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Perceived Service Quality and Patients' Satisfaction: The Case of Wolaita Sodo University Teaching Hospital

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Abstract
Quality of service has become an emblem for customers while availing any services and it is also a strategic advantage for the organizations to gain success and remain competitive in the market. This study aimed at assessing the effect of perceived service quality on patients' satisfaction at Wolaita Sodo University Referral Hospital. Five dimensions of 'SERVPERF' model: tangibility, reliability, responsiveness, assurance and empathy were used to measure patients' perception about the service quality in the hospital. One hundred sixty two respondents participated in a cross sectional survey The results showed that the mean scores along five service quality dimensions ranged from 3.38 up to 3.64 and the mean for overall service quality is 3.56 indicating slightly above average perceived service quality and the level of satisfaction is averaged 3.65.The Pearson Correlation Coefficient was used to evaluate the relationship between perceived service quality and patients' satisfaction and correlation is significant at the 0.01 level of significance and there is significant positive relationship between patients' satisfaction and the service quality as measured in terms of service quality dimensions and overall service quality. The service quality in terms of both dimension wise and the overall service quality of the hospital has significant influence on patients' satisfaction. To evaluate the impact of perceived service quality on patients' satisfaction, linear regression model has been employed and showed responsiveness and assurance dimensions of service quality have a significant influence, whereas; tangibility, reliability and empathy dimensions have no significant influence on patients' satisfaction. It indicated also that all the service quality dimensions combined significantly influence the patients' satisfaction.
Keywords: Service quality, service quality dimensions, overall service quality, patients' satisfaction, Wolaita Sodo University Referral Hospital

Introduction

Quality service has become an emblem for customers while selecting a service and at the same time organizations are making efforts for providing quality products or services as per customers' needs and wants. Quality has been considered as a strategic advantage for the organizations to gain success and to sustain in the business world. It has become a key determinant in both tangible goods industries and service sector to gain maximum return on investments and reduce cost (Anderson and Zeithaml 1984; Parasuraman*et al*., 1985). Service organizations like the manufacturing organizations are now well aware about the facts that they need to take preventive quality measures to gain customer satisfaction and retention (Spreng&MacKoy, 1996; Reichheld&Sasser, 1990). The importance of service quality has been recognized and its implementation leads the organizations to increase organizational performance and customer satisfaction (Berry *et al.,* 1989; Reichheld&Sasser, 1990; Rust &Zahorik, 1993; Spreng&MacKoy, 1996; Cronin *et al.,* 2000; Yoon &Suh, 2004; Kang & James, 2004).Quality in service is very important especially for the growth and development of service sector (Rahaman*et al,* 2011; Ruyter and Bloemer, 1995).A business with high service quality will meet customer needs whilst remaining economically competitive.

Quality has been defined in a different way by various scholars under different circumstances. Some of the prominent definitions include "Quality is predictability" (Deming, 1982), "conformance to specification or requirements" (Crosby, 1984), "fitness for use" (Juran, 1988) and "customer's opinion" (Feigenbaum, 1945). These initial efforts in defining quality originated largely from the manufacturing sector. Defining service quality is difficult as compared to product quality due to some features unique to services including intangibility, inseparability, heterogeneity and pershability (Chang and Yeh, 2002). Parasuraman*et al*. (1988) define service quality as a difference between customer expectation of service and customers' perceptions of the actual service. Kasper *et al.* (1999) defines service quality as the degree to which the service offered can satisfy the expectations of the user. According to these definitions, customers are the sole judges of service quality.

Gronroos (1978) suggests that service quality is made of two components – technical quality and functional quality. Technical quality refers to what the service provider delivers during the service provision while functional quality is how the service employee provides the service.The quality of service-both technical and functional-is a key ingredient in the success ofservice organizations (Gronroos, 1984).

Technical quality in health care is defined primarily on thebasis of the technical accuracy of the diagnosis and procedures. There have been several techniques for measuring technical service quality are proposed and currently in use in health-care organizations. Information relating to this is not generally available to the public, and remains within the purview of health-care professionals and administrators (Bopp, 1990).

Functional quality, in contrast, relates to the manner of delivery of health-care services. And accordingly can be measured by using SERVIQUAL model but as carved by the SERVPERF model of Cronin and Taylor (1992)by taking perceived quality of health care services into account that has a relatively greater influence on patients' behaviors (satisfaction, referrals, choice, usage, etc.). In healthcareorganizations, patients' perceptions are considered to be the major indicators of service quality (Cronin & Taylor, 1992; O'Connor *et al.,* 1994). It means that customer satisfaction is the major device for critical decision making in selecting a healthcare services (Gilbert *et al.,* 1992) and quality of services delivered to the customers should meet their perceptions (Parasuraman*et al.,* 1985, 1988; Reidenbach&Sandifer-Smallwood, 1990; Babakus&Mangold, 1992; Zeithaml*et al.,* 1993).

The fact that quality perceptions have a strong influence on one's inclination to avail health services is beyond dispute. Thus, expanding access or holding the line on costs is not enough if one's confidence in the quality of health care services is low. Perceptions of poor quality of health care may, in fact, discourage patients from using the available services because health concerns are among the most prominent one. If the system cannot be trusted to guarantee a threshold level of quality, it will remain underutilized, be bypassed, used only for minor ailments, or used as a measure of last way out.

The ever-growing population in Ethiopia is expected to place greater demands on the country's healthcare services. Unless quality improvement becomes a priority, the consequences are severe. Poor quality of healthcare services, in addition to preventing patients from quick recovery, increasing their costs and also elevating the psychological barriers of using the system. Patients may hold out from availing healthcare services until their condition deteriorates irreversibly, or they may bypass the system in search of alternatives mainly in other countries that assure better quality of healthcare. It is imperative, therefore, for healthcare providers to focus on and deliver quality services to gain patients' confidence and to make them satisfied. Thus, the general objective of the study is to assess the impact of perceived service quality on patients' satisfaction on Wolaita Sodo University Referral Hospital. Specifically, the objectives of the research are:

- To identify the service quality level as perceived by patient customers in the hospital
- To determine the level of patients' satisfaction in relation to the service quality of the hospital.
- To assess the relationship between perceived service quality and patients' satisfaction in the hospital.
- To determine the significance of perceived service quality dimensions and the overall perceived service quality on patients' satisfaction in the hospital.

MATERIALSAND METHODS

This research was conducted in WolaitaSodo University Referral Hospital which is located in Southern Nations, Nationalities and People Regional State government in Wolaita Zone, SodoTown, which is 380 Killo Meters far from the capital city, Addis Ababa. Purposive probability sampling method was employed to identify the sample respondents. In this study both primary and secondary sources of data were used to collect the needed information. The primary data were collected through self-administered questionnaire from samplepatients over the three months period starting from March up to May, 2015. In order to get the answer for questions, 175 questionnaires were distributed topatientsadmitted tothe hospital. From the 175 questionnaires, 168 responses were collected. The screening process resulted in excluding 6 responses from the study because of missing data items. The remaining responses of162make around 92.57% of the total sampleas an effective response rate.

The questionnaire has four sections consisting of31 questions. The first part of the questionnaire consists of issues related to the personal information of the respondent. It included the age, sex, education level, religion, occupation and days patients stayed in the hospital. The second part is concerned with the questions used to assess service quality of the hospital. The research instrument designed is based on the five dimensions of service quality and the 22 service quality items of the SERVPERF model. The developed questionnaire includes four items correspond to the tangibility dimension; five items correspond to the reliability dimension, four items to the responsiveness dimension, four items correspond to the assurance dimensions and five items to empathy dimension. Respondents were asked to indicate their degree of agreement with each of the items on five point Likerttype scale. In this study, patients' satisfaction was measured using three items that captures overall satisfaction on service offered by the hospital. It was also measured using a five-point Likerttype scale. According to Cronin and Taylor (1992), the performance based SERVPERF scale is a better methodof measuring service quality. They claim that the reliability ofthis scaleranges between 0.884 and 0.964, depending onthe industry type, and exhibits both convergent anddiscriminate validity. To examine reliability of the scaledimensions, Cronbach alpha was calculated and was0.913. Thus it can be concluded that the measures used inthis study are valid and reliable.

RESULTS

The section outlines characteristics of the respondents, mean score for service quality dimensions, mean score for patients' satisfaction, correlation results of patients' satisfaction and service quality dimensions, regression

results of service quality on patients' satisfaction, and the regression result of the overall perception of service quality on patients' satisfaction

Characteristics of the Respondents

Table 1.1:Sex of the respondents

Sex	**Frequency**	**Percent**
Male	97	59.9
Female	65	40.1
Total	162	100.0

The results of table 1.1 provide data on age of the respondents. The sample includes 162patient customers admitted in Wolaita Sodo University Referral Hospital. Male respondents make 59.9% of the sample patients and female respondentsmake40.1% of the sample patients.

Table 1.2:Age of the respondents

Age (in Years)	**Frequency**	**Percent**
18-25	6	3.7
26-35	33	20.4
36-45	63	38.9
46-55	47	29.0
55-65	13	8.0
>65	0	0.0
Total	162	100.0

Source: Own survey (2015)

Table 1.2 indicates the age of the respondents and the largest group of respondents (38.9%) is aged between 36 and 45.The next largest groups (29.0%) and (20.4%) are aged between 46 &55 and 26 & 35 respectively. The rest are with 8%, and 3.7% for the age groups between 55-65 and 18-25 respectively.

Table 1.3:Education level of the respondents

Education Level	**Frequency**	**Percent**
Bellow 10^{th} /12^{th} grade	31	19.1
10^{th} /12^{th} complete	77	47.5
Diploma	40	24.7
First Degree	9	5.6
Master Degree	3	1.9
Ph.D. Degree	2	1.2
Total	162	100.0

Source: Own survey (2015)

Regarding education level of the patients, according to table 1.3, most of the respondents are 10^{th} /12^{th} grade complete making 47.5%. Master and Ph.D. degree holders are less in proportion both making 1.9% and 1.2% respectively.

Table 1.4: Religion of the respondents

Religion	**Frequency**	**Percent**
Orthodox	72	44.4
Muslim	17	10.5
Protestant	65	40.1
Catholic	8	4.9
Others	0	0.0
Total	162	100.0

Source: Own survey (2015)

With regard to religion, according to table 1.4, orthodox, protestant,Muslim and catholic religion followers make 44.4% and 40.1%, 10.5% and 4.9% respectively. There is no patient registered and included in the sample survey as other religion follower than the listed ones.

Table 1.5: Occupation of the respondents

Occupation	Frequency	Percent
Civil Servant	39	24.1
Merchant	61	37.7
Farmer	47	29.0
Student	10	6.2
No Formal Work	5	3.1
Total	162	100.0

Source: Own survey (2015)

According to table 1.5, the occupation of patients, 37.7%, 29.0%, 24.1%, 6.2%, and 3.1% are merchant, farmer, civil servant, student and with no formal work respectively.

Table 1.6: Days patients stayed in the hospital of the respondents

Days Patients Stayed in the Hospital	Frequency	Percent
< 2 days	1	0.6
2-5 days	85	52.5
6-9 days	24	14.8
10-13	39	24.1
>13 days	13	8.0
Total	162	100.0

Source: Own survey (2015)

Regarding the days patients stayed in the hospital, according to table 1.6, majority of the respondents (52.5%) stayed for 2 up to 5 days. The next largest number of patients (24.1%) stayed for 10 up to 13 days. 14.8% of the respondents stayed for 6 up to 9 days where as only 8% of the patients stayed for more than13 days. The least 0.6%of the patients stayed for less than 2 days.

Mean Score for Service Quality Dimensions

Table 2: Mean score for service quality dimensions

Service Quality Dimensions	Mean	Std. Deviation
Tangibility	3.6418	0.88989
Reliability	3.5617	0.96248
Responsiveness	3.5746	0.86470
Assurance	3.6136	0.93926
Empathy	3.3835	1.04643
Total	3.55504	0.940552

Source: Own Survey (2015)

The table 2 above shows the mean score and standard deviation for the five dimensions of service quality as well as mean score and standard deviation for overall perceived service quality. The highest mean is scored by tangibility followed by assurance, responsiveness and reliability. The least mean is scored by empathy service quality dimension. According to the table relative comparison among service quality dimensions indicates tangibility dimension of service quality is carried out superior to the other four dimensions with a mean score of 3.64 and standard deviation of 0.89. This indicates that the hospital is performing around satisfactory level in possessing good looking equipments, visually appealing materials and neat appearing employees. The second dimension as per the rating of the customers is assurance with a mean score of 3.61 and standard deviation of 0.94. This as well performed at around satisfactory level with the customer perception of the hospital for having knowledgeable and courteous employees and providing secured and trustworthy services. The third dimension is responsiveness with3.58 mean score with standard deviation of 0.97. This also indicates around satisfactory level operation of the hospital employees in telling their patients exactly when the services will be performed, respond to the requests of patients promptly and always be willing to help patients.The fourth dimension as per the rating of patients is reliability with 3.56 mean score with standard deviation of 0.96.This indicates that when the hospital promises to do something by a certain time, it does so and when patients have problems, hospital employees are sympathetic and reassuring as well as it keeps its records accurately at around satisfactory level. The least performed dimension is empathy with a mean score of 3.38 with standard deviation of 1.046. Hospital employees give personal and individual attention and they know what the needs of patients are around an average level. It can be seen that all the service quality dimensions are perceived slightly above average and the total average for overall perceived service quality is nearly around satisfactory level (3.56).

Mean Score for Patients' Satisfaction

Table 3:Mean Score for Patients Satisfaction

Item	Mean	Std. Deviation
Patients' Satisfaction	3.6512	1.10909

Source: Own Survey (2015)

As indicated in table 3 the mean score for patients' satisfaction with the service quality of the hospital is 3.65 with standard deviation of 1.11. This indicates that patient satisfaction is near to satisfactory level of satisfaction rating, which is almost the same with the overall service quality rating (the total average of 3.56 as indicated in table 2 above) by patients of the hospital.

Correlation Results of Patients Satisfaction and Service Quality Dimensions

Table 4: Correlation results of customer satisfaction and service quality dimensions

Service Quality Dimensions	Patients' Satisfaction	Tangibility	Reliability	Responsiveness	Assurance
Tangibility	0.413**				
Reliability	0.547**	0.645**			
Responsiveness	0.575**	0.662**	0.690**		
Assurance	0.650**	0.596**	0.745**	0.713**	
Empathy	0.504**	0.616**	0.666**	0.722**	0.743**

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

Source: Own Survey (2015)

According to table 4, there is a significant positive relationship between the five dimensions of service quality and customer satisfaction at 99% confidence level, the highest correlation is between assurance and patients' satisfaction (0.650);followed by responsiveness (0.575), reliability (0.547)and empathy (0.504) respectively. The weakest correlation is between tangibility and patients' satisfaction (0.413). Because the correlation was positive, service quality and patients' satisfaction is positively related, which means the better service quality is the higher patients' satisfaction and vice-versa. Accordingly, the most important service quality dimension that affects customer satisfaction is assurance, which goes to prove that assurance perceived as a dominant service quality followed by responsiveness; reliability, empathy and tangibility.

Regression Results of Service Quality on Patients' Satisfaction

Table 5: Regression results of service quality on patients' satisfaction

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	0.559	0.311		1.795	0.075
Tangibility	-0.084	0.106	-0.067	-0.790	0.431
Reliability	0.111	0.113	0.096	0.977	0.330
Responsiveness	0.322	0.128	0.251	2.518	0.013
Assurance	0.571	0.124	0.483	4.614	0.000
Empathy	-0.062	0.105	-0.058	-0.590	0.556
R = 0.674[a] R Square = 0.454 Adjusted R Square = 0.436 F = 25.937 (Sig. 0.000[a])					

Source: Own Survey (2015)

Table 5 indicates that responsiveness and assurance dimensions of service quality have a significant influence on patients' satisfaction at 99% confidence level. Conversely, tangibility, reliability and empathy dimensions have no significant influence on patients' satisfaction. The regression function that can be established is:

$Y = 0.559 - 0.084X_1 + 0.111X_2 + 0.322X_3 + 0.571X_4 - 0.062X_5$

Where: Y is patients' satisfaction

X_1 is tangibility dimension of service quality

X_2 is reliability dimension of service quality

$X_3$is responsiveness dimension of service quality

$X_4$is assurance dimension of service quality

$X_5$is empathy dimension of service quality

The regression results indicate all the service quality dimensions (tangibility, reliability, responsiveness, assurance and empathy) combined significantly influence the satisfaction of customers. The value of R square is 0.454, which indicates that service quality accounts for 45.5% of the variation in patients' satisfaction. The adjusted R^2 of 0.436; that is, 43.6% and the *F*- ratio of 25.937 indicate the regression model result overall predicts patients' satisfaction well at $P < 0.01$significance level as measured by the service quality dimensions.

The Regression Result of the Overall Perception of Service Quality on Patients' Satisfaction

Table 6: The regression result of overall perception of service quality on patients' satisfaction

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	0.624	0.308		2.024	0.045
Perception	0.170	0.017	0.623	10.080	0.000
R = 0.623[a] R Square = 0.388 Adjusted R Square = 0.385 F = 101.608 (Sig. 0.000[a])					

Source: Own Survey (2015)

Table 6 indicates overall perceived service quality has a significant influence on patients' satisfaction at 99% confidence level. The regression function that can be established is:

$Y = 0.624 + 0.170X_1$

Where: Y is patients' satisfaction

X_1 is the overall perceived service quality

The regression result indicates overall perceived service quality significantly influence patients' satisfaction. The value of R square is 0.388, which indicates that service quality accounts for 38.8% of the variation in patients' satisfaction. The adjusted R^2 of 0.385; that is, 38.5% and the *F*- ratio of101.608 indicate the regression model result overall predicts patients' satisfaction well at $P < 0.01$significance level as measured by the overall perceived service quality.

DISCUSSION

In order to assess the service quality performance, the five dimensions of service quality were used. The hospital is good in all tangibility, assurance, responsiveness, reliability, and empathy dimensions. All the service quality dimensions mean score is perceived above average and near satisfactory level except empathy with 3.38 rating by the patient customers of the hospital. Accordingly, the satisfaction level of patients in the hospital with the service offered is above average; that is almost near satisfactory level.

The result of this study showed all service quality dimensions were positively correlated with patients' satisfaction indicating quality hospital service as a prerequisite for establishing and having satisfied patients. According to the correlation result, assurance and responsiveness are the dominant determinants of patients' satisfaction. This indicates that the hospital is required to be trusted and felt safe by the patient customers. In addition, the hospital should tell patients exactly when services will be performed and respond to the requests of patients promptly.

The regression result indicates that the service quality is the well predictor of patients' satisfaction as measured by the service quality dimensions and as measured by overall perceived service quality. That is, service quality significantly explains as well as significantly predicts the variation in patients' satisfaction.

CONCLUSION AND RECOMMENDATIONS

The main objective of the study is to assess the impact of perceived service quality on patients' satisfaction at Wolaita Sodo University Referral Hospital. The mean score values for service quality dimensions was between 3.38 and 3.64. This indicates that, though the service performance of the hospital is above average, improvements on service quality should be there on all the five service quality dimensions in order to have at least satisfactory level patients' satisfaction. The patients' satisfaction level with the service quality of the hospital is below but nearly satisfactory level, which is in line with patients' service quality rating. Thus the hospital should improve the satisfaction level of patients by improving its service quality based on the constructs of the service quality dimensions in turn the overall service quality.

This study also found a positive relationship between all service quality dimensions and patients' satisfaction. Accordingly, the results of this research confirmed the theory of literatures regarding the relationship between service quality dimensions and customer satisfaction. This indicates that improvements in service quality will have improvement in patients' satisfaction and the vice-versa is true. Thus the hospital should give due attention for the service quality as it has relation to bring high level satisfaction if there is high level service quality and result in loss of patients' confidence if there is low level service quality.

The service quality as measured by the service quality dimensions separately indicates that assurance and responsiveness are significantly influencing patients' satisfaction, whereas; tangibility, reliability and empathy have no significant influence. But when perceived service quality dimensions combined together, they have significant impact on patients' satisfaction. In the same fashion, the overall perceived service quality has significant influence on patients' satisfaction. Therefore, it can be concluded based on the regression model result that the variance in patients' satisfaction can be predicted by the service quality offered by the hospital as

measured by dimension wise as well as overall perceived service quality, which is also in line with the theory and the management of the hospital should be highly concerned with the quality especially with assurance and responsiveness. It should also be highly concerned with tangibles, reliability and empathy dimensions of service quality. This is because, though their influence is insignificant, these dimensions of service quality should be the concern of management as they are the literature supported as to their significant influence on customers' (patients') satisfaction.

Implications

This research provides note worthy imminent into the impact of perceived service quality on patients' satisfaction in one of the hospitals in Ethiopia but there is an opening to extend the findings to gain a more comprehensive understanding of the nature of hospitals services in general in Ethiopia by taking patients from more hospitals into account in that the future research may show-up the service quality in hospitals in total. The future research may also be directed to comparatively analyzing the application of SERPERF model to public owned and private owned hospitals. Even, the future research will not be limited to the SERVPERF model but can incorporate other service quality dimensions for comprehension. In general, this research is based on the data from only one hospital and it should not be taken as comprehensive finding and conclusion with regard to hospitals service quality and patients satisfaction in the country.

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