



## Hospital Service Quality and Patients' satisfaction within Soddo Christian Hospital PLC, Walaitta Region, Southwestern Ethiopia

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### HIGHLIGHTS

- The overall mean scores from tangibility of services, reliability dimensions, responsiveness dimensions, assurance dimensions, and empathy of service are moderately high level as the present service quality status of Soddo Christian hospital seems to be acceptable by the patients.
- The level of patient satisfaction with the standard deviation of 5.405, and this is an indication that overall patient satisfaction are satisfied, nevertheless the hospital has good services but it needs to put in the future plans better strategies to improve in some areas such as the performance of health workers and their behaviors where the mean shows 4.15 and 4.16 respectively, in order to meet or surpass patients expectations.

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### ABSTRACT

In this paper about Hospital service quality and patient satisfaction have been considered as significant factors for any Hospital that is looking forward to succeed, the research tested a service quality model SERVQUAL to measure patient's satisfaction with the delivery of service. Five main dimensions of the service quality model SERVQUAL which were applied are tangibility, reliability, responsiveness, assurance and empathy. The model was applied to the customers who had previous experience from Soddo Christian Hospital. The purpose of this paper was to investigate the factors that contribute to customer satisfaction at Soddo Christian Hospital. The study helps to examine and understand the factors influenced in determining customer satisfaction. Usable samples of 250 questionnaires were collected out of 302 that were distributed to the patients. SPSS software was used to do reliability analysis and regression analysis. The findings showed that there is a significant relationship between contextual factors and customer satisfaction as the correlation coefficient of 0.730 indicate high correlation between responsiveness dimension and customer satisfaction. The analysis indicated that responsiveness of perceived quality have direct relationship with customer satisfaction compared to other contextual factors. Furthermore, this paper reports that customer satisfaction depend on service quality as there is statistical significance of the predictor hospital service quality ( $F_{5, 225} = 52.395$  and  $p < .000$ ), has probability occurrence of by chance only of less than 0.001) this confirms that, there is statistical significance at 1% level between hospital service and patient satisfaction. There is moderate positive significant relationship with patient satisfaction as the perceived correlations of four dimensions are: Tangibility ( $r = .635$ ), Reliability ( $r = .645$ ), Assurance ( $r = .620$ ) and Empathy ( $r = .622$ ) respectively.

## 1. INTRODUCTION

Healthcare is one of the fastest growing sectors in the service economy globally (Andaleeb, 2001). Ethiopia is also following the global trend in health Sector growth in the past two decades and has increased from 38% to 89.6% of the country's population having some access to basic health services according to the data from 1991-2010(Ethiopia MAF, 2014).The data also indicates that the number of hospitals was very few in 1990, about 72 in the whole country, but this was increased to 183 hospitals by 2010. Similarly, according to this report Health centers multiplied from 635 in 2004/2005 to over 2660 in 2010/11. This shows that, Ethiopia had a remarkable increase of Health infrastructures in two decades. However, it did not match with improvements in the availability of health personnel, materials, and essential drugs that are critical for improving service delivery and the uptake of health services (Ethiopia MAF, 2014). This brings much pressure on medical care institutions of how they can deliver the best quality of the service in order to meet the demand of increasing patients.

Service quality and Customer satisfaction are important issues that have impact in all companies and organizations globally, and also they are most important in achieving organizational goals, and this characterized by discussions about the necessity for assessing customer expectations and service quality (Parasuraman et al., 1994). Different studies confirm that providing higher service quality is an important strategy for persistence and success of any organization in the present intense market (Guru, 2003). It is significant for hospitals to implement programs of service quality to develop means of providing high quality services to patients, and to

succeed a lasting sustainable correlation with patients (Hernon and Altaman, 1998).

Service quality and Patient satisfaction are a major concern in healthcare strategic planning processes following the growth in a better technology. Patients are more informed and if they are not satisfied with the service, they will seek alternative healthcare provider despite the extra costs such as travelling expenses (Fowdar, 2008). In any society, the quality of service is of inherent importance. Good customer care experiences bring positive impact on company's business performance, including success, productivity, and market share and thereby decreasing costs (Zeithaml, 2000). According to Boshoff and Gray (2004), the relationship between patients and health care givers, communication, patients' consent, confidentiality, sanitation of working environment and access to basic information about their rights, are still poor in some hospitals. Strandvik (1995) states that, quality and satisfaction have evolved along parallel trucks. Since Soddo Christian Hospital (SCH) started, there has never been done any research concerning Health care service quality and patient satisfaction within this hospital and therefore had no idea of what, where and how to improve their hospital services.

The design of quality consists of providers, customers and managers in a structured process to clearly categorize customers' desires and design services procedures with the main feature to meet those needs (Watts, A. 2014). Quality design is used to develop an entirely new process or redesign an existing process for improved service delivery.

Service quality is evaluation of how well a delivered service conforms to the customer's expectations. Some Business that deliver Services, repeatedly assess service

quality delivered to their clients so that they can improve their quality service to immediately recognize problems and to better evaluate customer satisfaction. Researchers define Service quality in different ways for example, Gronroos (2003), defines service quality as a degree resulting from an assessment process where customers compare their expectations with the service they have received. Service quality is also termed as the capability of a service in providing customer satisfaction related to other options (Bojanic, 1991). Service quality has become an important topic for research in the point of view of its important link to profitability (Rust & Zohorik, 1993; Crosby 1979), and customer satisfaction (Bolton & Drew 1991; Boulding et al, 1993). Buttle (1996) started that, Quality of service has become known driver of business marketing and financial performance. Any company trying to succeed and to be sustainable in a tight business competition environment, Service quality is the basic strategy (Parasuraman, Zeithaml and Berry 1988).

Service quality has been described by several scholars as, general assessment of specific services provider built on contrast of performance with customers general expectations of what and how the service organization should deliver its services, (Parasuraman et al., 1988; Gronroos, 1984, 2006). In addition to that, Parasuraman and Zeithman (2002), state that, service quality as the difference between customers' normative expectation for the service and their view of service performance. In the same way, these researchers revealed a set of complete service that a client may use as a standard in evaluating performance of service and it includes the following five

dimensions: reliability, responsiveness, assurance, empathy and tangibility.

Several studies have been made in Ethiopia and globally on specific aspects of hospital service quality and patient satisfaction. Hospitals are called health care centers where sick people go for their health treatment through services and products, also health can be defined as a state of thorough physical, mental and social minus ailment. There are many proofs that have been recognized on quality service linked to satisfaction in different customer satisfaction studies, as well as those in the area of marketing in hospital care (Gotlieb, Grewal and Brown 1994; Brady and Robertson 2001; Andaleeb 2001). Extents to which patients identify the hospital service quality are as follows: physical environment, quality of staffs, and procedure of clinical care, relationship, communication, administrative processes and infrastructure. In general Patients receive several services from hospital and judge the quality of services delivered to them (Choi et al; 2004). Therefore, this indicates that, quality of the service is the main reason patients choose Hospitals. According to their proposed observation Evans and Lindsay (1999), Customer satisfaction results from the provision of services and goods that go beyond customer wants. Chahal (2000), clarified service quality of health care in the following three latent concepts, these includes performance of medical doctors, performance of nursing and the quality operation.

More so, in the research done by Aragon et al. (2003), on Health care emergency units they recommended that, the best model to measure patient satisfaction contemplate three latent concepts, these are Physician service, waiting time service and care of nurses.

Parasuraman et al. (1988) developed the SERVQUAL model comprising of five dimensions which is a common

instrument that is used to measure quality of the service. It is also normally applied in measuring quality of the service in healthcare businesses and it is known to be one of the most important frameworks for service quality perception; on the other hand, there are many arguments about SERVQUAL of not being the best method to measure service quality (Buttle 1995). However, most scholars confirmed that, this model is the main yardstick for measuring service quality (Wang & Hing 2002; Wilson et al., 2008, Negi, 2009) and also Babakus and Mangold (1992) also identified SERVQUAL as a reliable and valid model in the hospital environment Service. SERVQUAL identifies five fundamentals of service quality as follows, Responsiveness, reliability, assurance, tangibles and empathy. According to (Parasuraman et al. 1988). Five dimensions were proposed and the magnitude of the differences between perception and expectation of customers are applied for measuring perceived quality services.

The five dimensions were defined by Zeithaml et al. (1990) as follows

**Tangibility:** The appearance of physical facilities, equipment quality, personnel physical appearance, communication material.

**Reliability:** The ability to perform the service promised accurately and dependably. When a service is promised it has to be on promised time.

**Assurance:** The knowledge and courtesy of personnel and their ability to convey trust and confidence

**Empathy:** The provision of care to individualized attention to the customer.

**Responsiveness:** Employer willingness to help customer and to provide quick service.

For any company to running and quantifying service

quality by using SERVQUAL for its business they should deploy questionnaire that measure both the quality of the service and expectations of the clients in terms of five dimensions and their perception of the service received. When customer expectations are greater than their perceptions of received delivery then service quality is considered low. In the same manner the researcher wants to use SERVAQUAL framework to assess the patient perception on hospital service quality.

According to Hill, 2006, customer satisfaction is a measure of how a business's total product performs in relation to a set of customer requirements. Recently different type of organizations, big and small have gradually come to know the significance of customer satisfaction and understood how cheaper it is to keep existing customers than to win new ones. In order to make clients satisfied product or service providers have to meet their needs and must do best what matters most to customers. However customer satisfaction is in the mind of consumers and might not conform to the fact of the situation at present. Also Szwarc, 2005 defined customer satisfaction as how customer perceived the services provided by the company or organization in light of their experience and in comparison with other companies. Customer satisfaction is all about feelings and attitude concerning their experience with the company (Hill, 2007). Customers that are positively satisfied are expected to show their enjoyment. However, Crary, 2001, in his research commented that, dissatisfied customer may have a much more negative impact outcome than satisfied customers, he portrayed that, customers that are not satisfied normally share with nine people about the problems with your business, whereas satisfied customers may only tell five to six people about positive experience of your business. Hill, (2006) agrees that, Customer

satisfaction is the measure of success for many companies and there is a strong relationship between customer satisfaction and profitability and customer retention.

Researchers have argued on the appeal of classifying the needs of customers as a first step concerning offering satisfactory services (Andaleeb and Simmonds, 2001). If a product or service doesn't meet customer expectations then the complaint will arise and this may lead a customer to search for a substitute. It is important for any company or organization to control customer satisfaction in order to boost its business. However, effort to enhance service quality is the major challenge faced by organizations or companies that provides services (Sohal 1994). Satisfaction is ought to be an individual feeling.

The importance of customer satisfaction in healthcare services can be explained by Andaleeb (2001): Delivering customer satisfaction is very important because currently health care service customers are much more educated and the level of awareness is higher compared to the past. Buyers are more sensitive to monitoring the options available to them, so they know exactly what they need. These changes are being induced by the huge amount of information that is available to them from public and private sources.

The studies of Kurz and Wolinsky (1995), and Hair and Black (1998) showed that customers are relying less on doctors to choose the "right" hospital. Reflecting on the importance of the patient's point of view, Patterson and Spreng (1997) suggested that, "It really does not matter if the patient is right or wrong. What counts is how the patient felt even though the caregiver's perception of reality may be quite different". Thus, Hospitals that fail to understand the

importance of delivering customer satisfaction may be welcoming possible failure.

The study of Andaleeb (1998) also revealed some factors that have significant impacts on customer satisfaction. Some of them are:

- a. The level and quality of communication perceived by the patient,
- b. The level of competence of the service provider,
- c. The level of perceived quality of the facilities,
- e. The positive demeanor of the hospital staff, and finally
- f. The perception of hospital costs.

### **Satisfaction model**

Satisfaction as process of evaluation between what was received and what was expected is the most widely adopted description of customer satisfaction (Parker & Mathews, 2001). This strand of theory appears to have origins in discrepancy theory (Porter, 1961; cited in Parker & Mathews, 2001). Over the years, a number of authors have used some form of comparison to model satisfaction and early contributions include Contrast Theory, which states that consumers would exaggerate any contrast between expectation and product evaluation (Cardozo, 1965; Howard & Sheth, 1969; cited in Parker & Mathews, 2001). The most well-known decedents of discrepancy theory is the expectancy disconfirmation paradigm (Oliver, 1981), which stated that if performance exceeds expectations, customers will be delighted.

### **Service quality and customer satisfaction**

It is clear that satisfaction repeatedly plays a mediating role among perceptions of quality and creation of behavioral purposes (Cronin et al., 2000). Several studies have been done on relationships between service quality and customer satisfaction. Satisfaction leads to a good service perception (Drew, 1991) also Spreng and

Mackoy, (1996) confirm that, there is a strong link between service quality and customer satisfaction. In their study Storbacka et al., (1994) on impact of service quality on satisfaction and on loyalty, they established service quality to be positively linked with satisfaction and it leads to improve purchase.

Andaleeb (2001), in his study that was done in hospitals of Bangladesh on the relationship between customer satisfaction and service quality, he applied five dimension of perceived service quality, and all dimensions were substantial in explaining patient satisfaction and hospital service quality. The study established that, assurance had a bigger impact on patient than other dimensions and it indicates that there is link between service quality and patient satisfaction.

In their study, Tucker and Adams (2001) on patient satisfaction on public hospitals in America, the performance of service provider and access provider serving were established and about 74% of the fast consent variances. And these scholars argued that the quality variables consist of caring, empathy, reliability and responsiveness while satisfaction variable includes access, Communication and result.

Furthermore according to Choi et al; (2005) in their study done in Hospital of Southern Korea describe that, the correlation between patient satisfaction and service quality dimensions among patient based on age, gender and received service are not different.

Azmi et al., (2012) studied the attitude patients concerning service quality and its impact on satisfaction in hospitals in Saudi Arabia and five dimensions were used for the survey and on each dimension of service quality there have been approved to have statistically positive effect on the patient satisfaction.

Ramez (2012) and Alrubaiee (2011) in their findings stated that, patient perception of hospital care quality has a positive correlation with patient satisfaction.

Global Journal of Health Science conducted a study on impact of service quality and patient satisfaction in private hospitals of Iran and the results indicated that, there is a strong relationship between service quality and patient satisfaction. Around 45% of the variance in overall satisfaction was explained by four dimensions of perceived quality. The cost of service, the quality of the process and the quality of interaction had the big impact on the general patient satisfaction however they didn't find a significant effect on the quality of the physical environment on patient satisfaction (Zarei, E.,et al., 2014)

The purpose of this study was to analyze hospital service quality and patient satisfaction and their relationship in the context of Soddo Christian hospital services. Specifically this paper examined the patient perception on service quality, identified the extent of patients' satisfaction with hospital services and assessed the effect of service quality on patients' satisfaction.

## **METHODS**

Soddo Christian Hospital (SCH) believes in providing good quality of health care services (Soddo Christian Hospital, 2015). Soddo has medical technology and specialists that are well trained and this enables SCH to provide the best quality of service health care. The hospital has one hundred twenty beds that are in four wards and an intensive care unit and also the hospital provides a full range of medical, surgical which includes general and orthopedic, pediatric care, maternity, emergence room, dental clinic, optometry clinic and outpatient clinic. There are five operating rooms in

surgical department with laparoscopy and fluoroscopy. Also the hospital has radiology department that offers digital x-ray, a new 16-slice CT-scanner and ultrasound (Soddo Christian Hospital, 2015).

There is a strong relationship between hospital services quality with patient satisfaction as long as the service provided is as per customer wants (Hill, 2002). Different research shows that there is a strong positive relationship between customer satisfactions and services quality. The more satisfied customers are, the more they are likely to repurchase the service (Hill, 2002). Also keeping customer through satisfaction maximizes companies' profits (Szwarc, 2005). It is obvious that dissatisfied customers are unlikely to repurchase again (Hill et al, 2007).

Research design is the blueprint for fulfilling research objectives and answering research questions (John et al., 2007). In other words, it is a master plan specifying the methods and procedures for collecting and analyzing the needed information. It insures that the study would be relevant to the problem and that it uses economical procedures. This study is a quantitative research adopted with Cross-sectional survey techniques and is critically assessing the quality of health care services and patient satisfaction at Soddo Christian Hospital.

Cross-sectional studies often employ the survey strategy (Easterby-Smith et al.2008; Robson 2002). Cross-sectional research design is most of the time carried out to investigate associations between risk factors and the outcome of interest. This study design is used when the purpose of the study is often in the

form of a survey, most of the time there is no hypothesis as such but the aim is to describe a population or a subgroup within the population with respect to an outcome and a set of risk factors (Bland, 2001). Cross-sectional also is very important to find the prevalence of the outcome of interest for the population or subgroups within the population at a given time point.

A lot of information can be collected about potential risk factors in a cross-sectional study (Dag S. Thelle, Petter Laake, 2015). Loss to follow-up is a common concern in longitudinal studies and one of the strategies used to overcome this is to minimize the amount of information collected. This is not a problem in cross-sectional study design. Cross-section is relatively inexpensive and takes up little time to conduct and also using this study it can be simple to estimate prevalence of outcome of interest because sample is usually taken from the whole population.

Many outcomes and risk factors can be easily assessed by using cross-sectional; in addition to that this study is very useful for public health planning, understanding disease an etiology and for the generation of hypotheses. However, it's difficult to make causal inferences by using cross-sectional study; also the situation may provide differing results if another time-frame had been chosen.

The major source of data was primary data collected from in-patients at Soddo Christian Hospital (SCH) using self-completion questionnaires that was designed based on SERVQUAL model (Parasuraman et al., 1988) and Smith strategies. The study also used data that was available on internet, books and articles for analysis and discussion. Method of data collection employs, preliminary questionnaire that was written in English and translated in Amharic for easy understanding of all respondents and

was administered by the researcher. The authorization from SCH was obtained to facilitate the process of data collection.

The population of this study is 1400 in-patients admitted in the surgery, internal medicine, gynecology and pediatric departments at Soddo Christian Hospital. The statistical sample included the number of inpatients who passed at least one night hospitalization at one of the mentioned departments of hospital in September 2015.

The sample size of 302 was reliable with the intended sample size value that could be calculated assuming 50% population proportion with a 95% confidence interval and sampling error level of 5%. The study assume that 50% of the population in Soddo Christian hospital possibly express knowledge on the quality of hospital services and the true population value would be within +or – 5 percent based on the sample.

The sample size was determined by using “Morgan” and “Cohen” table. This table stipulates that out of 1400 population the sample should be 302. From the total sample only 250 questionnaires were returned and those include patients hospitalized in general surgery, internal medicine, gynecology and orthopedic departments.

This study used SERVQUAL scale to measure hospital service quality and Likert scale for patient satisfaction, in addition to that; quantitative technique was used to do analysis, more so Statistical Package for Social Science (SPSS) Version 20 was used to analyze the data obtained from primary sources. Specifically mean, standard deviation and inferential

statistics (correlation and regression) were taken from this tool.

To inspect the normality of the SERVQUAL dimensions among the in patients, the measures of skewness and kurtosis are examined. Skewness and kurtosis values of zero are indicative of normal distribution and the values between +2 and -2 is revealing of no problematic deviations (Balanda and MacGillivray 1988).

The Cronbach’s alpha coefficient was calculated in order to evaluate the reliability of the questionnaire and the coefficients results are: .967 and .938 of the overall perceived service quality and the satisfaction indicative of stability, reliability, respectively. Likert scale (1= Strongly disagree, 2=Somehow disagree, 3=disagree, 4= neutral and 5=agree 6=Somehow agree 7= Strongly agree) was used for the assessment of the perception level of the service quality and total satisfaction and also scores of mean variable were acquired from the score of total items and divided into the number of items.

Descriptive analysis was used to reduce the data that were arranged in a table format and measure of central tendency (mean and standard deviation).

According to Saunders et al. (2009), Pearson product moment correlation is useful in measuring and it is commonly used statistical method for obtaining an index the relationship between two variables. Correlation coefficient also allows measuring the strength of linear relationship between two variables and the coefficient is symbolized by  $r$ . Values of Correlation coefficient  $-1=$  perfect Negative,  $-0.7 =$ strong Negative,  $-0.3=$  weak Negative,  $0=$  perfect Independence,  $+0.3=$  weak positive,  $+0.7=$  strong Positive,  $+1=$  Perfect Positive (Saunders et al. 2009)

Also according to Cohen et al. (2000), correlation coefficients can be interpreted as follows: < 0.35 is low (has limited meaning), 0.35 to 0.65 (moderate, useful and group prediction may be possible). 0.65 to 0.85 (strong and could make possible group predictions that are accurate enough for most purposes) and over 0.85 (very strong correlations, indicating a close relationship between the two variables).

Linear Regression analysis is the method of estimating or predicting a value on some dependent variable given the values of one or more independent variables (Saunders, et al., 2009). This study employed coefficient of multiple regression analysis to measure the strength of a relationship between five dimensions (SERVQUAL) (independent variables) and patient satisfaction (dependent variable). This method also takes into account the correlations among the predictor scores (Adams,et al.2007)

The regression equation of this study is generally built around two sets of variables, the independent variable through five dimensions which are tangibility, reliability, responsiveness, assurance and empathy and this has been used to assess the patient satisfaction as dependent variable.

The researchers clarify the purpose of the study to the respondents and assured them of confidentiality of data collection. Also, the researchers discussed the intended data collection period of one month with the

hospital management before administering questionnaires. Answers to the questions are filled by caretakers although the answers are given by the respondents.

**RESULTS**

Data were collected from in-patients at Soddo Christian Hospital and three hundred and two questionnaires were distributed in four wards namely: Orthopedic, Gynecology, medical and General Surgery ward. Out of 302 questionnaires 250 were completed and returned successfully representing 83% response rate. The study used categorical and continuous variables to check the data cleaning and it was observed that minimum and maximum range were, Tangibility (4 – 28), Reliability (5 – 35), Responsiveness (4 - 28), Assurance (5 - 35),Empathy (4 - 28) and this confirms that all the data were entered correctly. In addition to that, after checking the missing and valid cases it was confirmed that there were no errors.

More so, to assess the dependent and independent variables, the study used descriptive data analysis and statistics such as, means scores, standard deviation including t-test ANOVA and multivariate regression methods.

**Reliability of questionnaires**

The table one shows the Cronbach’s alpha test results indicating the reliability of the questionnaires of service quality on patient satisfaction.

**Table 1: Reliability of the questionnaires**

No.	Variable	Cronbach’s Alpha
1	<b>Service Quality</b>	.967
1.1	Tangibility Dimension	.858
1.2	Reliability Dimension	.883

1.3	Responsiveness Dimension	.903
1.4	Assurance Dimension	.877
1.5	Empathy Dimension	.901
2	<b>Patients satisfaction</b>	.938

Sources: Primary data, 2016

Table one shows the Cronbach's alpha test results indicating the reliability of the questionnaires of service quality on patient satisfaction, so the coefficient alpha was calculated for each subscale: alpha levels were .858, .883, .903, .877, .901, for Tangibility, Reliability, Responsiveness, Assurance and Empathy dimensions

accessibility to healthcare services respectively.

### Characteristics of the Respondents

This section discusses the respondents characteristics related to gender, patient experience with the hospital, service user, type of service received or department.

**Table 2: Characteristics of the respondents**

Descriptions of characteristics		Frequency	Percent
<b>Gender</b>	Male	88	33.7
	Female	162	66.3
	Total	250	100
<b>Patient experience with SCH</b>	Yes	218	87.5
	No	31	12.4
	Total	249	99.9
<b>Service User</b>	User	100	40
	Person accompany	150	60
	Total	250	100
<b>Type of service (Department)</b>	Orthopaedic	84	33.8
	General medical service	133	53.6
	General surgery	8	3.2
	Delivery/Gyne & OB	23	9.2
	Total	248	99.8

Source: Primary data, 2016

As indicated in the table two, some questions were not answered by the total respondents, and this make the response rate 99.6% and 99.2% to Patients experience with Soddo and type of service respectively. A total of 302 questionnaires were distributed and the returned was 250 representing 82.7% response rate. From table two, 88 (33.7%) male and 162 (66.3%) female

participated in this study. From the table, a total of 218 had experience with the hospital (83.5%) and 31 had no experience (11.9%) and 0.4% representing one as missing data. More so, 100 (40%) respondents used the services as patients and 150 (60%) were accompanying persons or were caretakers.

The respondents received medical services from

different departments including; Orthopedics 84 (32.2%); General medical service includes; internal medicine, pediatrics, emergency room, dental clinic; radiology and laboratory were 133 (53.6%) respondents; general surgery 8 (3.1%) respondents, OB/Gynecology 23 (9.2%) respondents and 2 represented by 0.8% as missing data. This indicates that, to assess the service

quality and patient satisfaction the respondents are relevant source of data.

### Service quality of the hospital

Table three presents the detailed descriptive statistics for the independent variables that include the five dimensions of the SERVQUAL model

**Table 3: Descriptive Statistics for five Dimensions items (SERVQUAL)**

DESCRIPTION	n	Mean	Std. Deviation
<b>Tangibility of service</b>			
Hospital have up-to-date professional equipment	250	6.33	1.094
SCH hospital physical facilities are visually appealing	250	6.01	1.460
The hospital Doctors and nurses are well dressed and appealed neat	250	6.27	1.194
The appearance of the physical facilities of SCH in keeping with the type of services provided	250	6.17	1.227
<b>Reliability Dimension</b>			
SCH Promises made to you were kept.	250	6.03	1.397
SCH is sympathetic to problems and interested in solving them.	249	6.05	1.439
SCH is dependable	250	6.09	1.387
SCH provide its services at the time they promise to do so.	250	6.02	1.356
SCH keep records accurately	249	6.16	1.300
<b>Responsiveness Dimension</b>			
SCH tell exactly when services will be performed	250	5.95	1.432
You receive prompt service from Doctors and nurses.	250	5.96	1.498
Hospital staffs are always willing to help patients	250	6.05	1.408
Hospital staffs are never too busy to respond to the patient requests promptly	250	5.94	1.482
<b>Assurance Dimension</b>			
You trust Doctors and nurses of Soddo Christian hospital	250	6.14	1.251
You feel safe in your dealings with Doctors and nurses	249	6.18	1.438
Soddo Christian Hospital workers are polite	248	5.92	1.537
Healthy workers get adequate support from SCH to do their jobs well	248	5.79	1.560
SCH gives you individual attention	250	6.15	4.776
<b>Empathy of Service</b>			
Doctors and nurses of Soddo Christian Hospital gives you, personal attention	248	5.99	1.470
Doctors and nurses of SCH understands your specific needs	250	6.05	1.395
Keep your best interest at heart	250	5.98	1.560

Soddo Christian Hospital have convenient time arrangement	250	5.97	1.538
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**Source:** Primary data, 2016

Results presented in table three indicate the mean values of SERVQUAL dimension this includes; Tangibility mean score with their respective standard deviation. In this regards patients agree that, SCH equipment's are up to date (Mean=6.33 and Std. deviation of 1.094), and also physical appearance of hospital Doctors and nurses are well dressed and neat (Mean=6.27 and Std. deviation 1.194).

More so, the Reliability dimension achieves the highest mean score as Soddo Christian hospital keeps records accurately (Mean=6.16 and Std. deviation of 1.300) and the hospital is dependable (Mean=6.09 and Std. deviation of 1.387).

Considering Responsiveness dimension, the results show that, Doctors and nurses of Soddo Christian Hospital are willing to help patients (Mean=6.05 and

Std. deviation of 1.408).

From the Assurance, the respondents feel safe in dealing with Doctors and Nurses (Mean=6.18 and Std. deviation of 1.438) and the SCH gives individual attention (Mean=6.15 and Std. Deviation of 1.776); while Empathy dimension with the mean score of 6.05 and Standard deviation of 1.395 for Doctors and Nurses understanding of specific needs. This shows that, the overall mean scores (moderately high level) show that the present service quality status of Soddo Christian hospital seems to be acceptable by the patients.

### Patients Satisfaction with the service of the Hospital

Table four presents patients satisfaction with the Soddo Christian Hospital services

**Table 4: Patients Satisfaction**

Description	n	Mean	St. Dev.
How satisfied are you with SCH complete range of service	247	4.22	1.128
How satisfied are you with the performance of healthy workers at SCH	247	4.15	1.070
How satisfied are you with healthy workers professional competence	247	4.20	1.019
How satisfied are you with the quick service at Soddo Christian Hospital	247	4.20	1.104
How satisfied are you with the behaviour of Health workers at SCH	247	4.16	1.084

**Source:** Primary data, 2016

Results presented in table four, shows level of patient satisfaction and standard deviation of 5.405, and this is an indication that overall patient satisfaction are satisfied, nevertheless the hospital has good services but it needs to put in the future plans better strategies to improve in some areas such as the performance of health workers and their behaviors where the mean shows 4.15 and 4.16 respectively, in order to meet or

surpass patients expectations.

### Pearson Correlation matrix between Patient' satisfaction and five dimensions (n=250)

In this section Pearson product moment correlation coefficient was used to assess the strength of relationship between patient satisfaction and five dimensions

**Table 5: Pearson Correlation matrixes**

	1	2	3	4	5	6	7	8	9	10
1. P/satisfaction	1									
2. Tangibility D	.635**	1								
3. Reliability D	.645**	.872**	1							
4. Responsive D	.730**	.821**	.850**	1						
5. Assurance D	.620**	.794**	.762**	.802**	1					
6. Empathy D	.622**	.758**	.740**	.771**	.885**	1				
7. Orthopedic	-.283**	-.107	-.135	-.175*	-.068	-.086	1			
8. Medical care	.196**	.011	.042	.093	.010	.015	-.815**	1		
9. Delivery/OB	.136	.115	.126	.111	.096	.081	-.165*	-.198**	1	
10. G/surgery	.058	.100	.085	.075	.050	.084	-.213**	-.256**	-.052	1

\*\* . Correlation is significant at the 1% level \*Correlation is significant at the 5% (2-tailed).

Source: Primary data, 2016

From the table five, it shows a strong relationship between patient satisfaction and responsiveness dimension (r = .730) while the rest four dimensions shows that, there is moderate positive significant relationship with patient satisfaction. The perceived correlations of four dimensions are: Tangibility (r = .635), Reliability (.r = .645), Assurance (r = .620) and Empathy (r = .622) respectively.

The results from the same table (five) revealed that, services received from Orthopedic departments, there is low negative correlation between services offered at orthopedic (r = - .283) and patient satisfaction which is significant at 1% level.

Taking into account each department separately, there

is low positive correlation in the services delivered to the department of General Surgery (r = .058). And in addition to that, table five indicates that, the services delivered to both Obstetrics /Gynecology (r = .136) and General medical care (r=.196) has weak positive correlation however they are not statistically significant. And the entire four departments were statistically not supported this means all of them are not significant.

### Linear Regressions Analysis

Table six presents Predicative Capacity of the Model for dependent variable and predictors.

Table 6: Predicative Capacity of the Model

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2849.854	5	569.971	52.238	.000 <sup>b</sup>
	Residual	2454.985	225	10.911		

	Total	5304.840	230			
a. Dependent Variable: Patient Satisfaction Model						
b. Predictors: (Constant), EDM, RDM, RPDM, TDM, ADM						

EDM: Empathy RDM: Reliability RPDM: Responsiveness TDM: Tangibility ADM: Assurance

Source: Primary data, 2016

Results presented in table six, indicate that, there is a statistical significant of the predictor hospital service quality (F5, 225= 52.395 and p<.000), has probability occurrence of by chance only of less than 0.001 this confirms that, there is statistical significant at 1% level between hospital service and patient satisfaction.

### Linear Regression Model

For the purposes of determining the extent to which variable explains the variance in the explained variables, regression analysis was employed and the results of that analysis are described under the table seven.

Table seven is linear regression model, the Patient satisfaction as (dependent variable) on five dimensions (independent variables) by using multiple regressions

Table 7: Linear Regression Model

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
(Constant)	2.874	1.307		2.199	.029	.298	5.449		
TDM	.085	.113	.075	.751	.453	-.138	.307	.209	4.791
RDM	.043	.089	.052	.490	.625	-.131	.218	.184	5.441
RPDM	.519	.094	.546	5.525	.000***	.334	.704	.210	4.754
ADM	-.015	.086	-.019	-.176	.860	-.184	.154	.169	5.916
EDM	.110	.088	.121	1.248	.213	-.064	.284	.218	4.583
a. Dependent Variable: Patient satisfaction dimension									

\*\*significant at 1% level, \*Significant at 5% level and R<sup>2</sup> = .537

\*\*TDM: Tangibility Dimension, \*RDM: Reliability Dimension, \*RPDM: Responsiveness Dimension,

\*ADM: Assurance Dimension, \*EDM: Empathy Dimension

Source: Primary data, 2016

Since the probability value (P-value) as illustrated in the column of significance (sign.) for the RPDM (Responsiveness dimension), this indicated this variable is the only explanatory that contributes significantly to the outcome variable (Patients 'satisfaction). This conclusion is made due to the fact that it is the only explanatory variable whose p-value

(=.000) less than the marginal error (level of significance). Other remaining explanatory variables such as TDM, RDM, ADM and EDM do not contribute significantly to the outcome variable since their corresponding p-values are greater than the level of significance.

The outcomes from the table seven reported a weak

negative gap for assurance (-.019) this shows that, patients had higher expectation than perceived services. In areas like hospital workers politeness, Trusting Doctors and Nurses of Soddo Christian hospital, Patients feeling safe in dealings with Doctors and Nurses and Hospital giving patients individual attention From the table seven the statistical results indicates that the current service quality level in term of tangibility (.075) gives a weak positive correlation coefficient similar to the service quality perceived in Reliability (.052) and empathy (.121) dimensions statistically explains that, their correlation coefficients are weak and they has not statistically significant.

## DISCUSSION

The research was conducted in Soddo Christian Hospital with the main intention of assessing the Hospital services quality and patient satisfaction and the SERVQUAL model was used to measure hospital quality of the service and patient satisfaction. Giving a distinguished health care service became one of the main competitive factors in the health care sector where there is tense competition. 302 questionnaires were distributed and 250 were collected back. The research analysis on service quality of Soddo Christian hospital and evaluate the effect of hospital service quality on patient satisfaction. To analyse the data and to create tables the SPSS window based software has been used. Health care delivery is a service based industry and patient satisfaction is a critical success factor in measuring the hospitals performance just as in other service based organizations. Understanding how patients perceive the service and the ability to analyze service quality can benefit the hospital managers in making both quantitative and qualitative decisions.

Specific data obtained from analysis of service quality can be used in quality management hence managers of the hospital would be able to monitor and maintain the quality of service provided by the facility.

In theory, the model recognized many elements of quality that influenced patient satisfaction in hospitals in Ethiopia. From the outcome of this study there was no significant relationship between service quality in departments, such as Orthopedic, Medical ward, Gynecology/OB and General Surgery with patient satisfaction as there is low negative correlation between services offered at orthopedic ( $r = - .283$ ) and patient satisfaction which is significant at 1% level.

There is low positive correlation in the services delivered to the department of General Surgery ( $r = .058$ ). And in addition to that, table six indicates that, the services delivered to both Obstetrics /Gynecology ( $r = .136$ ) and General Medical care ( $r = .196$ ) has weak positive correlation however they are not statistically significant. And the entire four departments were statistically not supported this means all of them are not significant.

However the regression model revealed that there is evidence to prove the positive correlation between service quality and patient satisfaction as the regression coefficient results indicate that, the probability value (P-value) as illustrated in the column of significance (sign.) for the RPDM (Responsiveness Dimension), this indicated this variable is the only explanatory that contributes significantly to the outcome variable (Patients 'satisfaction). The conclusion is made due to the fact that it is the only explanatory variable whose p-value ( $= .000$ ) less than the marginal error (level of significance). Other remaining explanatory variables such as TDM, RDM, ADM and EDM do not contribute

significantly to the outcome variable since their corresponding p-values are greater than the level of significance.

More so, Pearson product moment correlation coefficient revealed that reliability, tangibility and Empathy had moderate positive significant relationship with patient satisfaction. The perceived correlations of those four dimensions are: Tangibility ( $r = .635$ ), Reliability ( $r = .645$ ), Assurance ( $r = .620$ ) and Empathy ( $r = .622$ ) respectively.

The study identifies the service quality provided by Soddo Christian Hospital, and its findings give a managerial implication in constantly improving the service quality thus improving customer satisfaction. As indicated by the reliability dimension in terms of the ability to perform the promised service on time (Mean=6.02 and Std. Deviation of 1.356) and keep promises that were made (Mean=6.03 and Std. Deviation of 1.397); thus requires the improvement of services for customer satisfaction.

In terms of further studies, this study examined the concept of hospital service quality and patient satisfaction, however; this study did not explore the perspective of service providers. This is a limitation in as much as it only considers the patients view, which might be different from the service providers' view. Therefore future research may focus on service quality and service providers' motivation.

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#### REFERENCES

- Adams, John, Khan, Hafiz T. A., Raeside, Robert and White, David (2007). *Research methods for graduate business and social science students*. Sage, London. ISBN 9780761935896.
- Alrubaiee, L. and Alkaaida, F. (2011). *The Mediating Effect of Patient Satisfaction in the Patients Perceptions of Healthcare Quality—Patient Trust Relationship*. International Journal of Marketing Studies, 3, 103-127.  
<https://doi.org/10.5539/ijms.v3n1p103>
- Andaleeb S. and Simmonds PL, (2001). *The Role of Service Quality, Resources, and User Characteristics*. Library Trends 49(4):626-634
- Andaleeb, S.S. (1998). *Determinants of Customer Satisfaction with Hospitals: A Managerial Model*. International Journal of Health Care Quality Assurance, 11, 181-187.
- Andaleeb, (2001), *Service quality perceptions and patient satisfaction: a study of hospitals in an* International Research Journal  
[www..researchersworld.com](http://www.researchersworld.com), Vol.– II, Issue – 4, Oct. 2011 [156]
- Andaleeb, S.S. (2001) *Service Quality Perceptions and Patient Satisfaction: A Study of Hospitals in a Developing Country*. Social Science and Medicine, 52, 1359-1370.  
[http://dx.doi.org/10.1016/S0277-9536\(00\)00235-5](http://dx.doi.org/10.1016/S0277-9536(00)00235-5)
- Aragon et al., (2003), *Effects of training on business results*, International Journal of Human Resource Management, 14 (2003), pp. 956-980
- Azmi et all . (2012). *Patients Attitudes toward Service*

- Quality and its Impact on their Satisfaction in Physical Therapy in KSA Hospitals*, European Journal of Social Sciences 34(2):300-314
- Babakus, Emin, and Gregory W. Boiler (1992), "An Empirical Assessment of the SERVQUAL Scale," *Journal of Business Research*, vol. 24, issue 3, 253-268
- Bland M. (2001), *An Introduction to Medical Statistics*. 3<sup>rd</sup> Edn. Oxford: Oxford University Press;
- BOJANIC, David C. (1991). *Quality Measurement in Professional Services Firms*. *Journal of Professional Services Marketing*, 7(2), p.27-36.
- Boshoff, C., and Gray, B. (2004). *The Relationships between Service Quality, Customer Satisfaction and Buying Intentions in the Private Hospital Industry*, *South African Journal of Business Management*, 35(4), 2737
- Boulding W., Kalra A, Stålin R. & Zeithaml V.A. (1993). *A Dynamic Process Model of Service Quality, from Expectations to Behavioral Intentions*. In *Journal of Marketing Research*. Vol. 30, pp. 7-27
- Brady M., & Robertson C. J., (2001) *Searching for a Consensus on the Antecedent Role of Service Quality and Satisfaction: An Exploratory Cross-National Study*, *Journal of Business Research* 51(1):53-60, DOI:10.1016/S0148-2963(99)00041-
- Buttle, F. (1996). *SERVQUAL: Review, critique and research agenda*. *European Journal of Marketing*, 30 (1), 8-32.
- Business Dictionary.com  
<http://www.businessdictionary.com/definition/service-quality.html>
- Buttle F. (1996) *SERVQUAL: Review, Critique, Research Agenda*. *European Journal of Marketing*, 30, pp. 8-32.
- Cardozo, R.N. (1965). *An Experimental Study of Customer Effort, Expectation, and Satisfaction*. *Journal of Marketing Research*, 3, 244-249.
- Chahal Hardeep. & Neetu Kumari (2012). *Service Quality and Performance in the Public Health-Care Sector*, *Health Marketing Quarterly*, 29:3, 181-205, DOI: 10.1080/07359683.2012.704837
- Choi, K.H., Wojcicki, J., & Valencia-Garcia, D. (2004). *Introducing and negotiating the use of female condoms in sexual relationships: Qualitative interviews with women attending a family planning clinic*. *AIDS and Behavior*, 8(3), 251-261.
- Cronin, J.J. Jr and Taylor, S.A. (1994), "SERVPERF versus SERVQUAL: reconciling performance-based and perceptions-minus expectations measurement of service quality", *Journal of Marketing*, Vol. 58, January, pp. 125-31.
- Cronin, J.J., Brady, M.K. and Hult, G.T. (2000), "Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments", *Journal of Retailing*, Vol. 76, pp. 193-218.
- Cronin, J. J., & Taylor, S. A. (1992). *Measuring Service Quality: A re-examination and extension*. *Journal of Marketing*, 56(3), 55–68
- Crosby, P.B. (1979), *Quality is Free*, New York: McGraw-Hill
- Dag S. Thelle, Petter Laake, (2015)., *In Research in*

- Medical and Biological Sciences* (Second Edition)
- D. Burton (1995). *Women and financial services: some directions for future research*. International Journal of Bank Marketing., 13 (8): 21-28
- Drew, J.H., Bolton, R.N. and (1991). *A Multistage Model of Customers' Assessments of Service Quality and Value*. Journal of Consumer Research, 17, 375-384. <http://dx.doi.org/10.1086/208564>
- Evans, J.R., & Lindsay, W.M. (1999). *The Management and Control of Quality*: South-Western College Publishing, Cincinnati, OH.
- Easterby-Smith, M, Thorpe, R. Jackson, P. and Lowe, A. (2008), *Management Research* (3<sup>RD</sup> edn). Sage: London Health, Federal Democratic Republic of Ethiopia; and United Nations in Ethiopia.
- Ethiopia. MAF. (2014). *Accelerated Action Plan for Reducing Maternal Mortality*, Ministry of Health, Federal Democratic Republic of Ethiopia; and United Nations in Ethiopia.
- Gottlieb, B.H., Grewal, D. and Brown, S.W. (1994) *Consumer Satisfaction and Perceived Quality: Complementary or Divergent Construct?* Journal of Applied Psychology, 79, 875-885. <http://dx.doi.org/10.1037/0021-9010.79.6.875>
- Grönroos C. (2004). *The Relationship Marketing Process: Communication, Interaction, Dialogue, Value*. In Journal of Business & Industrial Marketing, Vol. 19, No. 2, pp. 99-113
- Grönroos, C. (1984), "A service quality model and its marketing implications", European Journal of Marketing, Vol. 18, pp. 36-44.
- Guru, C. (2003), "Tailoring e- service quality through CRM", Managing Service Quality, Vol. 13 No. 6.
- Hair, J.F., Anderson, R.E., Tatham, R.L. and Black, W.C. (1998), *Multivariate Data Analysis*, 5th ed., Prentice-Hall, Englewood Cliffs, NJ.
- Hernon, P. and Altman, E. (1998). "Assessing service quality" *Satisfying the expectations of customers*, Chicago: American Library Association
- Hill, N., Roche, G. & Allen, R. (2007). *Customer Satisfaction: The customer experience through the customer's eyes*. London: Cogent Publishing Ltd.
- Hill, N., Brierley, J. & MacDougall, R. (2003). *How to measure customer satisfaction?* USA: Gower Publishing Ltd.
- Howard, J.A. and Sheth, J.N. (1969). *The Theory of Buyer Behavior*. John Wiley, New York, 12-15.
- John Adams, Hafiz T.A, Robert Raeside and David white (2007). *Research methods for graduate Business and social science students*, California, Sage
- Kevin P Balanda, H. L. Macgillivray (1988). *Kurtosis: A Critical Review*, *The American Statistician* 42(2):111-119, DOI:10.1080/00031305.1988.10475539
- Kurz, R.S., and F.D. Wolinsky. (1985). *Who picks the hospital: Practitioner or patient?* *Hospital and Health Services*. Administration, vol. 30:2, , pp. 95-106.
- Negi, R. (2009). Determining customer satisfaction

- through perceived service quality: A study of Ethiopian mobile users. *International Journal of Mobile Marketing*, 4(1), 31–38.
- Oliver, Richard L. (1981), "*Measurement and Evaluation of Satisfaction Processes in Retail Settings*,"
- Oliver, R.L. (1980), "A cognitive model of the antecedents and consequences of satisfaction decisions", *Journal of Marketing Research*, Vol. 17, pp. 460-9.
- Parasuraman A, Valarie A. Zeithaml (2002). *Service Quality Delivery Through Web Sites: A Critical Review of Extant Knowledge*, *Journal of the Academy of Marketing Science* 30(4):362-375  
DOI:10.1177/009207002236911
- Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1994), "*Reassessment of expectations as a comparison standard in measuring service quality: implications for future research*", *Journal of Marketing*, Vol. 58, pp. 111-124.
- Parasuraman, A., Valarie A. Zeithaml, and Leonard L. Berry (1988), "*SERVQUAL: A Multiple-Item Scale for Measuring Customer Perceptions of Service Quality*," *Journal of Retailing*, 64 (Spring), 12-40.
- Parasuraman, A., Valarie A. Zeithaml, and Leonard L. Berry (1985), "*A Conceptual Model of Service Quality and Its Implications for Future Research*," *Journal of Marketing*, 49 (Fall), 41-50.
- Parker, C., & Mathews, B. P. (2001). *Customer satisfaction: Contrasting academic and consumers' interpretations*. *Marketing Intelligence & Planning*, 19(1), 38–44.  
<https://doi.org/10.1108/02634500110363790>
- Porter, L. W. (1962). *Job attitudes in management: I. Perceived deficiencies in need fulfillment as a function of job level*. *Journal of Applied Psychology*, 46(6), 375-384.  
<https://doi.org/10.1037/h0047808>
- Ramez, D.W. (2012). *Patients ' Perception of Health Care Quality , Satisfaction and Behavioral Intention : An Empirical Study in Bahrain*.
- Ramsaran-Fowdar RR. (2008). *The relative importance of service dimensions in a healthcare setting*. *Int J Health Care Qual Assur.*;21(1):104-24. doi: 10.1108/09526860810841192. PMID: 18437943
- Robson,C.R.(2002) *Real World Research*(2<sup>nd</sup> edn).Oxford Blackwell *Journal of Business Research*, 24, 253-68.
- Rust, R.T. and Zahorik, A.J. (1993). *Customer Satisfaction, Customer Retention, and Market Share*. *Journal of Retailing*, 69, 193-215.  
[http://dx.doi.org/10.1016/0022-4359\(93\)90003-2](http://dx.doi.org/10.1016/0022-4359(93)90003-2)
- Ruth N. Bolton James H. Drew (1991) *A Multistage Model of Customers' Assessments of Service Quality and Value*, *Journal of consumer research*, Inc. Vol. 17  
*Journal of Retailing*, 57 (Fall), 25-48
- Saunders, M., Lewis.P., and Tornhill, A., (2009). *Research Methods for Business Students*.5<sup>th</sup>ed. Essex: Pearson Education
- Soddo Christian Hospital PLC,(2015), *Annual report*,
- Sohal, R.S. and Orr, W.C. (1994). *Extension of life-span by overexpression of superoxide dismutase and catalase in Drosophila melanogaster*. *Science*, 263, 1128-1130.  
<http://dx.doi.org/10.1126/science.8108730>
- Storbacka, Kaj & Strandvik, Tore & Grönroos, Christian. (1994). *Managing Customer Relationships for Profit: The Dynamics of*

- Relationship Quality*. International Journal of Service Industry Management. 5. 21-38
- Spreng, R. and Patterson, P. (1997). *Modelling the Relationship between Perceived Value, Satisfaction & Repurchase Intention in a Business-to-Business, Service Context: An Empirical Examination*. International Journal of Service Industry Management, 8, 414-434. <https://doi.org/10.1108/09564239710189835>
- Spreng, R.A. and Singh, A.K. (1993), “*An empirical assessment of the SERVQUAL scale and the relationship between service quality and satisfaction*”, unpublished manuscript, Michigan State University, TN.
- Strandvik T. & Liljander V. (1995). *The Nature of Customer Relationships in Services*. In Swartz T.A.,
- Szwarc, P. (2005) *Researching customer satisfaction & loyalty [electronic resource: how to find out what people really think]*, Kogan Page Publishers.
- Wang, Y., Lo, H. P., & Hui, Y. V. (2003). *The antecedents of service quality and product quality and their influences on bank reputation: evidence from the banking industry in China*. *Managing Service Quality: An International Journal*, 13(1), 72-83
- Watts, A. (2014). *Project Management*. Victoria, B.C.: BCcampus. Retrieved from <https://opentextbc.ca/projectmanagem>
- Wilson A, Zeithaml V, Bitner M, Gremler D (2008). *Services marketing: integrating customer focus across the firm*. First European Edition. McGraw Hill, UK.
- Zarei, E., Daneshkohan, A., Pouragha, B., Marzban, S., & Arab, M. (2014). *An empirical study of the impact of service quality on patient satisfaction in private hospitals, Iran*. *Global journal of health science*, 7(1), 1–9. <https://doi.org/10.5539/gjhs.v7n1p1>
- Zeithaml, V.A. (2000). Service Quality, Profitability, and the Economic Worth of Customers: What We Know and What We Need to Learn. *Journal of the Academy of Marketing Science*, 28, 67-85. <http://dx.doi.org/10.1177/0092070300281007>
- Zeithaml, V.A., Parasuraman, A. and Berry, L.L. (1990), *Delivering Quality Service: Balancing Customer Perceptions and Expectations*, Free Press, New York, NY
- Zeithaml, V.A. (1988), “Consumer perceptions of price, quality, and value: a mean end model and synthesis of evidence”, *Journal of Marketing*, Vol. 52, pp. 2-22.