

## Malaysia for Medical Tourism: How Ready Are We? Insights from Prospective Medical Tourists

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**Abstract:** Currently, medical tourism in Malaysia is going through an emergent phase. With the establishment of Malaysia Healthcare Travel Council (MHTC) and its function to promote Malaysia as a medical tourism hub in South East Asia, the condition seems very much promising. Although, medical tourist arrival is on the rise, there are still lacking empirical studies toward the factors that influence potential tourists to choose Malaysia as their medical tourism destination. This issue is worth to study due to the potential of medical tourism to be a competitive advantage of Malaysia's tourism industry. This study examines factors which could determine prospective medical tourists' intentions to choose Malaysia as a destination for medical purpose. To address this objective, the study collects data from personal interviews of prospective medical tourists. After going through a series of analyses, the study finds that accessibility to destination and quality of care significantly predict prospective tourists' intentions to visit Malaysia for medical purpose. The result of this study provided the concern of the respondents for this type of tourism in Malaysia which can be used for both government authority and private enterprises to formulate appropriate strategies to grasp this market effectively.

**Key words:** Medical, tourism, destination attributes, market, Malaysia

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### INTRODUCTION

Medical tourism is relatively small into the overall service trade or the consumption of medical services worldwide. However, from the perspective of tourism per se, medical tourism has gained a lot of attention of late. According to Deloitte Medical Tourism report, medical tourism sector was expected to reach an estimated 15.75 million medical tourists by 2017. In 2007, over 0.75 million medical tourists from the United States alone travelled to other countries for medical and healthcare services. This phenomenon has given substantial opportunity for some developing countries to compete in and has a great potential to make contribution to any nation tourism industry. This eventually contribute to the growth of the industry (Omar *et al.*, 2015).

There are many countries seeking to compete successfully in order to gain the advantages of this industry. In recent years, a number of developing nations are competing for medical tourism hub in their respective

continents. Aggressive promotional effort has been launched for medical tourism in destinations like Costa Rica and Cuba for South America and the Caribbean, Hungary and Lithuania for Eastern Europe; Jordan, India, Malaysia, Thailand and Turkey for Asian region; South Africa in the African continent. These nations offer medical services and facilities with added value and most importantly with saving potential. For example, Woodman argued that a US citizen could gain the same quality of medical care in Malaysia with 65-80% saving potential.

As this niche market is seen as a success in many other Asia countries, Malaysia private hospitals started to realize medical tourism potentials and to attract more international tourists in order to solve their financial crisis due to the unaffordability of local patients toward private hospitals in 1997 (Hazilah *et al.*, 2010). According to Yanos, Malaysia was ranked among the top five medical tourism destinations including Panama, Brazil, Costa Rica, and India. Furthermore, a study by the American

Publication International Living in 2014 rated healthcare system in Malaysia as the third best from 24 other competing countries. With this information in hand, Malaysia could clearly be recognized as one of the most attractive providers for health and medical tourism in Asia; this has certainly brought about immense potentials for the nation's medical tourism. Acknowledging that Malaysia is not the only player in the South East Asia region, as a few other regional countries are competing to attract medical tourists globally, Malaysia is in dire need to identify and highlight its unique competitive advantages to differentiate its offering apart from the competing nations. In the current globalization in healthcare services, being able to highlight and sustain the competitive strength should be of main focus for Malaysia as its unique selling points. In order to distinguish bases of product or service differentiation for Malaysia as a medical tourism destination, the need to understand the key behaviours of prospective medical tourists is indispensable, especially matters concerning to perception of the degree of importance to the destination attributes when choosing medical destination. For this reason, the present study focuses on the influencing elements that motivate tourists to choose Malaysia as a destination for medical tourism. Furthermore, one of the spectrum in understanding tourists behavioural intentions gives reference to its product (or service) attributes, for example, quality of care, potential of saving and safety and security. So it is crucial to understand what are the considerations need to be fulfilled in order to understand prospective tourists' intentions to visit Malaysia for medical purpose. The question is, do these product (or service) attributes act as the determinants of prospective medical tourists' intentions to visit Malaysia for medical purpose? Therefore, the objectives of this study is to identify the destination attributes that have significant influence to tourists' intentions to visit Malaysia for medical purpose.

**Literature review:** Destination attributes are important variables in the evaluation of tourism destination image. A few related studies were conducted in Malaysia in relation to medical tourism. Among the recent ones is Ahmad and Yusuf who examined medical tourism activities by identifying possible demand and key main issues in medical tourism and the service quality on medical service among medical tourists visiting a private hospital in Johor. Aliman and Mohamad (2013) analysed out patients' service quality perceptions and their behavioural intentions towards private hospitals in Malaysia and found patients' satisfaction acted as a

mediator between service quality perception and behavioural intentions. Although, the study was not in the context of medical tourism, it has provided some indications to the scenario of patients' perceptions and medical facilities in Malaysia.

There were a few other literatures written on the measurement of destination attributes. Destination attributes indicators were used in Jotikasthira's study where she analysed the reasons that determine the motivation and behaviour of tourists for medical purpose in Thailand. A few past studies have identified and categorized destination attributes. Destination attributes were chronically categorized into two groups which are functional attributes and psychological attributes (Beerli and Martin, 2004; Rittichainuwat *et al.*, 2001; Chon, 1991). Sirakaya *et al.* (1997) emphasized on the safety and security issues, which in the absence of due diligence tourism industry may be in jeopardy. Others destination attributes such as political instability, international conflict, hygiene, prostitution and military intervention may also bring negative effects to the image of a destination (Sonmez and Sirakaya, 2002). Chi and Qu (2008) argued that accessibility was an important factor influencing a destination image. Apart from that, Marlowe and Sullivan (2007) argued that criteria such as quality of care, potential for savings and travel exposure are of paramount important, which medical tourists and health plan sponsors pay attention to. Noticeably, most studies in the literature have been conducted in the context of leisure tourism instead of medical tourism.

All in all, a few dimensions are identified to measure destination attributes for medical tourism in Malaysia, inter alia, quality of care; potential for savings; safety and security; hygiene issues; tourism opportunities and; accessibility of a destination. Jotikasthira utilized these six attributes in her study investigating tourists' medical tourism destination choice. For the purposes of this study, the importance of attributes is defined as the relative degree of importance that prospective tourists associate to when considering Malaysia as their destination for receiving offshore medical treatment. Thus, in the present study, these six attributes will be used for evaluate the influence of it to the intention to visit. The attributes are:

**Quality of care:** According to Lohr, a health service for individuals and populations which aims at increasing the likelihood of desired health outcomes with a consistent professional knowledge, can be called as quality of care. This has been accepted broadly and as an effective tool in the formulation of practical approaches to quality assessment and improvement.

**Potential for savings:** According to Keynesian economics, saving means the amount left over for a consumer to save after deducted the cost of expenditure in a given period of time. While, in the context of medical tourism, potentials for savings occurred when patients travel across international borders for less expensive care to save money. A bundle of products or services like accommodation, airfares and medical cost with the claim of saving potential up to 80% compared with the medical expenses in the United States (Newman, 2006). Furthermore, savings vary according to specific medical and surgical treatments and they may not exist across the board.

**Safety and security:** Political security, public safety, health and sanitation, personal data safety, legal protection of tourists, consumer protection, safety in communication are some of the concern under the range of security and safety issue. Safety and security issue has always been a complex multidimensional notion. Generally, tourists are likely to be deterred from traveling to dangerous countries or regions, making the tourism sector less attractive to develop in those places.

**Hygiene issues:** Hygiene is an important factor that affects not only the image of medical tourism of a country, but also the image of a country in general. The supply of hygiene drinking water and sanitation for travellers has become a very importance issues of late. Hygiene issues are also important to prevent illness spread such as the recent SARS and bird flu.

**Tourism opportunities:** Traveling for medical purposes also opens the door for indulging oneself into other types of tourism simultaneously. Like business travellers, other types of outbound visitors normally engage themselves in activities such as sightseeing, shopping, entertainment and culture. The concept of cross-selling is active in many types of tourism as it plays an important role in determining the competitiveness of a destination; that would include medical tourism as well. Attraction can be categories into five groups, which are culture attraction, natural attraction, events, recreation and entertainment attraction (Goeldner and Ritchie, 2007).

**Accessibility of destination:** The ability to provide appropriate and user-friendly visitor access into a destination and dispersal throughout the destination is another dimension that a destination management should take into consideration. Tourism operators should attempt

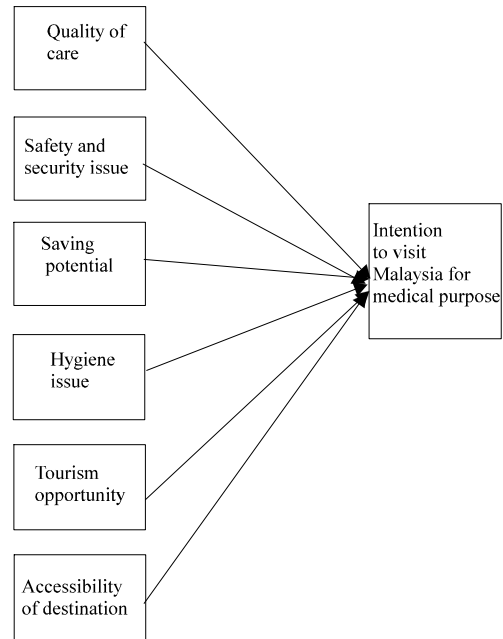


Fig.1: Proposed conceptual frame work

and put effort on the connectivity between transport and visitor attractions and should be guaranteed in terms of access routes and transport options. Due to it can influence a visitor’s initial destination choice, length of stay and overall satisfaction.

**Proposed conceptual framework:** According to a study conducted by Jotikashthira, respondents’ thorough association of medical tourism with some specific attributes was relatively important to be in their medical tourism destination checklist.

In the same study, as Jotikashthira deliberated it, destination attributes is viewed from six dimensions which are quality of medical care, safety and security issues, saving potential, hygiene issues, tourism opportunity and accessibility of destination. Meanwhile, in order to understand tourism behavior, tourist behavioral intentions are measured by tourists’ intentions to visit. Figure 1 is the proposed conceptual framework of the study.

**Research hypotheses:** Although, discussion pertaining medical tourism in Malaysia has been extensive, there are still lacking empirical study toward the factors that influence prospective medical tourists to choose Malaysia as their medical tourism destination. The primary research question to be addressed in this study is; what are the dimensions that influence prospective medical tourists’ intentions to choose Malaysia for medical purpose?

From the literature review and the research questions as stated in the preceding sections, this study can therefore list all the hypotheses as follows:

- H<sub>1</sub>: quality of care significantly predicts prospective tourists' intentions to visit Malaysia for medical purpose
- H<sub>2</sub>: saving potential significantly predicts prospective tourists' intentions to visit Malaysia for medical purpose
- H<sub>3</sub>: hygiene issue significantly predicts prospective tourists' intentions to visit Malaysia for medical purpose
- H<sub>4</sub>: safety issue significantly predicts prospective tourists' intentions to visit Malaysia for medical purpose
- H<sub>5</sub>: accessibility of destination significantly predicts prospective tourists' intentions to visit Malaysia for medical purpose
- H<sub>6</sub>: tourism opportunity significantly predicts prospective tourists' intentions to visit Malaysia for medical purpose

## MATERIALS AND METHODS

**Survey instrument and survey setting:** The data were collected at Kuala Lumpur International Airports (KLIA). For the current study, given that the primary objective was to identify the factors that motivate people to choose Malaysia as a destination for medical tourism, the first criterion for inclusion in the target population was people who travel to Malaysia regardless of their travel purpose.

As a result of an extensive review of the literature, 39 items of destination attributes were identified as being pertinent to medical tourism. These items were categorised into six factors: quality of care; potential for savings; safety and security; hygiene issues; tourism opportunities and accessibility to the destination. The items measuring degree of importance are labeled on a 6-point Likert-type scale (i.e., 1 being not at all important and 6 being very important). An even numbered scale is used to produce an impulsive measure where no in different option is available.

Due to time and economic constraint, intention to visit was used as an alternate for actual choice behaviour. According to Jotikasthira, visit intention is defined as the likelihood of the prospective medical tourists to choose a destination for his or her desired medical treatment. This study adapted Sonmez and Sirkaya (2002) measurement to

Table 1: Quota sampling based on statistic on medical tourist arrivals 2012

Countries	Medical tourist arrivals (%)	No. of sample
Indonesia	55.9	168
India	3.33	10
Japan	2.65	8
China	2.29	7
United Kingdom	1.99	6
US	1.81	5
Libya	1.77	5
Australia	1.54	5
Nepal	1.49	4
Others	27.23	82
Total	100	300

Bernama in 2014

Table 2: Quota sampling based on the group of the medical tourist arrival in continent (after adjustment)

Countries	Percentage	No. of sample
Indonesia	55.9	168
Asian countries besides Indonesia	23.38	70
Non-Asian countries	20.72	62
Total	100.00	300

tourists' intention to visit Turkey to the context of medical tourism in Malaysia with a 6-point Likert-type scale.

**Sample size and sampling method:** The present study is categorically a problem-solving research. Malhotra (2008) recommended that a sample of 300-500 respondents would be appropriate for this category of research. A desired sample size of 300 was therefore chosen. In this regard it is noteworthy that Manning and Munro (2007) have suggested a rule of thumb regarding sample size where 100 is considered poor, 200 is considered fair and 300 is considered good. It would thus seem justified to collect data from a sample size of 300 respondents for this study.

In the present study, it was decided that the most appropriate sampling method was quota sampling and the reference for quota sampling was the medical tourist arrivals 2012 (Table 1). Due to budget and time limitations in this study, sample is adjusted in accordance to the original medical tourist arrival in 2012. Adjusted quota sample derived from medical tourist arrival 2012 is presented in Table 2.

## RESULTS AND DISCUSSION

### Statistical analysis and hypotheses testing

**Profile of the respondents:** Data collection for the main study occurred between 22 March 2015 and 6 May 2015. In total, 330 copies of questionnaire were distributed, 325 completed questionnaires were collected. Table 3 presents a summary of the demographic characteristics of the final sample respondents.

**Normality, reliability and validity test:** The variables were checked for validity using inter-item correlation and item-to-total correlation. All items correlated with each other and with the composite variable at satisfactory levels (correlation >0.50 for item-to-total correlation and >0.30 for inter-item correlations) (Manning and Munro, 2007).

All variables were also checked for reliability using Cronbach's alpha. The result is as presented in Table 4, which indicates highly reliable. The scores for this variable were normally distributed, as indicated by the skewness and kurtosis of -0.966 and 0.350 (Liu *et al.*, 2014).

**Hypotheses testing:** Data from a total of 325 valid questionnaires were included in the analysis. All variables

were tested for normality, validity and reliability before proceeding to the testing of the six proposed hypotheses. Multiple regression analysis was used to test the degree of correlation of these variables. Only two variables (i.e., quality of care and accessibility to destination) were proven to significantly predict prospective tourists' intentions to visit Malaysia for medical purpose.

Within these 2 variables, standardized coefficient (beta) of accessibility to destination is 0.336 which was more influence on the intention to visit Malaysia for medical purpose, than quality of care with -0.263 beta. The result was shown in Table 5 and 6.

From the six hypotheses which were tested by appropriate statistical methods for the variables involved, only two were confirmed. Table 7 summarizes the testing of hypotheses.

Table 3: Profile of the respondents

Demographic characteristics	No. of respondents	Proportion of sample
<b>Continent country</b>		
Indonesia	171	52.6
Asian countries beside Indonesia	87	26.8
Non-Asian countries	67	20.6
<b>Gender</b>		
Male	230	70.8
Female	95	29.2
<b>Age (year)</b>		
≤20	54	16.6
21-30	173	53.2
31-40	66	20.3
≥41	32	9.8
<b>Education level</b>		
Secondary school or college diploma	69	21.2
Bachelor's degree	91	28.0
Master's or Doctorate degree	147	45.2
Others	18	5.5
<b>Employment status</b>		
Unemployment	114	35.1
Freelance professionals	33	10.2
Corporate firms employees	63	19.4
Business owners	12	3.7
Other	103	31.7
<b>Experience in medical tourism</b>		
None	294	90.5
Once	31	9.5
Two times and above	0	0.0

Table 4: The reliability test for each variable

Variables	Cronbach's alpha	Mean	SD	No. of items
Quality of care	0.767	5.340	0.6678	4
Saving potential	0.848	5.148	0.8042	4
Hygiene issue	0.796	5.026	0.6697	4
Tourism opportunities	0.659	4.711	0.7439	2
Accessibility to destination	0.768	4.778	0.8573	4
Intention to visit Malaysia	0.896	3.455	1.0084	3

Table 5: Output of multiple linear regression-coefficient

Model	Variables	Unstandardized coefficient		Standardized coefficient		Sig.
		B	SE	Beta	t value	
1	(Constant)	3.129	0.618		5.066	0.000
	Quality of care	-0.397	0.111	-0.263	-3.570	0.000
	Saving potential	0.111	0.091	0.0880	1.216	0.225
	Hygiene issue	-0.026	0.088	-0.017	-0.294	0.769
	Tourism opportunities	0.025	0.070	0.0180	0.353	0.724
	Accessibility to destination	0.395	0.065	0.3360	6.053	0.000

Dependent variable: Intention to visit Malaysia

Table 6: Output of multiple linear regression-model summary

R	R <sup>2</sup>	Adjusted R <sup>2</sup>	SE of the estimate
0.383 <sup>a</sup>	0.147	0.133	0.93887

<sup>a</sup>predictors: (Constant) quality of care, saving potential, hygiene issue, tourism opportunities, accessibility to destination

Table 7: Summary of testing of hypotheses

No.	Hypothesis	Results	Relationship
H <sub>1</sub>	Quality of care significantly predicts prospective tourists' intentions to visit Malaysia for medical purpose	Accepted	Negative
H <sub>2</sub>	Saving potential significantly predicts prospective tourists' intentions to visit Malaysia for medical purpose	Rejected	Insignificant
H <sub>3</sub>	Hygiene issue significantly predicts prospective tourists' intentions to visit Malaysia for medical purpose	Rejected	Insignificant
H <sub>4</sub>	Safety issue significantly predicts prospective tourists' intentions to visit Malaysia for medical purpose	Rejected	Insignificant
H <sub>5</sub>	Accessibility of destination significantly predicts prospective tourists' intentions to visit Malaysia for medical purpose	Accepted	Positive
H <sub>6</sub>	Tourism opportunity significantly predicts prospective tourists' intentions to visit Malaysia for medical purpose	Rejected	Insignificant

## CONCLUSION

In conclusion, medical tourism is proven to be a high-yield industry and it is worth that Malaysia to put extra effort on it due to its demand. Besides the suggestions listed above, Malaysia should also aim at reaching other potential markets among Asian countries, which are still lacking in healthcare services such as Laos, Cambodia and Myanmar. Furthermore with the emergence of Islamic tourism and the excellent credential of Malaysia as an Islamic country (Wong, 2003; Henderson, 2003), medical tourists from the Middle East could also be targeted. Considering the suggestions listed above, Malaysia is certainly ready to be not only Asian's hub for medical tourism, but also could be successful in providing medical service and facilities for the entire world.

## IMPLICATIONS

The findings of the present study provide several implications for practitioners in order to help them to formulate appropriate strategies to grasp this market effectively. The following suggestions for practitioners are made as:

- Government authority and private enterprises can utilize the result findings from the present study as an information sources to form the promotional message when advertisements
- Surprisingly, the negative relationship between quality of care and visit intention to Malaysia suggests that there are possibility of lacking or vague of promotional message to focus on services quality of medical care in Malaysia. This has resulted in the negative image of Malaysia leading undesirable intentions to visit Malaysia for medical purpose. Therefore, they should focus on this attribute, as it acts as the most importance factors when choosing a medical tourism destination
- Accessibility factors is a major focus to attract prospective medical tourists from the nearby countries as it shown a positively relationship in the present study. Maintaining status quo is highly recommended
- Saving potentials as a second most important factor that influence the medical destination choice. As Malaysia competes with Thailand, Singapore and India to be the hub of medical tourism in South East Asia, low medical rate may still not be a competitive advantage of Malaysia's medical tourism. However,

with the devaluation of ringgit recently, Malaysia should focus on becoming better option for medical purpose among international tourists offering more attractive facilities

- To highlight service differentiation of medical tourism in Malaysia, it is advisable to aggressively engage in more promotional schemes, especially both overt and covert marketing communication activities. This is crucial, as medical tourists tend to only rely on information from personal doctors and insurance companies. More impactful promotional schemes therefore, could provide insightful product and service information about medical services offered in Malaysia
- Although, safety and hygiene issues are indirect factor when influencing the choice of medical destination, but it represents the total image of Malaysia to foreigners. And therefore, promoting hygienic and safe is of paramount important, not only in promoting medical tourism, but also the entire tourism image in Malaysia. Surely, this effort needs cooperation from all parties involved including Malaysian public

## REFERENCES

- Aliman, N.K. and W.N. Mohamad, 2013. Perceptions of service quality and behavioral intentions: A mediation effect of patient satisfaction in the private health care in Malaysia. *Int. J. Marketing Stud.*, 5: 15-29.
- Beerli, A. and J.D. Martin, 2004. Factors influencing destination image. *Ann. Tourism Res.*, 31: 657-681.
- Chi, C.G. and H. Qu, 2008. Examining the structural relationships of destination image, tourist satisfaction and destination loyalty: An integrated approach *Tourist Manage.*, 29: 624-636.
- Chon, K.S., 1991. Tourism destination image modification process: Marketing implications. *Tourism Manage.*, 12: 68-72.
- Goeldner, C.R. and J.B. Ritchie, 2007. *Tourism Principles, Practices, Philosophies*. John Wiley and Sons, New York, USA.
- Hazilah, N., R. Johari and K. Marikar, 2010. Positioning Malaysia in medical tourism. *Proceedings of the International Conference on Marketing (IC-MAR 2010)*, June 23-24, 2010, IIUM Repository, Kuala Lumpur, Malaysia, pp: 1-21.
- Henderson, J.C., 2003. Managing tourism and Islam in peninsular Malaysia. *Tourism Manage.*, 24: 447-456.

- Liu, Y., F. Siali, M.R. Darun and M.F. Ismail, 2014. Service quality and customer satisfaction: Rapid kuantan in kuantan route, Malaysia. Proceedings of SOCIOINT14 International Conference on Social Sciences and Humanities, September 8-10, 2014, IIUM Repository, Istanbul, Turkey, pp: 976-985.
- Malhotra, N.K., 2008. Marketing Research: An Applied Orientation. 5th Edn., Pearson Education India, India, ISBN: 978-81-317-2317-3, Pages: 749.
- Manning, M.L. and D. Munro, 2007. The Survey Researchers SPSS Cookbook. Pearson Education Australia, Australia.
- Marlowe, J. and P. Sullivan, 2007. Medical tourism: The ultimate outsourcing. *People Strategy*, 30: 8-10.
- Newman, B.Y., 2006. Medical tourism. *Optometry J. Am. Optometric Assoc.*, 77: 575-660.
- Omar, S.S., R. Ramlan, K. Ahmad and C.S. Wei, 2015. Small business growth: A review of literature from the tipping points and social network perspectives. *Adv. Sci. Lett.*, 21: 1089-1093.
- Rittichainuwat, B.N., H. Qu and T.J. Brown, 2001. Thailand's international travel image: Mostly favorable. *Cornell Hospitality Q.*, 42: 82-95.
- Sirakaya, E., A.G. Sheppard and R.W. McLellan, 1997. Assessment of the relationship between perceived safety at a vacation site and destination choice decisions: Extending the behavioral decision-making model. *J. Hospitality Tourism Res.*, 21: 1-10.
- Sonmez, S. and E. Sirakaya, 2002. A distorted destination image. The case of Turkey. *J. Travel Res.*, 41: 185-196.
- Wong, C., 2003. Health Tourism to Drive Earnings. Malaysian Institute of Economic Research, Kuala Lumpur, Malaysia.