# FACTORS INFLUENCE MEDICAL TOURISTS' SATISFACTION AND THEIR REVISIT INTENTION TO MALAYSIA

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Factor Influence Medical Tourists' Satisfaction and their Revisit Intention to Malaysia
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- (1) This undergraduate research project is the end result of our own work and that due acknowledgement has been given in the references to ALL sources of information by their printed, electronic, or personal.
- (2) No portion of this research project has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.
- (3) Equal contribution has been made by each group member in completing the research project.
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#### **PREFACE**

It is compulsory to carry out a research project in order to achieve our study – Bachelor Degree of Business Administration (HONS). The topic of this research project is "Factor Influence Medical Tourists' Satisfaction and their Revisit Intention to Malaysia". This study is conducted because medical tourism is known as one of the attractive industries and it is getting familiar in tourism industry which may drive up the growth of country's economy.

In the research study, 3 independent variables are selected that have influences towards patient satisfaction of the medical tourism industry. These independents variables are medical service quality, perceived value, and health information technology (HIT). These selected independent variables are the possible factors that might influence the tourists' satisfaction in medical tourism industry.

#### **ABSTRACT**

Medical Tourism has emerged as an area of interest for tourists to travel across international borders to seek for medical services. This has intensified the competition of medical industry among countries. The main purpose of this research is to study whether the three variables: medical service quality, perceived value and health information technology will affect medical tourists' satisfaction in Malaysia. Furthermore, satisfaction of medical tourists also affecting their revisit intention. In this study, the survey was conducted and questionnaires were distributed to 410 medical tourist respondents which located at Kuala Lumpur, Ipoh, Penang, Perak and Selangor in Malaysia. SAS software version 7.1 was used to generate the data collected and we had used Reliability analysis to test the research model. The results show that all the variables (medical service quality, perceived value and health information technology) have the positive relationships with satisfaction and health information technology indicated the strongest influence. Further, patient's satisfaction is positively related to revisit intention for medical services. This study has provided implication for government, medical institutions and future researchers to gain understanding on the factors that influence the patients' satisfaction and revisit intention towards medical tourism in Malaysia.

Keywords: Medical Service Quality, Perceived Value, Health Information Technology, Patient Satisfaction and Revisit Intention.

## **Chapter 1: Introduction**

## 1.0 Introduction

Medical tourism has attracted tourists' attention from all over the globe. Travelling for healthcare has becoming a trend for the tourists to travel across international borders. In recent years, many countries have recognised medical tourism as their national industry and Malaysia had been acknowledged as a well-known destination for medical tourism. Malaysia has attracted significant attention where there is a growing number of medical tourists visited from various countries, such as Australia, India, and Indonesia. The market in medical tourism is rapidly expanding and the intense competition in international market had took place among the industry players. In this increasing competitive industry, Malaysia's core concern is to attract and retain medical tourists, hence, motivating the medical tourists to make repeat visitations for medical services is essential. Thus, this study aims to identify the underlining factors affect medical tourists' satisfaction and subsequently influence their intention to revisit for medical services in Malaysia.

# 1.1 Research Background

In present tourism condition, travelling for healthcare purpose is not a new sensation for the tourists from developed countries (Cham, Lim & Aik, 2014). This trend known as "medical tourism" when a patient visits to foreign country for the intention to seek medical treatment, dental, surgical care meanwhile vacation at the same time (Connell, 2006). The demand for medical services had become a common pattern of consumption for tourists, especially countries in Asia (Bookman & Bookman, 2007).

In 1998, when Asia economic crisis occurred, large numbers of countries had acknowledged the effect of diversification of economy activities and this has directed Malaysia to increase the engrossment in emerging medical tourism sector. Since then, the Malaysia government started to promote the medical tourism in 1998 as to branch out both of its healthcare and tourism sectors (Moghavvemi et al. 2016).

Based on the Table 1.1, medical tourism in Malaysia had gradually increased from year 2011 to year 2017. The number of healthcare travellers to Malaysia in 2011 to 2017 constantly increased from 643,000 to 1,000,000. It had contributed to the increasing in revenue of Malaysia from RM527,000 to RM1,300,000. Foreign patients travel to Malaysia for treatment are mainly from Indonesia (65% to 70%), Japan (5% to 6%), Europe (5%) and India (3%) (Mosbah, Abd Al Khuja, 2014).

Table 1.1: Medical Tourism Volume and Revenue (2011-2018)

Year	No. of Healthcare Traveller	Revenue (RM)
2011	643,000	527,000
2012	728,000	603,000
2013	881,000	726,000
2014	882,000	777,000
2015	859,000	914,000
2016	921,000	1,123,000
2017	1,000,000	1,300,000

Adapted from: Malaysia Healthcare Travel Council, 2018

The reasons of Malaysia have known as nation in this medical sector is based on several factors. The essential, affordability, quality and premium healthcare in Malaysia (Yap, 2007). The affordable cost of medical treatments in Malaysia act as a competitive advantage compared to other participating countries in Asia (Chaynee, 2003). Beside the costs, foreign medical tourists also attracted by the quality of services provided, advanced

technology of the facilities and treatment at a very favourable currency exchange rate. Next, Malaysia's medical healthcare also offered a varied services such as general medical screening, wellness and pain management, cardiothoracic surgeries, dental and fertility treaments, cosmetic surgeries, cancer treatments, and more (Malaysia South-South Association (MASSA), 2018).

Being as one of the best destinations for medical services, the achievement is built on the basis of continuous improvement of the medical healthcare services' quality. The success of Malaysia medical tourism industry has attracted more competitors into the market due to its profitability. To sustain the competitive advantage, there are more than providing good and affordable service, but also creating consistent value over the price for the medical tourists. A better quality of service with lower and affordable cost is the continual target for every service provider. The country needs to strive for this goal thus the medical tourists will not shift to other substitutions who provide better customer value. If the service providers able to meet the customers' expectation, their needs are satisfied and hence they will have more intention to revisit the country for medical treatment.

#### 1.2 Problem statement

Despite the medical tourism in Malaysia is in good condition, it still faced challenges due to the high competitions in the medical industry. Due to the stiff competition of healthcare industry within ASEAN countries and the increasing awareness of patients' satisfaction, the healthcare system of Malaysia still has room for improvement in order to build competitive advantage, and eventually attract more medical tourists and increase patients' revisit intention.

It is undeniable that service quality is crucial to create patient satisfaction. However, in developing countries, patients' perceptions on medical services have been disregarded

by health care providers (SaadAndaleeb, 2001). One of an enormous challenge faced by the healthcare system of Malaysia is our neighbouring countries such as Singapore are offering excellent medical and health care services and with an affordable cost. The low-quality services and high cost of medical treatments had encouraged patients to seek for high quality care treatment overseas with cheaper price. For instance, Singapore is hosting one of the most sophisticated, high-end healthcare architectures. The patients will consider the hospital that provides higher value with an affordable cost. Consequently, the patients will select the hospital that provides better medical care services.

Despite Malaysia has high reputation because of the affordability of medical cost, there are problems faced in attracting patients to visit. As shown in the Table 1.2, the medical cost for heart bypass is US \$12,100 in Malaysia which is higher as compared to US \$7,900 in India. This cost is about 65% of the cost of Malaysia. India provided same quality of services with cheaper price compared to Malaysia. Nevertheless, it is due to the labour intensive of the country that caused the low cost in the medical care services. Besides, Singapore is providing advanced medical treatments such as neuro surgery, joint replacement and liver transplant starts from Year 2007 (Pocock & Phua, 2011). Thus, patients will seek for better alternative after comparing the cost of varies countries.

Table 1.2: Cost comparison of medical treatment between various countries

Medical	USA	India	S. Korea	Thailand	Malaysia	Singapore
Procedure						
Heart	\$123,000	\$7,900	\$26,000	\$15,000	\$12,100	\$17,200
Bypass						
Hip	\$40,364	\$7,200	\$21,000	\$17,000	\$8,000	\$13,900
replacement						
IVF	\$12,400	\$2,500	\$7,900	\$4,100	\$6,900	\$14,900
Treatment						

Lasik	\$4,000	\$1,000	\$1,700	\$2,310	\$3,450	\$3,800
Gastric	\$25,000	\$7,000	\$10,900	\$16,800	\$9,900	\$9,750
Bypass						
Knee	\$35,000	\$6,600	\$17,500	\$14,000	\$7,700	\$16,000
Replacement						

Adapted from: Medical Tourism.com, 2019

Besides, the main reasons of Malaysia medical tourism to earn high reputation are because of the affordability of medical cost, government support and subsidies (Sarwar, 2013). The perceived value that the patients gained from the medical services create a great use of value of money after comparing the benefits gained and costs incurred. The competitiveness of the country is being built under the premium quality of medical services with affordable prices. Succeeding in local medical tourism industry has caused Malaysia to be imitated by the competitors. Hence, the local medical providers will need to utilise the resources to upgrade the quality of services and at the same time, sustaining the affordability of the price for medical treatments. Malaysia's government need to sculpt the medical institutions with proper perspectives to build long-lasting competitiveness through creation of patients' perceived value.

In this digital era, the health information in medical services have been digitalised. As one of the spotlighted health information technology, E-health is being built under the foundation of Internet which makes the communication between doctor and patient to exist without physically present in the same area. By utilising this information technology, it can be extremely beneficial to the medical service providers as it allows them to improve the patients' satisfaction by providing instant connection to the needy. Hampered by the budget constraints, the infrastructure of E-health in Malaysia is still developing (Chai, David, and Tracey, 2008). Medical tourism is about the battle of technology advancement. Without advanced technology, the patients will shift their preferences to other competitors (Ghani, Bali, Naguib, and Marshall, 2008). With the association of E-health, the service quality in

the medical sector can be positively improved. When come to patient care system, the implementation of E-health helps to capture the customers' value in term of instant counselling, online booking for appointment, and patient health screening.

# 1.3 Research Objectives

Based on the problem statement, the general objectives and specific objectives are formulated in order to create goal for this study.

## 1.3.1 General Objectives

The main objectives of this research are to explore the factors that affect satisfaction of patients who came for medical tourism in Malaysia, and to examine the relationship between tourist satisfaction and tourists' revisit-intention.

## 1.3.2 Specific Objectives

The specific objectives are as follows:

- 1. To investigate whether medical service quality affect medical tourist's satisfaction in Malaysia.
- 2. To investigate whether perceived value affect medical tourist's satisfaction in Malaysia.
- 3. To investigate whether health information technology affect medical tourist's satisfaction in Malaysia.
- 4. To investigate whether medical tourist's satisfaction will affect their revisit intention.

# 1.4 Research Question

In order to continuously conduct this study, we have developed few questions that connected from problem statements such as:

- 1. Does medical service quality affect medical tourists' satisfaction in Malaysia?
- 2. Does perceived value affect medical tourists' satisfaction in Malaysia?
- 3. Does health information technology affect medical tourists' satisfaction in Malaysia?
  - 4. Does medical tourists' satisfaction affect their revisit intention?

## 1.5 Hypothesis of study

Hypotheses 1: There is a positive relationship between medical service quality and satisfaction of medical tourists in Malaysia.

Hypotheses 2: There is a positive relationship between perceived value and satisfaction of medical tourists in Malaysia.

Hypotheses 3: There is a positive relationship between health information technology and satisfaction of medical tourists in Malaysia.

Hypotheses 4: There is a positive relationship between satisfaction and the revisit intention of medical tourists in Malaysia.

## 1.6 Significance of study

The findings of this study will contribute to the benefit of medical service providers such as hospital and medical tourism management. Medical institutions in Malaysia such as hospitals could obtain information and feedback related to the degree of patient's satisfaction who had received medical treatment in their medical institution. The findings also enable them to focus on the relevant factors that affect customers' satisfaction. Healthcare providers could utilise the factors when establishing productive ways in order to increase customers' retention and maximize revenue.

On the other hand, this research can contribute to the economy growth of our country, Malaysia. The increase development in medical tourism industry can eventually contributed to Malaysia's economy growth and simultaneously boost our country international reputation as a medical destination that provides quality healthcare services. Moreover, when patients satisfied with the medical services of Malaysia, it will increase their revisit intention, and spreading positive word of mouth towards the medical services in Malaysia.

Besides, this research provides travel agencies some ideas on the way to attract new medical tourists as well as retaining existing medical tourists to revisit by adopting the factors that are suitable for their businesses.

Furthermore, the idea presented in the study may be used as the reference data for academic institution or researchers in conducting others related findings. The patient satisfaction model developed from this research can provide information for medical research institutions by updating the statistics and data on the drivers of patient satisfaction in medical tourism industry.

In short, the findings serve could bring awareness to medical tourism practitioners

to learn the degree of satisfaction of a foreign patient, but also provide insights on how

destination countries utilise medical tourism as a win-win opportunity for themselves and

the patients by recognising the factors influencing tourists' satisfaction.

1.7 Chapter Layout

Chapter 1: Introduction

A conspectus of our research topic and background have been provided. Moreover,

the problems that been highlighted in the statement are served as the initiation for this

research. Hypotheses are being made in this chapter. The significance of study shows the

contributions of our study towards the industry.

Chapter 2: Literature review

The studies and summarisations of the past journals and articles that done by

previous researchers and publications had provided more information towards our research.

Key variables also been identified through the reading of the past theoretical frameworks

and models. A conceptual framework is being made to study on the relationships of the

variables.

Chapter 3: Research Methodology

The methods of how the study is being carried out is written under Chapter 3. To

be specific, the means of data analysis, data collection method and sampling design are

being discussed in this chapter.

Chapter 4: Data Analysis

In this chapter, the result of our study is being revealed to analyse on the validity of

the research. Descriptive analysis is adopted to interpret the demographic information of

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targeted respondents. Scale measurement is used to quantify the answer of respondents and inferential analysis is used to make assumption created from the result generated by Pearson

Correlation and Multiple Linear Regression analysis.

Chapter 5: Discussion and Conclusion

The statistical analysis is summarized. The major findings in connection with

previous chapter will be discussed and prove the research hypothesis and research

objectives. The implication, limitation and recommendation of this research will become

important to future researchers.

1.8 Conclusion

In summary, this chapter presents the research background and summary structure

including the background of Malaysia tourism and the importance of medical tourism

towards the development of Malaysia. Our main objectives of this research are to discover

the factors contribute to medical industry and to improve the patient satisfaction in medical

tourism. Through the problem statement, the researchers had developed the factors that

influence the patients' satisfaction towards medical tourism in Malaysia and the hypothesis

based on the variables.

**Chapter 2: Literature Review** 

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### 2.0 Introduction

There are two focuses in Chapter 2. The underlying theory followed by literature review are to show the definition, terms and dimensions including patient satisfaction, medical service quality, perceived value, and health information technology. Moreover, the relationship between those independent dimensions and patient satisfaction will be evaluated. The conceptual framework between independent variables and dependent variable provide a better image to further investigate the research objectives.

## 2.1 Underlying Theory

#### 2.1.1 SERVQUAL Gap Model

Gap model of service quality (SERVQUAL Gap Model) is an essential customer-satisfaction framework. Customer's satisfaction and service quality research are dominated by SERVQUAL, which proposed that service quality is basically a gap between customers' expectations regarding a service provider's general classes and the estimation of its actual performance (Cronin and Taylor, 1992; Parasuraman et al., 1991a).

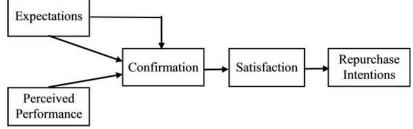
In the study of Parasuraman et al, (1985), they argued that service quality is defined as the gap between predicted or expected service (customer expectations) and the perceived service (customer perceptions). If customers' expectation is

greater than performance, then perceived quality is regarded less than satisfactory and a service quality gap arises. In other words, the wider the service quality gap exist, the lower the patient satisfaction. However, this does not necessarily mean that the service is at low quality but rather customer expectations have not been met. Therefore, customer dissatisfaction occurs while this is also an opportunity for service providers to improve the services in order to meet customer expectations.

#### 2.1.2 Expectancy Confirmation Theory (ECT)

ECT is one of the widely acceptance model explaining the antecedents of customer satisfaction. The core of satisfaction process is the comparison of what was expected with the product or service's performance while this process has traditionally been described as the 'confirmation' process. Hence, this research introduced ECT as a substantial theory for the framework that measure foreign patients' satisfaction.

Figure 2.1 Expected confirmation theory (ECT)



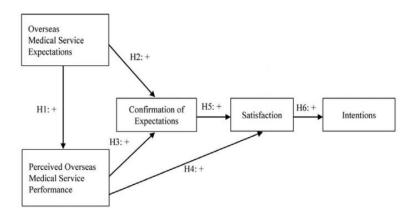
Adapted from: Richard L. Oliver (1977). An Expectation Confirmation Perspective of Medical Tourism.

Expectation confirmation theory (ECT) was developed by Richard L. Oliver in year 1977. Basically, this theory proposed expectations, tied with perceived performance, lead to post-purchase satisfaction; while this effect is mediated through positive or negative disconfirmation between expectations performance.

Expectation of customers refers to the perceived value or benefits which they expected when consuming a product or services (Albert, 1995) while the perceived performance refers the perceptions of the actual performance of a product or services. According to ECT, consumer will form a prior expectation on a specific product or service. Then, consumers develop their own perceptions of the performance of the products or services after they had used the products or services. After comparing the perceived performance with their initial expectation, they will determine whether their expectation had confirmed, and this led to their satisfaction or dissatisfaction. Consumers who are satisfied will have a repurchase intention, whereas dissatisfied consumers avoid consume again and seek for other alternatives.

Figure 2.2 Research Model of 'An Expectation Confirmation Perspective of Medical

Tourism'



Adapted from: Chou S. Y., Angelina I. T. Kiser, Erlinda L. Rodriguez (2012).

Besides, ECT was successfully tested in the study of 'Expectation Confirmation Perspective of Medical Tourism' by Chou, Angelina and Erlinda (2012). Before foreign patients receive medical treatment overseas, they will form their own expectation on the service quality, value as well as the technology availability. Meanwhile, if the medical treatments they received had performed equal or exceed their expectations, the medical tourists will probably feel satisfied

and increase their intention to revisit, in contrary, if the medical treatments performed below their expectation, disconfirmation of expectation will occur and the patients will feel dissatisfied.

#### 2.1.3 Technology acceptance model (TAM)

David, Bagozzi, and Warshaw defined technology acceptance as an individual's intentional or voluntary use of a particular technology. Although there are other predictive models exist, TAM is the most widely recognized theory to study the behavioural intention in the information system. TAM is originated from Theory of Reasoned Action (TRA) which is a very general theory suggested that the actual behaviour of a person is affected by his or her behaviour intention. The intention is determined by a combined influence from a person attitude and subjective norms.

Perceived
Usefulness

Intention to
Usage
Behavior

Perceived
Ease of Use

Figure 2.3 Technology acceptance model

In short, TAM suggests that an intention to adopt a new technology is determined directly by attitude, perceived usefulness, and perceived ease of use. The attitude component of the model measures the affective responses of an individual towards accepting a new technology, while the behavioural intention component of TAM explained an individual's intentions to utilize a new technology (David, Bagozzi, and Warshaw 1989).

Furthermore, TAM model could be applied to predict users' tendencies towards technologies acceptance. The perceived ease of use of the technology positively influences the perceived usefulness and the attitude towards technology. For instance, predictions involving e-health acceptance can be made from precedent characteristics of patients, it is essential for healthcare service providers to examine these factors prior to make decisions regarding e-health design and deployment.

### 2.2 Literature Review

#### 2.2.1 Medical Tourism

Medical tourism has been defined differently over the past researches. The literatures do not provide a standard definition of medical tourism that has been accepted by all of the researchers (Rodrigues, Brochado, Troilo & Mohsin, 2017). Some other researchers defined it as an economic activity that based on integrated services provide by two sectors which is medical and tourism (Heung, Kucukusta, & Song, 2010). Generally, this process usually is facilitated by the private medical sector, whereas both of the private and public sectors are involved in the tourism industry. The travel of receiving surgery or other medical procedures allow the medical tourists to take opportunity to visit the popular attractions of their destination, thus it is a combination of health care with a vacation (Gupta, 2004).

Medical typically refers to the restoration of individual's health through medical treatment. The medical aspect involves any medical services pertaining to diagnosis, hospitalization, surgical operations and other medical related services to improve or restore health. On the other hand, tourism can be referred to the related activities of experiencing the attractions of the visited countries, touring, hospitalization and vacationing (Cham, 2016).

The term of "medical tourism" has been first used by the travelling agencies to market a new segment of tourism (Rodrigues et. al., 2017). The term serves as an umbrella term which many promoters of tourism have accepted and associated with travellers in search of better health inclusive of not only necessary and electrical medical treatment, but also wellness therapies bundled with services for lodging, entertainment, food and beverages, and touring or exploring the attractions of a destination (hall, 2011). Some researchers said that medical tourism was initially emerged from "health tourism" that outside one's health care jurisdiction for the improvement or restoration of the individual health through wellness and medical procedures (Suess, Baloglu & Busser, 2018). In their study, the meaning of wellness that refer to the change in an individual's health through bodies and minds without surgical or invasive procedures, is contradict to the meaning of medical which typically refers to restoration of an individual's health through medical intervention or surgery (Carrera & Bridges, 2006).

In Malaysia context, modern healthcare facilities, qualified medical experts and affordable prices are the highlighted attributes of the Malaysia medical tourism (Heung, Kucukusta & Song, 2011). In the study of Leng (2007), Malaysia's government is playing a vital role in promoting medical tourism by providing tax incentive for those medical providers. Therefore, the price of medical procedures in Malaysia is more competitive compare to their competitors due to lower taxes and the competitive advantage is built on the basis of government involvement and subsidies.

Table 2.1 Definition of Medical Tourism

Authors	Definitions

Heung, Kucukusta & Song (2010, p.237)	An economic activity that based on integrated services provide by two sectors which is medical and tourism.		
Johnson, Crooks, Synder & Kingsbury (2010, p.1)	Medical tourism involves patients intentionally leaving their home country to access to non-emergency health care services abroad.		
Cormany & Baloglu (2011, p.710)	The act of travelling across broader to receive medical care.		
Yu & Ko (2012, p.81)	Medical tourism involves not only going across the broader to receive medical procedures, but also the search for destinations that have the most technical proficiency and which provide it at the most competitive prices.		
Wongkit & Mckercher (2013, p.5)	The travel of people to a specific destination to seek medical help that forms the primary purpose of their trip.		
Rodrigues et. al. (2017, p.17)	A combination of vacations and affordable cosmetic and dental procedures.		

Adapted from: Developed for the research

The medical tourism in this study focuses on the medical tourists' who have the intention to revisit Malaysia with the purpose of having medical care by understanding the service quality, perceived value and health information technology which will let the tourists feel satisfied towards the medical tourism in Malaysia.

#### **2.2.2 Patient Satisfaction**

Satisfaction has evolved in different concepts as among the researchers agreed that the experience of consumption can be an assessment for the individual satisfaction (Johnson, Anderson, & Fornell, 1995). Personal preferences and expectations for patient satisfaction were the functions of individual patients to

experience care which had mediated by Ware, Synder, Wright, Davies (1983). The key factors of consumer satisfaction will exceed the expectation based on the performance of the product or service (Meesala & Paul, 2018). While, Kotler and Keller stated that, patient satisfaction can be measured by the patient experience or attitude towards treatments and services after they encountered the care services. After gathering some experience over time, satisfaction can be considered as a judgment of individuals based on any object or event (Faezipour & Ferreira, 2013). The patient will experience medical treatment and process once they make decision to visit until the time they discharge in the hospital (Merlino & Raman, 2013).

Table 2.2 Definition of Patient Satisfaction

Author	Definition
Zineldin (2006)	Satisfaction is an emotional reaction and it can be defined in different way as it is a psychological concept.
Pellino and Ward (1998)	Personal emotional assessment of care in reference to an individual medical care experience.
Pascoe (1983)	The feedback from medical care receiver to the noticeable aspect of the customer experienced through the process, outcome and context.
Oaklan (2000) and Owusu- Frimpong, Nwankwo, & Dason (2010),	Customer satisfaction as cultivate and meet the customer preferences and expectations in order to improve the customer delivered value and deal with the satisfaction of customer.

Rama	and	Kanagaluru	Patient emotions, feelings and their perception of
(2011)			delivered medical care services can be referred by patient
			satisfaction.
Hansen,	]	Beitelspacher,	The level of preference and fulfilment of the customer is
Hansen, Deitz (2)		Beitelspacher,	The level of preference and fulfilment of the customer is related to the customer attitudes towards the product or
ĺ		Beitelspacher,	
		Beitelspacher,	related to the customer attitudes towards the product or

Adapted from: Developed for the research

The medical care services give a satisfying level of consumption which related to fulfil the patient satisfaction. Besides, the overall level of contentment could be fulfilled by experiencing the product or service provided (Syed, Nazlee & Shahjahan, 2007). Andaleeb (1998) argues that, it is crucial to deliver customer satisfaction because today's consumers are more educated and aware than in the past. Thus, patient satisfaction is the main factor to measure the proficiency of any medical system in the worldwide (Sajid & Baig, 2007).

The perception of consumers for the post-purchase state will reflect the consumer feeling which is favour or unfavourable after experience the product or services can be known as satisfaction (Woodside, 1989). According to Tse and Peter (1988), the assessment of the perceived discrepancy among the prior expectation and actual performance which can determine as the satisfaction of customer. While Zairi (2000) says that, the current and potential performance of the business can be a guideline to monitor and enhance the consumer satisfaction. Customer satisfaction can be improved by enhancing the customer delivered value through cultivating, meeting the customer preferences and expectation. Patient satisfaction shows a significant role in provide services and positively effects the patient's trust (Moliner, 2009; Alrubbaiee & Alkaa'ida, 2011).

Satisfactions had involved five determinants which is occurrences, value, expectations, interpersonal comparisons, and entitlement. Occurrence indicate as general viewpoint of what happened in real world. The assessment by the patients regarding the healthcare experiences can be determined as value and expectations indicates to the viewpoint of the patients which may occur in the future. Interpersonal comparisons indicate that the patients can make an evaluation of a healthcare institution with their past experiences while entitlement indicates as the patients' expectation that they may claim for specific results (Saiprasert, 2011). Hence, the patient satisfaction in this study can be defined as the patient will feel satisfied when they received the medical services which meet their preferences and expectations.

## 2.2.3 Medical Service Quality

Service quality can be clarified as the assessment of the customer on the outcome of the services provided to them (Zeithaml, 1988). The perceived service quality on the services that offered by the company can be evaluated as expectations and perceptions (Parasuraman, 1988). The differences between the service expectations and customers' opinions towards the actual service delivered can be determined as the service quality (Parasuraman, Zeithaml, and Berry, 1988). Customer expectations towards the service quality has become the most critical steps in determining and delivering high standard of service quality as it will affect the customer satisfactions (Zeithaml, 1996). According to Bowen & Chen (2001), the viewpoint of the customer for the quality whether has met his or her expectation. Therefore, in this study the service quality can be defined as the patients can make an evaluation based on their perception on the medical services that provided to them.

The customer evaluation about an overall excellence or superiority of service quality can be defined by the SERVQUAL (Parasuraman, Zeithaml and Berry, 1988). SERVQUAL scale survey can be used to gather pre-service and post-service data from consumer in order to measure the perceived quality. In the early

stage, gap model is the basis for the SERVQUAL scale which suggested by Parasuraman, Zeithaml and Berry (1985, 1988). Therefore, a few researchers had determined the service quality in the healthcare industry by using SERVQUAL model. In Malaysia private medical service quality had been measured by using SERVQUAL model by Butt and de Run (2010). Other researchers had used the SERVQUAL method to measure the healthcare service quality. Hence, Rohini and Mahadevappa (2006) stated that SERVQUAL instrument is one of the reliable and consistent measurements for healthcare service quality by developing it to study the viewpoint of service quality. SERVQUAL used to be known as a reliable and valid instrument in determining the hospital environment (Babakus and Mangold, 1992).

The service quality (SERVQUAL) dimensions are widely accepted as it including tangibility, reliability, responsiveness, assurance and empathy. The effects on the significant of quality outcome such as patient satisfaction can be analyse and comprehend through the five dimensions (Meesala, Paul, 2016). Initially, the tangibility for the aspect of service quality dimensions which need to do with physical environment such as physical facilities and equipment, as well as the appearance of personnel (James, Calderon, Cook, 2017). Reliability is the ability to complete promised service dependably and when the employees could precisely show their honesty towards the service provided to the patients, it will show high level of satisfaction. Responsiveness is the willingness to assist and bring efficient services to the customers such as increase the processing information (Rad, Som & Zainuddin, 2010). Besides, assurance is the employee knowledge, courtesy and capability to influence the trust and confidence when there is a high level of assurances which mean that the patients are likely to experience high level of satisfaction (Rad, Som & Zainuddin, 2010). Empathy is the medical institutions provide caring and individualized considerations to its customer (Meesala, Paul, 2018). From the five dimensions, functional quality and service performance will be likely to be enhanced through the quality system that had been created.

Service quality is a continuing concept that includes quality performance in all activities commenced by management and employees (Prayag, 2007). The main factor which affect the medical tourist satisfaction is due to the high qualified doctors that provided their services in the country (Zailani, Mohezar Ali,

Iranmanesh, Moghavvemi and Musa, 2016). The key issue of providing excellence services to improve the relationship between customers and suppliers only can be achieved when the customers' needs are known well. Services act as a significant role in business world to make improvement in order to survive in future (Badler, 2004). Customers today's required to have standard and quality services which will affect their decision in the future.

#### 2.2.4 Perceived Value

Perceived value is referring to the trade-off of benefits and costs perceived by a customer. Criteria of perceived value is based on what is received and given and can be defined in either a narrow or a broad perspective. The narrow perspective of value is only focusing on the single dimension of monetary value, which is the services received by the customers worth the price they have paid. Perceived value is created when customers have the feeling of the perceived benefits (quality) that they had enjoyed and received exceeds the price that they have paid for the products or services. Bokserger and Melsen (2011) argued that this interpretation is not enough to conceptualise perceived value due to it is not only focusing on the price, but on a bundle of benefits and sacrifices reflecting the dimensions. SERV-PERVAL (Service perceived value) was implemented in the medical tourism sector previously (Chen & Chen, 2010, Dumana & Mattila, 2005) and the use of dimensions reflecting both monetary and non-monetary benefits of perceived value were verified through the analysis (Prajitmutita el al., 2016).

The definition of customer perceived value has been interpreted differently over time. However, the definition of 'value' adopted in this study is: 'all factors, either qualitative or quantitative, either subjective or objective, that form the complete customer consumption experience (Schechter, 1984 as cited in Zeithaml, 1988). This definition identifies the subjective and multiple dimensional aspects of customer perceived value. Perceived value represents "the consumer's overall assessment of the experience of a product or service based on perceptions of what

is received and what is given" (Zeithaml, 1988, p. 14). Perceived value is being interpreted differently based on different type of product or service consumed and is measured separately in different areas (Lee et al., 2007). Traditionally, perceived value was used to measure the utility a product's price and satisfaction given, but in recent years 'value for money' has played a vital role as the primary determiner of perceived value (Gallarza & Saura, 2006). Value for money acknowledges the value of consumer behaviour approaches to identify the customer perceived value (Duman, 2002).

Perceived value can be related to perceived price in term of the trade-off between what is received and given. Price is an important factor to affect the tourism industry. For different types of businesses, including tourism, it is important to determine the customers perceived prices and price changes. Customers concern about price fairness will affect their attitude towards their product and service choice. Customers often use the reason of paying the price as an indication when judging their product and service experiences and forming their attitudes and feedback towards the products or services. In such cases, price reasonableness will likely to influence the formation of behavioural intention (Han & Hyun, 2015). In this research, functional value has been used to evaluate the value between price and performance of medical treatment.

Tourists will evaluate the experiences differently based on different situation, incidents and resources that they have encountered. Tourist's studies disclose that perceived value are proven to affect satisfaction, and behavioural intention. They find that emotional value and novelty value give impact towards satisfaction and suggest that they become even place higher ranking than value for money as consumers become more complex and difficult to defined (Prebensen & Xie, 2017). Emotional value has been defined as the feeling or affection of medical tourists that generated after receiving medical services.

According to the research of Kim & Thapa (2018), Perceived value is followed by consumer judgements, which is depending on outcomes, such as prepurchase information, contextual judgements, and moment of purchase. Perceived value is largely influenced by utilitarian perspective, whereby economic and

cognitive valuations are employed to examine the cognitive trade-off between the costs and benefits. Hence, it is advocated that perceived value based on a multiple-dimension construct embrace emotional value, social value and hedonic and utilitarian dimensions that critically builds up positive emotions and customer satisfaction (Lee et al., 2011). The definition of social value in this research is the ability of medical treatment that helps medical tourists to embrace their social self-concept. Thus, perceived value in this research can be defined as the value created from the satisfaction of medical tourists towards the medical treatments.

## 2.2.5 Health Information Technology (HIT)

According to Brailer, D. (2015), Health Information Technology (HIT) is defined as application of information processing that involves computer hardware and software that deals with the storage, retrieval, sharing, and use of healthcare information, data, and knowledge for communication and decision making. This included software applications such as electronic health records (EHRs), personal health records (PHRs) and electronic prescribing, or computerized provider order entry (CPOE) among other tools. The expectation of HIT was combined with the internet or technology to cultivate the patient-focused care, to promote transparency in price and performance, and also to enable the consumers to drive the transformation of the healthcare system.

Health Information Exchange (HIE) is a one of the applications of HIT. It had consisted of physical component and it had included the hardware and software component described as HIT. HIE is designed for sharing clinical and healthcare administration data among care practitioners and across practice settings who are not part of the same organization (Onyinyechi U., 2017).

The reliable of information availability is important to the medical tourists as they are unfamiliar with the health care system and options abroad which available to them and they are more rely on the internet for information search to

facilitate decision making (Moghavvemi S., 2017). The audible information such as electronic word-of-mouth (e-WOM), recommendations from family and relatives, or visual information from browsing medical providers' websites with good reviews from previous patients, may help a person to plan for travelling abroad to seek for medical treatment.

Health organizations discern that the technology could help to enhance the quality of health services and to reduce their costs by investing in the health technology. The health sector can be more efficient, productive, improve the service quality, and increase the customer satisfaction by using the information system. Health Information System (HIS) is one of the supportive software of HIT. HIS is a system that can help to capture, stores, manages or transmits information that related to the health sectors. It supports the operations in the hospital's practical, tactical, and strategic levels. The principal of the academic research hospital aims to use this system to enhance the personnel efficiency and patient care quality (Onyinyechi U., 2017).

HIT had included E-health as one of the software and it can be defined as the use of information and communications technologies (ICT) to support in the health or medical field which is including the healthcare service, health surveillance, health education, knowledge, and so on (World Health Organisation, 2005). E-health is one of the important software of HIT and it can be defined as a mechanism to bring growth, cost savings, and process improvement to healthcare. E-health has shown to be a better choice for medical providers in term of reducing the risk of liability and expenses incurred. Thus, an increasing number of providers are coming to adopt the reality that patients want to be involved "as a participant and partner in the flow of information" relating to their own healthcare (Wilson and Lankton, 2014).

According to World Health Organisation (2014), developing and developed countries need to integrate E-health into the daily routine of healthcare staff to practice the reality in developing. This enables the medical practitioners to communicate with others who are separated geographically about the medical issues and diagnosis of complicated diseases by online communication. Thus, E-

health has the potential to improve the management of health care systems, healthcare services and patient care (Ruxwana, 2010). Moreover, E-health is an emerging field in the connection of medical informatics, public health, and improved of information delivery through the internet and advanced technologies (Eysenbach, 2001).

In terms of health and demographic variables, users of Internet health services are different from the general population. The use of healthcare technologies is to read the information regarding to the health matters, and thus to decide whether to see a doctor and prepare for the follow up appointment with the medical provider. Hence, health information technology would appear to support and enhance the efficiency and effectiveness of the medical institution (Andreassen, 2007). Hence, HIT in this research can be defined as the satisfaction of medical tourists was created by the convenience and acceptance towards the medical treatments.

#### 2.2.6 Revisit Intention

Revisit intention refers to the degree of willingness of a visitor to repeating an activity or revisiting a destination (Baker & Crompton, 2000). Previous studies have focused on the factors that affecting revisit intention in order to indicate the reasons for the visitors to visit a destination at the future time (Meleddu, Paci, & Pulina, 2015). Um, Chon, and Ro (2006) found that there are different factors influencing first-timers' revisit intentions and repeaters' intentions. They further pointed out that first-timers are influenced mainly by the attitudes formed during previous travels, while repeaters' intentions may be inspired largely by promotional activities which can recall their positive memories. Hence, in this study revisit intention can be defined as the patients have the intention to revisit the destination once they received the medical services.

Intention to revisit a tourism destination has been defined as an individual's likelihood to make a repeat visit to the same destination, providing the most accurate prediction of a decision to revisit (Han & Kim, 2010). As Um, Chon, and Ro (2006, p. 1141) argue, "Revisit intention has been regarded as an extension of satisfaction rather than an initiator of the revisit decision making process". Past studies have focused on factors that influencing revisit intention (Alegre & Garau, 2011; Baloglu, 2000; Chen & Tsai, 2007), as it is better to attract visitors to come rather than look for new visitors (Um et al., 2006). For example, Petrick, Morais, and Norman (2001) concluded that intention to revisit a destination is influenced by the tourist's level of satisfaction, the perceived value, and past behaviour.

# 2.3 Proposed Theoretical Framework

Figure 2.5 has showed the proposed framework for this research. It is formed by three independent variables which is medical service quality, perceived value, and health information technology to investigate the impact on satisfaction of medical tourists. There is also has a relationship between satisfaction of medical tourists and revisit intention of the medical tourists.

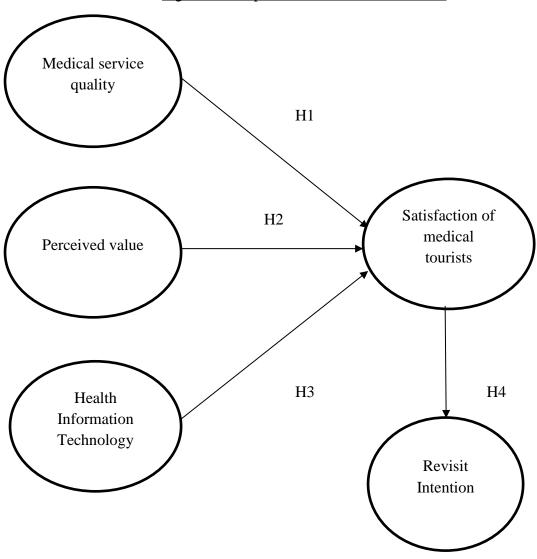


Figure 2.4 Proposed Theoretical Framework

Adapted from: Developed for the research.

This research is aims to find out how satisfaction of medical tourists in Malaysia is affected by these environment factors as mentioned above and also the relationship between satisfaction and revisit intention. Since the study among these relationships in Malaysia is limited, therefore this research may suggest how these environmental factors becoming significant factor of satisfaction in Malaysia medical tourism industry. Further study and investigation are required to prove these relationships.

## 2.4 Hypothesis Development

## 2.4.1 Medical Service Quality and Patient Satisfaction

The medical service quality had given a great impact on patient satisfaction as when the hospital had provided high quality of medical services it will lead to high patient satisfaction. Likewise, there is a positive relationship between the service quality and patient satisfaction which approved by Lee (2000). An analysis shows that the preferable service quality is a significant influence of customer satisfaction and loyalty, which commit to competitive advantage of the healthcare providers (Laohasirichaikul, 2011, Lee, 2010). Furthermore, the relationship of service quality dimensions to loyalty, empathy and assurance had given strong impact on patient willingness to revisit the hospital (Anbori, 2010).

Besides, the professional doctors are the main factor which influence the medical tourist's satisfaction (Zailani, Ali, Iranmanesh, Moghavvemi and Musa, 2016). The satisfaction of patients usually has a better compliance to dental care, attend scheduled consultation and experience less pain and doubt as it will affect the service utilization patterns (Lo, 2002). Hence, the viewpoint of consumer regarding the quality is a significant variable to evaluate the satisfaction level as it is crucial to reflect the quality care based on the healthcare situation and it shows a strong relationship between quality of products or services and satisfaction of consumer which had discovered by Smith and Swinehart (2001).

H1: There is a positive relationship between medical service quality and satisfaction of medical tourists in Malaysia.

#### 2.4.2 Perceived Value and Patient Satisfaction

Previous research has shown that perceived value leads to favourable outcomes such as satisfaction and behavioural intentions. Both repetitive purchases and positive word-of-mouth recommendations are two main indicators of customer loyalty and may be explained on the nature of tourist satisfaction. Satisfaction is the result of perceived expectations of consumer being satisfied by outcomes of the experience. Further, value needs to be subjectively defined by customers when they are satisfied with the total experience (Vandermerwe, 2003). Thus, high in quality service value results in high customer satisfaction which ultimately leads to revisit intention (Hu, Kandampully, & Juwaheer, 2009). Within a tourism perception, perceived value is positively influence on customer satisfaction (Chen & Chen, 2010).

It is true that escalating customers' perceived value is a winning strategy for a firm's long-term business success. In particular, there is a general consensus that when customers perceived positive value, they generate powerful motivations to make favourable decisions about a firm, contributing to successful long-term relationships and has positive attitude towards a firm's reputation. While minor discrepancies in the definition of perceived value exist, researchers generally describe it as individuals' overall appraisals of both financial and non-monetary considerations about a product or service, based on a trade-off between the relative rewards and the sacrifices required to acquire such rewards (Han & Hwang, 2013). Accordingly, the greater the value that patient perceived, it could result to the greater patient's satisfaction

H2: There is a positive relationship between perceived value and satisfaction of medical tourists in Malaysia.

## 2.4.3 Health Information Technology and Patient Satisfaction

According to Mehrdad Roham (2012), for various HIT adoption scenarios using ANFIS simulations, the impact of HIT adoption on patient satisfaction was obtained. Adaptive neuro-fuzzy inference systems (ANFIS) is a system that has provided alternative methods to address the non-linearity, imprecision, uncertainty, and partial truths that are found in the real world when modelling complex systems. There has a significant of increasing in patient satisfaction through the full implementation of HIT. The government and policy makers can use the implementation of HIT such as ANFIS as a modelling technique to predict the patient satisfaction. Therefore, the researchers have formulated the hypothesis to study about the relationship between health information technology (HIT) and patient satisfaction towards medical tourism.

H3: There is a positive relationship between health information technology and satisfaction of medical tourists in Malaysia.

#### 2.4.4 Patient Satisfaction and Revisit Intention

The relationship between the patient satisfaction and revisit intention had been severely investigated in medical tourism context (Zineldin, 2006, Rama and Kanagaluru, 2011, Pascoe, 1983, Pellino and Ward, 1998). As the studies have shown that satisfaction is a key variable, as satisfied consumer are more likely to repeat purchase and tend to be less receptive to competitors' offerings than dissatisfied consumer (Zeithaml & Berry, 1996). According to Andaleeb (1988), patient satisfaction will boost up the reputation of medical institution which will eventually lead to growth of service use and market shares. The long-term success of medical care provider will be favourable when the satisfaction of consumers is possibly to show supportive behavioural intentions (Naidu, 2009). When the satisfaction level and the willingness to repurchase increases which mean that the customer evaluate their consumption experiences is favour (Chiu, Hsu, Lai & Chang, 2012; Jani & Han, 2013). For instance, when the patient feel satisfied with the services provided they will tend to have revisit intention to the destination.

Factor Influence Medical Tourists' Satisfaction and their Revisit Intention to Malaysia

Hence, the following hypothesis had been developed to further investigate the

relationship between patient satisfactions and revisit intention in medical tourism.

H4: There is a positive relationship between satisfaction and the revisit

intention of medical tourists in Malaysia.

**Chapter 3: Methodology** 

3.0 Introduction

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This chapter carried out the process of collecting data and information for analysis purpose and it is a vital part of this study. The research methodology is used to study of the factors that affect the patient satisfaction in medical tourism.

## 3.1 Research Design

Business research consists of two different types of researches which named as basic business research and applied business research. Basic business research is conducted with an attempt to enhance the general knowledge without solving a specific pragmatic complication. On the opposite, applied business research is the research which works toward a modify business decision for specific organization. Basic business research is adopted in this research as the researchers is attempting to conduct specific types of research to investigate the influences of medical service quality, perceived values, and health information technology on patients' satisfaction and their revisit intention in medical tourism. Besides, the researchers may determine the specific cause and effect relationship from any variable in the research study by using basic business research (Zikmund, Babin, Carr & Griffin, 2013).

According to Zikmund et al. (2013), qualitative business analysis is a research that allows the researcher to provide the explanation of phenomena without relying on numerical measurement to form business objectives. It more focus on the disclosing of true inner meanings and also novel insights. Observation and interpretation are often used in qualitative research as well as used in exploratory research design. Instead, the quantitative business analysis is a research that delivers research methods through verifiable evaluation which accommodates the use of mathematical measurements and analysis. Quantitative business analysis is relying more on measurements, test and is more often used in descriptive research and causal research design.

In this research, quantitative research method is found to be more suitable to investigate the satisfaction of medical tourists. This is because the researchers are analysing the hypothesis in accordance to have a basic and grounded theory to support our hypothesis and the questionnaire also consists of fixed alternative questions. Hence, quantitative criterion measurement is more reliable and valid as compared to qualitative research method.

### 3.2 Data Collection Methods

According to Lim & Ting (2013). The process of collecting data is the most significant process. Meanwhile, there are two categorized under the methods of collecting data which are primary and secondary data. The data collection method is severely efficiency to the results of a research analysis as well as it will also help the researchers on the road to an excellent and successful research project. The primary and secondary data are derived to be used in data collection and concluding a hypothesis for this research analysis.

### 3.2.1 Primary Data

Primary data collection is mean gather the fresh and first-hand information relevant to the research topic (Khan, 2011). The first-hand source is collecting from

the original data which mean that the researcher can mainly gathering specifically data that is directly involved in the primary data. (Grimsley, n.d). Primary data involve interview, questionnaire and survey for researcher to collect data for the research projects. Questionnaire is a well-known and fundamental tool in obtaining data on open knowledge, and also can give important information which is beneficial for the research project. Through the observation of questionnaire researcher can gain information from the respondent through social attributes, attitudes to issues and behavior (Bird, 2009). Most of the researcher will use questionnaire to gather information with no inclination as it is the most famous and institutionalized strategies.

This strategy had been used in our research project. By making use of the questionnaire, it allows us to gather direct data about the respondents. Besides, questionnaire techniques also encourage and efficient process in collecting the significant information for the analysis extend (Lietz, 2010). In the research project, we had use questionnaire as our primary data collection tool because it is cost-efficient and easy to understand by the patient. We are able to collect the result from respondent by using questionnaire as the primary data. It capable in collecting the data by sending emails or link. The researcher can get more realistic view about what is the current trend that are preferred by respondent as the result of primary data is always up-to-date.

Secondary data has not been used in the study. This is due to the data that been collected from the questionnaire is categorized as primary data.

# 3.3 Sampling design

Sampling design that involves in research analysis consist of population of the study, location sampling, sampling frame, sampling elements, sampling technique and sampling size.

### 3.3.1 Population of study

The population of the study is defined in the first step. Target population defines as a group of people who has been classified and analysed by the researchers in their study. In this research, the targeted population are focused on the tourists who are receiving medical treatment in Malaysia. According to Nisha (2018), MHTC has recorded a total of 912,500 medical tourists in Malaysia.

### 3.3.2 Sampling Location and Sampling Frame

Sampling locations of our study are mainly focus on Kuala Lumpur, Penang, Perak and Selangor states of Malaysia. The reasons behind the selection of these locations is due to the high number of hospitals which provide medical tourism are located intensively within the mentioned areas. The geographical distribution of medical tourism hospitals in Malaysia are stated in Figure 3.1 and the number of medical tourism hospitals in Malaysia are shown in Table 3.1.

Figure 3.1: Geographical Distribution of medical tourism hospitals in Malaysia



Adapted from: Medical Tourism Malaysia

Table 3.1: Number of medical tourism hospitals in Malaysia

States of Malaysia	Number of medical tourism private
	hospitals
Selangor	11
Johor	4
Kuala Lumpur	3
Perak	3
Penang	3
Kedah	2
Negeri Sembilan	2
Melaka	2

Adapted from: Medical Tourism Malaysia

As mentioned in Table 3.1, Selangor ranks as the top state with the highest

number of medical tourism hospitals. The runner-up state is Johor which consists

of 4 hospitals while Kuala Lumpur, Perak and Penang have 3 hospitals. The reason

that Johor is excluded from the sampling location decision is because Johor located

far from the selected location distribution.

Sampling frame here referring to an actual list of all the elements in a

population from which a representative sample is derived. Due to the huge

population and confidentiality of patient information, it is extremely difficult for

the researchers to obtain patient information. Therefore, the actual population for

the medical tourist is unknown and this contribute to the use of convenience

sampling.

3.3.3 Sampling Element

The elements of the respondents are identified to select the population.

Medical tourists that received and receiving medical treatment are selected as our

sampling element. The reason for such selection is to analyse the patient satisfaction

and revisit intention.

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## 3.3.4 Sampling Technique

Probability sampling refers to each individual in the population who has the equitable possibility of being selected, whereas non-probability sampling provides a random chance to all individuals being chosen.

The unknown in the actual list of population hindered the usage of probability sampling. The researchers applied consecutive sampling into the distribution of questionnaires. The technique includes all the respondents that meet with the criteria of the study. In this research, medical tourist is the only criteria need to be met. This technique allows the research to filter those who does not meet with the requirement.

## 3.3.5 Sampling Size

Table 3.2 below showed the sample size for a given population size of the research.

Table 3.2: Sample Size for a Given Population Size

POPULATION	SAMPLE
40000	380
50000	381
75000	382
1000000	384

Adapted from: Krejcie, R.V., & Morgan, D.W. (1970)

As mentioned in Figure 1.1, the total medical tourists that came to Malaysia to seek for medical treatment has reaches up to 921,000 in Year 2016. As refer to Table 3.2, Krejecie and Morgan (1970) had simplified the size decision by

providing a sample size table showed that 384 respondents are required in this research. Therefore, 384 questionnaires have been requested to be distributed to the targeted population. In order to reduce the possibility of non-response bias and refusal to participate in the survey, a total of 400 questionnaires will be distributed to the respondents to avoid omission and missing data (Barlett, Kotrlik & Higgins, 2001). Below formula is the one used by Krejecie and Morgan.

Figure 3.2: Sample size formula

$$n = \frac{X^2 * N^* P^* (1-P)}{(ME^2 * (N-1)) + (X^2 * P * (1-P))}$$

Where:

n = Sample size

 $X^2$  = Chi- square for the specified confidence level at 1 degree of freedom

N = Population Size

P = population proportion (.50 in this table)

ME = desired Margin of Error (expressed as a proportion)

Adopted from: Krejecie & Morgan (1970)

By using this calculation, they have determined the sample size required based on the population. The result is then has been tabulated in the table below.

Table for Determining Sample Size of a Known Population N N S S S S N N N S 

Table 3.3: Table of sample size

Source: Krejecie & Morgan,

50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	100000	384

Note: N is Population Size; S is Sample Size

1970

Adopted from: Krejecie & Morgan (1970)

### 3.4 Research Instrument

In our study, questionnaire served as a tool for primary data collection. The questionnaire is purposely used due to its simplicity and direct forward questions. A simple direct and easily understand questions are hence practiced while conducting the survey. A well-designed questionnaire enables us to receive relevant and critical information from respondents which also help to achieve research objectives and provide accurate information directly at the mean time.

We used fixed-alternative questionnaire or closed-ended question where respondents select the option which can represent their opinion. This method has been selected by the researchers because closed ended questions allows the participants to select their degree of agreeableness towards the questions. This not only provide convenience to the participants as they can choose from the pre-set answer that best fit to their opinion, but also provide expedience to the researchers to compute the result into tables and graphical illustrations.

The questionnaire was divided into two sections. Section A consist of 7 questions related to the demographic profile of respondents such as gender, age group, place of origin,

income range and so on. The purpose of Section A is to collect some brief information of respondent.

5-points Likert Scale which ranged from "strongly agree, agree, neutral, disagree to strongly disagree" are used to measure respondents' answers in Section B. There are total of 50 questions were designed in Section B to cover all independent variables and dependent variable. A Likert scale is an ordered scale from which respondents choose one option that best align with their perceptions. It is often used to measure respondents' attitude by asking the extent of their agreeableness towards particular question or statement. The purpose of using 5-point Likert scale is to remain the comparability of the questions because some of the question adopted from past researchers are using 5-point Likert scale in their studies. The objective of this section is to obtain the related information in order to examine the relationship among each variable. Respondents are required to specify their degree of agreement for each of the statement.

The reason that the researchers selected 5-points Likert scale is because the targeted respondent of the study is medical traveller who come to Malaysia to seek for medical treatment. It is very inconvenient and uncomfortable for them to choose from varies answers when they feel ill. Hence, it is suitable to use 5-points Likert scale for time-saving purpose.

Furthermore, the questionnaire also been translated into different language. There are total of 3 versions of questionnaire, which are Chinese, English and Malay versions. The purpose of the translation is to overcome the language barrier in term of prevent the patients from understanding the questions.

The authors of the questions that adopted in the questionnaire are shown in the following table.

Table 3.4: Table of author of the questions adopted

Construct	Adopted From	No. of Items
Medical Service Quality	Meesala, Paul (2016)	2
	Cheng, Tang (2000)	1
	Kitapci, Akdogan, Dortyol	
	(2014)	4
	Aliman, Normila (2013)	10
Perceived Value	Sweeney, Soutar (2002)	3
	Kim, Thapa (2018)	1
	Chen, Hu (2010)	1
	Petrick (2002)	2
	Prebensen, Xie (2017)	4
Health Information Technology	Lee (2018)	5
	Abdelhamid (2018)	3
Patient Satisfaction	Meesala, Paul (2016)	2
	Aliman, Normila (2013)	2
	Saiprasert (2011)	1
Revisit Intention	Abubakar (2017)	4
	Stylos (2016)	1
	Kim, Lee & Bonn (2016)	1

Adopted from: Developed from research.

# 3.4.1 Pilot Study

A total of 30 sets of questionnaires were distributed to the respondents to verify the reliability of the questionnaire before running in full test. These questionnaires are being distributed to the patients who are currently receiving

medical treatment at Pantai Hospital, Ipoh, Perak and KPJ Specialist Hospital, Ipoh, Perak. Subsequently, the data collected from the questionnaires were run with Statistical Analysis System (SAS) Enterprise Guide 7.1 software to test on the reliability. When the value of alpha value is greater than 0.60, the variable is considered as a good reliability. Derived from the test, all of our variables are higher than 0.60 and the variables can be justified as good and reliable. The result is shown in the Table 3.2.

Table 3.5: Reliability Analysis Results (Pilot Test)

Variable	Dimension	Cronbach's Alpha Value
1 <sup>st</sup> independent variable	Service Quality	0.8486
2 <sup>nd</sup> independent variable	Perceived Value	0.9070
3 <sup>rd</sup> independent variable	HIT	0.8585
1 <sup>st</sup> dependent variable	Patient Satisfaction	0.8938
2 <sup>nd</sup> dependent variable	Revisit Intention	0.8521

Adapted from: Derived from the research

### 3.5 Construct Instrument

In the research, different scales of measurement are used to generate through information for analysis. In order to provide accurate description, the rule must be implied when assigning number to an observation. The scale of measurement consists of nominal scale, ordinal scale, interval scale and ratio scale. In this study, nominal scale, ordinal scale and interval scale were used in the design of questionnaire.

Nominal scale can be defined as a qualitative scale that gives basic and general information of the objects or individuals. It is simple and convenient category label without intrinsic value. An example of a nominal scale that can be found in our questionnaire is gender.

#### Figure 3.3: Nominal Scale's Example

Please indicate your gender.		
□ Male	П	Female

Adapted from: Developed for the research.

Ordinal scale can be described as a qualitative scale which consist of rankings to differentiate categories into some preference. It provides more information than nominal scale. Income of patient is one of the questions that using ordinal scale.

Figure 3.4: Ordinal Scale's Example

7.	What is your income range per month?	(1  USD = RM4.00)
	$\square$ USD 2000 and below	$\square$ USD 5001 and above
	$\square  USD\ 2001 - USD\ 3000$	
	$\square$ USD 3001 – USD 4000	
	$\square$ USD 4001 – USD 5000	

Adapted from: Developed for the research.

Interval scale is a quantitative scale which comprises of both nominal and ordinal scale but does not clearly represent some conditions and an erratic origin. Likert scale is being widely used in the questionnaire setting to identify the degree of respondents"

agreeableness with the statements. Five-point Likert scale had been adopted in the study because of its simplicity to understand by the respondents. The following example is abstracted from our questionnaire.

Figure 3.5: Interval Scale's Example

No	Medical Service Quality	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Tan	gibility					
1	The hospital is providing visual appealing facilities.	1	2	3	4	5

Adapted from: Developed for the research.

There are three different sections in our questionnaire design. Section A recorded the demographic information of patients. It includes gender, income level and age. Section B consist of the questions regarding the independent variables and dependent variables which are medical service quality, perceived value, health information technology (HIT), patient satisfaction, and revisit intention while Section C consist of the questions relating to the type of medical services that medical patients are seeking for, the major influences of medical patients' decision and the sources of medical information that medical patients get from.

## 3.6 Data Processing

Data analysis is used to ensure the quality of data accuracy from the questionnaire that collected back from the respondents. This involves several steps to analyse the collected data.

The first step is data checking. It helps to identify and allocate the missing data (omission) which will result to unreliable test. We want to ensure that 30 completed sets of questionnaires distributed are all collected back so that accurate and consistent measurement are made.

The next step is data editing. All of the questionnaires will be reviewed to identify the missing data and omission. Adjustment will be made if any missing or defect answer are found. However, if there are too many questions been omitted in the questionnaire, it is considered invalid and should be remove from the database.

The third step is data coding. In this process, the respondent's response will be digitized with numbers before key into the SAS software. The software will then analyse the data once the responses has been tabulated and catalogued into the system.

The final step in data processing is data transcribing. The process involves converting the collected data into coding while entering into the analysis software, SAS Enterprise Guide 7.1. The editing and amendment of inconsistent answer will be done during the data entry phrase to get the accurate and reliable information.

## 3.7 Data Analysis

## 3.7.1 Descriptive Analysis

Descriptive analysis is used to describe the basic features of the data of study. Descriptive statistics is the summary of responses obtained from the larger pool of

target respondents in simple statistics. Different graphical presentations are used to display the data. In this study, pie chart and frequency bar chart are used in presenting the demographic profiles collected from the respondents.

### 3.7.2 Scale Measurement – Reliability Test

Reliability is defined as the consistency of instruments measure of the research which indicates the range of the questionnaire that is free from bias. Reliable data play a vital role in contributing the correct and accurate information for the researchers. Cronbach's alpha test is the widely used method to evaluate the reliability for each dimension. The measurement and interpretation of Cronbach's alpha test are shown in the following table.

Table 3.6: Cronbach's Alpha Range

Level of Reliability	Range of Coefficient Alpha, α
Poor	<0.60
Fair	0.60 0.70
Good	0.70 0.80
Very Good	0.80 0.95

Adapted from: Sekaran, U., & Bougie, J. (2016). Research methods for business.

Chichester: Wiley.

As shown in the table, the coefficient alpha range determine the level of reliability. A poor reliability is considered when the value from the coefficient alpha is less than 0.60; The value ranging from 0.60 to 0.70 is considered as fair reliability

and the value ranging from 0.70 to 0.80 is considered good reliability. The range of .80 to 0.95 result to greater reliability level compared to previous levels.

A pilot test is conducted to evaluate the reliability of our questionnaire. 30 questionnaires had been distributed and collected from the medical tourists and the results are summarized in the following table.

Table 3.7: Reliability Test Result for Pilot study

Construct	Items	Cronbach's	Alpha	Strength of
		Alpha Value	Coefficient	Association
			Range	
Service	17	0.8486	0.80 0.95	Very Good
Quality				
Perceived	12	0.9070	0.80 0.95	Very Good
Value				
Health	9	0.8585	0.80 0.95	Very Good
Information				
Technology				
Patient	7	0.8938	0.80 0.95	Very Good
Satisfaction				
Revisit	5	0.8521	0.80 0.95	Very Good
Intention				

Adapted from: Derived from the research

As each variable's reliability test is above 0.6, this shows that the questionnaire is credible.

## 3.7.3 Inferential Analysis

In our study, five-point Likert scale is adopted to design our questionnaire. It functioned as the rating range for the respondents' degree of agree or disagree with our questions or statements. It is an interval scale that used to understand the relationship among the variables.

#### 3.7.3.1 Pearson Correlation Coefficient

**H1:** There is positive relationship between medical service quality and satisfaction of medical tourists in Malaysia.

**H2:** There is positive relationship between perceived value and satisfaction of medical tourists in Malaysia.

**H3:** There is positive relationship between health information technology and satisfaction of medical tourists in Malaysia.

**H4:** There is a positive relationship between satisfaction and the revisit intention of medical tourists in Malaysia.

The relationship between two variables is measured using Pearson's correlation coefficient. It measures the orientation, intensity and significance of the

relationship of the bivariate relationship among all the variables. The value of correlation coefficient is ranging from -1.0 to +1.0. The variables which have positive correlation will be ranged from 0 to +1.0 while the variables which have negative correlation will be ranged from -0.1 to 0. When the correlation value is equal to 0, it indicates that the variables have no correlation.

Table 3.8: Rules of Thumb of Pearson Correlation Coefficient

Pearson Coefficient Range	Strength of Association
±0.91 ±1.00	very strong
±0.71 ±0.90	High
±0.41 ±0.70	Moderate
±0.21 ±0.40	small but definite relationship
±0.00 ±0.20	slight, almost negligible

Adapted from: Hair, J. (2008). Research methods for business. Chichester: Wiley

#### 3.7.3.2 Multiple Regression Analysis

Multiple regression analysis is a tool used to show the variance between one dependent variable with multiple independent variables. It is known as  $R^2$ . It helps the researchers to understand the changes in the dependent variable. This allow the dependent variable to be evaluated with several variables at the same time. The equation for multiple regression is shown as below:

$$Y_i = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + ... + b_nX_n + e_i$$

## 3.8 Conclusion

The research methodology used had been outlined in chapter 3 for conducting the study. The design of our research on how we conducted the research has been justified. Moreover, the design of the questionnaire and the way to collect the data has been explained in details. The sampling design is determined to verify the target population. A pilot study has been done to determine the reliability of the research, hence sampling designs, research instruments and construct measurement have been determined for the questionnaire setting. The way of data processing and data analysis has been listed and interpreted in this chapter.

**Chapter 4: Data Analysis** 

4.0 Introduction

In this chapter, the researcher will analyse the result that was computed by using SAS Enterprise Guide 7.1 software and the result will be showed in table and figure. This chapter consists of three analyses which is descriptive analysis used to measure respondents' demographic profile and the additional questions, scale measurement used to measure the reliability of variables and inferential analysis included Pearson Correlation Analysis and Multiple Regression Analysis to measure the relationship between independent variables and dependent variables.

4.1 Descriptive Analysis

Descriptive analysis will be used to interpret the quantitative data. This section has a total of 11 questions included with regard to the personal information of the respondents.

4.1.1 Respondent Demographic Profile

The information of respondent demographic profile consists of gender, age, country of origin, education qualification, occupation, marital status, number of visit to Malaysia, purpose of visit, period of stay, accompany, and monthly income range.

65

### 4.1.1.1 Gender

Table and figure below shows the statistics of respondents' gender.

Table 4.1 Statistics of Respondents' Gender

Gender	Frequency	Percent (%)	Cumulative Percent (%)
Male	215	52.44	52.44
Female	195	47.56	100
Total	410	100	

Source: Developed from SAS Enterprise Guide 7.1

Figure 4.1 Statistics of Respondents' Gender

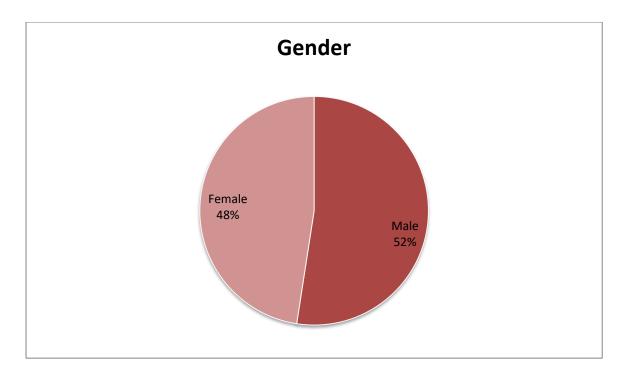


Table 4.1 and Figure 4.1 represent the proportions of male and female respondents who are participated in the survey. The majority of the respondents are male which is 215 (52%) while 195 (48%) of the respondents are female.

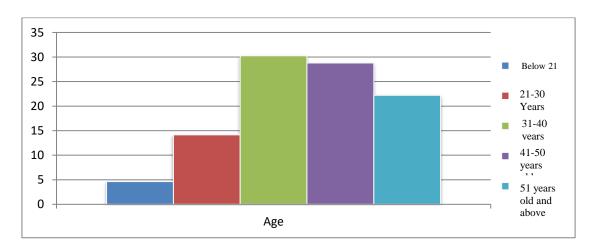
#### **4.1.1.2** Age Group

Table 4.2 and Figure 4.2 shows the age range of respondents in the research.

Table 4.2 Statistics of Respondents' Age

Age	Frequency	Percent (%)	Cumulative Percent (%)
Below 21 years old	19	4.63	4.63
21-30 years old	58	14.15	18.78
31-40 years old	124	30.24	49.02
41-50 years old	118	28.78	77.80
51 years old and above	91	22.20	100.00
Total	410	100	

Figure 4.2 Statistics of Respondents' Age



Based on the Table 4.2 and Figure 4.2, both of them show the different age group of respondents in this survey. We have classified the age group into five

categories which are below 21 years old, 21 to 30 years old, 31 to 40 years old, 41 to 50 years old, and 51 years old and above. The age group of below 21 years old consist of 4.63% (19 respondents). Besides, the age group of 21 to 30 years old consist of 14.15% (58 respondents), followed by the majority of respondents who between the age 31 to 40 years old which consist of 30.24% (124 respondents). Next, the age group of 41 to 50 years old consist of 28.78% (118 respondents). Lastly, the age group of 51 years old and above consist of 22.2% (91 respondents) from the total number of respondents.

#### 4.1.1.3 Country of Origin

The table and figure below show the respondents' country of origin.

Table 4.3 Statistics of Respondents' Country of Origin

Country of Origin	Frequency	Percent (%)	Cumulative Percent (%)
Indonesia	258	62.93	62.93
India	7	1.71	64.63
Japan	17	4.15	68.78
China	10	2.44	71.22
Libya	1	0.24	71.46
United Kingdom	14	3.41	74.88
United States	12	2.93	77.80

Total	410	100	
Others	1	0.24	100
Cambodia	16	3.90	99.76
Philippines	19	4.63	95.85
Bangladesh	34	8.29	91.22
Australia	21	5.12	82.93

Source: Developed from SAS Enterprise Guide 7.1

Figure 4.3 Statistics of Respondents' Country of Origin

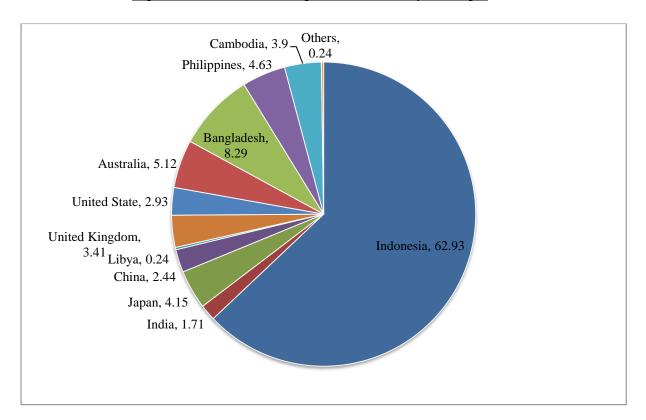


Table 4.3 and Figure 4.3 show the respondents' country of origin. Majority of the respondents are from Indonesia which consist of 62.93% (258 respondents) followed by 1.71% (7 respondents) from India. Besides, there have 4.15% (17

respondents) from Japan, 2.44% (10 respondents) from China, and 3.41% (14 respondents) came from United Kingdom. However, there is an equal number of minority respondents from Libya and other country (Korea) which consists of only 1 respondent (0.24%). Respondents from United State and Australia are 2.93% (12 respondents) and 5.12% (21 respondents) respectively. In addition, there are 8.29% (34 respondents) are from Bangladesh while 4.63% (19 respondents) are from Philippines. Lastly, respondents who are from Cambodia are 3.9% which is 19 respondents.

#### 4.1.1.4 Educational Qualification

Table 4.4 and Figure 4.4 shows the educational qualification of the respondents.

Table 4.4 Statistics of Respondents' Educational Qualification

Educational Qualification	Frequency	Percent (%)	Cumulative Percent (%)
No formal education	31	7.56	7.56
High school	130	31.71	39.27
Graduation	182	44.39	83.66
Higher education	65	15.85	99.51
Others	2	0.49	100
Total	410	100	

Source: Developed from SAS Enterprise Guide 7.1

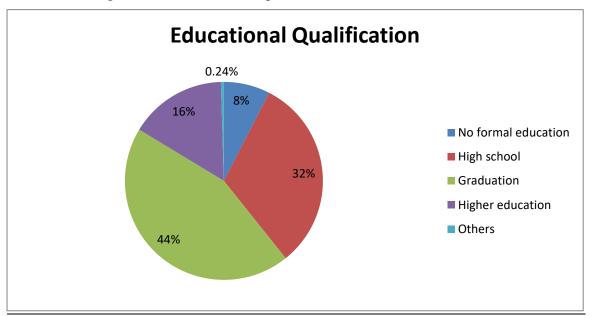


Figure 4.4 Statistics of Respondents' Educational Qualification

Table 4.4 and Figure 4.4 show the educational qualification of the respondents. Respondents who are no formal education consist of 7.56% which is 31 respondents. Besides, there have 31.71% (130 respondents) are graduated from high school. Majority of the respondents are graduation (Bachelor degree holder) which is 44.39% (182 respondents). Meanwhile, 15.85% (65 respondents) are higher education and other educational qualification such as diploma holder consist of 0.49% (2 respondents).

#### 4.1.1.5 Occupation

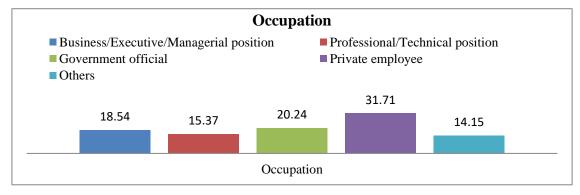
The table and figure below showed the occupation of the respondents.

Table 4.5 Statistics of Respondents' Occupation

Occupation	Frequency	Percent (%)	Cumulative Percent (%)
Business/Executive/ Managerial position	76	18.54	18.54
Professional/ Technical position	63	15.37	33.9
Government official	83	20.24	54.15
Private employee	130	31.71	85.85
Others	58	14.15	100
Total	410	100	

Source: Developed from SAS Enterprise Guide 7.1

Figure 4.5 Statistics of Respondents' Occupation



As referring to Table 4.5 and Figure 4.5, 18.54% (76 respondents) are businessman, executive or working as a managerial position. Respondents who are professional or technician consist of 15.37% (63 respondents) and followed by the 20.24% (83 respondents) who work in government department. The majority of the respondents are worked in private sector which consists of 31.71% (130 respondents). Meanwhile, other occupation consists of 14.15% (58 respondents) such as housewife, retiree, and student.

#### **4.1.1.6** Marital Status

The table and figure below shoed the statistics of respondents' marital status

Table 4.6 Statistics of Respondents' Marital Status

Marital Status	Frequency	Percent (%)	Cumulative Percent (%)
Single	96	23.41	23.41
Married	294	71.71	95.12
Divorced	11	2.68	97.80
Widowhood	9	2.19	100
Total	410	100	

Figure 4.6 Statistics of Respondents' Marital Status

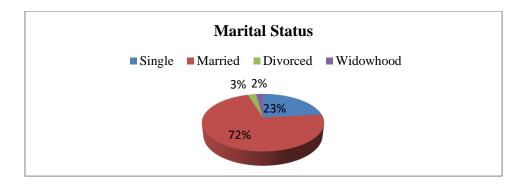


Table 4.6 and Figure 4.6 show the majority of the respondents' marital status are married (71.71%). 23.41% (96 respondents) of the respondents are reported as single and the remaining 2.68% (11 respondents) and 2.19% (9 respondents) are divorced and widowhood respectively.

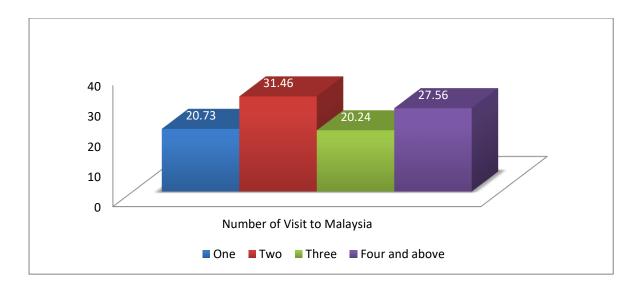
#### 4.1.1.7 Number of visit to Malaysia

Table 4.7 and Figure 4.7 showed the respondents' number of visit to Malaysia.

Table 4.7 Statistics of Respondents' Number of Visit to Malaysia

Number of Visit To Malaysia	Frequency	Percent (%)	Cumulative Percent (%)
One	85	20.73	20.73
Two	129	31.46	52.20
Three	83	20.24	72.44
Four and above	113	27.56	100
Total	410	100	

Figure 4.7 Statistics of Respondents' Number of Visit to Malaysia



As referring to Table 4.7 and Figure 4.7, 85 respondents (20.73%) just first time to visit Malaysia. The majority of respondents who are visited to Malaysia two times consist of 129 respondents which is 31.46%. Lastly, 83 respondents (20.24%) are visited three times and 113 respondents (27.56%) are visited four times and above.

#### 4.1.1.8 Purpose of Visit

The table and figure below showed the purpose of the respondents that visit Malaysia.

Table 4.8 Statistics of Respondents' Purpose of Visit

Purpose of Visit	Frequency	Percent (%)	Cumulative Percent (%)
Medical treatment only	205	50	50
Medical treatment and business	55	13.41	63.41
Medical treatment and sightseeing	150	36.59	100
Total	410	100	

Figure 4.8 Statistics of Respondents' Purpose of Visit

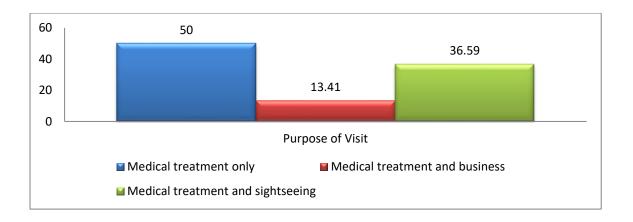


Table 4.8 and Figure 4.8 show the respondents' purpose of visit to Malaysia. Based on the result, half of the respondents (205 respondents) are visit for medical treatment only. 13.14% (55 respondents) are visit for medical treatment and business. The remaining 36.59% (150 respondents) are visit for medical treatment and sightseeing.

#### 4.1.1.9 Period of stay in Malaysia

Table 4.9 and Figure 4.9 showed the duration of the respondents that stay in Malaysia.

Table 4.9 Statistics of Respondents' Period of stay in Malaysia

Period of Stay	Frequency	Percent (%)	Cumulative Percent (%)
Less than 10 days	210	51.22	51.22
10-15 days	93	22.68	73.90
16-20 days	46	11.22	85.12
21-25 days	27	6.59	91.71
26-30 days	12	2.93	94.63
More than 30 days	22	5.37	100
Total	410	100	

Period of Stay in Malaysia

■ More than 30 days
■ 26-30 days
■ 10-15 days
■ Less than 10 days

Period of stay

Period of stay

11.22

22.68

Figure 4.9 Statistics of Respondents' Period of stay in Malaysia

Based on the result show in Table 4.9 and Figure 4.9, more than half of the respondents which are 210 respondents (51.22%) just stay for less than 10 days. Respondents who visit for 10 to 15 days and 16 to 20 days consists of 93 respondents (22.68%) and 46 respondents (11.22%) respectively. Besides, 27 respondents (6.59%) are stay in Malaysia around 21 to 25 days and followed by the minority stay period which is 26 to 30 days that only consist of 12 respondents (2.93%). Lastly, the remaining 22 respondents (5.37%) are stay in Malaysia more than 30 days.

#### **4.1.1.10 Travelling Companions**

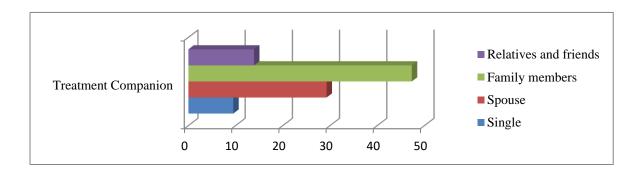
The table and figure showed the travelling companions of the respondents.

Table 4.10 Statistics of Respondents' Travelling Companions

Travelling Companions	Frequency	Percent (%)	Cumulative Percent (%)
Alone	39	9.51	9.51
Spouse	120	29.27	38.78

Family members	194	47.32	86.10
Relatives and friends	57	13.90	100.00
Total	410	100	

Figure 4.10 Statistics of Respondents' Travelling Companions



Based on the Table 4.10 and Figure 4.10, the respondents who are visit alone consist of 39 respondents (9.51%). Beside, 120 respondents (29.27%) are accompanied with spouse and the majority of respondents are come with their family members which is 194 respondents (47.32%). Lastly, 57 respondents (13.90%) are come with their relatives and friends.

#### 4.1.1.11 Monthly Income Range

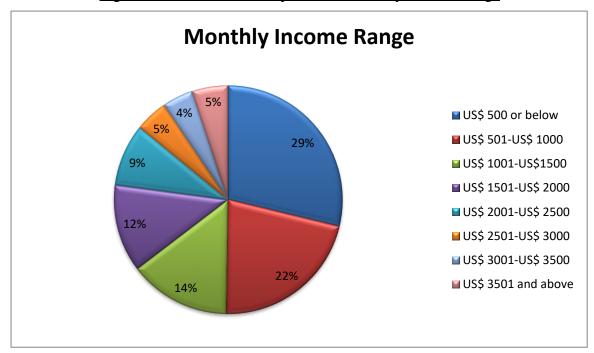
Table 4.11 and Figure 4.11 shoed the monthly income range of the respondents.

Table 4.11 Statistics of Respondents' Monthly Income Range

Monthly Income Range	Frequency	Percent (%)	Cumulative Percent (%)
US\$ 500 or below	118	28.78	28.78
US\$ 501 – US\$ 1000	88	21.46	50.24

US\$ 1001 – US\$ 1500	59	14.39	64.63
US\$ 1501 – US\$ 2000	51	12.44	77.07
US\$ 2001 – US\$ 2500	36	8.78	85.85
US\$ 2501 – US\$ 3000	19	4.63	90.49
US\$ 3001 – US\$ 3500	18	4.39	94.88
US\$ 3501 and above	21	5.12	100.00
Total	410	100	

Figure 4.11 Statistics of Respondents' Monthly Income Range



Based on the Table 4.11 and Figure 4.11, respondents who earned US\$ 500 and below of monthly income recorded the highest number which are 118 respondents (28.78%). Besides, the respondents who received the monthly income between US\$ 501 to US\$ 1000 is 88 respondents or 21.46%, followed by the respondents with a monthly income between US\$ 1001 to US\$ 1500, which is 59

respondents or 14.39%. There are 51 respondents or 12.44% having monthly income between US\$1501 to US\$ 2000 and 36 respondents or 8.78% with monthly income between US\$ 2001 to US\$ 2500. Next, respondents who earned a monthly income between US\$2501 to US\$ 3000 consist of 19 respondents or 4.63%, followed by the respondents with a monthly income between US\$ 3001 to US\$3500 took the last position in the research with the percentage of 18 respondents or 4.39%. Lastly, there are 21 respondents or 5.12% having monthly income of US\$ 3501 and above.

# **4.1.2** Central Tendencies Measurement of Constructs

The value of mean and standard deviation of independent variables and dependent variable will describe in the table.

#### **4.1.2.1 Medical Service Quality**

Table 4.12 showed the central tendencies measurement of medical service quality

Table 4.12 Central Tendencies Measurement for Medical Service Quality

No.	Statements	N	Mean	Ranking (Mean)	Standard Deviatio n	Ranking (Standard Deviation)
1.	The hospital is providing visual appealing facilities.	410	3.8365 9	5	1.08112	12
2.	The cleanliness of the hospital is in good status.	41 0	3.27561	16	1.38438	1

3.	The hospital is providing state-of-art equipment.	410	3.8414 6	4	1.02856	16	
4.	The medical staff have professional appearance.	410	3.9170 7	2	1.07560	13	
5.	The hospital is giving a strong concern of patients' safety.	410	3.7024 4	12	1.13803	6	
6.	Medical staff are kind and very helpful.	410	3.9170 7	2	1.02914	15	
7.	The hospital is providing services as promised to the patient.	410	3.7463 4	9	1.05314	14	
8.	The medical staff are well dependable in handling patient's problem.	410	3.6829	14	1.08195	11	
9.	The medical staff are able to provide precise medical services to the patient.	410	3.7219 5	11	1.12137	8	
10.	The medical staff are able to explain well on the procedure of medical treatment undertaken by the patient.	410	3.6951	13	1.21007	2	
11.	The medical staff give encouragement and infuse patient's confidence.	410	3.6195 1	15	1.12392	7	
12.	The medical staff are qualified with	410	3.7561	8	1.20473	3	
13.	professional skills.  The medical staff have the ability to handle the	410	0	10	1.18817	4	

14.	patient's health difficulties.	410	3.7268 3	3	1.15595	5	
15.	The doctor is showing courtesy and politeness when giving health advices to the patient.	410	3.8561 0	1	1.02493	17	
16.	Medical staff was treating the patients with friendly and caring attitude.	410	3.9707	6	1.12099	9	
17.	The medical staff are taking good care of the patient's feelings.	410	3	7	1.10183	10	
	The medical staff understand well on the patient's needs.		3.7902 4				
			3.7878 0				

Indicated from Table 4.12, the statement "Medical staff was treating the patients with friendly and caring attitude." has the highest mean value 3.97073 with the standard deviation which is ranked 17 in the list. Besides, the statement "The medical staff have professional appearance." and "Medical staff are kind and very helpful." have the same value of mean (3.91707) which is ranked 2 with the standard deviation of 1.07560 and 1.02914 respectively. The statement "The cleanliness of the hospital is in good status." has the lowest mean value (3.27561) with the highest standard deviation value (1.38438).

# 4.1.2.2 Perceived Value

Table 4.13 is the central tendencies measurement for perceived value.

Table 4.13 Central Tendencies Measurement for Perceived Value

No.	Statements	N	Mean	Ranking (Mean)	Standard Deviation	Ranking (Standard Deviation)
1.	The medical treatment in this private hospital is worth the price that I paid.	410	3.88780	8	0.82864	7
2.	This private hospital provide greater value as compared to other medical institutions.	410	3.93170	5	1.71723	1
3.	The medical treatment in this private hospital provide good service with a reasonable price.	410	3.89269	7	0.87798	5
4.	The procedure to receive medical treatment in this private hospital is appropriate for me.	410	4.04390	3	0.81130	8
5.	The medical treatment that I received help to relieve my illness.	410	4.21220	1	0.68254	11
6.	The medical treatment that I received make me feel relaxed and comfortable.	410	4.04146	4	0.75038	10
7.	The medical treatment in this hospital increase my confidence for	410	4.05122	2	0.76909	9

8.	recuperation (recovery).	410	3.87319	9	0.89197	3
9.	When I received the medical treatment in this private hospital, people have a good impression on me.	410	3.84878	10	0.84295	6
10.	When I received the medical treatment in this private hospital, this make me feel acceptable by other people.	410	3.84146	11	0.93387	2
11.	When I received the medical treatment in this private hospital, this will improve the way I perceived by others.	410	3.92927	6	0.89134	4
	When I received the medical treatment in this private hospital, this will give me social approval.					

The measurement for perceived value is shown in the Table 4.2. According to the results, the statements of "The medical treatment that I received help to relieve my illness." is agreed by most of the respondents as it has highest value of mean which is 4.21220 and lowest standard deviation of 0.68254. Besides, the statements that has the lowest value of mean 3.84146 and second highest standard deviation 0.93387 is "When I received the medical treatment in this private hospital, this will improve the way I perceived by others."

# 4.1.2.3 Health Information Technology (HIT)

Table below showed the central tendencies measurement for health information technology.

Table 4.14 Central Tendencies Measurement for Health Information Technology

No.	Statements	N	Mean	Ranking (Mean)	Standard Deviation	Ranking (Standard Deviation)
1.	Health information technology allow the doctor to follow up my health condition outside the hospital.	410	4.12439	7	0.73451	8
2.	Health information technology help to increase the healthcare accuracy in	410	4.12683	6	0.81760	2
3.	medical treatment. Health information technology increase my effectiveness in managing my health matters.	410	4.15122	4	0.80437	4
4.	Health information technology enable to manage my health matters more efficiently.	410	4.13902	5	0.77092	6

5.	Health information technology help to increase my confidence in the process of recovery from medical treatment.	410	4.06098	8	0.84129	1
6.	Health information technology enable me to track my medical health record easily.	410	4.22683	2	0.76587	7
7.	Using Health information technology is convenient for appointment making from technology-driven system.	410	4.18780	3	0.81330	3
8.	Using Health information technology makes it easier to manage my health matters.	410	4.25854	1	0.79822	5

As we can see from the Table 4.3, the statement "Using Health information technology makes it easier to manage my health matters." has the highest mean value 4.2584 with the standard deviation which is ranked 5 in the list for 0.79822. Besides, the statement for "Health information technology help to increase my confidence in the process of recovery from medical treatment." has the lowest mean of 4.06098 with standard deviation of 0.84129.

#### 4.1.2.4 Patient Satisfaction

Table 4.15 showed the central tendencies measurement for patient satisfaction.

Table 4.15 Central Tendencies Measurement for Patient Satisfaction

No	Statement	N	Mean	Ranking	Standard Deviation	Ranking (Standard Deviation)
1.	I am satisfied with the medical treatment that I received from this hospital.	410	4.20976	1	0.79725	2
2.	The medical services I received in this private hospital have fulfilled my requirements.	410	4.09512	3	0.79005	4
3.	For me, getting treatment in Malaysia's private hospital is a decent experience.	410	4.13415	2	0.76861	5
4.	For me, the medical services in Malaysia's private hospital is better than I expected.	410	4.08293	4	0.79605	3
5.	I am satisfied with the overall medical treatments in Malaysia's private hospital.	410	4.04146	5	0.83665	1

Based on the Table 4.4, the statement of "I am satisfied with the medical treatment that I received from this hospital." shown the highest mean value of 4.20976 with the standard deviation of 0.79725 which ranked 2 in the list. While, the statement for "I am satisfied with the overall medical treatments in Malaysia's private hospital." shows the lowest mean value of 4.04146 with the standard deviation of 0.83665.

#### 4.1.2.5 Revisit Intention

Table 4.16 is the central tendencies measurement for revisit intention.

<u>Table 4.16 Central Tendencies Measurement for Revisit Intention</u>

No.	Statements	N	Mean	Ranking (Mean)	Standar d Deviatio n	Ranking (Standar d Deviation
1.	I intend to revisit Malaysia for medical treatment in the near future.	410	3.99268	2	0.86635	4
2.	I will continue to use this hospital service in Malaysia for the future.	410	3.89756	5	0.87578	3
3.	It is very likely that I will revisit Malaysia for medical treatment within the next two years.	410	3.75854	7	0.98782	1
4.	If I need medical services again, I will consider Malaysia as my first choice.	410	3.89756	5	0.82991	7
5.	I will recommend the medical services of this hospital to my family and friends.	410	3.99024	3	0.84489	6
6.	I will recommend the hospitals in Malaysia to anyone who seeks my advice.	410	3.97561	4	0.91143	2

7.	I would say positive	410	4.05366	1	0.86612 5	
	things about the					
	medical services in					
	Malaysia to my family					
	and friends.					

Based on the results, the statement of "I would say positive things about the medical services in Malaysia to my family and friends." Has the highest mean value 4.05366 with the standard deviation of 0.86612 which is ranked 5 in the list. Besides, the statements of "I will continue to use this hospital service in Malaysia for the future." And "If I need medical services again, I will consider Malaysia as my first choice." Have the same value of mean which is 3.89756 ranked 5 with standard deviation of 0.87578 and 0.82991 respectively. The statement of "It is very likely that I will revisit Malaysia for medical treatment within the next two years." Has a lowest mean value (3.75854) with the highest standard deviation of 0.98782.

#### 4.1.3 Basic Information of Medical Travel

Basic information of medical travel consists of the type of medical service that the patients are seeking for the medical trip, the major influence of decision to seek medical treatment in Malaysia, the primary sources of information for the patient to decide the medical service destination, and the improvement of medical tourism in Malaysia.

#### **4.1.3.1** Types of Medical Service

Table 4.17 and Figure 4.12 showed the types of medical services that the medical tourists are seeking for the medical trip.

#### Table 4.17 Types of Medical Service

<b>Types of Medical Services</b>	Frequency	Percent	Cumulative Percent
Dental Treatment	6	1.46	1.46
Cosmetic surgery	25	6.10	7.56
Ophthalmology	9	2.20	9.76
Cardiology	132	32.20	41.95
Comprehensive Medical Checkup	95	23.17	65.12
Gastroenterology	14	3.41	68.54
Hepatology	34	8.29	76.83
Oncology Treatment	8	1.95	78.78
Neurology	41	10.00	88.78
Orthopedic Treatment	32	7.80	96.59
Others	14	3.41	100.00
Total	410	100	100

Figure 4.12 Types of Medical Services

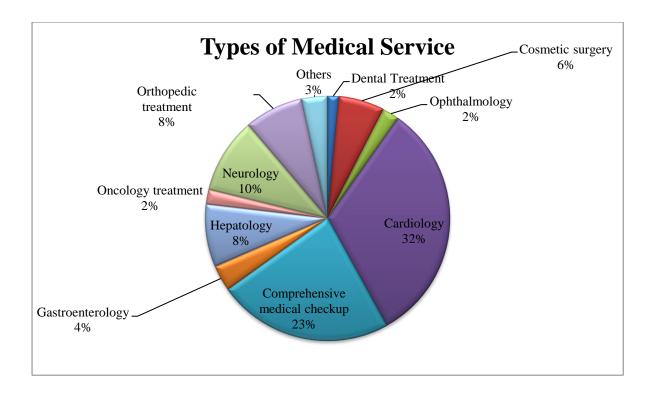


Table 4.17 shows the types of medical services that the patient is seeking for the medical tourism. There are 6 respondents (1.46%) and 25 respondents (6.10%) visited Malaysia for the dental treatment and cosmetic surgery respectively. Besides, there have 9 respondents visited Malaysia for ophthalmology treatment and followed by the majority of the respondents visited Malaysia for cardiologic treatment. Respondents that came for comprehensive medical treatment are 95 (23.17%), 14 respondents (3.41%) came for gastroenterology, and 34 respondents (8.29) came for hepatology. However, 8 respondents (1.95%) and 41 respondents (10.00%) are visited Malaysia for oncology treatment and neurology treatment. The remaining of the 32 respondents (7.80%) and 14 respondents (3.41%) are visited Malaysia for orthopedic treatment and other treatment such as gynecology and obstetrics.

#### 4.1.3.2 Major Influence

Table 4.18 and Figure 4.13 below showed the major influence of the medical tourists that choose Malaysia as their medical destination.

Table 4.18 Statistics of Major Influences

Major Influence	Frequency	Percent	Cumulative Percent
Experience and Reputation of a particular overseas medical provider	163	39.76	39.76
Medical care abroad is cheaper than domestic care	59	14.39	54.15
Length of waiting time for abroad treatment	39	9.51	63.66
Patient has inadequate domestic health insurance	19	4.63	68.29
Patient's health insurance covers treatment abroad	36	8.78	77.07
Treatment is available abroad that is unavailable domestically	48	11.71	88.78
Anonymity of treatment	28	6.83	95.61
Combining medical treatment with vacation	18	439	100.00
Others	0	0	100.00
Total	410	100	100

Figure 4.13 Statistics of Major Influences

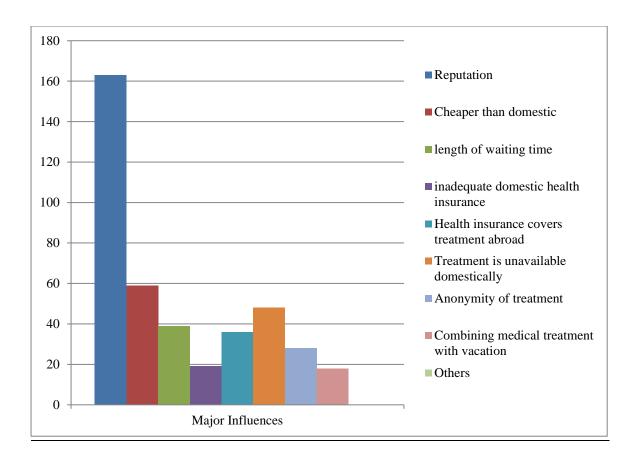


Table 4.18 shows the major influence of decision to seek medical treatment in Malaysia. Based on the result the reason "Experience and Reputation of a particular overseas medical provider" is chosen by most of the respondents as it has highest value of frequency and percentage which is 163 respondents and 39.76%. Besides, none of the respondents choose "other" as their major influence to seek medical treatment in Malaysia.

#### 4.1.3.3 Primary Source

Table 4.19 and Figure 4.14 are the statistics of primary sources of the medical tourists to search for the information of Malaysia's medical tourism.

Table 4.19 Statistics of Primary Source

Primary Source	Frequency	Percent	Cumulative Percent
Medical tourism guide	61	14.88	14.88
Medical tourism operator and facilitator	40	9.76	24.63
Hospital websites	90	21.95	46.59
Relatives and friends' encouragement	145	35.37	81.95
Advice from doctors in home country	42	10.24	92.20
Advertisements	31	7.56	99.76
Others	1	0.24	100.00
Total	410	100	100

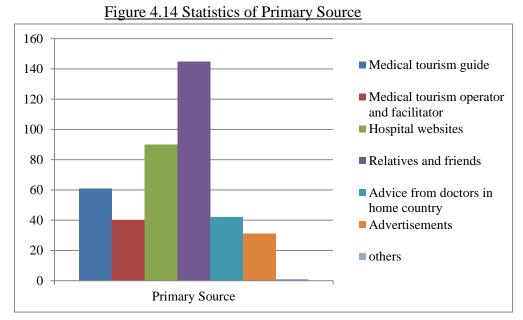


Table 4.19 and Figure 4.14 show the primary sources of information for the patient to decide the medical service destination. As we can see in the table, there have 61 respondents (14.88%) used medical tourism guide as their primary source. Besides, 40 (9.76%) and 90 (21.95%) respondents through the medical tourism operator and facilitator and hospital websites as their primary source to decide

Malaysia as their medical service destination. Majority of the respondents which is 145 respondents (35.37%) are encouraged by their relatives and friends to decide their medical service destination. There have 42 respondents (10.24%) and 31 respondents (7.56%) are through the advice of doctor from their home country and the advertisement respectively to decide Malaysia as their medical service destination. The remaining of 1 respondent with the 0.24% is because of the injury during the company business trip.

#### 4.1.3.3 Improvement

Table and figure below is the suggestion improvement for Malaysia medical institution from the medical tourists.

Table 4.20 Statistic of Improvement

Improvement	Frequency	Percent	Cumulative Percent
Infrastructure	134	32.68	32.68
Trained doctors/Staffs	109	26.59	59.27
Travel agencies	49	11.95	71.22
Improved hotels	56	13.66	84.88
No changes required	46	11.22	99.76
Others	16	3.90	100.00
Total	410	100	100

Figure 4.15 Statistics of Improvement

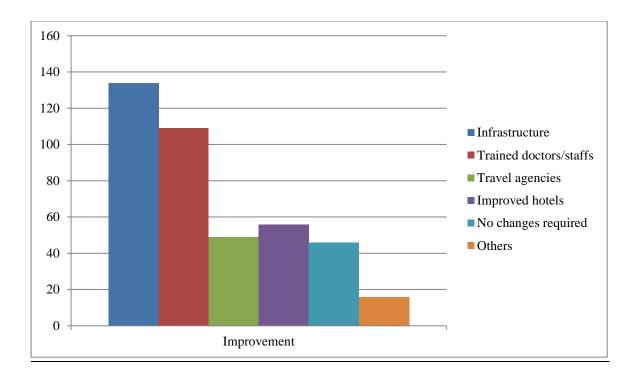


Table 4.20 and Figure 4.15 show the improvements that need to be enhance by the Malaysia's medical institutions. The majority of the respondents which is 134 respondents (32.68%) stated that the medical institutions need to improve the infrastructure of the hospital. Besides, 109 respondents (26.59%) said that the medical institutions of Malaysia need to train more professional doctors and staffs. Next, 49 (11.95%) and 56 (13.66%) respondents stated that the travel agencies and hotels service need to be improve. The other 46 respondents (11.22%) stated that there has no change required and 16 respondents (3.90%) stated that the medical institutions need to improve in other side such as the improvement of queuing time or the waiting time of the hospital.

#### 4.2 Scale Measurement

The researchers provide the results of reliability test for full study with a total number of 410 respondents. Reliability of the independent variables and the dependent

variable were evaluated by using SAS Enterprise Guide 7.1 software in order to ensure that all the data collected are reliable for the hypothesis testing.

### 4.2.1 Reliability Analysis

Table 4.21 showed the reliability statistic of the dependent variables and independent variables.

Table 4.21 Reliability Statistic

No	Variable	Cronbach's	Number of Item
1	Service Quality	0.83794	17
2	Perceived Value	0.86645	11
3	Health Information Technology	0.85181	8
4		0.82394	5
5	Patient Satisfaction	0.81134	7
	<b>Revisit Intention</b>		

Source: Developed from SAS Enterprise Guide 7.1

Based on the Table 4.6, all the independent variables and dependent variables used are reliable. Furthermore, all the variables are fall under Cronbach's Alpha range  $0.7 \le \alpha < 0.9$  as good reliability. The highest Cronbach's Alpha value in this study is perceived value which is 0.86645. The second highest was health information technology which is 0.85181 followed by service quality (0.83794) and patient satisfaction (0.82394). The revisit intention variable has a lowest Cronbaach' Alpha value among the variables which is 0.81134.

# 4.3 Inferential Analysis

#### **4.3.1 Pearson Correlation Coefficient Analysis**

Table 4.22 is the Pearson Correlation Coefficient analysis of the dependent variables and independent variables.

<u>Table 4.22: Pearson Correlation Coefficient Analysis</u>

	Medical Service Quality	Perceived Value	Health Information Technology (HIT)	Revisit Intention
<b>Tourists' Satisfaction</b>	0.50084	0.57987	0.62568	0.62828
	>0.0001	>0.0001	>0.0001	>0.0001

Source: Developed from SAS Enterprise Guide 7.1

#### 4.3.1.1 Medical Service Quality and Tourists' Satisfaction

H1: There is a positive relationship between medical service quality and satisfaction of medical tourists in Malaysia.

Based on the table, there is a positive relationship between medical service quality and patients' satisfaction because of the positive value (0.50084). Hence, the researcher can suggest that high medical service quality will result to high patient satisfaction. When the tourists satisfied with the medical services provided, they will tend to spread positive word-of-mouth. The correlation coefficient value

of service quality is 0.50084 which is fall under the coefficient range 0.41 to  $\pm 0.7$ . This shows that the relationship between medical service quality and tourists' satisfaction is moderate. The p-value 0.0001 is less than alpha value 0.05, so that the relationship between medical service quality and tourists' satisfaction is significant. Thus, the alternate hypothesis (H1) is accepted.

#### 4.3.1.2 Perceived Value and Tourists' Satisfaction

H2: There is a positive relationship between perceived value and satisfaction of medical tourists in Malaysia.

Based on the result, there is a positive relationship between perceived value and patient's satisfaction. The perceived value variable has a 0.57987 correlation with the tourists' satisfaction variable. Thus, when the tourist obtains greater value in the medical treatment, they will show greater commitment to the medical service provider. This is because their needs have been fulfilled with greater perceived value, and eventually lead to higher satisfaction. The value of correlation coefficient is 0.57987 which falls under the range  $\pm 0.41$  to  $\pm 0.7$  and the relationship between these two variables is moderate. There is a significant relationship between perceived value and tourists' satisfaction as the p-value is 0.0001 which is less than alpha value 0.05. Therefore, the alternate hypothesis (H2) is accepted.

#### 4.3.1.3 Health Information Technology and Tourists' Satisfaction

H3: There is a positive relationship between health information technology and satisfaction of medical tourists in Malaysia.

Based on the result, there is a positive relationship between health information technology (HIT) and satisfaction of medical tourists because of the positive value of correlation coefficient (0.62568). Therefore, when the medical treatments that the patient received have integrated with advanced HIT, the efficiency and effectiveness of the medical services will be improved. The

integrated advanced treatments will be critical in enhancing tourists' satisfaction, especially in the trend of technology. The relationship between HIT and satisfaction of medical tourist is moderate as the value of correlation coefficient 0.62568 is falls under the coefficient range  $\pm 0.41$  to  $\pm 0.70$ . The relationship between these two variables is significant due to the p-value 0.0001 is less than alpha value 0.05. Hence, the alternate hypothesis (H3) is accepted.

#### 4.3.1.4 Tourists' satisfaction and Revisit Intention

H4: There is a positive relationship between satisfaction and the revisit intention of medical tourists in Malaysia.

The result shows that there is a positive relationship between tourists' satisfaction and their revisit intention with the positive value of correlation coefficient (0.62828). The research revealed that satisfied tourist will have greater intention to obtain the medical treatments from the same provider. When the medical services can relief the pain of the patient, they will tend to repurchase the same services when the face the same illness, in other words, revisit to the same medical service provider. The value of correlation coefficient (0.62828) is fall under the moderate range which is the range between  $\pm 0.41$  to  $\pm 0.7$ . Next, the p-value 0.0001 is less than alpha value 0.05, so that the relationship between tourists' satisfaction and revisit intention is significant. Thus, the alternate hypothesis (H4) is accepted.

#### 4.3.2 Multiple Linear Regression (MLR) Analysis

Multiple Linear Regression used to explain the relationship between the dependent variable and two or more independent variables. In this study, MLR analysis was used to measure the strength of relationship between the three independent variables.

According to the Table 4.23 below, the p-value is <0.001, which is smaller than the alpha value, 0.05, thus, this indicate that the relationship is significant. While the F-statistic of our study is 108.47 which represent a significant value. Hence, we can conclude that all the independent variables significantly explain the variance of satisfaction of medical tourism in Malaysia. Besides, R-square represent the proportion of variance for a dependent variable that's explained by the independent variable. From the results, the independent variables can explain 44.49% of the variations in dependent variable.

Table 4.23: Analysis of Variance

Source	DF	Sum of	Mean Square	F-Value	P>F
		Squares			
Model	3	56.74567	18.51922	108.47	< 0.001
Error	406	70.79736	0.17438		
<b>Collected total</b>	409	127.54302			
Root MSE	0.41759		R-Square	0.4449	
Dependent Mean	4.04780		Adjusted R-	0.4408	
			Square		
Coeff. Variable	10.31635				

Source: Developed from SAS Enterprise Guide 7.1

From the Table 4.24, service quality is significant to predict the tourists' satisfaction towards the medical tourism in Malaysia since the p-value for service quality is 0.0065 which is less than the alpha value (0.05). Furthermore, perceived

value and health information technology have p-value of <0.001, which indicate that both of the variables are significant to predict the satisfaction of medical tourists, as the p-value is less than the alpha value of 0.05. Thus, three alternate hypotheses (H1 - H3) were accepted in the study.

Table 4.24: Parameter Estimates

Variable	DF	Parameter	Standard	t-value	Pr >  t
		<b>Estimates</b>	Error		
Intercept	1	1.13685	0.16405	6.93	< 0.0001
<b>Service Quality</b>	1	0.12471	0.04562	2.73	0.0065
Perceived Value	1	0.20884	0.04874	4.28	< 0.0001
<b>Health Information</b>	1	0.38870	0.05286	7.35	< 0.0001
Technology					
_ 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					

Source: Developed from SAS Enterprise Guide 7.1

# 4.3.3 Single Linear Regression (SLR) Analysis

From the Table 4.25 below, patient satisfaction has p-value of <0.001, which indicate that the variable is significant to predict the revisit intention of medical tourists, since the p-value is less than the alpha value of 0.05. Hence, the alternate hypothesis (H4) was accepted in the study.

Table 4.25 Parameter Estimates

Variable	DF	Parameter Estimates	Standard Error	T Value	Pr >  t
Intercept	1	0.80919	0.14273	5.67	<.0001
<b>Patient Satisfaction</b>	1	0.78017	0.03433	22.73	<.0001

Source: Developed from SAS Enterprise Guide 7.1

**Regression Equation:** 

Y = a + b1X1 + b2X2 + b3X3 + e

By substituting the results collected,

Y = Satisfaction

a = constant

X1 = Service Quality

X2 = Perceived Value

X3 = Health Information Technology

b = regression of coefficient of xi

i = 1,2,3...

e = an error term, normally distributed of mean 0 (assumes e = 0)

Satisfaction = 1.13685 + 0.12471 (service quality) + 0.20884 (perceived value) + 0.38870 (health information technology)

Refer to the equation above, health information technology is the predictor variable that contributes the highest to the variation of loyalty, due to the value of parameter estimate for this predictor variable is the highest (0.38870) among all the predictor variables. Thus, health information technology makes the strongest contribution to explain the variation in the satisfaction of medical tourists in Malaysia. Next, perceived value contributes the second strongest unique to explain the variation in medical tourist's satisfaction with the value of 0.20884 while service quality has the least contribution to explain the variation in medical tourist satisfaction as it has the lowest value which is 0.12471.

# **Chapter 5: Discussion and Conclusion**

# 5.0 Introduction

In Chapter 5, the researcher will summarise the statistical analysis which included the descriptive and inferential analysis interpretation along with the theoretical and managerial implication of the result from the study. Furthermore, this chapter also contains limitation of study, recommendations for future research as well as the conclusion.

# **5.1 Summary of Statistical Analyses**

# **5.1.1 Descriptive Analysis**

The table below had summarized all the demographic information of the respondents in the research.

Table 5.1 Summary of Descriptive Analysis

Variables	Frequency	Percentage (%)
Gender		
Male	215	52.44
Female	195	47.56
Age Group		
Below 21 years old	19	4.63
21-30 years old	58	14.15
31-40 years old	124	30.24

41-50 years old	118	28.78	
51 years old and above	91	22.20	
Country of Origin			
Indonesia	258	62.93	
India	7	1.71	
Japan	17	4.15	
China	10	2.44	
Libya	1	0.24	
United Kingdom	14	3.41	
United States	12	2.93	
Australia	21	5.12	
Bangladesh	34	8.29	
Philippines	19	4.63	
Cambodia	16	3.90	
Others	1	0.24	
<b>Educational Qualification</b>			
No formal education	31	7.56	
High school	130	31.71	
Graduation	182	44.39	
Higher education	65	15.85	
Others	2	0.49	
Occupation			
Business/Executive/Managerial position	76	18.54	
Professional/Technical position	63	15.37	
Government official	83	20.24	

Private employee	130	31.71	
Others	58	14.15	
Marital Status			
Single	96	23.41	
Married	294	71.71	
Divorced	11	2.68	
Widowhood	9	2.19	
Number of Visit to Malaysia			
One	85	20.73	
Two	129	31.46	
Three	83	20.24	
Four and above	113	27.56	
Purpose of Visit			
Medical treatment only	205	50	
Medical treatment and business	55	13.41	
Medical treatment and sightseeing	150	36.59	
Period of Stay in Malaysia			
Less than 10 days	210	51.22	
10-15 days	93	22.68	
16-20 days	46	11.22	
21-25 days	27	6.59	
26-30 days	12	2.93	
More than 30 days	22	5.37	
Travelling Companions			
Alone	39	9.51	
			_

Spouse	120	29.27
Family members	194	47.32
Relatives and friends	57	13.90
<b>Monthly Income Range</b>		
US\$ 500 or below	118	28.78
US\$ 501 – US\$ 1000	88	21.46
US\$ 1001 – US\$ 1500	59	14.39
US\$ 1501 – US\$ 2000	51	12.44
US\$ 2001 – US\$ 2500	36	8.78
US\$ 2501 – US\$ 3000	19	4.63
US\$ 3001 – US\$ 3500	18	4.39
US\$ 3501 and above	21	5.12

*Source:* Developed for the research

According to the result, the number of male respondents is greater than female respondents with the percentage of 52.44% and 47.56% respectively. Based on the result, the majority age group of the respondents is between 31 years old to 40 years old (124 respondents or 30.24%). Most of the respondents' country of origin is from Indonesia (258 respondents or 62.93%). There are 44.39% of the respondents are graduation and 130 respondents or 31.71% are working in private sector. In terms of respondents' marital status, a majority of them are married (294 respondents or 71.71%). Besides, 31.46% of our respondents visit two times to Malaysia and 50% of the respondents are visit for medical treatment only. Over 50% of the respondents stay in Malaysia less than 10 days and majority of the respondents are came with their family members. Lastly, 28.78% of the respondents earned US\$ 500 and below monthly income.

# **5.1.2** Central Tendency

Table 5.2 Summary of Central Tendency Measurement

Variables	N	Mean	Standard Deviation
Medical Service Quality	410	3.75552	0.59521
Perceived Value	410	3.95942	0.62172
Health Information Technology	410	4.15671	0.59914
Patient Satisfaction	410	4.04780	0.55843
Revisit Intention	410	3.93798	0.60579

Source: Developed for the research

According to the results above, health information technology has the highest average mean which is 4.15671 with the standard deviation of 0.59914. Next, patient satisfaction ranked the second highest of mean which is 4.04780 with the lowest ranked of standard deviation of 0.55843. The variable that has the third highest of mean is perceived value (3.95942) with the highest standard deviation of 0.62172 followed by revisit intention (0.93798) with the standard deviation of 0.60579. Medical service quality has the lowest mean among the variables which is 3.75552 with the standard deviation of 0.59521.

# **5.1.3** Reliability Test

The table below shows that all the independent variables and dependent variables show a good strength of reliability with the Cronbach's Alpha range of 0.81 to 0.87 respectively.

<u>Table 5.3 Summary Result of Reliability Test</u>

No	Variable	Cronbach's Alpha	Reliability

1	Medical Service Quality	0.837939	Good
2	Perceived Value	0.866450	Good
3	Health Information Technology	0.851806	Good
4		0.823934	Good
	Patient Satisfaction		
5		0.811339	Good
	Revisit Intention		

Perceived value has the highest Cronbach's Alpha value (0.866450) among three independent variables, followed by health information strategy (0.851806) and medical service quality (0.837939). For the dependent variables, patient satisfaction and revisit intention has a Cronbach's Alpha value of 0.823934 and 0.811339 respectively in the reliability test.

# **5.1.4 Inferential Analysis**

#### **5.1.4.1 Pearson Correlation Coefficient**

The result of Pearson Correlation Coefficient indicated that patients' satisfaction is significantly related medical service quality, perceived value, and health information technology.

Table 5.4 Summary Result of Pearson Correlation Coefficient

		Medical Service Quality	Perceived Value	НІТ	Patient Satisfaction
Patient	Pearson Correlation	0.50084	0.57987	0.62568	-
Satisfaction	Sig. (2-tailed)	<.0001	<.0001	<.0001	-
	N	410	410	410	-
Revisit	Pearson Correlation	-	-	-	0.62828
Intention	Sig. (2-tailed)	-	-	-	<.0001
	N	-	-	-	410

The result of revisit intention is significantly related to patients' satisfaction. The significant value for all independent variables was indicated <.0001 respectively. The result shown that all the independent variables were significant and positively related to patients' satisfaction, as the value of correlation is positive and the significant value is less than alpha value, 0.05.

### **5.1.4.2** Multiple Linear Regression Analysis

The result of Multiple Regression indicated that all the independent variables are significant explained the variance in dependent variable.

Table 5.5 Summary Result of Multiple Linear Regression Analysis

Variable	Parameter Estimates	Pr >  t	R-Square	F-Value
Intercept	1.13685	<.0001		
Medical Service Quality	0.12471	0.0065	0.4449	108.47
Perceived Value	0.20884	<.0001	3.1119	100.17
Health Information Technology	0.38870	<.0001		

According to the table above, the p-value 0.0065, <.0001 and <.0001 is less than alpha value 0.05 and F-statistic is significant with value 108.47. The R-Square value 0.4449 indicated that the independent variables can explain 44.49% of the variance in dependent variable. satisfaction is the most influential predictor of health information technology (parameter estimates=0.38870) among all the independent variables, followed by perceived value (0.20884), and medical service quality (0.12471). Thus, three alternate hypotheses (H1 – H3) were accepted in the study.

# **5.2 Discussion on Major Findings**

Major finding 1: Based on Pearson Correlation Coefficient Analysis, all the independent variables were found have significant and positive relationship with patient satisfaction at different strengths.

Hypothesis	Result	Supported
Hypotheses 1: There is a positive relationship between medical service quality and satisfaction of medical tourists in Malaysia.	r = 0.50084 $p = <0.0001$ $(p < 0.05)$	Supported
Hypotheses 2: There is a positive relationship between perceived value and satisfaction of medical tourists in Malaysia.	r = 0.57987 $p = <0.001$ $(p < 0.05)$	Supported
Hypotheses 3: There is a positive relationship between health information technology and satisfaction of medical tourists in Malaysia.	r = 0.62568 $p = <0.0001$ $(p < 0.05)$	Supported
Hypotheses 4: There is a positive relationship between satisfaction and the revisit intention of medical tourists in Malaysia.	r = 0.62828 $p = < 0.001$ $(p < 0.05)$	Supported

### **5.2.1** Medical Service Quality and Patient Satisfaction

Medical service quality has showed a moderate relationship with patient satisfaction towards the medical tourists in Malaysia. It represents that the patient satisfaction is high when the medical service quality is favourable. When the tourists satisfied with the medical services provided, they will tend to spread positive word-of-mouth. The result is consistent with Anbori (2010) as there is a positive relationship with between the service quality and patient satisfaction which the service quality provided will affect the satisfaction of patient. Hence, Hypothesis 1 is supported.

### 5.2.2 Perceived Value and Patient Satisfaction

According to the result shows that perceived value was found to have a moderate relationship with patient satisfaction towards the medical tourists in Malaysia. Thus, when the tourist obtains greater value in the medical treatment, they will show greater commitment to the medical service provider. This is because their needs have been fulfilled with greater perceived value, and eventually lead to higher satisfaction. The result is same with Chen and Chen (2010) says that within a tourism perception, perceived value is positively influence on customer satisfaction. Therefore, Hypothesis 2 is supported.

### **5.2.3 Health Information Technology and Patient Satisfaction**

Based on the findings above, health information technology has a moderate relationship with patient satisfaction towards the medical tourist in Malaysia. Therefore, when the medical treatments that the patient received have integrated with advanced HIT, the efficiency and effectiveness of the medical services will be improved. The integrated advanced treatments will be critical in enhancing tourists' satisfaction, especially in the trend of technology. The result is supported by Mehrdad Roham (2012), there has a significant enhancement of patient satisfaction through the result of fully implementation of Health Information Technology in hospital. Thus, Hypothesis 3 is supported.

### 5.2.4 Patient Satisfaction and Revisit Intention

Table 5.6 shows that there is a moderate relationship between patients' satisfaction and revisit intention. When the patient is satisfied with medical service provided, their revisit intention will increase. They will tend to repurchase the same services when they faced same illness, in other words, revisit the same medical service provider. This had further supported by the research of Zeithaml & Berry (1996), as the studies have shown that satisfaction is a key variable, as satisfied consumer are more likely to repeat purchase which mean that there is a positive relationship between patient satisfaction and revisit intention. Therefore, Hypothesis 4 is supported.

Major finding 2: Based on the Multiple Linear Regression Analysis, all the independent variables were found to be significant predictor of patient satisfaction toward revisit intention.

Table 5.7 Summary Findings of Multiple Linear Regression Analysis

Variable	Parameter Estimates	Pr > ltl	R- Square	Result
Intercept  Medical Service Quality	1.13685 0.12471	<0.0001	0.4449	Significant Significant
Perceived Value  Health Information  Technology	0.20884 0.38870	<0.0001		Significant Significant

Source: Developed for the research

In this study, the model is good to explain the relationship between the predictor variables and patient's satisfaction when p-value is less than the alpha value 0.05. Hence, Hypothesis 5 is supported.

Based on Table 5, health information technology (parameter estimates = 0.38870) is the best single predictor for patient satisfaction and revisit intention toward the medical tourism in Malaysia. Therefore, this result is verified by Mehrdad Roham (2012), as when the hospital implementing the health information technology it will lead to the patient satisfaction and revisit intention due to efficiency and productivity toward the medical tourism in Malaysia followed by perceived value as stated above.

# **5.3 Implications**

### **5.3.1 Theoretical Implications**

This study has proposed and tested the research model that explains that factors influence medical tourists' satisfaction and their revisit intention to Malaysia. Besides, this study had applied existing theory which are the Expectancy Confirmation Theory, SERVQUAL Gap model, Technology Acceptance Model into a relatively new context which is medical tourist satisfaction. Despite several past researches had study on medical tourists' satisfaction, however, the effect of service quality, perceived value and health information technology on medical tourists' satisfaction and their revisit intention to Malaysia had not been addressed in previous research.

The result of study presented that there's a positive relationship between the three independent variable and patient satisfaction, while patient satisfaction also positively related to revisit intention. Therefore, this reflects that the framework proposed had proven the validity of Expectancy Confirmation Theory, which the medical tourist satisfaction occurs when the patient's perceived service quality,

perceived value and perceived HIT are higher their initial expectations, which will eventually lead to their revisit intention. Besides, the findings of the study also show that satisfaction of medical tourists highly depends on the availability of healthcare information technology which is confirmed by TAM just as the user acceptance is one of the significant factor for successful adoption and utilization of the targeted technology. Perceived ease of use and perceived usefulness of E-health technology will positively influence the intention of medical tourists to adopt the new technology.

## **5.3.2 Managerial Implications**

In order to gain competitive advantage, medical institutions should develop their strategies on achieving a greater medical tourists' satisfaction by providing value and quality service, in order to increase their intention to revisit. For instance, patient satisfaction can be attained by delivering service which beyond tourist's expectation, providing superior health information technology and provide greater value to assure medical tourists that they had made the right decision.

Initially, this study shows that availability of health information technology was found to be the most significant factor that affect medical tourists' satisfaction. This result may be attributed to the fact that the majority of medical tourists may consider the facilities and technologies of medical institution to be an important part in satisfying medical experience. However, to be compete worldwide, the development of health information technology in Malaysia is still in a relatively slow progress. Hence, medical service provider should further invest in the developing of E-health technology such as Electronic medical health record system (EHRs), computerized disease registries, patient portal, medical billing and so on.

Besides, government also play a critical role to enhance the health information technology system in Malaysia. For instance, funding research and development activities to identify successful practices and adopting consensus standards within its own health IT. Governments can also provide incentives directly to medical institution such as offer tax incentives to medical establishment

in order to improve the health care effectiveness and efficiency, prevent medical errors, increase administrative efficiencies, and ultimately create competitive advantage among other countries.

Furthermore, medical service provider can create a greater value to medical tourists by providing medical treatment that the patients feel worth to the medical cost incurred. For instance, highly skilled and well-trained professionals such as physicians and nurses are important for sustaining the competitiveness of countries. To improve the quality of these professional workers, the authorities should introduce a systematic process of education and training that allow them to gain those up-to-date techniques related to diagnostics, procedures and pharmaceuticals.

In addition, to improve service quality, tourist agencies can collaborate with medical institution by offering an all-inclusive holiday packages that combining healthcare services together with airport transfers, transportation, hotel accommodation for accompanying family members, local city tour, sightseeing, and so on. Moreover, patients traveling abroad to undergo medical treatment often will have difficulties and barriers in foreign language communication, especially with doctors and others medical personnel. Hence, to attract global medical tourists, medical tourism providers might consider to offer the service of professional interpreter with specialized medical knowledge to support the patient through all stages of treatment during his/her stay at the hospital.

# 5.4 Limitations of study

As with any research, the study presented had few limitations that should be considered in future research. One of the limitation is unavailability of sampling frame. The data were collected in hospitals located in few metropolitan cities in Malaysia such as Penang, Ipoh and Kuala Lumpur, which employing a convenience-sampling approach.

Hence, the results of the study may not reflect the whole population. Caution must be taken when generalizing the findings to different hospitals in other geographic locations. Future research may include a more thorough research design with a wider sampling range to attain a higher validity and minimize sampling limitations.

Another limitation of the study is the language barriers present between the researcher and respondent. Language barrier is one of an important hindrance to researchers since the target respondent of this study are foreign medical tourists. Hence, there's difficulties to communicate the questionnaire to the respondent and this will potentially lead to misinterpretation and misunderstood on the survey question.

### 5.5 Recommendations

In order to overcome the limitations, numerous recommendations had proposed for the future research. Future researches with better temporal and financial provisions who intend to study on medical tourism in Malaysia should extend geographical areas in order to enhance the reliability of data collection and minimizing sampling limitations. Researches can widen the research area to other states or cities such as Melaka, Johor, and etc. which are also a favourable destination for medical tourism in Malaysia.

Moreover, health information technology was found to be the most important factor that affecting medical tourist satisfaction in this study. Hence, future researchers are recommended to focus on eHealth smart technology in medical sector since it is a trend in medical sector. Thus, it is an opportunity for the researchers to carry out more studies about smart technology. Hence, it will give an opportunity for the medical institution to improve the effectiveness and efficiency of the medical services while fulfil the patients' needs. Lastly, research could be carried out regarding on the factors that directly affecting the foreign patient revisit intention.

### **5.6 Conclusion**

Medical tourist's satisfaction is the key to enhance the medical tourism industry in Malaysia. This research had provided better understanding towards the factors that influence the medical tourists' satisfaction and their revisit intention to Malaysia. Medical service quality, perceived value and health information technology, had been proved to have contributed to the tourists' satisfaction and eventually affecting their revisit intention. According to the result, Health Information technology was found to be the most significant factor that affecting medical tourists' satisfaction, followed by perceived value and medical service quality. This research may contribute to healthcare service provider, travel agencies, government in promoting medical tourism as well as future researcher as a references. Lastly, in order to have a better future development of medical tourism in Malaysia, there should be a continuous effort to understand and enhance medical tourist's satisfactions.

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# Appendix Suppendix I Questionnaire (English Version)



### **Survey Questionnaire**

# Factors Influencing Patients' Satisfaction in Medical Tourism and Future Visit

Dear Sir/Madam,

Greetings and welcome to Malaysia. We are the Bachelor of Business Administration (Hons) students from Universiti Tunku Abdul Rahman (UTAR), currently conducting a final year project research study regarding medical tourists' satisfaction. Your participation to answer this questionnaire is much important to help us to complete this research. We appreciate for your time in completing these questions. All of the information provided will be treated as private and confidential. This survey is solely for academic research purposes.

Thank you very much for your time and participation. If you have any question or inquiry, please do not hesitate to contact our team members.

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### **Guidelines for completing this survey**

- 1. There are **THREE** sections in this questionnaire. Please answer **ALL** the questions in Section A, B and C.
- 2. Completion of this questionnaire will take you about 20 minutes.
- 3. The information gather will be treated as private and **CONFIDENTIAL**.

### PERSONAL DATA PROTECTION STATEMENT

Please be informed that accordance with the Personal Data Protection Act 2010 (PDPA) which came into force on 15 November 2013, Universiti Tunku Abdul Rahman (UTAR) is hereby bound to make notice and require consent in relation to collection, recording, storage, usage and retention of personal information.

Acknowledge	ement of Notice		
[ ] I have been notice.	en noticed by you and I hereby u	nderstood, conse	ented and agreed per UTAR
[ ] I disagree,	my personal data will not be pro	ocessed.	
	have been noticed by you and I hereby understood, consented and agreed per UTAR e.  disagree, my personal data will not be processed.  on A: Demographic Profile  e tick ( $$ ) on the most appropriate answer.		
		personal data will not be processed.  graphic Profile  the most appropriate answer.  ale  Female  Journal of the most appropriate answer.  ale  Female  Journal of the most appropriate answer.  Journal	
Section A: Do	emographic Profile		
Please tick (\)	) on the most appropriate answ	wer.	
1. Gende	er		
	Male		Female
2. Age g	roup		
	Below 21 years old		41-50 years old
	21-30 years old		51 years old and above
	31-40 years old		
3. Count	ry of origin		
	Indonesia		United States
	India		Australia
	Japan		Bangladesh
	China		Philippines
	Libya		Others (please specify):
	United Kingdom		<del></del>

4.	Educa	tional qualification	
		No formal education	Higher education
		High school	Others (please specify):
		Degree	
5.	Occup	pation	
		Business/ Executive/	Government official
		Managerial position	Private employee
		Professional/ Technical	Others (please specify):
		position	
6.	Marita	ıl status	
		Single	Divorced
		Married	Widowhood
7.	Numb	er of visit to Malaysia	
		One	Three
		Two	Four and above
8.	Purpos	se of visit	
	<b>r</b>	Medical treatment only	
		Medical treatment and business	
		Medical treatment and sightseeing	
9.	Period	of stay in Malaysia	
		Less than 10 days	16-20 days
		10-15 days	21-25 days

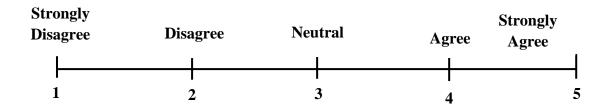
# Factor Influence Medical Tourists' Satisfaction and their Revisit Intention to Malaysia

	26-30 days		More than 30 days
10. Who a	accompanied you?		
	Single		Family members
	Spouse		Relatives and friends
11. What i	is your monthly income range?	(1  US\$ = R)	M4)
	US\$500 or below		US\$2001 – US\$2500
	US\$501 – US\$1000		US\$2501 – US\$3000
	US\$1001 – US\$1500		US\$3001 – US\$3500
	US\$1501 – US\$2000		US\$3501 and above

Factor Influence Medical Tourists' Satisfaction and their Revisit Intention to Malaysia

### **Section B:**

Please indicate your opinions on the following statements by circling the number from the rating scale given below.



**Part 1: Medical Service Quality** 

Medical service quality refers to the patients' evaluation for the quality of medical care provided. Please indicate your degree of agreement on the following statements.

No	Medical Service Quality	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Tan	gibility					
1	The hospital is providing visual appealing facilities.	1	2	3	4	5
2	The cleanliness of the hospital is in good status.	1	2	3	4	5
3	The hospital is providing state-of-art equipment.	1	2	3	4	5
4	The medical staff have professional appearance.	1	2	3	4	5
Reli	ability	1				
5	The hospital is giving a strong concern of patients' safety.	1	2	3	4	5
6	Medical staff are kind and very helpful.	1	2	3	4	5
7	The hospital is providing services as promised to the patient.	1	2	3	4	5
Res	ponsiveness					
8	The medical staff are well dependable in handling patient's problem.	1	2	3	4	5
9	The medical staff are able to provide precise medical services to the patient.	1	2	3	4	5
10	The medical staff are able to explain well on the procedure of medical treatment undertaken by the patient.	1	2	3	4	5
Assu	irance					

11	The medical staff give encouragement and infuse patient's confidence.	1	2	3	4	5
12	The medical staff are qualified with professional skills.	1	2	3	4	5
13	The medical staff have the ability to handle the patient's health difficulties.	1	2	3	4	5
Emp	Empathy					
14	The doctor is showing courtesy and politeness when	1	2	3	4	5
	giving health advices to the patient.					
15	Medical staff was treating the patients with friendly and caring attitude.	1	2	3	4	5
16	The medical staff are taking good care of the patient's	1	2	3	4	5
	feelings.					
17	The medical staff understand well on the patient's needs.	1	2	3	4	5

### **Part 2: Perceived Value**

Perceived value is defined as the patient's overall assessment of the medical product or service based on perceptions of what is received and what is given. Please indicate your degree of agreement on the following statements.

No	Perceived Value	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Fun	ctional Value (Price and Performance of medical treatm	nent)				
1	The medical treatment in this private hospital is worth the price that I paid.	1	2	3	4	5
2	This private hospital provide greater value as compared to other medical institutions.	1	2	3	4	5
3	The medical treatment in this private hospital provide good service with a reasonable price.	1	2	3	4	5
4	The procedure to receive medical treatment in this private hospital is appropriate for me.	1	2	3	4	5
Emot	tional Value (Feelings or affection that generated by me	dical tr	eatme	nt)		
5	The medical treatment that I received help to relieve my illness.	1	2	3	4	5
6	The medical treatment that I received make me feel relaxed and comfortable.	1	2	3	4	5
7	The medical treatment in this hospital increase my confidence for recuperation (recovery).	1	2	3	4	5
Socia	l Value (The ability of medical treatment to enhance so	cial self	f-conc	ept)		

8	When I received the medical treatment in this private	1	2	3	4	5
	hospital, people have a good impression on me.					
9	When I received the medical treatment in this private	1	2	3	4	5
	hospital, this make me feel acceptable by other people.					
10	When I received the medical treatment in this private	1	2	3	4	5
	hospital, this will improve the way I perceived by others.					
11	When I received the medical treatment in this private	1	2	3	4	5
	hospital, this will give me social approval.					

# **Part 3: Health Information Technology**

Health information technology can be perceived as one of the useful technological tools for medical treatment to achieve better outcome for the patients. Please indicate your degree of agreement on the following statement.

No	Health Information Technology (HIT)	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Health information technology allow the doctor to follow up my health condition outside the hospital.	1	2	3	4	5
2	Health information technology help to increase the healthcare accuracy in medical treatment.	1	2	3	4	5
3	Health information technology increase my effectiveness in managing my health matters.	1	2	3	4	5
4	Health information technology enable to manage my health matters more efficiently.	1	2	3	4	5
5	Health information technology help to increase my confidence in the process of recovery from medical treatment.	1	2	3	4	5
6	Health information technology enable me to track my medical health record easily.	1	2	3	4	5
7	Using Health information technology is convenient for appointment making from technology-driven system.	1	2	3	4	5
8	Using Health information technology makes it easier to manage my health matters.	1	2	3	4	5

### **Patient satisfaction**

Patient satisfaction can be known as personal emotional assessment of care in reference to an individual medical care experience. Please indicate your degree of agreement on the following statement.

No	Patient Satisfaction	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	I am satisfied with the medical treatment that I received from this hospital.	1	2	3	4	5
2	The medical services I received in this private hospital have fulfilled my requirements.	1	2	3	4	5
3	For me, getting treatment in Malaysia's private hospital is a decent experience.	1	2	3	4	5
4	For me, the medical services in Malaysia's private hospital is better than I expected.	1	2	3	4	5
5	I am satisfied with the overall medical treatments in Malaysia's private hospital.	1	2	3	4	5

### **Revisit Intention**

Revisit intention is a personal aim of the patient on sustaining the relationship with the medical providers and will visit the medical institution again when needed. Please indicate your degree of agreement on the following statement.

No	Revisit Intention	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	I intend to revisit Malaysia for medical treatment in the near future.	1	2	3	4	5
2	I will continue to use this hospital service in Malaysia for the future.	1	2	3	4	5
3	It is very likely that I will revisit Malaysia for medical treatment within the next two years.	1	2	3	4	5
4	If I need medical services again, I will consider Malaysia as my first choice.	1	2	3	4	5
5	I will recommend the medical services of this hospital to my family and friends.	1	2	3	4	5
6	I will recommend the hospitals in Malaysia to anyone who seeks my advice.	1	2	3	4	5

7	I would say positive things about the medical services in	1	2.	3	4	5
	Malaysia to my family and friends.	1	1		•	

# **Section C:**

Ple	ease	e respond to the following questions by checking $(\checkmark)$ the box that resemble t
yo	ur a	nnswer(s).
1.	Ту	pe of medical service(s) you are seeking for this medical trip. ( Please ✓ for all
	apj	ply)
		Dental surgery/ treatment
		Cosmetic/ plastic/ reconstructive surgery
		Sight treatment/ Ophthalmology
		Heart/ Cardiology
		Comprehensive medical checkup
		Angioplasty/ Arteries or veins treatment
		Gastroenterology and hepatology
		Fertility treatment (IVF)
		Cancer Treatment/ Oncology treatment
		Neurology
		Orthopedic treatment
		Hip resurfacing
		Others (please specify):

2.	Th	e major influence(s) of decision to seek medical treatment in Malaysia. (Please ✓
	for	those apply)
		Experience & reputation of a particular overseas medical provider
		Medical care abroad is cheaper than domestic care
		Length of waiting time for abroad treatment
		Patient has inadequate domestic health insurance
		Patient's health insurance covers treatment abroad or offers incentives
		Treatment is available abroad that is unavailable domestically
		Anonymity of treatment (privacy)
		Combining medical treatment with vacation
		Others (please specify):
3.		lect the primary sources of information below for you to decide Malaysia as
	me	edical service destination. ( Please ✓ for those that apply)
		Medical tourism guide
		Medical tourism operator and facilitator
		Hospital websites
		Relatives and friends' encouragement
		Advice from doctors in home country
		Advertisements
		Others (please specify):
4.		your opinion, what can be improved in order to attract more medical tourists ming to Malaysia?  ☐ Infrastructure/ Telecommunication
		☐ Trained doctors/ Staffs
		☐ Travel agencies
		☐ Improved hotels
		□ No changes required
		☐ Others (Please specify):

### **Appendix II Questionnaire (Malay Version)**



# UNIVERSITI TUNKU ABDUL RAHMAN FAKULTI PERNIAGAAN DAN KEWANGAN IJAZAH SARJANA MUDA PENTADBIRAN PERNIAGAAN PROJEK AKHIR TAHUN

# Faktor-faktor yang Mempengaruhi Kepuasan Pesakit terhadap Pelancongan Perubatan dan Lawatan pada Masa Depan

Tuan/Puan,

Selamat datang ke Malaysia. Kami adalah pelajar jurusan Bachelor of Business Administration (Hons) dari Universiti Tunku Abdul Rahman (UTAR), sedang melaksanakan projek akhir tahun berhubung dengan kepuasaan warga asing terhadap pelancongan perubatan. Penyertaan anda amat dihargai untuk menyelesaikan penyelidikan ini. Segala maklumat adalah sulit. Penyelidikan ini adalah bertujuan untuk penyelidikan akademik sahaja.

Terima kasih kerana meluangkan masa untuk penyelidikan ini. Sebarang pertanyaan, boleh menghubungi nama and nombor telefon seperti dibawah.

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Lew Yi Qi	010-3808030	yiqilew97@1utar.my
Loh Zi Yi	016-3495515	chrisloh@1utar.my
Wendy Tan	016-4024318	wendy97@1utar.my
Woo Pei Kei	017-3372587	peggywoopk@1utar.my

Berikut adalah garis panduan untuk melengkapkan kaji selidik ini:

- 1. Kaji selidik ini terdapat TIGA bahagian. Sila jawab SEMUA soalan di bahagian A, B dan C.
- 2. Masa untuk melengkapkan kaji selidik ini adalah sebanyak 20 minit.
- 3. Semua informasi berikut adalah peribadi dan sulit.

### Akta Perlindungan Data Peribadi

Dengan dimaklumkan bahawa menurut Akta Perlindungan Data Peribadi 2010 yang dikuatkuasa pada 15 November 2013, Universiti Tunku Abdul Rahman ("UTAR") membuat notis dan meminta kesetujuan anda untuk mengumpul, mencatat, menyimpan, mengguna dan memegang data peribadi.

Pengik	tirafan l	Notis		
[]Say	ya telah	diperhatikan dan telah memahami, setuju ata	ıs pe	mberitahuan dari UTAR.
[]Say	ya tidak	bersetuju, data peribadi saya tidak boleh dip	rose	s.
D.L.	•	D . (°1 D (°		
вапад	gan A:	Profil Demografi		
Sila ta	ndakan	ı (√) pada jawapan yang sesuai.		
1.	Jantina	ı		
		Lelaki		Perempuan
2.	Umur			
		21 tahun dan ke bawah		41-50 tahun
		21-30 tahun		51 tahun dan ke atas
		31-40 tahun		
3.	Sila ny	atakan tempat asal anda		
		Indonesia		Jepun
		India		China

# Factor Influence Medical Tourists' Satisfaction and their Revisit Intention to Malaysia

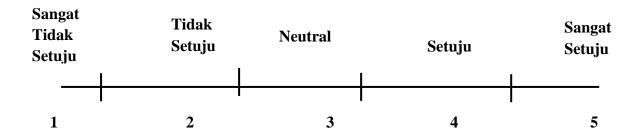
		Libya	Bangladesh
		United Kingdom	Filipina
		Amerika syarikat	Lain-lain (Sila jelaskan):-
		Australia	
4.	Kelaya	akan pedidikan	
		Tiaada pendidikan rasmi	Pendidikan tinggi
		Sekolah menengah	Lain-lain (Sila jelaskan):-
		Pengijazahan	
5.	Pekerj	aan	
		Perniagaan sendiri	Pekerja swasta
		Profesion	Lain-lain (Sila jelaskan):-
		Pekerja kerajaan	
6.	Taraf j	perkahwinan	
		Tunggal	Bercerai
		Berkahwin	Janda
7.	Jumlal	h kunjungan ke Malaysia	
		Satu kali	Tiga kali
		Dua kali	Empat kali dan ke atas
8.	Tujuar	n kunjungan	
		Rawatan perubatan sahaja	
		Rawatan perubatan dan perniagaan	
		Rawatan perubatan dan pelancongan	

Factor Influence Medical Tourists' Satisfaction and their Revisit Intention to Malaysia

9.	Tempo	oh penginapan di Malaysia		
		Lebih kurang dari 10 hari		21-25 hari
		10-15 hari		26-30 hari
		16-20 hari		Lebih dari 30 hari
10.	. Siapa	yang menemani anda ke Malaysia		
		Bujang		Ahli keluarga
		Pasangan suami/ Isteri		Saudara dan rakan-rakan
11.	. Berapa	akah pendapatan bulanan anda?	(1  US\$ = RM	M4)
		US\$500 atau di bawah		
		US\$501 – US\$1000		
		US\$1001 – US\$1500		
		US\$1501 - US\$2000		
		US\$2001- US\$2500		
		US\$2501 – US\$3000		
		US\$3001 – US\$3500		
		US\$3501 dan ke atas		

## Bahagian B

Sila nyatakan pendapat anda mengenai pernyataan berikut yang berkaitan dengan pengalaman perubatan yang diterima di Malaysia dengan memilih nombor skala yang diberikan.



Bahagian 1: Kualiti Perkhidmatan Perubatan

Kualiti perkhidmatan boleh ditakrifkan sebagai penilaian pesakit terhadap hasil perkhidmatan yang disediakan oleh pihak hospital. Sila nyatakan persetujuan anda pada pernyataan berikut.

No	Kualiti Perkhidmatan Perubatan	Sangat Tidak Setuju	Tidak Setuju	Neutral	Setuju	Sangat Setuju
Keta	araan					
1	Hospital ini menyediakan kemudahan yang memuaskan.	1	2	3	4	5
2	Hospital ini berada dalam keadaan yang bersih.	1	2	3	4	5
3	Hospital ini menyediakan peralatan perubatan yang canggih.	1	2	3	4	5
4	Kakitangan di hospital ini mempunyai penampilan yang profesional.	1	2	3	4	5
Kep	ercayaan					
5	Kakitangan di hospital ini mengambil berat tentang keselamatan pesakit.	1	2	3	4	5
6	Kakitangan di hospital ini adalah baik dan sudi memberi pertolongan.	1	2	3	4	5
7	Hospital ini menyediakan perkhidmatan yang dijanjikan kepada pesakit.	1	2	3	4	5

Tan	ggungjawab					
8	Kakitangan di hospital ini juga boleh dipercayai dalam menangani masalah pesakit.	1	2	3	4	5
9	Kakitangan di hospital ini menyediakan perkhidmatan perubatan yang berkualiti untuk pesakit.	1	2	3	4	5
10	Kakitangan di hospital ini dapat memberikan penerangan megenai prosedur rawatan dengan baik.	1	2	3	4	5
Jam	inan/ Kepastian	1			•	
11	Kakitangan di hospital ini memberikan galakan dan keyakinan kepada pesakit yang sedang menjalani rawatan.	1	2	3	4	5
12	Kakitangan di hospital ini mendapat pengiktirafan daripada badan perubatan professional.	1	2	3	4	5
13	Kakitangan di hospital ini mempunyai keupayaan untuk menangani masalah kesihatan pesakit.	1	2	3	4	5
Emp	pati		•			
14	Doktor di hospital ini merawat pesakit dengan mesra dan baik.	1	2	3	4	5
15	Kakitangan di hospital ini sering mengambil berat terhadap masalah pesakit.	1	2	3	4	5
16	Kakitangan di hospital ini sentiasa menjaga perasaan pesakit.	1	2	3	4	5
17	Kakitangan di hospital ini sangat memahami keperluan pesakit.	1	2	3	4	5

# Bahagian 2: Nilai tanggapan

Nilai tanggapan ditakrifkan sebagai penilaian atas pengalaman produk atau perkhidmatan berdasarkan pandangan pesakit terhadap apa yang diterima dan diberikan. Sila nyatakan persetujuan anda pada pernyataan berikut.

No	Nilai Tanggapan	Sangat Tidak Setuju	Tidak Setuju	Neutral	Setuju	Sangat Setuju
Nil	ai Praktikal/Fungsi (Harga dan prestasi bagi rawat	an peruba	tan yan	g dip	erole	hi.)

1	Hospital ini membekalkan rawatan yang berbaloi	1	2	3	4	5
	dengan harga yang ditetapkan.					
2	Hospital ini menyediakan perkhidmatan yang lebih	1	2	3	4	5
	baik berbanding daripada institusi perubatan lain.	_	_		-	
3	Harga rawatan yang diterima di hospital ini adalah	1	2	3	4	5
	berpatutan.	_	_		'	3
4	Bagi saya, prosedur perubatan di hospital ini adalah	1	2	3	4	5
	mudah.	1			-	3
Nila	i Emosi (Perasaan atau kasih sayang yang diperole	hi daripada	a rawa	tan pe	eruba	tan
vane	g diberikan)					
			r	1	ı	•
5	Perawatan yang diterima di hospital ini dapat	1	2	3	4	5
	melegakan penyakit saya.					
6	Perawatan yang diterima di hospital ini dapat	1	2	3	4	5
	menenangkan penyakit saya.	_			-	,
7	Perawatan yang diterima di hospirtal ini telah	1	2	3	4	5
	meningkatkan keyakinan saya untuk pulih.					
Nila	i Sosial (Keupayaan rawatan perubatan untuk men	ingkatkan	konsej	ken	diri so	sial.)
8	Setalah menerima rawatan perubatan di hospoiital	1	2	3	4	5
	ini, saya mendapat tanggapan yang baik daripada					
	masyarakat.					
9	Sekiranya saya menjalani rawatan di hospital ini,	1	2	3	4	5
	saya akan diterima oleh masyarakat.		_		-	
10	Masyarakat telah mengubah pandangan terhadap	1	2	3	4	5
	saya setelah menerima rawatan di hospital ini.				-	-
11	Masyarakat akan bersependapat selepas saya	1	2	3	4	5
11	menerima rawatan di hospital ini.	-	_			
	meneral at morphism min					

## Bahagian 3: Teknologi maklumat kesihatan

Teknologi maklumat kesihatan dijadikan sebagai salah satu alat teknologi yang berguna untuk rawatan kesihatan dalam memberikan keputusan yang baik kepada pesakit. Sila nyatakan persetujuan anda pada pernyataan berikut.

No	Teknologi maklumat kesihatan	Sangat Tidak Setuju	Tidak Setuju	Neutral	Setuju	Sangat Setuju
1	Teknologi maklumat kesihatan memberikan doktor mengambil tinsadakan susulan tentang keadaan kesihatan walaupun saya berada di luar hospital.	1	2	3	4	5

2	Teknologi maklumat kesihatan dapat membantu meningkatkan ketepatan penjagaan kesihatan saya semasa rawatan dijalankan.	1	2	3	4	5
3	Teknologi maklumat kesihatan dapat membantu meningkatkan keberkesanan semasa saya dalam proses penyembuhan kesihatan.	1	2	3	4	5
4	Teknologi maklumat kesihatan membolehkan saya mengurus masalah kesihatan saya dengan lebih efisien.	1	2	3	4	5
5	Teknologi maklumat kesihatan dapat meningkatkan keberkesanan semasa proses pemulihan rawatan kesihatan.	1	2	3	4	5
6	Teknologi maklumat kesihatan membenarkan saya mengesan kembali rekod kesihatan perubatan dengan mudah.	1	2	3	4	5
7	Penggunaan sistem teknologi maklumat kesihatan boleh memudahkan saya membuat termujanji.	1	2	3	4	5
8	Teknologi maklumat kesihatan telah memudahkan semua pengurusan perkara-perkara kesihatan saya.	1	2	3	4	5

# Kepuasan pesakit

Kepuasan pesakit boleh dikenali sebagai penilaian emosi peribadi dengan merujuk kepada pengalaman perubatan individu yang diterima. Sila nyatakan persetujuan anda pada pernyataan berikut.

No	Kepuasan pesakit	Sangat Tidak Setuju	Tidak Setuju	Neutral	Setuju	Sangat Setuju
1	Saya berasa puas hati dengan rawatan perubatan yang diterima dari hospital ini.	1	2	3	4	5
2	Perkhidmatan perubatan yang diterima dari hospital ini memenuhi keperluan kesihatan saya.	1	2	3	4	5
3	Bagi saya menjalani rawatan perubatan di hospital swasta Malaysia merupakan pengalaman yang baik.	1	2	3	4	5
4	Perkhidmatan perubatan di hospital swasta Malaysia adalah lebih baik daripada apa yang dijangkakan.	1	2	3	4	5

5	Saya berpuas hati dengan keseluruhan rawatan					
	perubatan yang diterima di hospital swasta	1	2	3	4	5
	Malaysia.					

#### Niat Kembali

Niat kembali adalah megenai tujuan pesakit yang ingin mengekalkan hubungan dengan institusi perubatan dan akan mengunjungi institusi perubatan tersebut semula apabila mermelukan. Sila nyatakan persetujuan anda pada pernyataan berikut.

No	Niat kembali	Sangat Tidak Setuju	Tidak Setuju	Neutral	Setuju	Sangat Setuju
1	Saya berhasrat untuk kembali semula untuk menerima rawatan perubatan dalam masa terdekat di Malaysia.	1	2	3	4	5
2	Saya akan menerima perkhidmatan di hospital ini pada masa akan datang.	1	2	3	4	5
3	Saya akan melawat ke Malaysia untuk rawatan perubatan dalam tempoh dua tahun yang akan datang.	1	2	3	4	5
4	Jika saya memerlukan perkhidmatan perubatan pada masa akan datang, saya akan memilih Malaysia sebagai pilihan pertama saya.	1	2	3	4	5
5	Saya akan megesyorkan perkhidmatan perubatan hospital ini kepada keluarga dan rakan-rakan saya.	1	2	3	4	5
6	Saya akan mencadangkan hospital di Malaysia kepada sesiapa yang meminta nasihat daripada saya.	1	2	3	4	5
7	Saya akan menyebar perkara-perkara yang positif mengenai perkhidmatan perubatan yang diterima di Malaysia kepada keluarga dan rakan-rakan saya.	1	2	3	4	5

## **Bahagian C:**

Sila jawab soalan berikut dengan menyemak  $(\checkmark)$  kotak yang sesuai dengan jawapan anda.

 Jenis perkhidmatan perubatan yang anda ingin menjalani. (Sila ✓ yang berkenaan) Factor Influence Medical Tourists' Satisfaction and their Revisit Intention to Malaysia

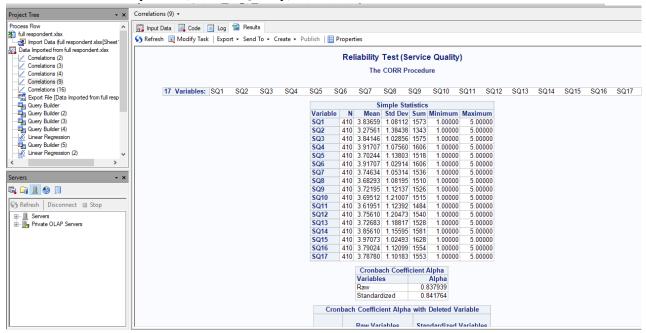
		Pembedahan / rawatan pergigian
		Pembedahan kosmetik / plastik
		Rawatan penglihatan / Oftalmologi
		Pembedahan jantung / Cardiothoracic
		Pemeriksaan perubatan yang komprehensif
		Angioplasti / Arteria atau rawatan urat
		Rawatan kesuburan (IVF)
		Rawatan kanser
		Neurologi
		Onkologi
		Rawatan ortopedik
		Kardiologi (Perubatan dalaman)
		Lain-lain (sila jelaskan):
2.	Apaka	h pengaruh yang menyebabkan anda mengambil keputusan untuk menerima
	rawata	n perubatan di luar negara?
		Pengalaman dan reputasi pembekal perubatan di luar negara
		Perkhidmatan perubatan di luar negara lebih murah daripada di negeri asal
		Tempoh masa menunggu untuk menerima rawatan di luar negara
		Pesakit tidak mempunyai insurans kesihatan yang cukup di negara asal
		Insurans kesihatan pesakit meliputi rawatan di luar negara atau
		menawarkan insentif yang baik
		Rawatan yang terdapat di luar negara yang tidak dapat diperolehi di negeri
		asal
		Ketidakpastiaan atas sesuatu rawatan yang ingin diterima
		Menerima rawatan perubatan sambil bercuti
		Lain-lain (sila jelaskan):
3.	Apaka	h sumber-sumber yang anda merujuk semasa memilih Malaysia sebagai
	destina	asi anda untuk rawatan perubatan?
		Panduan pelancongan perubatan
		Pengendali pelancongan perubatan

# Factor Influence Medical Tourists' Satisfaction and their Revisit Intention to Malaysia

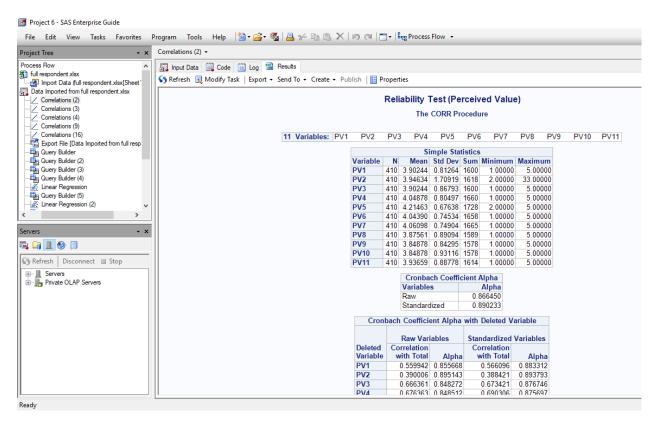
		Laman web hospital
		Saudara-mara dan rakan-rakan
		Doktor di negara asal
		Iklan-iklan megenai perubatan
		Lain-lain (sila jelaskan):
4.	Pada p	endapat anda, apakah yang harus ditingkatkan untuk menarik lebih ramai
	warga	asing menerima rawatan perubatan di Malaysia?
		Infrastruktur / Telekomunikasi
		Kakitangan perubatan
		Perkhidmatan pelancongan agensi
		Hotel penginapan
		Tiada perubahan yang diperlukan
		Lain-lain (sila jelaskan):
		-Terima kasih untuk peryertaan anda dalam kaji selidik ini-

#### Appendix III Data analysis

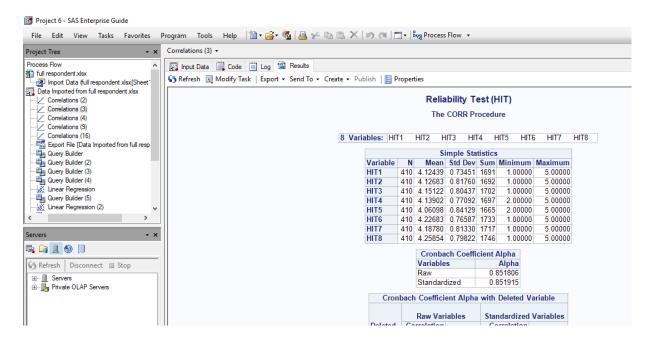
#### Result for Reliability Test (Service Quality)



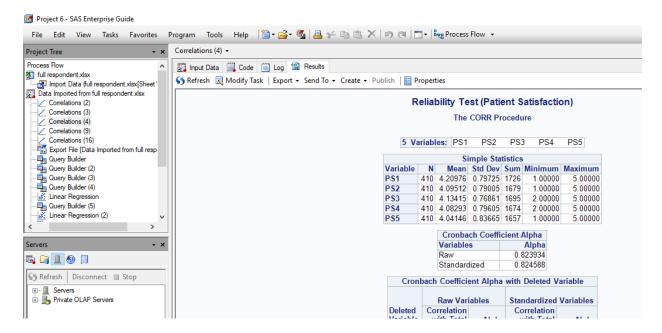
## Result for Reliability Test (Perceived Value)



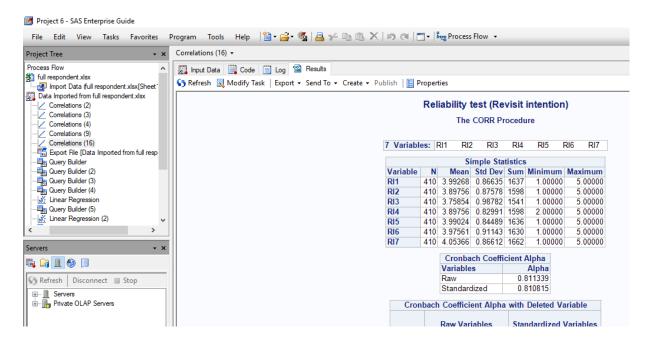
#### Result for Reliability Test (HIT)



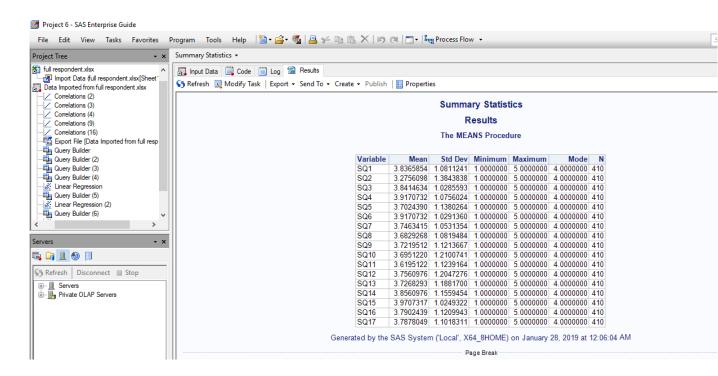
#### Result for Reliability Tesy (Patient Satisfaction)



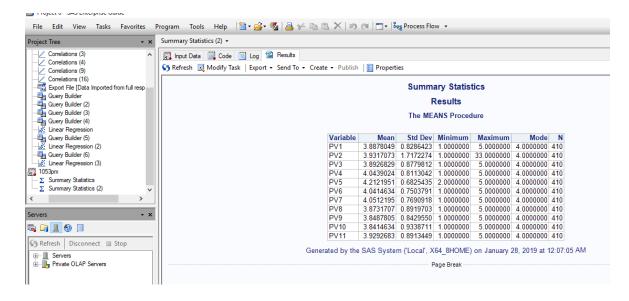
#### Result for Reliability Test (Revisit Intention)



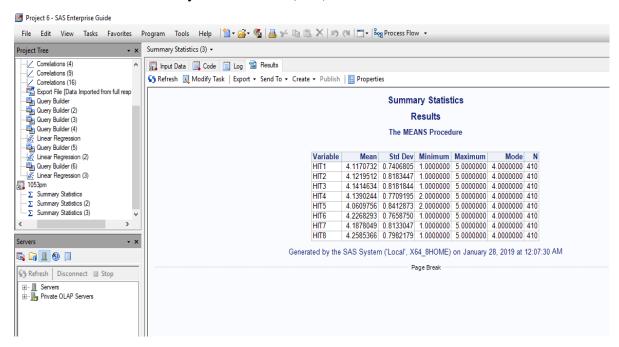
#### Result for Central Tendency Measurement (Service Quality)



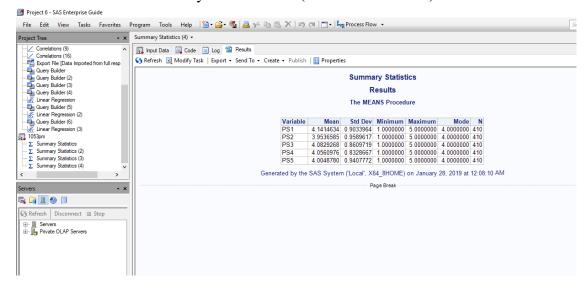
#### Result for Central Tendency Measurement (Perceived Value)



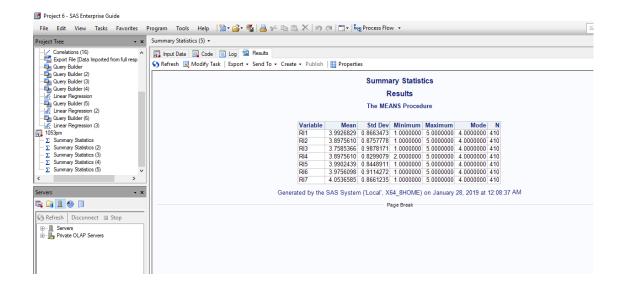
#### Result for Central Tendency Measurement (HIT)



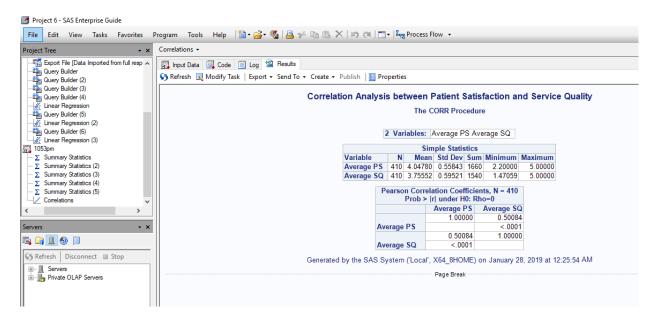
## Result for Central Tendency Measurement (Patient Satisfaction)



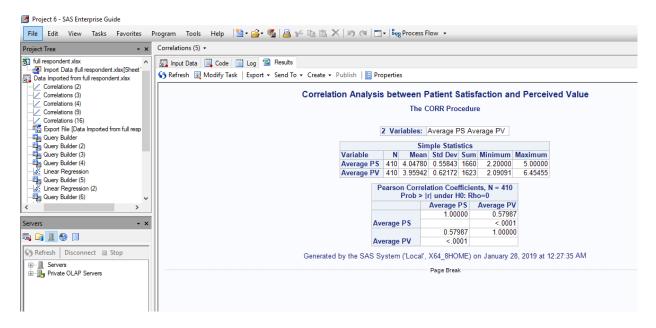
Result for Central Tendency Measurement (Revisit Intention)



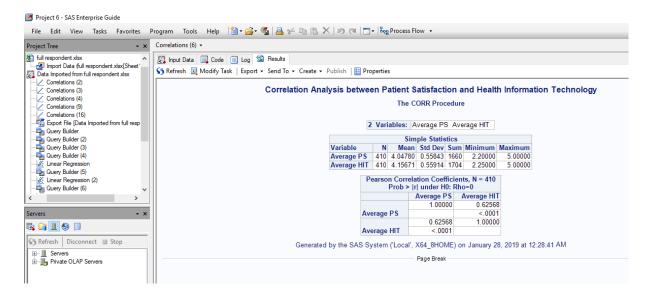
#### Result for Pearson Correlation Coefficient (service quality)



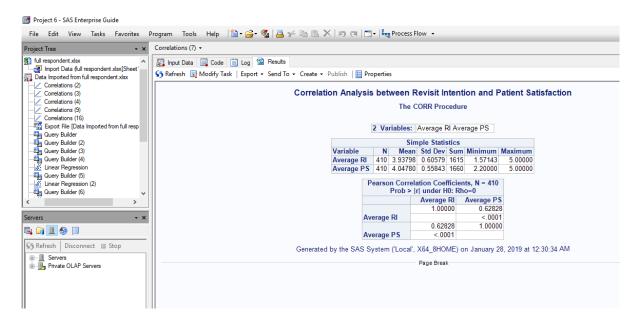
#### Result for Pearson Correlation Coefficient (Perceived Value)



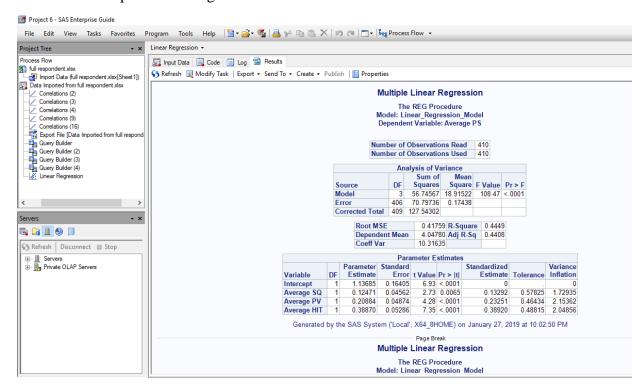
#### Result for Pearson Correlation Coefficient (HIT)



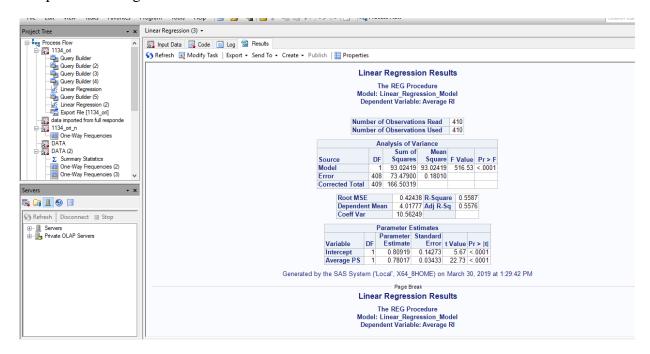
#### Result for Pearson Correlation Coefficient (Revisit intention and Patient Satisfaction)



#### Result for Multiple Linear Regression



#### Simple Linear Regression



#### **Appendix IV** Approval Letter (Penang Adventist Hospital)



02 January 2019

Adventist Clinical Research Centre

465, Jalan Burma, Taman Selamat,

10350 George Town,

Pulau Pinang,

Malaysia.

Dear Te Le Thing,

Re: Application for Research Committee Approval to Conduct a Research Entitled: Factors influence medical tourists' satisfactions and their revisit intention to Malaysia.

We are pleased to inform you that your application to conduct a research entitled 'Factors influence medical tourists' satisfactions and their revisit intention to Malaysia,' has been reviewed and approved by Penang Adventist Hospital. The final approval by our Research Committee is recorded in it meeting action number RC2018-008.

We appreciate your cooperation in keeping us updated of any changes or development in your research. Kindly submit a Research Progress Report <u>annually</u> (Every 12 months) from the <u>date of issue</u> of this research approval letter or a Research Closure Report at the end of the research, whichever is earlier.

Thank you very much.

Yours sincerely,

Dr Raymond Tah Kheng Soon

Head of Adventist Clinical Research Centre

Penang Adventist Hospital

PENANG ADVENTIST HOSPITAL

465, Jalan Burma, 10350 Penang, Malaysia Tel (+604) 222 7200 LoCall 1-300-88-4325 Fax (+604) 228 0443 E-mail enquiry@pah.com.my Website www.pah.com.my









# Appendix V Respondents











