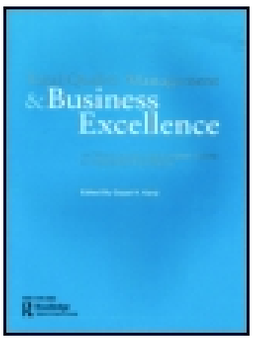

Routledge
Taylor & Francis Group

Total Quality Management & Business Excellence

ISSN: 1478-3363 (Print) 1478-3371 (Online) Journal homepage: http://www.tandfonline.com/loi/ctqm20

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To cite this article: Noor Hazilah Abd Manaf, Husnayati Hussin, Puteri Nemie Jahn Kassim, Rokiah Alavi & Zainurin Dahari (2015): Medical tourism service quality: finally some empirical findings, Total Quality Management & Business Excellence, DOI: 10.1080/14783363.2015.1068597

To link to this article: http://dx.doi.org/10.1080/14783363.2015.1068597

Total Quality Management, 2015
http://dx.doi.org/10.1080/14783363.2015.1068597

Medical tourism service quality: finally some empirical findings

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The purpose of this paper is to examine service quality, perceived value, overall satisfaction and future intention among medical tourists who seek treatment in Malaysian private hospitals. Self-administered questionnaire was the main method of data collection. Respondents comprised foreign patients who seek medical treatment, and/or related medical services such as tests and medical check-ups. Expatriates and foreign nationals residing in Malaysia were excluded. Altogether 173 responses were received and analysed by SPSS 17. Three dimensions of medical tourism service quality were identified, namely, medical staff quality, supporting services quality and administrative services quality. Medical staff quality was found to predict all three variables of patient satisfaction, perceived value and future intention for treatment. Very limited empirical research has been carried out with actual data from patients due to difficulty in getting access to international patients, and patients' reluctance to participate. This study is among the first few which examines medical tourism service quality with actual patient data. The research identifies important constituents of medical tourism which may assist policy-makers and hospital managers in better understanding the industry.

Keywords: medical tourism; medical outsourcing; international medical travel; health tourism; service quality

Introduction

Medical tourism is a recent phenomenon that has generated much interest due to not only its huge economic potential, but also the changing landscape of healthcare delivery services. Leahy (2008) estimates the industry to be worth USD 60 billion worldwide, and the oft-quoted Deloitte Report (2008) on medical tourism estimates the industry to grow by more than 20% annually and would be worth US 4 billion for the Asian chapter by 2012. The leading medical tourist hospital in Bangkok, Bumrungrad International received 55,000 American patients in 2005 (Fried & Harris, 2007), and it now provides care to over 430,000 international patients a year (Turner, 2007). In 2008, Thailand generated USD 1.5 billion from its medical tourism industry (NaRanong & NaRanong, 2011). The rise of medical tourism is incomprehensible as the healthcare service is often regarded as the most local of services. When in need of medical care, one would usually seek the service of the local hospital or medical facility. Thus, the traversing of patients across the globe within the recent decade and its resultant economic bearing have caught the attention of both researchers and policy-makers. In Asia, countries such as Singapore, India and Malaysia have the government machinery

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involved in expediting the industry in an attempt to capitalise on its economic fallout (Manaf, Ghazali, & Marikar, 2011).

Literature review

A review of the literature indicates that medical tourism can actually be traced throughout history to the practise of the wealthy and upper social classes who sought spas, mineral baths and innovative therapies as destinations for health improvement and wellness (Gray & Poland, 2008). In the seventeenth century, the wealthy of Europe travelled to spas and specialty hospitals on the Nile (Burkett, 2007). In the recent decades however, the travel of patients was primarily to developed countries with cutting-edge medical technology such as the USA and European countries such as Switzerland, Germany, Austria, Hungary, UK and France (Goodrich & Goodrich, 1987). But today's changing healthcare landscape saw a reversal in the trend whereby patients from developed countries such as the USA and Britain are travelling to other parts of the world for their medical needs. Connell (2006) quoted an estimate of 50,000 people leaving Britain in 2003 as medical tourists. For US patients, the estimates have been inconsistent. York (2008) puts the estimate at between 50,000 and 500,000; while the Deloitte Report (2008) estimated 750,000 Americans went abroad for medical care in 2007, and the figure was expected to increase to 1.6 million by 2012. Even Canadian patients are seeking healthcare services abroad, and the number is increasing each year (Johnston, Crooks, Adams, Snyder, & Kingsbury, 2011). The province of Ontario, Canada, for example saw a 450% increase from 2001 to 2008 in the number of those reimbursed for out-of-country medical treatment (Hopkins, Labonte, Runnels, & Packer, 2010). On the other hand, patients from less developed countries seek health treatment abroad for better quality of care. Thus, patients from countries such as Vietnam and Indonesia flock to neighbouring countries with better healthcare system such as Malaysia and Singapore. In fact, patients from Indonesia form the largest majority of health travellers to Malaysia, making over 70% of total medical tourists to the country (Sivanandam, 2009). This figure was corroborated by Manaf, Hussin, Kassim, Alavi, and Dahari (2013) based on empirical data.

The terms 'health tourism', 'medical tourism' and 'health services outsourcing' are often interchangeably used to describe health services provision in another country (Salmon, 2008). The concept of health tourism in a broader sense may include all health-seeking behaviours by consumers in another country. This may include getting health services, tourism for indigenous and alternative medical treatments and any other form of tourism undertaken with the purpose of addressing a health concern, usually motivated by seeking cheaper care (Salmon, 2008). However, what is on offer today takes more than just the preventive and wellness approach of the health resorts and spas, but broadens into invasive medical treatment such as hip replacement surgery or coronary bypass, done in another country particularly for cost considerations. This prompted authors like Connell (2006) to delineate medical treatment done in another country as medical tourism, while seeking services such as those offered at spas and health resorts abroad as health tourism. Johnson and Garman (2010) on the other hand use the phrase 'international medical travel' to denote care received by individuals who specifically travel to another country for medical care. For the purpose of this study, medical services and treatment specifically received in another country either with or without tourism activities such as sightseeing will be defined as medical tourism.

There are many reasons as to why patients go abroad for medical care and services, with cost being the main push factor especially for American patients. The US healthcare

system is the costliest in the world (Marlowe & Sullivan, 2007). It now stands at US$2 trillion a year and is predicted to double in the coming decade (Economist, 2007). Reports of individual patients going abroad for medical treatment prompted by cost factor grace the literature (Connell, 2006; Cuddehe, 2009; Gray & Poland, 2008; Milstein & Smith, 2006; Turner, 2007; York, 2008). While cost is the main issue, quality and standard of care of destination hospitals in medical tourism states have also been a pull factor. Many hospitals in Asia are also coming up with 'firsts' in medicine, indicating a global convergent in standard of care. Accreditation, particularly by Joint Commission International, lends credence to the quality of care of destination hospitals. To that extent, Rick Wade, the senior vice president of the American Hospital Association, has been quoted as saying that 'he has no doubt that some international hospitals are just as high-quality as their US counterparts' (Fried & Harris, 2007).

Apart from cost, Connell (2006) attributed to factors such as long waiting lists, relative affordability of international air travel, favourable economic exchange rates and the ageing of the affluent baby-boomer generation as augmenting elements to the growth of the industry. Sarwar, Manaf and Omar (2012), on the other hand, cited lack of access to a particular treatment at home and marketing impact as other determinants. Crooks, Kingsbury, Snyder, and Johnston (2010), on the other hand, quoted patients wanting access to procedures that are illegal or unavailable in the home country such as stem cell or surrogacy, apart from the ease of air travel, as other motivating factors. Apart from cheaper air travel, advances in medical technology help to develop procedures that are less and less invasive yet with higher degree of precision and efficacy, and this augurs well for the travelling patient who will need less time to recuperate, not to mention his or her peace of mind in times of sickness (Manaf et al., 2011). The industry has also leveraged on the Internet revolution. Advances in information technology allow mobility of patient data with ease and speed. The Internet also brought countries far away into homes of prospective patients, allaying the fear of alien culture (Manaf et al., 2011).

A review of the literature also indicates that medical tourism is a widely researched topic at the conceptual level (Arellano & Annette, 2007; Conell, 2006; Cuddehe, 2009; Douglas, 2007; Leahy, 2008; Schroth & Khawaja, 2007; York, 2008). This is understood since medical tourism is a recent phenomenon and not much field work has been carried out in the area, although there has been some published empirical work. For example, Chen, Kung, Huang, Chen, and Pei (2012) studied the willingness and barriers of potential medical tourists from China to seek treatment in Taiwan. Martin, Ramamonjiarivelo and Martin (2011) developed MEDTOUR, which is a scale for measuring medical tourism intention. However, the respondents comprised a convenience sample of undergraduate students enrolled in a four-year state university programme. Similarly, Wang (2012) explored perception of value as a medical tourism driver, but the respondents of the study comprised tourists from Mainland China from Company A who were deemed as 'potential medical tourists'. Among the few existing empirical research on medical tourism with actual patients as respondents was that of Rad, Som and Zainuddin (2010) who used the SERVQUAL model to investigate service quality among medical tourists in Malaysia. Guiry, Scott and Vequist (2013) on the other hand conducted an online survey on a convenience sample of consumers residing in the USA engaging or expressing an interest in medical tourism. Apart from these, literature based on empirical fieldwork is far and between, and this study is among the first few which examines medical tourism with actual patient data. Thus, it is timely for this study to be carried out in order to fill the lacuna.

Methodology

Self-administered questionnaire was the main method of data collection employed as the survey covered a large geographical area. The Ministry of Health Malaysia identified 41 hospitals as medical tourism hospitals and of these, 20 hospitals covering the main medical tourism states of Selangor, Penang, Melaka, Johor and the capital city of Kuala Lumpur were randomly selected. Since empirical data on medical tourism is not widely published; therefore, development of items was mainly based on the work of Saiprasert (2011), who examined medical tourists' behaviour in Thailand. A total of 22 items on perceived quality of medical treatment were posed to the respondents. The items were presented in a Likert-scale format with response ranging from 1 (strongly disagree) to 5 (strongly agree). The mean of the variables was worked out by averaging all the responses for a single variable. A mean less than 3.0 was classified as being a negative perception, while a mean greater than 3.0 as being a positive perception.

In designing the survey, the recommendation of Ford, Bach and Fottler (1997) for systematic feedback to be gathered before patients exit the service encounter was taken into consideration. This was to ensure that accurate feedback would be captured while it was still fresh on the patients' mind. However, it was envisaged that the challenge in getting patients' feedback in this manner was quite enormous as the patients were not only not in the best of health, but also in another country far away from the comfort of home. Tomes and Ng (1995) raised the concern that hospitalisation is more than just a physical experience for the patients. They are also burdened with psychological concerns such as fears of physical disability, fears of dying and fears about the side effects of treatment. Taking stock of this situation, data collection was done in close collaboration with the participating hospitals and only patients who have given consent were approached.

The questionnaire was also translated into Arabic and Indonesian Malay from the original English. Native speakers of Arabic and Indonesian Malay were requested to translate the questionnaire and the translated version was then translated again into English in order to ensure that the message and intention in each item were not lost in translation. Three sets of questionnaires in English, Arabic and Indonesian Malay were sent to the hospitals. Respondents of the survey comprised foreign patients who come to Malaysia specifically for medical treatment and other health services. Those who are already residing in the country either as expatriates (and family members) or students were excluded from the survey. Data collection was by means of convenience sampling rather than random sampling since the respondents were patients, and therefore, it is best that their involvement is voluntary given their health condition. Convenience sampling was also recommended by Manaf (2012) for any patient satisfaction studies. Altogether 1000 questionnaires were sent out and of these, 173 responses were received and analysed. This gave a response rate of 17.3%, and data were analysed by using SPSS.

Validity and reliability

Data were first subjected to reliability analysis. The aggregate Cronbach alpha for all 22 items was 0.966, which indicates a good internal consistency among the items in the instrument. This also exceeds the acceptable lower limit of 0.7 (Hair, Anderson, Tatham, & Black, 1998). All the items were also found to have item-total correlation which exceeded Nunnally and Bernstein's (1994) acceptable limit of 0.3. Factor analysis was also carried out by Varimax rotation which resulted in a three-factor solution as shown in Table 1. All the items were found to have a factor loading greater than 0.5, and this was considered significant (Hair et al., 1998). The first factor accounted for 58.92% of total

Table 1. Factor analysis and Cronbach's alpha.

		Factor loading	Cronbach's alpha
Medical staff quality	The physicians allowed me to ask many questions, enough to clarify everything	.854	.961
	The physicians adequately explained my condition, examination results and medical process	.827	
	Ease of assembling and transmitting of medical record/information	.787	
	Medical staff was polite and friendly	.786	
	The process for setting up the medical procedure appointment was simple and easy	.782	
	The physicians paid enough attention to my concerns in deciding on a medical procedure	.777	
	The hospital has adequate grievance channel for patients	.752	
	The hospital has acceptable protection against medical malpractice and liability	.673	
	The medical staff has good communication skill	.626	
	Arrangement for language interpretation service	.607	
	Availability of physicians and nurses who can speak my language	.560	
	Short waiting time for the medical examination from the physicians	.500	
Supporting services quality	The hospital amenities (cafeteria, Wi-Fi and public telephone) were conveniently located	.778	.924
	Hospital care facilities (laboratory and doctors' office) were easy to find	.767	
	The hospital's attention to patient s' privacy, confidentiality and disclosure	.738	
	The hospital has state-of-the-art facilities and equipment	.718	
	The hospital provides free Internet access	.698	
	The payment procedure was quick and simple	.687	
Administrative services quality	Package pricing with price transparency	.731	.863
	Coordination of arrangements between the patient, hospital, third party insurance companies, embassies and other businesses	.689	
	Convenient hospital transportation arrangement	.649	
	Assistance with financial arrangements including advance estimates for fees, deposits and payments	.613	

variance. Reliability analysis was carried out on all the three factors and again Cronbach's alpha of 0.70 and item-total correlation of 0.30 were used as the acceptable lower limit. The first factor which grouped items relating to physicians and medical staff, and services such as 'short waiting time for medical examination' was labelled as 'medical staff quality'. The second factor which grouped items on services such as Internet access and hospital amenities was labelled as 'supporting services'. Both labels were based on Saiprasert's

(2011) findings. The third factor which grouped items such as package pricing, hospital transportation and financial arrangements was labelled as 'administrative services quality'.

Profile of respondents

Almost half of the respondents (45%) travelled to Malaysia for the first time for medical services, and another 24% were here for a second time. More than half (53%) were male while the remaining 47% were female. In terms of age, 55% are between 26 and 45 years old, and another 33% are between 46 and 65 years old. Distribution by occupation showed that 34% are self-employed, executive 10%, education 8%, professional/technical 6.5% and retired 10%. Although the majority of respondents are Indonesians (61%), however, the country profile is very diverse with patients from Libya, Somalia, South Korea, China, Cambodia, Djibouti, Bangladesh, Japan, Pakistan, Australia, Yemen, Thailand, New Zealand, Romania, Iraq, USA, Singapore, Iran, Maldives and Mongolia. As for types of services, 31.2% came for comprehensive medical check-up, 14% for heart surgery, 8% for cosmetic surgery, 5% for lasik and sight treatment and another 5% for dental surgery and treatment. There were also those who came for in vitro fertilisation treatment, cancer, kidney, nerve and intestinal ailments. Almost half (48%) made their decision based on word-of-mouth information and 17% on the advice of their doctors. Most of the respondents (66%) made their own arrangement directly with the hospitals.

Medical tourism service quality

The finding indicates that of the three dimensions of service quality, the respondents were most satisfied with medical staff quality which has the highest mean score of 3.80. This was followed by supporting services quality at 3.68 and administrative services quality at 3.63, as shown in Table 2. It must also be noted that medicine acquires the status of profession whereby physicians perform knowledge-based work that is inaccessible to those lacking the required training and experience, and where control is internal by means of members of the profession itself (Plochg, Klazinga, & Starfield, 2009). Such being the case, patients are only passive receivers of a physician's service in a condition of knowledge asymmetry. Thus, patients are not able to understand the technical and medical aspects of care, and this limits their ability to make judgements on the technical competency of the hospital staff. Given the circumstance, based on Gronroos (1984) service quality model, they may be more comfortable in evaluating functional quality (i.e. the expressive performance of service, or 'how' the service was delivered), rather than technical quality (i.e. 'what' medication or treatment the patient receives). In this study, medical staff quality reflects the functional aspect of care.

The respondents were also posed questions on perceived value of their treatment, and the finding is as shown in Table 3.

Table 2. Dimensions of service quality.

	Mean	SD	*t*-Value	*p*-Value
Medical staff quality	3.68	.79	10.09	.00
Supporting services quality	3.80	.73	13.47	.00
Administrative services quality	3.63	.74	10.73	.00

Table 3. Perceived value.

	Mean	SD	*t*-Value	*p*-Value
I received quality medical treatment with a reasonable price	3.58	.97	7.59	.00
This medical treatment delivered superior value	3.66	.89	9.57	.00
This medical treatment was a good value for money	3.59	.96	7.85	.00
Overall perceived value	3.61	.87	9.05	.00

Perception of value in the treatment received was high, with the item on superior value having the highest mean score of 3.66. It must also be noted that the cost of treatment in Malaysia is cheaper in comparison to that in Singapore and Thailand. Furthermore, as the majority of medical tourists in the country are from Indonesia, the cost of treatment in Malaysia can actually be cheaper since, for example, it is nearer for a patient from Medan on the island of Sumatra to take a ferry ride to Melaka rather than travel to Jakarta on the island of Java.

Apart from perceived value, the respondents were also requested to rate their satisfaction with the medical experience, as shown in Table 4. Satisfaction with the treatment and services received was high among the respondents with the mean for overall satisfaction at 3.85.

Future intention of the respondents was also measured by the instrument, as shown in Table 5. Future intention was also found to be high among the respondents (overall mean 3.56) at both the hospital level and the country level. The respondents agreed that they would continue to use the service of the hospital and seek medical treatment in Malaysia in future. The response was still positive when the respondents were asked if they would continue to use the hospital service in Malaysia even if the cost is higher (mean 3.23).

Service quality and perceived value

Regression analysis was carried out between dimensions of service quality and perceived value. Table 6 shows that the R^2 value is 0.60, which indicates that 60% of variance in perceived value can be explained by the three dimensions of service quality. The F-test provides statistical significance F (3, 83.92), $p < 0.01$. From Table 7, all the three dimensions of service quality were found to be significant predictors of perceived quality. The higher Beta score for medical staff quality ($\beta = 0.446$, $p < 0.01$) indicates that it is a better predictor than supporting services quality ($\beta = 0.232$, $p < 0.01$) and administrative services quality ($\beta = 0.168$, $p < 0.05$).

Service quality and overall satisfaction

Regression analysis was also carried out between dimensions of service quality and overall satisfaction. Table 8 shows that the R^2 value is 0.550, which indicates that 55% of variance

Table 4. Overall satisfaction.

	Mean	SD	*t*-Value	*p*-Value
Overall, I was satisfied with my medical treatment in Malaysia	3.88	.75	15.15	.00
Overall, I was satisfied with my hospital services in Malaysia	3.87	.76	14.68	.00
Overall, I was satisfied with my medical trip to Malaysia	3.81	.84	12.32	.00
Overall satisfaction	3.85	.74	14.99	.00

Table 5. Future intention.

	Mean	SD	*t*-Value	*p*-Value
I would say positive things about this medical treatment in Malaysia to my relatives and close friends	3.80	0.933	11.11	.00
I would be willing to recommend this medical treatment in Malaysia to my relatives and close friends	3.74	0.982	9.78	.00
I will continue to use this hospital service in Malaysia in the future	3.73	0.917	10.24	.00
I would be willing to do further medical treatment at this hospital in Malaysia	3.68	0.970	9.01	.00
I would consider Malaysia as my first choice for medical tourism	3.61	0.989	7.92	.00
I would continue to use this hospital service in Malaysia even if the cost was higher than other destination	3.23	1.058	2.85	.00
I would be willing to spend more money on the medical treatment in Malaysia even if the price increased	3.11	1.018	1.37	.00
Future intention	3.56	0.860	8.37	.00

in overall satisfaction can be explained by the three dimensions of service quality. The F-test provides statistical significance F (3, 68.10), $p < 0.01$. Table 9 shows that of the three dimensions of service quality, only medical staff quality was found to be a significant predictor of overall satisfaction ($\beta = 0.598$, $p < 0.01$).

Service quality and future intention

Regression analysis was also carried out between dimensions of service quality and future intention. Table 10 shows that the R^2 value is 0.596, which indicates that almost 60% of variance in future intention can be explained by the three dimensions of service quality. The F-test provides statistical significance F (3, 81.48), $p < 0.01$. Table 11 shows that of the three dimensions of service quality, only medical staff quality was found to be a significant predictor of future intention ($\beta = 0.790$, $p < 0.01$).

Discussion and implications

The study sheds light on the perception of quality on the service encounter of medical tourists, and perception of value, overall satisfaction and future intention for medical care in the same hospital and in the same country. The study is timely as empirical data from medical tourists themselves are very limited in the literature. Yet despite being an emergent industry, medical tourism has not missed the attention of politicians and policy-makers. The Malaysian government has identified medical tourism as a New Key Economic Area under its Economic Transformation Programme (PEMANDU, 2010) aimed at raising the status of the country to that of a high-income developed

Table 6. Regression between service quality and perceived value.

Model	R	R^2	Adjusted R^2	Std. error of the estimate	
	1	.779[a]	.607	.600	.36331

[a]Predictors (Constant), medical staff quality, supporting services quality and administrative services quality.

Table 7. Coefficients.

Model		Unstandardised coefficients		Standardised coefficients		
		B	Std. error	Beta	*t*	Sig.
1	(Constant)	1.276	.155		8.230	.000
	Medical staff quality	0.324	.063	.446	5.164	.000
	Supporting services quality	0.184	.067	.232	2.756	.007
	Administrative services quality	0.124	.057	.168	2.199	.029

Table 8. Regression between service quality and overall satisfaction.

Model	*R*	R^2	Adjusted R^2	Std. error of the estimate
1	.747[a]	.558	.550	.49663

[a]Predictors (Constant), medical staff quality, supporting services quality and administrative services quality.

nation. Thus, the healthcare sector is identified as a wealth creator, beyond just a social right. But it must be noted from the finding that the majority of medical tourists in the country comprise Indonesians, who are attracted to seek medical care in the country as a cheaper alternative to Singapore or Thailand, and also due to the cultural similarities of both nations. This makes the market vulnerable as it is largely dependent on patients from a single source country. The government realises this and has called for a need to create a differentiated position for Malaysia and to broaden its customer base beyond Indonesia (PEMANDU, 2010). Thus, service providers need to understand customer perception at the patient level in order to cater to a more diverse international market.

The study indicates that while perception of medical tourists on their service encounter is good, it is not exactly excellent as the mean for all the three service quality dimensions are less than 4.00. Healthcare service is different from other hospitality services in the sense that patients as consumers do not have complete knowledge to evaluate the service of their providers. Given the knowledge asymmetry, patients are only able to evaluate the functional aspect of care, rather than the technical aspect (Gronroos, 1984). Leading medical tourism hospitals leverage on this fact. The authors' visit to Bumrungrad and Samitivej hospitals in Bangkok saw the blurring of line between hotel and hospital. An observation of the service in these hospitals mirrors that of a five-star hotel. Thus, Malaysian hospitals need to rise to this level of service if it is to compete on the global front.

Table 9. Coefficients.

Model		Unstandardised coefficients		Standardised coefficients		
		B	Std. error	Beta	*t*	Sig.
1	(Constant)	1.136	.212		5.350	.000
	Medical staff quality	0.560	.086	.598	6.525	.000
	Supporting services quality	0.058	.091	.056	.633	.528
	Administrative services quality	0.127	.077	.133	1.635	.104

Table 10. Regression between service quality and future intention.

Model	R	R^2	Adjusted R^2	Std. error of the estimate
1	.776[a]	.603	.596	.55028

[a]Predictors (Constant), medical staff quality, supporting services quality and administrative services quality.

Table 11. Coefficients.

Model		Unstandardised coefficients		Standardised coefficients		
		B	Std. error	Beta	t	Sig.
1	(Constant)	0.461	.237		1.946	.053
	Medical staff quality	0.871	.095	.790	9.147	.000
	Supporting services quality	−0.032	.101	−.027	−0.321	.749
	Administrative services quality	0.011	.086	.010	0.131	.896

The finding also indicates that all the three dimensions of medical tourism service quality are predictors of perceived value. But the strongest predictor is medical staff quality. This variable was also found to be the only predictor for overall satisfaction and future intention. Thus, the importance of quality of service of the medical staff must be acknowledged by the service providers. Again, this point must be read with knowledge asymmetry in mind where patients are limited in their ability to evaluate the technical aspect of care. However, there must be an attempt on the part of the service providers to decode technical aspect of care to the patients, and this must be emphasised especially to the attending physicians. Apart from this, leading medical tourist hospitals also widely publicise outcome measures on their website as a means of communicating their technical competency. For example, the Apollo Group of hospitals in India publicise its success rate of 90% for liver transplant, and that they have performed more than 500 liver transplants (Apollo Hospitals India, www.apollohospitals.com). In Thailand, the Spine Institute at Bumrungrad Hospital also publicise on their website that they have performed spinal endoscopic surgery on more than 600 patients with a success rate of 95% (Bumrungrad International Hospital, www.bumrungrad.com). Information on technical competence made known to the public gives the assurance of quality to the patients. A browse through the websites of Malaysian medical tourist hospitals shows a gap in the dissemination of such information.

It must also be noted from the finding that a sizeable 30% of the respondents came for medical check-up only rather than invasive medical treatment. Since the proportion is quite high, future research direction may be focused on this group of medical tourists as their preferences and perception on the service experience may differ from that of those who came for more serious ailments.

The study sheds light on the state of affairs of medical tourism in the country at the patient level. While Malaysia may be excited with new development in the healthcare landscape and has joined the league of medical tourist countries, there is still a need for a strategic direction in positioning the country as a premier medical tourist destination.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

This work was supported by the Ministry of Education Malaysia, through its Exploratory Research Grant Scheme [ERGS11-014-0014].

References

Apollo Hospitals India. Retrieved June 26, 2014, from http://www.apollohospitals.com

Arellano, R., & Annette, P. (2007). Patients without borders: The emergence of medical tourism. *International Journal of Health Services*, *37*(1), 193–98.

Bumrungrad International Hospital. Retrieved June 26, 2014, from http://www.bumrungrad.com

Burkett, L. (2007). Medical tourism: Concerns, benefits, and the American legal perspective. *The Journal of Legal Medicine*, *28*, 223–245.

Chen, P. T., Kung, R. H., Huang, M., Chen, F., & Pei, L. (2012). Exploring the medical tourism development barriers and participation willingness in Taiwan: An example of mainland tourist. *World Academy of Science, Engineering and Technology*, *68*, 1352–1356.

Connell, J. (2006). Medical tourism: Sea, sun, sand . . . and surgery. *Tourism Management*, *27*, 1093–1100.

Crooks, V. A., Kingsbury, P., Snyder, J., & Johnston, R. (2010). What is known about the patient's experience of medical tourism? A scoping review. *BMC Health Services*, *10*, 1–12.

Cuddehe, M. (2009, September 23). Patients without Borders. *The New Republic*, 16–17.

Deloitte Consulting SEA. (2008). Medical tourism: The Asia chapter. Retrieved June 27, 2008, from http://www.healthtourisminasia.com

Douglas, D. E. (2007). Is medical tourism the answer? *Frontiers of Health Services Management*, *24*(2), 19–30.

Economist. (2007, March 8). Sun, sand and scalpels. Retrieved May 5, 2012, from http://www.economist.com/node/8825097

Ford, R. C., Bach, S. A., & Fottler, M. D. (1997). Methods of measuring patient satisfaction in health care organisations. *Health Care Management Review*, *22*(2), 74–89.

Fried, B. J., & Harris, D. M. (2007). Managing healthcare services in the global marketplace. *Frontiers of Health Management*, *24*(2), 13–18.

Goodrich, J. N., & Goodrich, G. E. (1987). Health-care tourism-an exploratory study. *Tourism Management*, *8*, 217–222.

Gray, H. H., & Poland, S. C. (2008). Medical tourism: Crossing borders to access healthcare. *Kennedy Institute of Ethics Journal*, *18*(2), 193–201.

Gronroos, C. (1984). A service quality model and its implications. *European Journal of Marketing*, *18*(4), 36–44.

Guiry, M., Scott, J. J., & Vequist, D. G. (2013). Experienced and potential medical tourists' service quality expectations. *International Journal of Healthcare Quality Assurance*, *26*(5), 433–446.

Hair Jr., J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate data analysis*. Upper Saddle River, NJ: Prentice Hall.

Hopkins, L., Labonte, R., Runnels, V., & Packer, C. (2010). Medical tourism today: What is the state of existing knowledge? *Journal of Public Health Policy*, *31*, 185–198.

Johnston, R., Crooks, V. A., Adams, K., Snyder, J., & Kingsbury, P. (2011). An industry perspective on Canadian patients' involvement in medical tourism: Implications for public health. *BMC Public Health*, *11*, 416. Retrieved from http://www.biomedcentral.com/1471–2458/11/416

Johnson, T. J., & Garman, A. N. (2010). Impact of medical travel on imports and exports of medical services. *Health Policy*, *98*, 171–177.

Leahy, A. L. (2008). Medical tourism: The impact of travel to foreign countries for healthcare. *Surgeon*, *6*(5), 260–261.

Manaf, N. H. A. (2012). Inpatient satisfaction: An analysis of Malaysian public hospitals. *International Journal of Public Sector Management*, *25*(1), 6–16.

Manaf, N. H. A., Ghazali, R. J. M., & Marikar, M. (2011). Positioning Malaysia in medical tourism. *Malaysian Management Review*, *46*(2), 29–45.
Manaf, N. H. A., Hussin, H., Kassim, P. N. J., Alavi, R., & Dahari, Z. (August, 2013). *Medical tourism in Malaysia: An empirical perspective*. Paper presented at the Terengganu International Tourism Conference (TITC 2013), 23–24 August, Kuala Terengganu, Malaysia.
Marlowe, J., & Sullivan, P. (2007). Medical Tourism: The ultimate outsourcing. *Human Resource Planning*, *30*, 8–10. Retrieved from http://law-journals-books.vlex.com/vid/medical-tourism-ultimate-outsourcing-63856637
Martin, D. S., Ramamonjiarivelo, Z., & Martin, W. S. (2011). MEDTOUR: A scale for measuring medical tourism intentions. *Tourism Review*, *66*(1/2), 45–56.
Milstein, A., & Smith, M. (2006). America's new refugees-seeking affordable surgery offshore. *New England Journal of Medicine*, *355*, 1637–1640.
NaRanong, A., & NaRanong, V. (2011). The effects of medical tourism: Thailand's experience. *Bulletin of World Health Organisation*, *89*, 336–344.
Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory*. New York, NY: McGraw-Hill.
PEMANDU. (2010). *Economic transformation programme: A roadmap for Malaysia*. Kuala Lumpur: Prime Minister's Department.
Plochg, T., Klazinga, N. K., & Starfield, B. (2009). Transforming medical professionalism to fit changing health needs. *BMC Medicine*, *7*(64). Retrieved from http://www.Biomedcentral.com/74–705/7/64
Rad, F. N., Som, A. P. M., & Zainuddin, Y. (2010). Service quality and patients satisfaction in medical tourism. *World Applied Science Journal*, *24*(30), 24–30.
Saiprasert, W. (2011). *An examination of medical tourists motivational behavior and perception: A structural model* (Unpublished PhD thesis). Oklahoma State University, Oklahoma.
Salmon, J. W. (2008). Emerging trends in outsourcing healthcare: Medical tourism. *American Health and Drugs Benefits*, *1*(7), 27–28.
Sarwar, A. A. M., Manaf, N. H. A., & Omar, A. (2012). Medical tourists' perception in selecting their destination: A global perspective. *Iranian Journal of Public Health*, *41*(8), 1–7.
Schroth, L., & Khawaja, R. (2007). Globalization of healthcare. *Frontiers of Health Services Management*, *24*(2), 19–30.
Sivanandam, H. (2009). Medical tourism getting more popular. *The Sun*. Retrieved December 22, 2009, from http://www.malaysiahealhcare.com/26052009.htm
Tomes, A. E., & Ng, S. C. P. (1995). Service quality in hospital Care: The development of an inpatient questionnaire. *International Journal of Health Care Quality Assurance*, *8*(3), 25–33.
Turner, L. (2007). First world health care at third world prices: Globalisation, bioethics and medical tourism. *Bioethics*, *2*(3), 303–325.
Wang, H. Y. (2012). Value as medical tourism driver. *Managing Service Quality*, *22*(5), 465–491.
York, D. (2008). Medical tourism: The trend toward outsourcing medical procedures to foreign countries. *Journal of Continuing Education in the Health Professions*, *28*(9), 99–102.