Addis Ababa University
College of Business and Economics
Department of Management

The Effect of Hospital Service Quality on Patients' Loyalty through the Mediating Role of Patients' Satisfaction: In the Case of Armed Force Referral and Police Referral Hospitals in Addis Ababa City.

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Addis Ababa University
College of Business and Economics
Department of Management
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The Effect of Hospital Service Quality on Patients' Loyalty through the Mediating Role of Patients' Satisfaction: In the Case of Armed Force Referral and Police Referral Hospitals in Addis Ababa City.

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Statement of Certification

This is to certify that Mahlet Fente has carried out her research work on the topic entitled "The Effect of Hospital Service Quality on Patients' Loyalty through the Mediating Role of Patients' Satisfaction: In the Case of Armed Force Referral and Police Referral Hospitals in Addis Ababa City" is her original work and is suitable for submission for the award Degree of Master in Management.

_____

Lakew Alemu (PhD)

(Advisor)

June, 2021

Declaration

I, Mahlet Fente, hereby declare that the thesis work entitled "The Effect of Hospital Service Quality on Patients' Loyalty through the Mediating Role of Patients' Satisfaction: In the Case of Armed Force Referral and Police Referral Hospitals in Addis Ababa City" submitted in partial fulfillment of the requirements for Master of Arts in Management to Addis Ababa University, College of Business and Economics, is the outcome of my own effort and that all sources of materials used for the study have been duly acknowledged.

This study has not been submitted for any degree in this University or any other University.

Name: Mahlet Fente

Signature: _____

Date: _____

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List of Abbreviations and Acronyms

AFRH:	Armed Force Referral Hospital
BPR:	Business Process Reengineering
GDP:	Gross Domestic Product
HCU:	High Care Unit
ICU:	Intensive Care Unit
OPD:	Outpatient Department
PLS:	Partial Least Square
SEM:	Structural Equation Model
SERVQUAL:	Service Quality
SPSS:	Statistical Package for Social Science

Abstract

The main objective of the research is to examine the effect of hospital service quality on the patients' loyalty and find the mediating effect of patients' satisfaction in Armed Force Referral Hospital/Torhayloch and Police Referral Hospital. As the research approach quantitative method was used. As a sampling technique both purposive and convenience sampling was used. Data were collected through a self-administered questionnaire distributed to out-patients in two public hospitals; Armed Force Referral Hospital and Police Referral Hospital. There were a total of 235 out-patients respondents involved in this research. Data analysis techniques used was multivariate statistical techniques of PLS method which analyzed by SPSS version 20 and Smart PLS 3.0. In this study, the patient perception of hospital service quality was measured using SERVPERF model and results indicate that it appears to be a consistent and reliable scale. Finding of this study indicates that, age and educational level of the patient have significant effect on patient loyalty. Also hospital service quality have a positive and significant effect on patient satisfaction and loyalty i.e. while patient perception of hospital service quality has positive significant effect on the patient satisfaction and patient loyalty, patient satisfaction has also positive significant effect on patient loyalty. Moreover, patient satisfaction appears to play a partial mediating role in increasing the strength of the association between hospital service quality and patient loyalty in healthcare service provider i.e. hospital.

Keywords: *Hospital service quality, Patient Satisfaction, Patient Loyalty, Hospital, SERVPERF*

CHAPTER ONE

1. INTRODUCTION

1.1. Background of the Study

The most important aim of a firm's marketing strategies and tactics in today's economy is to make profits and contribute to the growth of the company. The service quality has become a highly instrumental coefficient within the aggressive competitive marketing. Hence, for the achievement and survival in today's competitive environment, delivering best service quality has paramount importance for any economic enterprise (Sandhu and Bala, 2011). Service quality is the personal experience of the customer with the service provider. Service is playing an increasingly important role in the present environment where there is no further scope for companies to differentiate themselves from the quality of service provided by other firms. Now a days delivering superior service than the competitor has become the key for success in any organization (Gautam, 2011).

Service quality is the back bone for success of any business and perceived as the main factor in obtaining and maintaining competitive advantage. Most studies have shown that service quality offers market shares, customer satisfaction, responsiveness increment towards customer order; customer loyalty/retention provides greater return on investment and lowers production costs. Accordingly organizations regard quality as a source of competitive advantage which they always strive to achieve. Moreover, excellent service will lead to increment of customer retention and also it leads to repeat customer purchase behavior (Cronin and Taylor, 1992) which eventually increases the market share of the companies and produce high revenues.

In recent years, there has been increasing interest in hospital services, as standards of living becomes changed and there's a requirement for better treatment to boost lifestyles. Improving the standard of treatment services has become a primary concern for patients and providing better service to patients is also the second concern (Alhashem et al., 2011; Arasli et al., 2008).

Hospital is one of the health facilities in which health efforts by empowering various trained and educated personnel in dealing with and handling medical problems for the recovery and maintenance of good health is conducted. User of hospital services in this case require quality services not only concerning the recovery of the disease physically or improving the degree of health, but also relating to the satisfaction of the attitude, always the availability of adequate

facilities, infrastructure and physical environment that can provide comfort. Due to the increasing of service quality, hospital service function needs to be improved to be more effective and efficient in providing satisfaction to patient, family and society (Jacobis, 2013).

Patient satisfaction upgrades hospital imagination, which in turn brings expanded service utilization and market share as well as increased loyalty of patients. Satisfied patients' are likely to show promising behavioral intentions, loyalty and trust which are advantageous to the healthcare provider's in long-term success. measuring the degree of patient satisfaction also helps to facilitate hospital service provision and management, in addition it increases and maintain the quality of the service provision (Andaleeb, 1988).

Thus , this study is attempted to examine the effect of hospital service quality on the patients' loyalty along with the mediating role of patients' satisfaction in Armed Force Referral Hospital/Torhayloch and Police Referral Hospitals.

1.2. Statement of the Problem

In numerous developed countries, service sectors are one of the largest contributor (more than50 percent) to GDP (Bateson and Hoffman, 1991). Developing countries are following the same strides to spice up their service industries by introducing initiatives. Healthcare service is a key service sector that can pull significant revenue from local and international sources. In most of East Asian countries such as Thailand and Singapore attracted several health tourists. Many patients from developing countries like Bangladesh, India and Pakistan mostly visit those countries for quality treatment in which Ethiopia is not remarkable.

In Ethiopia, the healthcare system could be a complex framework that doesn't permit patients to choose and settle on their doctors and hospitals. Public hospitals in Ethiopia haven't been established to create money. The private sector in Ethiopia has been attempted to enhance as in most of developing countries, but it couldn't met the desired level. Subsequently, a contest in healthcare system of Ethiopia has not been realized. Problems faced haven' been attempted to be solved by using scientific methods, and it's always been blockaded from politicians. Furthermore, the quality has not been improved, since increasing demands haven't been met in daily basis due to increasing population. So one can note that Public hospitals have serious financial and quality problems.

A research conducted by Wondwossen (2019) titled Comparative Assessment of Healthcare Service Quality and Customer Satisfaction in few chosen Public and Private Hospitals in Addis Ababa; uncovered that, complaints about poor patient care in hospitals are common specially on government hospitals. Due to poor patient care and satisfaction in government hospitals, it failed to attract healthcare customers. Moreover, the government hospitals health workers poor attention, negative attitudes and behaviors towards their clients/patients, intense competition between public and private health institutions, shortage of modern equipment and significant shift of customers from government hospitals to private hospitals are adversely affecting the government hospitals revenue and will leads to decline in income, poor quality service delivery for clients/patients, bring acute financial shortage and failurity to modernize government hospitals to satisfy the need of patients.

There were numerous studies conducted on the subject matter. Among these, the study conducted by Aditi Naidu (2009) on the factors affecting patient satisfaction and healthcare quality revealed

that, the relationship between health care quality and patient satisfaction is significant. The health service quality perceptions are antecedents to patient satisfaction, which successfully decide whether patients are loyal to healthcare providers. Patient loyalty ends-up positive behaviors like recommending health services to friends and relatives, compliance and better service use thus positively impacting profitability. Moderating factors that affect patient satisfaction are outlined.

In Ethiopia, the study conducted on the effect of hospital service quality on the patient satisfaction and patient loyalty through the mediating role of patients' satisfaction is under-researched. The meager amount of empirical evidence exists about the hospital service quality-customer satisfaction as well as patient loyalty relationship and mostly focuses either the effect of service quality on customer satisfaction or customer loyalty and missed the mediating role of customer satisfaction.

The rationale of this study was that, there are tremendous efforts made by the government of Ethiopia increasingly focused on improving the quality of healthcare services over the past 20 years. This is evident in the Health Sector Development Plan (HSDP) IV, which discusses various elements of quality and ensuring the availability of resources together with program designs for prioritized diseases and conditions for better outcomes. In contrary to this, the researcher has work experience in Torhayloch hospital and witnessed the presence of practical problems that are related with the quality of service being provided by the hospitals. The researcher has observed some problems at Outpatient Department (OPD) of AFRH (Armed Force Referral Hospital) which can be the identical to Police Referral Hospital. To say some; absence of specialties and presence of unsatisfied quality services are persistent problems within the hospital that have brought low patient satisfactions. Additionally, the incidence of long patients waiting time to get services at the OPD centers, due to inflexible availability of specialists, are regularly observed phenomenon within the hospital. In consequence of this, the number of patients becomes loaded in one specialist, since there are few. This in turn reduced the patient's satisfaction. This can be evidenced by the statistical data the researcher gathered from the BPR (Business Process Reengineering) of AFRH since the waiting time during the years in 2018 and 2019, was 69% and 72% respectively. On the other hand, the absence of better medications for militaries those come for hospitalization within the hospitals.

Globally many researches have been conducted the study in the area of patient satisfaction, service quality, and patient loyalty however only few of them are from Africa and particularly Ethiopia.

Although there are many efforts made by the government of Ethiopia, the present state of healthcare service quality in health facilities has different types of quality related issues. Hence, even if in different parts of the world various research studies have been conducted on the subject matter in health sector and others, it is difficult to generalize the finding of the study to Ethiopia hospital context without empirical testing. Besides, within the knowledge of the researcher, virtually there is no research undertaken on the effect of hospital service quality on the patient satisfaction and patient loyalty through investigating the mediating role of patients' satisfaction in the Ethiopian context.

Therefore, this study was aimed to examine the effect of hospital service quality on the patients' loyalty and the mediating role of patients' satisfaction in AFRH/Torhayloch and Police Referral Hospitals.

1.3. Research Questions

1.3.1. Main Research Question

To what extent does the hospital service quality influences the patients' loyalty and the patients' satisfaction mediates service quality and loyalty in AFRH (Torhayloch Hospital) and Police Referral Hospitals in Addis Ababa City?

1.3.2. Sub-Research Questions

The study was tried to answer the subsequent specific research questions:

- To what extent does the hospital service quality affect the patient satisfaction?
- To what extent does the patient satisfaction affect the patient loyalty?
- To what extent does the hospital service quality affect the patient loyalty in the Hospitals?
- To what extent does the patient satisfaction mediates the influence of hospital service quality on patient loyalty?

1.4. Objective of the Study

1.4.1. General Objective

The main objective of the research is to examine the effect of hospital service quality on the patients' loyalty and find the mediating effect of patients' satisfaction in AFRH and Police Referral Hospitals.

1.4.2. Specific Objectives

The specific objectives of the study were:

- To examine the effect of hospital service quality on the patient satisfaction;
- To investigate the effect of patient satisfaction on the patient loyalty;
- To examine the effect of hospital service quality on the patient loyalty;
- To examine the mediating effect of patient satisfaction between hospital service quality and patient loyalty.

1.5. Research Hypothesis

Four hypotheses were formulated and tested to answers to the research questions mentioned above. Therefore, the following alternative hypotheses are formulated:

H_1: The Hospital service quality has positive significant effect on patient satisfaction

H_2: Patient satisfaction has positive significant effect on patients loyalty.

H_3: Hospital service quality has positive significant effect on patient loyalty.

H_4: Patient satisfaction mediates between hospital service quality and patient loyalty.

1.6. Significance of the Study

The findings of the study is indispensable for hospitals' management and staff, policy makers, healthcare service providers, academicians and researchers, customers and other stakeholders. Accordingly, this study is to be intended to help hospitals' management and staff to focus on which specific characteristics of the healthcare service to improve the quality of the services being provided by the hospitals. Besides, it may have essential importance to the hospitals in general and public hospital in particular to understand the needs of their customers and to satisfy and retain them.

The findings of this study will serve as a guide to guide for policy maker particularly Ministry of Health to develop policies that will improve overall service delivery, to redesign health facilities or repackage their service offerings and tailor them to meet and even exceed the clients' expectations. Likewise, the findings of the study may give the stakeholders in the area to get an opportunity to gain relevant information about the effect of hospital service quality on the patients' satisfaction. The study also makes important theoretical contributions to the understanding of customer satisfaction and loyalty.

Furthermore, the study will serve as a stepping-stone for academicians and practitioner who may be focusing on similar topics and issues, particularly on the effect of service quality on the patients' satisfaction and loyalty through the mediating role of customer satisfaction in public hospitals.

1.7. Scope of the Study

The scope of the study was delimited to examine the effect of hospital service quality on the patient satisfaction and patient loyalty and find the mediating effect of patients' satisfaction in AFRH and Police Referral Hospitals. The study was focused on outpatients who are served at the OPD of the Hospitals. Geographically, the study was conducted in the two hospitals found in Addis Ababa City. In this study only quantitative research approach was used. The study was tried to employ explanatory research design. Accordingly, the result of the finding was analyzed by using SEM-PLS method. SEM is a multivariate technique combining aspects of multiple regression (examining dependence relationships) and factor analysis (representing unmeasured concepts with multiple variables) to estimate a series of interrelated dependence relationships.

1.8. Limitations of the Study

This research had faced the following limitations:

- unwillingness of some respondents to fill the questionnaire .
- COVID-19 was one of the potential limitations not to distribute and collect the data through the questionnaire as expected.
- The presence of limited empirical researches done on the mediating role on the subject matter.

1.9. Definition of Terms

- **Service Quality:** is a measuring of how well the service delivered to customer meets their expectations (Lewis and Booms, 1983).
- **Patient Satisfaction:** can be defined as the patient's judgments on the standard of care, particularly the interpersonal relationships with clinicians and other care providers (Donabedian, 1988).
- **Pediatric Patients:** Are infant, children, adolescents, and young adults up to the age of 18.
- **Outpatient Department (OPD):** It's the portion of a healthcare designed for the treatment of people with health problems who visit the hospital for diagnosis, but don't at now require a bed.
- **Reliability:** the power to perform the promised service dependably and accurately. It's thought to be the foremost important determinant of perceptions of service quality.
- **Responsiveness:** the willingness to assist customers and to supply prompt service. This dimension is especially prevalent where customers have requests, questions, Complaints and problems.
- **Assurance:** the employees' knowledge and courtesy, and also the ability of the service to inspire trust and confidence.
- **Empathy:** it is the ability to understand and giving individualized attention to customers.
- **Tangibles:** the appearance of physical facilities, equipment including personnel image which will find favor with consumers (Peter & Angela, 2006).

1.10. Organization of the Thesis

The thesis was structured into five chapters as indicated below.

- **Chapter One: Introduction**

The first chapter introduces the background of the study, statement of the problem, basic research questions, objectives of the study, research hypothesis, definition of terms, and the significance of the study. Further scope of the study is also presented.

- **Chapter Two: Review of Related Literature**

This chapter deals with the review of existing literature to throw more light on the concepts of the subject matter which includes the theoretical, empirical, and conceptual literatures with regards to the topic of the study.

- **Chapter Three**: **Research Methodology**

This chapter illustrated the research approach, research design, the source of data, data collection method, data collection instrument, data analysis method, validity &reliability, and research ethics.

- **Chapter Four**: **Results and Discussions**

This chapter provided information on data presentation, analysis, Interpretation, and discussion of the findings of the study.

- **Chapter Five**: **Summary, Conclusions, and Recommendations**

This chapter dealt with the summary, conclusions, and recommendations that will be drawn from the findings of the study.

CHAPTER TWO

2. REVIEW OF RELATED LITERATURE

2.1. Introduction

This chapter reviews the issues regarding service quality, satisfaction, and loyalty which provide an insight into the area of the study. In this chapter, the theoretical, empirical and conceptual literature which focused on the research objectives are reviewed hereunder.

2.2. Theoretical Review

2.2.1. Service Quality

Service quality aims to meet customer's need and requirements and the way well the service delivered meets customers' expectations (Lewis and Booms, 1983). So to continue and deliver service quality, a company must first identify what it's that constitutes quality to those whom it serves (Gronroos 1984). Gronroos (1984) classified service quality into two categories: functional quality which focused on the method of service delivery and technical quality which is primarily focused on what customers actually received from the service . Similarly Klaus (1985) proposes that service quality is also explained in physical, situational and behavioural terms; that's, what's delivered, the circumstances for the delivery, and the way it's delivered.

2.2.2. Distinctive Characteristics of Services

According to Mudie and Pirrie, (2006) Services are characterized as intangibles, perishable, inseparable from the providers and highly variable whenever it's delivered. These characteristic of services shall be thoroughly understood to create appropriate operations and marketing structures to produce and sell services profitably. Therefore, services have four distinctive characteristics that greatly affect the design of promoting the marketing programs.

Intangibility: service can be often the foremost basic and sometimes quoted difference between goods and services. Unlike tangible goods, services can'tbe seen, tasted, felt, heard or smelled before being consumed by service taker. The potential customer is commonly unable to perceive the service before (and sometimes during and after) the service delivery.

Inseparability: There's a noticeable distinction between physical goods and services in terms of the sequence of production and consumption: Whereas, goods are first produced and ultimately stored , sold and consumed by the clients; whereas, services are first sold, then produced and consumed simultaneously. The involvement of the customer within the assembly and delivery of the service means the service provider must exercise care in what's being produced and so the way it's produced.

Variability (or heterogeneity): An inevitable consequence of simultaneous production and consumption is variability in performance of a service. The standard of the service may vary wishing on who provides it, similarly as when and so the way it's provided. Even within one employee there is a variation in performance in a daily basis evaluation.

Perishability: unlike that of goods, services can't be stored for later sales or later use. As services are performances they cannot be stored. If demand of customers far exceeds supply it cannot be met. Fluctuations in demand characterize service organizations and will pose problems where these fluctuations are unpredictable. Strategies must be developed for producing an improved match between supply and demand (Mudie and Pirrie, 2006).

2.2.3. Service Quality Dimensions

The patients internal attitude gives direction for services which are playing role on appreciated service quality in the present research. Perceived service quality is defined as "the patient's assessment of overall smartness, superiority or authority of the services being observed by the service taker" (Zeithaml, 1988). The essential review by Parasuraman et al. (1988) exhibited ten measurements of service quality. Originally the SERVQUAL model demonstrate had 22 items of Likert-sort things, where as one section measures perceived level of service given by a chosen association and the other section of the model measures patients expected level of service quality (Kuo, 2003).As a solution to the critics against SERVQUAL model ,Cronin and Taylor (1992) established SERVPERF model or performance only model. here, same questionnaire of the *SERVPERF* model is administrated which doesn't consider customers' expectations. This model considered only one view that's customers' perception (Rahman et al, 2017). Parasuraman et al. (1985; 1988) constructed SERVQUAL display which measures the perceived service quality by the clients' as a contrast between what clients' desired and their view of what's conveyed in light of the five measurements of service quality dimensions that includes: Reliability,

Responsiveness, Assurance, Empathy, and Tangibles. Reliability is that the capability to execute the guaranted benefit of service consistently and precisely, Assurance is that the ability of employees to transfer faith and confidence, Tangibility is that the physical appearance of facilities, equipment and employees, Empathy is that the customized service to individuals (Alnsour et al., 2014). Responsiveness is that the preparedness to support customers and supply quick service (Upal & Dhaka, 2008). The result of the study reveals that the service quality attributes have strong associations on customer satisfaction (Izogo & Ogba, 2015). Some researchers stressed the link between service quality and customer satisfaction. The greater perceived service quality that has been found to be a significant antecedent of customer satisfaction ends up in a greater level of customer satisfaction and contrariwise (Cronin and Taylor, 1992).

2.2.4. Customer Satisfaction

Service quality is the customer's judgment that relies on the difference between perceived service by the patients' and level of service expected by the patients' while patient satisfaction is the immediate reaction of the patients' after consuming the services being provided by the service providers (Culiberg, 2010). Customer satisfaction implies fulfil or surpass customer expectation or requirements to face competition and to realize business success within the present context. The delightful service quality can accomplish customer expectation. The service quality of the service providers and customer satisfaction are intertwined concepts. Customers' feel satisfaction or dissatisfaction based on what an organization or the service providers provides them good service or bad service. Customer dissatisfaction will result in the customer turnover (Gupta, 2017). If company fails to satisfy customers effectively as competitors do the company will lose market share, clients, and stakeholders (Anderson et al., 2004). Service quality is that the way of creating customer satisfaction that survives a company in long run (Hafeez & Muhammad, 2012).

Customer satisfaction can bring customer loyalty since individuals may tend to reduce risk and remain with the service provider which they currently had great comunication with. Acctually, Customer satisfaction has been recommended to be a predecessor of loyalty in commission setting in past investigations (Belas & Gabcova, 2016; Coelho & Henseler, 2012). There are a lot of connections between customer satisfaction and customer loyalty proposed, for instance, fulfilment is that the centre of loyalty, satisfaction is one among the elemental segments of loyalty (Munari et al., 2013).According to the end result of most of the studies, customer satisfaction

mediates between service quality and customer loyalty (Chodzaza & Gombachika, 2013; Chu et al., 2012).

2.2.5. Customer Loyalty

Loyal customers are customers who have a commitment to shop a favorite service or product again even though he/she has potential to get alternative product or service (Oliver, 1999). Customer loyalty is failed to be attained because of the last results of the widely speaking and aggregate experience which clients have with a firm (Brunner et al., 2008). Reichheld and Aspinall (1993) observed that a loyal customer who buys company's product or services for a long period of time, can easily be served than other customers cause he or she can bring high profit for the company. Therefore, it's suggested that it's a great benefit to keep an existing customer than to ask fresh customers, a satisfied customer seems to return again to buy products (Sulaiman & Olaniyi, 2017). Consumer satisfaction prompts client maintenance and loyalty which brings about high benefit and high revenue for the association. A loyal customer benefit an organization in some ways like cost reduction, removing customer switching cost and bringing positive articulation (Pratminingsih, 2018). Customer loyalty happens when a client purchases an item or a service consistently and he/she features a decent and uplifting disposition towards products and services offered by the supplier. Consumer satisfaction has a great association with customer loyalty, which is typically recommended in both marketing and management studies (Gillani & Awan, 2014).

2.3. Empirical Literature Review

Studying the concept of service quality and its relationship has been become critical by the researchers for over two decades. The numbers of studies have been addressed the relationship between service quality and customer satisfaction and it is generally believed that higher levels of service quality lead to higher levels of customer satisfaction (Pollack, 2008).

The increase number of service quality-patient satisfaction studies over the past few years indicates that the concept of service quality improvement has become more imperative from year to year particularly in the service industry and stress the importance of patients' views as an essential tool in the processes of evaluating and improving the service quality of healthcare services (Thi et al., 2002; Hiidenhovi, et al., 2002; Lim and Tang, 2000; DeMan et al., 2002; Pakdil & Harwood, 2005; Badri et al., 2008). As per the findings of many researchers, the patients' service quality perceptions influence patient satisfaction positively, which in turn positively influences the patient's decision to choose a specific healthcare provider (Andaleeb, 2001; Taylor, S., 1994). In early study Donabedian, A. (1988) indicated that patient satisfaction is a key outcome of care (Lin and Kelly, (1995).

The study conducted by Aditi Naidu (2009) on the factors affecting patient satisfaction and healthcare quality revealed that, the relationship between health care quality and patient satisfaction is significant. The health service quality perceptions are antecedents to patient satisfaction, which successfully decide whether patients are loyal to healthcare providers. Patient loyalty ends-up positive behaviors like recommending health services to friends and relatives, compliance and better service use thus positively impacting profitability. Moderating factors that affect patient satisfaction are outlined.

Findings of Siddiqui & Sharma, (2010) study suggested six quality dimensional instruments consisting of assurance, personalized financial planning, competence corporate image, tangibles and technology. The customers (importers/exporters) have primarily defined assurance in terms of well trained and informed agents, who understand intimately specific needs, approach from customer's point of view show clarity in explaining policy's terms and conditions and thereby inspire trust and confidence. Therefore, it is imperative for the service providers to provide adequate training to their agents to improve their customer interaction skills and knowledge. Additionally, competence factor represent that frequent customers should be accorded the highest

priority to transport their consignment. Beyond this, the service providers need to focus on promptness in providing transport documents, that too by efficient and dependable staff that can take prompt actions.

According to Qadeer, (2013) results the customer need and word of mouth affect the level of customer expectations and perception about the quality of service which leads to overall satisfaction/ dissatisfaction. A need drive the customer to buy whereas word of mouth has the power to change customer perception and expectations regarding the service. It was found that Service performance and (negative) word of mouth has the strongest impact on customer decision regarding continue (repurchase intension) or discontinue (switching intension) the relationship with the particular service provider.

Tthe study conducted by Mahmud Zubayer (2017) on measuring the effect of healthcare services quality in the private hospitals of Dhaka City, Bangladesh shows that knowledgeable & hygienic, language & cleanliness, degrees & equipment, tests & meals, needs & caring, attractive & punctual, examination & skills, admission process and professionally dressed were crucial among the factors for determining the quality of the private healthcare services.

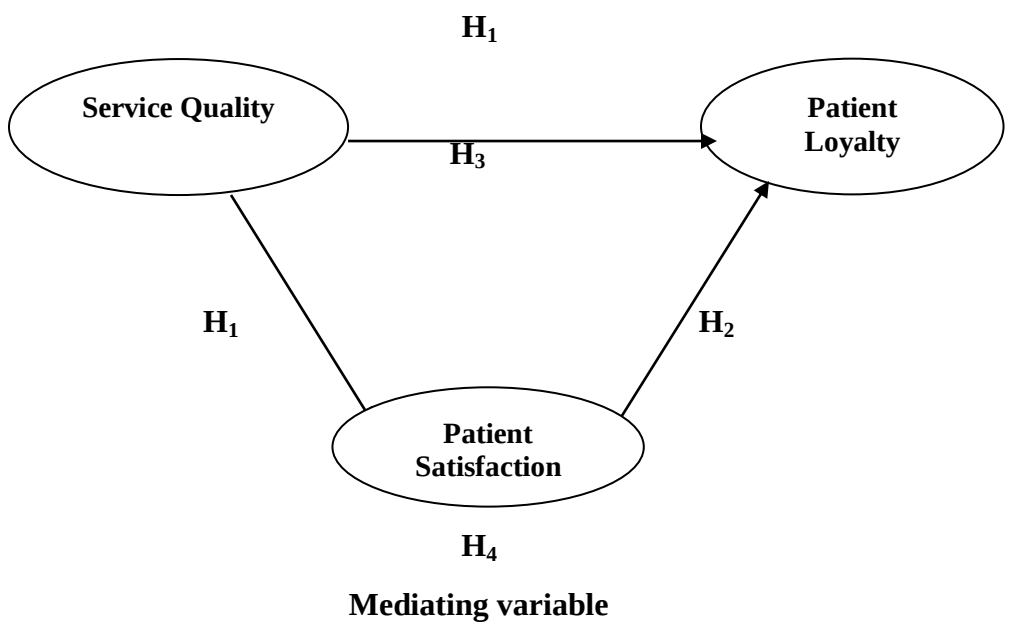
In the Ethiopian context, there are different research studies have been undertaken on service quality-customer satisfaction relationships in the banking industry, insurance, hotel sector, tourism industry, etc. among these authors; Eyerus B. (2016); Rediet S. (2016); Beniam T (2016); Wondwossen K. (2019), etc. were among the few who conduct the studies on service quality-customer satisfaction relationship. But, in the knowledge of the researcher virtually there is no research undertaken on the effect of hospital service quality on the patient satisfaction and patient loyalty through investigating the mediating role of patients' satisfaction in the Ethiopian context.

2.4. Conceptual Framework and Hypothesis Development

To sustain competitive advantage and enhances hospital image, the hospital shall improve healthcare quality and minimize defects if possible deliver zero defect service to their patients to influence patients' satisfaction positively, which in turn positively influences the patient's loyalty. As indicated in the figure below, hospital service quality as multi-dimensional construct consisting of five components; tangibility, reliability, responsiveness, empathy, and assurance. These five dimensions were modeled with patient satisfaction and loyalty as the dependents. In the study, the patient satisfaction acts as an antecedent to loyalty in healthcare services. Therefore, the researcher hypothesized that the relationship between hospital service quality and patient loyalty is mediated by patient satisfaction, i.e. patient satisfaction acts as a conditioning factor of patient loyalty. It is assumed that hospital service quality affects patient satisfaction, which in turn influences patient loyalty positively.

Besides, Baron and Kenny (1986, p.1177) provide the procedure that can be used to investigate the mediating effect as depicted in the figure below. The following conceptual framework is generated through the literature review mentioned in the previous section. This conceptual framework is used to formulate the hypotheses tested in the research.

Figure 1: Conceptual Framework of the Study



Source: conceptual framework developed by the researcher

Research Hypotheses

Hospital Service Quality and Patient Satisfaction

The effect of service quality on customer satisfaction have been studied in many fields (Amin and Isa, 2008; Caruana, 2002), and have become a controversial issue in marketing literature. Some researchers and academics viewed that service quality is an antecedent of customer satisfaction (McDougall and Levesque, 1994). Within the health industry, Naidu (2009) found that the relationship between healthcare quality and patient satisfaction is highly significant. As per the findings of Chahal and Kumari (2010), Patients are satisfied when hospital service quality matches with their expectations and requirements. However, patients have their rights and selection, and if they're not satisfied with the service providers, they need the chance to switch to another hospital (Kessler and Mylod, 2011). Thus, it is proposed that:

H_1: Hospital service quality has a positive significant effect on patient satisfaction

Patient Satisfaction and Patient Loyalty

Customer's satisfaction may potentially impact the customer's loyalty, which was the finding of Cronin et al., (2000). Brennan, (1998) suggested that trust will be framed by positive patient inclination and may provide positive judgments to the hospital. Numerous studies within the past like Chahal and Mehta, g (2013) & Naidu, (2009), Shabbir et al., 2016 supported that quality health service and patient loyalty has a very important interconnection between them. To determine client loyalty, buyer's satisfaction is a vital requirement (Cronin & Taylor, 1992; Dick & Basu, 1994). Besides, Chahal and Mehta (2013) suggested that prescribing it to others and willingness to return again to the hospital is termed behavioral intention. While Kessler and Maylod, (1999) found that customer loyalty with the service provider could be a function of consumer satisfaction. Therefore, based on the bases of these findings, the researcher hypothesized the following.

H_2: Patient satisfaction has positive significant effect on patient loyalty.

Service quality and patient loyality

Service quality has strong relationship with customer loyalty and use customer satisfaction as mediating. There are many studies conduct to analyze this relationship. According to Osman et al., (2013), customer satisfactions have significant and positive partial mediating effect on service

quality and customer loyalty relationship. Besides that, the study by Srivastava, et al., (2013), customer satisfaction as an intervening variable that offers directional influence as a mediator of the relationship between service quality and customer loyalty in the life insurance industry at India.

H_3: Hospital service quality has positive significant effect on patient loyalty.

The Mediating Role of Patients' Satisfaction b/n service quality and loyalty

Past researcher, Hussain (2016) shows the mediating effect of customer satisfaction between service quality and brand loyalty in airlines industry. Further, customer satisfaction is studied as a significant mediator between brand trust, and brand loyalty (umar, et al., 2017). It was to show that the impact of service quality on brand loyalty was significantly different (higher) from the impact of service quality on brand loyalty when customer satisfaction was controlled. Therefore, from the above the researcher hypothesized that patient satisfaction plays a mediating role in the relationship between service quality and patient loyalty.

H4: Patient satisfaction mediating the effect of hospital service quality on patient loyalty.

CHAPTER THREE

3. RESEARCH METHODOLOGY

3.1. Introduction

In this chapter, the research methodology used was briefly discussed. It described the research approach, research design/type, sampling design, source of the data, data collection method, data collection instrument, method of data analysis, validity and reliability, and research ethics followed.

3.2. Description of the Study Area

The study was conducted in the hospitals found in the Addis Ababa City. Addis Ababa is the capital city of Ethiopia and the African Union and is often called the African Capital due to its historical, diplomatic and political significance for the continent. This study, therefore, was conducted in one of the biggest and oldest hospitals found in Addis Ababa, the Armed Force Referral Hospital and Police Referral Hospitals. AFRH is one of the most known referral hospitals located around Torhayloch within Lideta Sub-City Administration. On the other hand Police Referral Hospital is located around Lideta, within Lideta Sub-City.

3.3. Research Approach

There are three basic types of research approaches; quantitative, qualitative, and mixed approach (Creswell 2003, pp. 13-15). Hence, by taking the research objectives and questions into considerations, quantitative research approach was used. A quantitative research approach was used to examine the effect of hospital service quality on patients' loyalty and the mediating role of patients' satisfaction between hospital service quality and patients' loyalty.

3.4. Research Design/Type

Cooper and Schindler (2014) define research design as the blueprint for collection, measurement, and analysis of data. There are three types of research design, namely; exploratory, descriptive, and explanatory (Kothari, 2004). By taking the research objectives and nature of the study into consideration, explanatory research design was used. As suggested by Kumar (2011), explanatory studies clarify the relationship between two aspects of a situation or phenomena. The research

purpose and research question is to reveal the relationship between the independent variable and dependent variables and to predict the relationship. Therefore, the researcher was used factor analysis method using both SPSS 20 and SmartPLS 3.0 statistics.

3.5. Sampling Design

A sample design is a method or way of selecting items for the sample. It is determined before data are collected (Kothari, 2004). Accordingly, the target population, sampling frame, sampling technique, sample size, and sampling procedure of the study are discussed under this section.

3.5.1. Target population

A population can be defined as all people or items (unit of analysis) with the characteristics that to be studied. The unit of analysis may be a person, individual, organization, country, object, or any other entity that researchers wish to draw scientific inferences about (Kelley, Clark, Brown, & Sitzia, 2003). Accordingly, the target populations of the study were all patients who are being served during data collection at Out Patient Department in Torhayloch/AFRH and Police Referral Hospitals who are above 18 ages.

3.5.2. Sampling Frame

The sampling frame for any sample is a complete list of all the cases in the population from which the sample will be drawn (Saunders et al, 2000). In view of that, the sampling frame for this study will be drawn from outpatients of the hospital found in AFHR and Police Referral Hospitals.

3.5.3. Sampling Technique

A sampling technique is the process through which a sample size is arrived at. Sampling techniques are either probability or non-probability (Cooper and Schindler, 2014). In this study, purposive sampling and convenience sampling techniques were used in combination. Purposive sampling technique was used to select the hospitals as well as respondents from each hospital. This technique was needed to choose members of the population to participate in the study purposively from the OPD who received the medical services based on researcher's own judgments' to answer research questions and/or achieve research objectives. Besides to purpose sampling, for respondent selection, convenient sampling technique which is one of the non- probability sampling techniques was also used. This technique was used since respondents among the hospitals patients were

selected because of their convenience, accessibility, and proximity to the researchers while distributing the questionnaire.

3.5.4. Sample Size

Determining sample size is a very important issue since samples that are too large may waste a lot of time, capital and other resources, while samples that are too small may lead to in accurate results (Kothari, 2004). Different authors have suggested different sample sizes as appropriate. A formula developed by Cochran (1963) yields a representative sample size for populations that are large (where the population is at least 20,000). This formula was used to determine sample size for the study:

$$n = \frac{Z^2 pq}{e^2}$$

Whereas:

n = is the minimum sample size required

Z = is the value corresponding to the level of confidence 90% equals to 1.645

p= is the proportion belonging to the specified category which is 0.5≫ (50%)

q= is the proportion not belonging to the specified category which is 0.5 (1-p ≫ (50%)

e = the desired level of precision which is ≫ (± 5%)

Therefore, from the infinite number of the patients, the sample size was 271 patients as suggested by Cochran (1963).

$$n = \frac{1.645^2 x\ 0.5x\ (1-0.5)}{0.05^2}$$

$$n = \underline{\underline{\mathbf{271}}}$$

3.6. Data Sources and Types

The study were used both primary and secondary source of data. The primary source of data was the response collected from the patients found at Outpatient Department (ODP) of AFHR and Police Referral Hospitals. On the other hand, the secondary source of the data was gathered from different books, articles, journals, and different reports of hospital to support the primary data.

3.7. Data Collection Instrument

The study was mainly depended on primary data which collected through self-administrated questionnaire. The questionnaire was prepared in line with the objectives of the study and

structured into four sections. The first section of the questionnaire was designed to be obtaining socio-demographic information about the respondents. The second section dealt with the issue related to service quality dimension by using SERVQUAL model. The third and fourth sections of the questionnaire were dealt with patient satisfaction and loyalty, respectively. The questions were structured in close-ended type and responses to the questions were measured by Likert scale of five rating scale where: Strongly Agree (SA) = 5; Agree (A) = 4; Neutral (N) =3, Disagree (D) = 2; and Strongly Disagree (SD) =1. The Likert scale will be used to make the questions easier for respondents to answer it in a simple way and permit an efficient use of statistics for the interpretation of data.

The questionnaire was first designed in English language. Then, since the samples of the study were targeted different patients with different educational background, it was translated into Amharic language before distributing the questionnaire to obtain the reliable information from the respondents.

3.8. Validity and Reliability

Validity and reliability of the measures need to be assessed before using the instrument of data collection (Hair et al., 2003). They are the essential criteria for assessing the accuracy and precision of the quantitative aspects of this research. Also they are essential criteria for measuring the research quality and especially the procedures used to measure the constructs of interest. Therefore, in this study the reliability and validity were tested as follows;

3.8.1. Validity

Validity is the extent to which a concept is accurately measured in the study. Therefore, in this study in order to assure the validity of the research instrument, various relevant literatures and different previous research questionnaire was used. To determine the potential effectiveness of the questionnaire and whether further revision was needed prior to conducting the survey, the questionnaire was pilot tested. Accordingly, the researcher was distributed the draft survey questionnaire was pilot tested with at least 10 respondents in order to assure that the instrument is clear and unambiguous. The subjects were asked if they have any problems understanding the questionnaire or have specific comments regarding the questionnaire. Comments will be solicited on the clarity of the questions and got amendments.

In addition, the average variance extracted (AVE) was also used to assess the convergent validities while the discriminate validity was assessed by examining whether the squared roots of AVE exceeded the correlations between all possible pairs of latent variables reliability if the question-statements (or other measures) associated with each latent variable are to be understood in the same way by different respondents.

3.8.2. Reliability

Reliability is a measure that indicates stability and consistency it also measures the concept and helps to assess the goodness of a measure in the instrument. In this study, the reliability of the items in the instrument was measured using Cronbach's alpha which is the most frequently used reliability test to measure internal consistency when using the Likert scale. As suggested by Sekaran (2003), the reliability coefficient that closer to 1.0 is better, and those values over .80 are considered as good. Those values which are .70 and more are considered as acceptable and that reliability value less than .60 is considered has poor reliability.

3.9. Data Analysis Methods

The researcher was analyzed the data collected through survey to statistical population concerning the satisfaction and loyalty by patients. The data to be collected via questionnaires were analyzed by using Factor Analysis using Statistical Package for Social Sciences (SPSS Version 20) and SmartPLS 3.0 software. The researcher was selected factor analysis using Structural Equation Model since the research model is multivariate have multi-causal relationship among different variables that need SEM, the research model is somewhat complex since it engages indirect effect variables using latent variable. Thus, both the strength of the relationship between variables and the effect of manifest variable and latent variable and statistical significance was assessed. At the end, the quantitative data was presented in the form of tables and graphs as desire so as to make all the data readable and understandable.

3.10. Ethical Issues

The considerations of the ethical issues were necessary for the purpose of ensuring the privacy of participants as well as the confidentiality of respondents' data. In order to secure the consent of the selected participants, the researcher was clarified the purpose of the study and the role of participants in completion of the study. The researcher had also informed participants that their

participation in the study was based on their willingness, and the idea and comments they raised highly honored and kept confidential. In the final result of the research paper personal information was not included, only the summary of relevant data that helped in answering the research questions were incorporated.

CHAPTER FOUR

4. DATA PRESENTATION, ANALYSIS AND INTERPRETATION

This chapter deals with the presentations, analysis, and interpretations of data in relation to examining the effect of hospital service quality on the patients' loyalty and on how to find the mediating effect of patients' satisfaction in AFRH and Police Referral Hospitals by formulating hypothesis. To meet the objective of the study, the data that were gathered from the primary source using questionnaire was analyzed, presented and interpreted in this chapter.

4.1. Data Editing and Coding

Once the primary data was collected, prior to the analysis, the questionnaire was reviewed and it was to certify that if questionnaires were filled appropriately. Any incomplete or missing responses were rejected from the subsequent analysis. The steps which are stated in the data analysis section such as coding, eliminating coding and data entry error, known as "clearing the data", Rubin & Babbie (2010) was performed in this research.

Beside, before analyzing the data by Smart PLS 3.0 software, the data was first inserted into SPSS version 20 and a preliminary stage of measurement item was first identified by an exploratory factor analysis. The psychometric properties of the measurement model in terms of internal consistency, reliability, convergent validity, and discriminant validity were evaluated.

4.2. The Questionnaire Response Rate

The questionnaires were physically distributed to patients found at the OPD who received the medical services. 271 patients at OPD of Armed Force Referral and Police Referral Hospitals whose age is over 18 had been contacted and 263 responses were received. After eliminating missing values and extreme cases, 235 responses were remaining for the data analysis with response rate of 86.7% which can be considered as a very good rate as per Hair et al. (2010).

4.3. Demographic Characteristics of the Respondents

Table 1: Socio-Demographic Characteristics of Respondents

Demographic and General Information Related			
Demographic Variable	**Categories**	**Outcomes**	
		Frequency	**Percentage (%)**
Gender	Male	159	67.7
	Female	76	32.3
	Total	**235**	**100.0**
Age in years	18-30 years	23	9.8
	31-45 years	134	57.0
	46-60 years	60	25.5
	Above 60 years	18	7.7
	Total	**235**	**100.0**
Educational Level	Less than secondary school	5	2.1
	TVET Certificate	56	23.8
	Certificate Diploma	93	39.6
	First Degree	63	26.8
	Second Degree and Above	18	7.7
	Total	**235**	**100.0**
Marital Status	Single	83	35.3
	Married	131	55.7
	Widowed	8	3.4
	Divorced	13	5.5
	Total	**235**	**100.0**

Source: Own Survey Result of SPSS, 2021

The above table is aimed to demonstrate the respondents' demographic result. After looking in to the above table, one can understand that regarding the first demographic distribution, 68% of them were male and the remaining 32% were female.

Regarding to age of the respondents, among the total respondents, 57% of them lies between age brackets of 31-45 years followed by the age group found between of 46-60 years and 18-30 which accounted for 25.5% and 9.8% respectively. But, the remaining age range i.e. over 60 years accounted for only 7.7%.

With respect to the educational status of the respondents, 39.6% were certificate Diploma, 26.8% of them were First Degree holders, 23.8% of them were TVET certificate holder, 7.7% were second/Masters' Degree and above holder, while the rest 2.1% were less than secondary school. Thus, the result implies that the majority of the respondents were possessed a high level of education and they have knowledge to evaluate the service rendered as well as to fill the questionnaire.

With regards to marital status of the respondents, 55.7% of them were married followed by single which accounted for 35.3%. The rest 5.5% and 3.4% of them were divorced and widowed, respectively.

4.4. Descriptive Analysis of the Variables

Even if the descriptive analysis is not important in this study, the research has tried to show it as depicted in the below table. This study required developing a multidimensional hospital service quality/healthcare quality measurement scale and a patient satisfaction scale as well as patient loyalty scale.

Table 2: Descriptive Analysis of the variables

Descriptive Statistics					
	N	Minimum	Maximum	Mean	SD
Tangibility	235	1	5	3.31	1.046
Reliability	235	1	5	3.65	0.890
Responsiveness	235	1	5	3.61	1.049
Assurance	235	1	5	3.79	0.883
Empathy	235	1	5	3.58	0.928
Patient Satisfaction	235	1	5	3.73	1.112
Patient Loyalty	235	1	5	3.00	0.799
Valid N (listwise)	235				

Source: Own Survey Result of SPSS data output, 2021

To measure healthcare quality perceptions the researcher used an adapted SERVPERF scale (cronin and tylor et al., 1988) for the particular healthcare sector contexts. The selected items were refined and paraphrased in both wording and contextual applications and an additional statement is added to suit our research purposes. The final questionnaire includes 22 items to measure hospital service quality by asking patients how they considered services that were provided and the rest were to measure patient satisfaction and loyalty. The five-point Likert scale ranging from (1) “strongly disagree” to (5) “strongly agree” was used. It measures the study participants’

perceptions of the actual hospital service being provided, their satisfaction and loyalty along the various attributes.

4.5. Measurement Model

4.5.1. Testing of Research Instrument-Reliability

Table 3: The outcome of Reliability Test

Construct/Dimension Name	No of items	Cronbach's α
Tangibility	4	0.796
Reliability	5	0.828
Responsiveness	4	0.842
Assurance	4	0.798
Empathy	5	0.849
Patient Satisfaction	3	0.842
Patient Loyalty	5	0.725
Overall	30	0.958

Source: Own Survey Result of SPSS data output, 2021

As indicated in the above table, the Cronbach's Alpha value for all dimensions and constructs are more than 0.7 that is the threshold value (Cronbach, 1951; Nunnally, 1978). These Cronbach's alphas indicate that the scales used in the questionnaire satisfactorily measured the constructs. hence, reliability for all dimensions and constructs are satisfactorily met.

Table 4: The outcome of KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.932
Bartlett's Test of Sphericity	Approx. Chi-Square	1349.327
	Df	21
	Sig.	.000

Source: Own Survey Result of SPSS data output, 2021

The above table shows the outcome of KMO test of Exploratory Factor Analysis (EFA). According to the outcome of KMO and Bartlett's Test as shown in the above table, KMO value is 0.932 that is well above threshold value 0.5. KMO value lies between 1 and 0 and anything above

0.9 is excellent but value above 0.5 is acceptable (Field, 2009). Besides, the Bartlett's test of Sphericity was significant at P-0.000 indicating the suitability of the sample for factor analysis.

4.5.2. Reliability and Validity Using SmartPLS

A measurement instrument has good reliability if the question-statements (or other measures) associated with each latent variable are understood in the same way by different respondents.

Therefore, the composite reliability of all latent variables is above 0.7 ranging from 0.710 to 0.830 for all reflective measure (Please refer annex 1 and 2). On the other hand the average variance extraction of all variable is above the threshold of 0.5. The AVE threshold frequently recommended for acceptable validity is 0.5 (Fornell & Larcker, 1981), and applies only to reflective latent variables. If a latent variable does not satisfy any of these criteria, the reason will often be one or a few indicators that load weakly on the latent variable that invite for removal of lower loading indicators. (Please refer annex 3)

4.5.3. Construct Validity

Construct validity indicates whether or not measures chosen are true constructs describing event (Straub, 1989). The techniques for assessing the construct validity of an instrument can be classified into two categories: Convergent validity and discriminant validity.

Convergent Validity

Convergent validity is the degree to which multiple attempts to measure the same concepts are in agreement i.e. how close the variables are in particular latent variables. The AVE threshold frequently recommended for acceptable validity is 0.5 (Fornell & Larcker, 1981). Therefore, in this study, all the constructs have high loadings; with all have above 0.6 which demonstrating the convergent validity. (Please refer annex 1 and 2)

Discriminant validity

Discriminant validity is determines whether the constructs in the model are highly correlated among them or not. It is shown when the square root of AVE in each latent variable can be used to establish discriminant validity, if this value is larger than other correlation values among the latent variables (Fornell and Larcker (1981). The square root of AVE is put on the diagonal of the table as it depicted in annex 5. For example, in this study, the latent variable Tangibility is found to be 0.621 hence its square root becomes 0.788. This number is larger than the correlation values in the

column of Tangibility and also larger than those in the row of Tangibility. The result indicates that discriminant validity is well established. (Please refer annex 4)

4.5.4. Correlation Analysis

A correlation refers to a quantifiable relationship between two variables, and the statistic that provides an index of that relationship is called a correlation coefficient r, which is a measure of the relationship between two variables. It is a very useful means to summarize the relationship between two variables with a single number that falls between -1 and +1 (Field, 2005). As per the guideline suggested by Field (2005), the strength of relationship 0.1-.29 shows week relationship; 0.3-0.49 is moderate; >0.5 shows the strong relationship between the two variables. Hence, in this study correlation analysis was used to examine the independent, moderate, and dependent variables. Accordingly, the relationship between variables is indicated in the below table.

Table 5: Correlation Matrix

Pearson Correlations							
	1	2	3	4	5	6	7
1. Tangibility	1						
2. Reliability	.741**	1					
3. Responsiveness	.696**	.701**	1				
4. Assurance	.618**	.703**	.773**	1			
5. Empathy	.712**	.738**	.798**	.739**	1		
6. Satisfaction	.693**	.693**	.788**	.732**	.744**	1	
7. Loyalty	.592**	.581**	.668**	.574**	.660**	.593**	1
N=235							
**. Correlation is significant at the 0.01 level (2-tailed).							

Source: Own Survey Result of SPSS data output, 2021

Bivariate Correlation indicates that whether the relationship between two variables is linear (as one variable increases, the other also increases or as one variable increases, the other variable decreases). Accordingly, as indicated in the above table, the correlation matrix, all of the independent variables were positively and strongly correlated with the mediating variable (patient satisfaction) and dependent variable (patient loyalty). The first highest strong coefficient of correlation in this research is between empathy and responsiveness ($r=0.798$, $p \leq 0.01$). It connotes that there is a strong, positive, and significant relationship between them. The second highest

strong coefficient of correlation between satisfaction and responsiveness which has strong positive and significant with performance ($r=0.788$, $p \leq 0.01$). Generally, the above correlation matrix shows that all independent variables were positively and strongly correlated with the mediating variable and dependent variable.

Sig (2-Tailed) value: This value tells that whether there is a statistically significant correlation between two variables or not. As per (Pedhazur, 1982), if the Sig (2-Tailed) value is less than or equal to .05, there are a statistically significant correlation between two variables. That means, increases in one variable do significantly relate to increases in the second variable and vice versa.

Therefore, as indicated in the above correlation table, Sig. (2-tailed) results of (.000) for all the constructs show that all have significant correlations. The convention implies that, if this value is less than .05, then the correlation is considered to be significant (meaning that the researcher can be 95% confident that the relationship between variables is not due to chance). Therefore, the researcher can connote that there is a significant correlation between the independent variables and mediating variable as well as dependent variable.

4.5.5. Regression Analysis

Regression is a technique used to predict the value of a dependent variable using one or more independent variables (Albaum, 1997). Regression analysis is a statistical tool for the investigation of relationships between variables. The investigator also typically assesses the "statistical significance" of the estimated relationships, that is, the degree of confidence that the true relationship is close to the estimated relationship (Malhotra, 2007). In this study, the researcher was trying to test the assumptions before running the regression analysis.

4.5.5.1. The Assumptions for Testing Regression Analysis

The test of assumptions should be done because the violations of the assumptions affect consequent use of multivariate statistical methods (Hair et al., 2006). Hair et al., (2006) suggested that several assumptions regarding the utilization of multivariate statistical tools, namely normality, homoscedasticity, linearity, and multicollinearity should be applied before performing any multivariate analysis.

1. Test of Normality

Hair et al. (2006) noted that normality relates to the shape of the data distribution for an individual metric variable and its relationship to the normal distribution. Assessment of the variables' levels of skewness and kurtosis is one of the method that determine Normality. In fact, Skewness provides an indication of the symmetry of the distribution. Kurtosis turns to the peakedness or flatness of the distribution relative to the normal distribution.

Accordingly, the normal distribution is detected based on skewness and kurtosis statistics. As proposed by George and Mallery (2010) the acceptable range for normality for both statistics is between -2 and +2. As depicted in table 8 below, all values of Kurtosis and Skewness are almost within the acceptable range for normality. This implies that all items show close to normal distribution.

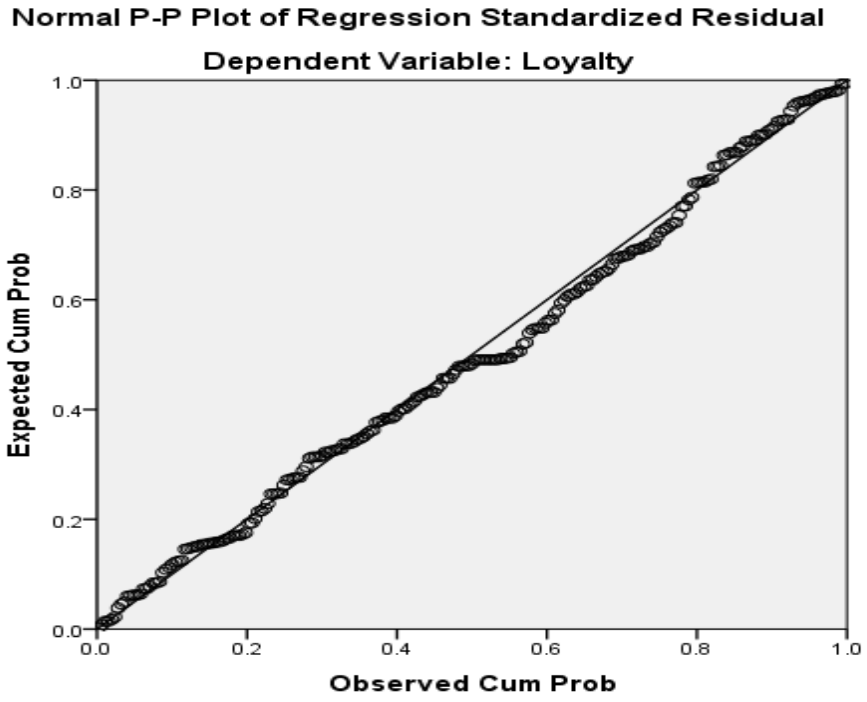
Table 6: Normality of Distribution Using Descriptive Statistics (Skewness and Kurtosis)

Descriptive Statistics					
	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Tangibility	235	-.327	.159	-.690	.316
Reliability	235	-.501	.159	-.159	.316
Responsiveness	235	-.878	.159	.170	.316
Assurance	235	-.905	.159	.224	.316
Empathy	235	-.663	.159	-.237	.316
Satisfaction	235	-.985	.159	.295	.316
Loyalty	235	-.455	.159	-.324	.316
Valid N (listwise)	235				

Source: Own Survey Result of SPSS data output, 2021

Alternatively the researcher produced another P–P plot (probability–probability plot) to show the skeweness and kurtosis. According to Hair et al. (1998), the plots are different from residuals plots when the standardized residuals are compared with the normal distribution. In general, the normal distribution makes a straight diagonal line and the plotted residuals are compared with the diagonal. If a distribution is normal, the residual line will closely follow the diagonal (Hair et al., 1998). Figure 2 indicates the normal pp plot of the data.

Figure 2: Normal P-P Plot



2. Multi-collinearity

when two or more of the independent variables are highly correlated and when certain mathematical operations are impossible we can say that multicollinearity exists . The correlation between independent variables is not a concern because multicollinearity will be created while results of the correlation coefficients are above 0.80 and considered-very high (Hair et al. 2006). Tolerance and variance inflation factor (VIF) are two general indicators to assess collinearity (Pallant, 2007). The data will be absence of multicollinearity while VIF is less than ten and tolerance value greater than 0.10 but less than one (Robert Ho, 2006).

Accordingly, as indicated in table below, the collinearity statistics analysis of variance inflation factors (VIF) value ranges from 2.772 to 4.091 and Tolerance value ranging with 0.244 to 0.361. Likewise, as indicated in table 8 of correlation analysis, the results of the correlation coefficient between independent variables were below 0.8. Therefore, this result indicates that there was no collinearity problem in this study.

Table 7: Collinearity Statistics

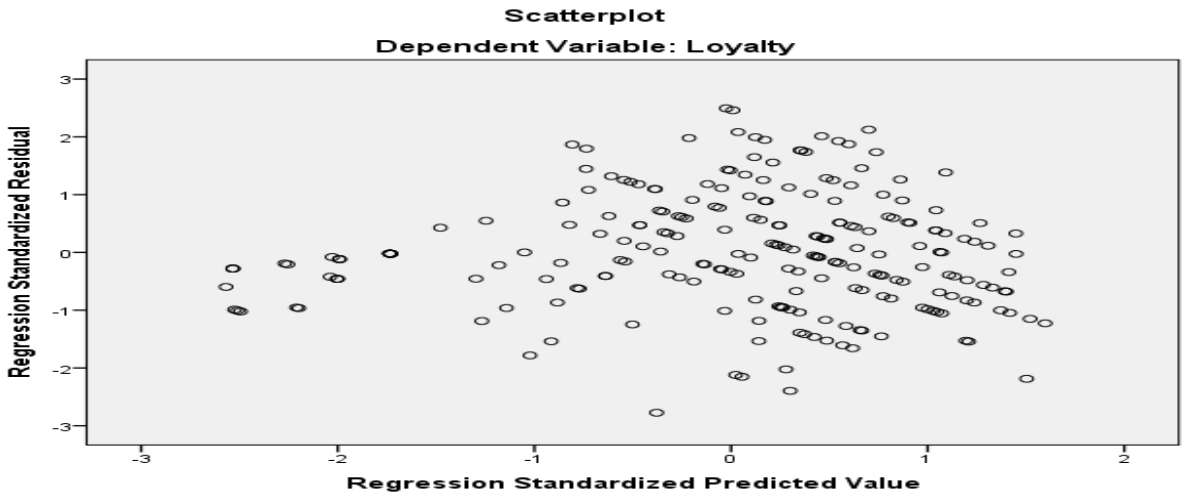
Coefficients[a]			
Model		Collinearity Statistics	
		Tolerance	VIF
1	Tangibility	.361	2.772
	Reliability	.326	3.064
	Responsiveness	.244	4.091
	Assurance	.322	3.102
	Empathy	.272	3.679
	Patient Satisfaction	.303	3.301
a. Dependent Variable: Patient Loyalty			

Source: Own Survey Result of SPSS data output, 2021

3. Homoscedasticity of the Error Terms

Hair et al. (2006) indicated that Homoscedasticity relates to the assumptions that dependent variable explaining equal levels of variance across the range of independent variables. Hair et al. (2006) argue the test of homoscedasticity is required because the variance of the dependent variable being explained in the dependence relationship could not be focus in simply a limited range of the independent values. Consistent with Hair et al. (2006), this study tested the homoscedasticity for metric variables using scatterplot. Scatter plots of standardized residual was conducted for all the variables and the outcomes from the data were shown in figure 3. In effect, the scatterplot showed that the pattern of data points does not contain any exact patterns and thus had not violated the assumptions (e.g., no discernible patterns of residuals were indicated).

Figure 3: Scatterplot



4. Autocorrelation

Autocorrelation assumption can be tested with the Durbin–Watson test, which tests for serial correlations between errors. Specifically, it tests whether adjacent residuals are correlated. The test statistic can vary between 0 and 4 with a value of 2 meaning that the residuals are uncorrelated (Field, 2005). As indicated in table 8, the Durbin-Watson test result is 1.377 which is closer to the acceptable standard of 2.0 showing that there is no autocorrelation problem in the model.

5. Linearity

Linearity as the relationship between the dependent and independent variable represented the degree to which the change in the dependent variable is associated with the independent variable (Hair et al., 1998). In a simple sense, linear models predict values falling in a straight line by having a constant unit change (slope) of the dependent variable for a constant unit change of the independent variable (Hair et al., 1998). This assumption can be checked using scatterplots or residual plots (Hoekstra et al., 2014). The scatter plots of standardized residuals versus the fitted values for the regression models were visually inspected from figure 3.

4.5.6. Multiple Linear Regression Analysis

The linear regression estimates include one or more independent variables that best predict the value of the dependent variable (Field, 2005). In this study, multiple linear regression is conducted to determine the explanatory power of the independent variables, socio-demographic variables and service quality dimensions. The regression estimates identify the relationship and determine the most dominant variables that influenced the dependent variable, patient loyalty. The significance level of 0.05 with 95% confidence interval is used.

4.5.6.1 The Effect of Demographic Variables and Hospitals' Service Quality Dimensions on Patient Loyalty

The R value is the correlation between observed values and predictor values. It indicates the value of the multiple correlation coefficients between the predictors and the outcome, with a range from 0 to 1, a larger value indicating a larger correlation and 1 representing an equation that perfectly predicts the observed value (Pedhazur, 1982). As indicated in table 8 the R value for the model 1 and model 2 are (R=.255[a] and .717[b]), respectively. Therefore, the results indicate that, the linear combination of the socio-demographic variables (gender, age, educational level, and marital status)

with patient loyalty and hospitals' service quality dimensions (tangibility, reliability, responsiveness, empathy, and assurance) as the independent variables strongly predicted the dependent variable, patient loyalty.

The Value of R Square (R^2): Indicates the proportion of variance that can be explained in the dependent variable by the linear combination of the independent variables. In another word, R^2 is a measure of how much of the variability in the outcome is accounted for by the predictors. The values of R^2 also range from 0 to 1 (Pedhazur, 1982). Therefore, as indicated in the above table, the model 1 value (R^2=0.065) indicates that the socio-demographic variables (gender, age, educational level, and marital status) explains 6.5% of the variance in patient loyalty and the remaining 93.5% is explained by extraneous variables, which have not been included in this regression model. Likewise, the model 2 the value (R^2=.514) indicates that the socio-demographic variables (gender, age, educational level, and marital status) together with the service quality dimensions (tangibility, reliability, responsiveness, empathy, and assurance) as the independent variables explains 51.4% of the variance in patient loyalty and the remaining 48.6% is explained by extraneous variables, which have not been included in this regression model. Table 8 below indicates the model Summary for dependent and independent variables

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.255[a]	.065	.049	.778	.065	3.990	4	230	.004	
2	.717[b]	.514	.494	.567	.449	41.571	5	225	.000	1.377

a. Predictors: (Constant), Marital Status , Level of Education , Age , Gender

b. Predictors: (Constant), Marital Status , Level of Education , Age , Gender, Tangibility, Assurance, Reliability, Responsiveness, Empathy

c. Dependent Variable: Patient Loyalty

Source: Own Survey Result of SPSS data output, 2021

Under model 1 of the regression result, the research examined the effect of socio-demographic variables namely, gender, age, level of education, and marital status. Under model 2 of the regression summary, service quality dimensions,, tangibility, reliability, responsiveness, empathy, and assurance were taken as independent variables and their effect on dependent variable, patient loyalty have examined. Table 9 below demonstrates the regression summary of the research.

Table 9: Regression for dependent and independent variables

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.901	.307		12.704	.000
	Gender	-.051	.110	-.030	-.461	.645
	Age	-.145	.069	-.137	-2.108	.036
	Level of Education	-.173	.055	-.203	-3.163	.002
	Marital Status	.021	.068	.020	.309	.757
2	(Constant)	1.098	.315		3.484	.001
	Gender	-.153	.082	-.090	-1.873	.062
	Age	-.017	.052	-.016	-.337	.736
	Level of Education	-.048	.041	-.057	-1.181	.239
	Marital Status	.030	.050	.029	.602	.548
	Tangibility	.091	.059	.119	1.525	.129
	Reliability	.073	.073	.081	.989	.324
	Responsiveness	.229	.068	.301	3.350	.001
	Assurance	.001	.073	.001	.015	.988
	Empathy	.236	.077	.274	3.053	.003
a. Dependent Variable: Patient Loyalty						

Source: Own Survey Result of SPSS data output, 2021

The above table revealed the effect of socio-demographic variable and service quality dimensions on the dependent variable which is patient loyalty. Accordingly, as indicated in the model 1, among socio-demographic variables: age and level of education have significant effect on patient loyalty with $p<0.05$ but there effect is negative. This result implies that, as the age of the patient is increasing, they are not loyal to the hospitals. Similarly, with regards to the level of education, as the patient become more educated, their level of loyalty is decreased. This means that the patients with high level educations are not loyal to the hospitals. Contrary to this, even if the gender and marital status have positive effect on patient loyalty but, their effects are insignificant. In the model 2, the effect of socio-demographic variables together with service dimensions variables on patient loyalty have seen. Accordingly, as depicted in the above table, when we see the combination effect of socio-demographic variables with service quality on patient loyalty, the results of all of the

independent variables have effect on the dependent variable. But, the effects of socio-demographic variables were insignificant since the P-values are greater than 0.05.

The beta coefficients indicated that how and to what extent socio-demographic variables and SERVQUAL dimensions such as tangibility, reliability, responsiveness, assurance and empathy influence patient loyalty in the hospitals. It has been found that, Responsiveness (p-value < 0.05; β=.301) and Empathy (p<0.05; β=.274) have the highest positive significant effect on patient loyalty, whereas, Tangibility (p>0.05; β=.129), Reliability (p>0.05; β=.081), and Assurance (p>0.05; β=.001) at 95% confidence interval have a relatively lower effect on loyalty of the patients' of the hospitals. The result of regression coefficient indicated that, for instance the Beta Coefficient result of 0.301 of responsiveness signifies that for a 1 unit change in responsiveness dimension, the patient loyalty will change by 0.301 units; the same is true for others. Therefore, from this result one can understand that the responsiveness followed by empathy dimensions was having the explanatory power than the others and the most important factors influencing loyalty the patients of the hospitals.

1. The Effect of Hospital Service Quality on Patient Satisfaction

As showed in the table below the value (R=.835[a]) indicated that, the linear combination of the hospital service quality variables (tangibility, reliability, responsiveness, empathy, and assurance) strongly predicted the patient satisfaction i.e. strong correlation between predictors and observed variables. Likewise the value (R=.697[a]) indicated that, the hospital service quality variables (tangibility, reliability, responsiveness, empathy, and assurance) explains 69.7% variance in the patient satisfaction and the remaining 30.3% is explained by extraneous variables, which have not been included in this regression model.

One the other hand, the p-value for all coefficient except for reliability, they are statistically significant (p<.05), meaning that hospital service quality dimensions except reliability have a significant predictor of patient loyalty. From the service quality dimensions, responsiveness has the highest regression coefficient with the beta value of 0.351 and reliability has the lowest with the beta value of 0.81. Except reliability, all hospital service quality dimensions have positive significant effect on patient satisfaction. For instance, for responsiveness dimension, the value of Beta Coefficient of 0.351 signifies that for a 1 unit change in the responsiveness dimension, the patient satisfaction will change by 0.351 units or 35.1%; the same is true for other dimensions.

Accordingly, the finding revealed that the first hypothesis which states 'hospital service quality has the positive significant effect on the patient satisfaction' is confirmed.

Table 10: Regression analysis for independent and mediating variables

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.109	.191		-.573	.567
	Tangibility	.178	.063	.168	2.822	.005
	Reliability	.101	.079	.081	1.269	.206
	Responsiveness	.372	.074	.351	5.026	.000
	Assurance	.248	.079	.197	3.146	.002
	Empathy	.167	.083	.140	2.019	.045
R=.835[a]						
R^2=.697						
Adjusted R^2=.690						
Std. Error of the Estimate=.618						
a. Predictors: (Constant), Empathy, Tangibility, Assurance, Reliability, Responsiveness						
b. Dependent Variable: Patient Satisfaction						

Source: Own Survey Result of SPSS data output, 2021

2. The Effect of Patient Satisfaction on Patient Loyalty

As indicated in table 11, the values of R^2 indicated that the linear combination of patient satisfaction (mediator variable) explains 35.1% of the variance in patient loyalty (dependent

variable) and the remaining 64.9% is explained by extraneous variables, which have not been included in this regression model.

Table 11: Regression analysis for mediating variable and dependent variable

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.407	.147		9.548	.000
	Patient Satisfaction	.425	.038	.593	11.238	.000
R=.593[a]						
R^2=.351						
Adjusted R^2=.349						
Std. Error of the Estimate=.644						
a. Predictors: (Constant), Patient Satisfaction						
b. Dependent Variable: Patient Loyalty						

Source: Own Survey Result of SPSS data output, 2021

As depicted in the above table, the p-value for this coefficient is statistically significant ($p<.05$), meaning that hospital service quality has a significant predictor of patient loyalty. Accordingly, the finding revealed that the hypothesis which states 'patient satisfaction has the positive significant effect on the patient loyalty' is supported by the data collected on this survey as (p-value < 0.05; β=0.593) hence, the alternative hypothesis is confirmed.

3. The Mediating Effect of Patient Satisfaction

The following table shows the regression coefficient for the association between the mediator (patient satisfaction) and independent variables (socio-demographic variables and hospital service quality dimensions-tangibility, reliability, responsiveness, assurance, empathy) on dependent variable (patients' loyalty).

Table 12: Regression Coefficient for mediation

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.117	.318		3.512	.001
	Gender	-.156	.082	-.092	-1.898	.059
	Age	-.018	.052	-.017	-.348	.728
	Education	-.051	.041	-.060	-1.225	.222
	Marital Status	.029	.051	.027	.570	.569
	Tangibility	.085	.060	.112	1.411	.160
	Reliability	.070	.074	.078	.947	.345
	Responsiveness	.217	.072	.285	3.001	.003
	Assurance	-.007	.075	-.007	-.090	.928
	Empathy	.230	.078	.268	2.957	.003
	Patient Satisfaction	.030	.061	.042	.489	.626
R=.717[a]						
R^2=.514						
Adjusted R^2=.493						
Std. Error of the Estimate=.568						
a. Predictors: (Constant), Patient Satisfaction, Marital Status, Level of Education, Gender, Age, Reliability, Assurance, Tangibility, Empathy, Responsiveness						
b. Dependent Variable: Patient Loyalty						

Source: Own Survey Result of SPSS data output, 2021

As exhibited in the table below the value (R=.717[a]) indicated that, the linear combination of the patient satisfaction, marital status, level of education, gender, age, reliability, assurance, tangibility, empathy, responsiveness strongly predicted the patient loyalty. Likewise, the values of R^2 indicated that the linear combination of service quality, socio-demographic variables and patient satisfaction explains 51.4% of the variance in patient loyalty and the remaining 48.9% is explained by extraneous variables, which have not been included in this regression model. The result shows that the result of testing the mediating effect of patient satisfaction in the association of hospital service quality and patient trust support a partial mediation i.e. If hospital service quality is still significant (i.e., both hospital service quality and patient satisfaction both predict patient loyalty), the finding supports partial mediation. According to Baron and Kenny (1986), there is significant indirect effect of hospital service quality on patient loyalty through patient satisfaction.

4.6. Structural Model

The Structural Model in this research was performed using SPSS 20 and SmartPLS 3.0 software

to test the hypotheses generated and to find the relationships between constructs. SEM mainly concerns about several fitness indexes that show how model fits to the data set.

4.6.1. Hypothesis Testing for Mediation Effect

4.6.1.1. A Model fit and Quality indices

The model includes 30 items describing 7 latent constructs: Tangibility, Reliability, Responsiveness, Assurance, Empathy, Patient Satisfaction and Patient Loyalty. The SmartPLS 3.0 software was used to provide the necessary analysis to serve the objectives of this study. The measurement model test resulted in statistically accepted goodness of fit between the data and the proposed measurement model.

Table 13: Model Fit and Quality Indices

Fit Summary	Values
SRMR	0.070
d_G	0.921
Chi-Square	1198.900
NFI	0.934
rms Theta	0.113

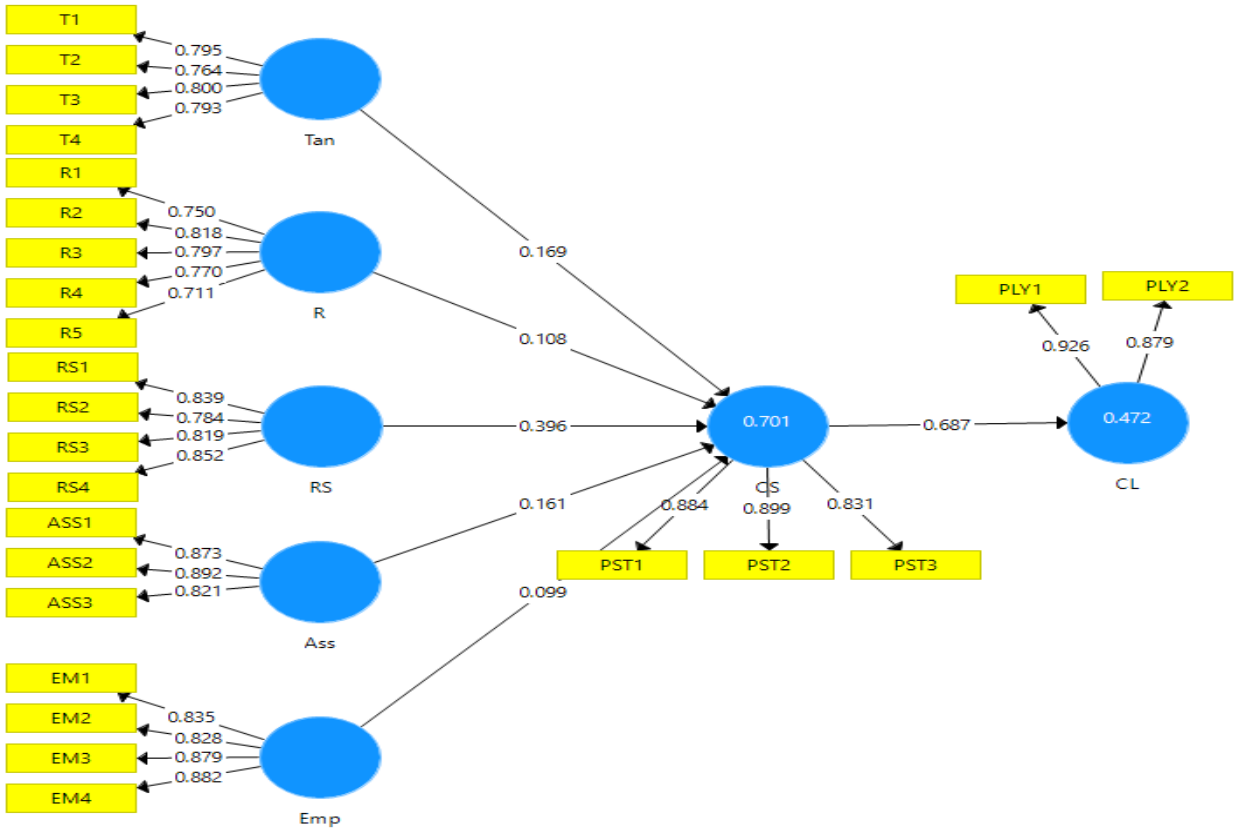
Source: Own Survey Result of SmartPLS data output, 2021

The fit values that can be used to assess the model fit are indicated in the above table. Accordingly, **Standardized Root Mean Square Residual (SRMR):** the SRMR is defined as the difference between the observed correlation and the model implied correlation matrix. A value less than 0.10 are considered a good fit (Hu and Bentler, 1999). Therefore, in this study, the SRMSR is 0.070 was lower than 0.10 which is considered as a good fit.

Normed Fit Index (NFI) or Bentler and Bonett Index: The NFI is then defined as 1 minus the Chi² value of the proposed model divided by the Chi² values of the null model. Thus, the NFI results in values can be ranging between 0 and 1. Therefore, in this study, the NFI value 0.921 was higher than 0.90 represent acceptable fit; thus we can conclude that the data fits the model well.

RMS_theta: assesses the degree to which the outer model residuals correlate. The values below 0.12 indicate a well-fitting model, whereas higher values indicate a lack of fit (Henseler et al., 2014). Therefore, in this study the value 0.113 indicates that a well-fitting model.

Figure 4: Path Coefficient Diagram



Source: Own Survey Result of SmartPLS data output, 2021

Figure 4 shows the analysis of the path model that represents the relationships among the 7 constructs in this study. There was a good model fit and the hypotheses were significant.

Table 14: Latent Variable indirect effect of endogenous variables

Specific Indirect Effects	
	Specific Indirect Effects
Tan -> CS -> CL	0.116
R -> CS -> CL	0.074
Emp. -> CS -> CL	0.068
RS -> CS -> CL	0.272
Ass –> CS -> CL	0.111

Source: Own Survey Result of SmartPLS data output, 2021

The research had tried to show the specific indirect effect and total effect of endogenous variables in table 14 and 15 by using SmartPLS 3.0 software. Accordingly, as shown in the table, the service

quality dimensions have indirect effect on patient loyalty and also responsiveness, tangibility, and assurance have relatively moderate path coefficient relative to other variables.

Table 15: Latent Variable total effect of endogenous variables

Total Effects		
	Patient Loyalty	**Patient Satisfaction**
Tangibility	0.116	0.169
Reliability	0.074	0.108
Responsiveness	0.272	0.396
Empathy	0.068	0.099
Assurance	0.111	0.161
Patient Satisfaction	0.687	

Source: Own Survey Result of SmartPLS data output, 2021

The above table shows the mediation effect analysis (direct, indirect, and total effect). Thus, the researcher assessed the direct, indirect, and total effects of hospital service quality through partially mediating variables patient satisfaction on the final dependent variable; patient loyalty.

4.6.2. Discussion of the Result

In order to test the hypothesis of the study both SPSS 20 and SmartPLS 3.0 software was used. Accordingly, the researcher observed that even if the researcher used two softwares, their results showed the same magnitude effect with very minimal difference of the result as indicated in tables below and figures above.

i.e. as depicted in table 12 the beta value 0.827 and p-value .000 indicated that there is a positive and significant effect. Further result show that responsiveness had the greatest impact on customer satisfaction (Beta value 0.351) followed by Assurance (Beta value of 0.197), tangibles (Beta: 0.168), Empathy (Beta value of 0.140), and reliability (Beta: 0.081). This result of the study is consistent with the outcomes of subsequent researches. Customer satisfaction and customer loyalty get increased through high quality service (Kumar et al., 2009). The outcome of study shows that service quality attributes namely tangibility, reliability; assurance, empathy, and responsiveness have an influence on customer satisfaction (AL-Mhasnah et al., 2018).

Hypothesis 1 : states that hospital service quality has a positive significant effect on patient satisfaction. Accordingly, this finding supports H_1, which predicted that patient's perception of

healthcare quality has a positive and significant effect on patient satisfaction. states that hospital service quality has a positive significant effect on patient satisfaction. Accordingly, the value R square (R^2=0.065) indicates that the socio-demographic variables (gender, age, educational level, and marital status) explains 6.5% of the variance in patient loyalty and the remaining 93.5% is explained by extraneous variables, which have not been included in the regression model. Likewise, the value (R^2=.514) for socio-demographic variables (gender, age, educational level, and marital status) together with the service quality dimensions (tangibility, reliability, responsiveness, empathy, and assurance) as the independent variables explains 51.4% of the variance in patient loyalty and the remaining 48.6% is explained by extraneous variables, which have not been included in the regression model. With regards to regression coefficient, the beta coefficients indicated that, the effects of socio-demographic variables only age and educational level of the patients' have significant effect on patients' loyalty since the P-values are greater than 0.05. this means that, as the age and educational level of the patients' are increasing, they are becoming loyal to hospitals.

Similarly, it has been found that, Responsiveness (p-value < 0.05; β=.301) and Empathy (p<0.05; β=.274) have the highest positive significant effect on patient loyalty, whereas, Tangibility (p>0.05; β=.129), Reliability (p>0.05; β=.081), and Assurance (p>0.05; β=.001) at 95% confidence interval have a relatively lower effect on loyalty of the patients' of the hospitals. The Beta Coefficient result of 0.301 signifies that for a 1 unit change in the responsiveness dimension, the patient loyalty will change by 0.301 units or 30.1%. Therefore, from this result one can understand even if all service quality dimensions have effect on patient loyalty, the responsiveness followed by empathy dimensions have the highest explanatory power than the others. In general, the findings of this study indicated that the perceived hospital service quality significantly predict patient loyalty, providing support for H1 and H2. Particularly the three dimensions of healthcare quality: responsiveness, assurance, and empathy consequently will be stronger predictors of patient loyalty. This result of this study is consistent with result of the subsequent researches. Customer satisfaction and customer loyalty get increased through high quality service (Kumar et al., 2009). Service quality is having a solid positive association with customer loyalty (Izogo & Ogba, 2015).

Hypothesis 2: states that hospital service quality has a positive significant effect on patient satisfaction. Accordingly, this finding supports H_3, which predicted that patient's perception of healthcare quality has a positive and significant effect on patient satisfaction. The p-value for all

service quality dimensions except for reliability are statistically significant at p-value ($p<.05$), meaning that hospital service quality dimensions except reliability have a significant predictor of patient loyalty. From the service quality dimensions, responsiveness has the highest regression coefficient and reliability has the lowest. From the service quality dimensions, responsiveness had the greatest effect on patient satisfaction (Beta value 0.351) followed by Assurance (Beta value of 0.197), tangibles (Beta: 0.168), Empathy (Beta value of 0.140), and reliability (Beta: 0.081). Except reliability all service quality dimensions have significant effect on patient satisfaction. Accordingly, the finding revealed that the third hypothesis which states 'hospital service quality has the positive significant effect on the patient satisfaction' is confirmed. Thus, the result of the study is consistent with the outcomes of subsequent researches. Customer satisfactions get increased through high quality service (Kumar et al., 2009). The outcome of study shows that service quality attributes namely tangibility, reliability; assurance, empathy, and responsiveness have an influence on customer satisfaction (AL-Mhasnah et al., 2018).

Hypothesis 3: states that the patient satisfaction has positive significant effect on patient loyalty. The beta value of .593 and p-value 0.000 shows that there is a significant positive effect. The Beta Coefficient result of 0.593 signifies that for a 1 unit change in the patient satisfaction, the patient loyalty will change by 0.593 units. Accordingly, the result of this study shows that the effect of patient satisfaction on patient loyalty was significant, providing support for H_4, which predicted that patient satisfaction has a positive and significant effect on patient loyalty. Therefore, the result of the study is consistent with the outcomes of subsequent researches. Customer satisfaction results customer loyalty and retention (Gupta, 2017). Customer satisfaction has a positive influence on customer loyalty (Khajeh & Rostamzadeh, 2018).

Hypothesis 4: states that Patient satisfaction mediating the effect of hospital service quality on patient loyalty. Results showed that all the service quality dimensions i.e. Tangibility, Reliability, Responsiveness, Empathy, and Assurance dimensions had direct effect on satisfaction and also had direct and indirect effect on patient loyalty with satisfaction as the mediator. Thus, the partial mediation effect is significant. Therefore, the result of this study is consistent with outcomes of subsequent researches. Customer satisfaction works as a mediating variable the relationship between service quality and customer loyalty (Bahri, 2017). Customer satisfaction that is reflected as an intervening variable mediates relationship between service quality and customer loyalty (Kaura et al., 2015).

CHAPTER FIVE

5. SUMMARY, CONCLUSION, AND RECOMMENDATION

5.1. Summary

- With regards to demographic characteristics of the respondents, out of the total respondents, 68 per cent of them were male and 55.7 per cent were single. 57 per cent of participants were aged between the age brackets of 31-45 years and 39.6 per cent had certificate Diploma.
- With regards to the reliability of the instrument, the Cronbach's Alpha value for all dimensions and constructs are more than 0.7 that is the threshold value which indicates that the scales used in the questionnaire satisfactorily measured the constructs or have an internal consistency.
- The findings of the study indicated that Armed Force Referral Hospital/Torhayloch and Police Referral Hospital are performing poorly on all dimensions of service quality and patients were found dissatisfied with their service quality.
- All the constructs with multiple reflective measures, all items have high loadings, with all are above 0.7 therefore demonstrating convergent validity.
- The result of the correlation matrix shows that all of the independent variables were positively and strongly correlated with the mediating variable (patient satisfaction) and dependent variable (patient loyalty) with 95% confidence interval & at 0.01 p-values.. The first highest strong coefficient of correlation in this research is between empathy and responsiveness ($r=0.798$, $p \leq 0.01$). It connotes that there is a strong, positive, and significant relationship between them. The second highest strong coefficient of correlation between satisfaction and responsiveness which has strong positive and significant with performance ($r=0.788$, $p \leq 0.01$). Generally, the above correlation matrix shows that all independent variables were positively and strongly correlated with the mediating variable and dependent variable.
- As per the findings of the study, the hospitals service quality positively and significantly affect the patient satisfaction. This means the higher service quality owned the AFRH and Police Referral Hospitals accompanied by high satisfaction Patients.
- Patient Satisfaction has also positive and significant effect on patient loyalty. This means that the higher patient satisfaction of the hospitals accompanied by high patient loyalty.

- Service quality has a positive and significant influence on patient loyalty, which means the more service quality owned by the AFRH and Police Referral Hospitals accompanied by high patient loyalty.
- Patient satisfaction partially mediates the effect of service quality on patient loyalty of the Hospitals. From this result one can conclude that, increasingly higher service quality will increase patient satisfaction and higher patient satisfaction is able to create patient loyalty to AFRH and Police Referral Hospitals.

5.2. Conclusions

From the above discussion, a conclusion can be drawn regarding the effect of hospital service quality on patient loyalty through the mediating role of patient satisfaction. Hence, the main objective of this study is to examine the effect of hospital service quality on the patients' loyalty and find the mediating effect of patients' satisfaction in Armed Force Referral Hospital and Police Referral Hospital. The Partial Least Square-Structural Equation Modeling approach was used to test the constructs framework between hospital service quality, patient satisfaction and patient loyalty. The results confirmed that the five service quality dimensions: tangibility, reliability, responsiveness, assurance, and empathy are the distinct construct for hospital service quality. Each dimension has a significant relationship with hospital service quality. For hospital service quality, responsiveness followed by assurance and tangibility was the key driver of hospital service quality. Overall service quality has a significant positive effect on satisfaction of patients with the highest regression coefficient. Similarly the hospital service quality had a significant positive effect on patients' loyalty. This suggests that patients are looking for a hospital that provides services, when patients have problems, the hospitals will show a sincere interest in solving them, provide services at the promised time, and offer a wide range of products and/or services.

The findings of the study are very vital for hospital, management of the hospital additionally to the employees/workers of the Hospital. The foremost important factor is that patient loyalty which leads to make profit for the organizations is the dependent variable of the research. The study finding reveals that patient loyalty is dependent on both service quality and patient satisfaction. The other important finding is that patient satisfaction mediates the relationship between service quality and customer satisfaction. It is very significant to note that all the service quality attributes namely: tangibility, reliability, responsiveness, assurance, and empathy have an effect on service

quality. Besides, the study findings indicated that all five dimensions of hospital service quality were significant in explaining patient satisfaction. Moreover, responsiveness and empathy were significant in explaining patient loyalty.

On the other hand, patient satisfaction works as a partial mediator and having direct influence on patient loyalty as well. The satisfied customers i.e. patient are always asserts to a company thus, it is highly required to make a customer friendly environment. It is a requirement to keep on communicating with existing customers to make sure them to be continuously loyal.

In general, the findings of the study suggest that a better quality of hospital/healthcare services play a vital role in building patient satisfaction and patient loyalty intentions as a reliable client always makes a positive word of mouth.

5.3. Recommendations

Based on the findings of the study the subsequent recommendations are forwarded.

- As clearly shown in the analysis part of the study responsiveness, assurance, tangibility, and empathy dimensions have the most dominant effect in bringing patients' satisfaction, and reliability is the least in the influence. Therefore, the hospitals shall invest more on the dominant dimensions and it should also consider the appropriateness of service reliability.
- The hospitals shall develop appropriate programs and provide on-going training for all staff including doctors, nurses, and general staff on the various attributes of responsiveness to strengthen employees' ability to improve customer service.
- Besides to improve responsiveness dimensions, the Hospitals management shall improve the speed of service provided by staff and improve the patient's sense of assistance when needed.
- In order to improve the tangibility aspect, the Hospitals management should focus their quality improvement efforts on areas of neat appearance of health workers, waiting facilities for employees and patients, and hygienic conditions at the hospital.

- Within the aspect of reliability dimensions the Hospitals shall keep promises that have been communicated before and the employees of the Hospitals are expected to quickly solve the problems of the Patients.
- On the assurance aspect, the Hospitals shall increase the sense of security and confidence in the medicine given.
- In order to improve empathy dimension, the hospitals shall improve immediately apologize when there is complaint from patients' and improve understanding of patients' requirement.
- The hospitals' managements shall be concentrate on patient's oriented strategies focusing on service quality dimensions improvement so as to compete effectively with private hospitals.
- The Hospitals shall design service standards that promote reliable services and not promise more than what they cannot deliver.
- The findings of this study shall provide insights for other healthcare found in the country, which is able to boost hospital service quality towards patient satisfaction and loyalty.

5.4. Limitations and Suggestions for the Further Research

This research examined the concept of hospital service quality, patient satisfaction and patient loyalty from the perspective of patients only. However, this study did not explore the perspective of service providers/hospital. This is a limitation in as much as it only considers the patients view points, which might be different from the providers view. Therefore, for future it is recommended that a similar study will be undertaken using the perspective of the service provider and make a comparative analysis.

The public hospitals were the major focus of the present study, however, the understanding and additional demands of patients of all types of hospitals with similar or different aspects of standard of health service could be explored in future studies. Therefore, the researcher suggested that similar study can be further extended to private hospitals rather than limiting to public hospitals

As a research design the researcher was employed quantitative method. Therefore, the researcher suggested that a mixed research design i.e. both qualitative and quantitative shall be used since qualitative study might give more detailed information in the future.

There are a number of variables that affect patient satisfaction and loyalty in addition to service quality. Therefore, for future research the researcher suggested that the number of research variables used to predict patient satisfaction, such as: trust, image, customer value, and product superiority will be added.

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APPENDIX I: English Version Questionnaire

Addis Ababa University
College of Business Administration
Department of Management

Dear Sir/Madam,

My name is Mahlet Fente. I am MBA candidate at Addis Ababa University College of Business and Economics. The purpose of this survey is to better understand "The effect of hospital service quality on the patient satisfaction and patient loyalty and find the mediating effect of patients' satisfaction in Armed Force Referral (Torhayloch Hospital) and Police Referral Hospitals". Therefore, your genuine and honest response is very important for the success of the research and the researcher would like to thank you for your cooperation in advance.

The questionnaire will take 10-15 minutes of your time. Kindly be assured that all information that you provide will be kept strictly confidential and will be used solely for research/analysis purpose. If you require any further information, want feedback on the study or unclear situation please contact me by the following address. I, therefore, respectfully ask to answer all questions, and I look forward to your timely reply.

- Email: maheletfente@gmail.com
- Cell phone:+251 912 48 41 86

Thank you very much for your participation!

General Instruction: No need to write your name and the instruction for each part of the questionnaire is given at the beginning of the questions.

Part I: Socio-Demographic Information Question

Please put the tick mark **"√"** in the appropriate option or fill in the space.

1. **Gender:** Male ☐ Female ☐
2. **Age:** under 20 years ☐ 21-30 years ☐ 31-40 years ☐ 41-50 years ☐ Over 50 years☐
3. **Educational status:** Less than secondary school☐ TVET☐ Diploma☐ 1st Degree ☐ 2nd Degree and Above ☐ If others, please specify_____
4. **Marital Status:** Single ☐ Married ☐ Widowed ☐ Divorced ☐

Part II: Service Quality Dimensions

Please indicate how strongly you agree or disagree with each statements by using **"√"** mark in the box that truly reflects your opinion. The scale represents: **1**=Strongly Disagree (SDA), **2**=Disagree (DA), **3**=Neutral (N), **4**=Agree (A) and **5=**Strongly Agree (SA).

S/no	Statements	SDA	DA	N	A	SA
	Tangibility	**1**	**2**	**3**	**4**	**5**
1.	Hospital has modern-looking equipment.					
2.	Hospital physical facilities are visually appealing.					
3.	Hospital staffs have professional appearance.					
4.	Hospital has visually appealing materials associated with the service.					
	Reliability					
5.	Hospital provides service as promised.					
6.	Hospital staff shows a sincere interest to solve patients' problem.					
7.	Hospital performs the service right the first time.					
8.	Hospital performs the services at the time it promises.					
9.	Hospital maintains error free records.					
	Responsiveness					
10	Hospital staffs inform me when services are ready.					
11	Hospital staffs provide prompt services to their patients.					
12	Hospital staffs are always willing to help their patients.					
13	Hospital staffs will never be too busy to respond to patients requests.					
	Assurance					
14	Hospital is capable to handle your medical problems.					
15	Health worker can assure you regarding better treatment.					
16	Health worker are well-manner and courteous to patients.					
17	Health worker are knowledge to answer your questions.					
	Empathy					
18	The hospital gives individual attention to the patient.					
19	The hospital has convenient consultation hours.					
20	Health worker deal with patients in caring fashion.					
21	Hospital has patients' best interests at heart.					
22	Hospital staffs understand patients' specific needs.					

Part III: Patient Satisfaction

S/no	Patient Satisfaction	SDA	DA	N	A	SA
		1	**2**	**3**	**4**	**5**
23	I'm satisfied with the medical treatment of the hospital.					
24	I'm satisfied with service of the hospital staff/worker.					
25	I'm satisfied with the hospital facilities.					

Part v: Patient Loyalty

S/no	Patient Loyalty	SDA	DA	N	A	SA
		1	2	3	4	5
26	Will say positive things about the hospital treatment to my relatives.					
27	Willing to recommend the hospital treatment to my relatives.					
28	Will continue to use the hospital service in the future.					
29	Willing to do further medical treatment at this hospital.					
30	Will continue the hospital service even if the cost is higher.					

Thank you very much for taking the time to complete my survey!!
Stay Safe and Control COVID-19

APPENDIX II: Amharic Version Questionnaire

ውድ የመጠይቁ መላሾች፣

ስሜ ማህሌት ፈንቴ ይባላል፡፡ በአዲስ አበባ ዩኒቨርሲቲ በንግድ አስተዳደር ማስተርስ ዲግሪ (MBA) ማሙዋያነት የመመረቂያ ጥናት እየሰራዉ ነዉ፡፡ የዚህ የዳሰሳ ጥናት ዓላማ "የሆስፒታል ጤና አገልግሎት ጥራት በታካሚው እርካታ እና በታካሚ ታማኝነት ላይ ያለዉ ተፅእኖ የበለጠ ለመረዳት በጦርሃሎች እና የፖሊስ ሪፈራል ሆስፒታሎች የታካሚዎችን እርካታ ጥናት ለማድረግ ነው"፡፡ ስለሆነም የእርስዎ እውነተኛ መልስ ለጥናቱ ስኬታማነት በጣም አስፈላጊ ነው እናም ተመራማሪው ስለ ትብብርዎ አስቀድሞ ሊያመሰግንዎት ይፈልጋል፡፡

መጠይቁ ጊዜዎን ከ10-15 ደቂቃዎች ይወስዳል፡፡ ያቀረቡት መረጃ ሁሉ በጥብቅ ሚስጥር እንደሚጠበቅ እና ለምርምር/ትንተና ዓላማ ብቻ እንደሚውል እርግጠኛ ይሁኑ፡፡ ተጨማሪ መረጃ ከፈለጉ፣ በጥናቱ ላይ ግብረመልስ ይፈልጉ ወይም ግልጽ ባልሆነ ሁኔታ እባክዎ በሚከተለው አድራሻ ያነጋግሩኝ፡፡ ስለሆነም ሁሉንም ጥያቄዎች እንዲመልሱ በአክብሮት እጠይቃለሁ፣ ወቅታዊ ምላሽዎንም በጉጉት እጠብቃለሁ፡፡

ስለ ተሳትፎዎ በጣም አመሰግናለሁ!

አጠቃላይ መመሪያ፡

- ስም መጻፍ አያስፈልግም
- ለእያንዳንዱ መጠይቅ ክፍል የተሰጠው መመሪያ በጥያቄዎቹ መጀመሪያ ላይ ተሰጥቷል፡፡

ክፍል ፩: ግለሰባዊ መረጃ ጥያቄ

እባክዎን የ "√" ምልክትን በተገቢው አማራጭ ውስጥ ያስገቡ ወይም ምላሽዎን ይግለጹ፡፡

1. ፆታ፡ ወንድ ☐ ሴት ☐
2. ዕድሜ፡ ከ 20 ዓመት በታች ☐ 21-30 ዓመት ☐ 31-40 ዓመት ☐ 41-50 ዓመት ☐ ከ 50 ዓመት በላይ ☐
3. የትምህርት ደረጃ፡ ከሁለተኛ ደረጃ ትምህርት ያነሰ ☐ ዲፕሎማ☐ 1ኛ ዲግሪ ☐ 2ኛ እና ከዚያ በላይ ☐ ☐ ሌሎች ካሉ እባክዎ ይግለጹ_____
4. የጋብቻ ሁኔታ፡ ያላገባ/ች ☐ ያገባ/ች ☐ የሞተበት/ባት ☐ የተፋታ/ች ☐

ክፍል ፪: የአገልግሎት ጥራት ልኬቶች

የእርሶዎን አስተያየት በእውነት በሚያንፀባርቅ ሳጥን ውስጥ "√" ምልክት በማድረግ እባክዎን በእያንዳንዱ መግለጫዎች ምን ያህል እንደሚስማሙ ወይም እንደማይስማሙ ያመልክቱ፡፡ ልኬቱ የሚያመለክተው 1 = በጣም አልስማማም (በአል) ፣ 2 = አልስማማም (በአል) ፣ 3 = ገለልተኛ (ገ) ፣ 4 = እስማማለዉ (እስ) እና 5 = በጣም እስማማለሁ (በእስ)፡፡

ተ.ቁ	መግለጫዎች	በአል	በአል	ገ	እስ	በእስ
	ቁሳዊ እና አካል ያላቸውን ጉዳዮች (Tangibles)	**1**	**2**	**3**	**4**	**5**
1.	ሆስፒታሉ ዘመናዊ የሚመስሉ መሳሪያዎች አሉት ፡፡					
2.	የሆስፒታሉ አካላዊ መገልገያዎች በዓይን ማራኪ ናቸው ፡፡					
3.	የሆስፒታሉ ሠራተኞች ሙያዊ ገጽታ አላቸው ፡፡					
4.	ሆስፒታሉ ከአገልግሎቱ ጋር ተያያዥነት ያላቸው ለዓይን የሚማርኩ ቁሳቁሶች አሉት፡፡					

	አስተማማኝነት (Reliability)					
5.	ሆስፒታሉ ቃል በገባው መሠረት አገልግሎት ይሰጣል፡፡					
6.	የሆስፒታሉ ሰራተኞች የታካሚዎችን ችግር ለመፍታት ልባዊ ፍላጎት ያሳያሉ፡፡					
7.	ሆስፒታሉ አገልግሎቱን ለመጀመሪያ ጊዜ ያከናውናል፡፡					
8.	ሆስፒታሉ ቃል በገባበት ወቅት አገልግሎቱን ያከናውናል፡፡					
9.	ሆስፒታሉ ከስህተት ነፃ የሆኑ መዛግብትን ይጠብቃል፡፡					
	ፈቃደኝነት እና ምላሽ ሰጪነት (Responsiveness)					
10.	የሆስፒታሉ ሠራተኞች አገልግሎቶች ሲጠናቀቁ ያሳውቁኛል፡፡					
11.	የሆስፒታሉ ሠራተኞች ለታካሚዎቻቸው ፈጣን አገልግሎት ይሰጣሉ፡፡					
12.	የሆስፒታሉ ሠራተኞች ሁልጊዜ ታካሚዎቻቸውን ለመርዳት ፈቃደኞች ናቸው ፡፡					
13.	የሆስፒታሉ ሠራተኞች ለታካሚዎች ጥያቄ ምላሽ ለመስጠት በጭራሽ ሥራ አይጠመዱም፡፡					
	ማረጋገጫ መስጠት (Assurance)					
14.	ሆስፒታሉ የህክምና ችግሮችዎን ለማስተናገድ የሚችል ነው ፡፡					
15.	የተሻለ ህክምናን በተመለከተ የጤና ሰራተኛ ሊያረጋግጥልዎት ይችላል፡፡					
16.	የጤና ሰራተኛ በጥሩ ሁኔታ እና ለታካሚዎች ጨዋ ነው፡፡					
17.	ለጥያቄዎ መልስ ለመስጠት የጤና ሰራተኛ ዕውቀት ነው፡፡					
	ርህራሄ (Emphaty)					
18.	ሆስፒታሉ ለታካሚው ግለሰብ ትኩረት ይሰጣል፡፡					
19.	ሆስፒታሉ ምቹ የምክር ሰዓት አለው፡፡					
20.	የጤና ሰራተኛ በእንክብካቤ ፋሽን ከህመምተኞች ጋር ይሠራል፡፡					
21.	ሆስፒታሉ የታካሚዎችን ፍላጎቶች ከልብ ይመለከታል፡፡					
22.	የሆስፒታሉ ሰራተኞች የታካሚዎችን ልዩ ፍላጎቶች ይገነዘባሉ፡፡					

ክፍል ፬-የታካሚ እርካታ

ተ.ቁ	መግለጫዎች	በአል	በአል	ገ	እስ	በእስ
		1	2	3	4	5
23.	በሆስፒታሉ ህክምና ረክቻለሁ፡፡					
24.	በሆስፒታሉ ሠራተኞች / ሠራተኛ አገልግሎት ረክቻለሁ፡፡					
25.	በሆስፒታሉ መገልገያዎች ረክቻለሁ፡፡					

ክፍል ፭: የታካሚ ታማኝነት

ተ.ቁ	መግለጫዎች	በአል	በአል	ገ	እስ	በእስ
		1	2	3	4	5
26.	ለዘመዶቼ ስለ ሆስፒታሉ ህክምና አዎንታዊ ነገሮችን እላለሁ፡፡					
27.	ለዘመዶቼ የሆስፒታሉን ሕክምና ለመምከር ፈቃደኛ ነኝ፡፡					
28.	ለወደፊቱ የሆስፒታሉን አገልግሎት መጠቀሜን እቀጥላለሁ፡፡					
29.	በዚህ ሆስፒታል ተጨማሪ ሕክምና ለማድረግ ፈቃደኛ፡፡					
30.	ወጪው ከፍ ያለ ቢሆንም የሆስፒታሉን አገልግሎት እቀጥላለሁ፡፡					

የዳሰሳ ጥናቴን ለማጠናቀቅ ጊዜ ስለወሰዱ በጣም አመሰግናለሁ !!

ደህንነትዎን ይጠብቁ እና COVID-19 ይቆጣጠሩ

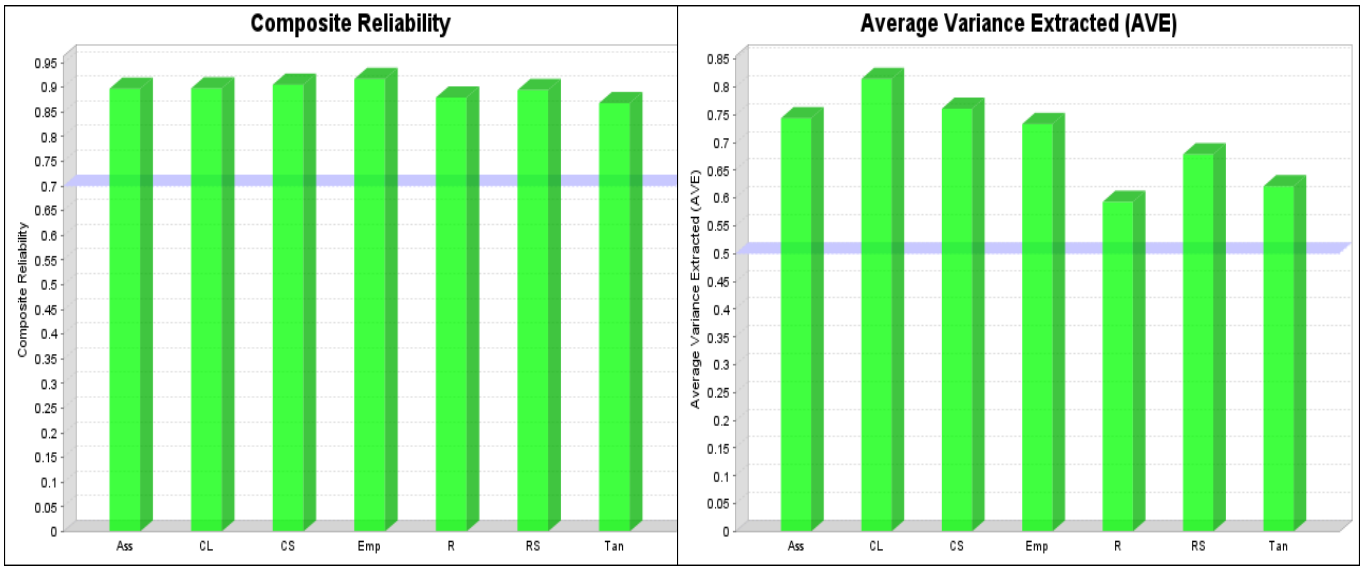
ANNEX

Annex 1: Composite Reliability and AVE

	Composite Reliability	Average Variance Extracted (AVE)
Tangibility	0.868	0.621
Reliability	0.879	0.593
Responsiveness	0.894	0.679
Assurance	0.897	0.744
Empathy	0.917	0.733
Patient Loyalty	0.898	0.814
Patient Satisfaction	0.905	0.761

Source: Own Survey Result of SmartPLS data output, 2021

Annex 2: Composite Reliability and Average Variance Extracted (AVE)



Source: Own Survey Result of SmartPLS data output, 2021

Annex 3: Factor Structure Matrix of Loadings and Cross-loadings

	Tan	Rel.	Res.	Ass.	Emp.	Pat Sat.	Pat Loy.
T1	0.795	0.558	0.609	0.532	0.591	0.626	0.551
T2	0.764	0.603	0.531	0.544	0.565	0.545	0.517
T3	0.800	0.542	0.541	0.471	0.556	0.535	0.503
T4	0.793	0.616	0.526	0.451	0.504	0.480	0.487

R1	0.672	0.750	0.505	0.504	0.487	0.454	0.525
R2	0.585	0.818	0.556	0.514	0.553	0.521	0.527
R3	0.567	0.797	0.533	0.527	0.582	0.554	0.617
R4	0.568	0.770	0.542	0.619	0.690	0.588	0.635
R5	0.450	0.711	0.595	0.537	0.509	0.560	0.413
RS1	0.612	0.659	0.839	0.699	0.706	0.775	0.633
RS2	0.513	0.490	0.784	0.529	0.533	0.591	0.461
RS3	0.540	0.574	0.819	0.602	0.701	0.595	0.557
RS4	0.644	0.603	0.852	0.747	0.700	0.641	0.653
ASS1	0.533	0.608	0.673	0.873	0.694	0.644	0.623
ASS2	0.540	0.589	0.714	0.892	0.654	0.683	0.560
ASS3	0.586	0.639	0.652	0.821	0.582	0.558	0.553
EM1	0.610	0.677	0.658	0.713	0.835	0.691	0.631
EM2	0.553	0.558	0.628	0.543	0.828	0.515	0.596
EM3	0.582	0.591	0.677	0.569	0.879	0.604	0.675
EM4	0.662	0.683	0.779	0.708	0.882	0.686	0.753
PST1	0.665	0.638	0.707	0.640	0.645	0.884	0.604
PST2	0.630	0.664	0.732	0.688	0.670	0.899	0.614
PST3	0.531	0.525	0.648	0.583	0.613	0.831	0.581
PLY1	0.630	0.651	0.667	0.606	0.757	0.685	0.926
PLY2	0.546	0.629	0.601	0.607	0.640	0.542	0.879

Source: Own Survey Result of SmartPLS data output, 2021

Annex 4: Discriminant Validity of Latent Variables

	Tang.	**Rel.**	**Resp.**	**Ass.**	**Emp.**	**Pat sat.**	**Pat Loy.**
Tang.	0.788	0.733	0.704	0.638	0.707	0.7	0.655
Rel.		0.77	0.712	0.706	0.739	0.701	0.709
Resp.			0.77	0.788	0.805	0.799	0.705
Ass.				0.862	0.748	0.731	0.67
Emp.					0.856	0.738	0.78
Pat Sat.						0.872	0.687
Pat Loy.							0.902

Source: Own Survey Result of SmartPLS data output, 2021

Annex 5: Regression result of Independent variables on patient satisfaction

Model Summaryc

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.227[a]	.052	.035	1.092	.052	3.128	4	230	.016	
2	.839[b]	.703	.691	.618	.652	98.776	5	225	.000	1.637

a. Predictors: (Constant), Marital Status , Level of Education , Age , Gender

b. Predictors: (Constant), Marital Status , Level of Education , Age , Gender, Tangibility, Assurance, Reliability, Responsiveness, Empathy

c. Dependent Variable: Patient Satisfaction

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	4.270	.431		9.909	.000	3.421	5.120
	Gender	.223	.155	.094	1.441	.151	-.082	.529
	Age	-.197	.097	-.133	-2.039	.043	-.387	-.007
	Level of Education	-.144	.077	-.121	-1.874	.062	-.295	.007
	Marital Status	.039	.095	.027	.412	.680	-.148	.227
2	(Constant)	-.650	.343		-1.894	.060	-1.326	.026
	Gender	.085	.089	.036	.959	.339	-.090	.261
	Age	.020	.056	.013	.349	.727	-.091	.130
	Level of Education	.074	.045	.062	1.654	.099	-.014	.162
	Marital Status	.050	.055	.034	.919	.359	-.058	.158
	Tangibility	.176	.065	.165	2.717	.007	.048	.303
	Reliability	.092	.080	.074	1.150	.251	-.066	.249
	Responsiveness	.385	.074	.364	5.189	.000	.239	.532
	Assurance	.262	.079	.208	3.298	.001	.105	.418
	Empathy	.167	.084	.140	1.992	.048	.002	.333

a. Dependent Variable: Patient Satisfaction