

AN EMPIRICAL STUDY ON ASSESSING QUALITY OF HEALTH - CARE SERVICES OFFERED BY PRIVATE HOSPITALS USING SERVQUAL MODEL

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Abstract

Purpose: There has been a slow but sure shift in the way health care delivery is being perceived, by both providers and patients. Patients are demanding better quality of health care delivery both for the in-patient services, outpatient services or even preventive care. Health care is a rapidly growing sector which has gained much attention from researchers and practitioners worldwide. Due to tremendously increasing cost, many hospitals attempt to adopt quality initiatives such as lean and/or Six Sigma to improve their service operations. Implementing such process improvement efficiently and effectively would ultimately help in delivering the highest value to customers. Many studies add that in addition to its positive implications on patient retention and loyalty, patient satisfaction influences the rate of patient compliance with physician advice and the healing process of patients.

Design/Methodology/Approach: Descriptive research has been applied, describes data and characteristics about the population or phenomenon being studied. The researchers have used primary data through self-constructed structured Questionnaire and as far as the secondary data is concerned that was obtained from web sites, journals etc. Structured questionnaire was constructed to interview the patients admitted in different private hospitals on 23 different parameters on Likert's five point scale, which was later reduced to five factors by using the statistical technique of factor analysis.

Findings: It is found that various statements like Physical Facilities are visually appealing, Appearance of doctors and staff of hospital are neat and professional, Obtain feedback and keep the patients informed and Staff and doctors of hospital understand the specific needs of the patients were found to be significant.

Research Limitations/Implications:The study focuses on general problems faced by patients in the private hospitals. There might be certain more variables as one patient is satisfied on particular aspect but another may not on that particular aspect.

Key Words:Patients Satisfaction, Satisfaction of Patients in Private Hospitals, Condition of Private Hospitals.

INTRODUCTION

Like any country that opens its economy, India has in the last 15 years seen much change in the way business and industries as a whole deal with consumer demand and expectation with regard to quality of service and goods being sold - this is especially evident in the health care sector. There has been a slow but sure shift in the way health care delivery is being perceived, by both providers and patients. Patients are demanding better quality of health care delivery both for the in-patient services, outpatient services or even preventive care. Health care is a rapidly growing sector which has gained much attention from researchers and practitioners worldwide. Due to tremendously increasing cost, many hospitals attempt to adopt quality initiatives such as lean and/or Six Sigma to improve their service operations. Implementing such process improvement efficiently and effectively would ultimately help in delivering the highest value to customers. Many studies add that in addition to its positive implications on patient retention and loyalty, patient satisfaction influences the rate of patient compliance with physician advice and the healing process of patients (Calnan, 1988). Evidence in both the manufacturing and services industries indicates that quality is a key determinant of market share and return on investment as well as cost reduction (Parasuraman, Zeithaml, and Berry 1985). Two forms of quality are relevant to service-providing organizations: technical quality and functional quality (Gronroos 1984).

Research suggests that service organizations share various commonalities in the service delivery process both within and across industries (Zeithaml, Berry, and Parasuraman 1988). For example, the intangible nature of services dictates that, unlike products, most services are produced and consumed at the same time. This characteristic increases the importance of the provider-consumer relationship as well as the potential for variation in service quality. Therefore, the purpose of this article is to report the results of a study that examined the usefulness of the

SERVQUAL scale for assessing patients' perceptions of service quality in the hospital environment. At the practical level, the representativeness of the SERVQUAL items as they relate to hospital services was assessed. In addition to content appropriateness, the length of the scale was a major consideration for the population under study, in this case former patients of a hospital. The scale was subjected to extensive reliability and validity assessment.

The difference between private and public sector organization is well documented in the literature. These differences are largely environmental— the situation in which these organizations operate. The private sector is considered more efficient compared to public sector owing to different incentives, market orientation and a decentralized business model. These fundamental differences provide strategic advantages leading to private sector growth and profitability. Nevertheless, these advantages are costly. Several tools have been developed to measure patients' perceptions and expectations, but SERVQUAL instrument developed by **Parasuraman et al. (1988)** is the most widely used tool. While the findings of some studies confirm the five generic quality dimensions of SERVQUAL (**Babakus and Mangold, 1992**), others either identified less number of dimensions or used a modified version of the instrument and identified additional dimensions (**Reidenback and Sondifer-Smallwood, 1990**). **Haywood-Farmer and Stuart (1988)** concluded that SERVQUAL was inappropriate for measuring professional service quality since it excluded the dimensions for “care service”, “service customization” and “knowledge of the professional”.

SERVQUAL

According to **Parasuraman, Zeithaml and Berry (1985, 1988, 1991, 1994)**, regardless of the type of service, consumers basically use the same criteria to assess quality. Service quality is a general opinion the client forms regarding its delivery, which is constituted by a series of successful or unsuccessful experiences. Managing gaps in service will help the company improve its quality. But gaps are not the only means clients use to judge a service.

These dimensions are briefly commented below:

(1) Reliability: is the company reliable in providing the service? Does it provide as promised? Reliability reflects a company's consistency and certainty in terms of performance. Reliability is the most important dimension for the consumer of services;

(2) **Tangibility**: how are the service provider's physical installations, equipment, people and communication material? Since there is no physical element to be assessed in services, clients often trust the tangible evidence that surrounds it when making their assessment;

(3) **Responsibility**: are company employees helpful and capable of providing fast service? It is responsible for measuring company and employee receptiveness towards clients;

(4) **Assurance**: are employees well-informed, educated, competent and trustworthy? This dimension encompasses the company's competence, courtesy and precision; and

(5) **Empathy**: this is the capacity a person has to experience another's feelings. Does the service company provide careful and personalized attention?

These elements clearly have a highly subjective factor linked to the person who perceives the service. The SERVQUAL scale (questionnaire) has two sections: one to map client expectations in relation to a service segment and the other to map perception in relation to a certain service company. The original SERVQUAL scale uses 22 questions to measure the five dimensions of service quality: Reliability, Tangibility, Security, Empathy and Responsibility. Quality is measured as performance minus expectations for each pair of questions and the summary score across all questions was the measure of quality. **Parasuraman et al. (1988)** also tested their SERVQUAL scale for reliability and validity. The major test of reliability is coefficient alpha of Cronbach's Alpha. The coefficient α is best conceptualized with the average of all possible split half reliabilities for a set of items. Split half reliability is the reliability between two parts of a test or instrument where those two parts are halves of the total instrument. The coefficient α measures the extent of internal consistency between or correlation among, the set of questions making up each of the five dimensions, such as the five reliability questions. The suggested cut-off point for coefficient alpha values is 0.70 indicating that the scale exhibits desirable levels of internal consistency. High reliabilities, such as 0.90 or above, are favorable. Since the industries under investigation represented a cross section of industries, which vary long key dimensions used to classify services (**Lovelock, 1981, 1983**), many researchers concluded that the findings are also likely to be of relevance to medical services.

The gaps can be subdivided into gaps on the marketer and consumer sides:

Gap 1: is the difference between consumer expectations and management perceptions of consumer expectations.

Gap 2: is the difference between management perceptions of consumer expectations and service quality specifications.

Gap 3: is the difference between service quality specifications and the service actually delivered.

Gap 4: is the difference between service delivery and what is communicated about the service to consumers.

Gap 5: is on the consumer side, and it shows the difference between a consumer's actual and perceived quality of service.

With regard to gap 5, service quality determinants used by consumers do not tend to vary substantially across service industries and were classified into 10 key categories: reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding/knowing the customer and tangibles then later summarized to five (**Parasuraman et al., 1985**). Then the SERVQUAL, a 22item instrument for assessing customer perceptions of service quality in service and retailing organizations was developed. The reliabilities and factor structures indicate that the final 22item scale and its five dimensions have sound and psychometric properties. There was also strong support for SERVQUAL validity (**Parasuraman et al., 1988**).

CUSTOMER SATISFACTION STUDIES IN HEALTHCARE

Because of increasing competition and more demanding consumers, service quality has become a watchword for virtually all businesses and in the medical field in particular due to the high importance of excellent service quality in a field where poor service quality could ultimately lead to morbidity. However, quality is difficult to measure for service providers in the medical field. Healthcare service quality have been regarded as a multidimensional construct. It has been envisioned to be composed of two main parts: quality as perceived by the consumer and quality in fact. Although many researchers argue the point that the 'real' quality of a service cannot be accurately portrayed in patient's perceptions, however patients will always continue to draw their own conclusions about the quality of the service. In healthcare especially, perception for the patient is the reality and it is the perceived quality as opposed to the actual or absolute quality that is important for healthcare professionals to manage. This is the basis on which consumers make purchase, repurchase and recommendation decisions (**Paul, 2003**).

Donabedian (1992) states that the research concluded that health care is conceived as consisting mainly of two parts, a technical task and an interpersonal exchange and envisaged an ideal whereby practitioner and patient together engage in a search for the most appropriate solution (thus jointly engaging in the production of care). Another research was not in favor of medical services being driven by market forces and suggests that a cost-effective practice should view patients not as consumers in episodic relationships but as co-producers in continuing relationships (**Murfin et al., 1995**). **Cartwright (1986)** found that men and women were equally satisfied with their doctors, younger people were more critical than older people as well as the existence of an inverse relationship between social class and satisfaction.

REVIEW OF LITERATURE

SERVICE QUALITY IN HEALTHCARE INDUSTRY

Understanding service quality is indispensable for service providers aspiring to attract and retain customers. Quality of goods, measured objectively by indicators such as durability, defects, reliability, etc. is difficult to replicate in service environments (**Parasuraman et al., 1988**). In the service industry, quality definitions tend to focus on meeting customer requirements and how well service providers meet their expectations, usually by an encounter between customer and service contact person. Service quality is defined as “a global judgment or attitude relating to the overall excellence or superiority of the service” (**Parasuraman et al., 1988**). One common way is to conceptualize service quality as a customer’s overall service quality evaluation is by applying a disconfirmation model – the gap between service expectations and performance (**Cronin and Taylor, 1992; Parasuraman et al., 1991**).

Table 1: Contribution of Researchers

S.NO.	YEAR	AUTHOR	FINDINGS
1.	1981	Oliver	He sees satisfaction as clients' emotional feelings concerning a particular consumption experience. By this Oliver means that satisfaction is a consequence of a mental assessment and evaluation of what clients experience and the resulting outcome of the services provided. This therefore implies that perceived service quality is

			considered as a cognitive construct, at the same time as satisfaction is an affective reaction to a specific service experience as a consequence of an evaluation process.
2.	1985	Parasuraman et al	The resulting multiple-item scale for measuring servicequality, SERVQUAL, lists five dimensions or determinants of service quality: tangibles, reliability, responsiveness, assurance and empathy.
3.	1988	Johnson	Hospitals are much more than buildings and machines, they are human organizations meeting human needs, and to remain successful in a competitive eye care market, they must outperform their competitors on the human dimensions.
4.	1988	Webster	The ultimate goal of service quality measurement is to assist managers in ensuring service quality and customer satisfaction. If service quality is to become the cornerstone of marketing strategy, the marketer must have the means to measure it.
5.	1990	Bopp	Healthcare providers' focus is providing the appropriate treatment to their patients. He believes that this actually is the focus of the patients as well.
6.	1992	Donabedian	States that the research concluded that health care is conceived as consisting mainly of two parts, a technical task and an interpersonal exchange and envisaged an ideal whereby practitioner and patient together engage in a search for the most appropriate solution (thus jointly engaging in the production of care).
7.	1994	Bowers et al	Consider that caring and patient outcome are two dimensions that were not captured by the original

			SERVQUAL scale.They suggest that caring involves human interaction during healthcare, while patientoutcome reflects relief from pain and suffering following treatment.
8.	1995	Tountas et al	The main goals of the reform were the separation of private and public sector, the empowerment of public health sector, the development of primary care, increases in public spending on health, decentralization, reorganization of hospitals, improvements in manpower policy, efficiency, equity in terms of equal accessibility and social control.
9.	1998	Sixam et al.	Explained satisfaction as the state of pleasure or contentment with an action, event or service and it is determined considerably by the expectations of customers and their experiences.
10.	1998	Jun et al	Carried out focus group discussion and came out with eleven dimensions as appropriate for assessing service quality in healthcare settings. The dimensions were named as "courtesy", "tangibles", "reliability", "communication", "competence", "reliability", "understanding customer", "access" "patient outcomes" "responsiveness", "caring", and "collaboration".
11.	1998	Hill and McCrory	Measured service quality conceptualized as (perceptions minus importance) at Belfast maternity hospitals. They tested perceptions and importance of clinical and non-clinical service factors from both the patient's and the staff's sides. They concluded that perceptions of previous patients were significantly more positive than first-

			time patients. Hygiene/cleanliness ranked as one of the top most important issues in the hospital while patients were disinclined to be judgmental about clinical staff since they often felt unqualified to judge clinical expertise.
12.	1999	Kotler and Armstrong	Patient satisfaction is considered the in the last stage of the buyer decision process which is constituted of need recognition, information search, evaluation of alternatives, purchase decision and the post-purchase behavior.
13.	2002	De Man et al	Analyzed patients' and personnel's perception of service quality in nuclear medicine organizations and compared the perceptions of patients' and personnel. They also examined the importance of the different service quality dimensions by studying their relationship to patient satisfaction. Their results showed that the original five dimensions of SERVQUAL were not confirmed. Patients considered tangibles and assurance as one dimension while empathy was divided into empathy and convenience. Personnel perceived service quality as less good than patients except for empathy. Patient's perceptions of service quality correlated strongly with satisfaction especially for reliability and tangibles-assurance.
14.	2007	Karassavidou and Glaveli	Despite efforts and reforms, healthcare organizations operating in the public sector in <i>Grece are still experiencing low trust on the part of the patients in terms of the quality of care provided and of the degree of responsiveness to patients' needs.</i> People hoping to receive high

			<p>service quality tend to prefer private hospitals or even travel abroad. Thus, NHS Hospitals in Greece are undergoing pressure to improve their quality and compete effectively. Pressures both from the government and the general public which in its vast majority have low income and realise that they have no alternative to turn to.</p>
15.	2014	Peprah	<p>The following factors play a critical role in the satisfaction of patients; the attitudes of nurses toward patients, the capacity to deliver prompt service without wasting time, ability to disseminate information to patients and the availability of up-to-date equipment. Others include the hospital's ability to render 24 hour service, the patience of the doctor to clearly explain what was wrong with patients before giving treatment, providing patients with detail information about their medication, and attractiveness and cleanliness of the hospital.</p>

OBJECTIVES OF STUDY

The main objectives of this study are:

- (1) To explore the services offered by Private Hospitals to its patients.
- (2) To find the expectation and perception of patients in private hospitals.
- (3) To determine whether there is any gap between the expectations and perception of patients.
- (4) To determine whether patients getting value to their expenses against the services offered by the Private Hospitals.
- (5) To determine whether patients are overall satisfied with the services offered by the private hospital and how much satisfied they are to recommend others also.

RESEARCH METHODOLOGY

The main concern of this research paper is to identify the factors affecting the quality of services being offered by the private hospital to its patients in Delhi and NCR. In order to generate the dimensions of quality a SERVQUAL model is used with certain modifications as per requirements. For the collection of data a structured questionnaire is used and in order to analyze the data SPSS version 17.0 is used. Total of 122 questionnaires were sent and out of 100 were used for analysis as they were fully filled. Thus the response rate is found to be 81.96%. The sampling technique used here is stratified random sampling. Five point likert's scale is used here in the questionnaire. The questionnaire related to demographic profile was also added to make the study more explorative and descriptive.

DATA ANALYSIS

The data collected through structured questionnaire is analyzed using SPSS 17.0 version. The various statistical tools used in the analysis of data are SERVQUAL model, t – test and ANOVA. Expectation and Perception of services in the healthcare industry provided by the private hospitals are calculated on eight dimensions i.e. Tangibility, Reliability, Responsiveness, Empathy, Assurance, Courtesy, Communication and Understanding the customer and 23 factors on five point likert scale. The Reliability analysis is done for all the 23 factors on eight dimensions and the value of cronbach's alpha is found to be 0.724, which is well above 0.6.

DEMOGRAPHIC PROFILE OF PATIENTS

Table 2: Demographic profile - Gender

GENDER		PERCENTAGE
Male	72	72%
Female	28	28%

Table 3: Demographic profile – Educational Qualifications

EDUCATIONAL QUALIFICATION		PERCENTAGE
Upto Schooling	23	23%
Graduate	59	59%

Post Graduate and more	18	18%
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Table 4: Demographic Profile – Age Group

AGE GROUP (IN YEARS)		PERCENTAGE
Below 25	24	24%
25 to 50	48	48%
50 & Above	28	28%

Table 5: Demographic Profile – Income Group

INCOME GROUPS (P.A.)		PERCENTAGE
Less than Rs. 3,00,000	20	20%
Rs. 3,00,000 to Rs. 5,00,000	38	38%
Rs. 5,00,000 & Above	42	42%

SERVQUAL MODEL FOR IDENTIFYING SERVICE QUALITY GAPS**Table 6: SERVQUAL Model for finding the gaps between Perceptions and Expectations**

DIMENSIONS	PERCEPTION(P)	EXPECTATION(E)	P – E
Tangibility			
1. Physical Facilities are visually appealing.	3.17	3.06	0.11
2. Appearance of doctors and staff of hospital are neat and professional.	3.12	2.95	0.17
3. Written materials are easy to understand.	3.68	2.89	0.79
4. Modern equipments are available in the hospital.	3.25	3.15	0.1
TOTAL	13.22	12.05	1.17
AVERAGE TOTAL	3.305	3.0125	0.2925
Reliability			
5. Services performed by staff and doctors of hospital as promised.	3.49	3.20	0.29
6. Documents are fast to retrieve and error	3.33	2.99	0.34

free.			
7. Same level of service experienced day and night.	3.78	2.97	0.81
TOTAL	10.6	9.16	1.44
AVERAGE TOTAL	3.53	3.05	0.48
Responsiveness			
8. In case of emergency, hospital staff responds quickly.	3.34	3.19	0.15
9. Hospital staff and doctors show willingness to answer question of patients and their family members.	3.48	2.97	0.51
10. Waiting time in hospital is not more than one hour.	3.25	3.18	0.07
11. While talking to staff and doctors the patients and their family members feel confident.	3.23	3.15	0.08
TOTAL	13.3	12.49	0.81
AVERAGE TOTAL	3.325	3.1225	0.2025
Assurance			
12. Staff and doctors of hospital are friendly and courteous.	3.23	3.20	0.03
13. Patients and their family members are treated with dignity and respect.	3.24	2.99	0.25
14. Staff and doctors of hospital give clear explanation on the medical condition of patient.	3.43	3.24	0.19
TOTAL	9.9	9.43	0.47
AVERAGE TOTAL	3.3	3.14	0.15
Empathy			
15. Obtain feedback and keep the patients	3.52	3.14	0.38

informed.			
16. Staff and doctors of hospital understand the specific needs of the patients.	3.45	3.16	0.29
TOTAL	6.97	6.3	0.67
AVERAGE TOTAL	3.485	3.15	0.335
Courtesy			
17. Staff and doctors look busy and rude when patients and their family members ask questions.	3.22	3.15	0.07
18. Staff and doctors observe consideration to the property and values of patients.	3.49	3.15	0.34
TOTAL	6.71	6.3	0.41
AVERAGE TOTAL	3.355	3.15	0.205
Communication			
19. During customer's contacts service point, staff listens to problem and demonstrates understanding and concern.	3.34	3.20	0.14
20. Staff able to explain clearly to a particular query.	3.37	3.19	0.18
21. Staff members call if a scheduled appointment is missed.	3.17	3.13	0.04
TOTAL	9.88	9.52	0.36
AVERAGE TOTAL	3.29	3.17	0.12
Understanding the Patients			
22. Staff recognizes the regular patients.	3.19	3.06	0.13
23. Staff is flexible enough to accommodate to patient's schedule.	3.24	3.17	0.07
TOTAL	6.43	6.23	0.2
AVERAGE TOTAL	3.215	3.115	0.1

SERVQUAL TOTALS	77.01	71.48	5.53
SERVQUAL AVERAGE	3.34	3.10	0.24

From the above Servqual Model, it is observed that there is a requirement of improvement in all the 23 factors on service quality aspects. There are certain factors where the service quality gap is more than 0.5 i. e. more than 10 % as the scale taken here is five point Likert's scale. The factors which have more than 0.5 service quality gap are written materials are easy to understand, same level of service experienced day and night, and staff and doctors show willingness to answer question of patients and their family members. Same level of service at all times of the day and staff willingness to answer customer's questions are critical here. The factor 'easy to understand written materials' is not that critical as written material is in medicinal terms and decision makers here are different from the users.

t- TEST AND ANOVA TEST FOR DEMOGRAPHIC COMPARISON

The t- test is used here for the Gender wise comparison of data and Anova is used for age, education and income wise comparison of data.

Table 7: t – Test and Anova Test

DIMENSIONS	GENDER	AGE	EDUCATION	INCOME
Tangibility	0.487	0.114	0.878	0.076
Reliability	-0.925	0.091	0.246	0.055
Responsiveness	1.026	1.168	0.093	0.773
Assurance	-0.009	0.159	0.998	0.778
Empathy	2.419*	0.119	0.550	3.246*
Courtesy	0.167	0.817	1.326	0.076
Communication	-0.939	0.500	0.142	1.479
Understanding the Patients	1.152	2.234*	0.145	0.761

To achieve a significance level of 0.05 for a two-sided test, the absolute value of the test statistic ($|z|$) must be greater than or equal to the critical value 1.96.

From table 7, it is observed that there is a significant difference of gender in the empathy factor out of the eight factors, only empathy factor has a significant difference between male and female while other factors in the gender have no significant difference in gender. Thus in other factors except empathy patients do not have significant difference in males and females. If we observe the mean values males are more satisfied than female in terms of empathy factors on which the management of hospitals needs to pay more attention.

If we observe in the age group there is also a significant difference in understanding the patients and again the empathy factor in the Income group has a significant difference.

PAIRED SAMPLE T-TEST STATISTICS

Table 8: Paired Sample t- test

DIMENSIONS	t- value	p - value
Tangibility		
1. Physical Facilities are visually appealing.	2.24	.027*
2. Appearance of doctors and staff of hospital are neat and professional.	2.18	.031*
3. Written materials are easy to understand.	4.52	.000
4. Modern equipments are available in the hospital.	7.32	.000
Reliability		
5. Services performed by staff and doctors of hospital as promised.	6.54	.000
6. Documents are fast to retrieve and error free.	7.95	.000
7. Same level of service experienced day and night.	7.51	.000
Responsiveness		
8. In case of emergency, hospital staff responds quickly.	6.87	.000
9. Hospital staff and doctors show willingness to answer question of patients and their family members.	6.45	.000

10. Waiting time in hospital is not more than one hour.	5.08	.000
11. While talking to staff and doctors the patients and their family members feel confident.	6.58	.000
Assurance		
12. Staff and doctors of hospital are friendly and courteous.	6.37	.000
13. Patients and their family members are treated with dignity and respect.	5.05	.000
14. Staff and doctors of hospital give clear explanation on the medical condition of patient.	6.39	.000
Empathy		
15. Obtain feedback and keep the patients informed.	7.24	.060
16. Staff and doctors of hospital understand the specific needs of the patients.	6.84	.079*
Courtesy		
17. Staff and doctors look busy and rude when patients and their family members ask questions.	7.94	.000
18. Staff and doctors observe consideration to the property and values of patients.	5.81	.000
Communication		
19. During customers contacts service point, staff listen to problem and demonstrate understanding and concern.	9.55	.000
20. Staff able to explain clearly to a particular query.	8.58	.000
21. Staff members call if a scheduled appointment is missed.	8.62	.000
Understanding the Patients		
22. Staff recognize the regular patients.	5.84	.000
23. Staff is flexible enough to accommodate to patient's schedule.	8.24	.000

Above table 8, represent the significant difference between the perception and expectation of services on all the dimensions and statements. Various statements like Physical Facilities are

visually appealing, Appearance of doctors and staff of hospital are neat and professional, Obtain feedback and keep the patients informed and Staff and doctors of hospital understand the specific needs of the patients were found to be significant at 5% level of significance. It can be concluded here that there is a significant difference between the patients' expectations and perceptions at the 95 per cent confidence level. However, for all the other statements, there is a statistical significance of $p < .01$, which illustrates a statistically significant gap between the patients' perceptions and expectations of service at the 99 per cent confidence level.

REGRESSION ANALYSIS

Regression analysis is done to analyze and generalize the results and is being done to find the relationship between certain dimensions and variables. Here in the Regression Analysis all the factors i.e. Tangibility, Reliability, Responsiveness, Assurance, Empathy, Courtesy, Communication and Understanding the Patients are taken as the independent variables while other factors i.e. value for expenses paid, satisfaction with the experience and willingness to recommend are serving as the dependent variables. The data is being represented below. All the dimensions i.e. Tangibility, Reliability, Responsiveness, Assurance, Empathy, Courtesy, Communication and Understanding the Patients are regressed against one another to check the problem of multicollinearity. In all cases, no significant multicollinearity exists between the dimensions.

Table 9: The Correlates of Patients Value (in terms of money spent)

DIMENSIONS	Beta	t	sig
Tangibility	0.87	0.766	0.139
Reliability	0.07	0.101	0.912
Responsiveness	0.370	2.883	0.000
Assurance	0.034	0.388	0.291
Empathy	0.064	0.562	0.568
Courtesy	0.431	0.642	0.451
Communication	0.042	0.561	0.349
Understanding the Patients	0.08	0.127	0.927
R	0.863		

R Square	0.765		
R Square (Adj)	0.660		

ANOVA

Table 10: Anova Table

Model	Sum of Squares	df	Mean Square	F	sig
Regression	51.23	5	10.233	6.239	.000
Residual	147.13	96	1.64		
Total	198.35	101			

The above table 10, illustrates that there is a strong correlation of 0.863 between dimensions and value in terms of money spent by the patients in the private hospitals. It means there is a strong positive correlation between the service dimensions and the value in terms of money spent. The value of adjusted R^2 is 0.660 this is being taken as it is a case of multiple correlation where dimensions itself can correlate and affect the line of best fit which clearly indicates that 66% variances in value in terms of money spent are explained by the service quality dimensions. From the Anova table it is clear that the service quality dimensions are significant to explain the value in terms of money spent as the significant value is less than 1% level of significance. The beta factor is higher in case of Tangibility and then in Empathy, it means the private hospitals has to concentrate more on this service quality dimension tangibility and empathy as these are the most important dimensions for predicting the perception of patients regarding value in terms of money spent.

Table 11: The Correlates of Patient Satisfaction with the Experience

DIMENSIONS	Beta	t	sig
Tangibility	0.117	0.943	0.348
Reliability	0.062	0.516	0.605
Responsiveness	0.173	1.270	0.207
Assurance	- 0.057	-0.559	0.576
Empathy	0.149	1.170	0.245
Courtesy	0.424	0.635	0.444

Communication	0.035	0.554	0.342
Understanding the Patients	0.01	0.120	0.920
R	0.860		
R Square	0.714		
R Square (Adj)	0.633		

ANOVA

Table 12: Anova

Model	Sum of Squares	df	Mean Square	F	sig
Regression	19.65	5	3.919	3.565	0.002
Residual	104.65	96	1.099		
Total	124.30	101			

The above table 11, illustrates that there is a strong correlation of 0.860 between service quality dimensions and overall satisfaction of patients in terms of services offered by the private hospitals. It means there is a strong positive correlation between the service quality dimensions and overall satisfaction of patients in terms of services offered by the private hospitals. The value of adjusted R^2 is 0.633 this is being taken as it is a case of multiple correlation where dimensions itself can correlate and affect the line of best fit which clearly indicates that 63.3% variances in overall satisfaction of patients are explained by the service quality dimensions. From the Anova table it is clear that the service quality dimensions are significant to explain the overall satisfaction of patients as the significant value is less than 1% level of significance.

Table 13: The Correlates of the Patients' Willingness to Recommend

DIMENSIONS	Beta	t	sig
Tangibility	0.104	0.703	0.502
Reliability	0.080	0.524	0.620
Responsiveness	0.072	0.420	0.695
Assurance	-0.023	-0.313	0.758

Empathy	0.176	1.214	0.245
Courtesy	0.427	0.638	0.447
Communication	0.038	0.557	0.345
Understanding the Patients	0.04	0.123	0.923
R	0.828		
R Square	0.803		
R Square (Adj)	0.729		

ANOVA

Table 14: Anova

Model	Sum of Squares	df	Mean Square	F	sig
Regression	14.09	5	2.807	1.960	0.001
Residual	136.58	96	1.432		
Total	150.67	101			

The above table 13, illustrates that there is a strong correlation of 0.828 between service quality dimensions and willingness to recommend. It means there is a strong positive correlation between the service dimensions and willingness to recommend. The value of adjusted R^2 is 0.729 this is being taken as it is a case of multiple correlation where dimensions itself can correlate and affect the line of best fit which clearly indicates that 72.9% variances in willingness to recommend are explained by the service quality dimensions. From the Anova table it is clear that the service quality dimensions are significant to explain the overall satisfaction of patients as the significant value is less than 1% level of significance.

CONCLUSION

It is concluded that here the private hospitals are performing sufficiently well in terms of the dimensions of the service quality model. The higher gap score is argued in terms of patients' lack of experience and knowledge to judge certain dimensions. Therefore, to some extent the gaps may be inevitable, and the issue of 'experience' comes into the equation, which has been

previously raised as one of SERVQUAL's limitations (Buttle, 1996). As each of the dimensions of the SERVQUAL model containing twenty three statements tested significantly the private hospitals could adopt a corporate policy drive to improve quality across the board. However, a more focused approach may be to focus on those areas considered to be of most relative importance as perceived among the sample. From the data collected, it was discovered that there are certain factors where the service quality gap is more than 0.5 i. e. more than 10 % as the scale taken here is five point Likert's scale. The factors which have more than 0.5 service quality gap are written materials are easy to understand, same level of service experienced day and night, and staff and doctors show willingness to answer question of patients and their family members. Same level of service at all times of the day and staff willingness to answer customer's questions are critical here. The factor 'easy to understand written materials' is not that critical as written material is in medicinal terms and decision makers here are different from the users. It is observed that there is a significant difference of gender in the empathy factor out of the eight factors, only empathy factor has a significant difference between male and female while other factors in the gender have no significant difference in gender. Various statements like Physical Facilities are visually appealing, Appearance of doctors and staff of hospital are neat and professional, Obtain feedback and keep the patients informed and Staff and doctors of hospital understand the specific needs of the patients were found to be significant at 5% level of significance.

LIMITATIONS OF STUDY

It is recommended that more research should be undertaken amongst the patients in private hospitals on a global basis. Such kind of research will provide the fruitful data and results can be used in comparing the services being provided by the private hospitals.

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