DETERMINANTS OF INTERNAIONTAL PATIENTS' SATISFACTION WITH DENTAL TOURISM IN BANGKOK
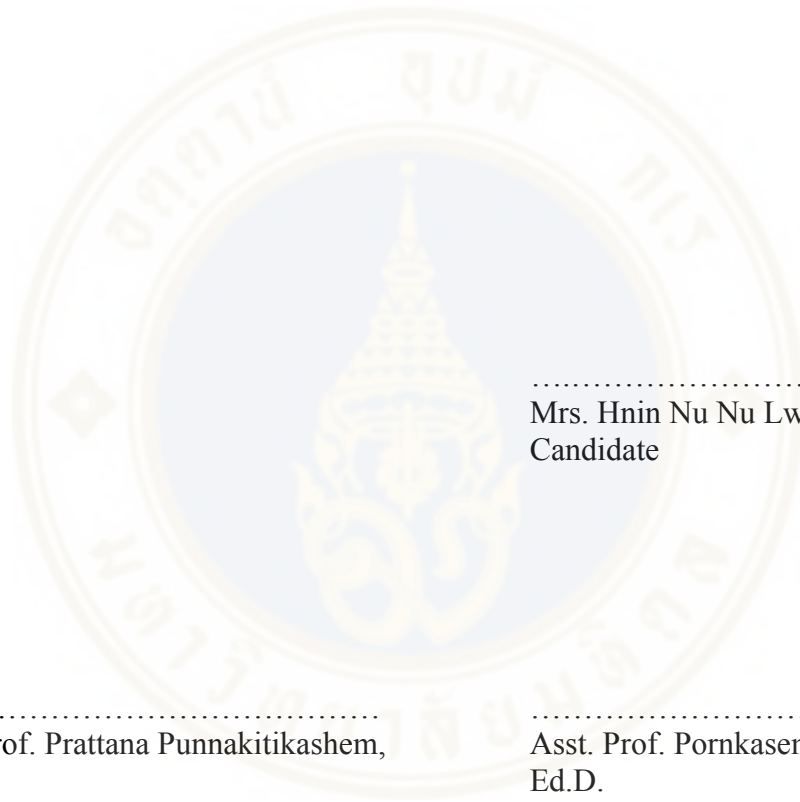
HNIN NU NU LWIN

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....
Mrs. Hnin Nu Nu Lwin
Candidate

....
Asst. Prof. Prattana Punnakitikashem,
Ph.D.
Advisor

....
Asst. Prof. Pornkasem Kantamara,
Ed.D.
Chairperson

....
Asst. Prof. Duangporn Arbhasil,
Ph.D.
Dean
College of Management
Mahidol University

....
Asst. Prof. Pard Teekasap,
Ph.D.
Committee Member

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DETERMINANTS OF INTERNATIONAL PATIENTS' SATISFACTION WITH DENTAL TOURISM IN BANGKOK

HNIN NU NU LWIN 6149201

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THEMATIC PAPER ADVISORY COMMITTEE: ASST. PROF. PRATTANA PUNNAKITIKASHEM, Ph.D., ASST. PROF. PORNKASEM KANTAMARA, Ed.D., ASST. PROF. PARD TEEKASAP, Ph.D.

ABSTRACT

Medical tourism is a developing market in the tourism business as there is a rise in number of people looking overseas for health care. Among the medical tourism services, dental tourism is one of the major subgroups and interest in this subject is still on the rise. While Asian countries are the popular destinations for dental tourists with the availability of affordable dental care and high quality services, Thailand also has a strong growth potential in dental tourism market. The objectives of this study is to analyze the level of international patients' satisfaction with dental tourism in Bangkok and to identify the determinants influencing international patients' satisfaction with dental tourism in Bangkok. For the purpose of this research, the scope includes international tourists visiting private dental clinics or hospitals located in Bangkok.

Quantitative research design was used in this study. The data was collected using paper-based and electronic-based questionnaires with random sampling method, distributed to dental tourists through customer service staffs in private dental clinics and hospitals in Bangkok. A total of 106 questionnaires were responded and all samples were eligible for analysis. Mean and multiple regressions were applied to analyze the data.

The research revealed that international patients are highly satisfied with dental tourism in Bangkok. Besides, the findings from the multiple linear regressions analysis showed that treatment quality, accessibility to clinic by transportation and destination appeal had significant and positive influence on patients' satisfaction.

This study has contributed to the body of knowledge to dental clinics' managers by providing the detail understanding of the determinants and relationships that drive the dental tourists' satisfaction in Bangkok.

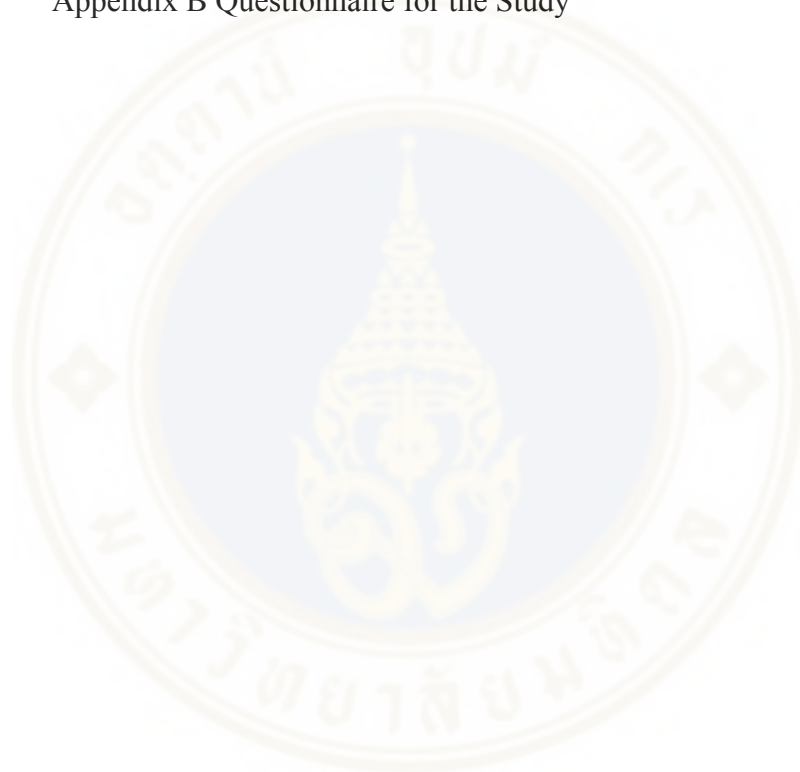KEY WORDS: Dental Tourism/ Dental Tourists/ Patients' Satisfaction/ Bangkok

72 pages

CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I
INTRODUCTION

1.1 Research Background

There is a developing market in tourism business namely "medical tourism" and many people around the world are looking overseas for medical treatment. Medical tourism is a particular type of movement that people travel across borders to another country with the purpose of receiving medical care (Lunt, Horsfall, & Hanefeld, 2016). In the old days, people sought the medical care in the United States or in the Europe, which had the advanced health care system in the world. Nowadays, the travelling trend can be in both ways that is more and more people from high developed countries travel to developing countries to achieve good health care quality with reasonable charges and shorter waiting time (Connell, 2013).

Though there are several factors influencing tourists' motivation to seek health care abroad, the main reason is the skyrocketing rise in the costs of health care in rich would countries. People, who cannot afford these expensive medical charges, look for affordable services in neighborhood countries or overseas. That primary reason has driven the medical tourism market to a dramatic growth in recent year. Relatively cheaper international flight ticket and favorable money exchange rates have also facilitated this growth. Moreover, the rise of the Internet, the emergence of health care facilitators, and the rapidly upgrading medical care system in some destination countries stimulate the desire of people looking for treatments abroad (Connell, 2013).

The economists expected the market for medical tourism to grow nearly triple from US$ 61 billion in 2016 to US$165 billion by the end of 2023 at a compounded annual growth rate of 15 percent (Ghosh & Mandal, 2019). In the healthcare marketplace, there has been a growing competition for patients by offering a wide variety of health care services. These services involve treatments and surgery for dental, cosmetic, orthopedic, cardiac, fertility, bariatric, and transplantation of organ and tissue (Lunt & Carrera, 2010). Not only providing a variety of medical

services, many of these medical tourism destinations also improve their healthcare infrastructures with modern healthcare facilities and appealing accommodations to gain the market share. Besides, many physicians in these countries gained their postgraduate training and/or professional working experience in industrialized nations (Horowitz, Rosensweig, & Jones, 2007).

Among the medical tourism destinations worldwide, Asian countries have attained a remarkable position in the medical tourism market because of their lower prices compared to other destinations while delivering the high quality medical care services (Zarei, Feiz, Maleki Minbashrazgah, & Maleki, 2018). Thailand, Singapore and India are Asia's top three destinations for medical tourism. They have upgraded their healthcare infrastructures to meet the high demand of international patients for first-class facilities and accredited medical care. In 2008, the combination of these three countries comprised about 90% of the Asia's medical tourism market share (NaRanong & NaRanong, 2011).

Table 1.1 Top 15 origins of medical tourists attending five hospitals, Thailand, 2010 (Noree, Hanefeld, & Smith, 2016)

Rank	Origin	No. (%)		Mean no. of visits per medical tourist
		Medical tourists ($n = 104\,830$)	Visits ($n = 324\,906$)	
1	United Arab Emirates	21 568 (20.57)	63 457 (19.53)	2.94
2	Bangladesh	8443 (8.05)	26 338 (8.11)	3.12
3	United States	7855 (7.49)	24 262 (7.47)	3.09
4	Myanmar	7568 (7.22)	32 940 (10.14)	4.35
5	Oman	7096 (6.77)	21 699 (6.68)	3.06
6	Qatar	5212 (4.97)	17 784 (5.47)	3.41
7	United Kingdom	3935 (3.75)	10 779 (3.32)	2.74
8	African countries other than South Africa[a]	3857 (3.68)	17 491 (5.38)	4.53
9	Cambodia	3837 (3.66)	10 919 (3.36)	2.85
10	Australia	3360 (3.21)	10 136 (3.12)	3.02
11	Kuwait	3159 (3.01)	11 330 (3.49)	3.59
12	Japan	1995 (1.90)	4681 (1.44)	2.35
13	France	1742 (1.66)	4275 (1.32)	2.45
14	Germany	1545 (1.47)	3780 (1.16)	2.45
15	Canada	1474 (1.41)	4115 (1.27)	2.79

Being one of the leading key players in medical tourism, Thailand provided international medical tourism services to million of patients. In 2007, there was approximately 1.4 million foreign patients received health care in Thailand. These patients include medical tourists who travel with the main purpose of receiving healthcare, general tourists who travel for vacation and receive treatments during their stay in Thailand and international residents who are living or working in Thailand (NaRanong & NaRanong, 2011). The top fifteen origins of medical tourists travelling to Thailand are the United Arab Emirates, Bangladesh, USA, Myanmar, Oman, Qatar, United Kingdom, African countries, Cambodia, Australia, Kuwait, Japan, France, Germany, and Canada (Noree et al., 2016). Medical tourists seek different types of treatments in Thailand including dental treatment, cardiac surgery, transplants, and gender reassignment (Connell, 2013).

The Thai Government has set the goal to make Thailand a global center for medical tourism through a Centre of Excellence Health Care of Asia initiative since 2003. The revenue from medical tourism is kept growing. In 2006, the Thai Ministry of Commerce estimated that the revenue of US$ 1.1 billion was gained from medical tourists (approximately 9% of total tourism revenue) in Thailand. In 2008, Thailand's medical tourism generated US$ 1.9-2.1 billion of revenue. This amounted to 0.4% of Thailand's GDP (NaRanong & NaRanong, 2011).

Dental tourism is one of the major subsets of medical tourism, in which people are travelling across the border with the intention to obtain dental treatment with or without leisure activities in destination country (Jaapar, Musa, Moghavvemi, & Saub, 2017). In most of the developed countries, dental treatments are expensive and insurances usually do not cover private dental care. Unaffordable dental care along with the prolong waiting time at local private dental facilities can be the major drivers for patients turning to seek treatment abroad (Turner, 2008). People from developed countries such as the United State, the Europe and Australia are travelling to neighborhood countries or far nations for the purpose of seeking affordable, speedy and convenience dental treatment in combination with some leisure activities or visiting family (Jaapar et al., 2017; Kovács & Szocska, 2013; Österle, Balazs, & Delgado, 2009).

Many medical tourism destinations also offer dental treatments, but there

are some countries, which specialize in this particular branch. Mexico is a popular dental tourism destination with high standards of care and cleanliness, low and affordable prices. Besides, its location is close to the United States, where many dental tourists are coming from. The next well-known destinations are Hungary and India. Hungary has more European patients while India cares for the Asian patients (Dhama et al., 2016; Peručić, 2019; STANCiU, CoNDREA, & Constandache, 2014). Research found that India's dental tourism market grows approximately 30% annually since they are intensely marketing in all-inclusive package tours including treatments and supporting services (Jurišić & Cegur Radović, 2017). The other popular dental tourism destinations are: Thailand and Philippines in Asia, and Turkey, Czech Republic and Poland in Europe (Dhama et al., 2016; Jaapar et al., 2017; Österle et al., 2009).

The nature of the dental care is different from other health care services. It is usually less urgency dominated and urgent treatment need for dental illness mostly does not cause dramatic health complications and consequences. Some patients receive preventive or palliative services and are informed about required curative treatment in the near future. Therefore, dental patients usually have the time to find and assess relevant information about their problems and dental providers. The consequence of this search for treatment alternatives could lead to dental tourism (Österle et al., 2009).

Thailand has a strong growth potential in dental tourism market. Thailand Dental Council stated that dentistry in Thailand provides outstanding services in the health tourism industry. Dental care is ranked as the third most utilization service by international patients, accounting for 11% of health tourism industry of Thailand (13,382 million baht or US$426 million) (Chongthanavanit & Kheokao). International patients are looking for dental services such as dental checkup, full mouth rehabilitation, new teeth replacement and cosmetic dentistry. Very high specializations and world-class experienced Thailand dentists complement price attractiveness of dental tourism. Thailand has a great potential and competitive advantage in delivering dental care ranging from the quality of the dentist to the quality of service that meets the international standard (Chongthanavanit & Kheokao, 2018).

1.2 Problem Statement

Among the medical tourism services, dental tourism is one of the major subgroups and there is a rise in the interest in this subject. Asian countries are the popular destinations for dental tourists with the availability of affordable dental care with high quality services. While Thailand is aiming to be a top medical hub, dental tourism sector cannot be neglected. It has a strong growth potential with generating significant revenue in Thailand. In order to be a sustainable dental tourism hub, it is important to provide services that fulfill customer satisfaction. Nevertheless, there has been a limited research works in the literature related to the determinants of patients' satisfaction and their expectation with dental tourism in Thailand.

1.3 Research Questions

1. What is the level of international patients' satisfaction with dental tourism in Bangkok?

2. What are the determinants influencing international patients' satisfaction with dental tourism in Bangkok?

1.4 Research Objectives

1. To analyze the level of international patients' satisfaction with dental tourism in Bangkok.

2. To identify the determinants influencing international patients' satisfaction with dental tourism in Bangkok.

1.5 Scope of the Study

The target population of this research was international tourists visiting private dental clinics or hospitals located in Bangkok, the capital of Thailand. This

study was focusing on the key determinants on their satisfaction with dental tourism, using the quantitative method.

1.6 Expected Benefits

A greater understanding of patients in the area of dental tourism context is required with the development in medical tourism industry. This study will give the information for the managers regarding the international customers' expectation and perception, which will be useful for the improvement of dental clinic management system in Bangkok, Thailand. Moreover, it will provide the data about the level of patients' satisfaction with Bangkok dental tourism. Dental clinic managers can thereafter consider whether to maintain or to adjust the current services so as to increase their international patients' satisfaction. Additionally, understanding the determinants that influence patients' satisfaction is essential not only for the success of the clinic but also for the long-term sustainability in the market. Furthermore, information from this research will assist managers in planning and decision making for appropriate operation and marketing strategies.

1.7 Definitions

Medical tourism: The practice of traveling to another country with the intention to obtain medical care such as medical checkups, elective surgery, cosmetic treatment, dental treatment, reproductive treatment, organ transplantation, etc. (Smith R, 2011).

Dental tourism: The American Dental Association (da Silva Freitas et al.) defined dental tourism as the act of travelling from resident country to another country with the purpose of obtaining dental treatment.

Customer satisfaction: A measure of the difference between customers' expectations before purchasing a service/product and their perceptions of this service/product after consumption (Oliver 1980).

Patient satisfaction: A healthcare recipient's reaction to salient aspects of the context, process and results of his or her service experience (Pascoe).

CHAPTER II
LITERATURE REVIEW

This chapter explores the general information about dental tourism and patients' satisfaction. Besides, the determinants that influence the dental tourists' satisfaction are explored from previous literatures and articles, and the research hypotheses are drawn based upon these studies. Then, the last part of this chapter presents the conceptual framework of the research.

2.1 Dental Tourism

Nowadays, many people travel to another country for their dental health care and the term "dental tourism" is developed. It is one of the major subgroups under medical tourism sector (Hunjet, Kustelega, & Kozina, 2018; Kovács & Szocska, 2013; Zoltan & Maggi, 2010). In European countries, dental tourism is also known as dental vacations or dental holidays since the purpose of travelling may combine with touring at the destination. A dental tourist is a person, who leaves the country of residence and travels abroad with the expectation to maintain, improve or restore the dental health by staying at least one night at the destination region (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 dental treatment and vacation. The second type is known as a migrant dental tourist, who returns to their native country for a holiday or for a visit to relatives and then access dental treatment during their visit (Peručić, 2019).

The dental tourism market is the biggest segment in the medical tourism trend and it is also developing worldwide (Peručić, 2019). Similar to medical tourism, the primary concern for dental patients is the unaffordable rising costs of dental treatment in local country. In addition, the high cost of dental care potentially limits the amount of care actually covered by insurance. Therefore, most of the dental

tourists are the ones living in a developed country and seeking affordable dental care in developing countries (Kesar, O., & Mikulic, J. 2017). If there is a significant difference in price between resident country and foreign country for the same or similar perceived quality level of dental care, patients might seek services abroad (Adams, Snyder, & Crooks, 2017; Österle et al., 2009).

Europeans and Americans travel to destination countries that offer good quality dental treatment with timely and affordable means. Such dental treatments include routine dental care, cosmetic dentistry, dental restorations and dental implants. Some types of treatments such as dental implants are often perceived as very expensive in some countries. By traveling to destination countries, patients receive this kind of care with more affordable cost. Besides, countries offering cosmetic dental treatments with short waiting time can be a pushing factor for people who want to have a beautiful smile in a blink (Kovács & Szocska, 2013).

The travel motivation of patients can also be facilitated by lack of available service and dissatisfaction with dental treatment received at home country. In addition, it is also influenced by the low-cost international flight tickets and the widely use of Internet communication that connects potential customers and dental care providers (Hunjet et al., 2018; Jaapar et al., 2017; Peručić, 2019). Moreover, the advancement in technology, availability of better quality dental materials, professionally trained dental specialists and the attractiveness of tourism destination have significant influence on dental tourists' decision in choosing their providers.

The nature of dental disease is different from other health care problems. Most of the dental diseases do not require an immediate attention and intervention by a dentist. Untreated dental illness does not usually lead to considerable health consequences. Thus, most of the patients receive emergency dental care at home countries to relieve the symptom, and then look for affordable curative treatments abroad. As a consequence, a birth of dental tourism is happened (Österle et al., 2009).

There are two categories in dental treatments; general dental care and specialized dental care. General dental treatments are usually performed by general dental practitioners, and include routine consultation, scaling, fillings, and tooth whitening. In contrast, specialized dental treatments are performed by dental specialists, and consist of complex restorative treatments such as crown/veneer/bridge,

root canal treatment, dental surgery and dental implants. Dental tourists look for both type of services (Jaapar et al., 2017; Österle et al., 2009).

On the other hand, dental tourists are still facing with some negative barriers in consuming services at foreign countries. These negative barriers include low quality dental services provided by the dentists in some countries, lack of appropriate professional training, and lack of sterilization and infection control standard (Dhama et al., 2016). Such poor quality treatments can lead to complications when patients back to home country, and costlier for dental tourists due to the need of expensive re-treatments (Lovelock, Lovelock, & Lyons, 2018).

2.2 Dental Tourism in Thailand

Thailand is well known as a tourism-oriented country in Southeast Asia. It has excellent dental care services and has a great potential for further development of dental tourism industry. The country is ranked as the third most preferred destination for medical tourism in the world due to its low-cost quality care. Hence, it also has a significant competitive advantage for dental services, which can compete with developed countries. Apart from the affordable price, the country also offers state-of-the-art medical technology, better efficiency and excellent service quality care (Chongthanavanit & Kheokao, 2018; Veerasoontorn & Beise-Zee, 2010).

Among the health tourism services offered by Thailand, dental care is ranked as the third most utilization service and it accounts for 11% of the Thailand's health tourism market (13,382 million baht or $426 million US). Additionally, there are many exotic tourist spots in Thailand which can promote the country as a tourist destination (Rerkrujipimol & Assenov, 2011). Thai Health Ministry has set the goal to reach the title of a main destination for dental tourism. According to the government, about 15% of journeys for dental treatments in the world are in Thailand, which means 1.2 million tourists each year (STANCiU et al., 2014).

Dental tourists come to Thailand mainly from industrialized countries such as Australia and European countries. The majority of international clinics in Thailand offering dental care are located in Bangkok, Phuket, Pattaya and Chiang Mai. Most commonly consumed dental services include dental checkup, tooth cleaning, tooth

whitening, root canal treatment, smile enhancement, orthodontist treatment and tooth replacement (Chongthanavanit & Kheokao, 2018).

However, only a few researches have been carried out so far in the context of dental tourism in Thailand.

2.3 Patient Satisfaction with Medical Tourism

Satisfaction has long been regarded as one of the key concepts in explaining customer post-purchase behavior. With the rapid enlargement of medical tourism industry and the rise in market entries globally, it becomes increasingly important for the stakeholders to explore and evaluate overall experience and satisfaction of their medical tourists to gain a greater market share.

Patient satisfaction reflects a healthcare recipient's perception to important aspects of the context, process and results of his or her service experience (Pascoe, 1983). Ware et at. (1983) mentioned that satisfaction is the patient's evaluation to the health-care services as well as to the providers from their own subjective point of view (Ware Jr, Snyder, Wright, & Davies, 1983). Thus, patient satisfaction could link with his or her personal profile and determinant. Obtaining a high level of satisfaction is crucial as it leads to customer loyalty and generates a considerable positive word-of-mouth recommendation to other peoples (Hunjet et al., 2018).

Numerous theories have been developed and used to analyze patients' satisfaction. Most of the studies used SERVQUAL model (Parasuraman, Berry, & Zeithaml, 1991) and SERVPERF (Cronin Jr & Taylor, 1994). The SERVQUAL model uses five dimensions: tangibles, reliability, responsiveness, assurance, and empathy to measure the difference between customers' expectation and perception of services quality received. The SERVPERF model omits expectation in measurement of service quality since it is difficult to get the valid sample of both expectation and performance.

Regarding dental tourism industry, it is important to consider both dental care and tourism services. Since the treatment and recovery time is usually fast with dental treatments, dental tourists have time and energy for a foreign vacation (Loubeau, 2009). According to literature, the competitive advantage of the dental

tourism destinations include high quality of dental care, reasonable prices and attractiveness of the country (Peručić, 2019).

Therefore, the present study will use "medical tourism experience" (MTEX) model, which measures patient experience on both medical aspect and tourism aspect to explore satisfaction with their tourism.

2.3.1 Medical Tourism Experience (MTEX) Model

The medical tourism experience (MTEX) model was developed and tested for reliability and validity by Ghosh and Mandal et. al in 2019, which is the latest concept to measure patient experience. The model measures patient experience in both medical services aspect and destination aspect. The MTEX model includes 43 items assessing seven dimensions that are related to medical tourism. These dimensions are: treatment quality, medical service quality, medical tourism expenses, medical tourism infrastructure, destination appeal, destination culture, and communication convenience. Then, MTEX is considered to have positive affect on medical tourist satisfaction and medical destination loyalty (Ghosh & Mandal, 2019).
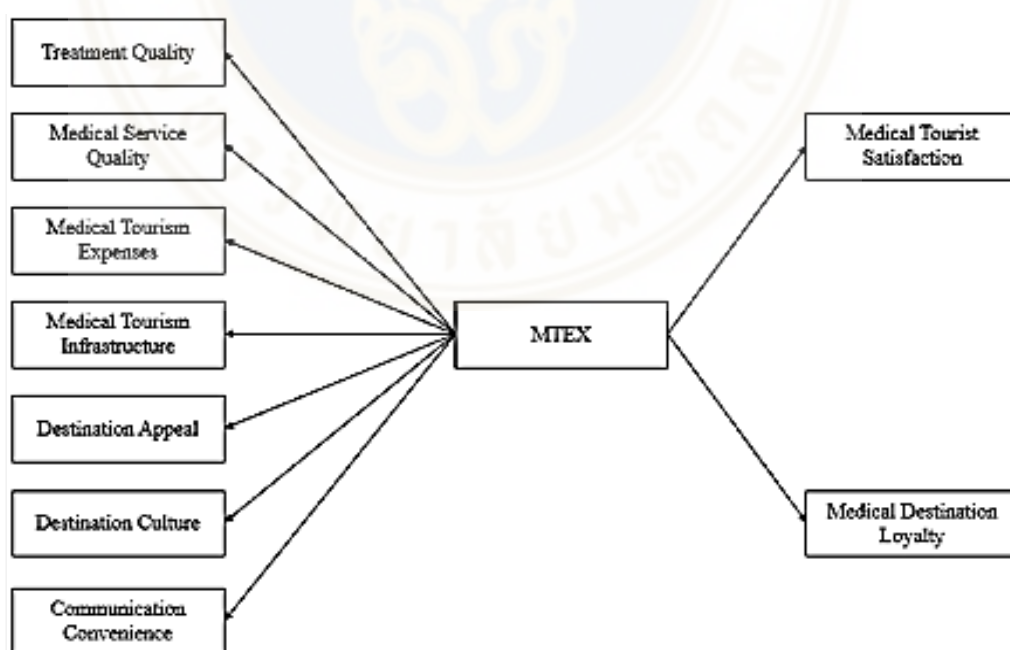
Figure 2.1 Medical Tourism Experience (MTEX) model (Ghosh & Mandal, 2019)

In the model, the dimensions are not directly related to satisfaction but to patient experience. However, the study found that these dimensions have influences on patients' satisfaction. Therefore, the conceptual framework of our research will be designed based on this model with some modification to fit with the Thailand's medical tourism context.

2.4 Determinants Contributing to the Conceptual Framework

2.4.1 Treatment Quality

Treatment quality refers to the fundamental medical product performance such as excellency in medical treatment, skillful medical and surgical performances, variety of available medical/healthcare products (Han & Hyun, 2015). It is a critical challenge for dental tourists to select the destination, which provides the good quality treatment. Patients are traveling across the borders with the expectation of receiving effective and safe treatment (Lunt et al., 2016). Therefore, it is crucial to provide accurate diagnoses and effective treatments according to the professionals' specifications (Marković, Lončarić, & Lončarić, 2014).

Most common dental treatments seek by dental tourists include routine dental check up, dental esthetic treatment, full-mouth reconstruction or rehabilitation of oral function. For a patient coming with esthetic concern, dental treatment that meets his or her needs, such as tooth color and general appearance of the teeth, has high influence on patient's satisfaction. Therefore, the esthetic dental treatment goal should be to enhance patients to feel confident about smiling without having to hide their teeth (Akarslan, Sadik, Erten, & Karabulut, 2009; Tin-Oo, Saddki, & Hassan, 2011).

The low quality dental treatments could result in undesirable complication and failure after the treatment, which can lead to low level of patients' satisfaction. In addition, it could result complication and failure after the treatment. This can significantly dissatisfy dental tourists since they had travelled a long way to receive a good quality dental care and it is also difficult for them to travel again for retreatment (Lovelock et al., 2018).

Based on the above literature review, the following research hypothesis is made for this study.

Hypothesis 1: There is a positive relationship between treatment quality and patients' satisfaction.

2.4.2 Dental Service Quality

Service quality can be defined as the discrepancy between expectation and perception of customers upon service consumed (Marković et al., 2014). The measurement of service quality includes the assessment of service performance such as empathy, friendliness, politeness, competencies and communication of health care providers and staffs (Han & Hyun, 2015). The quality of provided dental care services and the professionalism of staffs determined the medical tourists' satisfaction or dissatisfaction (Abd Manaf, Maulan, Hussin, Jahn Kassim, & Alavi, 2017; Kesar & Mikulić, 2017).

Patients will have high satisfaction level if the doctors have professional attitude, behavior and tidiness. However, low satisfaction was seen if the time spent with doctors and length of consultation takes long. Lack of language barrier, competence of communication by doctors and staff, and availability of translation services could enhance the satisfaction of medical tourists (Manaf, Hussin, Kassim, Alavi, & Dahari, 2015; Musa, Doshi, Wong, & Thirumoorthy, 2012). Therefore, we assumed that dental service quality has a positive influence on patient's satisfaction.

Hypothesis 2: There is a positive relationship between dental service quality and patients' satisfaction.

2.4.3 Affordability of Dental Tourism

The major pushing factor for medical and dental tourists travelling to Thailand is the unaffordable rise of healthcare cost in their home country. The study of UK medical tourists' behavior in Thailand stated that patients are travelling to Thailand for comparatively low-cost services (Noree, Hanefeld, & Smith, 2014). Similarly, Croatia and Hungary are also popular dental tourism destinations for their

low-cost (Hunjet et al., 2018; Österle et al., 2009). The perception of value in the treatment received will be high if there is a significant difference in prices (Manaf et al., 2015). Some types of treatments such as dental implants are often perceived as very expensive in some countries. By traveling to destination countries, patients receive this kind of care with more affordable cost (Barrowman, Grubor, & Chandu, 2010).

In the sector of dental tourism, not only the cost of treatments but also cost of travelling, accommodation and food are important issues for tourists (Sultana, Haque, Momen, & Yasmin, 2014). The cost-savings for leisure and accommodation influence dental tourists' satisfaction (Jaapar et al., 2017). From the above references, below assumption is made.

Hypothesis 3: There is a positive relationship between affordability of dental tourism and patients' satisfaction.

2.4.4 Infrastructure

In the health care context, tangible assets such as equipment and material are important when the patient arrives in the clinic/hospital in a distressed condition. These physical facilities play a crucial role in providing patient seamless experience (Ali, 2016). According to the study in Malaysia, it was found that hospital facilities and doctors were reported as the two most important considerations. Medical tourists' satisfaction is influenced by the state of the art hospital facilities, waiting lounge, disable friendliness signage and directions, toilets, and parking. Patients will be satisfied if the clinic or hospital has hygienic environment, cleanliness, and comfort (Musa et al., 2012).

Availability of hospitals, which are designed and constructed with standard hospital sterilization guidelines such as JCI, can be strength of destination country. In Asia, hospitals in Thailand are pioneer in achieving JCI accreditation. So far, there are 37 hospitals in Thailand that are accredited by JCI and most of them are located in the city Bangkok (Wong, Velasamy, & Arshad, 2014). According to the research, some patients concern with the facilities offered by the clinic. They may consider the cost of medical care is worth to pay or affordable if the clinic provides

high facilities such as lavish amenities floor, hotel-style infrastructure, etc. (Han & Hyun, 2015). Moreover, high-quality accommodation during their stay also influence patients' satisfaction (Hunjet et al., 2018). Thus, the hypothesis regarding infrastructure is made.

Hypothesis 4: There is a positive relationship between infrastructure and patients' satisfaction.

2.4.5 Destination Appeal

Destination attraction or destination appeal is one of the important factor in dental tourism development (Hunjet et al., 2018). The national heritage, beautiful scenic places, modern shopping mall and interesting festival activities are parts of destination appeal (Singh, 2013). Essentially, a destination appeal can highly influence decision of tourist on destination selection. In fact, destination's appeal increasingly become prominent and provides contribution to the destination when they are perceived by the tourist and help ones decide to travel or avoid (Thiumsak & Ruangkanjanases, 2016). Research found that stunning architectural buildings and heritage in Bangkok impact on the level of international tourists' satisfaction (McDowall, 2010).

Satisfaction of tourists is usually enhanced by positive experience of destination appeal during their visit. If customers found interesting in exploring destination attractions, they would give a positive evaluation of the destination and spread word-of-mouth recommendation to others (Chi, C. G., and H. Qu. 2008). Thus, the research hypothesis is made as follow.

Hypothesis 5: There is a positive relationship between destination appeal and patients' satisfaction.

2.4.6 Destination Culture

Every country has its own culture. Nowadays, many countries are actively developing and promoting their tangible and intangible cultural assets to attract tourists. The unique culture can be a distinctive feature of a country in the face of

globalization. In the medical tourism system, however, the size of the gap of cultural difference with home country and destination country has an impact on some patients and accompany. Significant cultural difference and unfamiliar surroundings can lead to weakening both physical and mental condition of medical tourists. Hence, it is required to pay higher levels of attention to this destination culture attribute (Liu, I. C., & Chen, C. C. 2013).

Medical tourism providers become coupling the health services with activities of tourism, that is, sightseeing around the city, shopping local products and enjoying destination culture. The previous research stated that 85% of patients at Bumrungrad Hospital in Thailand enjoyed touring, shopping, eating local foods and exploring local culture (Connell, J. 2006). Exploring the culture can reduce the feeling of cultural difference and encourage the degree of familiarity with that culture. As a result, medical tourists and accompanies will feel comfortable during their medical tourism journey in a foreign country and get a satisfied experience. Therefore, below assumption is made for this study.

Hypothesis 6: There is a positive relationship between destination culture and patients' satisfaction.

2.4.7 Accessibility

Accessibility factor means the ease of transportation access to facilities in destination. Sometimes, tourists and providers overlook this factor. Infrastructure (roads, public transports, airports, etc.), transportation facilities (speed and availability of public transportation), operations (various travel routes, service frequency, and costs) and government regulations on transportation have a great impact on the development of tourism because convenience of transportation has a positive and significant effect on tourists' satisfaction (Lim, K.Y. 2019; Robustin, T. P. 2018).

It is challenging for a tourist to find the location clinic or hospital in a foreign country, which he or she never has been to. Medical tourists will be happy if the location of the clinic or hospital is easily accessible. Moreover, literature stated that it is also important to provide proper direction maps and brochures to heighten patients' satisfaction (Musa et al., 2012).

Hypothesis 7: There is a positive relationship between accessibility and patients' satisfaction.

2.5 Conceptual Framework

From the literature review on theoretical models and previous studies, seven independent variables are considered to have relationship with patient satisfaction and a conceptual framework of this study is drawn as below.
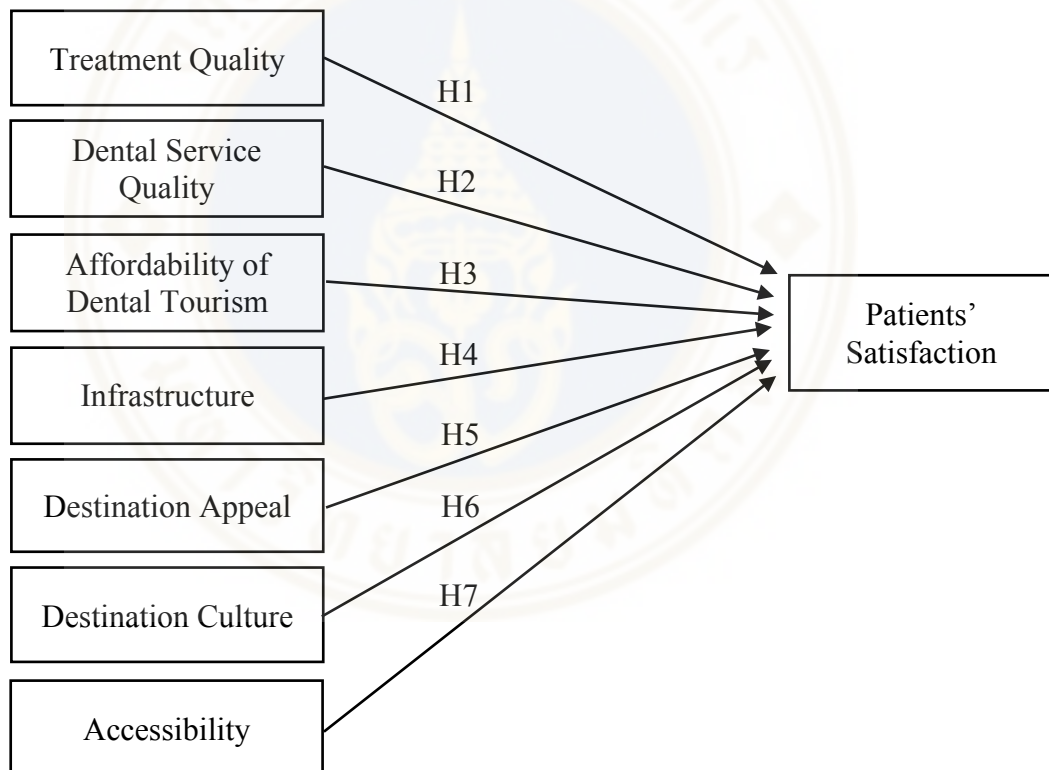
Figure 2.2 Conceptual Framework

CHAPTER III
RESEARCH METHODOLOGY

Previous chapter presented a literature review, research hypotheses and a conceptual framework of this research. This chapter describes the research methodology, the target population and sample size. It also discusses how we developed the questionnaire, how collect the data and how we planned to analyze the received data.

3.1 Research Method

This study was a cross-sectional analytic research performed to determine the determinants of international patients' satisfaction with dental tourism in Bangkok. The research has adopted a quantitative approach and used both paper-based and electronic-based questionnaire tools. The individual person was asked to provide response in the questionnaire set. The questionnaire was used to exclude international patients who are residing in Bangkok as an expert or people who have no experience with dental tourism in Bangkok. The participants were then subsequently screened to include only international patients who travelled to Bangkok with the intention to receive dental services and spent at least one night at the destination. The patient information sheet and consent form were incorporated into the beginning part of the questionnaire. The researcher obtained ethical approval from IPSR-Institutional Review Board (IPSR-IRB).

3.2 Target Population and Sample Size

This research focused on the foreign patients, who have experienced with dental tourism in Bangkok, Thailand. The reason for choosing Bangkok was due to the crowded international dental clinics and hospitals among all of every provinces of

Thailand. The inclusion criteria for the participants in this research were international patients, who traveled across the border to Thailand with the intention to receive dental services in Bangkok and spent at least one night at the destination.

A formula by Yamane was used to determine the sample size with 95% confidence interval (Israel, 2013).

$$n = \frac{N}{1 + N\,(e)^2}$$

Where n is the sample size, N is the population size, and e is the level of precision (Israel, 2013). For this study, each parameter is determined as the followings;

- Population size, N, is 1,200,000. The number came from the data of STANCiU et al.,(Acharya & Brecht) which indicated that about 15% for dental treatments in the world are in Thailand each year.
- The level of precision, e, is 10%.

$$n = \frac{1,200,000}{1 + 1,200,000\,(0.10)^2} = 100$$

As a result, 100 samples (n) were taken for this research analysis.

3.3 Instrument Development

The objective of this study was to identify the determinants that influence customer satisfaction who seek dental treatment in Bangkok, Thailand. The questionnaire was developed based on medical tourism index (MTEX) model (Ghosh & Mandal, 2019). There were 3 sections as total 44 questions.

Section A: contained questions about the socio-demographic characteristics of the participants (such as gender, age, nationality, education) and behavior (such as frequency of receiving dental treatment, how did you know about dental tourism, type of dental care received, travel companion) of the selected sample

of respondents. This section was aimed to gain a better understanding of the participants and to explore the correlation with other variables.

Section B: included questions relating to 7 independent variables from the conceptual framework. In the questionnaire, we measured the participant's agreement on a given statement by the 5-point Likert scale from "Strongly disagree" to "Strongly agree" and gained numeric information about agreement. This section comprised a total of 26 questions to measure treatment quality, dental service quality, affordability of dental tourism, infrastructure, destination appeal, destination culture, and accessibility.

Table 3.1 Description of the survey instrument for independent variables

No.	Statement/Question	Context in the Framework	Source
1.	I felt that I received excellence dental care during the treatment.	Treatment Quality	(Ghosh & Mandal, 2019)
2.	I was not concerned about the feeling of pain when I was at the dental clinic/hospital.		
3.	I felt that the treatment could relieve or cure most of the dental problems.		
4.	The dentist paid enough attention to my concerns in deciding on a dental procedure.	Dental Service Quality	(Han & Hyun, 2015; Manaf et al., 2015; Musa et al., 2012)
5.	I found the dentist and staff are polite and friendly.		
6.	I had no difficulty in communication with dentist and staff.		
7.	I have confidence that the dentist and staff at this clinic/hospital are very competent.		
8.	I did not need to wait for a long time when I was at the dental clinic/hospital.		

Table 3.1 Description of the survey instrument for independent variables (cont.)

No.	Statement/Question	Context in the Framework	Source
9.	Bangkok offered a lower price for dental treatments.	Affordability of Dental Tourism	(Ghosh & Mandal, 2019) (Manaf et al., 2015)
10.	The received dental treatment was a good value for money.		
11.	The accommodation was affordable.		
12.	The local traveling was affordable.		
13.	The clinic/hospital maintained adequate hygiene.	Infrastructure	(Musa et al., 2012) (Ghosh & Mandal, 2019)
14.	The clinic/hospital was clean and tidy.		
15.	The clinic/hospital has up-to-date infrastructure and facilities.		
16.	Proper cleanliness was maintained in the accommodation.		
17.	Thailand has beautiful architectural buildings and historical sites.	Destination Appeal	(McDowall, 2010) (Ghosh & Mandal, 2019)
18.	Thailand is a safe place to visit.		
19.	Thailand has many interesting events and activities.		
20.	Thailand's culture is similar to my country's culture.	Destination Culture	(Ghosh & Mandal, 2019)
21.	The local people are open to welcome people from other cultures.		
22.	Thailand's culture benefits dental tourists.		

Table 3.1 Description of the survey instrument for independent variables (cont.)

23.	The clinic/hospital is easily accessible by transportation.	Accessibility	(Musa et al., 2012) (Ghosh & Mandal, 2019)
24.	The clinic/hospital provided proper directions on maps, brochures or websites.		
25.	Thailand offers well-organized transport services.		
26.	Thailand offers different categories of transport to suit individual needs.		

Section C: contained questions about patients' satisfaction. In the questionnaire, level of satisfaction on a given statement was measured by the Likert scale and gained numeric information about satisfaction. The 5-point scale from "Highly dissatisfied" to "Highly satisfied" was used so that many respondents within the same categories could answer the questions. Destination loyalty was also measured additionally as a small part in this section to coordinate with the medical tourism index (MTEX) model.

Table 3.2 Description of the survey instrument for satisfaction

No.	Statement/Question	Context in the Framework	Source
1.	Dental Treatment quality	Satisfaction	(Ghosh & Mandal, 2019)
2.	Dental Service quality		
3.	Dental Treatment Prices		
4.	Thailand's Safety and cleanliness		
5.	Beautiful scenery of Thailand		
6.	Thailand's culture		
7.	Transportation services available in Thailand		
8.	Your overall satisfaction with dental tourism in Bangkok		

The questionnaire is attached in the Appendix.

3.4 Data Collection

The convenience sampling method was used for data collection for this research. The anonymity of the participants was maintained. Both face-to-face and online questionnaires were used to distribute to the participants. For the face-to-face survey, questionnaires were printed out into paper-based tool, and then were distributed to the participants via administrative staff at 5 private dental clinics and a hospital in Bangkok area. After the participants had filled out the form, the responsible staffs were collected and checked the forms for the completion of all questions in the survey. Then, the data were sent back to the researcher. For the online survey, questionnaires were prepared in Google form and were distributed to the participants' emails that were obtained from the same clinics. The data collection was done for approximately about two months to receive the targeted number of samples.

3.5 Data Analysis

All collected data were entered, coded, and analyzed using Microsoft Excel 2007 along with Statistical Package for Social Sciences (SPSS) version 20 to address all the research objectives and hypotheses. For descriptive statistics, frequency, percentage and mean value were used. To examine the research hypotheses, correlation analysis and multiple linear regressions were used. The multiple linear regression analysis was used to describe whether the independent variables (determinants) have any relationship with the dependent variable (patient satisfaction) in Bangkok's dental tourism context, to analyze whether these relationships are positive or negative, and to identify which independent variables are the most important factors among tested variables. Cronbach's alpha was also computed to examine the reliability test of the questionnaire.

CHAPTER IV
RESULTS

This chapter consists of the analysis and results of data collected in our study. First of all, it presented the information regarding the respondents' profile. Then, the reliability test was analyzed and presented. Finally, the result of the descriptive analysis and the hypotheses testing were presented.

4.1 Demographic characteristics of the respondents

In this research, the data were collected from 106 respondents via both electronic and paper based questionnaires. The descriptive statistics was used to present the frequency, percentage, mean value, bar charts, and line charts. The demographic variables consist of the dental tourists' gender, age group, nationality, education background and experience.

4.1.1 Gender

For the gender variable, a total of 61 males (57.5%) and 45 females (42.5%) out of the 106 participants responded the questionnaire survey. The proportion for the respondents reflected approximately 6:4 (male: female) ratio in this study.

Table 4.1 Statistics of demographic profile – Gender

Gender	Frequency	Percent
Male	61	57.5
Female	45	42.5
Total	**106**	**100**
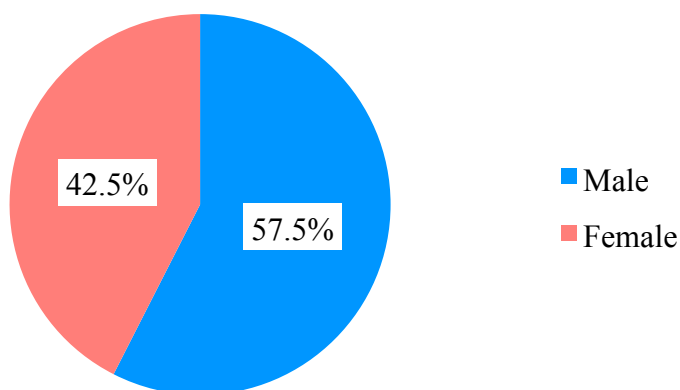
Figure 4.1 Respondents' demographic profile – Gender

4.1.2 Age Category

The participants are categorized into seven different age ranges as shown in table 4.2. Most of the participants were in the age range of 51-60 years old. The total number of respondents in this age group was 33 out of 106 or 31.1%. It can be assumed that the participants in this group demanded dental treatments especially dental implants and restorations. The next groups were ranged between 21-30 years old and 31-40 years old, with 21 patients each (19.8%). In contrast, the lowest percentages of the respondents were aged below 21 years old (0.9%) and above 70 years old (3.8%).

Table 4.2 Statistics of demographic profile – Age group

Age Group	Frequency	Percent
Below 21 years old	1	0.9
21-30 years old	21	19.8
31-40 years old	21	19.8
41-50 years old	13	12.3
51-60 years old	33	31.1
61-70 years old	13	12.3
Above 70 years old	4	3.8
Total	**106**	**100**
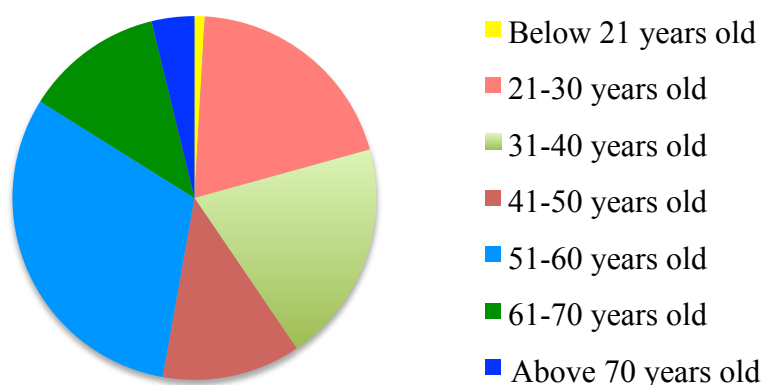
Figure 4.2 Respondents' demographic profile – Age group

4.1.3 Nationality

In this study, most of the participants (17.9%) were from Australia. The second highest numbers of participants were British, with 16 out of 106 (15.1%), followed by Americans with 15 out of 106 (14.2%). The next nations to seek dental services were from France, with 11 participants (10.4%). The 45 participants from other nations accounted for 42.4% of the total.

Table 4.3 Statistics of demographic profile – Nationality

Nationality	Frequency	Percent
Australian	19	17.9
British	16	15.1
American	15	14.2
France	11	10.4
German	7	6.6
Canadian	7	6.6
Swiss	6	5.7
Brazilian	4	3.8
Chinese	4	3.8
New Zealander	3	2.8
African	2	1.9
Italian	2	1.9

Table 4.3 Statistics of demographic profile – Nationality (cont.)

Nationality	Frequency	Percent
Vietnamese	2	1.9
Arab	1	0.9
Burmese	1	0.9
Cambodian	1	0.9
Czech	1	0.9
Egyptian	1	0.9
Finns	1	0.9
Singaporean	1	0.9
Swedish	1	0.9
Total	**106**	**100**
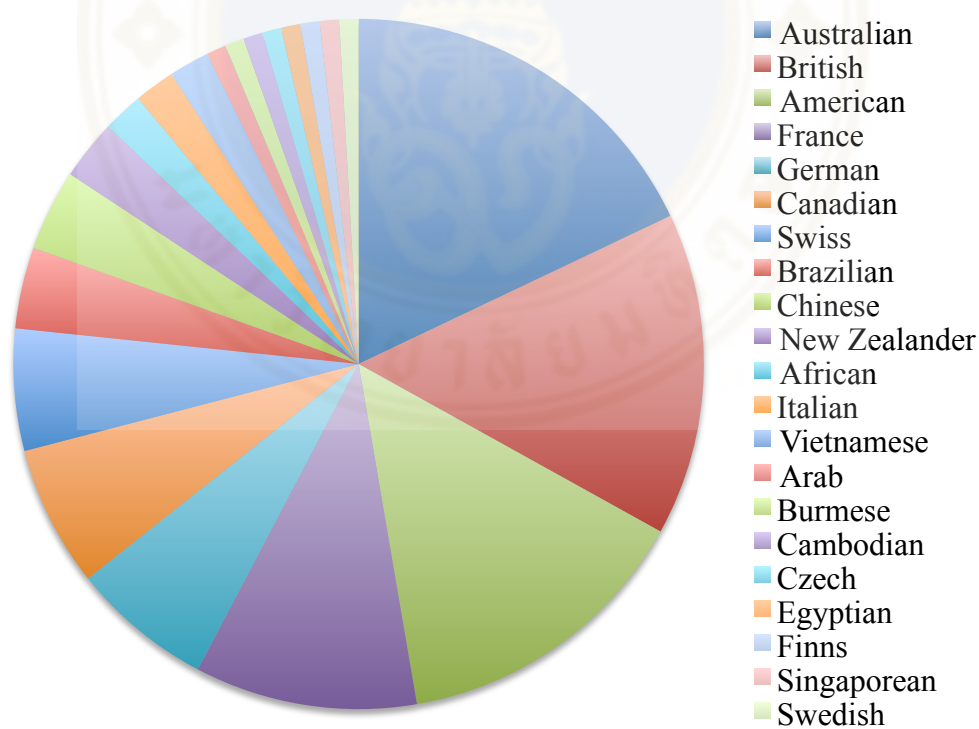
Figure 4.3 Respondents' demographic profile – Nationality

4.1.4 Education

The majority of the respondents, 34.9%, were bachelor degree graduates, 32.1% were master degree graduates, and 15.1% had completed PhD. Only 0.9% had no formal education.

Table 4.4 Statistics of demographic profile – Education

Education	Frequency	Percent
No Formal Education	1	0.9
High School	8	7.5
Certificate/Diploma	10	9.4
Bachelor Degree	37	34.9
Master Degree	34	32.1
PhD	16	15.1
Total	**106**	**100**
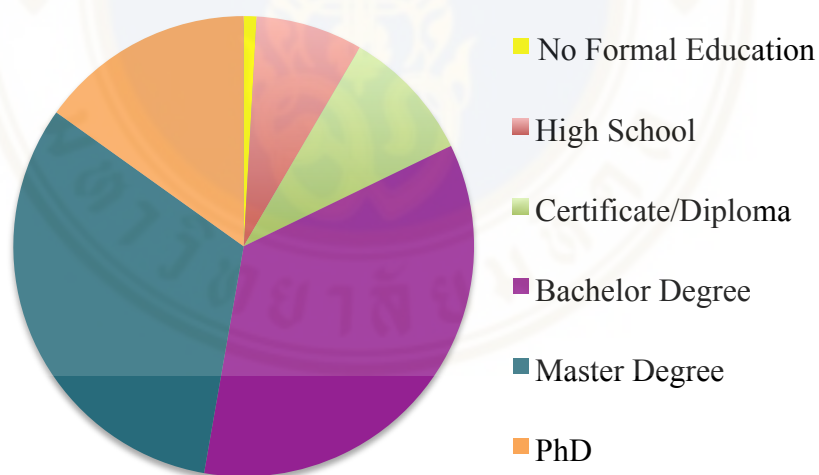
Figure 4.4 Respondents' demographic profile – Education

4.1.5 Visits to Bangkok for Dental Services (Experience)

From the data collection, we found that 70.8% of the respondents visited Bangkok for dental services for their first time and only 29.2% were returning patients to Bangkok for dental services. From this result, it can be described the importance of

this research to retain customers' loyalty by finding out the factors influencing the satisfaction with dental tourism.

Table 4.5 Statistics of demographic profile – Visits to Bangkok for dental services

Visits	Frequency	Percent
1st Visit	75	70.8
More than 1 visit	31	29.2
Total	**106**	**100**
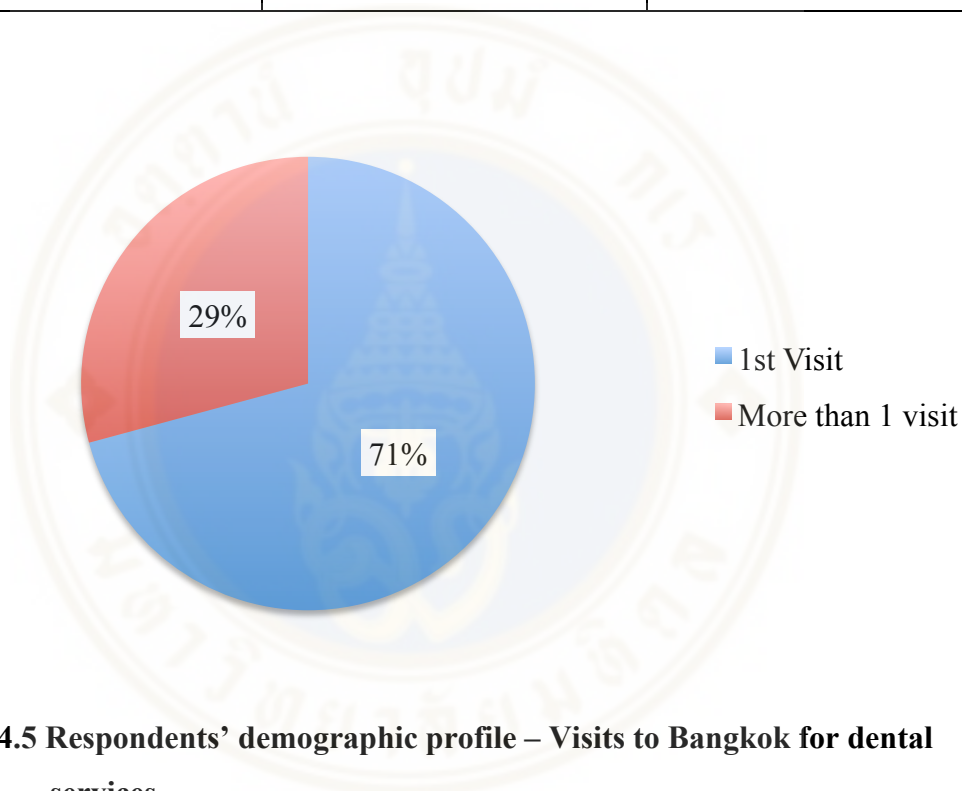
Figure 4.5 Respondents' demographic profile – Visits to Bangkok for dental services

4.1.6 Sources of Information About Dental Tourism

Over half of the patients (52.8%) found the information for dental clinic and dental tourism on Internet such as websites and social media. Nearly one fourth of the patients (23.5%) chose oversea dental clinics by word of mouth recommendation from friends or relatives, who visited or are living in Bangkok. Another 18.9% of the respondents contacted to the travel agency. The others (4.7%) were referred by local dentists.

Table 4.6 Statistics of demographic profile – Sources of information

Sources	Frequency	Percent
Internet	56	52.8
Friends/relatives visited Bangkok	17	16
Friends/relatives living in Bangkok	8	7.5
Travel Agent	20	18.9
Referred by professionals	5	4.7
Total	**106**	**100**
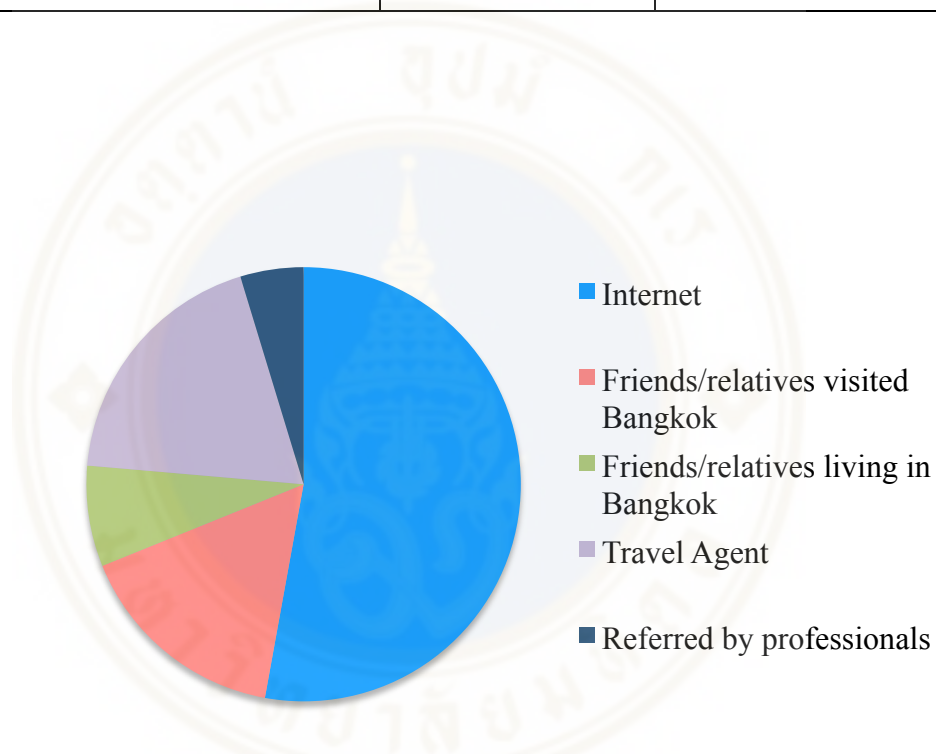
Figure 4.6 Respondents' demographic profile – Sources of information

4.1.7 Travel Companion

Most of the respondents to the survey traveled alone for dental tourism, with the response rate of 29.2% (31 out of 106). In contrast, people who traveled with business associate were only 3.8% (4 out of 106).

Table 4.7 Statistics of demographic profile – Travel companion

Travel Companion	Frequency	Percent
Alone	31	29.2
With spouse only	23	21.7
With family/relatives	27	25.5
With friends	21	19.8
With business associate	4	3.8
Total	**106**	**100**
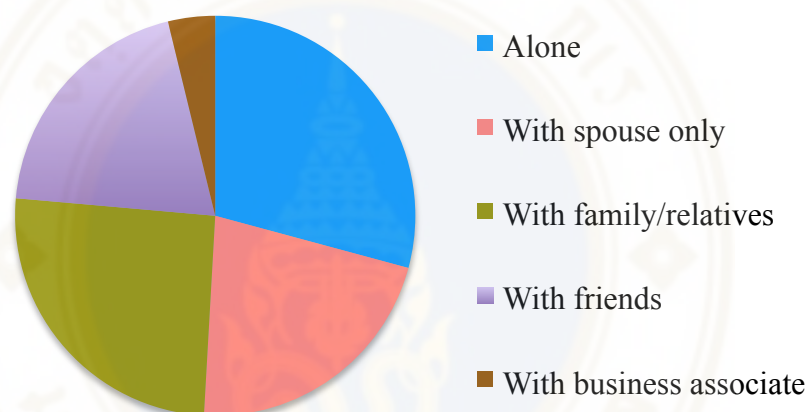
Figure 4.7 Respondents' demographic profile – Travel companion

4.1.8 Treatments

Dental tourists came to Bangkok to receive more than one dental treatment. Among them, almost half of them (40.6%) had received teeth cleaning, scaling and polishing. The second commonly received treatment was dental restoration such as crowns or bridges by 32.1% of the respondents. Dental filling and dental surgery, such as surgical removal of the tooth, were ranked as third most commonly received treatments with the response rate of 26.4% each, followed by dental implants (24%), dental check up (20.8%), cosmetic dental treatment (16%), endodontic dental treatment (13.2%) and periodontal treatment (3.8%).
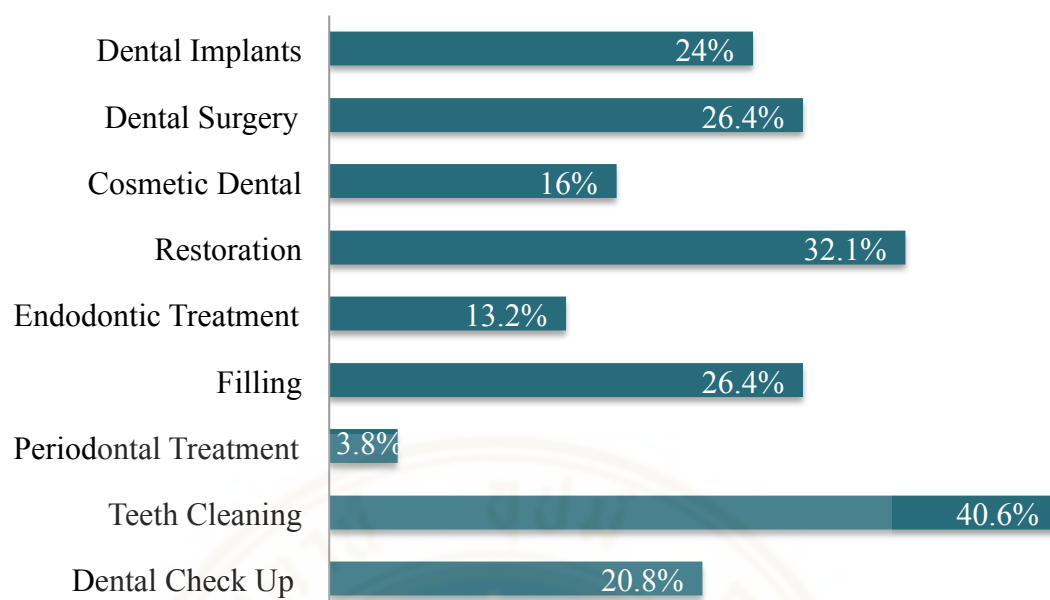
Figure 4.8 Respondents' demographic profile – Treatments

4.2 Reliability Test

The medical tourism index (MTEX) model was used in this study. However, to ensure that the contents in questionnaire are reliable for dental tourism, reliability test was applied. All independent variables- treatment quality, dental service quality, affordability, infrastructure, destination appeal, destination culture and accessibility by transportation; and dependent variable- patient satisfaction were analyzed in this test.

The value of the Cronbach's alpha implies that the amount of proportion of the variance in the test is attributable to general and group factors. The alpha value exceeding a threshold of 0.7 indicates a good reliability score. In this research, all of the constructs have Cronbach's alpha value exceeding 0.7 (Table 4.8), indicated an acceptable reliability value.

Table 4.8 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

4.3 Mean Scores

The study used 26 items to measure the perceptions of patients' with the seven independent variables; treatment quality, dental service quality, affordability, infrastructure, destination appeal, destination cultures and accessibility by transportation. Subsequently, 10 more items were used to explore patient's satisfaction and destination loyalty with dental tourism. The data were received in a form of a five-point scale measurement. The mean values are shown in Table 4.9 and 4.10 below, and each value represents the patient's agreement or satisfaction level towards the dental tourism experience. Almost all of the factors had high mean score over 4.0 except one of the item in destination culture. Therefore, except the destination culture factor, the participants have a similar concern on all of the independent variables.

Table 4.9 Mean of patients' experience with the factors

Factor	Mean
Treatment Quality	
(1) I felt that I received excellence dental care during the treatment.	4.84
(2) I was not concerned about the feeling of pain when I was at the dental clinic/hospital.	4.69
(3) I felt that the treatment could relieve or cure most of the dental problems.	4.65
Dental Service Quality	
(1) The dentist paid enough attention to my concerns in deciding on a dental procedure.	4.79
(2) I found the dentist and staff are polite and friendly.	4.87
(3) I had no difficulty in communication with dentist and staff.	4.82
(4) I have confidence that the dentist and staff at this clinic/hospital are very competent.	4.79
(5) I did not need to wait for a long time when I was at the dental clinic/hospital.	4.79
Affordability of Dental Tourism	
(1) Bangkok offered a lower price for dental treatments.	4.25
(2) The received dental treatment was a good value for money.	4.51
(3) The accommodation was affordable.	4.53
(4) The local traveling was affordable.	4.62
Infrastructure	
(1) The clinic/hospital maintained adequate hygiene.	4.92
(2) The clinic/hospital was clean and tidy.	4.92
(3) The clinic/hospital has up-to-date infrastructure and facilities.	4.92
(4) Proper cleanliness was maintained in the accommodation.	4.77

Table 4.9 Mean of patients' experience with the factors (cont.)

Factor	Mean
Destination Appeal	
(1) Thailand has beautiful architectural buildings and historical sites.	4.63
(2) Thailand is a safe place to visit.	4.49
(3) Thailand has many interesting events and activities.	4.43
Destination Culture	
(1) Thailand's culture is similar to my country's culture.	2.08
(2) The local people are open to welcome people from other cultures.	4.35
(3) Thailand's culture benefits dental tourists.	4.39
Accessibility	
(1) The clinic/hospital is easily accessible by transportation.	4.69
(2) The clinic/hospital provided proper directions on maps, brochures or websites.	4.75
(3) Thailand offers well-organized transport services.	4.58
(4) Thailand offers different categories of transport to suit individual needs.	4.56

Table 4.10 Mean of patients' satisfaction and destination loyalty

Factor	Mean
Patient Satisfaction	
(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) Thailand's culture	4.49
(7) Transportation services available in Thailand	4.56
(8) Your overall satisfaction with dental tourism in Bangkok	4.70
Destination Loyalty	
(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

4.4 Testing the Hypotheses

4.4.1 Correlation Analysis

A correlation analysis was performed to check if there are any associations among the independent variables, and the associations between the independent and the dependent variables. The values of multiple correlation coefficients (R) range between -1 and +1. The value of +1 reflects a perfect positive association and the value of -1 reflects a perfect negative association. The correlation coefficient of zero indicated the absence of an association.

As mentioned in Table 4.11 below, the association between all the factors and patient satisfaction were statistically significant ($p < 0.05$). Among them, accessibility by transportation and treatment quality factors had the strongest association with patient satisfaction. Besides, there were associations between the variables except destination culture. Destination culture has an association with only

affordability and destination appeal. Since we found that there is strong correlation coefficient (0.793) between treatment quality and dental service quality, there was a multi-collinearity problem in our proposed model. Therefore, we tested the regression analysis by including all of the variables except treatment quality or dental service quality variables.

Table 4.11 Correlations between variables

		Treatment Quality	Service Quality	Affordability	Infrastructure	Destination Appeal	Destination Culture	Accessibility
Treatment Quality	Pearson Correlation	1						
	Sig. (2-tailed)							
Service Quality	Pearson Correlation	.793	1					
	Sig. (2-tailed)	.000						
Affordability	Pearson Correlation	.468	.331	1				
	Sig. (2-tailed)	.000	.001					
Infrastructure	Pearson Correlation	.474	.315	.615	1			
	Sig. (2-tailed)	.000	.001	.000				
Destination Appeal	Pearson Correlation	.221	.301	.266	.257	1		
	Sig. (2-tailed)	.023	.002	.006	.008			
Destination Culture	Pearson Correlation	.157	.154	.291	.150	.441	1	
	Sig. (2-tailed)	.108	.116	.002	.125	.000		
Accessibility	Pearson Correlation	.440	.474	.281	.376	.395	.327	1
	Sig. (2-tailed)	.000	.000	.003	.000	.000	.001	
Patient Satisfaction	Pearson Correlation	.651	.575	.486	.525	.545	.400	.756
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000

4.4.2 Multiple Linear Regression Analysis

Multiple linear regression analysis is a method used to examine a linear relationship between several independent variables and a dependent variable. In this study, multiple linear regression was used to measure the intensity of the linear relationship between patient satisfaction and determinants such as treatment quality, dental service quality, affordability of dental tourism, infrastructure, destination appeal, destination culture and accessibility by transportation.

According to the findings of correlation analysis, there was a multi-collinearity problem between treatment quality and dental service quality. Therefore, we performed the multiple linear regression analysis by three ways as below:

- Model 1: all the variables were included in the model.
- Model 2: treatment quality variable was removed in the model.
- Model 3: dental service quality variable was removed in the model.

Then, we selected the model that can explain the highest percentage of variation in dependent variables (the highest R^2 value).

Firstly, multiple linear regression was tested by including all the seven variables in the model 1.

Table 4.12 Model 1 (including all the variables) - Summary

Model	R	R^2	Adjusted R^2	Std. error of the estimate
1	.884	.781	.765	1.575

Table 4.13 Model 1 (including all the variables) - ANOVA

Model 1	Sum of squares	DF	Mean Square	F	Sig.
Regression	866.734	7	123.819	49.910	.000
Residual	243.124	98	2.481		
Total	1109.858	105			

Table 4.14 Model 1 (including all the variables) - Coefficients

Model 1	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Constant	2.917	3.004		.971	.334
Treatment Quality	.733	.176	.360	4.158	.000
Dental Service Quality	-.080	.110	-.060	-.729	.468
Affordability	.089	.076	.075	1.167	.246
Infrastructure	.246	.186	.086	1.324	.189
Destination Appeal	.368	.090	.231	4.073	.000
Destination Culture	.100	.084	.066	1.195	.235
Accessibility	.702	.090	.460	7.769	.000

Secondly, multiple linear regression was re-tested by only including six variables; dental service quality, affordability, infrastructure, destination appeal, destination culture, and accessibility. Treatment quality factor was excluded in the model 2.

Table 4.15 Model 2 (excluding treatment quality factor) - Summary

Model	R	R^2	Adjusted R^2	Std. error of the estimate
2	.862	.742	.727	1.700

Table 4.16 Model 2 (excluding treatment quality factor) - ANOVA

Model 2	Sum of squares	Df	Mean Square	F	Sig.
Regression	823.833	6	137.306	47.525	.000
Residual	286.025	99	2.889		
Total	1109.858	105			

Table 4.17 Model 2 (excluding treatment quality factor) - Coefficients

Model 2	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Constant	.880	3.198		.275	.784
Dental Service Quality	.256	.080	.192	3.189	.002
Affordability	.148	.081	.125	1.837	.069
Infrastructure	.428	.195	.149	2.192	.031
Destination Appeal	.316	.097	.198	3.267	.001
Destination Culture	.106	.090	.070	1.176	.243
Accessibility	.722	.097	.473	7.407	.000

Lastly, we analyzed the multiple linear regression by including all the variables except dental service quality factor in model 3.

Table 4.18 Model 3 (excluding dental service quality factor) - Summary

Model	R	R^2	Adjusted R^2	Std. error of the estimate
3	.883	.780	.766	1.571

Table 4.19 Model 3 (excluding dental service quality factor) - ANOVA

Model 3	Sum of squares	Df	Mean Square	F	Sig.
Regression	865.416	6	144.236	58.416	.000
Residual	244.443	99	2.469		
Total	1109.858	105			

Table 4.20 Model 3 (excluding dental service quality factor) - Coefficients

Model 3	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Constant	2.268	2.862		.792	.430
Treatment Quality	.638	.119	.313	5.361	.000
Affordability	.090	.076	.076	1.187	.238
Infrastructure	.267	.183	.093	1.458	.148
Destination Appeal	.356	.089	.223	4.017	.000
Destination Culture	.104	.083	.069	1.257	.212
Accessibility	.689	.088	.451	7.807	.000

When we compared the adjusted R^2 values of three models in the model summary, model 3 had the highest adjusted R^2 value of 0.766 compared to other models. Approximately 76.6% of the variation in the patients' satisfaction can be explained by the variables included in model 3. Therefore, we selected model 3 as the best model to explain our regression results. Based on the significant (Sig.) column in Table 4.20, the p-values for treatment quality, destination appeal and accessibility were less than 0.05. This indicated that only these three factors had significant relationships with patient satisfaction.

The unstandardized Beta coefficient values in the coefficient table represent the amount that the dependent variable changes when the corresponding independent variable changes by 1 unit. The ratio of the Beta coefficients is the ratio of the relative predictive power of the independent variables.

Based on our results in Table 4.19, accessibility had the most significant impact on patients' satisfaction, as it shows the highest Beta value (0.689), followed by treatment quality (0.638) and destination appeal (0.356). However, the other variables showed no significant impact on the patients' satisfaction.

4.4 Hypotheses results

Based on the findings, it can be concluded that Hypothesis 1 (treatment quality), Hypothesis 5 (destination appeal), and Hypothesis 7 (accessibility) are supported by the positive impact of these constraints on patients' satisfaction. However, Hypothesis 2 (service quality), Hypothesis 3 (affordability), Hypothesis 4 (infrastructure), and Hypothesis 6 (destination culture) were not supported, as their p-value was not significant.

Table 4.21 Hypotheses results

Hypo-thesis	Content	Significance P<0.05	Direction of relationship
H1	There is a positive relationship between treatment quality and patients' satisfaction.	Yes	Positive
H2	There is a positive relationship between dental service quality and patients' satisfaction.	No	Positive
H3	There is a positive relationship between affordability of dental tourism and patients' satisfaction.	No	Positive
H4	There is a positive relationship between infrastructure and patients' satisfaction.	No	Positive
H5	There is a positive relationship between destination appeal and patients' satisfaction.	Yes	Positive
H6	There is a positive relationship between destination culture and patients' satisfaction.	No	Positive
H7	There is a positive relationship between accessibility and patients' satisfaction.	Yes	Positive

CHAPTER V
DISCUSSION AND CONCLUSION

The final chapter of this research summarizes and discusses the significance of the research findings. The level of dental tourists' satisfaction, and the determinants of the patients' satisfaction with Bangkok dental tourism industry are discussed based on the analysis. Then, the possible recommendations for managers of dental clinics are suggested. Finally, it is concluded with an assessment of limitations of this study and the recommendations for future research in this field.

5.1 Conclusions and Discussion

Thailand is one of the popular medical tourism destinations offering both general health care and dental care services (Knox, 2014). Previous research focus mainly on medical tourism of Thailand (Lertwannawit & Gulid, 2011; Yin, 2014), however, there was a lack of research focusing how the international patients experience with dental tourism in Thailand. The objectives of this study were to analyze the level of international patients' satisfaction with dental tourism in Bangkok and to identify the determinants influencing dental patients' satisfaction.

The research was conducted using quantitative method. The data was collected using both paper-based and electronic-based questionnaires with convenience sampling method. The paper-based questionnaires were distributed to patients through customer service officers at private dental clinics and hospitals in Bangkok, whereby the electronic-based questionnaires were sent to emails of patients by these clinics. A total of 106 questionnaires were responded and all the samples were eligible for the analysis.

5.1.1 Demographic Information of Dental Tourists

Among 106 eligible respondents of dental tourists, the majority of them (57.5%) were male and 31.1% were 51-60 years old. They were mostly bachelor degree graduates (34.9%). Most of the respondents were from Australia (17.8%), the United Kingdom (15.1%), and the United State of America (14.2%). The rest were from many different parts of the world including European, Asian and New Zealanders. When we collected the data, this trip was the first time experience for about two third of the respondents, and it was revisiting for the other one third of the respondents. Majority of them traveled alone to Bangkok (29.2%). The research showed that top dental services selected by dental tourists were teeth cleaning, scaling and polishing (40.6%) and dental restorations (32.1%).

The dental tourists obtained information about dental clinics in Bangkok mainly from Internet, friends, and relatives. This finding was corresponding with the result of Jaapar et al., (2017). The Internet provides not only information, but also a platform on which dental providers and patients connect (Jurišić, 2018). Thereby patients discuss with dental practioners online about their dental issues and then, consider travelling abroad for dental treatment. The Internet help in communication of sharing treatment options and pre-travel information between patients and providers (Jaapar et al., 2017). Moreover, the role of friends and family was also found as an important factor in the decision making for medical tourism (Yeoh, Othman, & Ahmad, 2013). This is because the recommendation and suggestion especially from friends and family are considered as an effective risk-reducing strategy by patients.

5.1.2 International Patients' Satisfaction with Dental Tourism in Bangkok

The study measured the level of patients' satisfaction with Bangkok dental tourism and their opinion upon the potential factors influencing the satisfaction by using five-point scale instrument. According to our analysis, international patients were highly satisfied with dental tourism experienced in Bangkok, Thailand. The mean score of overall patients' satisfaction was 4.70. Their level of satisfaction was the highest with dental service quality (4.79) and dental treatment quality (4.76). Thus, the study can conclude that dental tourists received the high quality care by the dental

providers in Bangkok. The level of satisfaction was then followed destination attributes such as safety and cleanliness of destination (4.61), transportation services available in Thailand (4.56), beautiful scenery encountered (4.54), and Thailand's culture (4.49). In contrast, patients were least satisfied with dental treatment prices, getting the lowest mean score of 4.44. This finding can be as a result of Bangkok's dental prices were higher than their expectation. Level of a patient satisfaction is rated by personal evaluation on health care services and providers (Gill & White, 2009). In addition, we found that the level of willingness of patients to revisit Thailand and to recommend others were also high with the mean scores of 4.37 and 4.34 respectively. This result proves that high level of satisfaction helps with patient retention and positive word of mouth recommendation.

We also measured opinion of dental tourists on each independent variable; treatment quality, dental service quality, affordability, infrastructure, destination appeal, destination culture and accessibility based upon their experienced while travelling to Thailand.

(1) Treatment quality

Based on our results, we discovered that patients were happy with the excellence dental care and they considered that their dental problems were relieved from the treatments received in Bangkok. One of the major goals of dental tourists is to receive effective and safe treatment (Lunt et al., 2016). Therefore, it is important to provide accurate diagnoses and effective treatments according to the professionals' specifications (Marković et al., 2014).

(2) Dental service quality

In the service quality context, patients were highly delighted with the politeness and friendliness of Bangkok dentists and staffs. Most of the respondents agreed that they did not experience difficulty in communication at dental clinics. This can be explained by the fact that the dental care providers and the staffs were proficient in English language or qualified translators were available at the clinics (Wongkit & McKercher, 2016). It also indicated that respondents received enough

care and attention from the dentists. Furthermore, satisfaction on service quality can be due to shorter waiting time at the clinic compared with their local providers.

(3) Affordability of dental tourism

Financial factor is one of the main considerations for dental tourists in consideration to travel abroad. High cost of dental care in home country is the driving force for many patients to seek treatments in another affordable country (Noree et al., 2014). In our study, we discovered that the mean score for patients' perception upon lower dental treatment prices in Bangkok was high (4.25). Given that the mean score is high implying that the dental service is affordable. Additionally, patient revealed that treatment received were good value for money. Thus, we can conclude that patients were willing to pay for a good quality treatment and service.

(4) Infrastructure

Clean and hygienic environment of a clinic or a hospital is one of the crucial factors for patients' safety and for prevention of infection. Additionally, the latest technology and up-to-date medical facilities help in providing effective and efficient diagnoses and treatments. We discovered that the respondents were highly pleased with the clean and hygienic environment, and up-to-date infrastructure of Bangkok dental clinics as the mean score for them were the highest with (4.92). The result was similar to the findings of (Musa et al., 2012) and (Yıldız & Erdoğmuş, 2004) . If the clinic or hospital has hygienic environment, cleanliness, and comfort, patients will be satisfied (Musa et al., 2012).

(5) Destination appeal

Dental tourists enjoy sightseeing, shopping, enjoying festivals between their dental visits, or before or after their appointments. The respondents of our study liked beautiful architectural buildings and historical sites in Thailand. The mean value of this item is 4.63. The kingdom of Thailand has many royal architectural buildings and unique Asian texture, which are attraction places to tourists. However, we noticed that the mean value for safety and interesting activities were low, 4.49 and 4.43

respectively. The respondents were concerned with the safety in travelling to Thailand and few enjoyable events and activities.

(6) Destination culture

Under the destination culture item, we examined the existence of cultural difference and the experience of patients regarding culture. Since most of the patients were from Australia and Europe, there was a cultural difference among them and Thailand, the Asian country. Although international patients mentioned cultural difference, we discovered that they were happy with the friendliness and welcoming of different cultures of Thai people. Previous literature stated that Thailand culture is one of the determinant influencing the tourism destination image of Thailand (Henkel, Henkel, Agrusa, Agrusa, & Tanner, 2006). Therefore, culture plays role in attracting tourists.

(7) Accessibility

We also included accessibility by transportation factor in our attributes. Convenience of transportation influences tourists' experience during travelling. Based on our mean score analysis, we found that the dental tourists were satisfied with the location of the dental clinics they went and the proper direction maps offered by the clinics, though they experienced difficulty in using transportation services in Thailand. This could be because taxies were the major mode of transportation for tourists (McDowall, 2010). According to Robustin, T.P. (2018), availability of various public transportations in a country influences tourists' satisfaction.

5.1.3 Determinants Influencing Dental Tourists' Satisfaction

The study used multiple linear regression analysis to prove the hypotheses and to answer the research question on analyzing the determinants influencing dental tourists' satisfaction. Before conducting the multiple regression analysis, a correlation analysis was carried out to find out the potential multi-collinearity problems among the independent variables and to test the associations between the dependent variable and the independent variables. Based on the findings of correlation analysis, we noticed that there was a multi-collinearity problem between treatment quality and

dental service quality. Hence, we removed one of these factors per time in analyzing the regression and then, we chose the best model to conclude our findings whereby excluding the dental service quality from our independent variables.

According to our results formulated by the multiple linear regression analysis, the factors that have a significant positive effect on the dental tourists' satisfaction are treatment quality, accessibility by transportation and destination appeal. These attributes identify the main factors that influence dental tourists' satisfaction in Bangkok. Below figure 5.1 provides a **determinants influencing dental tourists' satisfaction model** found in our research.
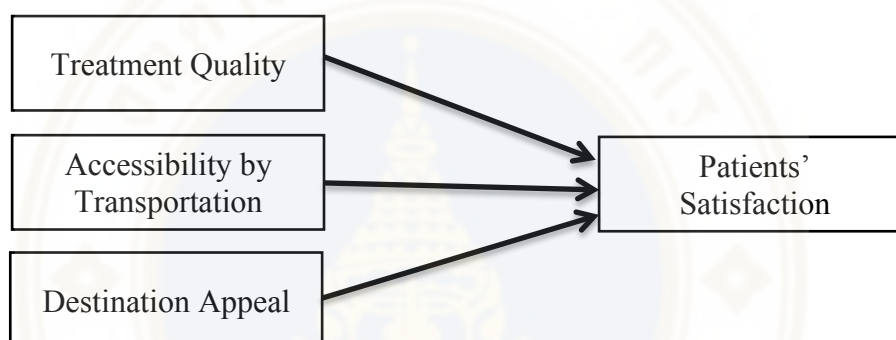
Figure 5.1 Bangkok dental tourism – Determinants influencing dental tourists' satisfaction model

Firstly, we found that ease of accessibility to dental clinics or hospitals by transportation had the most significant impact on patients' satisfaction. Most of the medical and dental tourism research overlooked accessibility factor as a determinant to patients' satisfaction. Thai people use Thai language as their first language, which could be a barrier for communication between a tourist and local people. Thus, it could be a challenging for a tourist to use public transportation such as riding taxi or reading signage, and to access destinations in Thailand. Similarly, tourists who are travelling for dental treatment expect an ease to access to their dental clinic or hospital without losing and panicking on the way to the clinic. Thus, a clinic or hospital located in an area that is easily accessible by different modes of transportation could significantly increase patients' satisfaction. In addition, providing a proper and clear direction maps or brochures to international patients can enhance their satisfaction level.

This finding is supported by the previous literature of (Kim, 2014), in which it is found that inconvenience to get to the destination, long journey to get to the destination, and difficulty in traveling around the destination caused the formation of negative memorable experiences for tourists. Moreover, the previous studies (Hasegawa, 2010; Robustin, Andi, Suroso, & Yulisetiarini, 2018) also stated that availability of different mode of transportations influenced the level of tourists' satisfaction.

Secondly, our study discovered that treatment quality of dental care had a significant impact on patients' satisfaction. Treatment quality is a major issue for both dentist and patient in regards to dental tourism. The ultimate goal of dental tourists is to receive a solution for their dental problems. Based on our findings, patients' level of satisfaction was increased if the dentists relieved or cured their dental problems. Lack of quality dental care can lead to complications when patients back to their own country. This may negatively impact patients' spread of word of mouth to others. Thus, ensuring correct diagnosis and treatment to a patient is essential to retain existing customers and to attract new customers.

The previous researches (Goedhart, Eijkman, & Ter Horst, 1996) also discovered that "the cure" is every patient's goal. A recent study of dental tourism (Lunt et al., 2016) mentioned that dental tourists may not travel for poor quality treatment. They are expecting to receive effective and safe treatment. Complications can occur if there is a lack of accountability by the dental care providers. This is a concern for dental tourists since it can cost more for travelling again or getting expensive local care (Barrowman et al., 2010). Providing an effective dental treatment within the limited time frame of a dental tourist can enhance patient's satisfaction and improve their compliance with future dental care.

Thirdly, the destination appeal factor had a significant impact to patients' satisfaction. Dental tourists like to travel around the destination country between their dental appointments. Despite dental clinic factors, satisfaction of dental tourists is affected by the presence of tourist attractions, activities, festivals, and shopping places. This result aligned with the previous research findings (Asgarnezhad Nouri, Nemati, & Abbasgholizadeh, 2019; Tavitiyaman & Qu, 2013). Thailand is a kingdom country. It has unique architectural buildings and antique places, where tourists can enjoy

exploring alone or with their travel companion. Moreover, Bangkok is a popular shopping paradise that medical and dental tourists can enjoy seeking from cheap to luxurious fashion products. Therefore, destination appeal is one of the most important factors for dental tourists' memorable experiences, corresponding with the finding of the study related with US medical tourism (Nguyen, 2016).

In our final model, we excluded dental service quality factor due to multi-collinearity effect, however, this factor showed strong association with patients' satisfaction in the correlation analysis. Thus, we should not ignore the dental service quality in the dental tourism business. In addition, we discovered that affordability factor did not show significant result in the multiple linear regression analysis even though price was the major driving force for dental tourists. This could be because patients were more concern about the treatment quality as their main value instead of the cost. If patients were satisfied with the quality that they received from the provider, they were happy to pay for the high cost of care.

In summary, our study determined accessibility, treatment quality and destination appeal as the major determinants of international patients' satisfaction in Bangkok. However, the other variables should not be neglected in dental tourism context since they showed positive association with patients' satisfaction in the correlation analysis ($p<0.05$).

5.2 Managerial Implication

Dental tourism is a growing industry along with medical tourism. Thailand is one of the most popular healthcare tourism destinations. Dental clinic managers should have broader understanding of their market and should constantly analyze their competitors' marketing activities to be successfully survived in this field. The results in this study provide quantitative information about demographic, behavior and satisfaction of Bangkok dental tourists.

Providing services that satisfy customers create loyalty among customers and significantly increase the repetitive purchase of the services. Besides, satisfied customers are willing to spread positive word-of-mouth promotion for the company (Kasemsap, 2017). Therefore, many research are focusing on customers' satisfaction

nowadays. Understanding those factors influencing dental tourists' satisfaction, managers can professionally make decisions and tailor their services accordingly to be sustainable and competitive in the market.

The results in this study showed that there was a high level of dental tourists' overall satisfactions on the dental clinics in Bangkok. Dental clinics in Bangkok should therefore aim to maintain their existing customers. The results also highlight the importance of providing high-quality treatment, destination appeal and accessibility of clinics to increase dental tourists' satisfaction. With this in mind, below are the recommendations for dental clinics' managers:

1. Dental tourists use the Internet as their source of information. By using this knowledge, providers can create an online platform where patients can consult their concerns prior to their trip. They can discuss possible treatment options and estimated time requirement for each option. Providing information in advance can build trust and give convenience for dental tourists in their travelling. Moreover, it can also deliver idea for patients what to expect when they arrive to the clinic.

2. For the effective marketing strategies for dental tourism service, communications with potential customers through clinic websites is recommended. Dental clinic websites should be created with multi-languages, should be user-friendly, and should be up-dated frequently with detailed information about services and products in order to enhance communications with dental tourists.

3. Receiving treatment in a foreign country is a risk taking decision for dental tourists. In our study, we found that their decision in choosing dental clinic was influenced by word of mouth recommendation from friends, family and relatives. Dental clinic managers may consider using electronic word of mouth, which is a kind of recommendation from patients who had experience with dental tourism. This can increase the awareness of many new customers to dental clinic.

4. Location selection of a dental clinic influences dental tourists' satisfaction. We would recommend business owners and new entrepreneurs, who are planning to open a dental clinic, to choose a right location where it can be accessed easily by different modes of transportation. The clinic can be planned to open in a

place near hotels and accommodations. So, tourists can choose to stay nearby and reach to the clinic easily.

5. Dental clinics should provide proper digital and physical maps to patients. The physical paper map should demonstrate simple way to reach to the clinic from patients' hotel location by different mode of transportation. In addition, it is advisable for a dental clinic to correctly and clearly pinpoint on the Google map since it is easy to look from any places and can guide patients to the clinic.

6. The direction map should show different ways to reach to the clinic, and be prepared in multi-languages. For example, if a patient comes from English speaking country, the clinic should provide one English language map for patient and one Thai language map for local taxi or vehicle driver. Offering a clear proper map not only help patients easily accessible to the clinic but also prevent patients go to the wrong clinic.

7. Regarding operations on clinic quality, dental care providers should invest continuously on maintaining treatment quality. It is important to learn up-to-date treatment protocols, which are effective, less time consuming and less complication. There is always a time limitation for tourists in travelling such as they may travel for a week or a month. Hence, the provided treatment should solve patients' concern within their limited time. At the same time, the clinic should try to achieve international accreditation such as JCI, which could help in building trust with the potential customers.

8. Lastly, managers should think about providing supplemental tourism services to international patients instead of focusing only on dental care. Dental tourists travel abroad for receiving dental treatment as well as experiencing tourism activities. Good experience with destination attractions, shopping, cultural activities and events significantly improve the dental tourists' satisfaction. For this reason, dental care services can be accompanied by arranging to travel to tourist attraction sites between each dental visit. If the dental care provider cannot arrange the tour trip for patients by itself, it could alliance with third party tourism agency. By this way, dental tourists can enjoy their trip by experiencing both required dental treatment and tourism pleasure.

To conclude, better understanding of dental tourists' needs and expectations is crucial for every dental clinic providers in popular tourist destination like Bangkok to gain greater market share and to be sustainable in the market.

This research offered information that could be useful in planning and designing marketing and operational strategies by focusing on the major determinants influencing patients' satisfaction. A through understanding of these determinants and the intensity of their impact on patients' satisfaction could assist dental care providers in designing and delivering tailored services that align with the market demands of dental tourists.

5.3 Research Limitations

Although this research provided new knowledge and contributions to the dental tourism sector, it also has some limitations.

5.3.1 Sample and Study Population

The study employed the convenience samplings. It was participated by only five private dental clinics and only one tourist destination Bangkok. Thus, the ability to generalize the findings is limited.

5.3.2 Limitations of Time

Since there was a limitation of time to conduct the study, the findings were based on only 106 dental tourists. Future research with a bigger sample, and use of a random sampling method was recommended.

5.3.3 Research Questionnaire

The study based on the Medical Tourism Experience Model as the conceptual framework and the items for questionnaire were generated from literature reviews. The ideal procedure for developing a quantitative questionnaire should be preceded by pilot survey or qualitative research. Ideally, the study should be preceded by pilot survey or qualitative research. Then, the quantitative survey could be designed

according to the findings in order to provide a greater relevance to Bangkok dental tourism context.

Nevertheless, the above limitations are hoped to be a guideline and encouragement for future research.

5.4 Recommendations for Future Research

This research particularly examined the Bangkok dental tourists' overall satisfaction with the dental tourism industry, and the determinants that have the influence on this satisfaction. Nevertheless, the research does not provide in detail about the relationship between dental tourists' satisfaction and the destination loyalty. Literature stated that satisfied patients are willing to revisit to their healthcare providers, and also have tendency to deliver positive word of mouth recommendation of the dental care providers to other people. Hence, future research should examine this relationship in detail because repeated use of services are an important issue for dental tourism providers and for academic researchers.

Furthermore, this study measured the dental tourism industry from the patients' perceptive. Future work could perform strategic analysis by finding strengths, weaknesses, opportunities and threats in delivering dental care from the dental providers' perceptive in order to provide international standard dental care services to all customers.

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APPENDICES

Appendix A : Certificates of Authenticity (COA)

Institutional Review Board, Institute for Population and Social Research, Mahidol University (IPSR-IRB)

Established 1985

COA. No. 2020/03-121

Certificate of Ethical Approval

This is to certify that the Institutional Review Board, Institute for Population and Social Research, Mahidol University, has granted an Ethical Approval to the research project entitled *"Determinants of International Patients' Satisfaction with Dental Tourism in Bangkok"* submitted by Mrs. Hnin Nu Nu Lwin from the College of Management. The duration of this project is from April to June 2020.

By this approval, the Principal Investigator of this project is obliged to:

1) Provide progress report to IPSR-IRB every twelve months from the start of the project;
2) Report to IPSR-IRB any changes in the project plan, especially those changes that may put research participants at risks;
3) Promptly notify IPSR-IRB any adverse events that occur during the project execution; and
4) Provide research completion report at the end of the project.

This COA is given on 26 March 2020 and valid through 25 March 2021.

Signature

(Professor Emeritus Pramote Prasartkul)
Chairman, IPSR-IRB

IORG Number: IORG0002101;   FWA Number: FWA00002882;   IRB Number: IRB0001007

Office of the Institutional Review Board, Institute for Population and Social Research, Mahidol University (IPSR-IRB),
Phuttamonthon 4 Rd., Salaya, Phuttamonthon district, Nakhon Pathom 73170. Tel (662) 441-0201-4 ext. 223

Appendix B : Questionnaire for the Study on Determinants of International Patients' Satisfaction with Dental Tourism in Bangkok

Date .... / .... / ....

My name is ....

aged .... years old, now living at the address no ....

Street .... Sub-district ....

.... District .... Province ....

.... Postal code .... Tel. No ....

....

I have read the statements in the information sheet for research participants. (Or, it was read to me by the research assistant who comes to meet me). I understand the research project's rationale and objectives, its procedural details, its expected benefits and potential risks/harms that may occur to the participants, including methods to prevent and handle harmful consequences. I have been given satisfactory explanations to my questions about this research.

I am aware of my right as a participant to decline answering any questions or to withdraw from participation at any time, if I want to, without any undesirable consequences on the welfare and services that I and my family may need.

I hereby express my consent to participate as a participant in the research project entitled **"Determinants of international patients' satisfaction with dental tourism in Bangkok"**

I consent to the researchers' use of information obtained from me in this interview, but do not consent to disclosure of my name or identity that can be used to identify me as individual.

I thoroughly understand the statements in the participant information sheet and in this consent form. I hereby give my signature.

Signature ....

(Participant/ Proxy) ....

Date .... / .... / ....

SECTION A

1. Gender: □ Male   □ Female

2. Age Group:

□ Below 21 years old   □ 51-60 years old

□ 21-30 years old   □ 61-70 years old

□ 31-40 years old   □ Above 70 years old

□ 41-50 years old

3. Nationality:_____

4. Education Qualification (please choose only one) :

□ No formal education   □ Bachelor Degree

□ Primary School   □ Master Degree

□ High School   □ PhD

□ Certificate/Diploma   □ Others (please specify):_____

5. Is this your first visit to Bangkok for dental services?   □ Yes   □ No

6. How did you know about this dental clinic/hospital? (You may choose more than one)

□ Internet   □ Travel agent

□ Friends/relatives visited Bangkok   □Travel magazine

□ Friends/relatives living in Bangkok   □ Others (please specify):_____

□ Referred by professionals

7. What type of dental care did you receive? (You may choose more than one)

□ Dental Check up

□ Teeth cleaning, scaling and polishing

□ Filling

□ Endodontic treatment (root canal treatment)

□ Restoration (crown / bridge)

□ Cosmetic dental treatment (teeth whitening / veneers)

□ Dental implants

□ Dental surgery (extraction / surgical removal of tooth)

□ Orthodontic dental treatment (braces / Invisalign)

□ Others (please specify):_____

8. Do you have any travel companion?

□ Alone

□ With spouse only

□ With family/relatives

□ With friends

□ With business associate

□ Special tour group

□ Others (please specify):_____

SECTION B

Please tick or circle the number based on what extent you agree to the following statements using the following scales:

1 – Strongly disagree   **2** – Disagree   **3** – Neutral   **4** – Agree   **5** – Strongly agree

Subject		Scales				
Treatment Quality						
1	I felt that I received excellence dental care during the treatment.	1	2	3	4	5
2	I was not concerned about the feeling of pain when I was at the dental clinic/hospital.	1	2	3	4	5
3	I felt that the treatment could relieve or cure most of my dental problems.	1	2	3	4	5
Dental Service Quality						
4	The dentist paid enough attention to my concerns in deciding on a dental procedure.	1	2	3	4	5
5	I found the dentist and staff are polite and friendly.	1	2	3	4	5
6	I had no difficulty in communication with dentist and staff.	1	2	3	4	5
7	I have confidence that the dentist and staff at this clinic/hospital are very competent.	1	2	3	4	5
8	I did not need to wait for a long time when I was at the dental clinic/hospital.	1	2	3	4	5
Affordability of Dental Tourism						
9	Bangkok offered a lower price for dental treatments.	1	2	3	4	5
10	The received dental treatment was a good value for money.	1	2	3	4	5
11	The accommodation was affordable.	1	2	3	4	5
12	The local traveling was affordable.	1	2	3	4	5

Infrastructure						
13	The clinic/hospital maintained adequate hygiene.	1	2	3	4	5
14	The clinic/hospital was clean and tidy.	1	2	3	4	5
15	The clinic/hospital has up-to-date infrastructure and facilities.	1	2	3	4	5
16	Proper cleanliness was maintained in the accommodation.	1	2	3	4	5
Destination Appeal						
17	Thailand has beautiful architectural buildings and historical sites.	1	2	3	4	5
18	Thailand is a safe place to visit.	1	2	3	4	5
19	Thailand has many interesting events and activities.	1	2	3	4	5
Destination Culture						
20	Thailand's culture is similar to my country's culture.	1	2	3	4	5
21	The local people are open to welcome people from other cultures.	1	2	3	4	5
22	Thailand's culture benefits dental tourists.	1	2	3	4	5
Accessibility						
23	The clinic/hospital is easily accessible by transportation.	1	2	3	4	5
24	The clinic/hospital provided proper directions on maps, brochures or websites.	1	2	3	4	5
25	Thailand offers well-organized transport services.	1	2	3	4	5
26	Thailand offers different categories of transport to suit individual needs.	1	2	3	4	5

SECTION C

Please tick or circle the number based on the level of your satisfaction to the following statements using the following scales:

1– Highly dissatisfied   **2**– Dissatisfied   **3**– Neutral   **4**– Satisfied   **5**– Highly satisfied

Subject		Scales				
Satisfaction						
1	Dental treatment quality	1	2	3	4	5
2	Dental service quality	1	2	3	4	5
3	Dental treatment prices	1	2	3	4	5
4	Thailand's safety and cleanliness	1	2	3	4	5
5	Beautiful scenery of Thailand	1	2	3	4	5
6	Thailand culture	1	2	3	4	5
7	Transportation services available in Thailand	1	2	3	4	5
8	Your overall satisfaction with dental tourism in Bangkok	1	2	3	4	5

Please tick or circle the number based on what extent you agree to the following statements using the following scales:

1– Strongly disagree   **2**– Agree   **3**– Neutral   **4**– Disagree   **5**– Strongly agree

Subject		Scales				
Loyalty						
1	My willingness to revisit Bangkok for dental treatments was high.	1	2	3	4	5
2	My willingness to recommend Bangkok to others was high.	1	2	3	4	5

Thank you very much for your time and contribution!