



A STUDY ON SERVICE QUALITY TOWARDS HEALTH CARE SERVICES OF PRIVATE HOSPITALS WITH SPECIAL REFERENCE TO TAMIL NADU

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Abstract

Healthcare is one of the most important components in human life. It is normally defined as the management or treatment of any health problem through the services, offered by medical, nursing, dental or any other health related service provider. In the present healthcare environment competition is keen and the patients' care and satisfaction have become the prime concerns of each and every healthcare facility. Due to high competition in health care sector, it is difficult for public health care providers to maintain its standards and achieve high performance. The present research takes these as the research problems.

Keywords: *Awareness of the patients, Service Quality, Satisfaction, Private Hospitals.*

Introduction

Healthcare is one of the most important components in human life. It is normally defined as the management or treatment of any health problem through the services that might be offered by medical, nursing, dental or any other health related service provider. People today are choosing a new approach to healthcare services; they are well informed and eager to take responsibility for their own health. Disease or illness can prevent a person from doing a host of activities one could have easily done when very strong. They are also becoming more critical of the quality of healthcare service they are provided with. Providing the right care, to the right patient, at the right time is not only the definition of providing quality healthcare, but also the key to the long-run viability of our healthcare system. However, our healthcare delivery system is often unable to match the supply of healthcare services with the demand for that care. Intense, inherent demand variability renders this synchronization almost impossible to maintain for any significant period of time. The mismatch between patients and providers has been shown to lead to significant adverse effects. Therefore, the consumers of healthcare services have exceptionally higher expectations and demand high quality.

Due to this new paradigm in healthcare services, hospital administrators consider patients' expectations and perceptions, so that they must address the issue of improving the perceived quality of healthcare services. According to Swamy (1975) patient's satisfaction is the real testimony to the efficiency of the hospital administration. As hospital serves all the members of the society, the expectations of the consumer differ from individual to individual. In general, providing good quality healthcare is an ethical obligation of all healthcare providers and receiving good quality care is a right of all patients. The healthcare sector is facing unparalleled challenges in an increasingly customer oriented environment. A lot of health problems need intensive medical treatment and personal care. Treatment cannot be given in a patient's house or in the clinic. This is possible only in a hospital, for it consists of large number of professionally and technically skilled people who apply their knowledge and skill with the help of world-class expertise, advanced sophisticated equipments and appliances. Technological advancement in the recent years has made dramatic changes in health care service provider's practices. Health care system is now a challenge for every government, state, political parties and insurance agencies due to high competition in this field. The health care system that was dominated by non-profit/public hospitals is now provided increasingly by private sector. This competition results in satisfying patient through improvement in service quality dimensions, building trust and getting positive reputation. This research is based on healthcare as a major area within the service sector. The service environment in a large hospital is complex, with multiple interactions occurring internally; health is a significant field of study from both technical and organizational perspectives providing specific prior research that may be used as a basis for, and extension into service quality; and the implications of not getting service delivery right in healthcare in terms of costs to patients, families, community, and the government are significant.

Review of Literature

Product or Service awareness is a marketing concept that measures consumers' knowledge of its existence. Product awareness has to be continuous range of services recognized by customers among the only one in the service class. At the end of this the uppermost in the consumer mind exist is the expected condition of the marketer seeks.



The quality of service can be improved by increasing the awareness level of the users. Though the government runs many Information, Education, and Communication activities, it has failed to raise the awareness levels (*India Infrastructure Report 2007*). Role of consumer awareness in health care industry; Health care awareness is particularly important in case of inexperienced consumers. Consumers who have the choice between well known high priced services and unknown lower priced services will often choose the well known product (*Aluregowda, 2013*).

It is the ability of a potential buyer to recognize or recall that a brand is part of a hospital services. In other words, the customer should be able to identify a firm's product in the able to recall its brand whenever he or she thinks of the product class. Due to Lack of awareness among the public, almost two-thirds of the medicines prescribed here by doctors are irrational or unnecessary. Nearly half of all outpatients receive mostly unnecessary injections (*India Infrastructure Report 2007*).

Patients' participation in decision making in health care and treatment is not a new area, but currently it has become a political necessity in many countries and health care systems around the world (*Thompson AG, 2007*).

Emphasizing the importance of participation in decision making process motivates the service provider and the health care team to promote participation of patients in treatment decision making (*Hawley ST, 2007; Baldwin LM, Taplin SH, Friedman H, 2004*).

With enhanced patient participation, and considering patients as equal partners in healthcare decision making patients encouraged to actively participate in their own treatment process and follow their treatment plan and thus a better health maintenance service would be provided (*Farrell Christine, 2004*).

There is no single universal definition for the service quality in the literature (*Zineldin, 2006*); however, many researchers have defined the service quality in their own point of view.

According to their definitions, the service quality seems to be a disconfirmation paradigm. The outcome of this process might be: negative disconfirmation (expectations are higher than perceptions), positive disconfirmation (perceptions are higher than expectations) or confirmation (perceptions are equal to expectations level) (*Sasser et al., 1978; Gummesson & Gronroos, 1988; Brown et al., 1989; Grönroos, 1990; Parasuraman et al., 1994*).

Unlike the quality of other manufactured goods, the quality of healthcare services is very elusive (*Lim, 2000*). Even though there are several definitions on the quality of healthcare service in the literature, it is still a complicated and indistinct concept (*Gronroos, 2000*).

According to *Martinez Fuentes (1999)*, the quality of healthcare service is a multidimensional concept which reflects a judgment about whether services provided for patients were appropriate and whether the relationship between doctor and patient was proper. The researchers have different opinions on dimensionality of quality of healthcare services.

Parasuraman (1988) indicated that elements of quality of healthcare services can be divided into five dimensions including tangible, reliability, responsiveness, empathy and assurance. Some others mentioned that affordability and accessibility also can be important dimensions of quality of healthcare services; however, most researchers classify the elements of quality of healthcare services into different dimensions based on their own opinion and experience in this field. Satisfaction is a psychological concept which is defined in different ways. Sometimes satisfaction is considered as a judgment of individuals regarding any object or event after gathering some experience over time. According to some theorists, satisfaction is a cognitive response whereas some others consider satisfaction as emotional attachment of individuals (*Ranajit and Anirban, 201*).

The service quality is a cognitive construct and it influences on patient satisfaction with the healthcare provided (*Choi et al., 2005*). Nowadays, consideration of patient satisfaction has become an integral part of hospital management across the world (*Smith et al*) and also a fundamental requirement for health care providers (*Choi et al, 2005*). Therefore, it is also becoming a challenging issue for healthcare providers to realize what elements of patients' perception significantly influence on patient satisfaction.

In some literatures, customer satisfaction has been defined as a cyclical model which explains the relationship between customer satisfaction and customer loyalty. According *McAlexander (2003)* customer satisfaction is an antecedents of loyalty where as *Compton (2004)* opined that the customer loyalty drives the expectation value that eventually drives the value of customer satisfaction in future purchase (*Compton, 2004*).



Healthcare services are a demand driven and high involvement industries which constitute an important part of the service sector. They together contribute about 12 percent of GDP from the total contribution of GDP (56.0 percent) in Indian service sector (CSO, 2010). As per the report published by Ministry of Labor and Employment (MoL & E), Government of India (GOI), July 2010, healthcare and hospitality industries are highly labour-intensive industries and provide substantial employment (MoL & E, 2010; Talib et al., 2012).

They encompass an extensive variety of service industries that includes hospitals, nursing homes, healthcare establishments, hotels, restaurant, private tour operators (PTOs), travel agencies and many others. These two industries especially hospitality industry often suffers from more economic fluctuations when compared to its peer industries and thus, they are continuously monitored by the clients, stakeholders, or consumers. But in recent years, it was observed that healthcare industry has become one of the extremely complex industries in the world, especially in Indian context. The reasons behind it are several. Some of them are due to the rapid development of information technology (IT), tremendous speed of socio-technical development, the changed needs of users, increasing number of hospitals, as well as increased number of healthcare and quality dimensions have all added to the expectations of a service industry. It is therefore, evident that the status of health care industry must be explored from time to time. Health is an essential component of nation's development and is vital to the economy growth and internal stability of the country. Assuring a minimal level of healthcare to its population is a critical constituent of the development process. Since independence, India has built up a vast health infrastructure and health personnel at primary, secondary, and tertiary care in public, voluntary, and private sectors.

Private spending accounts for almost 80 percent of the total healthcare expenditure and is quite dominant in the healthcare sector. Inadequate public investment in health infrastructure has given an opportunity to private hospitals to capture a large share of the market. ISO certification and Accreditation of healthcare organizations (Manjunath et al., 2007). In general, ISO 9000 certification helps achieve consistency in production of a product or service and providing assurance to customers that the specific practices are in providers' stated quality systems. While accreditation provides international recognition, guarantee quality healthcare to all, care of patients and protection of patient's rights, improvement in quality and attract new, markets (Nandaraj et al., 2001; Manjunath et al., 2007).

Objectives of The Study

The study aims to

- To measure level of awareness of the patients towards the healthcare.
- To analyze the service quality dimension in health care services provided by private hospitals.
- To evaluate the linkage between health care service quality, patient satisfaction and patient loyalty.
- To measure level of satisfaction of the patients towards the health care and
- To render suitable suggestions to refine the quality of Health Care services provided by the private hospitals.

Research Methodology

The present study is descriptive one and it is based on the patients' satisfaction towards the quality of health care services rendered by private hospitals in Tamil Nadu. The health care awareness, health care decision factors, experience, quality, satisfaction and expectations of the consumers are the dimensions of the study.

Sources of Data Used

Both types of data i.e., secondary and primary data have been used in the present study. The secondary data was collected at first form the text books, web sites, journals and other secondary sources. The primary data was collected then from the sample customers. The primary data collected from the 500 patients was put into reliability test accordingly.

Population and Samples

The present research takes 800 patients as sample respondents for the study. In total, 5 private hospitals were selected purposively from each district head quarters of Tamil Nadu. The sampled hospitals came to 160. From 160 private hospitals, 5 patients were considered as respondents and the data had been collected. The response rate on the questionnaire was only 62.5 per cent. Hence the included response of the patients for the present study came to a sample size of 500.

Measurement Scale

Apart from the demographic and health care decision dimensions which are analyzed with nominal scaling, Health care awareness is measured with ordinal five point scaling such as not at all aware, slightly familiar, somewhat aware, moderately aware, and extremely aware. Health care service quality is measured with the help of 7 point scale such as strongly disagree, disagree, slightly disagree, neither agree nor disagree, slightly agree, agree and strongly agree and

Patients satisfaction is measured by means of 7 point scale such as completely dissatisfied, mostly dissatisfied, somewhat dissatisfied, neither satisfied not dissatisfied, somewhat satisfied, mostly satisfied and completely satisfied.

Table – 1,Reliability and validity of data

Parameters	Cronbach's alpha	Number of Items
Level of awareness	0.896	7
Service quality in respect of Tangibility	0.739	4
Service quality in respect of Reliability	0.790	4
Service quality in respect of Responsiveness	0.785	4
Service quality in respect of Assurance	0.610	4
Service quality in respect of Empathy	0.681	4
Satisfaction of the patients	0.658	2

Source: Output generated from SPSS 20

As the Cronbach's alpha of seven parameters (level of awareness, Service quality (Tangibility), Service quality (Reliability), Service quality (Responsiveness), Service quality (Assurance), Service quality (Empathy), and satisfaction of the patients) reveal .610 and more than .650 as alpha. So, it is confirmed that the data are highly reliable and valid for analysis. The following table shows that, the Cronbach's alpha value for every dimension of healthcare service quality.

Analysis And Interpretation Of Data

Statistical tools Used - SPSS-20 (AMOS - SEM)

✓ Structural Equation Modeling

Structural Equation Modeling is a very general, very powerful multivariate analysis technique that includes specialized versions of a number of other analysis methods as special cases. We will assume that you are familiar with the basic logic of statistical reasoning as described in Elementary Concepts. Moreover, we will also assume that you are familiar with the concepts of variance, covariance, and correlation; if not, we advise that you read the Basic Statistics section at this point. Although it is not absolutely necessary, it is highly desirable that you have some background in factor analysis before attempting to use structural modeling.

Conceptual Model Fit For Service Quality Towards Health Care Services Of Private Hospitals In Tamil Nadu By Using Structural Equation Model

Structural equation modeling, or SEM, is a very general, chiefly linear, chiefly cross-sectional statistical modeling technique. Factor analysis, path analysis and regression all represent special cases of SEM. SEM is a largely confirmatory, rather than exploratory, technique. That is, a researcher are more likely to use SEM to determine whether a certain model is valid., rather than using SEM to "find" a suitable model--although SEM analyses often involve a certain exploratory element. In SEM, interest usually focuses on latent constructs - abstract psychological variables like "intelligence" or "attitude toward the brand"--rather than on the manifest variables used to measure these constructs. Measurement is recognized as difficult and error-prone. By explicitly modeling measurement error, SEM users seek to derive unbiased estimates for the relations between latent constructs. To this end, SEM allows multiple measures to be associated with a single latent construct. A structural equation model implies a structure of the covariance matrix of the measures (hence an alternative name for this field, "analysis of covariance structures"). Once the model's parameters have been estimated, the resulting model-implied covariance matrix can then be compared to an empirical or data-based covariance matrix. If the two matrices are consistent with one another, then the structural equation model can be considered a plausible explanation for relations between the measures.

The variables used in the structural equation model are

Observed, endogenous variables

1. Satisfaction of the patients
2. Overall satisfaction

Observed, exogenous variables

1. Service quality in respect of Responsiveness
2. Service quality in respect of Assurance
3. Service quality in respect of Reliability
4. Service quality in respect of Tangibility
5. Level of Awareness

Unobserved, exogenous variables

1. Error 1 for Satisfaction of the patients
2. Error 2 for Overall satisfaction.
- 3.

Table – 2, Summary of the variables used for the analysis

Number of variables in your model	9
Number of observed variables	7
Number of unobserved variables	2
Number of exogenous variables	7
Number of endogenous variables	2

Source: Output generated from Amos 20.

Figure – 1

Unstandardized estimated for Structural Equation Model of service quality towards health care services of private hospitals in Tamil Nadu

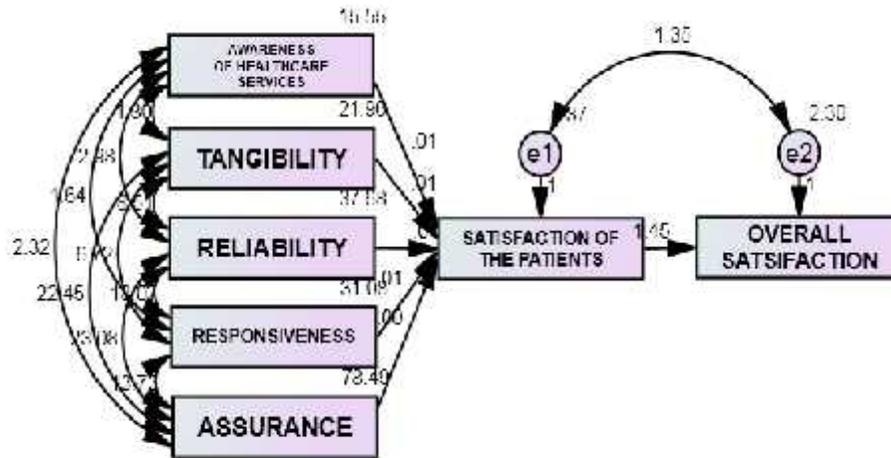
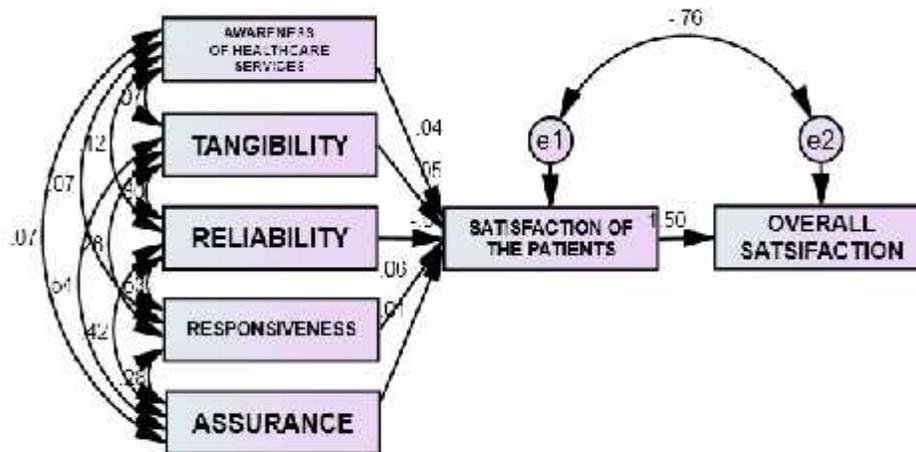


Table – 4, Regression weights for Structural Equation Model

Regression weights	Unstandardized coefficient Estimate	S.E.	Standardized coefficient	C.R.	P
Satisfaction of the patients<---Service quality in respect of Tangibility	.014	.010	.055	1.353	.176
Satisfaction of the patients <---Service quality in respect of Reliability	-.008	.008	-.040	-1.007	.314
Satisfaction of the patients<---Level of awareness	.011	.010	.036	1.122	.262
Satisfaction of the patients<---Service quality in respect of Responsiveness	.012	.009	.059	1.437	.151
Service quality in respect of Assurance	.001	.005	.007	.197	.844
Overall satisfaction<---Satisfaction of the patients	1.455	.647	1.499	2.249	.025

Source: Output generated from Amos 20.

Figure – 2
Standardized estimated for Structural Equation Model of service quality towards health care services of private hospitals in Tamil Nadu



When service quality in respect of tangibility goes up by 1, Satisfaction of the patients goes up by 0.014. When service quality in respect of tangibility goes up by 1 standard deviation, Satisfaction of the patients goes up by 0.055 standard deviations. The probability of getting a critical ratio as large as 1.353 in absolute value is .176. In other words, the regression weight for service quality in respect of tangibility in the prediction of Satisfaction of the patients is not significantly different from zero at the 0.05 level (two-tailed). The regression weight estimate, .014, has a standard error of about .010. Here the coefficient of service quality in respect of tangibility is 0.014 represents the partial effect of service quality in respect of tangibility on Satisfaction of the patients, holding the other variables as constant. The estimated positive sign implies that such effect is positive that Satisfaction of the patients would increase by 0.014 for every unit increase in service quality in respect of tangibility and this coefficient value is significant at 5% level.

When service quality in respect of reliability goes up by 1, Satisfaction of the patients goes down by 0.008. When service quality in respect of reliability goes up by 1 standard deviation, Satisfaction of the patients goes down by 0.04 standard deviations. The probability of getting a critical ratio as large as 1.007 in absolute value is .314. In other words, the regression weight for service quality in respect of reliability in the prediction of Satisfaction of the patients is not significantly different from zero at the 0.05 level (two-tailed). The regression weight estimate, -.008, has a standard error of about .008. Here the coefficient of service quality in respect of reliability is 0.008 represents the partial effect of service quality in respect of reliability on Satisfaction of the patients, holding the other variables as constant. The estimated positive sign implies that such effect is positive that Satisfaction of the patients would increase by 0.008 for every unit decrease in service quality in respect of reliability and this coefficient value is significant at 5% level.

When level of awareness goes up by 1, Satisfaction of the patients goes up by 0.011. When level of awareness goes up by 1 standard deviation, Satisfaction of the patients goes up by 0.036 standard deviations. The probability of getting a critical ratio as large as 1.122 in absolute value is .262. In other words, the regression weight for level of awareness in the prediction of Satisfaction of the patients is not significantly different from zero at the 0.05 level (two-tailed). The regression weight estimate, .011, has a standard error of about .010. Here the coefficient of level of awareness is 0.011 represents the partial effect of level of awareness on Satisfaction of the patients, holding the other variables as constant. The estimated positive sign implies that such effect is positive that Satisfaction of the patients would increase by 0.011 for every unit increase in level of awareness and this coefficient value is significant at 5% level.

When service quality in respect of responsiveness goes up by 1, Satisfaction of the patients goes up by 0.012. When service quality in respect of responsiveness goes up by 1 standard deviation, Satisfaction of the patients goes up by 0.059 standard deviations. The probability of getting a critical ratio as large as 1.437 in absolute value is .151. In other words, the regression weight for service quality in respect of responsiveness in the prediction of Satisfaction of the patients is not significantly different from zero at the 0.05 level (two-tailed). The regression weight estimate, .012, has a standard error of about .009. Here the coefficient of service quality in respect of responsiveness is 0.012 represents the partial effect of service quality in respect of responsiveness on Satisfaction of the patients, holding the other variables as constant. The estimated

positive sign implies that such effect is positive that **Satisfaction of the patients** would increase by 0.012 for every unit increase in service quality in respect of responsiveness and this coefficient value is significant at 5% level. When **service quality in respect of assurance** goes up by 1, **Satisfaction of the patients** goes up by 0.001. When **service quality in respect of assurance** goes up by 1 standard deviation, **Satisfaction of the patients** goes up by 0.007 standard deviations. The probability of getting a critical ratio as large as 0.197 in absolute value is .844. In other words, the regression weight for **service quality in respect of assurance** in the prediction of **Satisfaction of the patients** is not significantly different from zero at the 0.05 level (two-tailed). The regression weight estimate, .001, has a standard error of about .005. Here the coefficient of service quality in respect of assurance is 0.001 represents the partial effect of **service quality in respect of assurance** on **Satisfaction of the patients**, holding the other variables as constant. The estimated positive sign implies that such effect is positive that **Satisfaction of the patients** would increase by 0.001 for every unit increase in service quality in respect of assurance and this coefficient value is significant at 5% level.

When **Satisfaction of the patients** goes up by 1, **Overall satisfaction** goes up by 1.455. When **Satisfaction of the patients** goes up by 1 standard deviation, **Overall satisfaction** goes up by 1.499 standard deviations. The probability of getting a critical ratio as large as 2.249 in absolute value is .025. In other words, the regression weight for **Satisfaction of the patients** in the prediction of **Overall satisfaction** is significantly different from zero at the 0.05 level (two-tailed). The regression weight estimate, 1.455, has a standard error of about .647. Here the coefficient of Satisfaction of the patients is 1.455 represents the partial effect of **service Satisfaction of the patients** on **Overall satisfaction**, holding the other variables as constant. The estimated positive sign implies that such effect is positive that **Satisfaction of the patients** would increase by 1.455 for every unit increase in Overall satisfaction and this coefficient value is significant at 5% level.

Table – 5, Model Fit Summary for service quality towards health care services of private hospitals in Tamil Nadu

Indices	Value	Suggested Value
Chi-square value	1.838	
P value	0.766	>0.05 (Hair et al., 1998)
CMIN/DF	0.459	< 5 (Marsh&Hocevar,1985)
GFI	0.999	>0.90 (Hu and Bentler, 1999)
AGFI	0.993	>0.90 (Hair et al. 2006)
CFI	0.999	>0.90 (Daire et al., 2008)
RMR	0.058	<0.08 (Hair et al. 2006)
RMSEA	0.000	<0.08 (Hair et al. 2006)

Source: Output generated from Amos 20

Based on the result generated by SPSS 20, it is found that the calculated P value is 0.766 which is greater than 0.05 which indicates the model is fit. And also the CMIN/DF value is less than 5 which indicate the model is fit. Here GFI (Goodness of Fit Index) value and AGFI (Adjusted Goodness of Fit Index) value is greater than 0.9 which represent it is a good fit. The calculated CFI (Comparative Fit Index) value is 0.999 which means that it is a perfectly fit and also it is found that RMR (Root Mean Square Residuals) value is not less than 0.08 which indicates the model is not fit. But in case of failure in RMR value, RMSEA (Root Mean Square Error of Approximation) value is (0.000) less than 0.08 which indicates the model is perfectly fit.

Findings

The research takes socio-demographic profile, awareness factors, service quality (Tangibility), Service quality (Reliability), Service quality (Responsiveness), Service quality (Assurance), level of awareness and overall satisfaction of on patients as the major variables for analysis. Here, these variables are the independent variables on one hand and the overall satisfaction of the patients is the dependent variable on the other. It is studied how and to what extent the independent variables make changes in the dependent variable. The proposed conceptual research model confirms that the major variables (socio-demographic profile, awareness factors, service quality (Tangibility), Service quality (Reliability), Service quality (Responsiveness), Service quality (Assurance), level of awareness make impact on the overall satisfaction of the patients. The role of the variables is at large extent so that the patient's overall satisfaction depends on them. But, it is very important that no single variable influences the overall satisfaction. When two more variables combine together, then the overall satisfaction increases or decreases. In the case of loyalty should not affect from the overall satisfaction of the patients. So, from the proposed conceptual model, remove the loyalty of the customers.

Suggestion

Management should also bring to the attention of the quality assurance team quality issues that are beyond them but require more analysis and planning. Members of staff assigned to carry out specific quality improvement tasks should see those tasks as part of their routine responsibilities rather than extra duties. Units within the hospital should be regarded as quality action teams, which identify and solve problems that emerge at the unit level. Every staff in each unit should be part of the action team. The study revealed that to improve patient satisfaction, healthcare service providers must focus on quality improvement strategies that insist quality measures. Adopting lean in health care delivery and Six Sigma, a statistical based process improvement method helps to reduce the source of variation found in any process like billing, discharge summary, incidence of patient falls, treatments rendered, patients triage, use of technology, lab results, etc

Conclusion

The study concludes that patient's health care awareness as one of the dimension that reveals lack of knowledge about the health care services rendered by the hospitals considered. Quality as the major impact of patient choice, it had implications over the satisfaction of patients. When service is delivered at Patient satisfaction, the hospital earns reputation by word of mouth that initiates a deciding factor for the patient. Patients attending each hospital are responsible for spreading the good image of the hospital and therefore satisfaction of patients with the quality of health care service experienced by them is equally important. It was realized that the management and board of the hospital are poised to improve infrastructure of the hospital and introduce more specialist services to serve their consumers better. During the study it was revealed that hospital is more consumer-focused and market-oriented this time than before due to the emerging competition in the healthcare industry. The research recommends implementing new approaches to improve health care service quality.

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