefore, creating a website that can attract potential customers is a good marketing strategy. A clinical website should be user-friendly and translated in multiple languages. It should provide detailed information and user reviews about the services and products available. This can increase the awareness and credibility of the clinics whilst increasing the confidence of new customers.

To conclude, the contributions of this study may help clinical managers to plan and implement marketing and operational strategies that align with the market needs.



## 8. Limitations and study forward

This research has certain limitations which can suggest potential fruitful avenues for future research. Firstly, the study may have a limited generalisability since the samples were drawn from a limited number of dental clinics in downtown area in Bangkok clinics in downtown area because tourists were concentrated in the area. The findings were based only on 106 participants. Hence, future research with a bigger sample and random sampling method is recommended. Secondly, the research framework and items for questionnaires were generated from previous literature. Future research may conduct qualitative research or exploratory research to gain insights into the key factors that affect the satisfaction of the dental tourists in a given country (e.g., Thailand) or region. Then, the knowledge from such studies would enable a better survey questionnaire and provide a framework that has greater relevance to those dental tourism contexts.

Thirdly, this research focused on the relationship between determinants and patient satisfaction. It is recommended to examine the relationship between satisfaction and loyalty in detail because repeated use of services is an important issue for dental tourism providers and for academic researchers. Furthermore, this study measured the dental tourism industry from the patient's perspective. Future work could perform strategic analysis by finding strengths, weaknesses, opportunities and threats in delivering dental care from the dental provider's perspective in order to provide more balanced views from the perspective of both customers and service providers.

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### References

- Abd Manaf, N. H., Maulan, S., Hussin, H., Jahn Kassim, P. N., & Alavi, R. (2017). Service quality, value, satisfaction and future intention in medical tourism. *Journal of Tourism, Hospitality & Culinary Arts*, 9(3), 1–12. Retrieved from <https://core.ac.uk/download/pdf/154828479.pdf>
- Adams, K., Snyder, J., & Crooks, V. A. (2017). The perfect storm: What's pushing Canadians abroad for dental care? *J. Can. Dent. Assoc.*, 83(10), 1–6. Retrieved from <https://jcda.ca/sites/default/files/h10.pdf>
- Akarslan, Z. Z., Sadik, B., Erten, H., & Karabulut, E. (2009). Dental esthetic satisfaction, received and desired dental treatments for improvement of esthetics. *Indian Journal of Dental Research*, 20(2), 195. <https://doi.org/10.4103/0970-9290.52902>
- Asgarnezhad Nouri, B., Nemati, V., & Abbasgholizadeh, N. (2019). The effect of perceived value on the destination image, satisfaction and loyalty of medical tourists: A case study in Ardabil. *Journal of Health*, 10(1), 34–49. <https://doi.org/10.29252/j.health.10.1.34>
- Barrowman, R. A., Grubor, D., & Chandu, A. (2010). Dental implant tourism. *Australian Dental Journal*, 55(4), 441–445. <https://doi.org/10.1111/j.1834-7819.2010.01267.x>
- Chongthanavanit, P., & Kheokao, J. (2018). Factors influencing the use of dental services by foreign tourists in Thailand. *Asian Journal for Public Opinion Research*, 5(2), 63–83. doi:10.15206/AJPOR.2018.5.2.63
- Connell, J. (2006). Medical tourism: Sea, sun, sand and ... surgery. *Tourism Management*, 27(6), 1093–1100. <https://doi.org/10.1016/j.tourman.2005.11.005>
- Connell, J. (2013). Contemporary medical tourism: Conceptualisation, culture and commodification. *Tourism Management*, 34, 1–13. <https://doi.org/10.1016/j.tourman.2012.05.009>
- Dhama, K., Patthi, B., Singla, A., Gupta, R., Niraj, L. K., Ali, I., ... Prasad, M. (2016). Global tourist guide to oral care-A systematic review. *Journal of Clinical and Diagnostic Research: JCDR*, 10(9), ZE01. doi: 10.7860/JCDR/2016/19438.8408
- Fedorov, G., Tata, S., Raveslooy, B., Dhakal, G., Kanosue, Y., & Roncarati, M. (2009). *Medical travel in Asia and the Pacific: Challenges and opportunities*. UN ESCAP.
- Ghosh, T., & Mandal, S. (2019). Medical tourism experience: Conceptualization, scale development, and validation. *Journal of Travel Research*, 58(8), 1288–1301. <https://doi.org/10.1177/0047287518813469>
- Gill, L., & White, L. (2009). A critical review of patient satisfaction. *Leadership in Health Services*, 22(1), 8–19. <https://doi.org/10.1108/17511870910927994>
- Goedhart, H., Eijkman, M., & Ter Horst, G. (1996). Quality of dental care: The view of regular attenders. *Community Dentistry and Oral Epidemiology*, 24(1), 28–31. <https://doi.org/10.1111/j.1600-0528.1996.tb00808.x>
- Han, H., & Hyun, S. S. (2015). Customer retention in the medical tourism industry: Impact of quality, satisfaction, trust, and price reasonableness. *Tourism Management*, 46, 20–29. <https://doi.org/10.1016/j.tourman.2014.06.003>
- Hasegawa, H. (2010). Analyzing tourists' satisfaction: A multivariate ordered probit approach. *Tourism Management*, 31(1), 86–97. <https://doi.org/10.1016/j.tourman.2009.01.008>
- Horowitz, M. D., Rosensweig, J. A., & Jones, C. A. (2007). Medical tourism: Globalization of the healthcare marketplace. *Medscape General Medicine*, 9(4), 33.

- Retrieved from <https://www.ncbi.nlm.nih.gov/ejournal.mahidol.ac.th/pmc/articles/PMC2234298/>
- Hunjet, A., Kustelega, L., & Kozina, G. (2018). Development of dental tourism in Croatia. *Economic and Social Development: Book of Proceedings*, 307–325.
- Jaapar, M., Musa, G., Moghaviemi, S., & Saub, R. (2017). Dental tourism: Examining tourist profiles, motivation and satisfaction. *Tourism Management*, 61, 538–552. <https://doi.org/10.1016/j.tourman.2017.02.023>
- Kesar, O., & Mikulić, J. (2017). Medical tourist satisfaction and dissatisfaction with dental care services: An exploratory case study. *Paper presented at the 4th International Scientific Conference ToSEE-Tourism in Southern and Eastern Europe, Opatija, Croatia*.
- Kim, J.-H. (2014). The antecedents of memorable tourism experiences: The development of a scale to measure the destination attributes associated with memorable experiences. *Tourism Management*, 44, 34–45. <https://doi.org/10.1016/j.tourman.2014.02.007>
- Kovács, E., & Szocska, G. (2013). 'Vacation for your teeth'—dental tourists in Hungary from the perspective of Hungarian dentists. *British Dental Journal*, 215(8), 415–418. <https://doi.org/10.1038/sj.bdj.2013.995>
- KPMG. (2018). Medical tourism industry focus. KPMG, 1–4. <https://assets.kpmg/content/dam/kpmg/th/pdf/2018/03/th-medical-tourism-industry-focus-secured.pdf>
- Loubeau, P. R. (2009). The globalization of dental care: An opportunity for Croatian tourism. *Turizam: Medunarodni Znanstveno-strucni Casopis*, 57(2), 193–199. Retrieved from <https://hrcak.srce.hr/52951>
- Lunt, N., & Carrera, P. (2010). Medical tourism: Assessing the evidence on treatment abroad. *Maturitas*, 66(1), 27–32. <https://doi.org/10.1016/j.maturitas.2010.01.017>
- Lunt, N., Horsfall, D., & Hanefeld, J. (2016). Medical tourism: A snapshot of evidence on treatment abroad. *Maturitas*, 88, 37–44. <https://doi.org/10.1016/j.maturitas.2016.03.001>
- Manaf, N. H. A., Hussin, H., Kassim, P. N. J., Alavi, R., & Dahari, Z. (2015). Medical tourism service quality: Finally some empirical findings. *Total Quality Management & Business Excellence*, 26(9–10), 1017–1028. <https://doi.org/10.1080/14783363.2015.1068597>
- Marković, S., Lončarić, D., & Lončarić, D. (2014). Service quality and customer satisfaction in the health care industry—towards health tourism market. *Tourism and Hospitality Management*, 20(2), 155–170. Retrieved from <https://hrcak.srce.hr/130802>
- McDowall, S. (2010). International tourist satisfaction and destination loyalty: Bangkok, Thailand. *Asia Pacific Journal of Tourism Research*, 15(1), 21–42. <https://doi.org/10.1080/10941660903510040>
- Musa, G., Doshi, D. R., Wong, K. M., & Thirumoorthy, T. (2012). How satisfied are inbound medical tourists in Malaysia? A study on private hospitals in Kuala Lumpur. *Journal of Travel & Tourism Marketing*, 29(7), 629–646. <https://doi.org/10.1080/10548408.2012.720150>
- Nguyen, T. (2016). *Medical tourism: Studying the impact of motivational factors, destination image on perceived quality and overall satisfaction using SEM analysis*. California State Polytechnic University.
- Noree, T., Hanefeld, J., & Smith, R. (2014). UK medical tourists in Thailand: They are not who you think they are. *Globalization and Health*, 10(1), 29. <https://doi.org/10.1186/1744-8603-10-29>
- Österle, A., Balazs, P., & Delgado, J. (2009). Travelling for teeth: Characteristics and perspectives of dental care tourism in Hungary. *British Dental Journal*, 206(8), 425–428. <https://doi.org/10.1038/sj.bdj.2009.308>
- Pascoe, G. C. (1983). Patient satisfaction in primary health care: A literature review and analysis. *Evaluation and Program Planning*, 6(3–4), 185–210. [https://doi.org/10.1016/0149-7189\(83\)90002-2](https://doi.org/10.1016/0149-7189(83)90002-2)
- Peručić, D. (2019). Limitations and development opportunities of dental tourism: The case of Croatia. *Ekonomski Vjesnik*, 32(1), 93–104. Retrieved from <https://search-proquest-com.ejournal.mahidol.ac.th/docview/2251628654?accountid=46528>
- Rerkrujipimol, J., & Assenov, I. (2011). Marketing strategies for promoting medical tourism in Thailand. *Journal of Tourism, Hospitality & Culinary Arts*, 3(2), 95–105. Retrieved from <https://fhtn.uitm.edu.my/images/jthca/Vol3Issue2/chap-8.pdf>
- Robustin, T. P., Andi, R., Suroso, I., & Yulisetiari, D. (2018). The contribution of tourist attraction, accessibility and amenities in creating tourist loyalty in Indonesia. *J. Bus. Econ. Review*, 3(4), 92–98. Retrieved from <https://ssrn.com/abstract=3307340>
- Singh, N. (2013). Exploring the factors influencing the travel motivations of US medical tourists. *Current Issues in Tourism*, 16(5), 436–454. <https://doi.org/10.1080/13683500.2012.695341>
- Stanciu, A. C., Condrea, E., & Constandache, M. (2014). Aspects regarding the development of the dental tourism in Romania. *SEA: Practical Application of Science*, 2(1), 10. Retrieved from [https://seaopenresearch.eu/Journals/articles/SPAS\\_3\\_70.pdf](https://seaopenresearch.eu/Journals/articles/SPAS_3_70.pdf)
- Sultana, S., Haque, A., Momen, A., & Yasmin, F. (2014). Factors affecting the attractiveness of medical tourism destination: An empirical study on India—review article. *Iranian Journal of Public Health*, 43(7), 867. Retrieved from <https://www.ncbi.nlm.nih.gov/ejournal.mahidol.ac.th/pmc/articles/PMC4401052/>
- Sutherland, A. (2017). The cost of medical treatment in Thailand. <https://thaixpathealth.com/the-cost-of-medical-treatment-in-thailand/>
- Tavitiyaman, P., & Qu, H. (2013). Destination image and behavior intention of travelers to Thailand: The moderating effect of perceived risk. *Journal of Travel & Tourism Marketing*, 30(3), 169–185. <https://doi.org/10.1080/10548408.2013.774911>
- Thiumsak, T., & Ruangkanjanases, A. (2016). Factors influencing international visitors to revisit Bangkok, Thailand. *Journal of Economics, Business and Management*, 4(3), 220–230. <https://doi.org/10.7763/JOBEM.2016.V4.94>
- Tin-Oo, M. M., Saddki, N., & Hassan, N. (2011). Factors influencing patient satisfaction with dental appearance and treatments they desire to improve aesthetics. *BMC Oral Health*, 11(1), 6. <https://doi.org/10.1186/1472-6831-11-6>
- Turner, L. (2008). Cross-border dental care: dental tourism and patient mobility. *British Dental Journal*, 204(10), 553–554. <https://doi.org/10.1038/sj.bdj.2008.403>
- Veerasoontorn, R., & Beise-Zee, R. (2010). International hospital outshopping: A staged model of push and pull factors. *International Journal of Pharmaceutical and Healthcare Marketing*, 4(3), 247–264. <https://doi.org/10.1108/17506121011076174>
- Ware Jr, J. E., Snyder, M. K., Wright, W. R., & Davies, A. R. (1983). Defining and measuring patient satisfaction with medical care. *Evaluation and Program Planning*, 6(3–4), 247–263. [https://doi.org/10.1016/0149-7189\(83\)90005-8](https://doi.org/10.1016/0149-7189(83)90005-8)
- Wong, K. M., Velasamy, P., & Arshad, T. N. T. (2014). Medical tourism destination SWOT analysis: A case study of Malaysia, Thailand, Singapore and India. *Paper presented at the SHS Web of Conferences, Kola Kinabalu, Malaysia*.
- Zoltan, J., & Maggi, R. (2010). What is tourism in dental tourism. *Paper presented at the TTRA Europe Conference Proceedings, Lugano, Switzerland*.



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