Addis Ababa University College

School of Commerce

The Effect of Customer Service on Patient Satisfaction of Public Hospitals in Addis Ababa, Ethiopia

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A Research Proposal to be Submitted to the Graduate Studies of Addis Ababa University School of commerce, In the Partial Fulfillment of the Requirements for the

Master Degree of Marketing Management

May, 2019

Addis Ababa, Ethiopia

Declaration

First, I declare that this thesis is my original work and that sources of materials used in this thesis have been duly acknowledged. This thesis has been submitted in partial fulfillment of the requirements for an advanced MA degree in Marketing Management. I seriously declare that this thesis is not submitted to any other institution anywhere for an academic degree, diploma, or certificate. Brief quotations from this thesis are allowed without special permission, provided that accurate acknowledgement of the source is made.

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Date of Submission: _____

This thesis has been submitted for examination with my guidance and approval

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Approval

The undersigned certify that they have read and hereby recommend to Addis Ababa University School of Commerce to accept the thesis submitted by Adiyam Mulushoa entitled "The Effect of Customer Service on Patient Satisfaction in the Case of Public Hospitals in Addis Ababa, Ethiopia", in partial fulfillment of the requirements for the award of a *Master's degree in Marketing Management.*

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Acknowledgment

Before and for most I would like to thank almighty God for everything. I thank my advisor Dr. Mulugeta G/Medhin for his patience and guidance on preparing this research paper. Last but not least I would also want to thank my family who always believed on me, my dear love Addisu for his support and presence, and my friends for their support.

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Acronyms

BLH	Black Lion Hospital
MIIH	Menelik II Hospital
ZMH	Zewditu Memorial Hospital
Y12H	Yekatit 12 Hospital
SPHMMC	St. Paul's Hospital Millennium Medical College
RDDH	Ras Desta Damtew Hospital
AH	ALERT Hospital
TBH	Tirunesh Beijing Hospital
GMH	Ghandi Memorial Hospital
SPH	St. Peter Hospital

Abstract

A satisfied patient is expected to be compliant on his/ her treatment and medication leading to a better outcome; while patient satisfaction can be influenced by various factors, the service provided in a hospital can also have part on the patients' satisfaction over all. The aim of this study was to assess the effect of customer service on patient satisfaction in public hospitals in Addis Ababa. Quantitative cross-sectional study was undertaken among 398 patients attending the outpatient department at public hospitals in Addis Ababa. The data was collected using structured questionnaire and analyzed using SPSS 21. A total of 366 were interviewed with a total response rate of 91.96%. The overall self-reported patient satisfaction was only 42.1%. Patient satisfaction was independently associated with level of education, AOR 0.238 (95% CI 0.082-0.693), having first time and 2-4 times visit detail AOR 5.488 (95%CI 1.852-16.264), AOR 3.278 (95%CI 1.178-9.118) respectively, technical quality of the service AOR 7.530 (95% CI 3.473-16.324), and competence of employees AOR 3.152 (95% CI 1.655-6.003), communication skill of employees AOR 5.216 (95% CI 2.604-10.451), timely service delivery AOR 3.963 (95% CI 1.989-7.896). The self-reported patient satisfaction was low in the study area. The study showed that patient satisfaction is influenced by customer service dimensions like technical quality service, knowledge and competence of employees, communication skill of employees, and timely service delivery. Level of education and number of visit to hospital were also found to influence patient satisfaction.

Key words: customer service, patient satisfaction, public hospitals

CHAPTER ONE: INTRODUCTION

This introductory part aim to highlight the basic sections included in this study. It also indicate the reason why to select such topic and its importance. Thus, the topic of the study is the effect of customer service on patient satisfaction of public hospitals in Ethiopia. The contents of chapter one consists of background of the study, statement of the problem, general and specific objectives, research questions, significance of the study, scope of the study, organization of the study, and definition of key terms.

1.1 Background of the Study

Patient satisfaction, an internationally accepted factor, represents a key marker for the quality of health care delivery and needs to be studied repeatedly for smooth functioning of the health care system (Aldana et al., 2001). While patient satisfaction has been defined as the degree of consistency between patients' expectation of ideal care and perception of real care received (Aragon and Gesell, 2003). Ken Stanton puts the goal of customer service as to satisfy the demands of our customers' expectation (Stanton, 2004).

With the resource limitation that holds back public hospitals in developing countries, in our country doctors and nurses are in a very short supply where the doctor to population ratio is at most 1:20,000 and the nurse to population ration is 1:3,000 (INCTR), which makes the service delivery difficult and increase patient dissatisfaction. "Healthcare isn't like other business and patients are unlike other kinds of customers". Patients unlike other customers are not well, there being ill, injured makes them vulnerable, exhausted and confused; at the same time they come across making important and complex decisions in a short time frame where the service they seek needs high level of trust in their service provider. The clinician/patient relationship requires far more than customer service (Torpie, 2014).

Customer service is the link between the internal environment of the health care setting and the external environment of the healthcare market (Stanton, 2004). A study in Pennsylvania reported the total time spent waiting for the clinician to be the most significant predictor for patient

satisfaction in an ambulatory service (Dansky and Miles, 1997). Patients who reported to have better health had greater satisfaction (Jaipaul and Rosenthal, 2003).

A study in teaching hospital in Saudi mentioning the absence of one universally acceptable tool for measuring patient satisfaction resulted with patients being satisfied with professional services from medical staff (Al Umran et al., 1995). The level of patient satisfaction varies with hospitals, a study in Kerman Hospitals in Iran with just over 50% of patients satisfied raised hospital type as one of those being significantly associated (Bahrampour and Zolala, 2005). A comparative study done in public and private hospitals in Addis Ababa, Ethiopia showed that the satisfaction of patients in private hospitals being a bit higher (Tateke et al., 2012). Even though the private sectors are increasing in number in our country Ethiopia, the greater population still depends on the governmental hospitals for healthcare service (health and health related indicator, 2008).

Marshall and his colleagues used six aspects of care; namely technical quality, interpersonal manner, communication, financial aspects of care, time spent with doctor and accessibility of care when they developed patient satisfaction questionnaire (Marshall et al., 1993). Another article on patients satisfaction from the health service lists cost, behavior, competence and communication skills of the care providers, cleanliness, waiting time, consultation time among different variables relating directly to the subject being considered (Ahmad and ud Din, 2010). In this study the effect of customer service patient satisfaction will be seen from the medical care perspective using the patient satisfaction survey III.

1.2 Statement of the Problem

As provider of hospital care, business serving ‘customers’ and medical organization caring for patients are both involved. The business of delivering quality healthcare requires clinical and business expertise. All are essential in the attainment of excellent clinical outcomes, financial success, and patient satisfaction (Torpie, 2014). The increasing demand of the public for better health with the competitive and difficult environment the health care is surrounded by lead to enhanced focus on improved patient care and achieving high degree of patient satisfaction (Dandona et al., 2002).

Customer service is not an “extra”, it is an essential requirement for providing high quality health care and for staying in business, and satisfying patients makes the work more satisfying (Stanton, 2004). Patient satisfaction is reportedly a useful measure to provide a direct indicator of quality in healthcare. Therefore to develop a domesticated and localized healthcare plan it needs to be frequently measured (Farooqi, 2005).

In developing countries public hospitals are of highly crowded with patients. “Physician services, is just the kind of service where the affective component of satisfaction is expected to be salient. Physician services are high in credence properties and there is so much at stake that the patient is unlikely to feel happy unless he/she establishes an emotional bond with the doctor” (Shemwell et al., 1998).

Although public hospitals try to undertake surveys within their hospitals to assess their patients’ satisfaction, there lacks a study on this area. This study intends to assess the effect of customer service on patient satisfaction in public hospitals in Addis Ababa, Ethiopia.

1.3 Research Questions

The study was undertaken to address the following questions

Main research question

What is the effect of customer service on patient satisfaction in public hospitals in Ethiopia?

Sub research questions

1. How does technical quality of the service affect patient satisfaction in public hospitals in Ethiopia?
2. To what extent does functional quality of the service affect patient satisfaction in public hospitals in Ethiopia?
3. How does service employees’ knowledge and competence affect patient satisfaction in public hospitals in Ethiopia?
4. To what extent does service employees’ communication skill affect patient satisfaction in public hospitals in Ethiopia?

5. How dose timely delivery of service affect patient satisfaction in public hospitals in Ethiopia?

1.4 Research Objectives

1.4.1 General objective:

To assess the effect of customer service on patient satisfaction in public hospitals in Addis Ababa, Ethiopia.

1.4.2 Specific objectives:

- to examine the effect of technical quality of the service on patients satisfaction in public hospitals in Ethiopia
- to analyze the effect of functional quality of the service on patients satisfaction in public hospitals in Ethiopia
- to determine the effect of service employees' knowledge and competence on patients satisfaction in public hospitals in Ethiopia
- to analyze the effect of communication skills of service employees' on patients satisfaction in public hospitals in Ethiopia
- to examine the effect of timely delivery of service on patients satisfaction in public hospitals in Ethiopia

1.5 Significance of the Study

Delivering public healthcare services can be precarious in developing countries that struggle under the pressure of increasing demands and diminishing resources. Patient satisfaction measures play a crucial role in the health system by identifying the problems that arise in the health sector as well as integrating patients' point of view in the system. The significance of this study will be developing lesson to serve as guiding principles for the improvement of health care delivery system at the public hospitals. The beneficiaries of this study are; the patients, when their concerns will be factored into the healthcare facilities daily administration for improvement, the government, through getting an input to measure the performance of the health sectors, the

hospitals, making them improve upon their services for patients' satisfaction, and the health care provider's helping them to identify the potential areas of improvement.

1.6 Scope of the Study

This study was conducted on all public hospitals in Addis Ababa, Ethiopia. As its major objective was to assess the effect of customer service on patient satisfaction, the scope is limited to patients attending the outpatient department of the selected hospitals. Since, the first contact those patients have with their doctor determine their following acceptance and expectations on the rest of the service they will receive, the focus of this study is the effect of the customer service they received on their satisfaction. Among various customer service dimensions like service culture, customer centric orientation of management, technical quality of the service, process quality of the service, knowledge and competence of employees, service delivery systems, service policies and procedures, management support, functional quality of the service, communication skill of employees, professional appearance of service employees, timely service delivery, complaint handling system, service facility and customer feedback. For this study the included dimensions were technical quality of the service, functional quality of the service, knowledge and competence of employees, communication skill of employees, and timely service delivery.

Admitted patients were not included. Moreover; there are 12 public hospitals in Addis Ababa, but this study was only held at 10 of the hospitals, where Armed forces and Police hospital are restricted for confidentiality purpose.

1.7 Organization of the Study

This research is organized into six chapters, within each chapter there is different but interrelated subtopics. The first chapter deals with background, objective, statement of the problem, and significance of the study, the second chapter focuses on a literature review, which is divided into two parts that is theoretical literature review based on theories and concepts and empirical studies done by other researchers within and outside Ethiopia. Conceptual framework and research gaps are also addressed.

Chapter three is concerned mainly with research methodology which includes; research approach, research design, study area, target population, sample size, data collection methods, reliability and validity of measurement, as well as data analysis. Followed by chapter four where the results are presented with tables, figures and narrated. Chapter five has the discussion part, and in Chapter six conclusion and recommendation of the study are addressed.

1.8 Definition of Terms

Customer service is "a reflection of the organization's behavior, as well as of each individual who works there" (Stanton, 2004).

Patient satisfaction is defined as " individual's positive evaluation of multiple dimensions of the healthcare" (Linder-Pelz, 1982).

Technical quality of the service is defined as the degree to which the industry is able to do things right as measured against a technical industry standard (Ferguson et al., 1999).

Functional quality of the service the manner the service is delivered to customers and how they experienced the human interaction in the process (Fiala, 2012).

Knowledge and competence of employees is the competence of providers and adherence to high standards of diagnosis and treatment (Ware Jr et al., 1983).

Communication skill of employees is the features of the way in which healthcare providers interact personally with patients like the respect, concern, friendliness and courtesy they show to the patient (Ware Jr et al., 1983).

Timely service delivery the amount of time spent during an office visit (Gross et al., 1998).

CHAPTER TWO: REVIEW of RELATED LITERATURE

2.1 Theoretical Review

2.1.1 Patient satisfaction

A patient adhering to his/her medication and treatment is expected to have a better outcome. Satisfied patients show improved compliance, continuity of care and ultimately better health outcomes resulting from trustful & dependable contact with their physician (Danish et al., 2008). while Patient satisfaction has been defined as the degree of congruency between a patient's expectations of ideal care and his/her perception of the real care he/she receives (Aragon and Gesell, 2003), it has started to exist as an important component of the quality of medical care.

Ahmad and ud Din on their study of patient satisfaction concluded on its periodical measurement to enhance the quality of services stating patients' satisfaction from healthcare decides the fate of healthcare providers and healthcare delivery system (Ahmad and ud Din, 2010). And "satisfaction has been viewed as the dependent variable to evaluate different aspects of medical service" (Pascoe, 1983).

2.1.2 Patient satisfaction models

Unlike customer satisfaction patient satisfaction research lacks explicit guidance by a well-supported definition or psychological model of satisfaction (Pascoe, 1983). The models seen in patient satisfaction research are Linder-Pelz Model and the Alternative Patient Satisfaction Models.

Linder-Pelz Model

Linder-Pelz used the attitude theory frame work of Fishbein and Ajzen and characterized patient satisfaction as positive attitude. She labels perceptions like beliefs as cognitive, distinguishing cognitions from attitudes. She conceptualizes patient satisfaction by mixing health care dimensions (access, efficacy, cost, and convenience) to reactions and with experiences.

Linder-Pelz proposed six non exclusive hypotheses where five she tested using job satisfaction research and other social science formulations (Linder-Pelz, 1982). How particular perception value interactions may determine patient satisfaction was stated in the hypotheses. There were problems on this approach at the methodological level where the value scale and the entitlement scale mixed items referring to physician behavior with those referring to convenience, predictors of satisfaction with convenience were constructed using expectations about physician behavior. Another main problem is conceptualization of satisfaction as an expectancy-value attitude, since an individual satisfaction can be influenced by immediate experience than general value and expectation (Pascoe, 1983).

Alternative Patient Satisfaction Models

Two alternatives to value-expectancy models of satisfaction are fulfillment theories, which define satisfaction as a function of the amount received from a situation regardless of how much more one feels they should want to receive and discrepancy theories define satisfaction as the difference between actual outcome and some other ideal outcome and most studies have used it implicitly.

The weakness on this approaches is, fulfillment approach assumes, neglecting consideration of psychological standard involved in evaluating outcome, objective outcomes alone determine satisfaction. While discrepancy approach addressing the comparison of outcome to some psychological standard, assumes dissatisfaction result from any deviation from expectation (Pascoe, 1983).

2.1.3 Patient satisfaction dimensions

A study done on client satisfaction with service delivery in the health sector in Ghana, among the of patient' satisfaction the result showed 50% of the response on customer service, and the rest on supporting facility, quick service, complaints handling and low cost (Nkrumah et al., 2015). Fitzpatrick the hand listed different dimensions of patient satisfaction as humaneness, informativeness, overall quality, competence, bureaucracy, access, cost, facilities, outcome, continuity, attention to psychological problems arguing that studies have been including humaneness and information giving whereas, patients' view on outcomes being neglected (Fitzpatrick, 1991). Another study showed that patients have different views on doctor's conduct,

availability of care, continuity and convenience, and financial accessibility dimensions of their health care (Ware Jr and Snyder, 1975). Linder-Plez model characteristics are distinct dimensions of health care namely; access, efficacy, cost, and convenience (Linder-Pelz, 1982).

A meta-analysis done in USA on satisfaction literatures indicated that the reason for greater relative satisfaction on technical quality occurred could mean the health care system while stating technical performance to be very important, neglected patient needs, like their need to have affordable care, emotional and cognitive needs, that fall out of biomedical definition of health or the patients rank it high either because they feel they can't judge it very well or to consider the quality care one chose isn't of highest quality is terrifying (Hall and Dornan, 1988). And a patient may express satisfaction with one dimension and dissatisfaction with another dimension of care (Hsieh and Kagle, 1991).

2.1.4 Customer service

Customers could best be described as those who use the output of work, the end users of products or services. They may be internal to the organization such as the employees and directors or external like members of the public, other businesses, or government (DeiTumi, 2005). Stanton explain customer service as the link between the internal environment of the health care setting and the external environment of the healthcare market (Stanton, 2004).

According to Jamier (Jamier 2002), Customer service is a series of activities designed to enhance the level of customer satisfaction that is, the feeling that a product or service has met the customer expectation. It is the provision of service to customers before, during and after a purchase.

2.1.5 Customer Service Dimensions

Overall satisfaction

Overall satisfaction could be a global item or items, or something which made of different parts based on unidentified aspects (Pascoe, 1983).

Technical quality of the service

According to the service literature, the two different forms of quality are; technical quality and functional quality. The consumer is interested both on the outcome (technical quality) and the process itself (functional quality), where what he receives on his interaction with a service firm is essential to him and his evaluation of the service quality (Grönroos, 1984). Technical quality is defined as the degree to which the industry is able to do things right as measured against a technical industry standard (Ferguson et al., 1999).

Technical quality directly affected positively and significantly to the student satisfaction. The higher improvement of student perception about technical quality would give good effect to the student satisfaction. Therefore, the result that been perceived by students from good service interaction that given by educator and education staff had improved their professional performance and skill(Frangky R. *et al*, 2017).

Functional quality of the service

Functional quality is not the process rather the way the service is delivered. It's the manner the service is delivered to customers and how they experienced the human interaction in the process. And patients tend to make judgments about the service they have received based on the functional quality (Fiala, 2012).

A study conducted on all hotels in Malang City and Batu City Indonesia showed that functional Service Quality has significant effect on customer satisfaction and corporate image. Functional Service Quality also has significantly affected the loyal intentions. Corporate image significantly affect customer satisfaction and loyal intentions (Elfi Sukaisih et al, 2015).

Functional quality directly affected positively and significantly to the student satisfaction. The higher improvement of service process on functional quality would give good effect to the student satisfaction. Therefore, good service process that received from educator and education staff had assessed their service level by giving good attitude, ease of service, service reliability, and good trust (Frangky R. *et al*, 2017).

Functional quality starts from receptionist welcoming service. A positive first impression formed helps an overall good first impression of hotel employees and even hotel. Otherwise, once customer had a negative first impression to that front desk employee, it would affect that customer

had a negative first impression to the rest of employees even the entire hotel (Meijerink, Bondarouk, and Lepak's, 2016).

Knowledge and competence of the employees

Technical performance and competence clearly shown in traditional medical terms can be categorized under satisfaction with competence (Pascoe, 1983). It's the competence of providers and adherence to high standards of diagnosis and treatment (Ware Jr et al., 1983). There is satisfaction with the amount of information the provider supply (Pascoe, 1983).

Employee competence is a skill based on skill and knowledge supported by work attitude and its application in high-level performing tasks and work referring to the specified work requirements (Hollenbeck et al, 2018).

Communication skill of employees

Different patient subgroups have various satisfaction, and even though it hasn't been explored fully, patients with different socio-demographic backgrounds, different psychological needs and medical problems have different communication need (Greene et al., 1994).

Kathy states that interpersonal skill with clinical and communication skill is essential on ensuring patient's safety, comfort, care and inclusion in treatment planning generate patient satisfaction and gratitude (Torpie, 2014). Warmth, respect, kindness, willingness to listen, appropriate nonverbal behaviors, and interpersonal skill are included under satisfaction with humaneness (Pascoe, 1983). It's the features of the way in which healthcare providers interact personally with patients like the respect, concern, friendliness and courtesy they show to the patient (Ware Jr et al., 1983).

A review done on a total of 69 articles showed that poor communication between patient and physician can lead to various negative outcomes: discontinuity of care, compromise of patient safety, patient dissatisfaction and inefficient use of valuable resources, both in unnecessary investigations and physician work time as well as economic consequences (P. Vermeir et al, 2015).

A study showed a significant positive relationship between overall ratings of attendant's communication behaviors and overall satisfaction. Small changes in doctor communication behaviors can make some significant changes in patient satisfaction (Tongue JR. et al, 2005).

Timely service delivery

With the disproportional number of physicians and patients, physicians are being challenged to see more patients per office session while maintaining patient satisfaction. Recent reports show that physicians spend less time with each patient during the office visit (Collins, 1997). By spending a less time chatting about nonmedical topics and allowing sufficient time for exchange with the patient if feedback is necessary, physicians can enhance patient satisfaction with the amount of time spent during an office visit (Gross et al., 1998). A physician can accomplish patient's satisfaction not only by keeping the patients in the examination room longer, but also by spending a some amount of time chatting with patients to demonstrate caring for them as human beings, as well as patients (Gross et al., 1998).

2.1 Empirical Review

Overall satisfaction

A cross sectional study in patient satisfaction done in Iran stated 49.6% being satisfied (Bahrampour and Zolala, 2005). A comparative study done in Addis Ababa reported regarding overall satisfaction, 18.2% of the respondents very satisfied and 47.9% just satisfied. (Tateke et al., 2012). Hsieh and Kagel on their article, understanding patient satisfaction and dissatisfaction with health care, stated that patients' expectations of their physicians' and convenience of services being the best predictor of their overall level of satisfaction (Hsieh and Kagle, 1991).

Technical quality of the service

A meta-analysis of the satisfaction literature done by Judith and Michael reported technical quality of medical care and humanness ranked near the top, while aspects of care reflecting provider's attention to other patient needs and patient's relation to the system as a whole ranked at the bottom (Hall and Dornan, 1988).

Functional quality of the service

Functional and technical quality are good predictors of overall service quality which in turn significantly predicts customer satisfaction. Functional quality and technical quality predict 27.9% of the overall service quality which predicts 35.7% of the customer satisfaction.(Faizan Ali *et al* ,2017)

Knowledge and competence of the employees

A regression analysis of knowledge management maturity against customer satisfaction on a study done in Iraq on Impact of Knowledge Management on Customer Satisfaction shows that knowledge management has a significant positive impact on customer satisfaction. The reason for this is based on when the company's employees have the knowledge that the company's executives need, they will be ready and able to provide high quality services to the company and as such, will achieve high satisfaction for customers in acquiring the services and products of this company (Dr. Hamad Karem, 2018).

A patient satisfaction study done in kerman resulted with a significant relationship between satisfaction and education level with a p value less than 0.004 (Bahrampour and Zolala, 2005). An increase of one standard deviation in their perception of providers' technical competency score causes 0.237 standard deviations rise in the satisfaction score (Tateke et al., 2012)

Communication skill of employees

A study done in four and five star hotels in Kucbing Malaysia shows that; effective communication skills greatly influence customers' satisfaction. Factor analysis has extracted three factor solutions to be the most interpretable results; basic communication skills, communication clarity and information accessibility. It was found that all these three effective communication dimensions have a positive relationship with customers' satisfaction, with a beta of 0.32, 0.22 and 0.19 respectively (Aniza Baizura binti Ariffin, 2012).

A time–motion study reported that communication accounts for 24% of the work time of specialists. The economic impact of communication inefficiencies in nursing practices is estimated at about $4.9 billion per year. Wasted costs because of poor communication leading hospital overstay, were estimated to be $6.6 billion annually. Communication inefficiencies in the

hospital setting for physicians are estimated to generate a waste of $800 million annually (Hendrich A. et al, 2008)

In the USA, hospitals waste over $12.4 billion per year because of communication inefficiencies. More than half of that amount (53%) is because of an increase in length of stay, 40% is because of wasted nurse time and 6.7% because of wasted physician time. For a 500-bed hospital, annual losses because of communication inefficiencies are estimated to be $4 million (Agarwal R. et al, 2010).

Timely service delivery

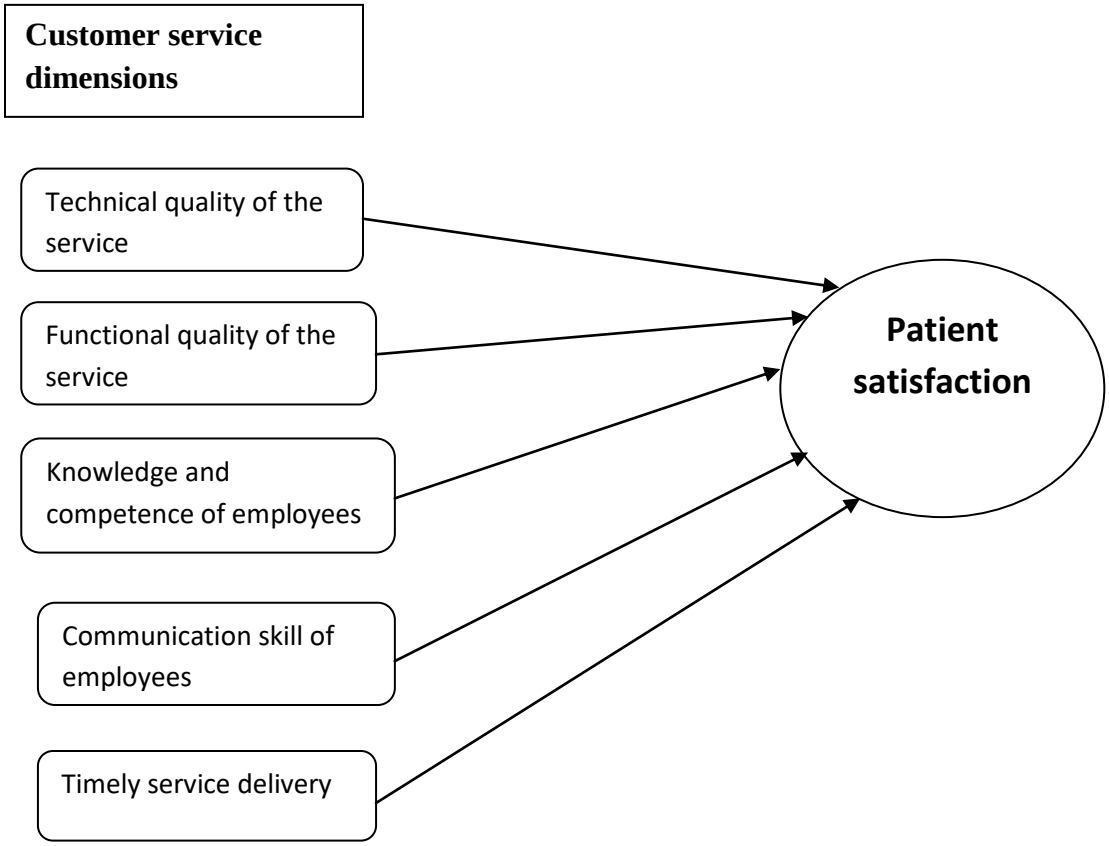
David and his colleagues on their study on patient satisfaction with the time spent with their physician reported that 49% of the patients answered excellent and only 1% poor, where older patients were more satisfied (Gross et al., 1998).

A comparative study by Tayue and his colleagues in Addis Ababa showed an association of waiting time with patient satisfaction, where the patients who reported adequate consultation duration had 0.095 unit higher satisfaction score than those who reported not adequate.

Another study done by Gross and his colleagues on patient satisfaction with time spent with physician concluded that the study provides evidence that many factors associated with overall patient satisfaction are also associated with satisfaction with the visit length, and that there are specific physician behaviors that enhance or detract from such satisfaction (Gross et al., 1998).

According to a 2015 study in Saudi Arabia, the only factor that had a significant influence on overall satisfaction was waiting time, with those waiting for over 30min reporting that they were dissatisfied with the service provided (Alnemer KA et al,2015).

2.2 Conceptual Frame Work



CHAPTER THREE: METHODOLOGY

The types of data used and the methods to be employed to investigate the effect of customer service on patient satisfaction in public hospitals will be dealt with in this chapter. To do so mainly, issues of the research approach, research design, study population, source of data, data collection procedure and analysis will be addressed.

3.1 Description of the Study Area

The study was conducted in all public hospitals in Addis Ababa, Ethiopia. There are 52 hospitals (12 governmental, and more than 40 private hospital) From the 12 public hospitals that deliver health services to the community, 10 of them were used; These are Tikur Anbessa Specialized Teaching Hospital, Menelik II Hospital, Zewditu Memorial Hospital, Yekatit 12 Hospital, St. Paul Hospital Millennium Medical College, Ras Desta Damtew Hospital, ALERT Hospital, Tirunesh Beijing Hospital, Ghandi Memorial Hospital and St. Peter Hospital. Police hospital and armed forces hospital wasn't used due to confidential issues.

3.2 Research Approach

In this study all patients in the public hospitals getting the service at the outpatient department were included, as a result a representative sample was taken which was well analyzed when expressed in numbers and in order to generalize a quantitative research approach was used to investigate the effect of customer service on patient satisfaction in public hospitals in Ethiopia.

3.3 Research Design

The study involved sampling the population at a given point of time while assessing the relationship between customer service dimensions and patient satisfaction; therefore an explanatory descriptive research design was undertaken.

3.4 Population and Samples

The source population in this study was all patients visiting the outpatient department of public hospitals in Addis Ababa during the study period. The study population consisted of the randomly selected patients, visiting the outpatient department of public hospitals in Addis Ababa, for the study.

3.5 Sampling Technique and Procedures

To undertake this research probability sampling technique was used. The probability sampling technique was used to randomly select respondents from the target population. To select respondents from each hospital a sampling frame was used to select samples from each hospital proportionally depending on the number of patient they served the month before, and samples were selected using convenience sampling. Patients age of 18 and above visiting the outpatient department of the hospital were selected from the waiting area right after they take a card and are waiting for their turn to be seen by the physician.

3.6 Sample Size Determination

For sample size determination the following formula was used, with an error 5% and with confidence coefficient of 95%

$n=N/(1+Ne^2)$, Where;

n= estimated sample size,

N = population size, and

e = Margin of error

(Tepping, 1968)

n = 102,518/ (1+102,518 x 0.0025) = 398

Table 1 Total number of study population in the respective hospitals

Facilities	BLH	MIIH	ZMH	Y12H	SPHMMC	RDDH	AH	TBH	GMH	SPH	Total
No. of patient on OPD visit/month	20,963	737	4,000	1,182	27,528	4,500	21,692	6,951	4,350	10,615	102,518
Sample	81	3	16	5	107	17	84	27	17	41	**398**

3.7 Data Sources and Types

Primary data sources were used to meet the objective of this study, where the data was collected through close ended questionnaire.

3.8 Data Collection Procedures

On this study both primary and secondary data collection methods were used. The primary data collection included questionnaires; whereas the secondary data was obtained from various documents such as books, reports, manuals, and journals. The questionnaire is adopted from other related studies.

3.9 Ethical Consideration

Permission was obtained from respective hospitals. Participation in the study was voluntary and based on the ability of each patient to give written informed consent, and they were guaranteed confidentiality of the information they gave and had the right to refuse or withdraw participation in the study at any time.

3.10 Data Analysis

Data was entered into Epi info version 7.2.0.1for cleaning and exported to the Statistical Package for the Social Sciences (SPSS version 21.0) computer software for analysis.

To test the assumptions normality and multicollinearity tests were undertaken and the independent variables were normally distributed, and there was no VIF value > 10 which implies that there was no multicolinerarity between the independent variables. Therefore, the assumptions were fulfilled (see Annex 3, 4).

The analysis consisted of basic summaries of patient characteristics, Univariate and bivariate analysis of the relation between patient satisfaction and customer service. Descriptive statistics (frequencies, tables, percentages, means, and standard deviation) was used to generate proportion and using bivariate analysis p- values ($p<0.05$) was used to decide whether observed difference would be statically significant or not. Multiple variable analysis was also employed to identify the independent predictors for patient satisfaction which are statically significant. Likert scale is used for measurement.

3.11 Validity and reliability

3.11.1 Validity

To assure quality of the data a structured standard questionnaire was used. Pretest was carried out on 20 individuals (5% of sample size) on similar subjects, which were not included in the study. Modifications and adjustments were made on questions and their responses based on lessons from the pretest.

3.11.2 Reliability

There are several different reliability coefficients. One of the most commonly used is called Cronbach's Alpha. Crobanch's alpha reliability coefficient normally ranges between 0 and 1. The closer the coefficient is to 1, the greater is the internal consistency of the items (variables) in scale. And this study used the Crobanch'S alpha to check for quality assurance and the scale produced an alpha of 91.3%, which makes the questionnaire reliable.

Table 2 Cronbach's alpha reliability statistics

Variables	Cronbach's alpha	N of items
TQSmean	0.773	7
FQSmean	0.718	3
KCEmean	0.812	4
CSEmean	0.905	5
TSDmean	0.733	5
Total	**0.913**	24

TQSmean = mean of technical quality of service, **FQSmean** = mean of functional quality of service, **KCEmean** = mean of knowledge and competence of employees, **CSEmean** = mean of communication skill of employees, **TSDmean** = mean of timely service delivery

CHAPTER FOUR: DATA ANALYSIS, FINDINGS and INTERPRETATION

4.1 Socio-Demographic Characteristics of the Study Participants

The participants of the study were 366 with a response rate of 91.96%. The median age of the participants was 38 years with a range of 18-78; most of the participants were females 192 (52.5%). With regard to level of education 137 (37.4%) were beyond secondary. 198 (54.1%) of them were married, and 115 (31.4%) of the participants had eight and more visits to the hospital (Table 1).

Table 3 Socio-demographic Characteristics of the study participants at public hospitals in Addis Ababa, Ethiopia, 2019

Category	Frequency	%
Sex		
Male	174	47.5
Female	192	52.5
Level of education		
No formal	64	17.5
education	78	21.3
Elementary	87	23.8
Secondary	137	37.4
Beyond secondary		
Marital status		
Single	118	32.2
Married	198	54.1
Divorced	23	6.3
Widower/widowed	27	7.4
Visit detail		
First time	100	27.3
2-4 times	112	30.6
5-7 times	39	10.7
> =8 times	115	31.4

4.2 Descriptive statistics on analysis of effect of customer service on patient satisfaction

Descriptive statistics are broken down into measures of central tendency and measures of variability (spread). The editing and coding phase was followed by descriptive analysis of the sample. Participants were asked about their satisfaction on the service. Data for the survey study

were collected from the target by means of interview based questionnaire. 24 close ended questionnaire were used so that, the variables can be averaged to measure the degree of agreement or the disagreement of the respondents.

4.2.1 Technical Quality of the Service

The composite mean of the participants' response to technical quality of the service was 2.99 (±0.66) somewhat neutral (Table 2).

Table 4 Summary of responses on technical quality of the service at public hospitals in Addis Ababa, Ethiopia, 2019

SN.	Technical quality of the service		SA (5)	A (4)	N (3)	DA (2)	SDA (1)	Mean	SDV
1	Hospital has organized queue system at the reception area	Frequency	23	265	7	64	7		
		%	6.3	72.4	1.9	17.5	1.9	2.36	0.90
2	Doctor's office has everything needed for complete care	Frequency	17	221	60.4	60.4	65		
		%	4.6	60.4	11.2	22.7	1.1	2.55	0.93
3	Well organized Pharmacy queue system	Frequency	10	128	60	159	9		
		%	2.7	35.0	16.4	43.4	2.5	3.08	0.99
4	Satisfied with waiting area at receptions site	Frequency	8	157	23	165	13		
		%	2.2	42.9	6.3	45.1	3.6	3.05	1.05
5	Satisfied with waiting area at dispensary area	Frequency	6	103	50	196	11		
		%	1.6	28.1	13.7	53.6	3.0	3.28	0.96
6	Satisfied with consultation room environment	Frequency	17	114	47	167	21		
		%	4.6	31.1	12.8	45.6	5.7	3.17	1.08
7	Hospital has necessary medical equipment	Frequency	7	109	34	122	94		
		%	1.9	29.8	9.3	33..3	25.7	3.51	1.22
	Total composite mean							2.99	0.66

1 = Strongly Disagree (**SDA**); 2 = Disagree (**DA**); 3 = Neutral (**N**); 4 = Agree (**A**); and 5 = Strongly Agree (**SA**).

4.2.2 Functional Quality of the Service

The composite mean of the participants' response to functional quality of the service was 2.75 (±0.91) somewhat neutral (Table 3).

Table 5 Summary of responses on functional quality of the service at public hospitals in Addis Ababa, Ethiopia, 2019

SN.	Technical quality of the service		SA (5)	A (4)	N (3)	DA (2)	SDA (1)	Mean	SDV
1	Receptionist greeted me cheerfully	Frequency	26	101	34	163	42		
		%	7.1	27.6	9.3	44.5	11.5	3.26	1.18
2	Didn't had to wait long to see my doctor	Frequency	10	78	22	142	114		
		%	2.7	21.3	6.0	38.8	31.1	3.74	1.19
3	Doctor was nice to his staff	Frequency	42	124	111	70	19		
		%	11.5	33.9	30.3	19.1	5.2	2.73	1.06
	Total composite mean							2.75	0.91

1 = Strongly Disagree (**SDA**); 2 = Disagree (**DA**); 3 = Neutral (**N**); 4 = Agree (**A**); and 5 = Strongly Agree (**SA**)

4.2.3 Knowledge and Competence of Employees

The composite mean of the participants' response to knowledge and competence of employees was 3.38 (±0.80) slightly to agreeing (Table 4).

Table 6 Summary of responses on knowledge and competence of employees at public hospitals in Addis Ababa, Ethiopia, 2019

SN.	Knowledge and competence of employees		SA (5)	A (4)	N (3)	DA (2)	SDA (1)	Mean	SDV
1	They carefully check everything when examining and treating me	Frequency	18	236	21	83	8		
		%	4.9	64.5	5.7	22.7	2.2	2.52	0.97
2	Always doubtless on diagnosis being correct	Frequency	27	196	20	116	7		
		%	7.4	53.6	5.5	31.7	1.9	2.67	1.06
3	No doubts on the ability of the doctor who treats me	Frequency	25	202	21	113	5		
		%	6.8	55.2	5.7	30.9	1.4	2.65	1.03
4	Get all explanations about medicines and dosage from the pharmacist	Frequency	18	209	42	94	3		
		%	4.9	57.1	11.5	25.7	0.8	2.60	0.95
	Total composite mean							3.38	0.80

1 = Strongly Disagree (**SDA**); 2 = Disagree (**DA**); 3 = Neutral (**N**); 4 = Agree (**A**); and 5 = Strongly Agree (**SA**).

4.2.4 Communication Skill of Employees

The composite mean of the participants' response to communication skill of employees was 2.85(±0.88) somewhat neutral (Table 5).

Table 7 Summary of responses on communication skill of employees at public hospitals in Addis Ababa, Ethiopia, 2019

SN.	Communication skill of employees		SA (5)	A (4)	N (3)	DA (2)	SDA (1)	Mean	SDV
1	Reception/registration staff are courteous	Frequency	9	104	22	213	18		
		%	2.5	28.4	6.0	58.2	4.9	3.34	1.02
2	Doctor treats me in a very friendly and courteous manner	Frequency	9	125	33	185	14		
		%	2.5	34.2	9.0	50.5	3.8	3.19	1.03
3	Treated with respect and dignity	Frequency	13	144	36	167	6		
		%	3.6	39.3	9.8	45.6	1.6	3.02	1.03
4	Pharmacy staff served my medication courteously	Frequency	11	119	48	182	6		
		%	3.0	32.5	13.1	49.7	3.14	0.99	3.14
5	The health care providers are compassionate	Frequency	28	127	27	177	7		
		%	7.7	34.7	7.4	48.4	1.9	3.02	1.10
	Total composite mean							2.85	0.88

1 = Strongly Disagree (**SDA**); 2 = Disagree (**DA**); 3 = Neutral (**N**); 4 = Agree (**A**); and 5 = Strongly Agree (**SA**).

4.2.5 Timely Service Delivery

The composite mean of the participants' response to timely service delivery was 2.59 (±0.78) somewhat neutral (Table 6).

Table 8 Summary of responses on timely service delivery at public hospitals in Addis Ababa, Ethiopia, 2019

SN.	Timely service delivery		SA (5)	A (4)	N (3)	DA (2)	SDA (1)	Mean	SDV
1	Satisfied with the registration time	Frequency	10	202	16	123	15		
		%	2.7	55.2	4.4	33.6	4.1	2.81	1.06
2	Waiting time isn't long and exhausting	Frequency	5	60	28	161	112		
			1.4	16.4	7.7	44.0	30.6	3.86	1.07

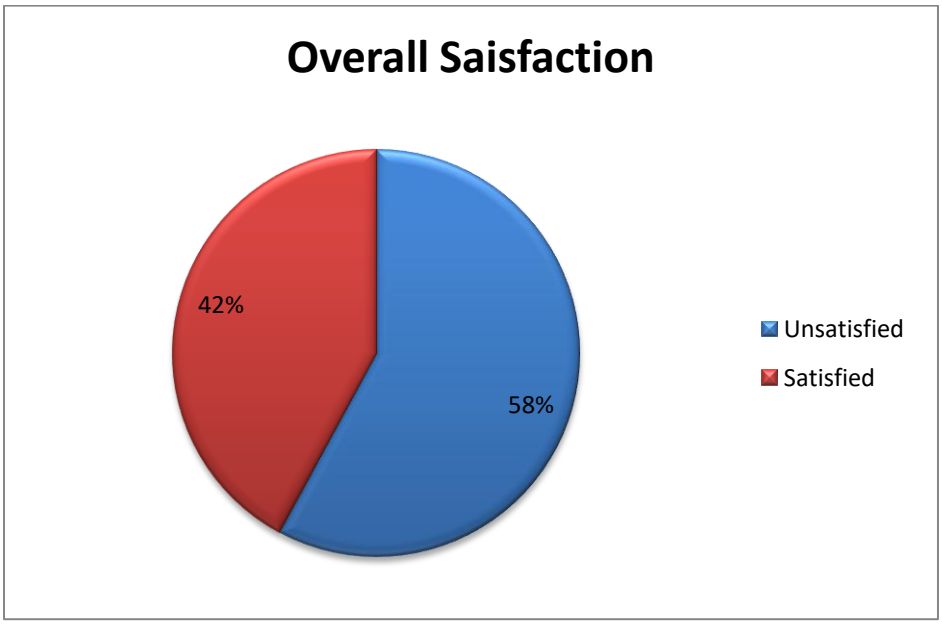
		%							
3	I have plenty consultation time	Frequency	11	201	34	107	13		
		%	3.0	54.9	9.3	29.2	3.6	2.75	1.02
4	Easy to find an appointment right away	Frequency	8	82	23	116	137		
		%	2.2	22.4	6.3	31.7	37.4	3.80	1.22
5	Able to get medical care whenever I need it	Frequency	13	74	25	119	135		
		%	3.6	20.2	6.8	32.5	36.9	3.79	1.24
	Total composite mean							2.59	0.78

1 = Strongly Disagree (**SDA**); 2 = Disagree (**DA**); 3 = Neutral (**N**); 4 = Agree (**A**); and 5 = Strongly Agree (**SA**).

4.2.6 Overall Satisfaction

Most of the participants 212 (57.9%) respond unsatisfied on the overall satisfaction of health care service they received in the hospital. While 154 (42.1%) respond to be satisfied (fig.1).

Figure 1 Summary of response on overall satisfaction at public hospitals in Addis Ababa, Ethiopia, 2019



4.3 Correlation analysis within the independent variables

The correlation between FQS and TQS was high (r=0.586 and p=0.000). The correlation between KCE and TQS was medium (r=0.347 and p=0.000), while the correlation between KCE and FQS small (r=0.257 and p=0.000). The correlation between CSE and TQS was high (r=0.553 and p=0.000) also its correlation with FQS was high (r=0.733 and p=0.000), and medium correlation with KCE. The correlation between TSD and TQS, TSD and FQS, TSD and CSE was high (r= 0.518 and p=0.000), (r=0.575 and p=0.000) and (r=0.686 and p=0.000) respectively, while the correlation between TSD and CSE was small (r=0.272 and p=0.000).

Table 9 Correlation matrix between variables

Variables		TQSmean	FQSmean	KCEmean	CSEmean	TSDmean
TQSmean	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	366				
FQSmean	Pearson Correlation	.586	1			
	Sig. (2-tailed)	.000				
	N	366	366			
KCEmean	Pearson Correlation	.347	.257	1		
	Sig. (2-tailed)	.000	.000			
	N	366	366	366		
CSEmean	Pearson Correlation	.553	.733	.305	1	
	Sig. (2-tailed)	.000	.000	.000		
	N	366	366	366	366	
TSDmean	Pearson Correlation	.518	.575	.272	.686	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	366	366	366	366	366

TQSmean = mean of technical quality of service, **FQSmean** = mean of functional quality of service, **KCEmean** = mean of knowledge and competence of employees, **CSEmean** = mean of communication skill of employees, **TSDmean** = mean of timely service delivery.

4.4 Logistic regression

4.4.1 Socio-demographic factors with patients' overall satisfaction

Among the male and female patients 61.5% and 54.7% respectively respond unsatisfied on the overall satisfaction of the service they received in the hospital. From the patients with no formal education 62.5% and 56.9% of those with beyond secondary level of education responded unsatisfied on the overall satisfaction of the service they received in the hospital. 55.9% of patients who are single answered unsatisfied on the overall satisfaction of the service they received in the hospital. From the patients who had >=8 times visit to hospital 60.9% answered unsatisfied on the overall satisfaction of the service they received in the hospital (Table 7).

Table 10 Socio-Demographic characteristics associated with patient satisfaction in public hospitals, Addis Ababa, Ethiopia 2019

Variables	Overall satisfaction		P	COR (95%CI)
	Unsatisfied freq (%)	Satisfied freq (%)		
Sex				
Male	107 (61.5)	67 (38.5)	0.188	0.756 (0.498-1.147)
Female	105 (54.7)	87 (45.3)		1
Level of education				
No formal education	40 (62.5)	24 (37.5)	0.456	0.793 (0.432-1.458)
Elementary	46 (59.0)	32 (41.0)	0.771	0.920 (0.523-1.616)
Secondary	48 (55.2)	39 (44.8)	0.796	1.074 (0.625-1.845)
Beyond secondary	78 (56.9)	59 (43.1)		1
Marital status				
Single	66 (55.9)	52 (44.1)	0.282	0.630 (0.272-1.462)
Married	122 (61.6)	76 (38.4)	0.092	0.498 (0.221-1.122)

Divorced	12 (52.2)	11 (47.8)	0.586	0.733 (0.240-2.239)
Widower/widowed	12 (44.4)	15 (55.6)		1
Visit detail				
First time	57 (57.0)	43 (43.0)	0.864	1.173 (0.680-2.024)
2-4 times	64 (57.1)	48 (42.9)	0.565	1.167 (0.687-1.981)
5-7 times	21 (53.8)	18 (46.2)	0.568	1.333 (0.641-2.774)
> =8 times	70 (60.9)	45 (39.1)	0.441	1

4.4.2 Patient Satisfaction with customer service dimensions

The mean of those who answered satisfied with the overall satisfaction of the service received in the hospital was 3.46 from the composite mean for technical quality of the service. From the composite mean of the functional quality of the service 3.33 was the mean of those who answered satisfied. While from the total mean of knowledge and competence of employees; the mean of those who answered satisfied on the overall satisfaction of the service was 3.74. for communication and skill of employees and timely service delivery the mean of those who answered satisfied on the overall satisfaction of the service they received in the hospital was 3.55 and 3.15 respectively (Table 8).

Table 11 Customer service dimensions and patient satisfaction in public hospitals, Addis Ababa, Ethiopia 2019

Variable	Overall satisfaction	Mean	SDV
TQSmean	Unsatisfied	2.66	0.56
	Satisfied	3.46	0.51
FQSmean	Unsatisfied	2.34	0.78
	Satisfied	3.33	0.77
KCEmean	Unsatisfied	3.13	0.85
	Satisfied	3.74	0.56
CSEmean	Unsatisfied	2.35	0.64
	Satisfied	3.55	0.67
TSDmean	Unsatisfied	2.19	0.54
	Satisfied	3.15	0.72

TQSmean = mean of technical quality of service, **FQSmean** = mean of functional quality of service, **KCEmean** = mean of knowledge and competence of employees, **CSEmean** = mean of communication skill of employees, **TSDmean** = mean of timely service delivery

4.5 Independent predicators of patient satisfaction

This study used a structured questionnaire and self-report of satisfaction to examine the effect of customer service on patient satisfaction. In this study we found that the proportion of patients who were satisfied is low 42%, comparable to a study done in Kerman hospital, Iran (Bahrampour and Zolala, 2005).

In order to control confounding factors a multiple variable analysis was used. All the variables were included in multiple variable analysis. Among socio demographic variables, level of education and visit details were significant in explaining patient satisfaction. While there was no significant association between sex, age and marital status with patient satisfaction, furthermore among dimensions of customer service technical quality of the service, knowledge and competence of employees, communication skill of employees and timely service delivery were independent predictors of patient satisfaction.

Level of education was significantly associated with patient satisfaction controlling other factors; patients with elementary level of education were 76.2% less likely to be satisfied than those beyond secondary level of education, **AOR 0.238 (95%CI 0.082-0.693)** against the study done in Iran Kerman hospital (Bahrampour and Zolala, 2005). Patients with first time visit to the hospital were 5.5 times and those with 2-4 times visit detail were 3.3 times more likely to be satisfied, **AOR 5.488 (95%CI 1.852-16.264), AOR 3.278 (95%CI 1.178-9.118)** respectively than those who had >= 8 times visit to the hospital.

Among the dimensions of customer service technical quality of the service, knowledge and competence of employees, communication skill of employees and timely service delivery were significantly associated with patient satisfaction. By controlling the effect of all other relevant factors the result indicated that a unit increase in the mean of technical quality of the service result 7.5 fold increase in satisfaction **AOR 7.530 (95%CI 3.473-16.324)** Similar to a comparative study done to identify determinants of patient satisfaction in Ethiopia (Tateke et al., 2012). A unit

increase in the mean of knowledge and competence of employees result 3.2 fold increase in satisfaction **AOR 3.152 (95% CI 1.655-6.003).** Similar to a study done on impact of interpersonal communication on customer satisfaction at a hospital in Indonesia (Novalia Agugung W.A, 2017), a unit increase in the mean of communication skill of employees result 5.2 fold increase in satisfaction **AOR 5.216 (95%CI 2.604-10.451).** Consistent to other study done on patient satisfaction with time spent with physician (Gross et al., 1998)**,** a unit increase in the mean of timely service delivery result 4 fold increase in satisfaction **AOR 3.963 (95% CI 1.989-7.896)** (Table 9).

Table 12 Multiple Variable logistic regression model to identify independent predictors of patient satisfaction in public hospitals, Addis Ababa, Ethiopia 2019

Variables	Overall satisfaction		COR (95%CI)	P	AOR (95%)
	Unsatisfied freq (%)	Satisfied freq (%)			
Sex					
Male	107 (61.5)	67 (38.5)	0.756 (0.498-1.147)	0.071	0.495(0.231-1.061)
Female	105 (54.7)	87 (45.3)	1		
Age			1.002 (0.986-1.018)	0.898	1.002(0.965-1.041)
Level of education					
No formal education	40 (62.5)	24 (37.5)	0.793 (0.432-1.458)	0.258	0.441(0.107-1.823)
Elementary	46 (59.0)	32 (41.0)	0.920 (0.523-1.616)	**0.009**	**0.238(0.082-0.693)**
Secondary	48 (55.2)	39 (44.8)	1.074 (0.625-1.845)	0.569	0.754(0.285-1.992)
Beyond secondary	78 (56.9)	59 (43.1)	1		
Marital status					
Single	66 (55.9)	52 (44.1)	0.630 (0.272-1.462)	0.525	0.432(0.032-5.748)
Married	122 (61.6)	76 (38.4)	0.498 (0.221-1.122)	0.464	0.390(0.031-4.849)
Divorced	12 (52.2)	11 (47.8)	0.733 (0.240-2.239)	0.965	0.936(0.049-17.701)
Widower/widowed	12 (44.4)	15 (55.6)	1		
Visit detail					
First time	57 (57.0)	43 (43.0)	1.173 (0.680-2.024)	**0.002**	**5.488(1.852-16.264)**

2-4 times	64 (57.1)	48 (42.9)	1.167 (0.687-1.981)	**0.023**	**3.278(1.178-9.118)**
5-7 times	21 (53.8)	18 (46.2)	1.333 (0.641-2.774)	0.106	2.883(0.797-10.426)
> =8 times	70 (60.9)	45 (39.1)	1		
TQS			12.578 (7.524-21.027)	**0.000**	**7.530(3.473-16.324)**
FQS			4.296 (3.146-5.866)	0.488	0.815(0.457-1.453)
KCE			3.104 (2.233-4.316)	**0.000**	**3.152(1.655-6.003)**
CSE			8.249 (5.625-12.098)	**0.000**	**5.216(2.604-10.451)**
TSD			9.474 (5.981-15.008)	**0.000**	**3.963(1.989-7.896)**

CHAPTER FIVE: DISCUSSION

Most of the participants 212 (57.9%) respond unsatisfied on the overall satisfaction of health care service they received in the hospital. While 154 (42.1%) respond to be satisfied (fig.1).The finding is greater than a result obtained from a cross sectional study done in Iraq which shows that 49.6% percent are satisfied (Bahrampour and Zolala, 2005). In consistent with our finding a comparative study done in Addis Ababa showed that 47.2% are satisfied.

Most of the respondents (72.4%) agreed that hospitals have organized queue system and (60.4%) agreed that doctor's office have everything to provide the service. Technical quality of service positively and significantly associated to patient satisfaction in the study. In line with this technical quality directly affected positively and significantly to the student satisfaction. The higher improvement of student perception about technical quality would give good effect to the student satisfaction (Frangky R. *et al*, 2017).

Cheerful greetings in the hospital are given only to (34.7%) of customers (63.3%) disagree to have cheerful greetings. This has an impact to the overall satisfaction to below 50%. There is never a second chance to make a first impression because the first impression is difficult to change. And some scholars argue that it takes a maximum of 60 seconds to make one .A positive first impression formed helps an overall good first impression of hotel employees and even hotel. Otherwise, once customer had a negative first impression to that front desk employee, it would affect that customer had a negative first impression to the rest of employees even the entire hotel (Meijerink, Bondarouk, and Lepak's, 2016)

In my finding functional quality positively and significantly associated to patient satisfaction which is consistent with a study done to see the effect of functional quality on corporate image and satisfaction which showed that functional Service Quality has significant effect on customer satisfaction and corporate image. Functional Service Quality also has significantly affected the loyal intentions. Corporate image significantly affect customer satisfaction and loyal intentions (Elfi Sukaisih et al, 2015).

Knowledge and competence of employees were positively and significantly associated with patient satisfaction in the study. Inconsistent to this patient satisfaction study done in kerman

resulted with a significant relationship between satisfaction and education level (Bahrampour and Zolala, 2005).

All the five parameters used to measure communication skill of employees are under (35%) which shows that there is poor communication skill that has a direct effect on patient satisfaction. Inconsistent with this a study showed a significant positive relationship between overall ratings of doctor's communication behaviors and overall satisfaction. Small changes in doctor communication behaviors can make some significant changes in patient satisfaction (Tongue JR. et al, 2005).

Poor communication between patient and physician can lead to various negative outcomes: discontinuity of care, compromise of patient safety, patient dissatisfaction and inefficient use of valuable resources. The economic impact of communication inefficiencies in nursing practices is estimated at about $4.9 billion per year. Wasted costs because of poor communication leading hospital overstay, were estimated to be $6.6 billion annually (Hendrich A. et al,2008).In the USA, hospitals waste over $12.4 billion per year because of communication inefficiencies.(Agarwal R. et al, 2010).

From the respondents only 20.2% of patients are able to get medical care whenever they want, the rest 79.8% didn't get timely medical service. It is not also easy to find an appointment for 78% of respondents.

Waiting time for the service is too long and exhausting for 83.6% of patients in the study.Waiting time is a significant factor determining patient satisfaction. According to a 2015 study in Saudi Arabia, the only factor that had a significant influence on overall satisfaction was waiting time, with those waiting for over 30min reporting that they were dissatisfied with the service provided (Alnemer KA et al,2015)

CHAPTER SIX: MAJOR FINDINGS, CONCLUSION and RECOMMENDATION

6.1 Major findings

The participants of the study were 366 with a response rate of 91.96%. The median age of the participants was 38 years with a range of 18-78; most of the participants were females 192 (52.5%). Most of the participants 212 (57.9%) respond unsatisfied on the overall satisfaction of health care service they received in the hospital. While 154 (42.1%) respond to be satisfied. There was no multicollinearity among the independent variables.

Among socio demographic variables, level of education and visit details were significant in explaining patient satisfaction. While there was no significant association between sex, age and marital status with patient satisfaction, furthermore among dimensions of customer service technical quality of the service, knowledge and competence of employees, communication skill of employees and timely service delivery were independent predictors of patient satisfaction, but there was no significant association between functional quality of the service and patient satisfaction.

6.2 Conclusion

Healthcare is an industry that directly affects people's lives at their most vulnerable moments, and patient satisfaction plays an ever increasing role in the way hospitals are judged. The study showed that the overall patient satisfaction was low. Patient satisfaction was influenced by technical quality of the service, knowledge and competence of employees, communication skill of employees, and timely service delivery, in addition level of education and number of visit of patient to the hospital were also found to influence it. In general from the findings of this study we can say good customer service provision positively affect satisfaction of patients.

6.3 Recommendation

Knowing the satisfaction of the patients will let the hospital know the feedback their clients have towards their service and that can be used to know where they stand in the eyes of their customers and help to improve the service. It's recommend that hospital management should work to improve the ability of their employees to win the interest of the patients as well as on the welcoming behavior of the hospital staff.

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APPENDICES

Appendix 1

Addis Ababa University College

School of Commerce

Information sheet (English version)

Greetings! My name is _____. I am here on behalf of Adiyam Mulushoa, student of marketing management at Addis Ababa University, School of Commerce. She is conducting a research on the effect of customer service on patient satisfaction in public hospitals, for the partial fulfillment of second degree. Your honest answer to these questions will help us better understand the level of patient satisfaction with the healthcare service provided and the measures or dimensions of patient satisfaction, in order to develop good strategies and solve the problems for the future. You are chosen to participate in this study. The choice is made randomly. The objective of the study is to assess the effect of customer service on patient satisfaction, no harm will come to you as a result of participating on this research other than taking 5 – 10min of your time, there will be no direct benefits you will gain from participating, you have the right not to be part of the study or withdraw at any time you don't want to. The information you give will be kept confidential and be used only for academic research only.

Thank you for taking your time to participate in this study!

Informed consent (English version)

The objective, benefits, harms, procedures and confidentially of the study has been read and explained to me in the language I comprehend. I further understand that, taking part in this study and withdraw from participating in any time without having reason is purely voluntary.

I agree to participate in this study.

Participant:

Sign (signature or thumb print).....Date.....

For further information you can contact the primary investigator with the following address:

Name: Adiyam Mulushoa

Phone No. 0910024757

Email: adimule1@gmail.com

Questionnaire (English version)

Questionnaire: the Effect of Customer Service on Patient Satisfaction in Public Hospitals.

Section I: Personal Information

1. Sex
   a. Male
   b. Female

2. Age (in complete years) _____ year

3. Level of education

   a. No formal education
   b. Elementary (1-8)
   c. Secondary (9-12)
   d. Beyond Secondary

4. Marital status
   a. Single
   b. Married
   c. Divorced
   d. Widower/ Widowed

5. Visit detail
   a. First time
   b. 2 – 4 times
   c. 5 – 7 times
   d. ≥ 8 times

Section II: Patient Satisfaction Dimensions

The following are some things people say about health care service. Please reply to each question carefully, keeping in mind the service you have received or are receiving now. (if you have not received service recently, think about what you would expect if you needed care today) we are interested in your feelings, good and bad, about the service you have received.

How strongly do you AGREE or DISAGREE with each of the following statements?

"1" Strongly Disagree, "2" Disagree, "3" Neutral, "4" Agree, "5" Strongly Agree

Subscale and Item	**1**	**2**	**3**	**4**	**5**
Technical quality of the service					
The hospital has an organize Queue system at the receptions area					
I think my doctor's office has everything needed to provide complete care					
The pharmacy's Queue system is well organized					
I'm satisfied with the waiting area at the reception site					
I'm satisfied with the waiting area at the dispensary area					
I'm satisfied with the consultation room environment					
The hospital has the necessary medical equipment					
Functional quality of the service					
The receptionist greeted me cheerfully					
I didn't had to wait long to see my doctor					
The doctor was nice to his staff					
Knowledge and competence of employees					
When I go for medical care, they are careful to check everything when treating and examining me					
I am doubtless on the diagnosis being correct					
I have no doubt about the ability of the doctors who treat me					
I get all the explanation about medicines and dosages from the pharmacist					
Communication skill of employees					
The staff at the reception or registration are courteous					
My doctors treat me in a very friendly and courteous manner					
I was treated with respect and dignity					
The staff at the pharmacy served me my medication courteously					
The health care providers are compassionate					

Timely service delivery					
I’m satisfied with the registration time					
The waiting time is not long and exhausting					
I have plenty of consultation time					
I find it easy to get an appointment right away					
I am able to get medical care whenever I need it					
Overall response					
Overall I’m satisfied with the service I’ve received in the hospital	Unsatisfied		0		
	Satisfied		1		

Appendix 2

Information sheet (Amharic version)

ክፍል አንድ፡- የጥናት ማብራሪያ (መረጃ) ቅፅ

ጤናይስጥልኝ! ስሜ_____ይባላል። እዚህ የተገኘሁት በአዲስ አበባ ዩኒቨርስቲ ንግድ ስራ ኮሌጅ ተማሪ በሆነችው አድያም ሙሉሸዋ ምትክ ነው።ተማሪዋ የደንበኞች ግልጋሎት በህዝብ ሆስፒታል በሚገለገሉ ታካሚዎች እርካታ ላይ ያለው ውጤት ላይ የሁለተኛ ዲግሪ ማሟያ ጥናት በማካሄድ ላይ ትገኛለች። የእርሶ ትክክለኛ ምላሽ በጤና አገልግሎት አሰጣጡ ላይ የታካሚዎችን የእርካታ ደረጃን እና የታካሚዎች እርካታ መለኪያ በተሻለ መልኩ ለመረዳት እና ጥሩ የሆነ ዕቅድ/ፒሊሲ በማዘጋጀት ለወደፊቱ ችግሮችን ለመፍታት የሚረዳን ይሆናል። እርስዎ በዚህ ጥናት ላይ እንዲሳተፉ ተመርጠዋል። ምርጫው የተካሄደው በሎተእኢ መልክ በሚደረግ አመራረጥ ነው።

የጥናቱ ዓላማ የደንበኞች ግልጋሎት በታካሚዎች እርካታ ላይ ያለውን ውጤት ሲሆን፤ ከጊዜዎ 5-10ደቂቃ ከምንወስድቦ ውጪ ሌላ በእርሶ ላይ የሚደርስ የትኛውም ዓይነት ጉዳት አይኖርም። በዚህ ጥናት በመሳተፎ የሚያገኙት ቀጥተኛ የሆና ጥቅም አይኖርም፤ በጥናቱ ያለማሳተፍ እና በማንኛውም ሰዓት ከጥናቱ መውጣት ቢፈልጉ የመውጣት ሙሉ መብት አሎት። የሚሰጡት መረጃ ምስጢራዊነት የሚጠበቅ እና ለትምህርታዊ አገልግሎት ብቻ የሚውል ይሆናል።

ለቀና ትብብርዎ በጣም አመሰግናለሁ!

Informed consent (Amharic version)

ክፍል ሁለት፡ የስምምነት ቅፅ

የጥናቱ ዓላማ፣ ጥቅማጥቅም፣ ጉዳቶች፣ ሒደቶችና ሚስጥራዊነት በሚገባኝ ቋንቋ ተነቦልኝ ተረድቻለሁ። በተጨማሪም በጥናቱ መሳተፍ ሆነ ከጥናቱ በአስፈለገኝ ሰዓት መውጣት ሙሉ በሙሉ በእኔ ፈቃደኝነት ላይ የተመሰረተ መሆኑን ተረድቻለሁ።

በዚህ ጥናት ላይ ለመሳተፍ ተስማምቻለሁ።

ተሳታፊ፡

ፊርማ (ፊርማ ወይም የጣት አሻራ) _____ቀን _____

ለበለጠ መረጃ ወይም ማብራርያ ከፈለጉ የዚህ ጥናት ባለቤት በሚከተለው አድራሻ ማግኘት ይችላሉ።

ስም፡ አድያም ሙሉሸዋ

ስ.ቁጥር፡0946727808

ኢሜይል፡adimule1@gmail.com

Questioner (Amharic version)

መጠይቅ፡ የደንበኞች ግልጋሎት በህዝብ ሆስፒታል በሚገለገሉ ታካሚዎች እርካታ ላይ ያለው ውጤት

ክፍል I: ግለሰባዊ መረጃዎች

1. ፆታ
   ሀ. ወንድ
   ለ. ሴት

2. እድሜ (በዓመት) _____ ዓመት

3. የትምህርት ደረጃ

   ሀ. መደበኛ ትምህርት የሌለው/ላት
   ለ. የመጀመሪያ ደረጃ (1-8)
   ሐ. ሁለተኛ ደረጃ (9-12)
   መ. ሁለተኛ ደረጃ በላይ

4. የጋብቻ ሁኔታ

   ሀ. ያላገባ/ች
   ለ. ያገባ/ች
   ሐ. የፈታ/ች
   መ. ባለቤቱ/ቷ የሞተችበት/ባት

5. ወደ ሆስፒታሉ የመጡበት ድግግሞሽ

   ሀ. ለመጀመሪያ ጊዜ

   ለ. 2 – 4 ጊዜ

   ሐ. 5 – 7 ጊዜ

   መ. ከ8 ጊዜ በላይ

ክፍል II: የታካሚ(የተገልጋይ) እርካታ መለኪያዎች(መስፈርቶች)

ከታች የተገለጹት ጉዳዮች/ጥያቄዎች ሰዎች ያገኙትን የህክምና አገልግሎት አሰጣጥ በተመለከተ የሚያነሷቸው ሀሳቦች ናቸው። እባክዎ እያንዳንዱን ጥያቄ በጥንቀቄ ይመልሱ፤ በሚመልሱበት ጊዜ ከዚህ በፊት ያገኙትን ወይም አሁን እያገኙ ያሉትን የህክምና አገልግሎት አሰጣጥ ታሳቢ በማድረግ መሆን ይኖርበታል። በቅርቡ የህክምና አገልግሎት ካልወሰዱ ፣ህክምናውን ቢወስዱ መሆን ይኖርባቸዋል ብለው የሚያስቧቸውን ጉዳዮች ከግምት ውስጥ ያስገቡ። የሚሰማዎትን ጥሩም ይሁን መጥፎ ስሜት ትክክለኛውን እንዲያስቀምጡልን አበክረን እንጠይቃለን።

በምን ያህል መጠን መስማማት ወይም አለመስማማቶን ከታች ለተገለጹት ዓርፍተ ነገሮች በተገለጸው ቁጥር መሰረት ግለጹ፡

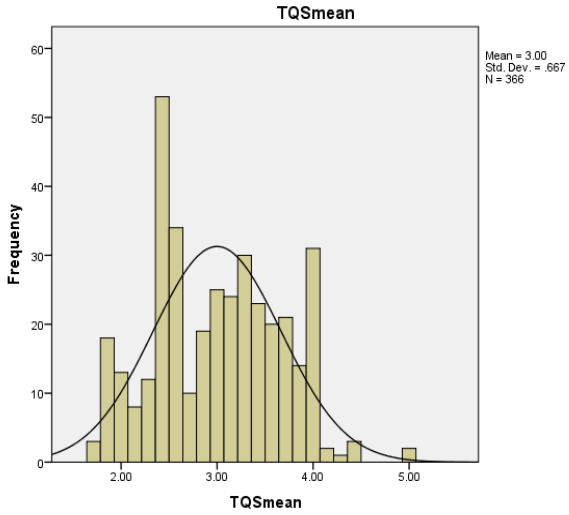
“1” በጣም አልስማማም “2” አልስማማም “3” ድምጸ ተዓቅቦ “4” እስማማለሁ “5” በጣም እስማማለሁ

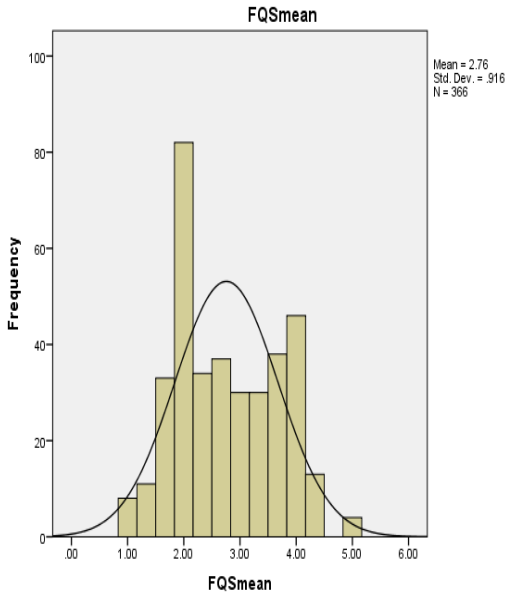
ዋና ዋና እና ዝርዝር ጉዳዮች	1	2	3	4	5
የአገልግሎት አሰጣጡ ሙያዊ ጥራት					
ሆስፒታሉ በታካሚ መቀበያ ቦታ ላይ የተደራጀ ወረፋ መጠበቂያ ስርዓት አለው					
በዶክተሩ ቢሮ አግልግሎቱን ለመስጠት የሚያስፈልጉ ነገሮች በሙሉ ተሟልተዋል					
የፋርማሲ ወረፋ መጠበቂያ ስርዓቱ በደንብ የተደራጀ ነው					
በታካሚ መቀበያ ቦታው ላይ ባለው የታካሚዎች መቆያ/መቀመጫ ረክቻለሁ/ ደስተኛ ነኝ					
በመድኃኒት ቤቱ የመድኃኒት ማደያ ክፍሉ ውስጥ ባለው የታካሚዎች መቆያ/መቀመጫ ረክቻለሁ/ ደስተኛ ነኝ					
ምክር በሚሰጥበት ክፍል አካባቢ ምቾት ደስተኛ ነኝ/ረክቻለሁ					
ሆስፒታሉ ሁሉም አስፈላጊ የህክምና መሳሪያዎች አሉት					
የአገልግሎት አሰጣጡ ተግባራዊ ጥራት					
ታካሚ ተቀባዩ /አስተናጋጁ በፈገግታ ሰላም ብሎኛል					
ሀኪሙ ዘንድ ለመግባት ብዙ ሰዓት አልጠበቅሁም/ በቶሎ ሀኪም ዘንድ ገብቻለሁ					
ሀኪሙ አብረውት ለሚሰሩት መልካም ሰው ነው					
የባለሙያዎች ሙያዊ እውቀት እና ብቃት					
በምርመራ እና ህክምና ወቅት ሁሉንም ነገር በጥንቃቄ መርምረው ያክማሉ					
ሁልጊዜ የሀኪሞችን የምርመራ ትክክለኛነት አልጠራጠርም					

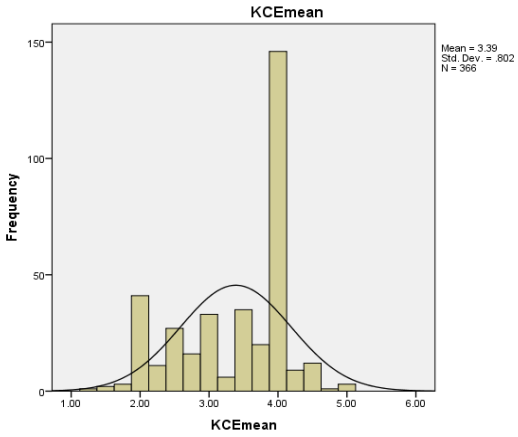
አገልግሎቱን በሚሰጡኝ ሀኪሞች ሙያዊ ብቃት ምንም ጥርጣሬ የለኝም					
ስለመድሃኒት አወሳሰድ እና ምክር በቂ ገለጻ ከፋርማሲስቱ ተሰጥቶኛል					
የባለሙያዎች የተግባቦት ችሎታ					
የታካሚ መቀበያ ወይም ምዝገባ ቦታ ላይ ያለ ባለሙያ ትሁት፣ሰው አክባሪ እና የተገልጋይን ችግር በቀላሉ የሚረዳ ነው					
ባለሙያዎች በጣም በማቅረብ እና በትህትና ያስተናግዱኛል					
በአክብሮት ተስተናግጃለሁ					
የፋርማሲ ባለሞያዎቹ የመድኃኒት አሰጣጥ አገልግሎትን በትህትና ሰጥተውኛል					
የጤና ባለሙያዎች ሩህሩህ ናቸው					
ወቅታዊ አገልግሎት አሰጣጥ					
ታካሚ ለህክምና በሚመዘግብበት ጊዜ ምቹነት ደስተኛ ነኝ					
አገልግሎት ለማግኘት ያለው የመቆያ ጊዜ ረጅም እና አድካሚ አይደለም					
ስለ በሽታዬ እና መድኃኒት አወሳሰድ ምክር ለመስጠት የሚመደበው ጊዜ በቂ ነው					
የአጭር ጊዜ የህክምና ቀጠሮ ለማግኘት ቀላል ነው					
በፈለግሁ ጊዜ የህክምና አገልግሎት ማግኘት እችላለሁ					
ጠቅላላ ምላሽ					
በአጠቃላይ በሆስፒታሉ ባገኘሁት የደንበኞች ግልጋሎት ደስተኛ ነኝ/ረክቻለሁ	አልረካሁም		0		
	ረክቻለሁ		1		

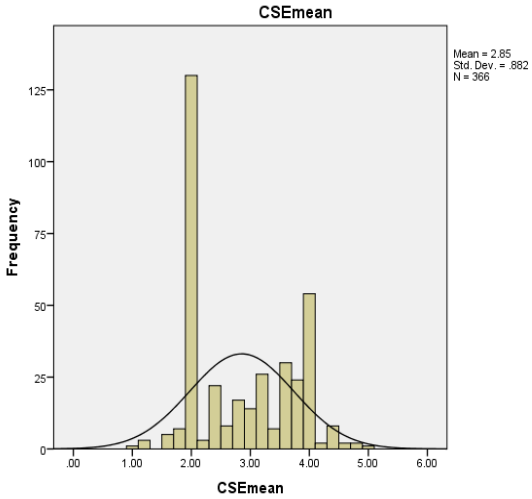
Appendix 3

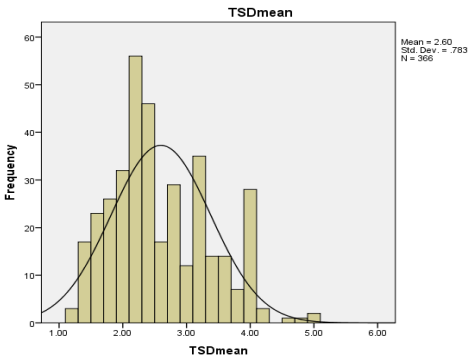
Normality test











Appendix 4

Multicollinearity test

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	FQSmean	.415	2.410
	TQSmean	.594	1.684
	KCEmean	.861	1.162
	CSEmean	.432	2.316

Dependent Variable: TSDmean

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	FQSmean	.556	1.800
	TQSmean	.578	1.729
	KCEmean	.867	1.153
	TSDmean	.614	1.629

Dependent Variable: CSEmean

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	FQSmean	.413	2.423
	TQSmean	.600	1.667
	TSDmean	.498	2.007
	CSEmean	.353	2.831

Dependent Variable: KCEmean

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	TQSmean	.629	1.590
	TSDmean	.500	1.998
	CSEmean	.471	2.122
	KCEmean	.860	1.163

Dependent Variable: FQSmean

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	TSDmean	.514	1.944
	CSEmean	.353	2.837
	KCEmean	.898	1.114
	FQSmean	.452	2.213

Dependent Variable: TQSmean