

FACTORS EFFECTING PATIENT SATISFACTION IN PRIVATE SECTOR HOSPITALS: A CASE STUDY OF WEST BENGAL

Soumik Gangopadhyay

Sr. Lecturer, Dept. of Hospital Management,
Durgapur Society of Management Studies,
Dr. Zakir Hussain Avenue, Bidhannagar,
Durgapur, W.B. India.

Dr. Bidyut Kumar Ghosh

Assistant Professor, Supreme Knowledge
Foundation Group of Institutions,
Mankundu, Hooghly, West Bengal, India.

ABSTRACT

Satisfaction of the customers in the private sector hospital service depends on a set of factors including the physical factors like quality of treatment rendered to the patients, reliability, responsiveness, assurance, tangibles i.e. convenience created psychological factors like care taken cost to the patients and monetary factors like the cost required to access the services provided by the hospitals. Based on a field survey data collected from the privately owned hospitals in West Bengal, the present study aims to identify the factors responsible for patient satisfaction and thereby to gauge its effect on the brand-image of the hospitals. The study clearly shows a strong association between the factors such as care, quality of treatment and cost of service with the customers i.e., patients satisfaction. The study concludes a paradigm shift in the Indian hospital industry as the customer preference to choose a service is changing.

Keywords : Satisfaction, Care, Treatment, Cost, Logit Regression.

Introduction:

If you don't care your customer somebody else will do. Customer is god. In service sector customer satisfaction directly depends on friendly employees, helpful employees, knowledgeable employees, courteous employees, quick service, service quality, good value, timeliness, clarity & accuracy of billing, competitive pricing. Customer collects information from personal sources, market controlled sources, public sources, personal experiences. These risks involve dare functional risk of non-performance, financial risk, time or temporal loss, physical risk, psychological risk of anxiety. Hospital is a service that no one wants to buy; no one is looking forward to his next surgery with excitement (unlike the next holiday trip or the next mobile). In today's age every customer wants to be served according to his or her unique and individual needs. Due to this reason every organization whether a hospital or any service industry needs to provide customized solutions; tailoring their services based on actual preferences rather than on generalized assumptions.

Hospital occupies 50 per cent of Indian healthcare market, whereas, pharma, diagnostic, insurance and medical equipments holds 25 per cent, 10 per cent and 15 per cent respectively (Hazarika, 2009). According to RNCOS – 2009, 70 per cent of all hospitals and 40 per cent of beds in the country are controlled by the private sector. Less than

10 per cent of the population has health insurance (IRDA Annual report-2009-10). Indian hospital market is growing at 13 per cent per annum (IBEF – Oct, 2010). Broadly speaking, 80-85% Indian hospital market is dominated by private investors (IBEF – Oct, 2010). Under this backdrop this paper tries to re-examine and compare the impact of factors like quality of treatment, care, cure and cost on the satisfaction of the patients.

Once, the relationship and degree of involvement of the independent variables towards patient satisfaction is known, the organization can enhance the quality/quantity of dependent variable (patient satisfaction). Hence, patient satisfaction will reach at its best helping the hospitals to grow further. Patient satisfaction surveys are an important vehicle for collecting patient's opinions and needs. They allow to quickly capturing information at relatively minimal expense and effort. Satisfaction surveys answers tough and critical questions related to customer satisfaction. Specifically, the broad objectives of the study are as follows:

1. To assess the level of satisfaction of inpatients with regard to various services provided by the hospitals. More clearly, the study looks into the area of customer behavior, attitudes and perceptions of hospital service users.
2. To identify the gap in the service by analyzing the factorial inter-relationship and hence to develop

strategies to improve the patient satisfaction level and image of the hospital.

The planning of the paper is as follows. After the introduction in section I, section II deals with the brief review of existing literature. Section III contains the materials and methods used in the study. The results and discussion are in section IV. Finally, the conclusion and policy implication appears in section V.

Review of Literatures:

A good number of research works have been done in this filed. Bitner et. al. (1990) has shown that the idea of 'zero defects', though widely implemented in manufacturing industry, is extremely difficult to apply in service industry. He, however, concludes that a continuous up gradation of quality is an essential requirement of service organization. Customer satisfaction helps a firm to retain its customers that directly depends on friendly employees, helpful employees, knowledgeable employees, courteous employees, quick service, service quality, good value, timeliness, clarity, accuracy of billing and competitive pricing" (Fornell 1992). Moreover, customer switching is industry specific, limits the generalization and need to adopt broader perspective. Berry and Parasuraman (1993) have emphasized on the customer specific services i.e. individual customer based service (SERVQUAL). However, factors like pricing, inconvenience, core service failure, service encounter failure, and response to service failure, competition, ethical problems, and involuntary switching also play role in switching customers from one brand to another (Susan M. Keaveney 1995). Further it costs more to gain a new customer than it does to retain an existing one as it incurs more costs in relation with promotion, product designing, product presentation, sampling etc. (Woodruff 1997). Hence, a guideline for developing service recovery procedures is required that improve customer service and enhance customer relationships in hospitals. These can be used to implement service delivery systems that include provisions for appropriate recovery efforts, allocate recovery resources to maximize returns in terms of satisfaction, and train employees to recognize failures and reduce their effects on customers (Smith K et. al 1999). Also, expectations serve as a major determinant of a customer's service quality evaluations and satisfaction (Mangold Glynn W. et. al 1991).

In hospital and health services need of patient is controlled by cultural and ethical determinants, public and political pressure. Demand is influenced by media, medical influence, social and educational influence. Whereas factors controlling supply are public and political pressure, historical patterns, momentum and inertia. Need, demand, supply for a healthcare market overlap each other due to various reasons one of which is emergency need (Tabish Amin Syed 2005).

Over the years, hospitals have shown marginal growth. The financial risks of the hospitals are high because of lower profitability and lower operating efficiencies.

Absences of specific standards for provision of care and agreement on predetermined rates for reimbursement are two critical factors in developing an insurance based system of financing (Bhat Ramesh et. al 2006). Different researchers showed that patients pay most attention on "physician care" and have less concern with "hospital costs" (Lee-I. Wan et. al 2007). So, 'voice of the customer' should be taken into the design process using advanced techniques, such as experimental design, quality function deployment and value engineering (Pakdil, Aydin et. al. 2007).

Technological orientation and relationship (IT applications and relationship); integrated health care (efficiency, openness, quality), sensitivity to response (elements of development, competence), vision and work culture (spirituality, effectiveness and ethics), concern, commitment and consideration, compatible and reciprocal relationships (appraisal, responsiveness, welfare), and promotion of self-discipline (transparency, recognition, empathy, housekeeping) have also been identified as the effective dimensions of success of healthcare marketing (Shah N et. al 2007). Medical reliability failure, physical evidence failure, poor information, medical treatment errors, costly services, complaint handling failure have been identified as the service failure in case of hospital service marketing that directly affect the hospital image. These should be considered as mandatory factors while designing the while designing the hospital marketing strategy (Alfansi & Atmaja 2008).

Relationship marketing is evident in private hospitals giving importance to patient-staff interactions and the trusting impact on the organizations that followed and implemented it (Rooney 2009). It is essential to analyze patient's expectations to improve service quality (Bakar et. al 2008). Even, challenge of Indian healthcare is to build trust-based institutions (Bloom et. al 2008). Other researchers have also proved that staff care is the most influential attribute to patients in rating their overall hospital experience (Otani et. al 2009) and lower or higher levels of efforts are definitely required for all dimensions of perceived service quality for hospitals (Aagja et. al 2010). If hospitals want to be preferred by patients, they should be careful on gaining the trust of patients, and should try to have employees be kind and helpful to the patients (Ekiyor et. al 2010).

Materials And Method:

The whole study is based on the primary field survey data collected from ten privately owned hospitals located in different cities in West Bengal. In total 300 patients were surveyed and after screening of all the questionnaires, 289 filled up questionnaire have been finally used. The survey was conducted during the months of July-September 2010. Hospital service marketing is a "4-Factor" model i.e. treatment (doctor's service), care (personnel's service), quality (convenience and time of service) and cost (monetary costs & non-monetary costs such as searching cost, queuing cost, temporal loss, risk of anxiety, loss of

earning time etc.). The relationship between the customer satisfaction and the '4-factors' such as treatment, care, quality and cost can be measured by the following model

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4$$

Where X_1 = treatment comprised of doctor's service to solve health related problems

X_2 = quality comprised of reliability, responsiveness, assurance, empathy, tangibles i.e., convenience created

X_3 = care comprised of employee's performance towards patients and

X_4 = cost which includes direct cost like doctor's fees, medicine cost, additional investigation cost, travelling cost and other indirect cost like searching cost, queuing cost, cost of temporal loss, cost of risk of anxiety and cost of loss of earning time.

Y= patient satisfaction which is dichotomous qualitative variable. i.e., Y=1 if the patients satisfied and 0, otherwise. As the dependent variable is a binary variable we cannot apply OLS method to estimate the model. A logit model is accordingly used to estimate the above model. Thus,

The dependent variable is binary taking a value of 1 for the satisfied patient and 0, otherwise.

$$P = \frac{1}{1 + e^{-Y}}$$

P = Probability that the patient is satisfied

$$Y = C(1) + C(2)*Treatment + C(3)*Quality + C(4)*Care + C(5)*Cost$$

All the statistical calculations have been done using the computer software STATA.

Results And Discussion:

Table 1: Age-Distribution of Surveyed Patients

Age (years)	Percentage of patients
0-15	12
16-30	09
31-45	19
46-60	45
60 and above	15

Source: Field survey data (2010)

Demographic Profile of the surveyed patients: All the total 289 patients surveyed were classified into five age groups viz. 0-15, 16-30, 31-45, 46-60 and 60 and above. The percentage distribution of patients into different age groups is shown in table 1 indicates that more than 50 per cent of the respondents belong to age group of 45-60 and more than 60 years of age.

It has been observed that 67 per cent of the total respondents had an average family income of Rs.10000/- to Rs. 20000/- which indicate that although most of the

patients were belonged to the average income group and still cost have not been chosen as auxiliary factor of hospitalization. 52 per cent of the patients among admitted became aware about the hospital through relatives and friends, hence they have been influenced by word of mouth which proves the good reputation of the hospitals. Hence, Age and income are the passive factors that are influencing customer perception in choosing a private hospital service.

Again the field survey data shows, as far as the educational background of the surveyed patients is concerned, that 70 per cent of the respondents belonged to the category of above higher secondary (i.e., 12th standard) pass. This indicates that the respondents will be very much sensitive as their awareness level is concerned.

All the patients have been asked about the factors influencing their satisfaction levels and the factors are accordingly categorized as per their choices (table 3). The data suggests that doctors' approach is the single most important factor responsible for the patients satisfaction, followed by timely service, nurses care, comfortable stay at the hospital, overall administrative system etc.

Table 2: Status of The Patients' Influencing Parameter

Parameter	Percentage (%)
Doctors approach	43
Nursing care	20
Comfortable during stay	15
Paramedical staffs approach	Nil
Timely service	22

Source: Field survey data (2010)

Table 3: Influencing Factor of Choosing Hospital And Factors Affecting Awareness

Influencing factors	%	Factors of awareness	%
Accessibility	3	Advertisements	4
Image of the hospital	20	Medical professionals	44
Quality service	31	Medical camps	2
Referred by family doctors	20	Friends & relatives	52
Self-decision	10		
Word of friends	16		

Source: Field survey data (2010)

Patients Satisfaction: A Logit Regression Model:

There are four set of factors viz. treatment, quality, care and cost which influence the patients' satisfaction. To examine the factors influencing patients' satisfaction whether the patient is satisfied or not, a logit model has been fitted where the dependent variable is a binary variable taking the value 1 if patient surveyed is

completely satisfied, 0 otherwise. The result of logit analysis is shown in the table 5.

Table 5: Logit Analysis Of Patient’s Attitude Towards Hospital Preference

Variable	Coefficient	Std. error	t- ratio
Constant	- 29.2245	5.49279	- 5.321
Treatment	0.305982**	0.112214	2.727
Quality	0.251855*	0.0536980	4.690
Care	0.324190*	0.0635998	5.097
Cost	0.266493**	0.126958	2.099

Source: Author’s calculation based on field survey 2010
 McFadden’s pseudo-R-squared = 0.721642
 Log-likelihood = -32.9189.

Likelihood ratio test:

Chi-square (4) = 170.684 (p-value 0.000000)
 * and ** imply significant at 1% and 5% level respectively.

All the independent variables have strong positive impact on the customer (patient) satisfaction. McFadden’s pseudo-R-squared = 0.721642 signifies that 72% of the dependent variable are explained by the data which is highly significant. For all the factors such as treatment, quality, care and cost, the p-value are tested as less than 0.05 (i.e., 5 per cent level of significance) which signifies that all the independent variables are statistically significant in explaining the dependent variable, i.e., patients’ satisfaction. More clearly, as the coefficients of all the explanatory variables are positive and statistically significant, it implies that treatment, quality, care and cost all play significant role in satisfying a patient. The derived model is as follows,

$$PS = -29.2245 + 0.3059 * Treatment + 0.2518 * Quality + 0.3241 * Care + 0.2664 * Cost$$

Conclusion:

One of the major challenges of the dynamic health care environment is keeping up with constantly escalating patient’s expectations. The prime reason that today’s patients prefer private hospital than public hospital as personnel’s services of a private hospital are designed in a more systematic way anticipating needs of the patients. The derivation of the study have agreed from different perspective that, irrespective of income level, age and sex of the customer or consumer; doctor’s service, staff care, quality of hospital and cost of services are the foremost important factor which customer considers in his/her choice process of a private hospital service and among those staff care (personnel care) is the prime criteria to decide a hospital for treatment.

The results of logit analysis clearly reveal that all the four set of explanatory variables i.e., treatment applied to the patient, the overall quality of service rendered by the hospital to patients, care given to them and the cost involved in the treatment, are significantly responsible for the patients satisfaction. More specifically, the quality treatment and care given to the patients are the most top most vital variables towards patients’ satisfaction. Hospital need to design their advertising and promotional strategy through highlighting personnel service on top priority to differentiate their brand in the competitive market.

Hence keeping in mind the objective of the study, that is, identifying the gap in the service by analyzing the factorial inter-relationship and developing strategies to improve the patient satisfaction level and image of the hospital, what appears finally that the private sector hospital in West Bengal should emphasize more on the quality treatment, care taken to the patients admitted to private hospital and quality of overall service rendered by the hospital authority. The service gap prevails in the West Bengal private hospital service as perceived by the patient is mismanagement in personnel’s services (staff care) as stated and implied by the patient. Stringent implementation of hospital standardization system like JCI, NABH, ISO, NABL, etc. can help to upgrade the hospitals’ care segment. Involvement of more skilled manpower who is more empathetic towards their customers is the need of the hour. Extensive training can be taken up for the employees as a strategic formula to launch better version of employees of a hospital. Minute things need to be taken care of with absolute sincerity to achieve precision in service performance. Hospitals must renovate their services based on customer- feedback system. This is an area where a hospital can minimize the gap i.e. deliver service that is committed and expected by the customer. It will create better image and help by adding a value in marketing a hospital brand.

References:

- [1] Aagja, P, Jayesh; Garg, Renuka. (2010). “Measuring perceived service quality for public hospitals (PubHosQual) in the Indian context”. International Journal of Pharmaceutical and Healthcare Marketing, 4(1), 60-83.
- [2] Bakar, Coskun; Akgun, S., H.; Assaf Al., F., A. (2008). “The role of expectations in patient’s hospital assessments- A Turkish University hospital assessments- A Turkish University hospital example”. International Journal of Health Care Quality Assurance, 21(5), 503-516.
- [3] Blendon R. J.; Schoen, C.; Desroches, M; Osborn, R.; Zapert, Raleigh, K. (2004). “Conforming competing demands to improve quality: A five country hospital survey”, Health Affairs, 23(3), 119-135.
- [4] Bloom, Gerald; Kanjilal, Barun; Peter, David H. (2008). “Regulating Healthcare Markets in China and India”, Health affairs, 27 (4), 952-963.
- [5] Cadogan, J. W. and Foster, B.D. (2000). “Relationship Selling and Customer Loyalty: An Empirical

- Investigation”, Marketing Intelligence and Planning, 18(4), 185-199.
- [6] Crosby, Lawrence A., Kenneth R. Evans, and Deborah Cowles. (1990). “Relationship Quality in Service Selling: An Interpersonal Influence Perspective”, Journal of Marketing Research, 24 (November), 404-411.
- [7] Endresen, K, W; Wintz, J. C. (2002). “Inside the Mind of Today’s Consumers’ Marketing”, Health Services, 22(4), 19-24.
- [8] Ekiyor, Aykunt; Tengilimoglu, Dilaver; Yeniyart, Sengun; Ertiirk, Ergin. (2010), “Relationship Marketing and Customer Loyalty: An Empirical Analysis in the Healthcare Industry”, The Business Review, Cambridge, 14(2), summer, 244-249.
- [9] Labiris G; Niakas, D. (2005), “Patient Satisfaction Surveys as a Marketing Tool for Greek NHS Hospitals”. Journal of Medical Marketing, 5(4), 324-330.
- [10] Lee-I. Wan, Chang Hsiang-Tien, Chao Ju-Pei. (2007), The Relationship Between Quality of Healthcare Service and Customer Satisfaction- An Example of Hospitals in Taiwan”, Journal of the Chinese Institute of Industrial Engineers, 24(1), 81-95.
- [11] Li, Chuen-Ye; Ho Ching-Yung. (2008). “Discuss the Impact of Customer Interaction on Customer Relationship in Medical Service”. The Business Review, Cambridge, 11(1), 152-158.
- [12] Mongkolrat, Saranthinee; Pongopanich, Sathirakorn. (2009). “Foreign Patient Customer Satisfaction With Private Hospital Service”, Journal of Health Research, 23(supplementary), 49-52.
- [13] Mulhall, J, K; Ahmed, Aftab; Masterson, Eric. (2002). “The ‘doctor-customer’ Relationship: Hippocrates in the Modern Marketplace”. International Journal of Health Care Quality Assurance, 15(1), 9-10.
- [14] Orava, M and Tuominen, P. (2002). “Curing and Caring in Surgical Services : A Relationship Approach”, The Journal of Services Marketing, 16(7), 677-691.
- [15] Otani, Koichiro; Waterman, Brian; Faulkner, Kelly M; Boslaugh, Sarah; Burroughs, Thomas E, ; Dunagan, Claiborne W. (2009). “Patient Satisfaction: ‘Focusing on Excellent’”, Journal of Healthcare Management, 54(2), 93-103.
- [16] Parasuraman, A., V. A. Zeithaml and L. L. Berry. (1988). “SERVQUAL: a multiple-item scale for measuring consumer perceptions of quality,” Journal of Retailing, 64(1), 12-40.
- [17] Reichheld F and Sasser, W. (1990). “Zero Defects: Quality Comes to Services”, Harvard Business Review, 68(Sept-Oct), 105-111.
- [18] Rooney, K. (2009), “Consumer-Driven Healthcare Marketing: Using the Web to Get Up Close and Personal”, Journal of Healthcare Management, 54(4), 241-251.
