Impact of Service Quality Dimensions on Patients' Satisfaction -A Study on Some Private Hospitals in Chittagong, Bangladesh

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Abstract
The objectives of this study is to determine the impact of service quality on patient's satisfaction. This study is based on the private hospitals of Chittagong. In this study the researcher examined the key factors that are employed to determine the current standard of the healthcare service quality from patients' perception. Now a days, patients' satisfaction considered as one of the major issues in hospital management. Hospital's success depends on patient's expectations, perceptions, and judgment on the quality of services provided by hospitals. A survey was conducted among 300 respondents who were the patients of 10 renowned private hospitals in Chittagong.A model questionnaire has been adopted to conduct this survey.In this study, "SREVPERF" Model has been applied to gauge the service quality and find its impact on patients' satisfaction. Patients perceptions were collected on dimensions of perceived service quality including tangible, reliability, responsiveness, assurances, empathy, and satisfaction. This study revealed that, there is a very positive relationship between patients' satisfaction and service quality. Each dimension of service quality is positively regressed with patients' satisfactions.The findings of this research indicate that the establishment of higher levels of hospital service quality will lead customers to have a high level of satisfaction.
Keywords: *Service Quality, Patient's Satisfaction, SERVPERF model, Healthcare services, Private Hospitals*

I. Introduction

Service quality plays a major role in differentiating a brand or an organization. The service quality of an organizations has great impact on customer's satisfaction and brand loyalty. It is measured in different industrial sectors. Healthcare sector is such an industry which is fully based on rendering services to the patients. The healthcare sector is served by both public as well as private hospital in Bangladesh. This study covers only the private hospital in Chittagong. "Private hospitals and clinics can be defined as privately managed organization in which sick and injured persons are given healthcare and treatment" (Ahmed 2015). The total number of registered hospitals under DGHS in Bangladesh is 5670 whereas 607 hospitals are public and 5023 are private hospitals. The total number of beds in private sector facilities are 87610 (Bangladesh Bureau of Statistics 2017) These hospitals can be categorized as primary, secondary and tertiary hospitals. In this study the private hospitals those are delivering tertiary healthcare services in Chittagong metropolitan area are selected as samples.

The concept of private healthcare service in Bangladesh started its journey in 1990.
A class of medical clinics providing some hospital services has begun to emerge.

During this period, hospitals were limited, relatively small in size and, as a rule, did not have the full range of services.Some of them were prestigious clinics providing a large proportion of the general population for surgery and treatment services (Ahmed 2015). Although this scenario has substantially been changed in 2018. Now private clinics and hospitals are equipped with advanced technologies and more skilled people to render their services. But it has been observed that due to the establishment of many well equipped hospitals in Chittagong, a large pool of patients are moving abroad for their treatment and spending a lot of money. Besides, Bangladesh is facing a severe healthcare crisis and challenges due to its expensive and unreliable healthcare system.

Due to better medical care and financial constraints, Bangladeshi patients are visiting neighboring countries including India, Thailand, Singapore and Malaysia.

Thousands of patients, including politicians, also go abroad for routine medical treatment every year, while doctors say there are almost all medical facilities in Bangladesh. (Maswood 2017). Therefore, measuring service quality and measuring the impact on patient satisfaction in private hospitals in Bangladesh has been a serious problem.

II. Literature Review:

Service qualityis defined by many authors and experts in the field of business. In healthcare industries service quality is such an important issue that needs to be considered very cautiously. Gronroos (2001) defined "Quality of service is the difference between customer expectations and customer service perceptions".

Gronroos (1984), In his study, the quality of service for an organization is divided into two aspects, namely technical (result) and functional (purpose) qualities. Technical Quality Services refers to delivery facilities. Quality of work refers to how the service is delivered to customers. Sharma and Chahal (1995) examined the technical and non-technical features of the service meetings, which are extracted from four main components as important components to evaluate the quality of health service.

Voss et al (1998), in an attempt to examine the role of price, productivity and expectations in order to determine satisfaction in a discreet exchange of services. Risser (1975) He emphasized that patient satisfaction can be defined as "the degree to which a patient's perception of ideal health care and their actual medical care is expected".A study of Safavi (2006) found that satisfaction with medical experience was due to dignity and respect, speed and efficiency, comfort, information and communication and emotional support. Linder-Pelz,(1982)

Define patient satisfaction as a positive evaluation of a person's quality of service Word-of-mouth is an important factor that affects user satisfaction. Since the quality of service is a precursor of satisfaction, there is a direct relationship between quality of service and satisfaction. Parasuraman et al. They noted that their tool (SERVQUAL) can be used to assess the relative importance of measuring quality, which affects the overall perception of customers.

This study is based on SERVPERF model that is derived from SERVQUAL model. SERVPERF has been developed by J.J Cronin and S.A. Taylor in 1994. In 1988 Parasuraman, Zeithaml and Berry first came up with the idea of SERVQUAL model. The SERVPERF is derived from the SERVQUAL model and it uses the same dimensions to assess the quality aspects of services. Though SERVQUAL model was designed to measure customer expectations and organization's performance , the SERVPERF models designed to measure only performance related. Several studies clearly highlighted the problems of using SERVQUAL and acknowledged the amenities of SERVPERF. Hence, Salomi et al (2005) highlighted the convenience of using SERVPERF in terms of time needed for the survey. Though SERVPERF doesn't reflect customer expectation, it is more effective. Elen (2006) defined "the perception scales(used in SERVPERF) incorporates better psychometric properties than the one based on perceptions minus expectations (as it done in SERVQUAL)".

In this research we used five dimensions of SERVPERF model, namely-"(1) Tangibility that represents physical amenities, personnel appearance and communication equipment(2) Reliability that refers to the capacity to render the committed service responsively and precisely (3) Responsiveness means the eagerness of staffs to render service instantly to customers(4) Assurance that means the awareness, courtesy and eligibility of employees and their ability to build firm belief and confidence in the customer towards the service provider(5) Empathy that is defined as the sympathy, caring and attention provided to the customers".

According to Polsa et al (2011) "SERVQUAL model is subject to application in healthcare research in terms of reliability – the trustworthiness of service delivery, i.e., keeping promises being sympathetic and reassuring, and keeping records accurately; responsiveness – the exact delivery of service, willingness to help, and efficient allocation of time; assurance – safeness of diagnoses, politeness, and relevant specialized knowledge; empathy – the ability of personnel to reflect the perceived needs of the patients; and tangibles – the physical environment of the hospital as well as the functional quality of diagnoses, and efficient communication with nurses and doctors, and the understanding of diagnoses (Polsa, et al,2011)." After studying a number of articles, it has been found that there is no such study conducted in Chittagong that analyzed the attitudes of patients toward the quality of service and its effect on patients' satisfaction. A few studies have been found those focused on assessing service quality in private and public hospitals in different countries.

A research conducted by Andaleeb (2000)has shown that private hospitals seek better services than public hospitals in response to communities, disciplines and guarantees (medical procedures).Irfan and Ijaz (2011) found thatprivatehospitals in Pakistan offer their patients a better quality of care than public hospitals in terms of empathy; tangibility, reliability and responsiveness. In a study on perceived quality of private and public hospitals , Polsa et al. (2011) found that the quality of service for private hospitals is considered superior to that of public hospitals, in terms of hospital environment, staff care, record keeping accuracy, prompt delivery of services, trust, staff compassion, expert knowledge and personal attention from the hospital.

Conceptual Framework

In order to examine the effects of service quality on satisfaction, a conceptual framework should be introduced. The above literature review leads the author to develop a conceptual framework based on SERVPERF model where the framework shows that the dimensions of service quality such as tangibility, reliability, empathy, assurance and responsiveness rendered by private hospitals have impact on the patient's satisfaction.
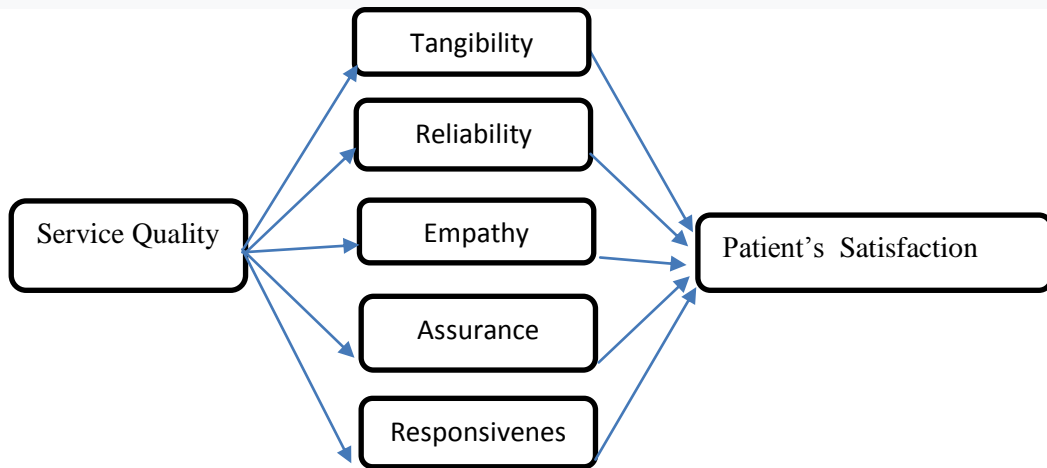

Figure:1 – Conceptual framework"

Research Objectives:

This study is designed with the following objectives:
1. To analyze the possible variability of the importance of these five dimensions across age and gender of the respondence.
2. To understand the patient's attitude and satisfaction towards the services of private hospitals.
3. To measured the impactof service qualitydimension(Tangible, Relibility, Responsiveness, Assurance,Empathy) on patients' satisfaction.

III. Methodology

This study examines the effect of higher quality of service on patient satisfaction at private hospitals in Chittagong. In this study a questionnaire has been adapted which is based on SERVPERF model where there are 22 items of five dimensions. A survey has been conducted on 300 respondents who are the patients of different private hospitals in Chittagong. Around 10 private hospitals have been selected for conducting the survey. The effect of service quality on patient satisfaction is tested by incorporating correlation and regression analysis using SPSS software (version-21).

Reliability Statistics	
Cronbach's Alpha	No of Items
.871	25

Table:1- Test of Reliability

The value of Cronbach's alpha (α=.871) on 25 items of the questionnaire show that there is a high level of internal consistency for our scale with the specific sample. This study is designed with the following hypothesis

Data Analysis:
Demographic Analysis:

This study finds that majority of patients' age fall within 21yrs to 50yrs and among them about 40% represents regular patients and about 60% of them are irregular in nature.

		If the patient Regular or No		Total
		Yes	No	
Age of the patient	Below 20	5	0	5
	Between 21-30	55	58	113
	Between 31-50	31	110	141
	Above 50	28	13	41
Total		119	181	300

***Table: 2**- Age of the patient * If the patient Regular or No Cross-tabulation*

The marital status of respondents show that around 30% of them are single and around 70% of them are married. So it is clear from the data that married people are very concerned about their health and regular checkup.

If the patient Regular or No * marital status of the patient Cross-tabulation				
Count				
		marital status of the patient		Total
		Single	Married	
If the patient Regular or No	Yes	39	80	119
	No	49	132	181
Total		88	212	300

***Table no 3:** Shows patient Regularity*

We are conducting this survey from 300 respondent and among them the male respondents are 257 and the females are 43 only. Though it is not always easier to get the access to the female patients as they are mostly conservative. That's why most of the respondents are male.

Gender of the respondent * If the patient Regular or No Cross-tabulation				
Count				
		If the patient Regular or No		Total
		Yes	no	
Gender of the respondent	Male	102	155	257
	female	17	26	43
Total		119	181	300

***Table no 4:** ShowsGender of the respondent*

Variables Entered/Removed[a]			
Model	Variables Entered	Variables Removed	Method
1	EMP_AVG, TAN_AVG, ASSUR_AVG, REL_AVG, RES_AVG[b]	.	Enter
a. Dependent Variable: SAT_AVG			
b. All requested variables entered.			

***Table no 5:** ShowsVariables Entered/Removed[a]*

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.857[a]	.735	.730	.26156
a. Predictors: (Constant), EMP_AVG, TAN_AVG, ASSUR_AVG, REL_AVG, RES_AVG				

***Table no 6:** ShowsModel Summary*

An overview of this model predicts customer satisfaction.The relation between predictors and customer satisfaction are indicated by R. In our case, R = 0.857 indicates avery high correlation. This means the model predicts customer satisfaction very precisely. R square Shows the percentage of changes in customer satisfaction that may be explained by our five prophecies. The adjusted r square measures the square of population R, by the model and therefore provides a more realistic indication of its predictive power.

ANOVAa						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	55.656	5	11.131	162.702	.000[b]
	Residual	20.114	294	.068		
	Total	75.770	299			

***Table no 7:** ShowsANOVAa*

a. Dependent Variable: SAT_AVG
b. Predictors: (Constant), EMP_AVG, TAN_AVG, ASSUR_AVG, REL_AVG, RES_AVG

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.398	.197		-2.018	.045
	TAN_AVG	.261	.036	.241	7.284	.000
	ASSUR_AVG	.193	.037	.179	5.159	.000
	REL_AVG	.175	.057	.142	3.076	.002
	RES_AVG	.370	.044	.404	8.457	.000
	EMP_AVG	.195	.044	.185	4.429	.000

***Table no 8:** ShowsCoefficients[a]*

The multiplication value B shows how many units of customer satisfaction increase for each growth unit in each forecast. Given our forecast, we can predict customer satisfaction= -.398 + (0.26 x tangible) + (0.19 x assurance) +(0.18 x reliability) + (0.37 x responsiveness) + (0.20 x empathy)

It is important to know that all B-coefficients are positive; higher tangibility is related with higher customer satisfaction and so on. The column "Sig." means the level of significancefor our predictors. Thus, the coefficient b is statistically significant. Only when p value is less than 0.05. Here it is apparent that all b coefficients are significant.

Limitations and Further Research:

This study examined perceptions about the patient satisfaction ,service quality of hospital , and behavioral intentions from the patient's perspective.The physical features of the structural and the management of the process aspects are considered essential dimensions. This is also seen in this studythat Patient Satisfaction has a positive correlation in accordance with five observed independent variables namely, 'Tangible', 'Reliability', 'Responsiveness', 'Empathy', 'Assurance'. The results of these five factors showed that the quality of service was appropriate for the SERVPERF model, and the model is valid and reliable.According to the results obtained from the statistical analysis, this shows that patients in hospitals feel satisfied that Private hospitals work together to provide patients with higher quality services. The quality of service studied has a major impact on patient satisfaction.

Scope for future study

This study has been conducted by considering some private hospitalsof Chittagong, however the majority of patients of our country go to public hospitals for taking treatment at low price. In this study we find a positive result but it may vary if same research is replicated at public hospitals.Though public hospitals lack resources for rendering healthcare services, the patients perception of service quality might be different.

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