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Service Quality in Healthcare: Patients' Perspective

Abstract

In today's highly competitive environment, hospitals are increasingly realizing the need to focus on service quality as a measure to improve their competitive positions. Customer based determinants and perceptions of service quality play an important role when choosing a hospital. A service quality perception study was undertaken in three hospitals in Delhi. The well-documented 'Service Quality Model' was used as a conceptual framework for understanding service quality delivery in health care services. The measuring instrument used in this study was the SERVPREF questionnaire for understanding the patients' perceptions about the service quality being provided by three healthcare institutions in Delhi. An analysis covering a sample of 150 patients revealed that there is an overall difference among the services provided by these hospitals. This study also assessed the relative importance of each of the five service quality dimensions - reliability, responsiveness, assurance, tangibles, and empathy - as compared to the others. Improvements need to be made according to the type of hospital - government, trust or corporate.

Key Words: Healthcare, Service Quality, Perception, SERVPREF

Introduction

Healthcare delivery is a service industry that is both labor and capital intensive. Any institution that has to deliver through people using infrastructure resources,

within a short period of time, at minimal cost, and of a specific quality, needs management. The major differences are: hospitals deal with people rather than materials or products as an end; involve 24 hours work; of emergency nature; involve high risk; ethical and legal issues; work is highly stressful since lives are affected. Studies have revealed that patients and their caregivers are concerned with the cost and quality of healthcare services and also with the personal touch provided.

The Indian healthcare industry is estimated to be a USD17 billion (Rs 80,000 crore) industry. The totals spend on the healthcare sector currently accounts for 6.1 per cent of the GDP, of which the government spends 1.1 per cent. The annual growth rate of the industry is 13 per cent and is expected to continue as healthcare is recession proof. Most healthcare users pay from their own pocket and prefer to use private services as compared to government services. Major corporations like the Tatas, Apollo Group, Fortis, Max, Wockhardt, and Escorts have made significant investments in setting up state-of-the-art private hospitals in cities across India. India receives 1.5 lakh medical tourists every year. A CII-McKinsey report has projected that medical tourism could contribute Rs 5,000-10,000 crore (Rs 50-100 billion) as additional revenue for the tertiary care hospitals by

2012. This will account for 3-5 per cent of the total healthcare delivery market.

Research in both the manufacturing and services industries indicates that delivering high service quality produces measurable benefits in profit, cost savings, and market share (Zeithaml, et al., 1988). In India the past few years have witnessed an increasing concern regarding the quality of healthcare services. The globalisation and liberalisation policies have significantly changed the health care scenario in India. With increasing awareness, the patients, as consumers, expect quality in healthcare services. Quality has been shown to be an important element in the consumers' choice of hospitals (Lynch and Schuler, 1990). In the light of these changes, there is a need to improve the quality of healthcare services.

Researchers divide service quality into two components: **technical quality** and **functional quality** (Parasuraman, et al., 1988; Lewis, 1991). Technical quality is defined primarily on the basis of technical accuracy and procedures. Functional quality refers to the manner in which service is delivered to the customer. In the health care setting, patients understandably tend to rely on functional attributes (e.g., facilities, cleanliness, quality of hospital food, hospital personnels' attitudes) rather than technical attributes when evaluating

the service quality because they are unable to evaluate the technical quality due to lack of expertise (Babakus and Boller, 1991; Lanning and O'Connor, 1990).

Literature review

Service quality in different sectors has been studied and some are listed below.

Parsuraman, et al. (1988) pointed out that many tangible cues such as style, hardness, color, feel, package and fit were used by the consumers to judge the quality of the products, but while purchasing services, the tangible evidence was limited to the service provider equipment, physical facility and personnel. In an extensive exploratory investigation in service businesses, Parsuraman, et al. (1988) developed a framework of service quality. They devised a model called "Gap Analysis Model" and defined service quality as the degree of discrepancy between customers' expectation from the service and their perception of service performance. Subsequent empirical work based on the exploratory research yielded SERVQUAL, a 22-item scale for measuring service quality along five dimensions: reliability, responsiveness, assurance, empathy and tangibles.

The multi-dimensionality of healthcare quality was supported by **Griffith and Alexander** (2002). Given the consumers'

propensity to switch service providers rather than complain, it is of paramount importance for hospitals to be aware of what the patients look for while evaluating the professional services of a particular hospital. Perception of hospital care is derived from a set of criteria based on perceptual cues that patients use. **Lehtinen and Jukka** (1985) present how to measure, monitor, and operationalize customer perceptions of service quality in health care organizations.

John (1989) argues that there are four dimensions of health care service quality: curing, caring, access, and the physical environment dimensions

Reidenbach and Sandifer-Smallwood (1990) developed an instrument based on the original ten-dimension questionnaire developed by Parasuraman, et al. (1988). They analyzed patient service needs by examining the differing perceptions of service held by patients in three basic hospital settings: emergency room services; inpatient services; and outpatient services. Differential impacts were found in all the three hospital settings.

Babakus and Glynn (1992) empirically evaluated SERVQUAL for its potential usefulness in a hospital service environment. The completed perceptions and expectations scales met various criteria

for reliability and validity. Suggestions were provided for the managerial use of the scale and a number of future research issues were identified.

An empirical study in a Belgian hospital by **Vandamme and Leunis** (1993) has been reported on the development of an appropriate multiple-item scale to measure hospital service quality. Discrepancies between SERVQUAL and the dimensions obtained from their study were discussed in some detail, along with the reliability and validity properties of the scale.

Bowers, et al. (1994) studied the five attributes of quality from SERVQUAL model. Their results from a quantitative analysis lend support to qualitative conclusions. Caring and communication were found to be significant. Three of the generic SERVQUAL dimensions were found to be related significantly to patient satisfaction: empathy, responsiveness and reliability.

Anderson (1995) measured the quality of services provided by a public university health clinic, using a 15-item instrument representing the five dimensions of SERVQUAL. According to her findings, all the five dimensions measured negatively, assurance being most negatively measured. Based on these results, Anderson made recommendations

for budgeting future quality improvement projects.

Youssef, et al. (1995) measured service quality in West Midlands NHS hospital and in all the five dimensions of SERVQUAL that were measured found that patients' perceptions failed to meet their expectations. Another study by **Youssef and Nel** (1996) revealed reliability as the most serious problem facing the NHS hospital providers involved in their study.

A study by **Sewell** (1997) in the NHS hospitals showed reliability as the most important dimension, followed by assurance. Empathy and responsiveness were found to be of equal importance, while tangibles were found to be the least important dimension.

Lim and Tang (2000) attempted to determine the expectations and perceptions of patients in Singapore hospitals through the use of modified SERVQUAL that included 25 items representing six dimensions; namely, tangibles, reliability, assurance, responsiveness, empathy, and accessibility and affordability. Their study revealed the existence of an overall service quality gap between patients' perceptions and expectations.

Service quality encompasses numerous factors that are important to customer satisfaction and is defined as the ability of

the service provider to satisfy customer needs. Satisfaction is related to expectations and perceived delivery on these dimensions. The task is complicated in the case of service because of the intangible nature of services and the variation in services offered to different customers. Customers must be given quality service as the industry is very competitive and if customers are lost, it is extremely difficult to them win back. Most customers do not complain when they experience problems they just take their business elsewhere.

Satisfaction = function of
{Expectation and Perceived delivery}

Perceived Delivery < Expectation
--> Dissatisfaction

Perceived Delivery = Expectation
--> Satisfaction

Perceived Delivery > Expectation
--> Delight

Perceived Delivery >> Expectation
--> Astonishment

There are five dimensions of service quality as defined by Parasuraman, et al. (1988) and listed below:

1. **Reliability:** customers expect that companies will do what they say and they will do when they say they will do it.

2. **Responsiveness:** willingness of the employees to help customers and provide prompt service.

3. **Assurance:** knowledge and courtesy of employees and their ability to inspire trust and confidence.

4. **Tangibles:** appearance of the physical facilities, equipment, personnel, and communication materials.

5. **Empathy:** refers to the caring, individualized attention the firm provides to its customers.

Several researchers find the performance perceptions to be sufficient in assessing service quality as compared to the gap (Carman, 1990). This resulted in the adoption of the SERVPREF instrument instead of the gap based measure of SERVQUAL. The final instrument consists of 22 items. All items are measured using a seven point Likert scale, from '1 - Strongly disagree' to '7 - Strongly agree'.

Service quality dimensions in hospitals

Reliability

- When excellent hospitals promise to do something by a certain date, they do so. (e.g., tests, follow-ups, surgeries).

- When a patient has a problem, excellent hospitals will show a sincere interest in solving it (e.g., registration, calling the concerned doctor to attend to the case).

- Excellent hospitals will be dependable (e.g., services provided at appointed time, error free and fast retrieval of documents, good communication, good treatment).
- Excellent hospitals will provide their services at the time they promise to do so. (e.g., emergency care, casualty services).
- Excellent hospitals will get the things right the first time (e.g., correct diagnosis, prompt treatment)

Responsiveness

- Personnel in excellent hospitals will tell patients exactly when services are provided. (e.g., admissions, ward facilities, visiting hours).
- Personnel in excellent hospitals will give prompt services to patients. (e.g., house-keeping, nursing, speed and ease of both admission and discharge).
- Personnel in excellent hospitals will always be willing to help patients. (e.g., smiling, kind hearted staff).
- Personnel in excellent hospitals will never be too busy to respond to patients' requests (e.g., attending immediately whenever called).

Assurance

- The behaviour of personnel in excellent hospitals will instill confidence in patients. (e.g.,

convincing briefings by medical and paramedical staff).

- Patients of excellent hospitals will feel safe in their dealings with the hospital. (e.g., cost of treatment, medicines, trust in the personnel).
- Personnel at excellent hospitals will be consistently courteous with their patients. (e.g., patients treated with dignity and respect, impartial treatment, sympathetic approach).
- Personnel of excellent hospitals will have the knowledge to answer patients' questions. (e.g., thoroughness of explanation of medical condition)

Tangibles

- Excellent hospitals will have modern equipment. (e.g., C.T., M.R.I.).
- The physical facilities at excellent hospitals are visually appealing. (e.g., well maintained, computerized billing and registration facilities, neat and clean labs, rooms).
- Personnel at excellent hospitals will be neat in appearance (e.g., staff in uniform with name badges, professional appearance of staff).
- Materials associated with the services will be visually appealing in an excellent hospital. (e.g., clean and comfortable environment with good directional signs, informative

brochures about services, stretchers, wheelchairs).

Empathy

- Excellent hospitals will give patients individual attention. (e.g., bed side care, proper diet, and courteous staff).
- Excellent hospitals will have operating hours convenient to all their patients (e.g., 24-hour service facility).
- Excellent hospitals will have the patients' best interests at heart. (e.g., sympathetic care, consistent charges).
- The personnel at excellent hospitals will understand the specific needs of their patients. (e.g., receiving, investigating & sending them to specific departments for treatment).
- Excellent hospitals will keep their patients informed and listen to them. (e.g., operation details, explaining nutritional needs, pre-op & post-op care).

Need for the study

The literature survey suggests the need to fill the research gap in analyzing the service quality of healthcare sector in India.

1. Health services are intangible and highly reliant on experience. In order to promote them effectively, a service provider must first identify the dimensions used by consumer to evaluate the service quality of the health care institutions prior to becoming a customer. Once the service quality dimensions are identified, service managers should be able to improve the delivery of customer perceived quality.

2. Investigating the influence of the dimensions of service quality on customers' behavioral intentions should provide a better understanding of the drivers of customer satisfaction and also help to measure, control and improve customer perceived service quality.

Objectives

The objectives are to identify the important service quality dimensions of the health sector from the patients' perspective:

- To understand the service quality dimensions of the health care sector.

- To generate service quality perception scores on different dimensions.

- To understand how well the hospitals in Delhi are performing on these identified service quality dimensions.

- The relative importance of the five dimensions to the customers and to

rank them in order of importance to the patients.

Hypothesis

Regarding patient perceptions of service quality, one hypothesis was formulated:

H_0: There is no difference in patients' perception of service quality among the three hospitals in Delhi.

H_1: There is a difference in patients' perception of service quality among these hospitals.

Methodology

The study is a cross-sectional empirical study. Purposive sampling was used and limited to patients and their caregivers of Lok Nayak Hospital, Sir Ganga Ram Hospital and Max Hospital (Pitampura). The sample size was 150 respondents, 50 at each of the three hospitals. A multi-dimensional structured questionnaire of 22 items, SERVPREF was used to measure patients' perceptions of service quality (Parasuraman, et al., 1988). Averages were used to measure perception scores. Statistical Package for Social Sciences (SPSS) was used for data analyses. One-way ANOVA was used to test whether any significant difference exists in the perceptions of patients' service quality among the hospitals.

Hospitals under study:
Lok Nayak Jai Prakash Hospital (Hospital A)

One of the prestigious teaching hospitals of Government of Delhi, Lok Nayak Jai Prakash (LNJP) Hospital functions as a tertiary referral centre. It has over 2000 beds in all the specialties. The associated Maulana Azad Medical College, GB Pant Hospital and Guru Nanak Eye Centre are integrated in all functions of health care delivery, teaching, training and research activities.

Sir Ganga Ram Hospital (Hospital B)

Sir Ganga Ram Hospital (SGRH) is a 650-bed multi-specialty state-of-the-art hospital in Delhi. It provides comprehensive health care services and is a premier medical institution. The hospital is run by the Sir Ganga Ram Trust Society. SGRH makes available 20% of its total bed strength for financially weaker section of the society who are provided services free of cost.

Max Healthcare, Pitam Pura (Hospital C)

Max Healthcare is an integrated healthcare system, offering three levels of clinical service (Primary, Secondary, and Tertiary) within one system. Facilities include 100

beds available as single rooms, double rooms, four bed wards and economy wards.

Results

The results obtained from the questionnaire are given below.

Respondents' Profile

Total sample size = 150

The respondents' profile is given as follows:

1) Age group

18-25yrs

-       **11%**

26-40yrs

-       **76%**

41yrs & above

-       **13%**

2) Purpose of visit

Specific illness

-       **73%**

Medication

-       **14%**

Routine check-up

-       **8%**

To visit a relative

-       **5%**

3) Occupation

Govt. employees

-       **46%**

Businessmen

-       **23%**

Private sector employees

-       **24%**

Others (housewives/students/retired)

-       **7%**

Mean scores for all respondents are presented in Table 1.

Service Quality Dimensions	Hospital	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min.	Max.
						Lower Bound	Upper Bound		
Reliability	A	50	4.01	0.4	5.66E-02	3.89	4.12	3	5
	B	50	5.04	0.23	3.28E-02	4.97	5.11	5	5
	C	50	4.56	0.26	3.72E-02	4.48	4.63	4	5
	Total	150	4.53	0.52	4.26E-02	4.45	4.62	3	5
Responsiveness	A	50	3.52	0.49	6.88E-02	3.38	3.66	2	4
	B	50	5.15	0.17	2.37E-02	5.1	5.2	5	6
	C	50	4.72	0.35	5.00E-02	4.61	4.82	4	6
	Total	150	4.46	0.78	6.36E-02	4.34	4.59	2	6
Assurance	A	50	4.1	0.551	7.79E-02	3.9434	4.2566	2.75	5.25
	B	50	4.445	0.4143	5.86E-02	4.3273	4.5627	3.75	5
	C	50	4.075	0.3322	4.70E-02	3.9806	4.1694	3.5	5
	Total	150	4.2067	0.4704	3.84E-02	4.1308	4.2826	2.75	5.25
Empathy	A	50	4.415	0.186	2.64E-02	4.362	4.468	4	4.8
	B	50	4.18	0.299	4.23E-02	4.095	4.265	3.5	5
	C	50	4.54	0.408	5.78E-02	4.424	4.656	4	5.5
	Total	150	4.378	0.344	2.81E-02	4.323	4.434	3.5	5.5
Tangibility	A	50	3.305	0.4018	5.68E-02	3.1908	3.4192	2.25	4
	B	50	6.175	0.3164	4.48E-02	6.0851	6.2649	6	7
	C	50	5.16	0.2661	3.76E-02	5.0844	5.2356	5	6
	Total	150	4.88	1.2373	0.101	4.6804	5.0796	2.25	7

Table 1. Descriptive Scores

Hospital A, LNJP

Average Service Quality Score:
3.8696

Hospital B, SGRH

Average Service Quality Score: 4.998

Hospital C, Max Pitampura

Average Service Quality Score:
4.6092

Overall Scores for Health Care Service Quality for the 3 Hospitals

Overall Service Quality Perception:
4.4918

Discussion

Comparing the mean scores of the above mentioned three hospitals, the following are observed:

- Hospital A (LNJP, government) performs least in the **Tangibility** aspect while the **Empathy** scores are highest for this kind of set-up.
- Hospital B (SGRH, trust) performs least in the **Empathy** aspect while the **Tangibility** scores are highest for this kind of set-up.

Table 2. One-Way ANOVA

- Hospital C (Max Pitampura, corporate) performs least in the **Assurance** aspect while the **Tangibility** scores are highest for this kind of set-up.

Based on the above scores, the following deductions were made:

Patients and their caregivers give importance to all the five service quality dimensions in the following order of preference:

1. Assurance
2. Empathy
3. Responsiveness
4. Reliability
5. Tangibility

This means that the most important service quality dimension for these customers/patients/relatives is the aspect of **Assurance** and the least important out of these is **Tangibility** aspect.

One-way ANOVA was applied. The critical test value with d.f. (2, 147) and significance level   = 0.05 is 3.00. The calculated values of *F* from Table 2 are greater than the critical test value hence the **null hypothesis (Ho) is rejected.** This implies that there is a difference in the service quality of the three hospitals.

Service Quality Dimensions	Sum of Squares		df	Mean Square	F Value	p Value
Reliability	**Between Groups**	26.66	2	13.33	141.357	0.0001
	Within Groups	13.86	147	9.43E-02		
	Total	40.52	149			
Responsiveness	**Between Groups**	71.236	2	35.618	273.985	0.0001
	Within Groups	19.106	147	0.13		
	Total	90.342	149			
Assurance	**Between Groups**	4.276	2	2.138	10.964	0.0001
	Within Groups	28.693	147	0.195		
	Total	32.968	149			
Empathy	**Between Groups**	3.341	2	1.67	17.216	0.0001
	Within Groups	14.251	147	9.70E-02		
	Total	17.592	149			
Tangibility	**Between Groups**	211.802	2	105.901	954.063	0.0001
	Within Groups	16.288	147	0.111		
	Total	228.09	149			

Recommendations

Improve the technical service quality as well as functional service quality by implementing strategies for service enhancement**.** Listening to what customers and employees feel about the services. These will include conducting internal performance analysis, customer satisfaction analysis, and specialist market research.

Customer Retention

Customer retention and relationship marketing concepts have come to be accepted in services marketing. It is more economical to retain a customer than to acquire a new one. Existing customers are induced to use more services of the same hospital and enhance customer loyalty. Trust and relationship commitments lead to satisfaction and customer loyalty. While it is common to both the manufactured goods and services that customer retention brings more revenues than running after new customers, the approach to customer retention is very different. In the case of

manufactured goods, it is the zero-defect quality that matters while in services it is the service quality that matters most. While product and service quality are the minimum requirements, the quality of relationship with the customers is emerging as a proper measure of success.

Role of Internal Marketing in Customer Retention

Internal marketing means that the service firm must efficiently train & motivate its customer contact employees & supporting service people to work as a team to provide customer satisfaction. Internal marketing was originally proposed as an approach to service management, which entailed the application of traditional marketing concepts within the organization in order to improve corporate effectiveness.

Future Service Strategy

Traditional marketing strategy revolved around the identification of the target market and deciding on the 4Ps of Product, Price, Place and Promotion to satisfy the needs of the customers. In the case of services what is needed is a clear understanding of the customer' needs that the company would like to meet and then develop a strategy. This strategy will determine the kind of people and the kind of delivery systems that will effectively implement the strategy.

Strategies to improve quality and patient safety in hospitals

Many strategies are reported in the literature, and are listed below.

Increasing resources:
Increasing the financing, personnel, facilities or equipment used in a hospital, with the aim of treating more patients or treating the same number faster, better and at lower cost-per-person.

Large-scale reorganization or financial reform:
Changing the structure of a hospital or health system so as to facilitate better decision-making and use of resources. Changes in financing methods are made as a way of improving quality.

Strengthening management:
Improving quality by increasing management responsibilities, authority or competencies.

Standards and guidelines formulation and implementation:
Formulating standards of what is expected from health providers, communicating, providing training in, and enforcing the standards. Examples are the United Kingdom's national standards frameworks, and clinical practice guidelines for various health conditions. Most medical and clinical audits fall within this category, as well as some approaches called "quality assurance" and "clinical pathways". Many individual audit projects report positive results but do not meet scientific standards of evidence. No evaluations of auditing as a

hospital-wide or national strategy provide strong evidence of results. Perceived benefits of auditing included improved communication and patient care, increased professional satisfaction, and better administration. Disadvantages were perceived as diminished clinical ownership, fear of litigation, hierarchical and territorial suspicions, and professional isolation. Key facilitating factors were modern medical records systems, effective training, dedicated staff, protected time, structured programs, and a dialogue between purchasers and providers.

Patient empowerment and rights:

Giving patients a voice, for example through complaints systems or patient satisfaction questionnaires, as well as publicizing what patients have a right to expect. There may also be methods to strengthen patient power through legal entitlement, advocacy or other institutions, such as a right to treatment within 30 minutes of arriving at an emergency room.

Quality management system:

Defines responsibilities for quality and puts into place the structures and systems to ensure it. The International Organization for Standardization (ISO) issues guidelines used by some European hospitals to design quality management systems. The composition of such a system is interpreted differently from country to country in the absence of overarching standards.

Quality assessment and accreditation, internal or external:

There are many assessment systems. A related strategy is voluntary or compulsory external quality assessment by a third-party peer review organization, or governmental body. This may or may not involve issuing formal accreditation. Accreditation systems differ in which aspects of hospital operations are assessed and whether quality outcomes are considered in the assessment. Some experts argue that hospital accreditation programs are not a good use of resources in low-income developing countries.

Risk management and safety:

Identify high risk procedures or situations that put the hospital at financial risk from patient claims. It includes methods for diagnosing causes of adverse events. Patient safety strategies often include risk management and a wide range of methods from other service industries for collecting and analysing adverse event or near miss reports with a view to prevention.

Conclusions

The importance and the human touch involved in healthcare makes patients to seek the best quality available. As patients are unable to assess the technical quality of health care, the functional attributes associated with healthcare delivery have been used by them.

Results from this study suggest that patients define healthcare quality in terms of tangibles, reliability, responsiveness, assurance and empathy. In the present study based on the data from the three hospitals in Delhi, SERVPREF appears to be a consistent and reliable instrument to measure healthcare service quality. The scores show that there is room for service quality improvement in Delhi hospitals especially in Tangibility (Hospital A, LNJP), Empathy (Hospital B, SGRH), and Assurance (Hospital C, Max Pitampura). On-time, professional and competent services are the patients' expectations from health care providers, and although hospitals in Delhi are providing good services in these areas, improvements are still needed to meet patients' expectations. Health care managers should focus on training the paramedical staff as well in order to build confidence in the patients' minds regarding service delivery. Our study shows that performance analysis is an appropriate way to identify inconsistencies between the management's and patients' expectations of service performance. Addressing these inconsistencies should form the basis for formulating strategies to ensure consistent expectations and experiences, thus increasing the likelihood of satisfaction and long-term patient-hospital relationships.

Limitations of the Study

Only hospitals were studied and these do not represent the health care status entirely (e.g., nursing homes, charitable hospitals, clinics, etc). The Emergency and other critical care services departments were not taken into consideration. The service quality perceptions were measured and not the expectations which would reveal the service gaps as well.

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