International Tourists' Service Quality Perception And Behavioral Loyalty Toward Medical Tourism In Bangkok Metropolitan Area

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ABSTRACT

This research assesses the relationship between service quality, value, satisfaction, and brand trust on the behavioral loyalty of international tourists acting as medical tourists toward private hospital medical services in the Bangkok Metropolitan area. A quantitative study was performed using 400 international tourists who use medical service from private hospitals in Thailand. Structural equation analysis is used to test the hypotheses. The results indicate that there are significant positive relationships between service quality and value (H1), satisfaction (H2), and brand trust (H3). Value (H4), satisfaction (H5), and brand trust (H6) have significant positive relationships with behavioral loyalty. Service quality has an indirect effect on behavioral loyalty by having value, satisfaction, and brand trust function as mediators. Finally, nationality has no moderating effect on the relationship between service quality and value (H7), satisfaction (H8), and brand trust (H9).

Keywords: Service Quality; Value; Brand Trust; Satisfaction; Behavioral Loyalty; Medical Tourism

INTRODUCTION

The growth of the medical tourism market attracts new countries to compete for customers. Thailand, once among the top five destinations, was displaced from the list in 2010 (Tourism Review, 2010). However, Chin-Tsai, In-Fun, and Ya-Ling (2009) applied a grey forecasting model, which predicted the demand for Thai medical tourism in 2012 to be 1.4 million people; this number represents an increase of approximately 14% since 2009. How can we ensure that this increase continues? International accreditation alone is not enough to maintain competitiveness; marketing also plays an important role in the maintenance of sustainable competitiveness. It is important to better understand the attitudes and behaviors of medical tourists in order to support relationships between government agencies and stakeholders in order to formulate appropriate tourism policies. Consequently, this research was initiated to gather information from the perspective of international tourists who travel to Thailand for medical tourism purposes, called medical tourists in this research. We expect that the results will be used to guide the development of a competitive medical tourism marketing policy.

Service marketing studies have consistently reported that--either through behaviors or attitudes--service quality, perceived value, and satisfaction are correlated with loyalty (Akbar, 2010; Cronin, Brady, & Hult, 2000). In addition, brand trust is theoretically reported to be a key determinant of loyalty in brand relationship studies (Chaudhuri & Holbrook, 2001; Delgado-Ballester & Munuera-Aleman, 2001; Matzler, Grabner-Kräuter, & Bidmon., 2008). These relationships have each been independently studied, both in a general service context and in a medical or health care service context. Despite the well-recognized significance of all of these variables to the development of loyalty in the service market, no study has examined the interrelationships among all of these variables that could affect consumer loyalty or the mechanisms by which these variables contribute to the enhancement or reduction of loyalty. Consequently, an integrated model is needed to clarify these interrelationships.

The research aims to study the relationship and forecasting capability of service quality, value, satisfaction, and brand trust on international tourist behavioral loyalty toward private hospital medical services in the Bangkok Metropolitan area.

LITERATURE REVIEW

Service Quality and Behavioral Loyalty

Service marketing studies have consistently reported that, either through behaviors or attitudes, service quality, value, and satisfaction are correlated with loyalty (S. Akbar, 2010; Cronin et al., 2000). In addition, brand trust is theoretically reported to be a key determinant of loyalty in brand relationship studies (Chaudhuri & Holbrook, 2001; Delgado-Ballester & Munuera-Aleman, 2001; Matzler et al., 2008). These relationships have each been independently studied, both in a general service context and in a medical or health care service context; for example, studies have been published on the relationships between service quality and satisfaction (Chaniotakis & Lymperopoulos, 2009; Cho, Lee, Kim, Lee, & Kui-Son Choi, 2004; Naik, Gantasala, & Prabhakar, 2010), service quality, value, and satisfaction (McDougall & Levesque, 2000; Ruytera, Bloemerb, & Peetersa, 1997), brand trust, satisfaction, and loyalty (Zboja & Voorhees, 2006), satisfaction and loyalty (Bodet, 2008), and finally, brand trust and loyalty (Akbar & Parvez, 2009). There are few studies that report on the interrelationships among these variables, although several independent studies have evaluated the service quality-value-satisfaction-loyalty model (Choi, Cho, Lee, Lee, & Kim, 2004; Cronin et al., 2000; Wang, Lo, & Yang, 2004), and the trust-loyalty model in relationship studies (Chaudhuri & Holbrook, 2001; Delgado-Ballester & Munuera-Aleman, 2001; Doney & Cannon, 1997).

Consequently, an integrated model is needed to clarify these interrelationships. This research aims to fill the above-mentioned gap in the literature. We argue that brand trust is a key determinant of loyalty and a mediator between service quality-loyalty and value-loyalty. We postulate that brand trust can reduce the impact of frustration that results from long-distance communication, language barriers, and other issues and can thus enhance medical tourism. Second, brand trust can make the traditional service quality-loyalty model more understandable in the medical tourism context. Third, in mapping the mechanisms that link service quality, value, satisfaction, brand trust, and loyalty, we do not limit our conceptualizations to simple linear relationships; rather, we use path analysis, which allows in-depth phenomena to be exposed. This analysis is useful to management because it pinpoints mechanisms that are likely to be key drivers of medical tourists' loyalty in medical tourism. This information can be used to facilitate policies that maintain sustainable competitiveness. We begin by examining the proposed conceptual research model. The conceptual model guiding this research is depicted in Figure 1. The hypothesized paths were described below.
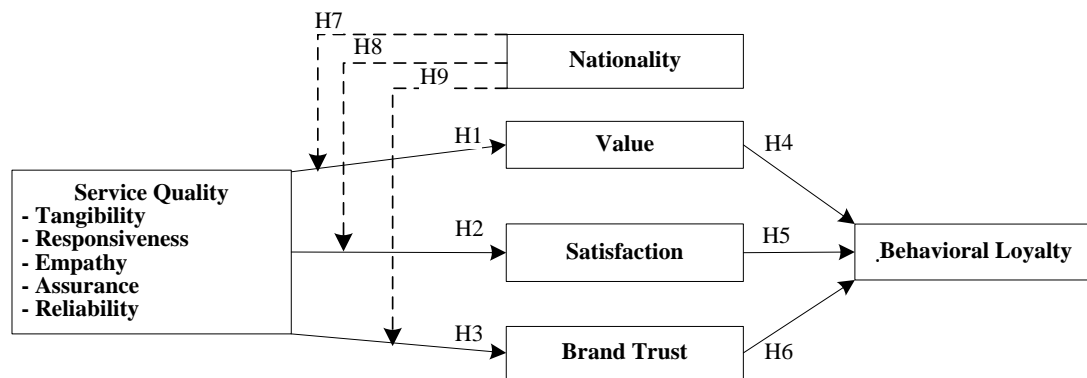

Figure 1 Service Quality Perception and Behavioral Loyalty Toward Medical Tourism Model

Service Quality and Value

Bolton & Drew (1991) published the first empirical study that reported a difference between service quality and perceived service value, they confirmed that service quality has a direct effect on value. Their results were consistent with those of prior exploratory research. This relationship has been further confirmed in several service contexts, such as transportation service (Chen, 2008) and mobile service (Kuo, Wu, & Deng, 2009). Conversely, in medical service there is relatively little research except that done by Cronin et al. (2000), which reported a significantly positive relationship. Replicated research has been done in medical service in South Korea by Choi et al. (2004). For tourism service, the relationship between service quality and value has been reported with a different conclusion. Hutchinson, Lai, and Wang (2009) reported that the relationship does not exist in the golf traveler context, while Chen and Chen (2010) reported a positive relationship between the experiences of quality and value for the world heritage tourist. Even though tourism research has reported diverse results, the majority of service research studies have reported a positive relationship. So for medical tourism, we also propose that there is a direct relationship between service quality and value. Therefore, we hypothesize the following:

H1: Service quality is positively related to the value that medical tourists perceive in medical service.

Service Quality and Satisfaction

The relationship between service quality and satisfaction has been confirmed by several service contexts. The relationship between service quality and satisfaction is also clear in studies of the health care service industry (Andaleeb, 2000; Chaniotakis & Lymperopoulos, 2009; Naidu, 2007; Ruytera, Bloemerb, & Peetersa, 1997). The relationship between service quality and satisfaction is also evident in tourism research (Baker & Crompton, 2000; Chen & Chen, 2010; González, Comesañaa, & Breaa, 2007). Conversely, Hutchinson et al. (2009) reported that there is no relationship between service quality and satisfaction among golf travelers. For this different result, there is a different relationship between constructs, when context is different. Drawing on this literature, we propose that in medical tourism, tourists who have a positive evaluation of their medical service experience will also have a positive satisfaction rating. Therefore, we hypothesize the following:

H2: Service quality is positively related to the satisfaction of medical tourists toward medical service.

Service Quality and Brand Trust

Service quality research during the early 1980s concluded that service quality is highly related to trust and commitment that the service provider promises to deliver to the consumer, which has direct impact on organization image (Grönroos, 1984; Lehtinen & Lehtinen, 1982, 1985). Brodie, Whittome, and Brush (2009) studied airline customers and reported that company trust and employee trust are positively related to service quality and brand image. Harris and Goode (2004) studied e-commerce users and reported that there is a positive relationship between service quality and trust in Books.com users, while there is no relationship between service quality and trust in Flights.com users. Hazra and Srivastava (2009) reported a positive relationship between assurance as an element of service quality and brand trust. Therefore, we hypothesize the following:

H3: Service quality is positively related to brand trust of medical tourists toward medical service.

Value and Behavioral Loyalty

Zeithaml (1988) indicated service value is an important factor in behavioral loyalty. The empirical research in a service context also proved that there is a positive relationship between perceived service value and behavioral loyalty of customers (Fandos Roig, Garcia, & Moliner Tena, 2009; Harris & Goode, 2004; Kuo et al., 2009). These research studies concluded that when customers have high perceptions of service value, their behavioral loyalty increases in terms of word-of-mouth, recommending the service to others and revisiting it themselves. For the medical service context, Cronin et al. (2000) also reported a positive relationship between value and behavioral loyalty. This relationship is also found in the tourism context; when tourists have a high perception of tourism sites, they have positive behavioral intentions in terms of word-of-mouth and future visits (Chen & Chen, 2010;

Hutchinson et al., 2009). Therefore, for medical tourists, we hypothesize the following:

H4:   Value is positively related to behavioral loyalty of medical tourists toward medical service.

Satisfaction and Behavioral Loyalty

It is widely accepted that satisfaction has a direct impact on behavioral loyalty, which comes in terms of repeat patronage, recommendations to others, and positive word-of-mouth, and an indirect impact on searching for the alternatives (Bodet, 2008; Cooil, Keiningham, Aksoy, & Hsu, 2007; Delgado-Ballester & Munuera-Aleman, 2001; Voss, Godfrey, & Seiders, 2010). For medical service, Chaniotakis & Lymperopoulos (2009) reported a positive relationship between satisfaction and word-of-mouth by customers who received maternity service in Athens, Greece. Kim (2008) reported a positive relationship between satisfaction and brand loyalty of customers who received medical service from a hospital in Seoul, South Korea. The relationship between satisfaction and behavioral loyalty also exists in tourism service (Chen & Chen, 2010; Hutchinson et al., 2009; Žabkar, Brenčič, & Dmitrović, 2010). Therefore, we hypothesize the following:

H5:   Satisfaction is positively related to behavioral loyalty of medical tourists toward medical service.

Brand Trust and Behavioral Loyalty

Brand trust is widely accepted as a factor in reducing the price sensitivity of customers' purchasing decisions (Delgado-Ballester & Munuera-Aleman, 2001). In relationship marketing research for product market, brand trust has a positive relationship to behavioral loyalty (Doney & Cannon, 1997; Palmatier, Dant, Grewal, & Evans, 2006; Sirdeshmukh, Singh, & Sabol, 2002). While this relationship has been widely accepted in product marketing, there is relatively little research in the service context. In the e-commerce context, in which great distances exist between service provider and customer, trust also has a positive impact on loyalty (Harris & Goode, 2004). For medical service, Kim, Kim, Kim, Kim, & Kang, (2008) reported a positive relationship between trust and loyalty existed in customers of hospitals in Seoul, South Korea. However, we cannot find a study in tourism research for this relationship. Therefore, we hypothesize the following:

H6:   Brand Trust is positively related to behavioral loyalty of medical tourists toward medical service.

Nationality as Moderation Effect

Nationality is one of several important demographic factors widely accepted as key indicators of customer behavior. Different nationalities result in different values, which affect behavior of people in each country. Hofstede (2010) developed Hofetede's cross-cultural dimensions, which are composed of four different dimensions: power distance, individual, masculinity/femininity, and long and short-term orientation. Based on these four dimensions, Hofstede classified population into two groups: individualists and collectivists. These two groups have differences in terms of their attitudes and behaviors. Steenkamp and Geyskens (2006) studied the differences in website perception between people from individualistic and collectivist countries. The research concluded that individualistic people put more importance on pleasure, privacy, and customization of the website than do collectivist people. In addition, Chan, Yim, and Lam (2010) reported that service providers and customers who have similar cultural dimensions will have a positive impact on value creation during the service delivery process. Patterson and Mattila (2008) reported that the cultural dimension has a moderation effect on value and evaluation of service. Laroche, Ueltschy, Abe, Cleveland, and Yannopoulos (2004) studied the effect of the cultural dimension on service quality evaluation and satisfaction. The research reported that customers from Japan, which has high collectivism, will evaluate a relatively lower score than American and Canadian customers, who have high individualism, in high performance service quality. Conversely, Japanese customers, with high collectivism, will evaluate a relatively higher score than American and Canadian customers, who have high individualism, in low performance service quality. In conclusion, collectivist customers will evaluate in a conservative way, without the most positive or negative evaluation. Therefore, we hypothesize the following:

H7:   Nationality moderates the positive relationship between service quality and value.

H8:   Nationality moderates the positive relationship between service quality and satisfaction.
H9:   Nationality moderates the positive relationship between service quality and brand trust.

RESEARCH METHODOLOGY

The research used quantitative methodology. A survey was conducted to collect data. The following explains the research design used for data collection and hypotheses testing, stated previously.

Sample Design and Data Collection

In this research, the population consists of international tourists who use medical tourism service from a private hospital in the Bangkok metropolitan area, called medical tourists. In collecting the data, the research scope is private hospitals in the Bangkok metropolitan area that serve medical tourists. The sample size is 400 medical tourists.

Measures

The questionnaire was developed based on standard item scales. Before being distributed, the questionnaire was pre-tested on 2 researchers and 10 medical tourists. The questionnaire included the latent constructs listed below, most of which were measured on a seven-point Likert scale ranging from "strongly agree" (7) to "strongly disagree" (1); "satisfaction" was measured on a semantically different scale. Confirmatory factor analysis (CFA) was conducted in conjunction with all of the multidimensional constructs. Table 1 summarizes the goodness of fit index and the composite reliability of each construct.

Service quality. Measures of service quality were adapted from extant research based on five service quality dimensions: tangibility, reliability, responsiveness, assurance, and empathy (Duggirala, Rajendran, & Anantharaman 2008; Moliner 2009; Ramsaran-Fowdar 2008). Each dimension was reported as a summed score, which represented a first order of service quality.

Value. We adapted existing value research (Kantamneni & Coulson, 1996; Moliner, 2009; Sweeney & Soutar, 2001; Sánchez, Callarisa, Rodríguez, & Moliner, 2006) to develop a measurement of value. We measured the value construct using four items that included the value obtained from using the medical service in exchange for money, time, and effort.

Satisfaction. Two items were included to measure tourists' satisfaction with the medical services that they received ("satisfaction/dissatisfaction" and "pleased/displeased").

Brand Trust. We adapted existing research on branding (Chaudhuri & Holbrook, 2001; Delgado-Ballester & Munuera-Alemán, 2003; Li, Zhou, Kashyap, & Yang, 2008) to develop a measurement of brand trust. Five items were included to measure the trustworthiness, trust in benevolence, and trust in honesty of the hospital brand.

Behavioral Loyalty. The loyalty measure was drawn from extant service literature (Delgado-Ballester & Munuera-Aleman 2001; Johnson, Herrmann, & Huber 2006) and used measures of seven items, which included the degree to which tourists showed signs of repeat purchases, whether they had a positive attitude towards the hospital and would recommend the hospital's services, and whether they would consider using only this provider for future services.

Table 1 Assessment Indexes of the Confirmatory Factor Model

Construct	No. of items	Factor loadings		t-value		Composite reliability coefficient	Average variance extracted	GFI	CFI	TLI
		lowest	highest	lowest	highest					
Service Quality	5	0.71	0.77	12.757	14.199	0.86	0.55	0.991	0.970	0.941
Value	4	0.41	0.70	5.895	6.878	0.81	0.29	0.996	0.992	0.977
Brand Trust	5	0.47	0.57	6.378	7.088	0.68	0.29	0.985	0.958	0.916
Behavioral Loyalty	8	0.37	0.52	5.242	6.453	0.71	0.33	0.979	0.947	0.921

RESULTS

The results are reported by dividing them into four parts. The first part is about medical tourists' demographics and their medical service experience, both in country of residence and abroad. The second part includes the empirical test of the hypothesized model. The third part is testing the mediation effect of value, satisfaction, and brand trust between the relationship of service quality and behavioral loyalty. And fourth, the moderating effect of nationality is reported.

International Tourists' Demographics and Medical Service Experience

International tourists who are medical tourists for this research are primarily female, 30-39 years of age, married/living together with 2 children, holding postgraduate degrees, of European nationality, and professionals. Their average annual income is USD 95,554.07, and they travel abroad five times per year on average. Their medical service experience in their country of residence consists mostly of two to four visits per year for general treatment. They prefer to use private hospitals for medical service. They have insurance with Medicare policies and no further expenses for their medical services. This is their first medical service experience in Thailand. The individuals who have had previous medical service experience used those services in the USA and Thailand. Most of the respondents used services from BNH hospital. Friends accompanied the medical tourists during their hospital visits. Family, friends, and relatives are key informants and decision makers for hospital medical service. Their average expenditure on this trip is USD 486.70, which is cheaper than similar services offered in their country of residence by around USD 409.10. The average time for medical services is 2.35 days, while the average total time living in Thailand is around 220 days. Medical tourists ranked the factors for deciding to use medical services at this hospital according to order of importance (most to least important) as follows: medical quality, value of services, patient safety and security, location, international patient marketing, international patient management, attention to the unique needs of the medical traveler, and transparency.

Empirical Testing of Hypothesized Model

After having satisfied the requirements arising from the measurement issues of confirmatory factor analysis, a test of structural relationships using AMOS was conducted to assess the data-model fit and the hypothesized relationships between theoretical constructs. All measures of fit for the structural model indicate sound fit statistics: goodness-of-fit index (GFI) = 0.928, adjusted goodness-of-fit index (AGFI) = 0.910, standardized root mean square residual (SRMR) = 0.049, Tucker-Lewis index (TLI) = 0.932, comparative fit index (CFI) = 0.940, and root mean square error of approximation (RMSEA) = 0.049. The hypothesis testing was accomplished by examining the completely standardized parameter estimates and their associated t-values. One-tailed tests of significance were used to determine the significance of each path coefficient. The results demonstrated that service quality had a significant and positive impact on value (β = 0.78***), brand trust (β = 0.85***), and satisfaction (β = 0.38**) as hypothesized. In addition, value (β = 0.26*), satisfaction (β = 0.31**), and brand trust (β = 0.28**) have direct impacts on behavioral loyalty. The research model explains a reasonable proportion of the variance in the dependent variables (SMC), including value (61%), satisfaction (14%), brand trust (72%), and behavioral loyalty (44%). The standardized path coefficients, along with their associated t-values, were displayed in Table 2.

Table 2: Summary of Hypotheses Testing Results Without Moderator Effects

Hypothesis			Standardized Estimate	t-values	Supported
H1	Service Quality	→ Value	0.78	9.30	Yes***
H2	Service Quality	→ Satisfaction	0.38	3.71	Yes**
H3	Service Quality	→ Brand Trust	0.85	9.15	Yes***
H4	Value	→ Behavioral Loyalty	0.26	2.29	Yes*
H5	Satisfaction	→ Behavioral Loyalty	0.31	2.63	Yes**
H6	Brand Trust	→ Behavioral Loyalty	0.28	2.49	Yes**
Squared Multiple Correlation : Value = 0.61, Brand Trust = 0.72, Satisfaction = 0.14, and Behavioral Loyalty = 0.44					
Model Goodness-of-fit statistics: Chi-square = 375.664, Degrees of freedom = 242, x^2/ df = 1.55, p value = 0.000, GFI = 0.928, AGFI = 0.910, SRMR = 0.049, TLI = 0.932, CFI = 0.940, and RMSEA = 0.049					

Remark: * p = 0.05, ** p=0.01, ***p=0.001

Testing the Mediation Effect

To test mediating effect, the direct, indirect, and total effects were estimated. According to the variance of behavioral loyalty at 44%, satisfaction (β =0.305), brand trust (β =0.284), and value (β =0.261) have significant and direct effect on behavioral loyalty. Service quality has significant and indirect effect on behavioral loyalty at 0.560. In conclusion, the relationship between service quality and behavioral loyalty is mediated by value, brand trust, and satisfaction. The direct, indirect, and total effect of the model were displayed in Table 3.

Table 3 Direct, Indirect, and Total Effects of the Model

Independent V. / Dependent V.	Service Quality			Value			Brand Trust			Satisfaction		
	Total	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect
Value	0.783***	0.783***	-	-	-	-	-	-	-	-	-	-
Brand Trust	0.849***	0.849***	-	-	-	-	-	-	-	-	-	-
Satisfaction	0.375**	0.375**	-	-	-	-	-	-	-	-	-	-
Behavioral Loyalty	0.560***	-	0.560***	0.261*	0.261*	-	0.284*	0.284*	-	0.305**	0.305**	-

Remark: *p=0.05, **p=0.01, ***p=0.001

Testing the Moderating Effect of Nationality

The model specification required a test of the moderating influence of nationality on the relationship between service quality and value (H7), satisfaction (H8), and brand trust (H9). To test the moderating effect, a multi-group path analysis was employed (Bagozzi & Yi, 1989). The multi-group path analysis is a technique especially appropriate when the covariance matrices differ significantly across treatments (Voss et al., 1998). It also enables a simultaneous estimation of all hypothesized relationships across groups.

The sample was divided into two groups, which were individualist and collectivist. The individualist group was composed of medical tourists with nationality in Scandinavia, Europe, Oceania, and the USA. The total number of individualist tourists was 279 or 69.75%. For collectivist group was composed of medical tourists who had nationality in countries in Asia and Africa. The total number of collectivist tourists was 121 or 30.25%. The test was performed with two models, an unconstrained model, in which all the path are freed, and a constrained model, in which the hypothesized path was equal for both groups. We compared the constrained model and unconstrained model using a chi-square test, and the results show no significant improvement in terms of $\Delta\chi^2$ at $p < 0.05$ when introducing nationality as a moderator between service quality and value (H7), satisfaction (H8), and brand trust (H9). In conclusion, these results suggest that nationality has no moderating effect on the research model. The result of moderating effect were displayed in Table 4

Table 4 Multi-group Path Analysis to Test Moderating Effect of Nationality

Hypothesized Path / Model	H7: SQ-V		H8: SQ-SAT		H9: SQ-BR	
	Chi-Square	d.f.	Chi-Square	d.f.	Chi-Square	d.f.
Constrained Model	619.52	489	620.424	489	621.562	489
Unconstrained Model	617.484	484	617.484	484	617.484	484
Chi-Square Difference	2.036	5	2.94	5	4.078	5
Chi-Square (Table) at p = .05	11.07	5	11.07	5	11.07	5
Testing Hypothesis	Not Support		Not Support		Not Support	

Remark: SQ = Service Quality, V = Value, SAT = Satisfaction, BT = Brand Trust

CONCLUSIONS AND RECOMMENDATIONS

According to path analysis, all six hypotheses are confirmed positive relationships. Service quality has a positive relationship with value (H1), satisfaction (H2), and brand trust (H3), which also has direct impact on medical tourists' behavioral loyalty (H4, H5, and H6). In addition, value, satisfaction, and brand trust have a mediation effect on the relationship between service quality and behavioral loyalty. Finally, nationality, measured in term of individualism and collectivism, does not have a moderation effect on the relationship between service quality and value (H7), satisfaction (H8), and brand trust (H9).

The research model is an extended service quality-loyalty model by insertion of brand trust from relationship market research. The results of this study provide empirical evidence better suited to the research model in a medical tourism context, in which the distance between the service provider and the customer is relatively high. We suggest that brand trust plays an important role in creating loyalty and also in leveraging the relationship from service quality and value to loyalty.

There are two major managerial contributions of our study. First, in addition to service quality, value, and satisfaction, brand trust is also an important mechanism in generating both attitudinal and behavioral aspects of loyalty. The main rationale that explains this phenomenon is that tourists have to travel to a distant country in order to receive medical services, which provides a direct challenge to the individual. Consequently, a high level of brand trust can reduce the uncertainty level of tourists as they make a final decision. Brand trust is important when tourists travel from a developed country to use a service in a developing country where the overall level of technology and knowledge is relatively low. Thus, all stakeholders in the field of medical tourism should devote more effort and resources to building a strong brand trust. Second, medical providers are able to generate loyalty among customers; this loyalty is directly beneficial, in terms of both creating repeat purchases and positive word-of-mouth. Word-of-mouth is important in medical tourism because key informants for medical tourism have a close relationship with the consumer.

LIMITATIONS AND FURTHER RESEARCH

Although the results derived from this sample provide useful knowledge pertaining to medical tourists, these results are not intended to be generalizable to all medical tourism around the world. Future studies are required to test the model's relationships in other cultural contexts, especially in developed countries, such as Germany, to enhance the efficacy of the model. In addition, this study mainly focuses on international tourists who stay in Thailand for less than a year, but applying this model to expatriates or long-stay tourists could provide similar or different results, representing a further contribution to this field of research.

ACKNOWLEDGEMENTS

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