

ASSESSMENT OF SERVICE QUALITY IN HEALTH CARE SECTOR: A SURVEY OF PATIENTS

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Abstract

In today's highly competitive healthcare environment, hospitals increasingly recognize the need to focus on service quality as a means to improve their competitive position. Patients' expectations and perceptions of health care service quality as a result play a vital role when selecting a hospital. One of the principal concerns in Indian health care sector, centred on the issue of patient satisfaction. This paper attempts to conduct the gap analysis among patients' expectations and perceptions of health care service quality by means of a generic, internationally applied market research technique called SERVQUAL.

Key words: Service Quality, Patient Satisfaction, Health Care Sector, Patient Expectation, Patient Perception

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1. Introduction

Physical well being is the fundamental requirement of any individual, and it is said prevention is better than cure. Most of us rarely like to go to hospital but the era has come where we are needed to visit the hospital at least to get the assurance about the health condition to have some diagnosis. Services are deeds, processes and performances (Zeithaml and Bitner, 2003). Broadly, services include all economic activities whose output is not a physical product or construction is generally consumed at the time it is produced and provides added value in forms (convenience, amusement, timeliness, comfort or health) that are essentially intangible concerns of its first purchaser (Quinn, Baruch and Paquette, 1987). The Service sector consists of different dimensions and among them we have picked 'health care' which deals with different services such as, hospital services, diagnosis services, physicians' consultancies and some other emerging fields. The paper aims to tackle the issue of service provided by hospitals, access to expectations and satisfaction held by patients, to identify the relevant service quality dimensions used by patients to evaluate service quality and to determine the existence of significant difference in service quality expectation and satisfaction of patients. It has measured the gap of expectation and satisfaction of consumers who are none other than patients and attendants.

Service quality has become an important research topic in view of its significant relationship to cost, profitability, customer satisfaction, customer retention, service guarantees and financial performance. The service sector is expanding at an increasing rate and is becoming intensely competitive (Chen, et.al., 1994; Johnson, et.al., 1988). As such, service quality has become a very important issue in marketing and has received much attention due to being deregulated and thus has increased the competition among service providers (e.g.: health care, banking and telecommunications in the 1980's and utilities in the 1990's). Service quality has become so important that some businesses, not only need high levels of service quality for success, but in some cases, need it for survival (Buzzel and Gale, 1987; Chen et. al., 1994; Ford Motor Company, 1990; Germano, 1992; Hauser and Clausing, 1988; Howcroft, 1993; Kearns and Nadler, 1992; Kettinger and Lee, 1995; Koska, 1990).

Increasing competition in this sector has led the hospitals to realizing the need to focus on increase the service quality to maintain competitive position. Consumers are the determinants of

service quality and perception carried by them plays an important role in choosing a hospital. This paper presents service quality analysis of consumers (patients) studied in Bhubaneswar city of India. The measuring instrument used in this study is SERVQUAL. The analysis covers a sample of 450 patients that reveals the overall gap between patient's expectations and their perception about the health care service.

2. Background of Study

Patient satisfaction is getting the highest priority for health services. The patient satisfaction survey is becoming the primary tool of assessing this aspect of health care. This survey provides a 'snapshots of patients' opinions of medical/ health care practice. A health care organization purpose is to measure, analyze, and to report the degree to which they are meeting this goal within their organization. One of the primary concerns in Indian health care sector is the centralisation of issues of patient/consumer satisfaction. Today individuals are having different options when deciding on a specific health care provider due to increasing number of service providers and varying options of quality of services provided by them. Two specific and essential elements that influence the selection process for a healthcare service provider are the health care organisation reputation for its commitment to quality and the patient centred customer service. The world is passing through a phase of rapid transition from fragmented market system to a global one. During business in such an environment calls for a high degree of perfection which enables the enterprises to successfully cope up with challenges. Services are being highly competitive and the health care industry in India is moving very rapidly to face this situation. Quality assurance has become the major concern in the delivery of medical care. Quality of the product or service is an important parameter of a service organization to evaluate its performance and is equally done for the hospitals which are accountable to country as well as to the provider of the resources.

The concept of health restoration, rehabilitation, and belief of pain, prevention of disease or death is not tangible or qualify able in numerical or financial terms. Hence in the hospital resources provided in the form of facilities and standard practices forms important indices for measuring the quality of services rendered. The meeting of patient/client expectations are assumed to play a role in the process by which an outcome can be said to be satisfactory or

unsatisfactory. Expectations are an important influence on the patient/client's overall measurement of satisfaction with a health care experience. Patient/client satisfaction is influenced by the degree to which care fulfils expectation (Mahon, 1996). Some literature however suggests that a link between satisfaction and fulfilment of patient/client expectations is not necessarily the case, since it is possible that the patient/client's evaluation of a service may be largely independent of actual care received (Williams, 1994). Important factors influencing patients/clients satisfaction include literacy levels, intellectual and physical/sensory disability levels and difficulties with language proficiency or ethnic and cultural diversity. Social elements within our society must be considered as they can very often dictate whether the consumer will provide feedback and express their satisfaction or otherwise, e.g., financial status, educational status, demographics (urban/rural), technology. Previous measurements of patient satisfaction overwhelmingly show that the majority of consumer usually 80% or more, expresses overall satisfaction with their care, with few respondents responding negatively to any given item. Satisfaction is, however, a relative measure which research literature shows, may be influenced by many factors that should be considered.

Reflecting the prior discussions and necessities, the key research questions addressed in this study are:

How the major dimensions of service quality analysis work in Indian health care sector?

Is there any major significant gaps observed between patients' perception and expectation related to service quality of health care industry?

In this context, the broad purpose of this research study is to investigate the perception of service quality in Indian health care sector in the mindset of patients. More specifically the research aims to:

- Assess the current expectations and perceptions held by patients with respect to health care services provided by Indian hospitals
- Evaluate the major service quality dimensions used by patients in consuming health care services
- Determine the gaps between patients' perceptions about the service performance and their expectations with respect to hospital service quality parameters.

3. Review of Literature

From various studies, SERVQUAL appears to be a consistent and reliable scale to measure health care service quality. In principle, together with the information relative significance of service quality dimensions, it helps health care organization to identify where, and to some extent how, to improve the service they offered to patients. Given the importance of functional aspects of care, the SERVQUAL instrument has a useful diagnostic role to play in assessing and monitoring service quality in health care, enabling the organization to identify where improvements are needed from the patient's viewpoint. The findings of research provide valuable insights to relation of customer's health and service quality perceptions that can be used in quality improvement efforts (Dagger and Sweeney, 2007). The research framework has been proposed to measure service quality from the perspectives of patients as well as attendants (Padma, Rajendran and Sai, 2009). Importance of service delivery has been talked and said that factors of service quality influence customers overall sense of satisfaction with the services offered by the public and private sector hospitals (Kaul, Gupta and Jauhari, 2008). The research conducted by Reynoso and Moores, 1995 has contributed the different dimensions with its validity which is needed to assess the internal service quality of any organization. The study done by Choi. K et al., 2005 with the motivation to extend the test of functional relationship between health care service quality and patient satisfaction and concluded that the study broadens the scope of generalizability of the service quality satisfaction relationship. Leadership's role in developing systems for delivering quality is one of the most important aspects of satisfaction for customers in healthcare sector (Marley A. and Collier D., 2004). The research adds to the large body of previous research on service quality, which demonstrates that SERVQUAL is not a generic service quality measure for all industries and that "reliability" is the most important dimension in a healthcare context (Roshnee.R. and Fowder R., 2007). Research shows that major hospitals are lacking higher standard of quality service delivery because of ignorance of patient complaints (Hsieh S, Thomas D and Roten A., 2005) and the situation seems not to be unique. It is reassuring that service quality becomes the most critical consumer issue in health care setting (Rashid.W and Jusoff, 2008).

4. Design and Method of Study

The data for the study were collected through a structured questionnaire from 450 patients selected on stratified random basis. Initially 600 samples were planned covering 300 patients of both private and government hospitals. Because of the small number of establishments of govt. hospitals, unwillingness and inability of the patients to provide data, time and budgetary constraints restricted the sample size to 450, covering all major private hospitals situated in the capital city of Bhubaneswar. A questionnaire for patient survey is designed keeping the broad parameters in mind, which was pre-tested before finalisation. The questionnaire containing all the 22 numbers of statements of SERVQUAL instrument developed by Parsuraman et al for primary data survey is administered keeping the broad parameters in mind. The data regarding perceptions and expectations of patients were collected in a 7 – point interval scales, where 1 stands for strongly agree and 7 stands for strongly disagree. All the data were collected from the patients through personal contact approach.

5. Sample Profile

The demographic backgrounds of the sample respondents in six parameters are presented in Table 1 to understand the customer profiles i.e., name of the hospitals where got service, age, education, gender, income and occupation. Table describes the patients' profile in detail in terms of frequency and percentages. It is evident from the table that most of the patients (18.2 %) are of Kalinga Hospital and there are least number of patients (1.2 %) in Kar Clinic & Hospital Pvt. Ltd. Most of the patients (86 %) are of lower and middle age groups. This is due to the fact that they are interested to give their opinions in the survey. It is observed from the same table that around 59% of the total patients have just intermediate diploma in their education and around 61% of the total patients surveyed are female. Around 88% of total sample patients are having above Rs. 1 lakh as their annual family income, out of which maximum falls in the range of Rs. 1 lakh to Rs. 2 lakh. Taking into account the occupation of the patients, salaried persons dominate the sample followed by self employed.

Table-1 (Patients' Profile)

| Parameters | | Total | |
|-----------------------|-------------------------|-----------|------------|
| | | Frequency | Percentage |
| Name of the Hospitals | SUM Hospital | 63 | 14 |
| | Kalinga Hospital | 82 | 18.2 |
| | Hitech Hospital | 66 | 14.7 |
| | KIIMS | 42 | 9.3 |
| | Appolo Hospital | 65 | 14.4 |
| | Vivekananda Hospital | 37 | 8.2 |
| | Kar Clinic and Hospital | 8 | 1.8 |
| | Nilachal Hospital | 57 | 12.7 |
| | Aayush Hospital | 30 | 6.7 |
| Age | 11-30 years | 202 | 44.9 |
| | 31-50 years | 186 | 41.3 |
| | 51 years and above | 62 | 13.8 |
| Education | 10 th | 99 | 22 |
| | Intermediate | 264 | 58.7 |
| | Graduate | 54 | 12 |
| | Post Graduate | 33 | 7.3 |
| Gender | Male | 177 | 39.3 |
| | Female | 273 | 60.7 |
| Annual Family Income | Less than Rs.1 lakh | 55 | 12.2 |
| | Rs.1 – 2 lakh | 131 | 29.1 |
| | Rs.2 –3 lakh | 77 | 17.1 |
| | Rs.3-4 lakh | 84 | 18.7 |
| | Rs.4 lakh and above | 103 | 22.9 |
| Occupation | Salaried | 126 | 28.3 |
| | Self-employed | 107 | 23.6 |
| | Professional | 58 | 12.9 |
| | Business | 67 | 14.9 |
| | Student | 46 | 10.2 |
| | Retired | 10 | 2.0 |
| | Housewife | 36 | 8.0 |
| All Samples | | 450 | 100.00 |

6. Results and Discussions

The views of the sample respondents regarding the services offered by the hospitals under study are presented in Table 2. Referring to Table 2, the comparison of patient expectations and perceptions of private hospitals, it is observed that the sample patients have very similar opinion as indicated from the mean values of different dimensions. The gap between perceptions and expectations (P - E) is positive for last three factors (i.e. responsiveness, assurance and empathy) indicating satisfaction of the patients. In the rest two factors (i.e. tangibility and reliability) the gap is negative indicating dissatisfaction of the patients. The gaps related to reliability and empathy dimensions are statistically significant as indicated from the t-values. Further, item-wise analysis indicates that the higher level of dissatisfactions are observed in SERVQUAL items like; i) Visually Appealing Materials & Records; ii) Keeping Promises in Time, iii) Sincere in Solving Patient Problems, iv) Provide Services as Promised, v) Response to Requests of Patients; and vi) Understanding Specific Needs of the Patients. This indicates the major reasons of dissatisfaction of patients are physician and staff related. There are only three items where the patients' satisfaction is statistically significant (i.e. Willingness to Help Patients, Patients' Confidence on Physicians & Medical Staff and Patients' Best Interests at Heart).

Table 2 Comparison of Mean and t-Values of Patients' Perceptions and Expectations

| SERVQUAL ITEMS | Perception | Expectation | Gap | t value |
|--|-------------|-------------|--------------|----------------|
| 12. Modern Equipments | 4.50 | 4.42 | 0.08 | 1.004 |
| 07. Visually Appealing Physical Facilities | 4.56 | 4.46 | 0.10 | 1.304 |
| 09. Neat Appearance of Physicians & Medical Staff | 4.44 | 4.56 | -0.10 | -1.514 |
| 13. Visually Appealing Materials & Records | 4.38 | 4.59 | -0.21 | -2.290** |
| Tangibility | 4.47 | 4.51 | -0.04 | -0.864 |
| 14. Keeping Promises in Time | 4.26 | 4.48 | -0.22 | -3.068* |
| 10. Sincere in Solving Patient Problems | 4.42 | 4.83 | -0.44 | -4.731* |
| 11. Dependable Service Delivery | 4.42 | 4.51 | -0.09 | -1.241 |
| 03. Provide Services as Promised | 4.62 | 4.81 | -0.19 | -2.714* |
| 15. Keeping Error Free Records | 4.53 | 4.58 | -0.05 | -0.704 |
| Reliability | 4.45 | 4.64 | -0.19 | -5.193* |
| 04. Inform When Service will be Performed | 4.40 | 4.44 | -0.04 | -0.493 |
| 16. Prompt Service from Physicians & Medical Staff | 4.84 | 4.71 | 0.13 | 1.551 |
| 17. Willingness to Help Patients | 4.90 | 4.51 | 0.39 | 5.243* |
| 02. Response to Requests of Patients | 4.66 | 5.07 | -0.41 | -5.617* |

| | | | | |
|--|-------------|-----------------------------|-------------|---------------|
| Responsiveness | 4.70 | 4.68 | 0.02 | 0.365 |
| 06. Patients' Confidence on Physicians & Medical Staff | 4.74 | 4.50 | 0.24 | 2.551* |
| 18. Safe Feeling of Patients in Treatment | 4.79 | 4.73 | 0.06 | 0.912 |
| 01. Courteous Physicians & Medical Staff | 5.20 | 5.21 | -0.01 | -0.138 |
| 19. Adequate Knowledge of Physicians & Medical Staff | 4.52 | 4.60 | -0.08 | -1.257 |
| Assurance | 4.81 | 4.76 | 0.05 | 1.387 |
| 08. Individual Attention by Hospital | 4.44 | 4.56 | -0.12 | -1.412 |
| 05. Personal Attention by Physicians & Medical Staff | 4.42 | 4.42 | 0.00 | 0.000 |
| 22. Understanding Specific Needs of the Patients | 4.55 | 4.76 | -0.21 | -1.946** |
| 21. Patients' Best Interests at Heart | 5.92 | 4.81 | 1.11 | 14.851* |
| 20. Convenient Surgery Hours | 4.52 | 4.41 | 0.11 | 1.536 |
| Empathy | 4.77 | 4.60 | 0.17 | 4.139* |
| * 1% Level of Significance | | ** 5% Level of Significance | | |

Table 3 Results of Factor Analysis

| Expectations | | | | |
|---------------------------------------|--|--|-----------------|---------------------------|
| Factors | Variables | Dimensions | Loadings | Variance Explained |
| Factor - 1 | 10. Sincere in Solving Patient Problems | Empathy/ Assurance/ Reliability / Tangibility | 0.826 | 22.683 % |
| | 11. Dependable Service Delivery | | 0.901 | |
| | 12. Modern Equipments | | 0.859 | |
| | 13. Visually Appealing Materials & Records | | 0.729 | |
| | 18. Safe Feeling of Patients in Treatment | | 0.584 | |
| | 19. Adequate Knowledge of Physicians & Medical Staff | | 0.608 | |
| | 20. Convenient Surgery Hours | | 0.631 | |
| 21. Patients' Best Interests at Heart | 0.601 | | | |
| Factor - 2 | 05. Personal Attention by Physicians & Medical Staff | Responsiveness/ Reliability / Empathy | 0.659 | 15.156 % |
| | 15. Keeping Error Free Records | | 0.727 | |
| | 16. Prompt Service from Physicians & Medical Staff | | 0.862 | |
| | 17. Willingness to Help Patients | | 0.762 | |
| Factor - 3 | 01. Courteous Physicians & Medical Staff | Reliability / Responsiveness/ Assurance | 0.643 | 14.839 % |
| | 02. Response to Requests of Patients | | 0.813 | |
| | 03. Provide Services as Promised | | 0.858 | |
| Factor - 4 | 07. Visually Appealing Physical Facilities | Tangibility/ Empathy | 0.648 | 14.010 % |
| | 08. Individual Attention by Hospital | | 0.824 | |
| | 09. Neat Appearance of Physicians & Medical Staff | | 0.646 | |
| Factor - 5 | 04. Inform When Service will be Performed | Responsiveness/ Reliability | -0.501 | 5.188 % |
| | 14. Keeping Promises in Time | | 0.652 | |
| Factor - 6 | 06. Patients' Confidence on Physicians & Medical Staff | Assurance/ Empathy | 0.496 | 4.999 % |
| | 22. Understanding Specific Needs of the Patients | | 0.940 | |
| Perceptions | | | | |
| Factor - 1 | 05. Personal Attention by Physicians & Medical Staff | Empathy/ Assurance/ Reliability / Tangibility | 0.555 | 18.245 % |
| | 06. Patients' Confidence on Physicians & Medical Staff | | 0.823 | |
| | 07. Visually Appealing Physical Facilities | | 0.826 | |
| | 08. Individual Attention by Hospital | | 0.669 | |
| | 14. Keeping Promises in Time | | 0.653 | |
| | 15. Keeping Error Free Records | | 0.633 | |

| | | | | |
|------------|--|--|--------|----------|
| | 20. Convenient Surgery Hours | | 0.504 | |
| Factor – 2 | 09. Neat Appearance of Physicians & Medical Staff | Reliability / Tangibility | 0.720 | 14.990 % |
| | 10. Sincere in Solving Patient Problems | | 0.843 | |
| | 11. Dependable Service Delivery | | 0.779 | |
| | | | | |
| Factor - 3 | 01. Courteous Physicians & Medical Staff | Assurance/ Responsiveness/ Tangibility | 0.666 | 14.496 % |
| | 02. Response to Requests of Patients | | 0.530 | |
| | 12. Modern Equipments | | 0.661 | |
| | 13. Visually Appealing Materials & Records | | 0.894 | |
| Factor – 4 | 03. Provide Services as Promised | Reliability/ Assurance/ Responsiveness/ Empathy | 0.670 | 12.020 % |
| | 04. Inform When Service will be Performed | | 0.763 | |
| | 19. Adequate Knowledge of Physicians & Medical Staff | | 0.552 | |
| | 21. Patients' Best Interests at Heart | | 0.697 | |
| Factor – 5 | 16. Prompt Service from Physicians & Medical Staff | Responsiveness | 0.787 | 10.606 % |
| | 17. Willingness to Help Patients | | 0.758 | |
| Factor – 6 | 18. Safe Feeling of Patients in Treatment | Assurance/ Empathy | 0.501 | 5.668 % |
| | 22. Understanding Specific Needs of the Patients | | -0.608 | |

Principal component analysis (PCA) was used to interpret and evaluate the 22 items of service quality for expectations and perceptions to compare with the initial findings. The findings of the initial models were five dimensions, as compared with six dimensions extracted for expectations and perceptions of the patients from private hospitals. The results of the factor analysis are given in Table 3.

For patients' expectation in private hospitals, the KMO measures of sampling adequacy is 0.720 and approximate Chi-Square significant at 1 % level, indicating the applicability of factor analysis. Similarly, KMO measures 0.836 and significance level of Bartlett's test of sphericity at 0.000, suggests the need for factor analysis of patients' perception as viewed by the respondents. Total variances explained by the first six factors are 76.876 %, and 76.026 % in the analysis of patients' expectation and perceptions respectively. The solutions for 5 – components suggested by Zeithmal et al are compared with the sample results indicating validity of the scales and suggesting the basis in Table 3 for private hospital patients' expectations and perception.

7. Managerial Implications

Delivering patient satisfaction is at the heart of modern health care marketing, which is a post-purchase judgement of the patients. The study on service quality in health care sector is measured in five dimensions by using the SERVQUAL scale developed by Parsuraman et al (1988). The analysis of responses clearly reveals that there exists a small perceptual difference among patients regarding overall service quality with their respective hospitals. The

expectations exceeding performances are clearly visible with Indian private hospitals. However, the results of principal component analysis indicate that though the dimensions suggested in the model are comparable with the sample results, but the contents of the factors are different. The patients mostly focus on people (physicians and medical staffs of the hospitals) factor for improving the level satisfaction. An improvement in the patients' perception of these factors is required rather than putting emphasis on additional resources.

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