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ii

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IMPACT OF SERVICE QUALITY ON SATISFACTION IN HEALTHCARE

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ABSTRACT

The healthcare sector in India is undergoing a phase of reform propelled by rapid economic growth. While the Indian healthcare system has grown manifold over the past few years, it has yet not been able to keep pace with the rapid rise in the population. Healthcare organizations operating in the public sector are experiencing increasingly low trust on the part of the patients in terms of the quality of care provided. Today people hoping to receive high service quality tend to prefer private hospitals or even travel abroad. Thus, National Health System Hospitals are undergoing pressure from governments and the general public to improve their quality and compete effectively. With this in mind, the purpose of this paper is twofold. First, to identify the service quality factors that is important to patients. Second, to examine their links to patient satisfaction in the context of India. A field survey was conducted. Evaluations were obtained from patients on several dimensions of service quality (responsiveness, assurance, reliability, empathy, tangibility and Clinical and Nursing services) and their satisfaction towards the services provided. Questionnaires were distributed and explained to the patients in Private Hospitals. Totally 917 samples from four significant and diverse metropolitan cities in India which is considered to be proportionate to the Indian population in age, gender and income wise ratio is used. Using factor analysis and multiple regression, significant associations were found between the five dimensions and patient satisfaction. Implications and future research issues are discussed.

KEYWORDS
Healthcare , Patient satisfaction, Service quality, SERVQUAL.

INTRODUCTION

For any organization, service to the customers plays a vital role. Without services, it is not possible to do business transactions. In current business scenario, the customers are expecting the organizations to provide better service. While considering the service sector organizations, providing quality service to the customers in hospital sector is an important aspect. Today, in the competitive and complex healthcare environment, how to understand your customer has been one of the foremost challenges for service organizations (Lorden, et al., 2008; Orzano, et al., 2008; Suter, et al., 2007; Ryan & Sysko, 2007; Weng, 2006; Zeithaml, et al., 2006; Corbin, et al., 2001; Kaldenberg, 2001). Every marketing professional in healthcare knows that the most influential form of advertising for physician and hospital services is word of mouth (Beckham, 2001). How do managers of healthcare institutes determine what patients want (of new products/services)? Why the patient chose to come rather than another? Managers should care not only medical effect but also customer value in order to meet his/her special needs to retain customers and earn their loyalty (Hippel & Katz, 2002). One way to attract and retain customers is to ensure customer satisfaction.

THE INDIAN HEALTH CARE SECTOR

Healthcare is one of India's largest sectors, in terms of revenue and employment, and the sector is expanding rapidly. During the 1990s, Indian healthcare grew at a compound annual rate of 16%. The health infrastructure across Indian states is projected to grow by an average of 5.8 percent per annum between 2009-2013, taking the total expenditure in 2013 to USD 14.2 billion, suggests the Indian Healthcare edition of KPMG's trend monitor. The report states that the Indian healthcare industry is estimated to double in value by 2012 and more than quadruple by 2017. The main factors propelling this growth are rising income levels, changing demographics and illness profiles, with a shift from chronic to lifestyle diseases. This is likely to result in considerable infrastructure challenges and opportunities.

REVIEW OF LITERATURE
SERVICE QUALITY
Karassavidou, Glaveli and Papadopoulos (2008) in their paper showed that a gap exists between the rating which patients assign to expectations and to perception statements. In fact, expectations exceed perceptions of the provided service quality, suggesting that there is room for quality improvement initiatives.

Mohamed, Prasad, Rajamanoharane (2010) evaluated of service quality by analyzing the failure of operations, lack of service, deficiencies etc. In their study, the criteria and sub criteria which are most prevalent for the evaluation of service quality are considered and performance of the hospitals (for case purpose) is evaluated by using analytical hierarchy process (AHP) as a decision-making methodology.

Sohail (2003) in his paper examined and measured the quality of services provided by private hospitals in Malaysia. Empirical research is used to determine patients' expectations and perceptions of the quality of service, and a comprehensive scale adapted from SERVQUAL is empirically evaluated for its usefulness in the Malaysian hospital environment. Results based on testing the mean differences between expectations and perception indicate that patients' perceived value of the services exceed expectations for all the variables measured.

Andaleeb(2001) in his study compared the quality of services provided by public and private hospitals in Bangladesh. The premise of the paper was that the quality of hospital services would be contingent on the incentive structure under which these institutions operate. Since private hospitals are not subsidized and depend on income from clients (i.e. market incentives), they would be more motivated than public hospitals to provide quality services to patients to meet their needs more effectively and efficiently. This premise was supported. Patient perceptions of service quality and key demographic characteristics were also used to predict choice of public or private hospitals.

SERVICE QUALITY AND CUSTOMER SATISFACTION
The nature of the relationship between perceived service quality and customer satisfaction is an intriguing issue. Some researchers have suggested that perceived service quality is an antecedent of customer satisfaction (Anderson and Sullivan 1993; Ravald and Grönroos 1996; de Ruyter et al. 1997). There is considerable evidence that service quality functions as an antecedent to customer satisfaction (Reidenbach and Sandifer-Smallwood, 1990; Cronin and Taylor, 1992, Reichheld and Sasser, 1990).

Andaleeb (2001) did a study which is patient-centered and identified the service quality factors that are important to patients; he also examined their links to patient satisfaction in the context of Bangladesh. A field survey was conducted and evaluations were obtained from patients on several dimensions of perceived service quality including responsiveness, assurance, communication, discipline, and baksheesh.

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111

Choi Cho, Lee, Hanjoon & Kim (2004) in their research proposed an integrative model of health care consumer satisfaction based on established relationships among service quality, value, patient satisfaction and behavioral intention, and which tests it in the context of South Korean health care market. Results showed that between the two cognitive constructs, service quality emerged as a more important determinant of patient satisfaction than value.

OBJECTIVES OF THE STUDY

The objectives of the study are as under:
* To identify the service quality factors that is important to patients.
* To examine the links of service quality factors to patient satisfaction.

RESEARCH DESIGN

The research design to explore the impact of service quality on patient satisfaction and most influential service factor concerned in private hospital is detailed underneath.

SAMPLE DESIGN

Convenience sampling has been used in the present study. Totally 917 patients of various Government Hospitals, from four significant and diverse metropolitan cities in India which is considered to be proportionate to the Indian population in age, gender and income wise ratio is used.

VARIABLES

SERVICE QUALITY

In measuring service quality, specific items (tangibles, reliability, responsiveness, assurance and empathy) are taken from Parasuraman, Zeithaml and Berry (1988); and Rosen and Karwan (1994). Almost all the customers investigated in the pilot study believed that Clinical and Nursing services was one of the most important factors associated with service quality. Hence Clinical and Nursing services (5 items) was added as a dimension of service quality. Each item was answered by using a 1–7 rating scale numbered from 1 (Strongly disagree), through 4 (Neither agree or disagree), to 7 (Strongly agree).

PATIENT SATISFACTION

This variable was measured by using a 3 item scale from Westbrook & Oliver (1991) and Dabholkar et.al.,(2000) .Each item was answered by using a 1–7 rating scale numbered from 1 (Strongly Dissatisfied), through 5(Neither satisfy or dissatisfy), to 7 (Strongly satisfied).

RESULTS AND ANALYSIS

The sample of the study was 917.The demographic profile of the sample is given in table.

TABLE 1: PROFILE OF RESPONDENTS

Characteristics		Frequency	Percentage
Age	18-24	188	20.5
	25-34	235	25.6
	35-44	276	30.1
	45-54	173	18.9
	54 and above	45	4.9
Education	Illiterate	22	2.4
	School Level	41	4.5
	Graduate	629	68.6
	Post-Graduate	225	24.5
Profession	Business man	256	27.9
	Agriculturist	59	6.4
	Employees (Govt./Private/Public)	471	51.4
	Housewife	16	1.7
	Any other	115	12.5
Income group(per annum)	Above 10 lakhs	9	1.0
	5 lakhs to 10 lakhs	18	2.0
	2 lakhs to 5 lakhs	91	9.9
	90,000 to 2 lakhs	604	65.9
	Less than 90,000	195	21.3
Type of patient	Out-patient	647	70.6
	In-patient	270	29.4

EXPLORATORY FACTOR ANALYSIS

Before proceeding for the factor analysis, appropriateness of factor analysis needs to be assessed. This can be done by examining sampling adequacy through Kaiser- Meyer-Olkin (KMO) statistic. Table 2 provides the SPSS output of data for factor analysis. KMO value greater than 0.6 can be considered as adequate (Kaiser and Rice, 1974).

TABLE 2: KMO AND BARTLETT'S TEST RESULTS FOR PATIENT'S PERCEIVED SERVICE QUALITY

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.887
Bartlett's Test of Sphericity	Approx. Chi-Square	4263.465
	Df	325
	Sig.	.000

From the Table 2, it can be seen that KMO value is acceptable; Bartlett test results also show that the values are significant and thus acceptable. The items in the respective category were individually subjected to Principal Component Analysis with varimax rotation and Kaiser Normalization using SPSS. The items having factor loadings less than 0.5 were eliminated (Hair *et al.*, 2005). Finally, five factors comprising sixteen items, all having eigen values of unity and above were extracted and the results are shown in Table 3. Further, in order to assess the appropriateness of the data for factor analysis, the communalities derived from the factor analysis were reviewed. These were all relatively large (greater than 0.5), suggesting that the data set is appropriate (Stewart, 1981).

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TABLE 3: ROTATED COMPONENT MATRIX

	Component				
	1	2	3	4	5
The hospital is having visually appealing facilities.	.509				
You feel safe in getting treatment from this hospital	.541				
Doctors are friendly and polite while to answering patients' questions	.601				
Your opinion regarding out-patient service management		.683			
Your opinion regarding in-patient service management		.622			
Your opinion regarding emergency and casualty services		.651			
Your opinion regarding operation theatre		.639			
Your opinion regarding radiological services		.649			
Doctors and other employees should offer prompt services to patients.			.610		
Your complaints/queries are taken seriously			.665		
Your complaints are resolved quickly			.659		
Gives you individual attention			.521		
Hospital staffs perform the service right the first time.				.731	
Hospital provides services as promised.				.628	
Billing system is accurate and error free					.698
Bills are received in time					.657

Notes:

1. Extraction Method: Principal Component Analysis.
2. Rotation Method: Varimax with Kaiser Normalization.
3. Rotation converged in 5 iterations.

TABLE 4: FIVE EXTRACTED FACTORS

Factor 1	Assurance and Tangibility
Factor 2	Clinical and Nursing services
Factor 3	Responsiveness and empathy
Factor 4	Reliability of Personnel
Factor 5	Reliability of Service

HYPOTHESES

Based on the results of earlier studies discussed in the previous section, we formulated the hypotheses detailed below.

H_1 Reliability of Service have a significant influence on satisfaction.

H_2 Assurance and Tangibility has a significant influence on satisfaction.

H_3 Reliability of Personnel has a significant influence on satisfaction.

H_4 Clinical and Nursing services have a significant influence on satisfaction.

H_5 Responsiveness and Empathy has a significant influence on satisfaction.

TABLE 5: MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.637(a)	.406	.402	2.16992

a Predictors: (Constant), Reliability of Service, Assurance and Tangibility, Reliability of Personnel, Clinical and Nursing services, Responsiveness and empathy

b Dependent Variable: Customer Satisfaction

RESULTS OF HYPOTHESES TESTING ARE AS UNDER

TABLE 6: BETA VALUES OF INDEPENDENT VARIABLES

Independent variables	Beta	t-Value
Assurance and tangibility	.343	13.323
Clinical and nursing services	.366	14.234
Responsiveness and empathy	.352	13.659
Reliability of personnel	.136	5.300
Reliability of service	.158	6.150

b. Dependent Variable: Customer Satisfaction , N= 124; adj R^2 = 0.239; F-Value : 38.235; *** p < 0.000

The results of regression analysis indicate that a) Assurance and tangibility has a significant impact on satisfaction (t-value 13.323, p<.000) b) Clinical and nursing services has a significant impact on satisfaction (t-value 14.234, p<.000) c) Responsiveness and empathy has a significant impact on satisfaction (t-value 13.659, p<.000) d) Reliability of personnel has a significant impact on satisfaction (t-value 5.300, p<.000) and finally e) reliability of service too have a significant impact on satisfaction (t-value 6.150, p<.000). Thus H_1, H_2, H_3, H_4 and H_5 are supported.

The outcome can be presented in form of following equation:

Customer Satisfaction = a + .343 Assurance and Tangibility + e1----------(1)

Customer Satisfaction = a + .366 Clinical and Nursing services + e1-------- (2)

Customer Satisfaction = a + .352 Responsiveness and empathy + e1------- (3)

Customer Satisfaction = a + .136 Reliability of Personnel + e1--------- (4)

Customer Satisfaction = a + .158 Reliability of Service + e1--------- (5)

The results suggests that a) change of one standard deviation in the value of assurance and tangibility will result in 0.343 standard deviation change in customer satisfaction b) change of one standard deviation in the value of clinical and nursing services will result in 0.366 standard deviation change in customer satisfaction c) change of one standard deviation in the value of responsiveness and empathy will result in 0.352 standard deviation change in customer satisfaction. d) change of one standard deviation in the value of reliability of personnel will result in 0.136 standard deviation change in customer satisfaction e) change of one standard deviation in the value of reliability of service will result in 0.158 standard deviation change in customer satisfaction.

INTERNATIONAL JOURNAL OF RESEARCH IN COMPUTER APPLICATION & MANAGEMENT   113

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TABLE 7: ANOVA (B)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2883.415	5	576.683	122.476	.000(a)
	Residual	4223.568	897	4.709		
	Total	7106.983	902			

a Predictors: (Constant), Reliability of Service, Assurance and Tangibility, Reliability of Personnel, Clinical and Nursing services, Responsiveness and empathy

b Dependent Variable: Customer Satisfaction

TABLE 8: COEFFICIENTS (A)

Independent Variables	Beta (β)	Sig.	Order of Importance
Assurance and Tangibility	.343	.000	3
Clinical and Nursing services	.366	.000	1
Responsiveness and empathy	.352	.000	2
Reliability of Personnel	.136	.000	5
Reliability of Service	.158	.000	4

Note: Dependent Variable: Customer Satisfaction

Further, in order to determine the relative importance of five customer-perceived service quality dimensions, they were subjected to regression analysis. For this, based on Parasuraman, Zeithaml and Berry's (1988) approach, multiple regression analysis model was followed in which the respondents customer satisfaction was considered as dependent variable and the five service quality dimensions were made independent variables. Thus, the average score for each of the dimensions were regressed on the customer satisfaction score obtained from each respondent surveyed. The beta (β) coefficients provided the relative importance.

The dimension with the largest coefficient represents the most important dimension in terms of its influence on customer satisfaction. The next largest coefficient represents the second most influential dimension and so forth. All the factors were found to be significant. The higher the beta co-efficient, more the contribution of factors in explaining customer satisfaction. As shown in the Table, the results indicate that customer satisfaction is influenced by all the five dimensions with clinical and nursing services as the most important dimension, β coefficient = 0.431, and reliability of personnel appearing to be the least important (with β co-efficient = 0.136). This shows that the customers perceive reliability of personnel as the least important for influencing their Customer Satisfaction. The results suggest that the customers tend to make service quality judgments based on their satisfaction level as revealed in the regression analysis.

DISCUSSIONS

The insights obtained from exploratory investigations reveals the emergence of new factor clinical and nursing services in affecting the overall service quality. Further, the results of the regression analysis highlighted the priority areas of service improvement and revealed that not all the dimensions impact equally to the customer satisfaction in healthcare context. The study indicated that among the various service quality dimensions which influenced customer satisfaction, clinical and nursing services (with the largest β value) is the best predictor, followed by responsiveness and empathy, assurance and tangibility, reliability of service and reliability of personnel. Thus, superior performance on the most important dimension, clinical and nursing services may be helpful in satisfying the patients by providing enhanced quality of service while the performance on less important dimension like reliability of personnel may not significantly impact patient's satisfaction. Looking at the individual dimension, it is suggested that a hospital should concentrate on the functional areas viz., out-patient, in-patient, emergency and casualty and radiological services.

Additionally, responsiveness and empathy factor also appeared to play an important role in influencing customer satisfaction. Thus, the Hospital employees should resolve the patient's complaints timely and their queries should be taken seriously. This implies that health service providers should invest in empowering the contact employees and providing them with adequate resources so that they can take prompt actions to customer queries. For this, they need to ensure that the employees are able to make important decisions regarding patients and understand their specific needs.

The third service quality dimension to impact on satisfaction is Assurance & Tangibility .To convey a sense of Assurance, on the other hand, the hospital will have to cultivate a perception that will be based on more than just interaction with the hospital staff. During the whole hospitalization experience and at each 'contact point' all employees should demonstrate that they care about its patients, are careful in protecting and enhancing the hospital's reputation, do everything to gain the patients' confidence in the hospital and ensure that patients feel safe during their hospitalization. Perceptions of the cleanliness of the hospital in general and the wards in particular, the neatness of the buildings, the decor in the wards and the appearance of the nursing staff will all influence whether a patient will return to a hospital or not. Tangibles are typically the easiest service quality dimension to manage and manipulate as they do not involve people. Feelings of Assurance & Tangibility will not only enhance patient Loyalty but will also enhance patients' ratings of their overall satisfaction.

Another dimension that impacts on patient satisfaction is Reliability of Service. This implies that keeping the customers well informed about the progress of their complaints, ensuring the correctness and accuracy of billing system and timeliness of bills plays an important role in satisfying a patient. Not only that the fees that patients are charged should be fair, reasonable and good value for the money paid (fees).

Though Reliability of Personnel is found to be the least important factor affecting patient satisfaction, it shouldn't be neglected in healthcare industry .Thus, the service providers need to focus on performing the service right the first time, providing the services at the promised time.

CONCLUSION

The service marketing is gaining supremacy over product marketing in the recent years. The service marketing includes profit making as well as non-profit making activities of a business. The social marketing concepts are finding extensive application in certain selected areas.

It is found that Clinical and Nursing services play an important in healthcare industry. The following are the strategies for quality medical care services and hence patient satisfaction:

a. Clear objective, vision and mission statement.
b. Measure of performance to match with patient's demand.
c. Service improvement plan.
d. Effective communication among internal and external customers.
e. Rewards for outstanding customer service.

FUTURE IMPLICATION OF THE STUDY

In the past, image of the Government Hospital was poor and associated with ineffective services. But, nowadays the image has improved and they are at par or sometime ever better than the private and public Hospitals. The Government is feeling the burden of increasing health care costs. It is estimated by 2020 the cost will be about 7% of GDP. There is a lack of motivation to promote cost effective and cost efficient services in the management of Government Hospitals because budgets are easily available from the Government funding.

All Hospitals should be accredited to follow a minimum quality standard. Accreditation should be done by the Government. Only the accredited Hospitals should be followed to provide health care services. Management will then become a very important function in the hospital. Effective management should occur at all levels to ensure quality services to meet the needs and expectations of the customers. The Doctors, the Nurses and other paramedics should be trained in

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management and take the roles of managers. If they are not ready to take the role to the managers, they should be soon be replaced by other individuals with specific qualification in management for example those Officers with Master of Business Management (MBA).

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