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ANTECEDENTS OF REVISIT INTENTIONS ON HOSPITAL CHOICE IN THE DEVELOPING COUNTRY: A SEM ANALYSIS

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ABSTRACT

In today's rapidly evolving healthcare landscape, understanding the factors that drive patient decision-making regarding hospital revisit intention is critical for hospitals to remain competitive and thrive. Despite the availability of world-class private hospitals, many patients from developing countries such as Bangladesh routinely travel beyond for medical treatment. Hence, developing countries are taking the initiative to strengthen their healthcare industries to increase their GDP. This study aims to shed light on this issue by exploring the antecedents that affect hospitals in a developing country, Bangladesh. Data were collected by interviews at private hospitals in Chattrogram from November 2023 to December 2023 from 417 individuals using a randomized block design, and AMOS 24 was used for SEM analysis. The process in both EFA and CFA confirmed construct, convergent, and discriminant validity. The findings of this study demonstrate that the brand image of private hospitals affects patient revisit intent both directly and indirectly through service quality and patient satisfaction. A brand image does not influence the probability of returning to the same hospital. Moreover, commodity costs have a negative impact on revisit intention—service quality is associated with patient satisfaction, which is moderated by the brand image of selected hospitals in Bangladesh. Hospital management can better position itself to meet patients' expectations, the government may contribute to improving health outcomes, and academicians may develop extensions of theory for developing countries.

INTRODUCTION

Although poor healthcare infrastructure puts Bangladesh in the lowest place among South Asian nations (Mohiuddin, 2020), with few resources, Bangladesh is advancing rapidly in meeting international healthcare standards. Developing high-income nations are advancing rapidly, but progress in low- and middle-income nations (such as Bangladesh) could be faster. A hospital must assess patients' needs and expectations to provide care that meets them. However, patients and relatives often have to sell assets or borrow money to cover the costs when loved ones need expensive medical care for conditions like heart disease, kidney disease, or oncology, putting their health and well-being at risk in the process. Even patients in Bangladesh who are dissatisfied with their prospects have begun to go to neighbouring nations like India, Thailand, and Singapore in search of better medical care (Ali & Medhekar, 2018). To retain these people in receiving healthcare services from Bangladesh, we fill a gap in the literature by investigating the connection between service quality

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(SQ), patient satisfaction (PS), revisit intentions (RI), brand image (BI), and healthcare expenditures in developing nations like Bangladesh.

Researchers in Bangladesh and other poor countries devote closer attention to healthcare issues than their governments do (Javed & Ilyas, 2018). Cost savings are one-way hospitals with loyal patients can attract more patients. However, more studies are needed to analyze how brand image correlates with service quality and client retention (Cham et al., 2016). When deciding on a doctor, many patients consider the clinic's or hospital's name alone (AlSaleh, 2019; Hyder et al., 2019). In recent years, interest has risen in the correlation between consumer perceptions of a brand and their likelihood to return.

Many studies have examined how SQ affects PS or how satisfaction affects the likelihood that a customer will return (Lin & Bowman, 2022; Ali et al., 2018; Shafiq et al., 2017). However, more research must be conducted to analyse how well-satisfied customers influence a company's reputation and how often they return. The literature needs to include this sort of discussion. As a result, this study tries to respond to the following healthcare-related research questions: What role does hospital BI play in determining whether or not a patient will return to a given facility? Specifically, how do SQ and PS relate to the likelihood of a customer making a return visit? The literature was reviewed to provide answers to these questions. In the subsequent sentences, we will discuss the review's objectives and analyze how the literature has changed. We next moved on to SEM after reviewing the factor analysis.

Although Chattroram is the commercial hub of Bangladesh and the country's second-largest city, this research aims to determine whether or not patients are satisfied with the care they receive at the private hospitals there. The following aims can be attained with the help of the survey data:

- To Determine The Relationship Between BI On RI;
- To Identify The Relationship Between SQ And PS On RI And
- To Evaluate The Relationship Between Commodity Cost And RI;

LITERATURE REVIEW

Research on the connections between the significant variables that affect patients' choices to return to hospitals in Chittagong, Bangladesh, remains sparse. In particular, few studies use an integrated approach to comprehend how variables such as "Revisit Intent (RI)," "Brand Image (BI)," "Service Quality (SQ)," "Patient Satisfaction (PS)," and "Commodity Cost (CC)" relate to one another. Many Bangladeshis travel to other South Asian nations each year for medical care because those countries provide better medical facilities at lower costs. Besides the unavailability of treatments and lengthy wait times for diagnostics and specialist treatment support services, Anvekar (2012) revealed that high treatment costs are the primary reason people travel abroad for care.

CC and RI

Hospital spending refers to a commodity expense (Shetty & Ananthakrishnan, 2016) or patient out-of-pocket costs (like doctor's visits, hospital stays, medicine, and transportation to and from medical appointments, which are those not covered by insurance) paid directly to hospitals. For instance, if a patient cannot afford the out-of-pocket costs, they may decide against receiving hospital service or delay receiving it. The authors argue that treating healthcare costs like any other commodity expense will allow hospitals to develop more robust brand image initiatives that win the trust of their patients. Thus, the hypothesis is developed as follows:

H_1: There is no significant influence of commodity cost to revisit the intention of the same hospital.

BI and RI

Researchers contend that a hospital's brand image encompasses elements like its reputation, marketing efforts, and patients' satisfaction, which affect patients' propensity to return and their loyalty to the hospital (Chaudhuri & Holbrook, 2001; Kim & Kim, 2017). Thus, a favourable hospital Brand Image may increase patient continuance intention in a hospital setting. So, a more reputable hospital will have a more significant number of loyal patients.

H_2: There is no significant influence of brand image on revisiting the intention of the same hospital.

BI and SQ

Patients' impressions of the hospital and their probability of returning or recommending the facility remain significantly affected by the quality of their care (Choi et al., 2004). However, Physicians' recommendations of specific hospitals to their patients may influence their decisions and the public's perception of those facilities in Bangladesh. Thus, this research examined how hospital marketing and social media affected patients' perceptions of the hospital's brand. This leads to the following hypothesis:

H_3: BI in hospitals is not strongly influenced by the quality of the services

BI and PS

Research (Kim et al., 2008) shows that patients' satisfaction levels with a hospital are directly related to the hospital's reputation. While branding and marketing initiatives may help, they should not be used as a substitute for providing excellent medical treatment and satisfying patient experiences. This leads to the following hypothesis:

H_4: Patient Satisfaction in hospitals is not significantly influenced by the hospital's BI

SQ and PS

Patients' satisfaction with hospital care in Iran significantly correlated with the quality of care they received (Tavakol et al., 2018). Numerous studies have looked at how satisfied customers are related to service quality. Aspects of healthcare service quality include practitioner competence, treatment efficacy, and consistency (Omoregie et al., 2019). This leads to the following hypothesis:

H_5: Service quality has no significant influence on hospital patient satisfaction.

PS and RI

Patient satisfaction has been demonstrated to correlate positively with revisit intention in the healthcare setting (Vuori & Vänskä, 2018). Thus, it is reasonable to assume that patients who are happy with their care will be more loyal to their hospital. This leads to the following hypothesis:

H_6: There is no significant influence of patient satisfaction to revisit the intention of the same hospital.

MATERIALS & METHODS

Sample and Procedure

We examined patients to identify the revisit intention from the top five sample private hospitals providing heart centres, kidney dialysis, and critical care in Chattrogram, Bangladesh, with more than 100 beds. We took a convenience sample from 500 respondents when the patients were present at these hospitals. These patients are the leading representatives of the target market, and they are conveniently reachable in person at a particular location (Andrade, 2021) from November 2023 to December 2023. Participants' responses were voluntary and anonymous, and privacy was maintained. We asked questions of those who had visited the sample hospitals within six months. Among the valid respondents, 312 are male and 105 are female, of which 45% are below 35 and 65% are over 40 years old. Moreover, demographics indicate that around 73.5% of respondents were above SSC educational qualification.

Measurement

The questionnaire was pre-tested with the selected 30 patients from different groups and two academicians to ensure their instrument suitability and content validity, and then necessary corrections and modifications were made according to their suggestions. We used a modified version of Kim et al.'s (2008) "brand image" items and Parasuman et al. (1988) "service quality" items. The study developed a 23-item (Table 1) validated scale by adopting items from prior literature with minor changes. The corrected and finalized survey questionnaire was distributed by purposefully sampling in a randomized block design method to the selected 500 patients from different hospitals in Chittagong City.

Method of Analysis

The complete opinions of 417 respondents (83%) are selected and coded (as some respondents answered all the questions in the same rank and did not answer many questions) in IBM SPSS AMOS 24, which is sufficient for further analysis (Saunders et al., 2007) with 5% margin of error, and a 50% population proportion.

Afterwards, we check the data from our survey response variables for the normality test using the Kolmogorov-Smirnov and Shapiro-Wilk tests. Based on the normality test's result, median values are considered to classify the response data into a factor analysis. From the factor analysis's result, the following conceptual model is developed (Figure 1) to test the hypothesis.

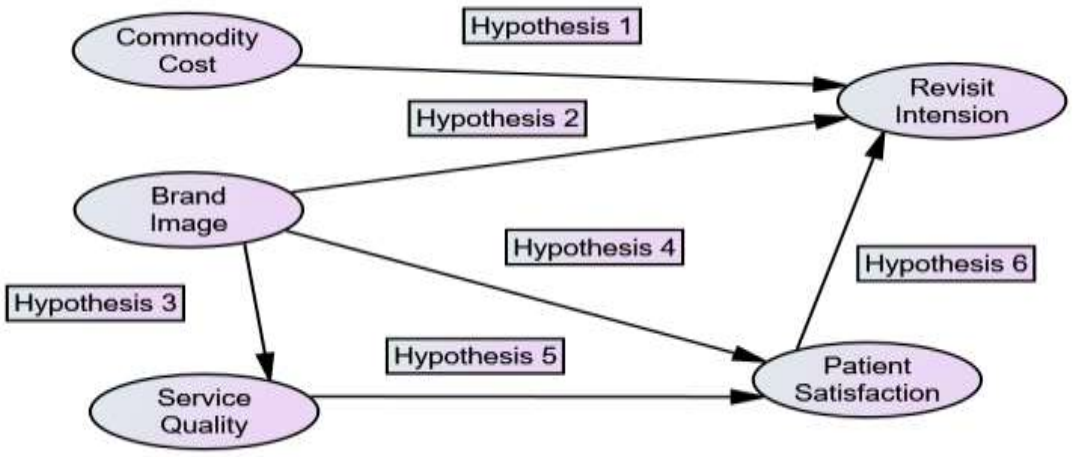

Figure 1. Conceptual model

RESULTS

Normality Test

Table 1 depicts the descriptive statistics and normality test for the respondents' disclosed values on their intention to return.

Table 1. Descriptive statistics and normality test

Sl. No.	Constructs	Questionnaire	Min	Max	Kolmogorov–Smirnov Test (Sig)	Shapiro–Wilk Test (Sig)	Median
1.	Q1	If I need hospital care, I can get admitted without any trouble	1	4	0.267 (0.000)	0.862 (0.000)	2.0
2.	Q2	When I need medical attention, I will consider this hospital.	1	4	0.240 (0.000)	0.872 (0.000)	2.0
3.	Q3	The hospital has my highest possible recommendation	1	4	0.223 (0.000)	0.878 (0.000)	2.0
4.	Q4	I want to promote this institution as a desirable destination shortly.	1	4	0.211 (0.000)	0.880 (0.000)	2.5
5.	Q5	I will participate in awareness programs organized by this hospital in the future	2	4	0.254 (0.000)	0.868 (0.000)	2.0
6.	Q6	This hospital is conveniently located	2	5	0.213 (0.000)	0.878 (0.000)	3.0
7.	Q7	The follow-ups after treatment are good	2	5	0.211 (0.000)	0.869 (0.000)	3.0
8.	Q8	Medical records are error-free.	1	5	0.196 (0.000)	0.877 (0.000)	3.0
9.	Q9	This hospital's personnel provided prompt service.	2	5	0.213 (0.000)	0.874 (0.000)	3.0
10.	Q10	The staff is educated enough to respond to my questions.	2	5	0.220 (0.000)	0.867 (0.000)	4.0
11.	Q11	This hospital's personnel gives me individual care.	2	5	0.222 (0.000)	0.860 (0.000)	4.0
12.	Q12	This hospital's physical amenities are modern and visually appealing.	2	5	0.224 (0.000)	0.850 (0.000)	4.0
13.	Q13	I am sure that I will be able to obtain the medical treatment I require without incurring financial hardship.	2	5	0.226 (0.000)	0.867 (0.000)	4.0
14.	Q14	People did not have to wait long for care in this hospital.	2	5	0.218 (0.000)	0.862 (0.000)	4.0
		Brand Image					
15.	Q15	The brand's social media exposure is good for this hospital.	1	5	0.219 (0.000)	0.900 (0.000)	3.0
16.	Q16	I felt safe taking treatment in this hospital	1	5	0.196 (0.000)	0.906 (0.000)	3.0
17.	Q17	The doctors gave me ample opportunity to ask questions, and their answers addressed all my worries	1	5	0.209 (0.000)	0.902 (0.000)	3.0
18.	Q18	The hospital seems to be equipped with the latest equipment	1	5	0.167 (0.000)	0.910 (0.000)	3.0
19.	Q19	I have a favourable impression of this hospital's name because of recommendations from my loved ones.	1	5	0.176 (0.000)	0.912 (0.000)	3.0
20.	Q20	The cost of doctor fees is affordable	1	5	0.182 (0.000)	0.909 (0.000)	3.0
21.	Q21	The cost of renting a cabin or bed is inexpensive	1	5	0.167 (0.000)	0.914 (0.000)	3.0
22.	Q22	The price of medicine is reasonable	1	5	0.174 (0.000)	0.908 (0.000)	3.0
23.	Q23	The price of an ambulance service is high	1	5	0.163 (0.000)	0.914 (0.000)	3.0

The minimum and maximum values for each survey questionnaire response are 1 to 2 and 4 to 5, respectively. At the 0.000 significance level, each response ranges from 0.163 to 0.267 on the Kolmogorov-Smirnov test statistic and from 0.850 to 0.914 on the Shapiro-Wilk test statistic.

Factor Analysis

Since the survey response values are not normally distributed ($p < 0.05$), the factor analysis calculates median values for mean rank comparison. The median values of each survey questionnaire response are 2 to 4. As the median values vary widely, a factor analysis is conducted to classify the survey questionnaire into different factors with similar responses. As the KMO is 0.793, we can apply the factor analysis method to divide the questionnaire response values into different factors (Table 2).

Table 2. Factor analysis and Convergent Validity

Rotated Component Matrix[a]						**Convergent Validity**			
Questionnaire	**Component**					**Construct**	**Cronbach's Alpha**	**AVE**	**Square Root of AVE**
	1	2	3	4	5				
Q10	0.963					Service Quality	0.931	0.734	0.857
Q13	0.945								

Q11	0.855								
Q14	0.837								
Q12	0.800								
Q2		0.925				Revisit Intension	0.921	0.718	0.847
Q5		0.869							
Q3		0.852							
Q1		0.851							
Q4		0.804							
Q18			0.918			Brand Image	0.916	0.660	0.813
Q15			0.915						
Q17			0.908						
Q19			0.792						
Q16			0.766						
Q23				0.943		Commodity Cost	0.959	0.833	0.913
Q21				0.930					
Q20				0.924					
Q22				0.859					
Q9					0.878	Patient Satisfaction	0.901	0.698	0.835
Q7					0.850				
Q6					0.832				
Q8					0.809				
a. Rotation converged in 5 iterations.									

From the factor analysis table, the factor loading values are classified into five-factor variables: Service quality with Question10 to Question14 (factor leading 0.800 to 0.963), Revisit intention with Question1 to Question5 (factor leading 0.804 to 0.925), Brand Image with Question15 to Question19 (factor leading 0.766 to 0.918), Commodity cost with Question20 Question23 (factor leading 0.859 to 0.943) and Patient satisfaction Question6 to Question9 (factor leading 0.809 to 0.878) respectively. All the constructs had factor loadings above 0.70, Cronbach alphas above 7.0, and AVE over 0.50, showing they were highly trustworthy, valid, and consistent (Hair et al., 2006).

Structure Equation Model

Based on the above factor analysis result, a structural equation model of revisit intention based on commodity cost, brand image, service quality, and patient satisfaction (Figure 2)has been developed to test the hypothesis.

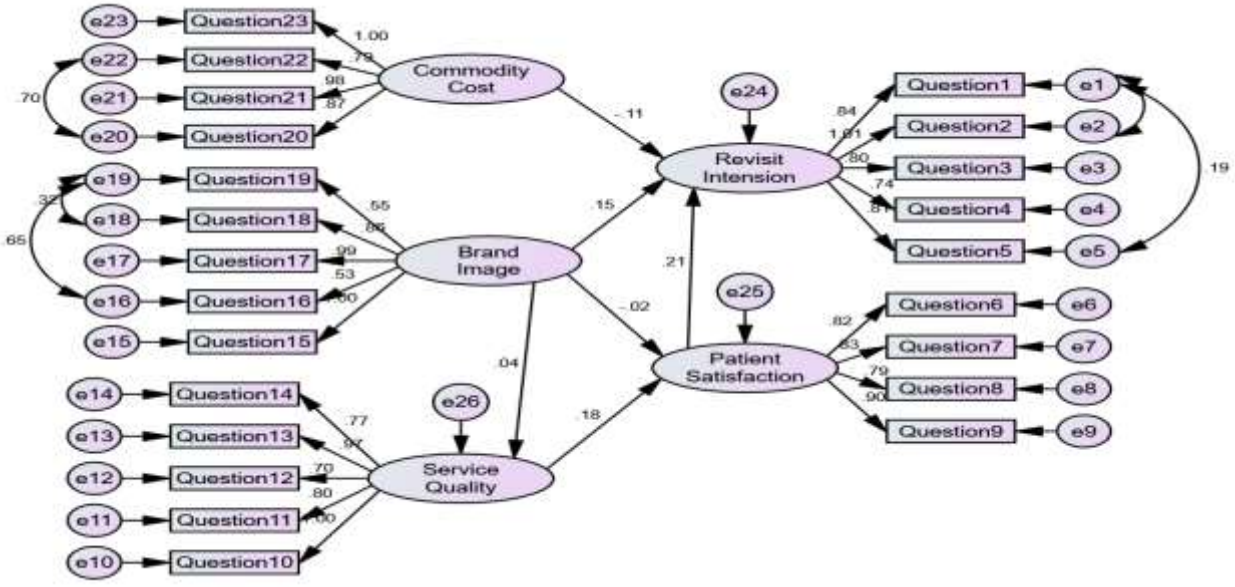

Figure 2. Structure equation model of revisit intension

According to the above structural equation model, the standardized regression weights for commodity cost are 0.79 to 1.00, brand image is 0.53 to 1.00, service quality is 0.70 to 1.00, patient satisfaction is 0.79 to 0.90 and revisit intention is 0.74 to 1.01 respectively (which are nearly between –1 to 1). In these cases, each factor loading of indicator variables is exceptionally high and statistically significant ($p < 0.05$). The covariance values between errors in the model range from – 0.14 to 0.46 and are also important ($p < 0.05$).

The final model fits the data quite well, as shown by the computed global fit measures ($\chi 2$ /df = 2.614, GFI= 0.90, CFI= 0.966, IFI= 0.966, TLI= 0.960, NFI= 0.946, RFI= 0.938, and RMSEA = 0.064, which is 0.08). The model index values meet all of the survey's requirements for a well-fitted model; consequently, the chosen model is appropriate (Awang et al., 2015).

Convergent and Discriminant Validity

Table 3 shows the results of a convergent validity test using the average variance expected (AVE). In contrast, Table 3 shows the results of a discriminant validity test using the maximum shared variance (MSV).

Table 3. Path coefficient and discriminant validity

Regression Weights: (Path coefficient)					**Discriminant validity**
Exogenous		Endogenous Variable	Estimate	P	Maximum shared variance (MSV)
Service quality	<---	Brand image	0.033	0.401	0.042
Patient satisfaction	<---	Brand image	– 0.012	0.739	– 0.009
Patient satisfaction	<---	Service quality	0.155	***	0.177
Revisit intension	<---	Commodity cost	– 0.079	0.021	– 0.184
Revisit intension	<---	Brand image	0.108	0.001	0.145
Revisit intension	<---	Patient satisfaction	0.222	***	0.251

Source: Authors Calculation

The average variance expected (AVE) to test convergent validity (from Table 2) for service quality is 0.734, revisit intension is 0.718, brand image is 0.660, commodity cost is 0.833, and patient satisfaction is 0.698, respectively. Here, the AVE values are more significant than 0.5, which indicates that the model has achieved convergent validity (Arbuckle, 2006).

Maximum shared variance (MSV) was examined to test the discriminant validity. As depicted in Table 3, the MSV between BI and SQ was 0.042, which is less than the square root of the Average Variance Extracted(SRAVE) for BI (0.813) and service quality (0.857). Similarly, the MSV between BI and Patient Satisfaction(PS) was 0.009, which is smaller than both the SRAVE for BI (0.813) and PS (0.835). Furthermore, the MSV between SQ and PS was 0.177, less than the SRAVE for SQ (0.857) and PS (0.835). Additionally, the MSV between commodity price and intention to return was found to be 0.184, smaller than the SRAVE for commodity price (0.913) and return intent (0.918). (0.847). Moreover, the SRAVE for brand image (0.813) and the AVE for revisit intention (0.813) were both smaller than the MSV of brand image and revisit intention (0.145). (0.847). Accordingly, these findings support discriminant validity (Henseler et al., 2015).

Hypothesis Testing

The path coefficient of brand image to patient revisit intention is 0.108 ($p = 0.001$). This indicates that null hypothesis 2 is rejected and that the brand image significantly influences revisiting intention to the same hospital ($p < 0.05$). It suggests that as brand image improves (social media communication, safe treatment, enough time spent by a doctor with a patient, equipped with the latest equipment, patient positive evaluation, etc.), the patient revisit intention into the same hospital will increase significantly.

Hospital service quality is correlated with the brand image at a path coefficient of 0.033 ($p = 0.401$). Hence, the evidence does not support discarding null hypothesis 3. An organization's internal and external communication channels indicate its reputation and efficacy in the community from the standpoint of the signalling theory (Soliha et al., 2021; Kim et al., 2010). A company's name, product line, and perceived quality all play a role in determining whether or not a customer would return to make a purchase.

The structure equation model's path coefficient of commodity cost to revisit intention is – 0.079 ($p = 0.021$). Therefore, commodity cost significantly negatively influences the intention to return to the same hospital, thus rejecting the null hypothesis 1. As a result, with the increased commodity costs (doctors' fees, cabin or bed rent, medicine prices, etc.), the patient revisits intention significantly and vice versa. In line with previous research, the higher commodity expenses were associated with a lower level of satisfaction and a reduced likelihood of return for hospital care and vice versa (Yang et al.,2016)

Similarly, the correlation between brand image and hospital patient satisfaction was found to be -0.012 ($p = 0.739$), refuting null hypothesis 4. While previous studies explored the relationship between BI and PS (Liu et al.,2018), a negative correlation was observed in Chattrogram, Bangladesh, due to physician associations of Chattrogram not favouring hospital management branding; other factors may also contribute to this outcome, which was not accounted for in previous studies.

The path coefficient of hospital service quality to patient satisfaction is 0.155 ($p < 0.000$). Therefore, service quality has influenced patient satisfaction, thus rejecting the null hypothesis 5($p < 0.05$). As a result, with the increase in service quality (error-free medical reports, prompt service, enough knowledge of staff, individual attention to the patient, physical facilities, etc.), the hospital's patient satisfaction increases significantly and vice versa. This increased patient satisfaction also substantially increases the intention of the patient to revisit the same hospital (Hypothesis 6). The connection between patient satisfaction and future hospital readmission is 0.2222 ($p=0.000$). We reject null hypothesis 6 ($p < 0.05$) because there is strong evidence that patients' level of satisfaction promotes their desire to return to the same hospital. Similar correlations between service quality and patient satisfaction have been identified in prior research (Fook & Dastane, 2021; Sanyal & Hisam, 2016). As a result, with increased patient satisfaction in hospitals, the intention to revisit patients increases significantly, and vice versa.

DISCUSSIONS

Despite a large body of prior theoretical and empirical work, our results suggest that investigation into the connection between BI and follow-up visits is still in its infancy in the healthcare industry. The model's soundness was tested by Structural Equation Modeling (SEM). Hospital reputation, service quality, patient loyalty, and satisfaction were all shown to be significantly correlated. Our investigation extends further than the already available SQ and PS frameworks, both capable of delving into BI. To enhance patients' intentions to return to the same hospital, it is necessary to considerably cut the cost of commodities, such as doctors' fees, cabin or bed rent, pharmaceutical prices, ambulance service costs, etc.

Brand image has a significant positive influence on patients' revisiting intentions to the same hospital, so the brand image (social media communication, safe treatment, enough time spent by a doctor with a patient, equipped with the latest equipment, patient positive evaluation, etc.) must be increased significantly to increase the patient's revisit intention to the same hospital.

It has also been observed that brand image does not significantly influence patient satisfaction in hospitals in developing countries. However, in our study, brand image has no significant influence on the service quality of hospitals in the business capital city of Chattrogram in the developing country. Physicians' contribution has a profound impact on increasing patient satisfaction rather than a brand image in Chattrogram. Leading two foreign affiliated and cobranded private hospitals could not attract and retain patients in their hospital by creating a brand image. The lack of authorization of foreign doctors to practice in the selected foreign cobranded hospitals in Bangladesh had a problem for boosting revisit intention.

Moreover, as a result, show, the service quality of a hospital has a positive significant influence on patient satisfaction in a hospital, so the service quality (error-free medical report, prompt service, enough knowledge of staff, individual attention to patients, physical facilities, etc.) of the hospital must be increased significantly to increase the patient satisfaction in hospital in the developing country like Bangladesh. This increased patient satisfaction also substantially increases the intention of the patient to revisit the same hospital (Hypothesis 6).

We found that patient satisfaction in hospitals significantly influences patient revisit intention in the same hospital; thus, patient satisfaction in hospitals must be increased significantly to increase the patient revisit intention in the same hospital in a developing country like Bangladesh. This increase in patient satisfaction in hospitals significantly increases patient revisit intention. This increased patient revisit intention also increases the revenue earning of the hospital significantly and ultimately makes a higher profit.

From a managerial perspective, this study illuminates patient-centred care in a developing economy for healthcare organizations. Coordinated care pathways foster a patient-centred hospital culture (Lin & Bowman, 2022; Srivastava & Singh, 2020). Management can improve morale among workers and patients by adjusting the hospital's physical space. Building a solid reputation in this sector might increase the number of times patients visit a healthcare facility. In today's globally competitive market, patients have numerous options regarding where to acquire healthcare. This should serve as an incentive for hospital administrators to work on improving their institutions' public profiles.

CONCLUSIONS

The study found a favourable association between a hospital's brand image and the likelihood of a patient returning for health care. At the same time, a negative association between commodity cost and return intent was also found. However, in hospitals in developing countries, brand image has no appreciable effect on service quality or patient satisfaction. Furthermore, patient satisfaction in hospitals is significantly impacted by the quality of hospital services. However, there needs to be an overarching conceptual framework in the literature. The study focused on patients in private hospitals. This might limit the generalizability of the results. Future research will likely broaden the degree of generalizability to different cities or healthcare settings. The small sample size falls short of the targeted sample size. Studies often use cross-sectional study methodologies, but longitudinal studies should be conducted afterwards to glean extra knowledge. This gap in the literature can be filled by future conceptual and empirical research. It would be beneficial to extrapolate the results to countries like India, Pakistan, Malaysia, Singapore, etc. if the study were replicated in diverse settings. Health communication data gleaned from research on service quality gaps could contribute to the economic and social development of Bangladesh and other comparable developing countries.

Finally, this research reveals that mere brand image does not increase patient satisfaction; a brand image with service quality can satisfy patients. Brand hospitals with high prices may not satisfy patients. Quality time doctors provide in brand hospitals, patient care by the staff, and structural ties could motivate patients to revisit hospitals. Customer surveys, suggestion boxes, and other feedback methods can be used to improve patients' levels of satisfaction. They can set themselves apart by raising their brand's awareness, fostering greater patient trust, generating significant returns, and expanding their organization. Hospital administrators can integrate numerous marketing tactics such as patient communication, service training for their workers, advertising, public relations, and online marketing to develop BI and gain a competitive advantage. The hospital administration should emphasize any ideas made by the patients for purposes of improvement and identical brand image creation.

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