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Research Article

Examining service quality of hospitals in India, Sri Lanka, Thailand, and Malaysia: Case of outbound medical travelers from the Maldives

Ahmed Ali Jaleel[1], Mohamed Shukri Ab. Yajid[2], Ali Khatibi[3], S.M. Ferdous Azam[4]
Management and Science University, Shah Alam, MALAYSIA
[1]jaleel.aa@gmail.com
[2]Shukri@msu.edy.my
[3]alik@msu.edu.my
[4]drferdous@msu.edu.my

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ABSTRACT

To examine outbound Maldivian medical travelers' perception on the quality of the service levels in hospitals located in India, Sri Lanka, Thailand, and Malaysia. A survey questionnaire was used to gather cross-sectional data from 400 outbound medical travelers from the Maldives. Respondents who received overseas medical treatment at any hospital in India, Sri Lanka, Thailand, and Malaysia were selected randomly. SPSS 25.00, and AMOS version 23.00 was used for data analysis. The service quality dimension of tangible, empathy, efficiency and safety positively and significantly influence hospital service quality. On contrary, the level of improvement in medical care found to have a negligible effect. Hospitals in Thailand and Malaysia have overall service quality perceptions scores of 91.8% and 84.6% respectively, which is higher than those in India and Sri Lanka, indicating 67.2% and 77.6%. The study highlights the necessity of improving hospital efficiency and safety in India, Sri Lanka, Thailand, and Malaysia. Academics may supplement their analyses of previously published literature with new data and empirical support from the medical industry in Southeast Asia. The findings of this study minimize knowledge, empirical, and population gaps seen in recent literature on medical service quality related to outbound medical travelers from the Maldives.

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INTRODUCTION

Information on the backgrounds of Maldivian medical customers, their perceptions of service quality, and their satisfaction with medical service providers is scarce in contemporary academic literature, which unintentionally influences decision-making by policymakers and the medical industry in the Maldives (Health Ministry, 2022). One of the top three research objectives in the Maldives for the years 2022–2025 is quality in the health sector (Health Ministry, 2021). It is also widely recognized that health research in the Southeast Asia region is insufficient for guiding policy and activities to enhance health outcomes for the respective population (Swaminathan et al., 2017).

The participants in this study are Maldivian outbound medical tourists who sought treatment at a hospital in India, Sri Lanka, Thailand, or Malaysia. With 1190 coral islands spanning the equator in the Indian Ocean, with a residential population of 533,000, the Maldives is a low-medium developing country in Southeast-East Asia (National Bureau of Statistics - Maldives, 2019). The Maldives Health Master Plan for 2016–2025 is focused on non-communicable disease prevention since non-communicable diseases, such as cancer, diabetes, chronic respiratory diseases, and cardiovascular diseases, have become more prevalent because of changes in the modern lifestyles of Maldivians. In addition, the Maldivian government launched Husnuvaa Aasandha in 2012, a universal healthcare effort to fund medical care abroad, dramatically increasing travel costs after only a few years of operation (Suzana, Walls, Smith, & Hanefeld, 2018).

Due to the availability of trained and unskilled labor, affordable healthcare infrastructure, and lower treatment prices, India, Thailand, Malaysia, Southeast Korea, and Singapore have dominated the Asian medical tourism sector in recent decades (Dash, 2020; Medical Tourism Association, 2022). The global market for health and medical services has risen rapidly in Southeast Asian nations, where medical tourists using treatments outside their borders account for a share of US$40 billion with a 20% annual growth (Jadhav, Yeravdekar, & Kulkarni, 2014). Over 40% of Maldivians who have traveled abroad annually for the last four years straight have done so for medical treatment, with India, Sri Lanka, Thailand, and Singapore being popular destinations (Maldives Monetary Authority, 2019). This study aims to provide answers to the following research questions in light of the lack of studies on the perception of hospital medical care service quality in Southeast Asia:

Research Question 1

Do Maldivians who travel abroad for medical care perceive a higher hospital service quality at construct and dimension levels in India, Sri Lanka, Thailand, or Malaysia?

Research Question 2

Does the perceived quality of medical care affect how satisfied Maldivian outbound medical travelers are with their hospital service quality experience in India, Sri Lanka, Thailand, or Malaysia?

Based on research questions, this study focuses on the following research objectives:

1. To determine how hospital service quality dimensions affect their capacity to entice Maldivian outbound medical travelers to acquire medical treatment from hospitals in India, Sri Lanka, Thailand, and Malaysia.
2. To find out how the perception of overall service quality influence Maldivian outbound medical travelers who had medical care from a hospital in India, Sri Lanka, Thailand, and Malaysia.

Future research on service quality in medical care is crucial for the Maldives to strengthen its healthcare infrastructure and processes (Health Ministry, 2022). However, little research assesses

how service quality affects patient satisfaction in medical tourism using a modified SERVQUAL model (Mahmud et al., 2021). Therefore, the HEALTHQUAL model (Lee, 2017), a variant of the SERVQUAL paradigm, is employed in this study. This study examines the overall service quality experienced among Maldivian outbound medical travelers who received medical care from a medical service provider in India, Sri Lanka, Thailand, or Malaysia. Additionally, the impact of the service quality dimension on the overall medical service quality aspects is analyzed.

Academic literature includes numerous discussions on service quality and client satisfaction (Parasuraman, Zeithaml, & Berry, 1988; Uzir et al., 2021; Endara, Ali, & Yajid, 2019; Medberg & Grönroos, 2020; Herhausen et al., 2020; Mahmud et al., 2021; Lee & Kim, 2017; Oliver 2014). However, only four of the 211 publications studied in Menon's (2016) evaluation of the management research literature for Southeast Asia during the 25 years from 1990 to 2014 were devoted to health and medical care. Furthermore, no studies were from the Maldives, Sri Lanka, Bhutan, or Nepal. Thus, the literature shows Southeast Asian institutions rarely conduct research in health and medicine, indicating a knowledge gap because there are inadequate recent studies that address Maldivian views, attitudes, or intentions to visit hospitals in Southeast Asia, according to Miles (2017). As Jacobs (2011) argued, an empirical gap exists. Thus, suggests that study findings regarding Maldivian outbound medical travel experiences in the Southeast Asia region need an assessment or experimentally verified. Robinson, Saldanha, and McKoy (2011) explain that there is evidence of a demographic gap in the current scenario and that the Maldivian population is either underrepresented or understudied in the evidence base.

Because it depends on the type of treatment, stakeholder perspectives, and interactions between patients and service providers, service quality can be difficult to define and assess. Leo and Kim (2017) and Durairatnam et al. (2020) argue that service quality and customer satisfaction are critical success elements to get a competitive edge and establish a strong brand in the service sector. Five healthcare quality measurement models—Donabedians, SERVQUAL, HEALTHQUAL, PubHosQual, and HospitalQual—were identified through a review of the literature as being necessary to comprehend the definitions and limits of service quality (Endeshaw, 2021). According to Donabedian (1980), providing high-quality medical care means using medical research and technology to reduce risks and enhance patient and client well-being benefits. The Nordic viewpoint, in contrast, distinguishes between the utilitarian and specialized quality of service (Grönroos, 1984). The American School, under the direction of Parasuraman, Zeithaml, and Berry (1988), devised SERVQUAL, a five-dimensional model that considers empathy, responsiveness, assurance, and reliability to measure service quality.

The SERVQUAL application to the service business was criticized, which gave rise to the SERVPERF model (Cronin & Taylor, 1992). Altaf, Tabassum, and Mokhtar (2018) contend that the SERVQUAL model cannot assess service quality in various industries because service quality differs across industries. The SERVQUAL and SERVPERF models were enhanced by Jun et al. (1998) by including new dimensions, such as tangibles, reliability, responsiveness, competence, courtesy, communication, access, caring, patient outcomes, understanding of customers, and collaboration, to provide better applications and ensure industry-related measures. An integrated paradigm for evaluating the quality of medical and healthcare services created by Lee (2017) is called the HEALTHQUAL. The hybrid SERVQUAL model, mixed Institute of Medicine dimensions, and measurement standards from foreign accreditation bodies are all included in the model. The HEALTHQUAL model can assess the quality of services provided by health and medical care providers, according to Sharifi et al. (2021). The HEALTHQUAL model extends and modifies the SERVQUAL model by adding the dimensions of safety, efficiency, and quality improvement of care services. HEALTHQUAL incorporates the aspects of empathy and tangibles from the SERVQUAL model. The authors of this study have several options for choosing a model for this investigation, considering the service quality models mentioned above. To build the research construct for this study, which focuses on medical tourism services provided by hospitals in India, Sri Lanka, Thailand, and Malaysia, authors used aspects from the HEALTHQUAL model (Lee, 2017).

The study looks at how Maldivian outbound medical travelers who sought treatment at a hospital in India, Sri Lanka, Thailand, or Malaysia feel about the general standard of care. More information was given on analyzing existing theories of service quality and the logical construction of the study framework. Customer satisfaction is based on service quality (Cronin & Taylor, 1992). According to Parasuraman, Zeithaml, and Berry (1988), excellent service results in satisfied customers. Additionally, contemporary research has demonstrated that SERVQUAL and modified SERVQUAL affect customer satisfaction (Endara, Ali, & Yajid, 2019). However, according to Mahmud et al. (2021), the HEALTHQUAL model, has only been used in several studies to evaluate the standard of medical services. In this study, the HEALTHQUAL model (Lee, 2017), which includes empathy, tangibles, safety, efficiency, and the degree of improvement in care services, is used to measure service quality

Lee and Kim (2017) describe empathy in the medical field as the service provider's attitude that helps them better serve the medical clients by actively listening to and reflecting on their thoughts while providing medical care service. In the opinion of Ahmed, Tariq, and Arif (2017), empathy comprises compassion, awareness of consumer demands, and personalized service to each client. According to Parasuraman et al. (1985), empathy or care is the particular focus that a business or institution gives to its customers, taking into account the capacity building necessary to understand their requests and the ability to respond to them and learn about their special requirements. Finally, Mahmud et al. (2021) concluded that boosting the pleasure of a medical tourist depends on their ability to empathize. The research suggests the following hypothesis in light of the various definitions of empathy:

> *H1. Medical empathy from hospitals in India, Sri Lanka, Thailand, and Malaysia significantly and positively affects overall service quality perception among Maldivian outbound medical travelers.*

The level of securing the best medical personnel, cutting-edge medical technology, and equipment is tangibility (Lee, 2017). Examples of tangibles include physical infrastructure, machinery, and personnel appearance. (Parasuraman, Zeithaml, and Berry, 1985; Ratnawati et al. (2020) proposed the availability of prayer rooms in hospitals as a tangible that makes it easier for patients, staff, and visitors to practice their religion, which raises general satisfaction due to tangibility qualities. By emphasizing the significance of the location, Lee and Kim (2017) advise that modern medical technology and the physical environment be employed to give acceptable care services. According to Mahmud et al. (2021), physical facilities make a better first impression, which raises consumer satisfaction. In light of this, the authors suggest the following:

> *H2. Medical tangibles from hospitals in India, Sri Lanka, Thailand, and Malaysia significantly and positively affect overall service quality perception among Maldivian outbound medical travelers.*

Medical safety is the capacity of a service provider to uphold a comfortable and secure environment for clients, potential clients, and other medical stakeholders (Lee, 2017). Due to improved safety levels and its ability to maintain a cozy and secure environment (Lee & Kim, 2017), safety is considered one of the primary criteria used to gauge customer satisfaction (Mahmud et al., 2021). Furthermore, Ampaw et al. (2020) identified safety as one of medical care's most crucial and important aspects. Thus, the authors suggest the following hypothesis:

> *H3. Medical safety from hospitals in India, Sri Lanka, Thailand, and Malaysia significantly and positively affects overall service quality perception among Maldivian outbound medical travelers.*

Efficiency is a measure of operational effectiveness (Lee, 2017). According to Mahmud et al. (2021), efficiency levels should be closely correlated with patient satisfaction since efficiency demonstrates that operational components of the proper medication are correct, medical

procedures are convenient, and medical costs are affordable. In terms of medical care expenses and the efficient use of medical resources, Lee and Kim (2017) explain how effective the service provider is when providing medical services to clients. Based on the explanations above, the authors hypothesize that:

> *H4. Medical efficiency from hospitals in India, Sri Lanka, Thailand, and Malaysia significantly and positively affects overall service quality perception among Maldivian outbound medical travelers.*

The best efforts of personnel in providing medical care, communicating with and interacting with patients, and the outcome of patient attempts to improve their medical conditions are all considered to be improving medical services (Lee & Kim, 2017). Therefore, this study proposes the hypothesis:

> *H5. The degree of improvement in medical care service from hospitals in India, Sri Lanka, Thailand, and Malaysia has a significant and positive effect on overall service quality perception among Maldivian outbound medical travelers.*

To conclude that service quality is a significant predictor of customer satisfaction and that overall service quality is essential to satisfy a client, several authors have either used the SERVQUAL model or a modified or extended SERVQUAL model as the basis for their research (Mahmud et al., 2021; Endara, Ali, & Yajid, 2019; Rahman et al., 2018; Sharifi et al., 2021). For instance, Gandi, Sachdeva, and Gupta (2019) used the SERVQUAL and FAIRSERV models in the research of SME manufacturing and sales units to conclude that service quality promotes and fosters business-to-business loyalty. In addition, the efficiency, safety, empathy, and tangibility dimensions all have a positive and significant impact from high to low values, according to recent research on Bangladeshis seeking medical care in Indian medical facilities (Mahmoud et al., 2021). However, studies using the HEALTHQUAL model in Southeast Korean hospitals revealed that the importance of the service quality component for better treatment, tangibility, efficiency, and empathy ranges from high to low (Lee & Kim, 2017). Contrarily, Sharifi et al. (2021) show that tangible factors are perceived as being more successful than empathy and effectiveness dimensions. Figure 1 illustrates the main concepts and relationships theorized and hypothesized from the evidence of the literature review in this study.

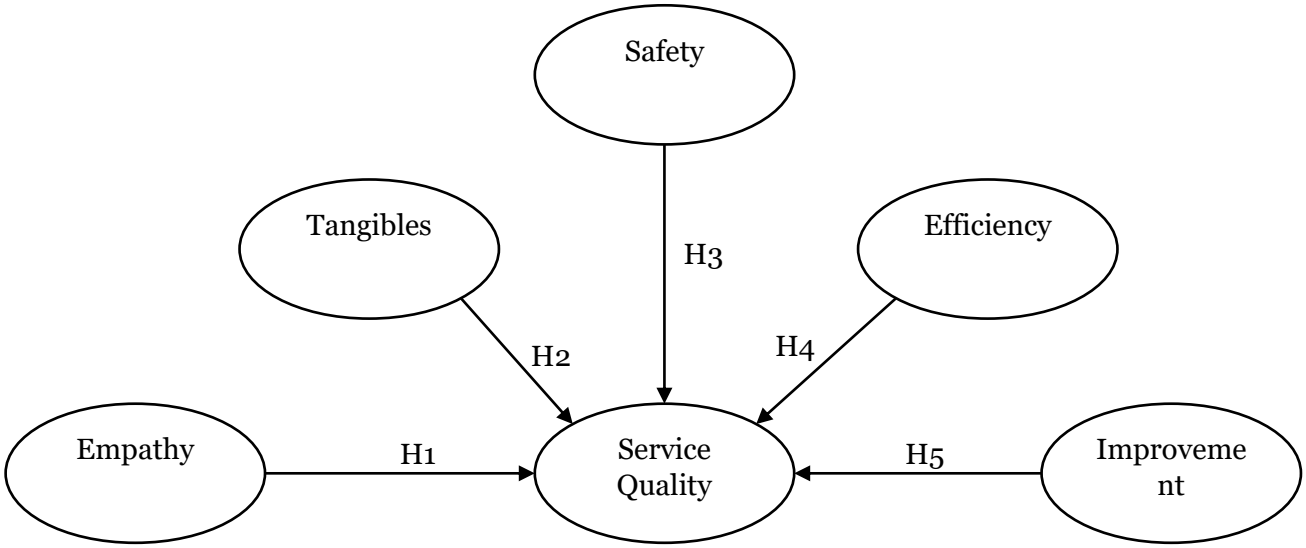

Figure 1. The proposed conceptual model

METHODS

This quantitative study examines how overall service quality and dimensions affect customer satisfaction. A deductive, positivist cross-sectional study explored collects data from 400 outbound medical travelers from the Maldives who have received medical care from a hospital in India, Sri Lanka, Thailand, or Malaysia within 12 months before this study.

The availability of a sample frame is shown by the list of outbound medical travelers for this investigation. It supported the decision to utilize probability sampling in this investigation (Azam et al., 2021). This study requires a minimum sample size of 384 people to reflect a 100% response rate and the sample size to population ratio (Krejcie & Morgan, 1970). An average response rate of 83 percent was found in prior research conducted in the Maldives (Suzana, Walls, Smith, & Hanefeld, 2018). The sample size increased to 462 as a result. To ensure that the minimum necessary 384 samples were gathered for the data analysis of this study, more questionnaires were added to bring the overall distribution of questionnaires to 475. These additional questionnaires were introduced with data-cleaning reasons in mind. As a result, the literature section identifies a design to overcome the demographic gap. Given the necessity to disseminate questionnaires to Maldivian outbound medical travelers who have returned to the Maldives and are living there, a three-month data collection period was chosen. To generalize the results in the context of the Maldives, the survey coverage also included all atolls. Finally, the primary data was collected through online methods.

The measurements extracted from those used in earlier studies on the interactions between service quality and dimensions of service quality were modified by this study's authors. Questionnaires with 20 items were used for this study to collect significant amounts of quantitative data because they were less expensive and time-consuming than interviews and observations (Bougie & Sekaran, 2020). Recent literature evaluations recommend modifying the SERVQUAL equipment for upcoming studies (Cronin & Taylor, 1992). To evaluate the effect of the service quality dimension on the overall service quality of hospitals in India, Sri Lanka, Thailand, and Malaysia, the HEALTHQUAL model (Lee, 2017), which is a modified SERVQUAL model, was used in this study. The 20 measurement components that make up the service quality construct are taken from Lee and Kim (2017), and Chatterjie, Shainesh, and Sravanan, (2018). One (1) indicates strong disagreement, two (2) indicate disagreement, three (3) indicate neither disagreement nor agreement, four (4) indicates agreement, and five (5) indicates strong agreement on the Likert scale, which has a range of one (1) to five (5).

The sample design was successfully put into practice, and the data set needed for the study's objective was obtained. After data cleansing, the researchers collected four hundred responses from respondents residing in the Maldives. The 82.69 percent response rate for this study is in line with response rates from related earlier studies conducted in the Maldives. The collected data is analyzed using Statistical Package for the Social Sciences (SPSS) version 25.00 and Analysis of Moment Structure (AMOS) version 23.00, which is an extension of SPSS, handling structural equation modeling. The descriptive statistics in Table I demonstrate that enough samples were obtained for this analysis, which necessitates multiple age- and education-based segmentations. Table II lists the information gathered for the reliability outcomes for all the service quality items.

Management and Science University (MSU), Malaysia ethics committee has approved the ethics and design of this study (reference code: MSU-RMC-02/FR01/08/L1/001). With a sample frame, survey respondents were chosen randomly. Before beginning the survey stage, respondents were informed of the background and aims of the research. Participation in the survey was made optional. The researchers emphasized that the data was used only for the study's purposes. The data were stored anonymously, with each participant being identifiable simply by a code to maintain the anonymity of the respondents.

RESULTS AND DISCUSSION

The demographic profile displays the characteristics, profile, frequency, and percentage. The demographic factors are the highest education level, age, and gender. Internal consistency and reliability of the construct were assessed using Cronbach's alpha. The Statistical Package for the Social Sciences (SPSS) version 25.00 was used to analyze the dataset used in this study. The study utilizes the structural equation modeling (SEM) approach to proceed with measurement and structural models on demographic data. Analysis of Moment Structure (AMOS) software version 23.00 was used to analyze the measurement and structural model under SEM because AMOS is well-suited for Covariance-Based-SEM. Hair et al. (2017) recommended removing the error variances from the analysis before looking at the theoretical model and using Covariance-Based Structural Equation Modeling (CB-SEM) to validate an established theory. The Fornell-Larker criterion is still the most used method for determining discriminant validity when using CB-SEM. To evaluate a knowledge, empirical, and population gap observed in Southeast Asian academic literature, the HEALTHQUAL model is employed in this study. For this investigation, a reflecting model using parametric data was employed. Cronbach's alpha (α) value determines the internal consistency reliability. The study uses Average Variance Extracted (AVE) to examine the convergent validity. The discriminant validity was evaluated using the Fornell-Larcker criterion (1981). Therefore, CB-SEM is a preferable option for this study to gauge Maldivian outbound medical travelers' perception of service quality at the construct and dimension levels. Table 1 represents the descriptive statistics of the respondents in this study.

Table 1. Descriptive statistics

Characteristics	Profile	Frequency	(%)
Gender	Male	176	44.0
	Female	224	56.0
Age	Below 20 years	11	2.79
	20-29 years	135	33.8
	30-39 years	141	35.3
	40-49 years	83	20.8
	50-59 years	29	7.2
	Over 60 years	01	0.3
Highest Education Level	No formal education	01	0.3
	Secondary School or lower	38	9.5
	Higher Secondary or Certificate Level	44	11.0
	Diploma Level	69	17.3
	Bachelor's Degree Level	110	27.5
	Master's Degree Level	128	32.0
	Professional Degree	5	1.3
	Doctorate Level	2	0.5
	Others	3	0.8

Source: SPSS Output

Table 1 shows that 176 responses were from men and 224 from women, totaling 400 respondents, indicating a female gender bias. Those ages 20 to 39 are more responsive, revealing an active age group in contrast to the Maldives population, which is a dominant youth population. A good distribution across education levels, demonstrating a high literacy group as indicated by the Maldives National Bureau of Statistics figures on the literacy level of the Maldivian population. Table 2 shows respondents' mean service quality scores for overall service quality and service quality dimensions.

Table 2. Service quality mean scores for the respective medical service destinations

Medical Service Provider located in	Overall service quality	Empathy	Tangible	Safety	Efficiency	Improvement in care service
India	3.36	3.59	3.47	3.23	3.10	3.40
Sri Lanka	3.88	3.84	3.94	3.78	3.91	3.78
Thailand	4.59	4.71	4.70	4.58	4.33	4.65
Malaysia	4.23	4.35	4.33	4.15	4.03	4.33

Source:

SPSS Output

Table 2 reveals that the overall mean score for service quality, dimension of empathy, tangibles, safety, efficiency, and improvement in medical care, when ranked from high to low, represents medical service providers in Thailand, Malaysia, Sri Lanka, and India respectively ranked. As suggested by Fornell and Larcker (1981), the authors of this study examined the reliability of each measurement item. Table 3 shows the reliability test of this study.

Table 3. Reliability test results

Variable	Cronbach's alpha	Number of items
Service quality dimension of empathy (Empathy)	0.914	4
Service quality dimension of tangible (Tangible)	0.815	4
Service quality dimension of safety (Safety)	0.884	4
Service quality dimension of efficiency (Efficiency)	0.851	4
Service quality dimension of the degree of improvement in care (DoIC)	0.910	4
Overall service quality	0.951	20

Source: SPSS output

Table 3 shows that the HEALTHQUAL service quality dimensions have internal reliability values ranging from 0.815 to 0.910, while overall service quality has 0.951. For structural equation modeling, this research used a two-step process. Based on the confirmatory factor analysis (CFA), the measurement model was first calculated. Then, the structural model underwent a second study that predicted the route coefficients for the direct and indirect effects using Analysis of Moment Structure (AMOS) software version 23.00 for Covariance-based Structural Equation Modeling (CBSEM). This method makes it possible to quickly pinpoint the origin of the model fit. Principal

Component Analysis (PCA) with Varimax Rotation was used before performing the exploratory factor analysis (EFA). All the 20 service quality items were successfully divided into five components, representing the dimensions of empathy, tangibles, safety, efficiency, and degree of improvement in care, with factor loading above 0.5, initial eigenvalues > 1.0, KMO > 0.7, and Bartlett's test value of p 0.001. These five components accounted for a total of 69.02% of the variance. After that, CFA analysis was performed using the AMOS software. All the study variables included in the measurement model provided a respectable fit in terms of absolute, incremental, and parsimonious fit. The validity and reliability tests listed in Table 4 were carried out based on the comprehensive measurement model.

Table 4. Results of validity and reliability

Measure item	Item	Factor loading	Average Variance Extracted (AVE)	Composite Reliability (C.R.)	Cronbach's Alpha (α)
Empathy	SQ1	0.82	0.744	0.920	0.914
	SQ2	0.89			
	SQ3	0.87			
	SQ4	0.87			
Tangibles	SQ5	0.82	0.662	0.885	0.815
	SQ6	0.88			
	SQ7	0.86			
	SQ8	0.68			
Safety	SQ9	0.80	0.610	0.860	0.884
	SQ10	0.82			
	SQ11	0.84			
	SQ12	0.84			
Efficiency	SQ13	0.83	0.610	0.860	0.851
	SQ14	0.61			
	SQ15	0.83			
	SQ16	0.85			
Improvement	SQ17	0.84	0.746	0.921	0.910
	SQ18	0.92			
	SQ19	0.90			
	SQ20	0.79			

Source:

SPSS Output

Table 4 reveals that the values of AVE, the level of variance captured by a construct versus the level due to measurement error, are between 0.610 and 0.746, indicating excellent and acceptable values. In addition, all the C.R. values are above the threshold acceptance of above 0.70, and the values demonstrate good reliability. The discriminant validity was checked using Fornell and Larcker criterion (1981), and the results are indicated in Table 5.

Table 5. Correlation matrix of discriminant reliability

	Empathy	Tangibles	Safety	Efficiency	Improvement
(Constant)					
Empathy	(0.862)				
Tangibles	0.735	(0.813)			
Safety	0.701	0.762	(0.824)		
Efficiency	0.789	0.700	0.768	(0.781)	
Improvement	0.739	0.701	0.753	0.763	(0.863)

According to the results in Table 5, the discriminant validity of this measurement model is accepted because the square root of the AVE result for each construct is higher than the correlation coefficients between the variables under investigation. As a result, the data set agrees that the structural model and suggested hypotheses may be tested using the construct developed in the measurement model. Based on the output from the measurement model, the structural model for this investigation, represented in Figure 2, was built. In terms of the percentage of variance explained, the model's predictive power was assessed.

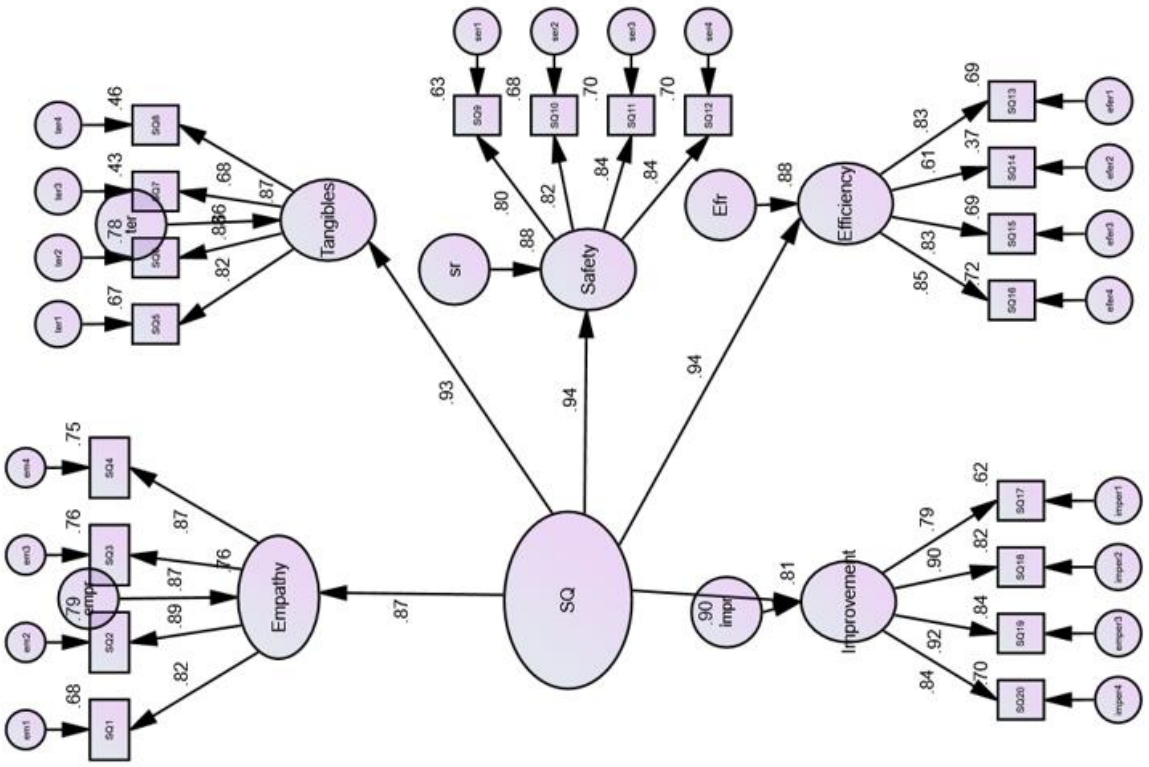

Figure 2. Structural model

The overall fit of the modified structural model derived from the AMOS output, compared to expected values, is shown in Table 6.

Table 6. Assessing the structural model fitness

	Acceptable fit indices	Output	Study observation
Chi-squared	Dependable on the sample size.	213.286	
DF		91 – 29 = 62	
P Value	0.000	0.000	Good fit attained at 5%
Normed Chi-Squared	A value between 2.00 and 5.00 is acceptable. Below 2.0 is very good (Hair et al., 2019)	3.440	Absolute fit, incremental fit, and parsimonious fit values attained for this study
CFI	Above 0.900 (Hair et al., 2019)	0.965	
RMSEA	Below 0.08 (Hair et al., 2019)	0.078	

Table 6 shows the goodness of fit indices Normed Chi-squared value of 3.440, degree of freedom (91 - 29) giving a value of 62, P-value of 0.000, CFI value of 0.965, and the RMSEA value of 0.078, which is well below the recommended cut-off value of 0.08 (Hair et al., 2019). However, these numbers have given us sufficient original data to statistically test a model. There have been many ideas for the essential cut-off values for these fit indices, which decide whether a model should be accepted or rejected. Hair et al. (2019) assert that no single magic number reliably distinguishes superior models from inferior models, even in situations where the goodness of fit indices x^2 value, degree of freedom, CFI, and the RMSEA typically provide sufficient distinct information to evaluate any study model. To confirm the links and orientations between the variables chosen for this study, the five hypotheses produced from the research model developed from the literature need testing. AMOS output on the Maximum Likelihood Estimates of the Hypothesis for the study model and the summary of hypotheses test results are shown in Tables 7 and 8, respectively. The five hypotheses produced from the research model developed from existing literature need testing to confirm the links and orientations between the study variables. Tables 7 and 8 present the findings of the Maximum Likelihood Estimates of the Hypothesis test for the study model, respectively.

Table 7. Maximum likelihood estimates of the hypotheses for the study model

Hypothesis	Relationship	Estimate	SE	CR	p-Value
H1	Service quality ← Empathy	0.749	0.093	8.055	***
H2	Service quality ← Tangible	0.514	0.089	5.776	0.009
H3	Service quality ← Safety	0.418	0.056	7.468	0.004
H4	Service quality ← Efficiency	0.399	0.078	5.119	***
H5	Service quality ← Degree of Improvement in care	0.575	0.073	7.890	0.087

The three stars (***) in Table 7 indicate that the p-value is less than 0.01, meaning that the covariance between the construct variable relationships under test is significantly different from 0 at

the 0.05 level. The Critical Ratio (C. R.) values greater than ± 1.96 for the five of the study relationships, indicating a significant regression coefficient. The probability value for Hypothesis 5 falls outside the acceptable level of less than 0.05. The summary of the hypotheses test results for this study is shown in Table 8.

Table 8. Hypotheses test results

H#	Hypothesis	Direction	Significance	Status
H1	Empathy significantly and positively affects overall hospital service quality perception among Maldivian outbound medical travelers.	Positive	Significant	Supported
H2	Tangibles significantly and positively affect overall hospital service quality perception among Maldivian outbound medical travelers.	Positive	Significant	Supported
H3	Safety significantly and positively affects overall hospital service quality perception among Maldivian outbound medical travelers.	Positive	Significant	Supported
H4	Efficiency significantly and positively affects overall hospital service quality perception among Maldivian outbound medical travelers.	Positive	Significant	Supported
H5	The degree of improvement in care services significantly and positively affects overall hospital service quality perception among Maldivian outbound medical travelers	Positive	Not Significant	Not Supported

Findings in Table 8 shows that overall service quality is greatly and favorably impacted by an increase in empathy, tangible, safety, and efficiency. However, even while the degree of improvement in the care service quality component is favorable, the overall service quality is not greatly impacted.

CONCLUSION AND RECOMMENDATION

The demographic profile of this study showed a bias in favor of females. The participants' educational level, which includes a sizeable number of students and postgraduates, demonstrates that a major section of the Maldives population is educated at the higher secondary level, at a college or university level, which explains why the most active respondents are between the ages of 20 and 39. The reliability test results show that the Maldivian outbound medical traveler data set utilized for this study is reliable because Cronbach's alpha value for each factor is more than 0.7. (Azam et al., 2021; Bougie & Sekaran, 2020). According to the findings, variance in the five dimensions of service quality may account for 69.2% of the variation, impacting the overall medical service quality of hospitals in India, Sri Lanka, Thailand, and Malaysia. According to the standardized coefficients, Maldivian outbound medical tourists who received a medical tourism service from a hospital in India, Sri Lanka, Thailand, or Malaysia valued empathy, tangibles, safety, and efficiency more than the aspect of the level of improvement in medical care services. The study provides concrete data to support study hypotheses H1, H2, H3, and H4. Contrarily, this investigation does not support Hypothesis H5.

Regarding the main goal of the investigation, the results of this study make it abundantly evident that services which are empathic, tangible, safe, and efficient in hospitals in India, Sri Lanka, Thailand, or Malaysia are better able to draw outbound medical travelers from the Maldives for medical care. The degree of care improvement is not significant as a component of service quality. The results of the study demonstrate that the second objective: finding out how the overall

hospital service quality of hospitals in India, Sri Lanka, Thailand, or Malaysia affects service quality levels among Maldivian outbound medical tourists, revealed a favorable and significant impact. The statistics clearly show that Sri Lanka has a score of 77.6 percent, whereas Indian hospitals receive a score of 67.2 for total service quality. On the other hand, hospitals in Malaysia scored 84.6 percent, and hospitals in Thailand scored 91.8% for overall service quality. For the empathy factor, hospitals in India, Sri Lanka, Thailand, and Malaysia had overall scores of 71.8, 76.8, 94.2, and 87.0 percent, respectively. Hospitals in India, Sri Lanka, Thailand, and Malaysia received overall scores for the dimension of tangibles of 69.42, 78.8, 94.0, and 86.6 percent, respectively. For hospitals in India, Sri Lanka, Thailand, and Malaysia, the total ratings for the safety component are 64.6, 75.6, 91.6, and 83.0 percent, respectively. For the efficiency factor, hospitals in India, Sri Lanka, Thailand, and Malaysia received overall scores of 62.0, 78.2, 86.6, and 80.6 percent, respectively. For the dimension of care improvement, hospitals in India, Sri Lanka, Thailand, and Malaysia received 68.0, 75.6, 93.0, and 86.6 percent, respectively. Thailand hospitals obtained a good overall score but a lower comparative score for the efficiency dimension, which is below 90%, while empathy, tangible, safety, and care improvement are well above 90%. An indication that hospitals in Thailand need to sustain service quality levels for empathy, tangible, safety, and care enhancement while increasing efficiency if they want to achieve service quality excellence and remain a medical tourism leader in the Southeast Asia region. Hospitals in Malaysia received scores ranging from 80 to 87 percent, with the lowest score for efficiency compared to the other four service quality parameters included in this study.

Considering the post-pandemic shift toward a focus on efficiency and safety over tangible aspects, it is possible that in the future, financially independent Maldivians who travel abroad for medical treatment. In such instances, travelers may choose Thailand or Malaysia as their preferred destination rather than Sri Lanka or India. Therefore, this study's findings on the effects of overall hospital service quality on outbound medical travelers from the Maldives, who have had a medical experience from hospitals in India, Sri Lanka, Thailand, or Malaysia, could help fill in the literature gaps and aid future research by employing service quality dimensions. Specifically, among Maldivian outbound medical travelers seeking medical tourism services from hospitals in India, Sri Lanka, Thailand, or Malaysia, and by examining the interrelationships between service quality and respective dimensions, this study contributes to the body of knowledge on service quality by providing new evidence to minimize empirical gaps, knowledge gaps, and population gaps identified in current literature (Menon, 2016; Jacobs, 2011; Miles, 2017). Even though service quality dimensions have a favorable effect on overall service quality at the construct variable level, this study reveals that some service quality dimensions can have a negative effect. According to this study conducted among Maldivian outbound medical travelers who received medical treatment from a hospital in India, Sri Lanka, Thailand, or Malaysia, the service quality dimension of improving medical care does not affect overall service quality. This research also reveals that factors affecting overall service quality, such as empathy, efficiency, tangible, safety, and improvement of medical care, are evaluated in order of low to high ranking.

The results of this study contribute to the body of literature by addressing the knowledge, empirical, and population gaps in hospital service quality in Southeast Asia, specifically about medical care providers in India, Sri Lanka, Thailand, and Malaysia. The study findings are also in line with prior studies (Lee & Kim, 2017; Mahmud et al., 2021), which suggest that there are more variations between the five service quality characteristics based on the degree of efficiency and empathy. On the other hand, the results of this study differ from those of earlier research by Ampaw et al. (2020), which found that gaps in the service quality dimensions of tangible and empathy had decreased. Further reveals that tangibles, empathy, and efficiency are equally essential elements of service quality compared to overall service quality.

All five aspects of the HEALTHQUAL, a modified SERVQUAL model measuring service quality, explained a 69.2 percent influence on total service quality in this study of Maldivian overseas medical tourists who had a medical tourism experience in a hospital in India, Sri Lanka, Thailand, or Malaysia. This study reveals that the perception of outbound medical travelers from the

Maldives is significantly influenced by overall service quality. This study suggests that the remaining 30.8 percent is related to additional service quality traits mentioned in recent literature but not considered in this study. As a result, a research void will enable future scholars to further enrich the existing body of knowledge on the dimensions and overall quality of services. The top five foreign medical destinations for Maldivian outbound medical travelers were hospitals in India, Sri Lanka, Thailand, Malaysia, and Singapore, according to reports from the Maldives Monetary Authority (2019). To satisfy current clients and to draw in new ones, medical marketers in India, Sri Lanka, Thailand, and Malaysia must implement the proper product and service design strategies by offering new or enhanced values.

Respective hospital administrators can contribute to developing new medical goods and services by providing feedback on consumer views that help distinguish between service excellence and client contentment. As a result, increased value generation from service quality dimensions, including empathy, tangible, safety, efficiency, and the degree of progress in medical care services, may arise from client feedback on construct variables and dimension levels during the product development phases at a respective medical institution in India, Sri Lanka, Thailand, or Malaysia.
Businesses, decision-makers, and the public have learned from the recent COVID-19 pandemic the value of health systems and service levels and the repercussions of their failure. Hospitals, a significant player in medical and health care, constantly look for new, better ways to provide care. In India, Sri Lanka, Thailand, and Malaysia, the management of healthcare facilities and organizations must pinpoint problems and raise customer satisfaction levels. Popular medical tourism destinations like India, Sri Lanka, Malaysia, Thailand, and Singapore face fierce competition from other areas despite having lucrative medical care providers and a variety of cultural backgrounds. As a result, it is essential for these medical tourism destinations and their associated medical service providers to build the necessary infrastructure and understand service quality as a value, giving them a competitive edge that has the greatest influence on the motivation of medical travelers.
Empirical evidence provided by this study of outbound medical travelers from a small island developing state like the Maldives demonstrates the importance of efficiency and empathy in enhancing service quality in general and medical tourism leading destinations in Southeast Asia. Medical professionals, such as doctors, nurses, office workers, and technical employees, should emphasize how service quality at the dimension level may considerably increase overall satisfaction during training programs and refresher courses. To increase customer satisfaction among Asian groups, particularly Maldivians seeking medical care services related to medical tourism, service providers in India, Sri Lanka, Thailand, or Malaysia should strategically employ service quality dimensions. When generating values from operational processes to satisfy specification requirements, medical tourism service providers in India, Sri Lanka, Thailand, or Malaysia should consider service quality at the dimension levels seriously as important performance values are created depending on service quality characteristics and features.

In India, Sri Lanka, Thailand, and Malaysia, hospital administrators and managers must ensure patients have high levels of satisfaction with their quality of medical care. The hospital's overall quality, as well as the aspects of the care that are tangible, empathic, safe, efficient, and improving care, are vital to satisfy customers. Policymakers in the health and medical care administrations or authorities in India, Sri Lanka, Thailand, and Malaysia need to comprehend that customers are satisfied with the outcome of the medical tourism care service. The service, in general, due to a high standard of service quality, cover all the moments of truth touch points in the valued medical journey of the customer, which is equally important. Empathy, tangibles, safety, efficiency, and degree of improvement in care are service quality dimensions that span many critical moments in an experience during a respective medical journey of a customer. The frequency of complaints about hospital overall service quality get reduced by the favorable perception of service quality attributes, and hospitals in India, Sri Lanka, Thailand, and Malaysia make their patients and clients feel valued by the service provider.

Future studies considering the post-Covid-19 environment might provide different findings due to changes in the medical tourism sector and its associated value chain. The modified

SERVQUAL model known as HEALTHQUAL model used in this study may yield different results if a similar study uses more than five dimensions or a different set of measurements for assessment of medical service quality. Such a modified model may then help future researchers to identify a portion of the remaining 30.8 percent that may then be connected to additional service quality dimensions.

REFERENCES

Ahmed, S., Tariq, K.M. & Arif, I. (2017). Service quality, patient satisfaction and loyalty in the Bangladesh healthcare. *International Journal of Health Care Quality Assurance,* Vol. 30 No. 5, pp. 477-488.

Altaf, M., Tabassum, N., & Mokhtar, S.S.M. (2018). Brand equity and the role of emergency medical care service quality of private cardiac institutes: An empirical investigation. *International Journal of Pharmaceutical and Healthcare Marketing,* 12(1), 44-60. https://doi.org/10.1108/IJPHM-09-2016-0046

Ampaw, E.M., Chai, J., Liang, B., Tsai, S., & Frempong, J. (2020). Assessment on healthcare service quality and patients' satisfaction in Ghani. *Kybernetes,* 49(12), 3047-3068. https://doi.org/10.1108/K-06-2019-0409

Azam, S.M.F., Yajid, M.S., Tham, J., Hamid, J.A., Khatibi, A., Johar, M.G.M., & Ariffin, I.A. (2021). *Research Methodology: Building Research Skills,* Malaysia, McGraw-Hill.

Bougie, R. & Sekaran, U. (2020). *Research Methods for Business: A Skill Building Approach (8th Ed.)*, NJ: John Wiley & Sons.

Chatterjie, S., Shainesh, G., & Sravanan, C.N.S. (2018). Does intention translate into action? Investigating the impact of loyalty intention on future usage. *Journal of Indian Business Research,* 10(2), 151-169.

Cronin, J.J. & Taylor, S.A. (1992). Measuring Service Quality: A Reexamination and Extension. *Journal of Marketing,* 56(3), 55-68.

Dash, A. (2020). Exploring visit intention to India for medical tourism using an extended theory of planned behavior. *Journal of Hospitality and Tourism Insights,* 4(4), 418-436. https://doi.org/10.1108/JHTI-03-2020-0037

Donabedian, A. (1980). *The definition of quality and approaches to its assessment*. Health Administration Press, Chicago, IL.

Durairatnam, S., Chong, S., Jusoh, M., Azam, S.M. Ferdous, & Tham, J. (2020). "People related TQM practices, intrinsic motivation and quality performance: empirical study in Sri Lankan apparel industry". *European Journal of Social Science Studies,* 5(1), 147-173. https://doi.org/10.5281/zenodo.3749491

Endara, Y.M., Ali, A.B., & Yajid, M.S.A. (2019). The influence of culture on service quality leading to customer satisfaction and moderation role of type of bank. *Journal of Islamic Accounting and Business Research,* 10(1), 134-154. https://doi.org/10.1108/JIABR-12-2015-0060

Endeshaw, B. (2021). Healthcare service quality – measurement models: a review. *Journal of Health Research,* 35(2), 106-117. https://doi.org.10.1108/JHR-07-2019-0152

Fornell, C. & Larcker, D.F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research,* 18(1), 39–50. https://doi.org/10.2307/3151312

Gandi, S. K., Sachdeva, A. and Gupta, A. (2019). Impact of service quality on satisfaction and loyalty at manufacturer-distribution dyad: Insights from Indian SMEs. *Journal of Advances in Management Research,* 16(1), 91-122.

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

Grönroos, C. (1990). *Service Management and Marketing: Managing the Moments of Truth in Service Competition,* Lexington Books, Lexington, MA.

Hair, J.F., Anderson, R.E., Tatham, R.L., & Black, W.C. (1995). *Multivariate Data Analysis. (3rd ed.).* New York, MacMillan.

Hair, J.F., Black, W.C., Anderson, R.E., & Babib, B.J. (2019). *Multivariate data analysis* (8th ed.). London, Cengage Learning.
Hair, Jr., J.F., Matthews, L.M., Matthews, R.L., & Sarstedt, M. (2017). 'PLS-SEM or CB-SEM: updated guidelines on which method to use'. *Int. J. Multivariate Data Analysis*, 1(2), 107–123.
Health Ministry (2021). Health research priorities in Maldives 2022-2025.
Health Ministry (2022). *Maldives Health Research Bulletin,* Vol. VIII, Health, M. O. (ed.): Maldives.
Herhausen, D., Emrich, O., Grewal, D., Kipfelsberger, P., & Schoegel, M. (2020). Face forward: How employees' digital presence on service websites affects customer perceptions of website and employee service quality. *Journal of Marketing Research*, 57(5), 917-936.
Jacobs, R. L. (2011). "Developing a research problem and purpose statement". In T. S. Rocco and T. Hatcher (eds.). *The Handbook of Scholarly Writing and Publishing,* San Fransisco, CA: Jossey-Bass, 125-141. https://doi.org/10.1002/nha3.20034
Jadhav, S. Yeravdekar, R., & Kulkarni, M. (2014). Cross-border Healthcare Access in Southeast Asian Countries: Learning for Sustainable Healthcare Tourism in India. *Procedia-Social and Behavioral Sciences,* 57(27), 109-117. https://doi.org/10.1016/j.sbspro.2014.11.014
Jun, M., Peterson, R.T., & Zsidisin, G.A. (1998). "The identification and measurement of quality dimensions in health care: Focus Group Interview Results". *Health Care Management Review,* 23(4), 81-94.
Krejcie, R.V. & Morgan, D.W. (1970). "Determining sample size for research activities". *Educational and Psychological Measurements,* 30(1), 607-610.
Lee, D. (2017). "HEALTHQUAL: a multi-item scale for assessing healthcare service quality". *Service Business – An International Journal,* 11(3), 491-516.
Lee, D. & Kim, K.K. (2017). "Assessing healthcare service quality: a comparative study of patient treatment types". *International Journal of Quality Innovation,* 3(1), 1-15.
Mahmud, M.S., Lima, R.V., Rahman, M.M., & Rahman, S. (2021). "Does healthcare service quality affect outbound medical tourists' satisfaction and loyalty? Experience from a developing country". *International Journal of Pharmaceutical and Healthcare Marketing,* https://doi.org.10.1108/IJPHM-04-2020-0028
Medberg, G. & Grönroos, C. (2020). "Value in use and service quality: do customers see a difference?". *Journal of Service Theory and Practice*, 30(4/5), 507-529. https://doi.org/10.1108/JSTP-09-2019-0207
Medical Tourism Association. (2022). "What is Medical Tourism".
Menon, S.T. (2016). "A quarter century of management research in Southeast Asia – I: Afghanistan, Bangladesh, Bhutan, Maldives, Nepal, and Sri Lanka. *Southeast Asian Journal of Global Business Research,* 5(1), 2-31. https://doi.org/10.1108/SAJGBR-06-2015-0043
Miles, D. (2017). A Taxonomy of research gaps: Identifying and defining the seven research gaps: Doctoral Student Workshop: Finding Research Gaps – Research Methods and Strategies, Dallas, Texas, 2017.
National Bureau of Statistics – Maldives (2019). *Maldives in figures – May 2019*. National Bureau of Statistics Maldives.
Oliver, R.L. (2014). "*Satisfaction: A Behavioral Perspective on the Consumer*". Routledge, New York, NY.
Parasuraman, A., Zeithaml, V.A., & Berry, L.L. (1985). "A conceptual model of service quality and its implication for future research". *Journal of Marketing,* 49(4), 10-16.
Parasuraman, A., Zeithaml, V.A., & Berry, L.L. (1988). "SERVQUAL: A Multiple Item Scale for Measuring Consumer Perceptions of Service Quality". *Journal of Retailing,* 64(1), 12-40.
Rahman, M.S., Mannan, M., Hossain, M.A., & Zaman, M.H. (2018). "Patient's behavioral intentions: public and private hospitals context". *Marketing Intelligence & Planning,* 36(3), 349-364. https://doi.org/10.1108/MIP-08-2017-0155
Ratnawati, A., Cokrohadisumarto, W.M., & Kholis, N. (2020). "Improving the satisfaction and loyalty of BPJS healthcare in Indonesia: a Sharia perspective". *Journal of Islamin Marketing*, 1759-0833. https://doi.org/10.1108/JIMA-01-2020-0005

Robinson, K.A., Saldanha, I.J., & McKoy, N.A. (2011). Development of a framework to identify research gaps from systematic reviews. *Clinical Journal of Epidomology,* 64(12), 1325-1330. https://doi.org/10.1016/j.jclinepi.2011.06.009

Sharifi, T., Hosseini, S., Mohammadpour, S., Javan-Noughabi, J., Ebrahimipour, H., & Hooshmand, E. (2021). "Quality assessment of services provided by health centers in Mashhad, Iran: SERVQUAL versus HEALTHQUAL scales". *BMC Health Services Research,* 21(1), 1-7. https://doi.org/10.1186/s12913-021-06405-4

Suzana, M., Walls, H., Smith, R., & Hanefeld, J. (2018). "Understanding medical tourism from a source country perspective: a cross-sectional study of the experiences of medical travelers from the Maldives". *Globalization and Health,* 14:58. https://doi.org/10.1186/s12992-018-0375-4

Swaminathan, S., Quraishi, H., Jahan, M.U., Baskola, D.K., Alwis, S.D., & Dandona, L. (2017). Health research priorities and gaps in Southeast Asia. *BMJ 2017. 357: j1510,* https://doi.org/10.1136/bmj.j1510

Uzir, M.U.H., Al Halbusi, H., Thurasamy, R., Hock, R.L.T., Aljaberi, M.A., Hasan, N., & Hamid, M. (2021). The effects of service quality, perceived value and trust in home delivery service personnel on customer satisfaction: Evidence from a developing country. *Journal of Retailing and Consumer Services*, 63, 102721.