

SERVICE QUALITY MEASUREMENT AND ITS RELATION WITH OVERALL CUSTOMER SATISFACTION IN HEALTHCARE

Byju K.P.M

Research scholar, Department of International Business, Pondicherry University

Dr.Y.Srinivasulu

Associate Professor, Department of International Business, Pondicherry University

Abstract

India, over the past two decades is witnessing a steady growth rate which helped it to create one of the biggest middle class segments in the world. With the demand over goods and services constantly increasing, Marketing and differentiating them from competition becomes more than necessary. Service industries which fail to understand the importance of delivering customer satisfaction may be inviting possible extinction sooner or later. In the healthcare industry, different hospitals provide the same type of services but they do not provide the same quality of services. The identification of service quality dimensions is becoming increasingly important in healthcare, as providers seek to meet the challenges inherent in a more competitive health environment.

To understand the dimensions of service quality, a study was conducted in two service oriented hospitals in puducherry region. The results showed that there is significant difference in service quality perceptions between the patients and their attendants. Out of the five determinants used for measuring service quality Responsiveness, Empathy and Tangibility have significant impact on overall customer satisfaction.

Key Words: Marketing, Service Quality, Healthcare, Customer Satisfaction.

Introduction

The institute of medicine (IOM) has defined quality of healthcare as “The degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge”. In past years the concern for service quality reached unprecedented level in various sectors. Service quality has been increasingly identified as the major factor in distinguishing between services and building competitive advantage. Due to its very nature of complexity the health care services have a unique position among others. Research divides service quality into two categories, technical quality and functional quality (Gilmore, 2010). The distinction between these two aspects is extensively accepted, although diverse terminology is occasionally used.

Organizational productivity will be more as quality promotes higher productivity and lower cost especially with higher customer retention. It also provides improved environment within the organization and helps in retaining talented staff. Customer satisfaction reinforces positive attitude towards the brand, leading to a greater likelihood that the same brand will be purchased again (White C. J., 2010). Whereas the dissatisfaction leads to negative brand attitudes and lessen the likelihood of buying the same brand again (Zhou, 2004). Satisfaction of customers also appears to be the cheapest form of promotion. It's higher quality or lower price relative to competitors that helps suppliers create an “Incentive to purchase” (naumann, 1995 cited in Invalid source specified.). Organizations do need to have regular access to the service quality determinants and the customer satisfaction attributes in order to address if any short falls in it Invalid source specified..

Providing excellent level of customer service is as important as the quality of products. Service marketers have experienced it for past few years that competition can well managed by differentiating

through quality. Customer service is viewed as part of marketing mix in service marketing. Because of the inseparability and intangibility features of services, customer service in service business is usually more important than in manufacturing companies.

In recent years the thrust on efficient customer service has increased manifold in the services because of increased competition from private players, improved technologies and growing customer satisfaction. Efficient usage of customer satisfaction and customer loyalty provides an excellent opportunity for a firm to maximize revenues. To date most attempts at measurement have focused on how external clients perceive the quality of services provided by organizations. In the healthcare industry, quality of care is more than a concept. It has become essential to patient well being and financial survival.

Study Objectives

1. To analyze the status of healthcare in India.
2. To identify the relative importance of service quality indicators from both patients and their attendants perspective.
3. To find out the relation between five factors of service quality and customer satisfaction.
4. To measure the strength of relationship between service quality indicators and customer satisfaction using multiple regression analysis.

Health Sector in India

India, home to more than 1.2 billion people has just embarked upon a journey to enrich its healthcare system (CII-Mckinsey, December 2012). In order to have an enhanced public health system the central government has decided to almost double the spending during the twelfth five year plan (2012-2017) if happens so the centre’s contribution will increase to 0.5% of GDP. The total public spending on health is expected to increase from 1.04% of GDP which is among the lowest in the world to 1.87%. For this to become realistic the public healthcare spending will have to triple what was spent in the eleventh plan period.

The average state share in India is about .68% of GDP. Despite all these the major contribution towards healthcare comes from the state and central governments the bulk of the spending on healthcare comes from the individual. This makes India among the highest private spending nations on health. The health outcome in India and the quality of underlying health system significantly lagged those of peer nations.

Country	Total Health Expenditure(as% of GDP)		Share out of Pocket (as %)	
India	4.4	4.0	67	61
LMIC	5.3	5.7	44	37
Year	2000	2010	2000	2010

Source: (CII-Mckinsey, December 2012), LMIC- Low and Middle Income Countries

The public spending in Indian healthcare is much lower than the average spending of LMIC. Measuring the quality of service rendered to a patient becomes paramount in these conditions as an individual has to spend 60% of the total health expenditure from the pocket. There are a series of developments to be made in the Indian healthcare system starting from increased spending of central and state governments.

Things such as Infrastructure demand for the healthcare service providers all need a push so as the quality of the service provided in healthcare systems.

Servqual Vs Servper

Even though there are many scales developed towards the measurement of service quality the two prominent ones till date are SERVQUAL and SERVPERF. SERVQUAL, based on the Gap model, measures SQ as the calculated difference between customer expectations and performance perceptions of a service encounter (Parasuraman et al., 1988, 1991). Cronin and Taylor (1992) challenged this approach and developed the SERVPERF scale which directly captures customers' performance perceptions in comparison to their expectations of the service encounter. There were many research conducted over the past two decades to strengthen the case of SERVQUAL as well as SERVPERF (Narang, 2010). The most logical question for a manager to ask when assessing the quality is about the diagnostic value of a measurement tool as well as its reliability and validity issues. SERVQUAL has more diagnostic power than SERVPERF which helps managers in decision making (Urban, 2013).

Studies conducted reveals that SERVPERF has been identified as being superior in explaining variance in overall measure of service quality. The argument is that the relative usage of SERVQUAL or SERVPERF is industry specific. Expectations part associated with the measurement of SERVQUAL is multi dimensional (Padma, Rajendran, & Lokachari, 2010). It is rather difficult to measure expectations in industries such as healthcare where the customer's are not empowered so much. The information they got to know is limited and more often the technical part of the service in a healthcare (Zhou, 2004) setting is completely in the hands of service providers. The other major drawback of SERVQUAL is both the expectations and perceptions are recorded at the same time. These two administrations cause respondents boredom and frustration (Gilmore, 2010). Customer does tend to much have higher expectations when they are not met, they normally get dissatisfied.

Study Area and Construct Used

Study was conducted in a 2 service oriented 1200 bedded hospitals in Puducherry region. SERVPERF scale was used to gather information regarding service quality from the respondents. The questionnaire had two parts.

1. A total of 10 questions dealing with the Geographical and Demographical data of the respondents.
2. A total of 27 questions (Psychometric) focusing on the five latent factors of service quality and the overall customer satisfaction.

The five factors taken for the study are:

1. Tangibility (Measured by 5 constructs)
2. Tangibility represents the service physically. It is defined as the appearance of physical facilities, staff appearance and communication materials that are used to provide services for them. Often firms use tangibility to highlight their image and quality.
3. Reliability (Measured by 4 constructs)
4. It is the ability to perform promised service accurately on time. It generally means the company delivers on its promises regarding delivery, service provision and problem resolution.
5. Responsiveness (Measured by 4 constructs)

6. Being willingness to help, it is the willingness or readiness to help customers and to provide prompt service. This dimension emphasizes attentiveness and promptness in dealing with customer requests, questions, complaints and problems.
7. Empathy (Measured by 4 constructs)
8. Treating customers as individuals is defined as empathy. Caring, individual attention a firm provides to its customers.
9. Assurance (Measured by 4 constructs)
10. Inspiring trust and confidence is defined as Assurance. The employees knowledge and courtesy and the ability of the firm and its employees to inspire trust and confidence.

Total respondents were 340 out of which 184 -patients and 156 - attendants.

Results

Hypothesis

- H0₁: There is no significant difference between patients and attendants with respect to overall customer satisfaction
- H0₂: There is no significant difference between male and female respondents with respect to overall customer satisfaction.H0₃: There is no significant relationship between five factors of service quality and overall customer satisfaction.

Demographics

Of the total 340 respondents 179 respondents were male and 161 female. 43% of the patients were from Puducherry union territory and 32% from Cuddalore district, while the remaining from nearby districts of puducherry. 38% of the respondents had a minimum of three visits to the hospital before as inpatients while 33% of the respondents were using the facility for more than four times. So the major junk of the patients (79%) had repeated visits to the hospital facility before. Hence they were in much better position to evaluate the quality of service provided.

Mean value of all the Factors

The following table shows the mean value of all the factors taken for the study both the patients, attendants and overall perspective. The mean score consistently above 4.10 for all the factors shows that both attendants as well as patients as highly satisfied with the service outcomes.

Table: 1

Factor	Overall	Patients	Rank	Attendants	Rank
1. Tangibility	4.13	4.16	4	4.08	5
2. Reliability	4.08	4.06	5	4.11	4
3. Responsiveness	4.14	4.18	3	4.24	2
4. Assurance	4.22	4.22	1	4.23	3
5. Empathy	4.24	4.21	2	4.27	1

H0₁: There is no significant difference between patients and attendants with respect to overall customer satisfaction.

Table: 2Independent sample t-test

	Leven’s test p value	T-Test for equality of means	
		P value	Mean difference
Equal variance assumed	.000	.000	-.13317
Equal variance not assumed		.000	-.13317

Table: 3

	Respondent type	N	Mean	Std. Deviation	Std. Error Mean
Cust.mean	patient	184	4.1348	.36707	.02706
	attendant	156	4.2679	.23445	.01877

Table 2 provides the results of independent sample t test performed In order to find whether there is any significant difference between patients and their attendants with respect to overall customer satisfaction. The Leven’s p value indicated that there unequal variance. Probability value for t test is .000 which is less than .05 (cut off value at 5% level of significance).hence null hypothesis is rejected.

The mean values of customer satisfaction of both patients and their attendants were tabulated in table 3. The mean value is higher for attendants (4.267) than patients (4.134).

H0₂: There is no significant difference between male and female respondents with respect to overall customer satisfaction.

Table: 4 Independent sample T-Test

	Leven’s test p value	T-Test for equality of means	
		P value	Mean difference
Equal variance assumed	.086	.168	-.04793
Equal variance not assumed		.168	-.04793

In order to find whether there is any significant difference between male and female respondents with respect to overall customer satisfaction, independent sample T-test was performed. The Leven’s p value indicated that there is unequal variance among two groups. Probability value for t test is .168 which is greater than .05 (cut off value at 5% level of significance).hence null hypothesis is accepted.

H0₃: There is no significant relationship between five factors of service quality and overall customer satisfaction.

Table: 5 Correlations

Factor	Pearson correlation coefficient (r)	Significance value (p)
Tangibility sum	.523**	.000
Reliability sum	.448**	.002
Responsiveness sum	.523**	.000
Empathy sum	.510**	.006
Assurance sum	.472**	.001

**Correlation is significant at the 0.01 level (2-tailed).

Pearson correlation was performed to understand the relation between five factors of service quality and the overall customer satisfaction. All correlation coefficients (r values) are significant at 1% level (p values <.01).

Multiple regression analysis was done to measure the effect of independent variables (5 factors of service quality) with that of the dependent variable (overall customer satisfaction).

Table: 6 Regression

1. Model 1: t variables: constant, Responsiveness.
2. Model 2: variables: constant, Responsiveness and Empathy.
3. Model 3: variables: constant, Responsiveness and Empathy and Tangibility.

Model	R	R square	Adjusted R square	Sig. F change
1	.523 ^a	.274	.272	.000
2	.578 ^b	.334	.330	.000
3	.608 ^c	.369	.364	.000

Table: 7 Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.655	.208		7.947	.000		
	Responsiveness.mean	.631	.049	.690	12.828	.000	1.000	1.000
2	(Constant)	1.250	.209		5.978	.000		
	Responsiveness.mean	.411	.062	.449	6.603	.000	.546	1.833
	Empathy.mean	.316	.060	.358	5.259	.000	.546	1.833
3	(Constant)	1.204	.205		5.887	.000		
	Responsiveness.mean	.284	.073	.311	3.905	.000	.380	2.633
	Empathy.mean	.261	.061	.295	4.265	.000	.501	1.995
	Tangibility.mean	.194	.061	.242	3.158	.002	.409	2.447

a. Dependent Variable: Satisfaction.mean

Of the three models compared the third model has the maximum adjusted r square value of .364. This indicated that 36.4 % of variance in the dependent variable (Customer satisfaction) is explained by three independent variables (Responsiveness, Empathy and Tangibility). The table 7 provides the coefficients table values. All coefficients are significant (at 1% level of significance). The Variance Inflation Factor values are less than 3 which indicated that there is no incidence of multi collinearity.

Customer satisfaction = 1.204 + .311 * Responsiveness + .295* Empathy + .242* Tangibility.

Discussion and Conclusion

The status of healthcare in India is clearly lower than other low and middle income countries. The public spending in health care is much lower than the world's average of 4 percent (WHO data, 2011). On an average every individual spending around 60% of one's total health expenditure from pocket, this put enormous pressure on the individual to find out the ways and means to finance his health spending. The twelfth five year plan draft has made healthcare as one of its major objectives. It's high time for the government to contribute more towards the nation's health.

The mean values of all the five factors of service quality taken for the study are over 4.05 for both patients as well as their attendants, which show that the respondents in general are satisfied with all the factors of service quality. With respect to rankings Assurance, Empathy and Responsiveness are perceived better than Tangibility and Reliability. This emphasizes the role of customer contact personnel (i.e.,) Doctors, Nurses and the Attendants in providing better care. Both the patients and their attendants perceive the care provided by the medical staff ahead than the infrastructural and the treatment reliability. Attendants have rated better customer satisfaction (4.26) when compared to patients (4.13) and is statistically significant.

The correlations between all the five factors of service quality and customer satisfaction are significant and above .50. This indicates moderate positive relationship between service quality determinants and customer satisfaction. Multiple regression analysis was performed to understand the impact of service quality determinants on customer satisfaction. Its only Responsiveness, Empathy and Tangibility which have significant impact on customer satisfaction. With respect to the variance explained Responsiveness explains 31% of the total variance in customer satisfaction where as Empathy and Tangibility explains 29 and 24 percent respectively. Responsiveness and Empathy both in the hands of customer contact personnel is crucial in achieving better customer satisfaction. This clearly states the importance of better personnel management and sufficient training to them so that they can treat patients with respect and care. Tangibility is one main factor lacking in developing countries. With more amount of investments coming to healthcare over the past decade this seems to get rectified and resulting in enhanced customer satisfaction.

Bibliography

1. Andaleeb, S. S. (2001). Service quality perceptions and patient satisfaction of hospitals in a developing country. *Social science and Medicine* , 52 (1), 1359 - 1370.
2. Blanga, L. (2011). A Conceptual Framework for a Marketing Perspective. *Healthcare service quality* , 57 (4).
3. Buttle, F. (1996). SERVQUAL: Review, Critique, Research agenda. *European Journal of Marketing* , 30 (1), 8 - 32.

4. CII-Mckinsey. (December 2012). *Indian Healthcare: Inspiring possibilities & Challenging journey*. CII.
5. Gilmore, A. (2010). *Service marketing management*. New delhi: Response books.
6. KV, R., & Dileep, M. (2005). Health Syatem in India: Oppurtunities and Challenges for Improvements. *Research and Publications: IIM-A* , 7 (3).
7. Narang, R. (2010). Measuring percieved quality of health services in India. *International Journal of Healthcare Quality Assurance* , 23 (2), 171 - 186.
8. Padma, P., Rajendran, C., & Lokachari, P. S. (2010). Service Quality and its impact on customer satisfaction in indian hospitals. *Journal of Healthcare Marketing* , 807 - 841.
9. Ramez, W. S. (september 2012). Patients perception of healthcare quality, satisfaction and behavioural intentions : An empirical study in bahrain. *International journal of Business and social science* , 3 (18).
10. Urban, W. (2013). Percieved quality versus quality of processes: a meta concept of service quality measurement. *The Services Industries Journal* , 33 (2), 200-217.
11. White, C. J. (2010). The impact of emotions on service quality, satisfaction, and positive word of mouth intentions over time. *Journal of Marketing Management* , 26 (5-6), 381 - 394.
12. White, C., & Ting Yu, Y. (2005). Satisfcation emotions and consumer behavioural intentions. *Journal of Service Marketing* , 19 (6), 411 - 420.
13. Zhou, L. (2004). A Dimension-specific analysis of performance - only measurement of service quality and satisfaction in China's retail banking. *Journal of service marketing* , 18 (7), 534 - 546.