Brand image as the competitive edge for hospitals in medical tourism

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Abstract

Purpose – Following promising growth of the international medical tourism industry, competitions within the global market have escalated tremendously with increased involvement by numerous healthcare providers to acquire a share of its disposable income. The brand reputation would hereby play a determining role as a competitive strategy. Specifically, this paper aims to investigate the impact of social and marketing aspects on the brand image of medical tourism-based hospitals, alongside its relationship toward service quality. In turn, the influence of perceived service quality on satisfaction and the perceived value was examined, in view of further potential behavioral intention among medical tourists on healthcare providers in Malaysia.

Design/methodology/approach – The data were collected through a survey questionnaire among medical tourists, with 596 successful cases collected via 6 major private hospitals at 3 popular Malaysian medical tourism locations. Data analysis was then performed using both SPSS and Smart PLS software.

Findings – The findings from the present study acknowledged the importance of both social (e.g. social media and word-of-mouth communications) and marketing (e.g. hospital advertisement and price perception) aspects toward establishing brand image among medical tourism-based hospitals. Consequently, the brand image would influence perceived service quality among medical tourists; further entail positive impact on behavioral intention, with satisfaction and perceived value as mediators between both factors. Following PLS predict analysis confirming this model's high predictive capability, it demonstrated close representation to actual medical tourism scenario in Malaysia.

Originality/value – This study is one of the very few studies that explored the minimally investigated territory on the consequential importance of hospital branding within the medical tourism industry; specifically through extending the literature on the influence of social and marketing efforts toward the formation of brand image.

Keywords Word-of-mouth, Social media, Perceived value, Service quality, Patient satisfaction

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1. Introduction

Service offerings with health and wellness at its center have become an important part of the global healthcare industry, with growth in recent years. Patients from less developed countries used to visit developed countries in the early days to gain access on reputable and skilled doctors and advance medical facilities; a reversed trend has been identified since the early 1990 s, with more patients who traveled to developing countries for medical treatments, in view of their lower medical costs and improved healthcare infrastructures (Cham *et al.*, 2016; Rogers, 2008). This trend is known as "medical tourism," generally understood as:

> A set of activities in which a person travels, often long distances or across the border, to avail medical services with direct or indirect engagement in leisure, business or other purposes (Jagyasi, 2008, p. 9).

Medical tourism is indeed a growing industry with significant potentials. According to the medical tourism index^{TM} report, the global medical travel market is projected at a growth of 25% per year; whilst, it can possibly hit approximately US$3tn by the year 2025 (medicaltourismindex.com, 2018).

As its inception, medical tourism has been considered one of the earmarked and promising industries in many countries (Cham *et al.*, 2016; Deeparechigi *et al.*, 2018; Manaf *et al.*, 2015). This scenario has, thus, escalated the level of competition within global medical tourism industry with the increasing number of developing countries, particularly in the Southeast Asia region, exploiting this opportunity toward acquiring a share of its disposal income (den Mooter, 2017; Nazem and Mohamed, 2015; Thomas, 2019). With a recorded total of approximately 4.6 m medical tourists who have visited the Southeast Asia region in the year 2016 alone (den Mooter, 2017); countries including Thailand, Singapore and Malaysia have prevailed as major players in earning the available medical income within this region (Patientsbeyondborders.com, 2019). Among the previously mentioned countries, Malaysia has been regarded as one of the popular medical tourism destinations, attributable to its literacy excellence, political and economic stability, state-of-the-art medical facilities, competitive medical costs, favorable exchange rate and expertly trained healthcare professionals (Neilson, 2017).

In addition, there are 73 private hospitals that have participated in the medical tourism program throughout Malaysia; which are being evaluated and accredited by the Malaysian Society for Quality in Health toward ensuring continuous maintenance of superior servicing standards and medical care quality, while meeting the requirements of fellow medical tourists. Among the participating hospitals, 21 hospitals are recognized by the Joint Commission International – an imperative accreditation for hospitals healthcare programs from the USA; further acknowledged as an important recognition within the medical tourism sector (Malaysia Healthcare Travel Council, 2019). Specifically, a multitude of medical treatments are available within this country, with the like of *in vitro* fertilization treatments, cardiothoracic surgery, cosmetic surgery, orthopedics, dental treatment, rehabilitative medicine, pain management and cancer treatment (Cham *et al.*, 2016; Lim *et al.*, 2018; Thomas, 2019). Not to mention, record by Thomas (2019) has also demonstrated a surging number of medical tourists visiting Malaysia, from 643,000 in the year 2011 to approximately 1.2 m in the year 2018, contributed a total revenue of US$362m.

The fore-discussed situation has hereby highlighted promising opportunities for this niche tourism sector; yet, with limited studies in the area of medical tourism toward obtaining substantial evidence. As noted by Wu (2011) and Cham *et al.* (2016), studies related to the aspect of branding within healthcare and medical tourism industries remain

under-examined to date, with limited empirical evidence in addressing the importance of brand image. This scenario reflects a research gap worth exploring, as superior brand image can arguably be a factor within healthcare providers that facilitates decision-making, risk assessment, medical service visualization and medical service evaluation among medical tourists (Cham *et al.*, 2016; Wu, 2011). Moreover, their perceptions toward brand image of a hospital will potentially influence their assessments on service quality; which in turn, will have an impact on their level of satisfaction, perceived value and most importantly, intention to revisit.

Nevertheless, literature reviewed have also evidenced limited studies done in addressing factors that influence brand image (Cham *et al.*, 2015; Cham *et al.*, 2016; Wu, 2011). As such, preliminary investigations by the researchers have determined social (e.g. social media and word-of-mouth (WOM) communication) and marketing (e.g. advertisement and price perception) aspects as important influencers of brand image among hospitals involved with medical tourism. Applying this argument as a foundation, the current study aimed to extend the research conducted by Cham *et al.* (2016) by examining the impact of both social and marketing aspects on brand image and its relationship toward the service quality of medical tourism-based hospitals. This study is also one of the very few empirical studies that highlighted the importance of the marketing mix elements (e.g. price and advertisement) in influencing brand image in the context of high-credence services like healthcare. Additionally, this study emphasized on investigating manner in which service quality influenced satisfaction and perceived value among medical tourists, further their behavioral intentions toward healthcare providers in Malaysia. Also, the mediating effect of both medical tourists' satisfaction and perceived value on the relationship between perceived service quality and behavioral intention are also addressed in the present study, in which under-examined to date. Noted that greater understanding of these relationships would entail heightened competitiveness among Malaysian healthcare providers, typically within the increasing challenging medical tourism industry.

All-in-all, the remainder of this paper is organized as follows: the Section 2 presents detailed reviews on previous literature, with the development of research hypotheses. This is followed by discussions of research methodology in Section 3 and data analysis in the Sections 4, respectively. Ultimately, discussions on the research findings, as well as implications and suggestions for future research are being finalized in the Section 5.

2. Literature review and hypotheses development

2.1 Brand image

According to Keller (1993), brand image is being defined as "a set of perceptions about a brand, as reflected by brand associations in consumer's memory." In other words, Brand image is known as series of recognition regarding a brand, as affiliated within the consumers' minds (Dobni and Zinkhan, 1990). As its inception, brand image has become an important element for corporations due to its enormous implications on a firm's strategic planning and performance. Several aspects have hereby contributed to the formation of brand image, including practicality, symbolic and pleasantness of a particular product/service (Hsieh and Li, 2008). According to a study based on the image forming theory by Riezebos (2003), brand image can be arguably formed through inductive inferences. In this case, social aspects and marketing communication strategies were found to be prominent inductive processes with extensive credibility toward instilling image of a brand in the minds of fellow consumers (Riezebos, 2003). The influence of social and marketing aspects are too important to be overlooked; hence, included within the present study in examining such impacts on brand image of hospitals involved with medical tourism.

2.2 Factors that influence brand image

2.2.1 Social aspect. Drawing from the sociological perspective, social aspects can be explained as those elements that are related to social relations and communications between individuals (Silverstone, 2005). As previously highlighted, social aspects, particularly social influence, have played a significant role in creating a brand image based on induction inference following the advancement of social technologies, alongside consumption experiences (Riezebos, 2003). Often, marketing and promotional efforts, rather than product perceptions, are deemed to form brand image (Lee *et al.*, 2008; Robert and Patrick, 2009). The internet has hereby overshadowed traditional advertising in terms of far-reaching audience capacity, despite relevance of the later (Scott and Orlikowski, 2012; Thackeray *et al.*, 2012). Jones (2010) and Miller and Lammas (2010), thus, placed social media as an essential channel, etc., toward reviewing available marketing information. While, Cheung and Thadani (2012) have proposed buzz marketing as highly influential, in comparison to conventional marketing tools. With the absence of traditional marketing undertaken by the Malaysian healthcare industry, the importance of social-based advertising is further emphasized.

As noted by Stelzner (2011), social media possess capabilities toward exposure, website traffic and website ranking improvement. Yet, the ambiguous impact is presented in two forms, namely firm-created and user-generated social media (Bruhn *et al.*, 2012). As a marketing tool, social media offer outreaching convenience to traditionally unavailable customers (Schivinski and Dabrowski, 2016), following greater customer engagement through well-customized advertising (Kaplan and Haenlein, 2010). As an interactive tool, social media platform allows consumer-to-consumer communications in sharing brand-related opinions (Bruhn *et al.*, 2012; Cheah *et al.*, 2019a, 2019b; Fournier and Avery, 2011). This has toppled the concept of marketer-empowered advertising to a shifting paradigm between marketers and consumers (Mangold and Faulds, 2009). While social media enable efficient customer-related problem resolutions (Ulusu, 2010), they also allow public brand-related comments (Xiang and Gretzel, 2010). Ultimately, heightened customer involvement is acknowledged (Chung and Buhalis, 2008; Schivinski and Dabrowski, 2016).

On this note, the reliability of user-generated communication has always been highly regarded (Wood *et al.*, 2011). Specifically, WOM communication is perceived as a more credible information source (Porter and Guy, 2006); especially in complex and risk-filled industries (e.g. healthcare), as traditional marketing channels are inefficient in delivering complicated messages (Walsh and Mitchell, 2010; Wood *et al.*, 2011). In terms of medical tourism, WOM is an informal medical-related communication among close acquaintances (Kotler, 2015). This further entails brand associations and awareness (Lam *et al.*, 2009; Trusov *et al.*, 2009); thereby, prevailed as an impactful communication tool (Wood *et al.*, 2011). WOM has been particularly effective in attracting new customers and maintaining market relevance within the healthcare industry (Ko and Kim, 2011; Lee *et al.*, 2012). While brand image is influenced by both social and experiential factors, this study emphasized on the social aspects, with the hypotheses postulated:

H1. WOM communication has a significant direct effect on hospital brand image.

H2. Hospital-created social media communication has a significant direct effect on hospital brand image.

H3. User-generated social media communication has a significant direct effect on hospital brand image.

2.2.2 Marketing aspect. Marketing is a vital component for businesses due to its capability in creating awareness, attracting, educating and influencing customers in purchasing products or services (Kotler, 2015). As usual, businesses will often depend on their marketing mix (e.g. place, product, price and promotion) in approaching their target market effectively (Helm and Gritsch, 2014). Drawing from the context of marketing mix, the present study focuses on the aspect of price and advertisement. In the tourism and hospitality industry, advertisement and price have become important areas that attracted the attention of many researchers. As understood from the American Marketing Association (2018), advertisement is any announcement or persuasive message communicated via mass media in paid or donated time or space by an identified individual, company or organization. As an essential part of commercial industrial growth, it is one of the key elements in marketing communication adopted by many organizations for reaching out to potential customers, further capturing their attentions and influencing them toward purchasing certain products and services (Scott and Walker, 2010). Moreover, advertising is also reported to be more effective as compared to sales promotion in encouraging customers to try a new product (Yagci *et al.*, 2009). According to Adibi (2012), an advertisement is deemed effective shall its content possesses the capability in affecting emotions, attracting attention, stimulating purchase intentions and creating memorable impact on customers. Like any other industry, advertising has become a key strategy for hospitals in various countries involved with medical tourism to actively promote their services through foreign press (Lunt *et al.*, 2014).

Coming to the context of marketing, literature have further supported the capability of advertisement in attracting consumers' attention (Bhutada and Rollins, 2015; Martins *et al.*, 2019), creating product/service impression (Zhang and Mao, 2016) and influencing customers' purchase decisions (Chen *et al.*, 2017), to name a few. Advertising is also found to be a vehicle that promotes brand image of a particular organization (Ardestani *et al.*, 2014; Hanaysha and Hilman, 2015; Ramiz *et al.*, 2014). Such situation can be seen from a study by Hanaysha and Hilman (2015) on 287 passenger car owners, in which advertisements conveyed by automotive companies have positively influenced participants' perceptions of the brand image of the car they owned. Similarly, study by Ardestani *et al.* (2014) has also determined advertisements from Iranian insurance companies to possess direct positive influence on customers' perceptions of brand image of the firms.

As for the aspect of pricing, price from the consumers' perspective, is being referred to as the amount of money paid in obtaining certain products or services (Zeithaml, 1988). The importance of price is often attributed to its impact on consumers' decision-making in actual purchases and their choices of products and services (Ryu and Han, 2010). According to Zeithaml (1988), "price" can be explained based on the context of monetary and non-monetary aspects – monetary aspect is regarded as the objective price (i.e. actual price) for a product or service; while non-monetary aspect is regarded as the consumers' perceived price (i.e. encoded price) (Jacoby and Olson, 1977). Previous research studies have placed arguments in favor of encoded price as a benchmark among consumers, toward evaluating the reasonableness or adequateness in which a product or service is priced, in contrast to prices being charged by other competitors within the marketplace (Han and Kim, 2009; Jayasingh and Eze, 2012).

Placed within the current study, complex settings of the medical tourism industry have often caused price deviations between participating hospitals. Objective price is, thus, inappropriate toward determining prices of products or services in this industry; as the actual prices specified for such items might remain unknown to some customers (Zeithaml, 1988). In this regard, price perception would be more suitable within this context, instead of

the actual price. As understood from Beneke and Zimmerman (2014), Jin *et al.* (2012); Popp and Woratschek (2017), price perception has been consistently reported to have significant impact on branding attributes. This is further supported by Beneke and Zimmerman (2014), who found that price perception possessed significant influence among 205 shoppers in Cape Town (South Africa) on private label prestige brands. In particular, brands of breakfast cereals being priced at a higher range were perceived to be more prestige as compared to those of lower prices. Similarly, study by Jin *et al.* (2012) on 1,528 customers of full-service restaurants in the USA has also put forward the influence of price perception on customers' perception in terms of restaurants' brand image. Based on evidence discussed, it is, therefore, postulated that:

H4. Hospital advertisement has a significant direct effect on its brand image.

H5. Price perception has a significant direct effect on hospital brand image.

2.3 Linking hospital brand image, perceived service quality, medical tourists' satisfaction, perceived value of medical trip and behavioral intention

Perceived service quality for the present study is defined as customer's assessmentof the overall excellence or superiority of the service (Zeithaml, 1988).This area has been vastly explored, often due to its significance on customer satisfaction, profitability, operational efficiency and customer loyalty (Cham and Easvaralingam, 2012; Cronin and Taylor, 1992; Naik *et al.*, 2010; Seth *et al.*, 2005); through influencing purchasing behaviors and overall organizational performance (Kayaman and Arasli, 2007). Within the context of healthcare, patients would place more emphasis on client quality (interpersonal communications), rather than technical quality (medical procedures) within a service (Cham *et al.*, 2015; Babakus and Glenn, 1992; Mostafa, 2005; Zineldin, 2006a). SERVQUAL is deemed viable in assessing the fore-mentioned service quality, due to its heterogeneous, intangible and inseparable nature (Butt and de Run, 2010). Acknowledged within the Signal Theory, image represents a brand's credibility that aids the determination of perceived quality, before actual consumptions (Cham *et al.*, 2016; Cretu and Brodie, 2007).

With this in mind, brand image has exerted substantial influence on service judgments (Rahi *et al.*, 2017). In fact, image hereby acts as a shelter to shortcomings within service delivery, based on consumers' evaluations (Grönroos, 2000). From the healthcare perspective, brand image of a hospital would play significant role in affecting patients' perception of the quality of service provided (Cham *et al.*, 2016; Wu, 2011). It stands as the cornerstone to performance standard, in terms of trustworthiness, quality and operations; especially when unfamiliar services (e.g. medical tourism) are concerned. Therefore, while the brand image has not been widely explored within the healthcare industry, its potential as a considered factor for foreign healthcare services should not be ignored. This postulated the hypothesis:

H6. Hospital brand image has a significant direct effect on perceived service quality.

On the other hand, satisfaction is the cognitive judgment regarding a consumer's experience, based on the underlying expectations he/she possesses prior to the experience (Zineldin, 2006b). It is simply the disconfirmed expectancy evaluation between ideal and reality. In alignment with the importance of perceived service quality as per previously discussed, findings from An *et al.* (2019) and Voon (2011) have supported superior service quality in enhancing customer satisfaction. Even in the area of healthcare, perceptions toward service quality would enable the development of satisfactions among patients

(Kim *et al.*, 2008; Lee *et al.*, 2010; Yesilada and Direktör, 2010). This, in turn, resulted in potential revisits (Kim *et al.*, 2008). In view of medical tourism, such perceptions would often link to behavioral intentions, in terms of patients' future behaviors (re-purchase, willingness to pay, recommendations, etc.) (Chen and Tsai, 2007). Yet, contradicted findings have been presented by Tian-Cole *et al.* (2002), who suggested both service quality and satisfaction as being independent constructs with little causal relationship. While healthcare providers strive to improve their services toward satisfying medical tourists, creating values and building potential retentions, its importance remains debatable.

In addition, satisfaction among customers would entail greater loyalty, in view of enhanced customer-company relationships (Kim *et al.*, 2008). While, Kotler (2015) further proposed the attainment of new customers through understanding the underlying aspects toward their satisfaction; thus, building fruitful long-term relationships. Satisfaction has, nevertheless, demonstrated its importance in bringing about potential behaviors (Cheng *et al.*, 2014; Cheng *et al.*, 2019; Udo *et al.*, 2008). Within the context of medical tourism, the essence of satisfaction is based upon an expected ideal care a patient has on a service and the evaluation of actual service experienced (Aragon and Gesell, 2003). While Chen and Chen (2010) have reported the presence of causal relationship between satisfaction and behavioral intentions within the tourism industry; such relationship has also been proven to exist within the medical (Choi *et al.*, 2004) and healthcare industries (Kim *et al.*, 2008; Wu, 2011). Chaniotakis and Lymperopoulos (2009) further suggested satisfaction as the direct antecedent to positive recommendations among patients. Ultimately, potential relationships involving perceived service quality, satisfaction and behavioral intention should not be overlooked within the currently investigated industry, thus, postulated the hypotheses:

H7. Perceived service quality has a significant direct effect on the behavioral intention of medical tourists.

H8. Perceived service quality has a significant direct effect on medical tourists' satisfaction.

H9. Medical tourists' satisfaction has a significant direct effect on their behavioral intention of medical tourists.

Separately, perceived value is the customer's perception based upon the cost they are required to make for a specific product or service through evaluating the factors of execution, outcome and characteristics in meeting their demands (Woodruff, 1997). Zeithaml (1988) further argued that customers would only perceive value from the transaction shall the benefits received at the post-purchase stage outweighed what they have to give up (sacrifices) before actual purchases. Noted by Hu *et al.* (2010), Ladhari and Morales (2008); Ullah (2012), perceived value, among other aspects, would precede the effect of perceived service quality in today's business front. This is hereby achievable for being a form of differentiated and competitive positioning (Ullah, 2012; Parasuraman and Grewal, 2000).

Excellence in value created would enable the development of customer loyalty; thus, leading to potential customer retentions (Cham *et al.*, 2020; Keiningham *et al.*, 2007; Lim *et al.*, 2020). This aspect has often been regarded as a prerequisite to competitive advantage among firms (Lusch and Vargo, 2014); which further generates satisfied customers and profit margin (Frank and Enkawa, 2007). As such, perceived value would be essential within complex and personalized industries like healthcare (Pedroso and Nakano, 2009), in achieving the effect of differentiation. Yet, such importance has often been neglected, particularly toward strategic planning within the healthcare (Chahal and Kumari, 2011),

further the medical tourism industry. Perceived value has, thus, been explored within the current study, following the hypotheses postulated:

H10. Perceived service quality has a significant direct effect on the perceived value of medical trip.

H11. Perceived value of medical trip has a significant direct effect on the behavioral intention of the medical tourists.

2.4 The mediation effect of medical tourists' satisfaction and perceived value

Following previous discussions that have placed perceived service quality as a direct determinant to behavioral intention, such claim has not always been the case (Ažman and Gomišček, 2015; Finn, 2011). Findings by Tarn (2008) in the area of hospitality have acknowledged the indirect relationship between perception and intention, through the formation of satisfaction among customers. Further explorations by Mosahab *et al.* (2010) have also assured potential future behavioral intentions through customer loyalty, via the mediating effect of satisfaction. Placed within the context of medical tourism, such indirect relationship can potentially exist, whereby medical services that fulfilled patients' requirements would entail possibility of retentions. Thus, hypothesis is formed as follows:

H12. Medical tourists' satisfaction mediates the relationship between perceived service quality and behavioral intention.

While, perception toward a brand's value has been shown to mediate perceived service quality and satisfaction (Varki and Colgate, 2001; Yunus *et al.*, 2009). Based on the disconfirmation between cost and service obtained in defining value (Yunus *et al.*, 2009), satisfaction can be achieved through heightened service quality and lowered transactional cost (Frank and Enkawa, 2007). Even when behavioral intention comes into play, following the indirect impact of service quality through perceived value within a consumption experience, it is not without the causal development of satisfaction beforehand (experience quality → perceived value → satisfaction → behavioral intention) (Chen and Chen, 2010; Ullah, 2012). Little exploration has been done in terms of indirect causal impact between perceived quality and behavioral intention both within the tourism and healthcare industries, solely mediated by perceived value. This area is hereby explored, with the hypothesis developed:

H13. Perceived value mediates the relationship between perceived service quality and behavioral intention.

Based on thorough discussions on the matter in hand, the research model tested within the current study is being presented as follows:

3. Research methodology

3.1 Sampling procedure and characteristics

The target respondents for this study were medical tourists who visited Malaysia in seek of medical services during the time of data collection. This study focused on three locations – Penang, Selangor and Kuala Lumpur; because of their high number of healthcare providers involved with medical tourism (Malaysia Healthcare Travel Council, 2019). Both purposive and quota sampling were used for the data collection process. To generate reliable

responses, two screening criteria had been imposed in assessing individual qualifications as the respondents for this study, which include:

(1) The individual would need to visit Malaysia for medical purpose; and

(2) he/she had and would engage in some tourism activities (e.g. sight-seeing, engaged with transportation of all modes, hotel lodging, shopping, dining, etc.) during the visit.

Herewith, survey questionnaires were used to collect responses of 720 medical tourists in 6 hospitals located at the fore-mentioned locations (with 120 respondents from each hospital). To secure a high response rate, questionnaires were hereby personally distributed by fellow researchers in the waiting areas, cafeterias and lobbies of corresponding hospitals, where medical tourists could be easily accessed. Following the data cleaning process, a total of 596 cases among the received responses were deemed usable for further data analysis. According to Saunders *et al.* (2012), a sample size of 596 was considered sufficient for the current study, in representing a large population. Moreover, implementation of the G*Power program had revealed such number of collected data to be in fulfillment of criteria where a minimum sample size of 138 should be attained, with an effect size of 0.15 at 95% power level (Faul *et al.*, 2009). Hence, the total sample size of 596 obtained for this study was considered adequate.

3.2 Research instrument

Based on the outlined conceptual model, instruments adopted within this study were adapted from existing literature, with minor changes to suit the currently investigated context. In terms of social aspects, a five-items communication measurement scale was adapted from the study by O'Cass and Grace (2004) in measuring WOM communication among medical tourists, operationalized upon the influence of family/friends on decision-making, understanding, ideas, attitude and evaluation toward a hospital's brand; while, measurement scale by Bruhn *et al.* (2012) was adapted in gauging the factor of social media communication, with both firm-created and user-generated contents as its basis.

As for marketing aspects, the perception of advertisement was measured based on a six-items scale adapted from Inoni (2017), which covered respondents' perceptions toward the importance, appeal, information and content of hospital's advertisements. While, a three-items scale by Kumar *et al.* (2014) had been adapted in assessing the respondents' perceptions on price, in view of reasonableness, quality relation and competitiveness. Following this, study by Hsieh and Li (2008) had been adapted for the measurement of brand image, in the context of brand symbolic, customers' experience and practicability; whilst, study by Suhartanto (2011a, 2011b) had been applied in defining the measurement for perceived service quality, which was operationalized through medical tourists' overall perception of hospital's service quality. In terms of satisfaction, a four-items scale as studied by Panjakakornsak (2008) was adapted for the current study, through acknowledging affective responses of medical tourists on their service experience.

On the other hand, perceived value for this study was measured based on the four-items scale proposed by Lertwannawit and Gulid (2011), which was operationalized upon the degree to which medical tourists had sacrificed for their medical trips. Last but not least, behavioral intention was measured through a three-items scales adapted from Choi *et al.* (2004), in view of the likelihood where medical tourists would demonstrate signs of repeat purchase and conveying positive recommendations to fellow acquaintances. All the measurement items employed in the present study are presented in the Appendix. To ascertain the face validity of measurement scales, the developed questionnaire was pretested

via 12 experts, while further pilot tested among 50 medical tourists, prior to actual data collection.

3.3 Common method bias

Common method bias (CMB) is a serious methodological issue that occurs when the estimates of the relationships between two or more constructs are biased as they are measured with the same method (Podsakoff and Organ, 1986). As such, the data is often susceptible to possible artificial inflation of relationships in which could hamper the reliability and validity of the measures. MacKenzie and Podsakoff (2012) have recommended a statistical and procedural remedy to curb the issue of CMB. For the current research, researchers addressed the CMB issues through both procedural and statistical strategies. In terms of procedural remedy, past literature (Jordan and Troth, 2019; Min *et al.*, 2016; Podsakoff *et al.*, 2012) were used to guide the data collection process with the objective of alleviating CMB issues. It was carried out by incorporating detail research information coversheet to every respondent with the aim to increase the probability of response accuracy, understand the importance of clarity and the usage of unambiguous terms and questions. In addition, pre-test and pilot-test the questionnaire as highlighted above were performed to gather and incorporate comments from the targeted respondents, with all the questions in the questionnaire finalized to ensure that it was concise and simple without double-meaning items. As for the statistical approaches, Harman's single factor test and a full collinearity variance inflated factor (AFVIF) were used to control CMB. Harman's Single Factor test is a procedure conducted after data collection, which identifies whether a single factor is accountable for variance in the data (Chang *et al.*, 2010). Results of the exploratory factor analysis has then shown that the first and largest factor explains 32.4% of the total variance. While, AFVIF test was used to determine CMB by assessing the correlations between two measurements. The analysis results had obtained an AFVIF value of 1.309, which is less than 3.3, indicating that CMB would not be a threat to the results. Based on these two statistical tests performed, CMB does not appear as an issue in the current study.

4. Data analysis and result

4.1 Sample characteristics

Table 1 provides an overview of the total 596 respondents' profiles and their details. It was found that majority of the respondents are female (52.0%) and married (80.4%). It is interesting to know that the middle age group formed most of the medical tourists, i.e. there are 33.6% of the medical tourists fall under the age group of 46 to 55 year olds. Moreover, majority of the respondents are either business proprietors or self-employed (36.9%) as their profession and possess professional certificates (32.4%) in terms of their educational background. Due to the geographical proximity, most of the medical tourists are from neighbouring countries such as Indonesia (67.8%), China (14.6%) and Singapore (5.0%). Moreover, the findings in Table 1 have also shown that most of the medical tourists visited Malaysia for the purpose of orthopaedic treatment (19.6%) and comprehensive medical check (19.6%).

4.2 Measurement model assessment

Partial least squares structural equation modeling (PLS-SEM) method was adopted for this study and the Smart PLS 3.2.8 software was used to analyze the data collected. Rationale for analyzing the existing research model using PLS-SEM was due to the few appealing attributes of the model. Firstly, PLS-SEM enables researchers to evaluate complex models with many constructs, indicators and structural paths without strict distributional

Variables	Descriptions	(%)
Gender	Female	52.0
	Male	48.0
Marital status	Married	80.4
	Single	16.6
	Divorced	1.5
	Widowed	1.3
	Others	0.2
Age	25 years old and below	2.9
	26-35 years old	11.9
	36-45 years old	19.3
	46-55 years old	33.6
	56-65 years old	25.7
	Above 65 years old	6.7
Education	High school or below	21.6
	Certificate or Diploma	25.2
	Professional certificates	32.4
	Bachelor or Degree	12.9
	Postgraduate	7.9
Employment	Business proprietor/self-employed	36.9
	Retiree/ not in work force	16.8
	Executive/managerial position	16.6
	Professional position	9.2
	Unemployed	7.9
	Clerical/admin/secretary	4.4
	Production/ manufacturing position	2.3
	Others	5.9
Nationality	Indonesia	67.8
	China	14.6
	Singapore	5.0
	Japan	4.7
	Australia	1.8
	Qatar	1.5
	Saudi Arabia	1.3
	India	1.2
	Thailand	0.8
	USA	0.7
	South Korea	0.5
Type of treatments	Orthopedic	19.6
	Comprehensive medical check	19.6
	Cardiovascular surgery	18.5
	Sight treatment/Lasik	9.9
	Oncology (cancer treatment)	9.6
	Fertility care	5.5
	Cosmetic/plastic/reconstruction	5.0
	Ear, nose and throat surgery	4.2
	Dermatology (skin treatment)	3.3
	Others	4.7

Table 1.
Medical tourists' demographic profile

assumptions on the data (Cheah *et al.*, 2019a, 2019b; Hair *et al.*, 2019a, 2019b; Ramayah *et al.*, 2018; Sarstedt *et al.*, 2019), which is often the case of social sciences research. Secondly, Shmueli *et al.* (2019) have also highlighted that PLS-SEM is a causal predictive approach to SEM, which advances on regression-based technique in marketing and other social sciences areas in estimating path relationship with latent and manifest variables (Wold, 1985; Sarstedt *et al.*, 2017). These two advantages of PLS-SEM matched the characteristics of existing research model and data; hence, it justified the adoption of PLS-SEM in current study.

According to Hair *et al.* (2019a), the first step in evaluating PLS-SEM involves examination on the measurement model for its validity and reliability before continue to assess the structural model, which involves testing the relationships among variables to derive the final outcome. The measurement model assessment involves examination of convergent validity and discriminant validity. With reference to the guidelines provided by Hair *et al.* (2017), convergent validity would be assessed based on the composite reliability (CR), factor loadings for the variables and the average variance extracted (AVE). As for the present study, most of the items' loadings are greater than the threshold value of 0.7, the AVE is higher than 0.5 and the values of CR are above 0.7. However, an item of hospital advertisement and perceived service quality were removed due to their low factor loading. The results are shown in Table 2, which denotes that convergent validity has been established for this study.

Discriminant validity is the extent to which each latent variable is differentiated from other constructs in the model (Hair *et al.*, 2014). It also refers to the degree to which the indicators are distinct from others across constructs. Most recently, Hair *et al.* (2019b) recommend researchers to use heterotrait-monotrait (HTMT) criterion for discriminant validity testing. This is congruent with Henseler*et al.* (2015) and; Rönkkö and Evermann, (2013)'s suggestion of HTMT ratio of correlation criterion for discriminant validity testing. Henseler *et al.* (2015) further explained on the establishment of discriminant validity, with the HTMT statistics should not exceed 0.90 or 0.85, dependent over whether the constructs are conceptually similar. As shown in Table 3, none of the HTMT values are greater than 0.90 (Henseler *et al.*, 2015; Gold *et al.*, 2001). Moreover, all the values of the confidence interval in Table 3 do not have a value of 1 in between, which suggested that all HTMT values are significantly different from 1 (Henseler *et al.*, 2015). Hence, it can be concluded that the discriminant validity for the present study is established.

Constructs	Items	Factor loadings	AVE (>0.50)	CA (>0.70)	CR (>0.70)
Word-of-mouth communication	5	0.838-0.876	0.742	0.913	0.935
Hospital-created social media	3	0.807-0.876	0.722	0.807	0.886
User-generated social media	3	0.789-0.874	0.714	0.800	0.882
Hospital advertisement*	4	0.800-0.844	0.642	0.861	0.900
Price perception	3	0.854-0.918	0.783	0.864	0.916
Hospital brand image	3	0.803-0.867	0.712	0.798	0.881
Perceived service quality*	4	0.762-0.818	0.632	0.806	0.873
Medical tourists' satisfaction	4	0.780-0.851	0.676	0.840	0.893
Perceived value of medical trip	4	0.763-0.818	0.629	0.803	0.871
Behavioral intention	3	0.842-0.852	0.718	0.804	0.884

Table 2.
Convergent validity for the variables

Notes: AVE = Average variance extracted; CR = Composite reliability; CA = Cronbach's alpha; *represent an item that has been dropped from the variable based on the recommendation of convergent validity test

Constructs	1	2	3	4	5	6	7	8	9	10
BI										
HBI	0.406 [0.302; 0.507]									
ADS	0.128 [0.063; 0.257]	0.265 [0.106; 0.417]								
HCS	0.118 [0.043; 0.240]	0.322 [0.183; 0.452]	0.164 [0.070; 0.291]							
PVMT	0.433 [0.327; 0.525]	0.234 [0.136; 0.341]	0.085 [0.048; 0.216]	0.069 [0.041; 0.166]						
PSQ	0.388 [0.259; 0.508]	0.423 [0.310; 0.531]	0.195 [0.078; 0.341]	0.203 [0.085; 0.318]	0.321 [0.194; 0.434]					
MTS	0.658 [0.586; 0.726]	0.334 [0.216; 0.448]	0.123 [0.058; 0.283]	0.116 [0.053; 0.21]	0.462 [0.360; 0.559]	0.324 [0.216; 0.429]				
PRICE	0.270 [0.189; 0.360]	0.201 [0.118; 0.298]	0.027 [0.031; 0.112]	0.037 [0.028; 0.123]	0.284 [0.194; 0.374]	0.224 [0.135; 0.310]	0.323 [0.228; 0.422]			
UGS	0.222 [0.111; 0.336]	0.406 [0.262; 0.528]	0.187 [0.066; 0.337]	0.417 [0.278; 0.542]	0.217 [0.110; 0.327]	0.216 [0.010; 0.353]	0.115 [0.068; 0.247]	0.103 [0.004,0.200)		
WOM	0.274 [0.154; 0.381]	0.396 [0.269; 0.514]	0.208 [0.087; 0.336]	0.180 [0.062; 0.306]	0.211 [0.106; 0.326]	0.367 [0.272; 0.466]	0.236 [0.115; 0.353]	0.193 [0.108; 0.276]	0.367 [0.231; 0.488]	

Notes: BI = Behavioral intention; HBI = Hospital brand image; ADS = Hospital advertisement; HCS = Hospital-created social media; PVMT = Perceived value of medical trip; PSQ = Perceived service quality; MTS = Medical tourists' satisfaction; PRICE = Price perception; UGS = User-generated social media; WOM = Word-of-mouth communication; the values in the brackets represent the lower and the upper bounds of the 95% confidence interval

Table 3. Discriminant validity assessment

4.3 Structural model assessment

Prior to assessing the structural model, researchers need to address the issue of collinearity, that is, present in the model investigated in the study (Diamantopoulos and Siguaw, 2006). To assess the collinearity issues, variance inflated factor (VIF) was used. According to Diamantopoulos and Siguaw (2006), VIF values below 3.3 for each of the constructs show that collinearity is not a concern. Table 4 presents the outcome of collinearity test of the model, whereby all the VIF values fall below 3.3. Hence, it concluded the absence of collinearity in the model.

Thereafter, bootstrapping using 1,000 resampling was conducted to generate the *t*-values to measure the statistical significance of the path coefficients. The path co-efficient assessment as highlighted in Table 5 shows that all the hypotheses (*H1* to *H11*) proposed in this study were found to be significant. This shows that both social (e.g. WOM communication, hospital-created social media and user-generated social media) and marketing aspects (Hospital's advertisement and price perception) are significantly related to hospital brand image. Moreover, the brand image of the hospital has a significant influence on medical tourists' perceived service quality ($\beta = 0.340$, $p < 0.001$), satisfaction

($\beta = 0.267, p < 0.001$) and their perceived value of the medical trip ($\beta = 0.259, p < 0.001$). Similarly, Table 5 has also highlighted that medical tourists' perceived service quality ($\beta = 0.157, p < 0.001$), value ($\beta = 0.136, p < 0.001$) and satisfaction ($\beta = 0.451, p < 0.001$) have a significant impact on their behavioral intentions.

As for *H12* and *H13*, the mediation effect for medical tourists' satisfaction and the perceived value was determined based on the suggestion proposed by Hayes and Preacher (2014). Results from the bootstrapping analysis in Table 5 shows that the indirect effect of both medical tourists' satisfaction ($t = 4.942$) and perceived value ($t = 2.584$) are significant at 95% confidence level. In particular, the indirect effect of $\beta = 0.120$ with 95% Boot CI: (LL = 0.078; UL = 0.174) suggested that medical tourists' satisfaction mediates the relationship between perceived service quality and behavioral intention. Similarly, the

Table 4. Structural model assessment: collinearity, coefficient of determination, predictive relevance and effect size

Contructs	VIF	R^2	Adj. R^2	Q^2	f^2
Behavioral intention		0.342	0.339	0.230	
Hospital brand image	1.000	0.222	0.215	0.143	0.134
Hospital advertisement	1.058	–	–	–	0.043
Hospital-created social media	1.136	–	–	–	0.014
Perceived value of medical trip	1.206	0.067	0.065	0.039	0.040
Perceived service quality	1.111	0.116	0.114	0.067	0.001
Medical tourists' satisfaction	1.211	0.071	0.070	0.045	0.306
Price perception	1.033	–	–	–	0.021
User-generated social media	1.233	–	–	–	0.006
Word-of-mouth communication	1.165	–	–	–	0.059

Notes: VIF = Variance inflated factor; R^2 = Coefficient of determination; Q^2 = Predictive relevance; f^2 = Effect size

Table 5. Structural model assessment for direct and indirect effect

Hypotheses	*SE*	*Std β*	Confidence interval *LL*	*UL*
H1: Word-of-mouth communication → HBI	0.043	0.178**		
H2: Hospital-created social media communication → HBI	0.043	0.214**		
H3: User-generated social media communication → HBI	0.042	0.147**		
H4: Hospital advertisement → HBI	0.048	0.139**		
H5: Price perception → HBI	0.035	0.121**		
H6: HBI → perceived service quality	0.047	0.340**		
H7: Perceived service quality → behavioral intention	0.047	0.157**		
H8: Perceived service quality → medical tourists' satisfaction	0.047	0.267**		
H9: Medical tourists' satisfaction → behavioral intention	0.038	0.451**		
H10: Perceived service quality → perceived value of medical trip	0.050	0.259**		
H11: Perceived value of medical trip → behavioral intention	0.040	0.136**		
H12: Perceived service quality → medical tourists' satisfaction → behavioral intention	0.024	0.120*	0.078	0.174
H12: Perceived service quality → perceived value of medical trip → Behavioral intention	0.014	0.035*	0.012	0.063

Notes: HBI = Hospital brand image; SE = Standard error, std β = Standardize estimate; **and *denote significant at 99% and 95% confidence level, respectively

indirect effect of $\beta = 0.035$ and 95% Boot CI: (LL = 0.012; UL = 0.063) further indicated that perceived value of medical trip also mediates the relationship between perceived service quality and behavioral intention. Hence, *H12* and *H13* as developed for this study are supported.

Subsequently, R^2, the variance explained in the dependent construct, behavioral intention, Q^2 predictive relevance and f^2 effect size were also being examined and the results are shown in Table 4. The R^2 for behavioral intention is 0.342, which indicates that 32.4% of the variance in behavioral intention can be explained by the significant independent variables as shown in Figure 1. According to Chin (1998), the R^2 value of 0.342 is higher than 0.33, indicating a moderate level of acceptance. Inter m of Q^2, the overall Q^2 values are larger than 0 indicate that exogenous constructs possess predictive capacity over behavioral intention. The results further show that among all the exogenous constructs, medical tourists' satisfaction has the largest effect on behavioral intention ($f^2 = 0.256$) while price perception has the lowest effect size on behavioral Intention ($f^2 = 0.018$).

4.4 Predictive model assessment

In the recent publication, Shmueli *et al.* (2019) highlighted that PLS-SEM is a "causal-predictive" application and it has predictability power to assess a path model. For this reason, PLS predict, which based on the concepts of separating training and holdout samples with the aim to estimate model parameters and evaluate model's predictive power was applied. Root mean squared error (RMSE) and mean absolute error (MAE) were used owing to the symmetrical nature of the prediction error of the existing data and the results are presented in Table 6. PLS-SEM < LM for all the indicators in the PLS-S analysis have lower RMS and MAE values compared to the naïve LM benchmark. Additionally, the Q^2 values for the indicators of PLS model outperformed those generated for LM model ($Q^2 > 0$). Based on this results, it can be concluded that the model for the present study has a high predictive power to represent the reality.

4.5 Importance and performance matrix analysis

Importance-performance map analysis (IPMA) is also known as priority map analysis. IPMA provides additional information to the standard results of path coefficient estimates

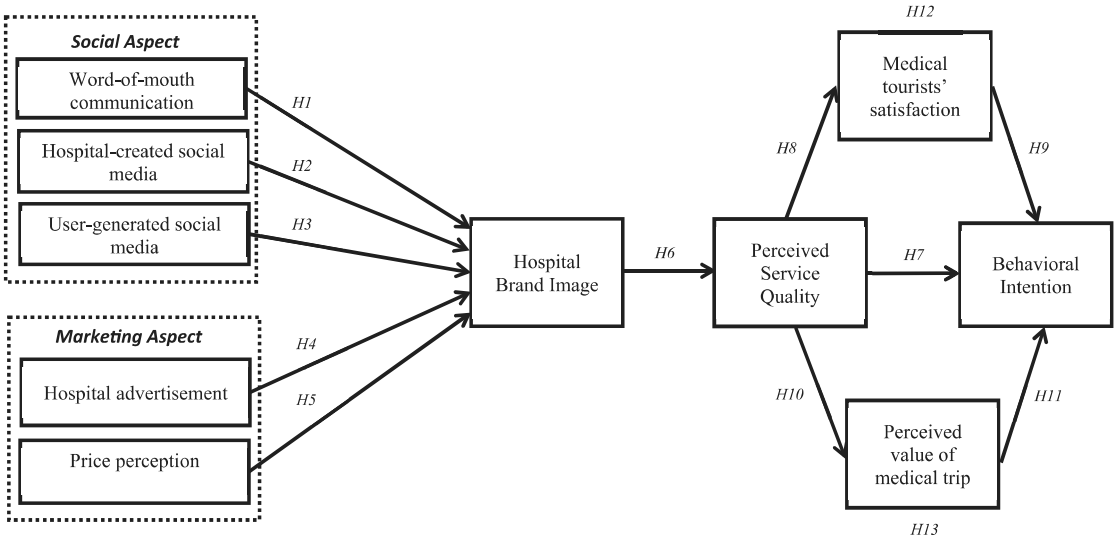

Figure 1.
Research model

through the inclusion of the average values of the latent variable scores (Hair *et al.*, 2017). IPMA technique distinguishes the total effects, which is representing the importance of the antecedent constructs while determining the "target construct" with the average values of the latent variables scores to indicate their performance (Ringle and Sarstedt, 2016). IPMA aims to identify those antecedents that are mostly relevant while determining the target construct through a strong total effect. It also informs low performing constructs through the low average latent variable scores. As such, IPMA enables observations on areas that are of greater importance to a target construct, even when the construct is underperformed (Nitzl and Chin, 2017), thereby recommending major areas to work on. Figure 2 hereby illustrates the IPMA scatter plot graph.

With reference to Figure 2 and Table 7, it is observed that medical tourists' satisfaction is the most important construct; yet, it is not the most performing one. The second most important construct that positively contributes to behavioral intention is perceived service quality, followed by value of medical trip. Among these three most important constructs, namely medical tourists' satisfaction, perceived service quality and value of medical trip, their performance are contradicting to its' importance. Nevertheless, these three important constructs are performing above 50 index value at 66.336, 67.592 and 70.339, respectively. Drawing from Martilla and James (1977), importance-performance analysis (IPA), an alternative partitions of IPA grid would highlight the difference between importance and performance ratings by means of an upward diagonal line. With this partition, the results informed that current research has identified the core contributing factors to behavioral intention as all the constructs has fallen on the top left quadrant of Martilla-James partition. This outcome suggested that all these constructs score over the average, both in terms of importance and performance. Therefore, they must be carefully monitored for greater

	PLS			LM			PLS-LM		
Variables	RMSE	MAE	Q^2_predict	RMSE	MAE	Q^2_predict	RMSE	MAE	Q^2_predict
INT3	0.671	0.563	0.043	0.679	0.584	0.019	−0.008	−0.116	0.024
INT1	0.687	0.565	0.053	0.701	0.599	0.015	−0.014	−0.136	0.038
INT2	0.629	0.523	0.046	0.638	0.546	0.018	−0.009	−0.115	0.028

Table 6. PLS predict assessment

Notes: RMSE and MAE metric in PLS must produce smaller values than that of LM, thus generating negative values in PLS-LM; Q^2 metrics in PLS must produce larger values than of LM, thus, generating positive values in PLS-LM

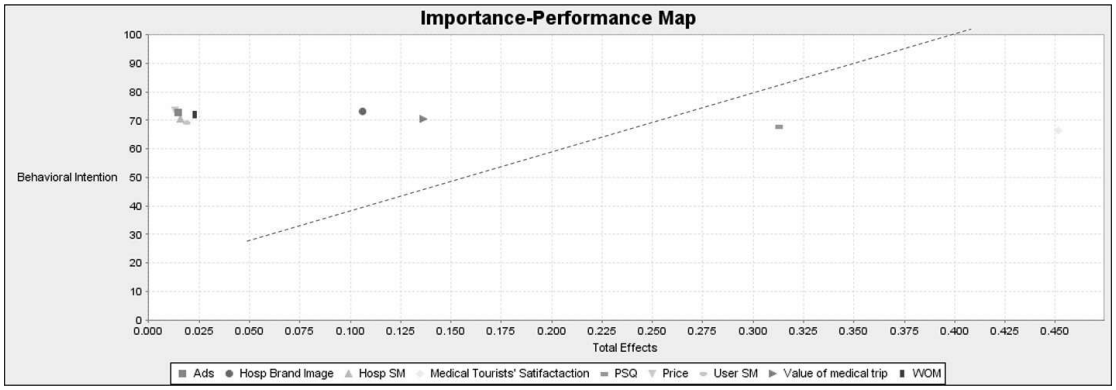

Figure 2. Total effects (Importance) and behavioral intention (performance)

Construct	Importance (total effect)	Performances (ondex values)
Hospital advertisement	0.015	72.661
Hospital brand image	0.106	73.093
Hospital-created social media	0.016	70.536
Medical tourists' satisfaction	0.451	66.336
Perceived service quality	0.313	67.592
Price perception	0.013	73.567
Medical tourists' satisfaction	0.019	69.185
Perceived value of medical trip	0.136	70.339
Word-of-mouth communication	0.023	71.974

Table 7.
IPMA result

results. In fact, the most important factor, i.e. the medical tourists' satisfaction is performing above 50 index value. Marketing personnel should keep up the existing effort in satisfying medical tourists while continuously working on other factors.

5. Discussion and implications

There are several key findings worth noting in this study. First, it was found that social factors play an important role in influencing the medical tourists' perception of the brand image of the healthcare providers. In particular, it has been recorded that both social media communication and WOM communication significantly influence the perception of medical tourists in relation to hospitals' brand image. As for social media communication, unlike the results by Cham *et al.* (2016) that only found hospital-created social media content to have a significant influence on hospital's brand image, this study puts forward that both hospital-created and user-generated content in social media have a direct impact on branding of the hospital, which is consistent with several past studies (Bruhn *et al.*, 2012; Schivinski and Dabrowski, 2016). This scenario indicates that medical tourists, in general, depend on social media as a reliable and trustworthy source of information for the hospital; further used it to bridge perceptions formed on the hospital's brand image. Taking this context into consideration, hospitals need to consistently employ innovative content in their social media accounts. For example, the hospitals can use various type of media (e.g. videos, infographic, etc.) and update their social media accounts regularly with latest information pertaining to the services that they offer. Moreover, inclusion of patients' review, contact details, hospital's information, medical treatments' information and real-time online conversations are additional initiative that can be considered by hospitals in enhancing a better social media presence.

In addition, this study has also highlighted the importance of WOM in influencing medical tourists' perception of the hospitals' brand image. Thus, the relationship between WOM and brand image has been firmly supported, as aligned to Jalilvand *et al.* (2013), Ko and Kim (2011); while being a preceding factor to decision-making among medical tourists (Cham *et al.*, 2016; Yeoh *et al.*, 2013). Positive reviews from close acquaintances (e.g. family and friends) would result in greater brand favorability on the hospitals, vice versa. Positive traditional WOM and e-WOM (e.g. user-generated content in social media) can be created based on various patients' positive testimonials and reviews on the service encountered. Hospitals can consider employing promotions-oriented approaches (e.g. vouchers and coupon giveaway, free medical trial, etc.), creating a referral program and using influencer marketing to encourage the spread of WOM and user-generated content in social media, with regards to their medical offerings. These strategies are expected to reinforce

observation of the potential medical tourists; and, potentially increase their likelihood to engage the respective hospital for medical treatments.

Secondly, the impact of marketing factors in relation to medical tourists' perception are also evident in the present study. In particular, it was found that the hospital's advertisement alongside price perception of the medical charges among medical tourists would significantly influence their perceptions toward the hospital's brand image. Notwithstanding the popularity of social media platforms as a great marketing tool, the effect of advertising on medical tourists' decision-making process cannot be denied. This is because advertising is still one of the main platforms for hospitals to reach potential customers and promote their services in other countries (Lunt *et al.*, 2014). The findings from this study are consistent to earlier literature (Ardestani *et al.*, 2014; Hanaysha and Hilman, 2015; Ramiz *et al.*, 2014), which argued that advertisement is a great marketing communication tool to promote the brand image of a particular organization toward encouraging actual trials. This can be performed with the use of interactive and creative media ads through promotion campaigns, social media and spokespersons to influence the perceptions of fellow medical tourists.

As for the context of pricing, it has been revealed that prices perceived by medical tourists eventually influence their perceptions toward brand of a hospital. This proposition is consistent with past literature, whereby price perception was being reported to have significant impact on branding attributes (Beneke and Zimmerman, 2014; Jin *et al.*, 2012; Popp and Woratschek, 2017). As for the present study, it was found that medical tourists will perceive the brand of a particular hospital favorably if prices of the services were deemed reasonable.In view of importance of the pricing aspect, it is recommended for healthcare providers to manage their monetary charges at a reasonable rate to maintain market competitiveness, while creating positive value for medical tourists. Various competitive pricing strategies such as price bundling, price-off promotion, cash discount, rebates, coupons and reward systems can be considered by the healthcare providers in determining their pricing mechanism. The use of appropriate pricing strategy is beneficial as it can enhance their competitiveness within the marketplace, entice the price-conscious customers and most importantly, attract potential medical tourists. Additionally, the value created from cheaper charges can further enhance the intention among medical tourists to revisit Malaysia for future occasions.

Thirdly, it was found in the present study that brand image acts as a form of differentiation among hospitals, in addition to creating awareness for fellow medical tourists. Undeniably, brand image has emerged as a strategic technique in establishing favorable customer connections, further ensuring positive impressions to service quality, especially for high-credence and risky services like medicine and healthcare (Cham *et al.*, 2016; Wu, 2011). This scenario is plausible as patients often use brand image as the reference point to quality and trust for unfamiliar services such as medical tourism for this case (Brodie *et al.*, 2009; Cham *et al.*, 2016; Wu, 2011). Fourthly, it is interesting to know that the service quality as perceived by medical tourists has a positive impact on their level of satisfaction, perceived value from the trip and ultimately their behavior intention to return to Malaysia in the future for medical treatments. This shows that service quality of healthcare providers is the cornerstone of performance standards that have significant potential in retaining medical tourists. Explicitly, while service quality would entail potential visits from medical tourists, the element of satisfaction and value should not be unattended for being a result of perceived service quality and an antecedent to behavioral intention (Kim *et al.*, 2008; Ullah, 2012). The importance of perceived service quality, medical

tourists' satisfaction and perceived value is critical as highlighted by the Importance-Performance Analysis in the previous section.

In addition to the above, the present study has also highlighted the mediating effect of medical tourists' satisfaction and perceived value in relation to the relationship between perceived service quality and behavioral intention. Such findings further reinforced findings obtained via past studies (Ažman and Gomišček, 2015; Chen and Chen, 2010; Ullah, 2012) that have focused on the mediating role of customer satisfaction and perceived value. Such association implies that healthcare providers not only need to focus and depend on service quality to promote favorable behavioral intention among medical tourists; but would also need to consider the importance of medical tourists' satisfaction and their value perception. As evidenced in the study, both the satisfaction and value perception of medical tourists play a vital role in their decisions to return to Malaysia for medical service in the future.

From a practical standpoint, healthcare providers should emphasize on the importance of quality aspects in their service provision and communication aspect with their customers. It was reported that high quality of service provision and effective communication would be able to instill trust among medical tourists, which form positive brand image toward the healthcare providers. The eminence service quality could also encourage them to spread positive WOM with regards to particular healthcare provider via both traditional and modern means of communication. This initiative can be executed with availability of the standard of procedures (SoPs) and clear KPIs upon service delivery process. Moreover, staff trainings in relation to customer service skills and strategies should be emphasized in every part of customers' touch points as it can enhance the service experience of fellow customers. It is anticipated that conducive and effective training will definitely improve the level of service provision among healthcare providers through creating pleasant experience for the customers. Besides having impact on brand image, the proposed strategies can also enhance the level of medical tourists' satisfaction, perceived value from the trip and most importantly, their intention to return for future medical services.

As for the aspect of contribution, the present study contributed to the theory and practice in different degrees. Firstly, from the theoretical standpoint, this study highlighted the importance of social and marketing factors in relation to hospitals' brand image in the context of medical tourism. Particularly, it was found that social media communication, advertisement and price are important elements that greatly influence the formation of brand image. Secondly, this study validates the importance of brand image in the healthcare setting, which has still been under-examined to date. Hence, this study makes an addition to knowledge by delving into the importance of social and marketing aspects, along with brand image in relation to medical tourism. Thirdly, the present study also successfully highlighted the mediating effect of perceived trust and perceived value on the relationship between service quality – behavioral intention link, in which relatively under-studied to date. These empirical findings put forward the importance of both medical tourists' satisfaction and perceived value in predicting their behavioral intentions.

6. Conclusion

This study examined the impact of social and marketing aspects on hospital brand image, toward formulating more effective service marketing strategies for enhanced positive behavioral intentions among tourists within the medical tourism sector. With the increased knowledge on issues regarding brand image, value and quality of medical services; medical tourists have become more sophisticated and demanding in their choices. Alongside stiffened competition among medical tourism services, industrial operators are required to sustain a strong customer base through accommodating different marketing aspects to

generate positive behavioral intentions, further long-term profitability. Nevertheless, medical tourism, while being a major player within the tourism industry as a whole, has demonstrated essential financial impact with substantial contribution to the gross domestic product) in Malaysia. Current findings have presented several remarkable contributions to the medical tourism sector, specifically as a benchmark for improved medical services in attracting potential tourists. Greater significance is hereby placed on addressing practical implications, by suggesting micro-marketing strategies among medical tourism operators; thus, boosting long-term sustainability within this sector.

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Appendix

Table A1. Measurement item of the variables in the study

Variables	Items
Word of mouth communication	My family/friends positively influenced my attitude toward this hospital's brand
	My family/friends mentioned positive things I had not considered about this hospital's brand
	My family/friends provided me with positive ideas about this hospital's brand
	My family/friends positively influenced my evaluation of this hospital's brand
	My family/friends helped me make the decision in selecting this hospital's brand
Hospital-created social media	The level of this hospital's social media communications for its brand meets my expectations
	Compared with the very good social media communications of other competing hospitals, this hospital's social media communication for its brand performs well
	I am satisfied with this hospital's social media communications for its brand
User-generated social media	The level of the social media communications feedback expressed by other users about this hospital's brand meets my expectations
	Compared with the very good social media communications of other users' feedback about other competing hospital brands, the social media communications of users' feedback about this hospital's brand performs well
	I am satisfied with the social media communications feedback expressed by other users about this hospital's brand
Hospital advertisement	The advertisement by this hospital is appealing to me
	I pay attention to the advertisement message by this hospital
	The advertisement by the hospital is important to me as a medical tourist
	The advertisement by this hospital provides me with useful information about its medical services
	My preference toward the brand of this hospital is influenced by their repeated advertisement
	The advertisement by this hospital has an influence on me
Price perception	The price of medical services for this hospital is reasonable
	The price of medical services for this hospital is appropriate
	Overall, the price for medical services of this hospital are cheaper compare to the competitors
Brand image	This hospital's brand possesses complete practical functions (medical services and adequate medical facilities)
	This hospital's brand possesses a positive symbolic meaning (good reputation, credibility and positive image)
	I feel that this hospital's brand can provides me with pleasant service experience
Perceived service quality	This hospital provides an environment, that is, free from danger
	The staff of this hospital are trustworthy
	The staff of this hospital provides services in a timely manner
	The staff of this hospital perform the medical service right on the first time
	The staff of this hospital understand my individual needs
Medical tourists' satisfaction	I am satisfied with my decision to use the service at this hospital
	My choice to come to this hospital is a wise decision
	My experience at this hospital is satisfactory
	I am not disappointed to use this hospital's service
Perceived value of medical trip	The effort involved to decide on this medical service is worthwhile
	The time I spent flying from my country to Malaysia to receive medical service is worthwhile
	The services provided by this hospital are good for what I have to pay
	The money I spent for this medical trip is well worth it
Behavioral Intention	I will recommend that other people to use this hospital
	I need medical services in the future outside my country of residence, I would consider this hospital as my first choice
	I will tell other people good things about this hospital

About the authors

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