

**THE IMPACT OF DOCTOR-PATIENT INTERACTION ON PATIENT
LOYALTY IN EYE HEALTHCARE DELIVERY AT THE KOMFO ANOKYE
TEACHING HOSPITAL. THE MEDIATING ROLE OF SERVICE QUALITY.**

By

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DECLARATION

I hereby declare that this thesis is my own work towards the award of Master of Business Administration in Strategic Management and Consulting, and that to the best of my knowledge, it contains no material previously published by another person or material which has been accepted for the award of any other degree in any university except where due acknowledgement has been made in the text.

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DEDICATION

This thesis is dedicated to my family and all my friends who have believed in my dreams and supported me in diverse ways.

“...but He knows where I am going. And when He tests me, I will come out as pure as gold”

Bible Verse



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May God Richly Bless you all!!



ABSTRACT

Since the introduction of the National Health Insurance Act, Act 650 (2003), the financial barrier which prevented many from accessing certain healthcare institutions was removed, enabling patients to now have a wider range of accessible healthcare facilities to choose from. This has resulted in competition, with some healthcare institutions, whose only advantage was affordability, now losing patients, and therefore revenue. Many healthcare institutions are now having to find other ways of maintaining and building the loyalty of their patients. This study seeks to investigate the effect of doctor-patient interaction on patient loyalty in the KATH Eye Center, and the mediating role of service quality in this relationship. 450 patients at the KATH Eye Centre were sampled using accidental sampling method, out of which 419 responses were received, representing a 93.1% response rate. Data was gathered via questionnaires and analyzed with the Statistical Package for Social Sciences (SPSS) and Microsoft Excel v.2013. Reliability testing using Cronbach Alpha was done on the data, after which descriptive and inferential statistical tools were employed to help describe an accurate profile of persons and situations and to help determine the associations existing amongst the variables under study. Hierarchical regression analysis was also done to establish mediation. The findings of this study show that there is a statistically significant and positive relationship between doctor-patient interaction and patient loyalty. It also reveals that service quality has a partial mediation effect on this relationship. It further shows that doctor-patient interaction shares a significant and positive relationship with service quality, and that service quality also has a significant and positive relationship with patient loyalty. These findings imply that efforts being made to increase patient loyalty at the KATH Eye Centre must be aimed towards improving the doctor-patient interaction and service quality at the KATH Eye Centre.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Health is one of the most important aspects of human life. The World Health Organization (WHO) defines health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (WHO, 1948). In today's world, where people are always on the move and have a lot to do, poor health is one of the few things that can actually slow a person down. Illness and disease can prevent a person from performing daily activities that they would otherwise have had no problem doing. Healthcare is defined as the maintaining and restoration of health by the treatment and prevention of disease especially by trained and licensed professionals (as in medicine, dentistry, clinical psychology, and public health). (Merriam-Webster Online Dictionary, 2016). Healthcare therefore is an important service since it is primarily concerned with the provision of services geared towards improving the health of people.

Eye healthcare is of particular importance in the provision of healthcare because poor management of eye conditions could ultimately result in blindness. Also, of the estimated 285 million people who are visually impaired worldwide, 80% are attributed to preventable causes such as cataracts and uncorrected refractive errors (Global data on visual impairments, 2010). This means that with proper eye health services, the disease burden could be reduced drastically. Also, an estimated 90% of visually impaired people live in developing countries (Global data on visual impairments, 2010). The effects of low vision and blindness are dire, and are seen in the lives of individuals,

families, and communities as a whole. The effects of eye diseases range from a reduction in the quality of life and increase in mortality to large-scale economic consequences. People affected with blindness may also suffer from social stigma and alienation from their community. The social and economic effects are staggering, since in most cases not only is the blind individual not working, but he or she also requires the assistance of a second individual to help in mobility and other activities of daily living. This therefore multiplies the effects of the condition by a factor of two. Recognizing the importance of eye healthcare, the Government of Ghana as well as private practitioners have undertaken efforts to ensure that eye healthcare facilities are incorporated into the national healthcare system. At the regional and district levels, these facilities exist to respond to eye healthcare needs of citizens.

In 2003, the National Health Insurance Act, Act 650 (2003) was passed, thereby reforming the financing of healthcare in Ghana from the cash and carry system to one paid for by insurance schemes. This removed the financial barrier which prevented many from accessing healthcare services, and therefore resulted in an immediate change in the healthcare seeking behavior of people. The change resulted in a dramatic increase in the number of individuals who were beginning to seek health services. Some healthcare facilities which were previously the reserve of a very few and the elite in society, had now become accessible to all who had health insurance (Blanchet et al., 2012). This has provided a more even playing field between government and private healthcare facilities to compete for and maintain existing clients.

A key factor for retaining customers is to satisfy their needs. Given these new developments, the ability to attract new customers and retain existing customers by

keeping them satisfied is important if a health facility is to continue to stay in business and be successful. Patients must be kept satisfied. Hekkert et al. (2009) state that service quality is the key to measuring user satisfaction. Some factors that contribute to patient satisfaction concerning health service include the quality of the service, how well the service meets their needs, how efficient and reliable the service provider is in fulfilling customer orders, and the professionalism, expertise and friendliness of staff (Anbori et al, 2010). Other service quality indicators that affect the satisfaction of patients concerning healthcare delivery include waiting time, behavior and availability of doctors, behavior of supporting staff, and a clean environment. Cronin and Taylor (1992) conclude that service quality and customer satisfaction —share a close relationship. The provision of a high quality of service should become a priority for every health service provider since sales and profitability of the business will be dependent on the ability to retain customers and to keep them happy.

Being one of the key players in the provision of healthcare, the doctor is very influential in inspiring patient loyalty. A good doctor-patient relationship is a major predictor of patient loyalty (Platonova *et al.*, 2008) and is therefore important for healthcare providers if they are to survive in a competitive environment. Cheng et al (2003) suggest that a hospital's technical competence, and the interpersonal skills of physicians appeared to be good predictors for patient satisfaction and the likeliness of patients to recommend a hospital.

1.2 Statement of the Problem

Many people have expressed concern about the general lack of high service quality in Ghana, and especially in the government-run institutions. The Health Service sector is no different. Although private clinics do appear to provide better quality of service,

government institutions are still responsible for the majority of health care provision services in Ghana. Many patients seeking healthcare are unhappy with services provided at hospitals and complain of long waiting times, inability to see a qualified health professional, poor interaction with doctors and nurses, among others. All these result in patient dissatisfaction and make it difficult for the patient to be loyal to any one particular hospital.

There is generally a strong perception that many health workers, like doctors and nurses, especially those in government hospitals, often exhibit negative attitudes and behaviors towards their patients. Many are seen as disrespectful, unresponsive, and not empathetic towards the plight of their patients. The lack of numerous viable options is usually the main reason most patients would keep patronizing these hospitals. According to the Ghana Health Service (2009), it is estimated that 65% to 95% of unhappy but non-complaining customers will never patronize the services of health institutions which provide poor service quality.

Essentially, the core reason for patronizing a health facility is to have a medical problem resolved. At the core of this process is the medical doctor. This implies that the ability of the doctor to accurately diagnose and effectively treat a patient's ailment, and to provide a good doctor-patient interaction plays a role in the quality of the service rendered (Marcinowicz *et al.*, 2009).

The problem addressed by this study is that due to the introduction of the National Health Insurance Act, Act 650 (2003), the financial barrier which prevented many from accessing certain healthcare institutions has been removed, thereby enabling patients to now have a wider range of accessible healthcare facilities to choose from. This has resulted in competition, with some healthcare institutions, whose only advantage was

affordability, now losing patients, and therefore revenue. Many healthcare institutions are now having to find other ways of maintaining and building the loyalty of their patients. This study seeks to find out the extent to which the interaction that a patient has with the attending doctor influences the patient's loyalty, and the mediating role service quality plays.

1.3 Objectives of the Study General

objective:

To assess the role of service quality in doctor-patient interaction and loyalty of patients in the KATH Eye Clinic.

Specific objectives:

- To determine the effect of doctor-patient interaction on patient loyalty in KATH Eye Clinic
- To determine the effect of doctor-patient interaction on service quality in KATH Eye Clinic
- To determine the effect of service quality on patient loyalty in KATH Eye Clinic
- To determine the mediating effect of service quality on the relationship between doctor-patient interaction and patient loyalty in KATH Eye Clinic

1.4 Research Questions

In an attempt to achieve the objectives of the study, the following questions were posed;

- i. What is the effect of doctor-patient interaction on patient loyalty in KATH Eye Clinic?
- ii. What is the effect of doctor-patient interaction on service quality in KATH Eye Clinic?

- iii. What is the effect of service quality on patient loyalty in KATH Eye Clinic?
- iv. What is the mediating effect of service quality on the relationship between doctor-patient interaction and patient loyalty in KATH Eye Clinic?

1.5 Scope of the Study

The study was conducted at the Komfo Anokye Teaching Hospital Eye Clinic, which is located in Kumasi, the capital of the Ashanti Region of Ghana. The clinic was selected because it is one of the two major Eye Clinics in the country, and also because of its geographically central location in Ghana. As a major referral site, it provides a large population for sampling, and its central location provides a broad range of correspondents from various backgrounds, which all helps increase the validity of the findings. Patients who presented to the Eye Clinic for treatment during the period of the study and were willing to participate in the study were sampled.

1.6 Significance of the Study

This study is important because, it will add on to the existing body of knowledge concerning the effect doctor-patient interaction has on patient loyalty in eye healthcare delivery. It will also determine the effect of service quality on the doctorpatient interaction and patient loyalty relationship. It will clarify the extent to which patient loyalty in KATH Eye Center is attributable to good doctor-patient interaction. It will make recommendations on how to improve doctor-patient interaction and service quality in the KATH Eye Centre to improve patient loyalty. This will benefit the KATH Eye Centre by increasing the patronage by existing patients, and bring in new patients as well, thereby increasing revenue. Patients will also benefit since patient satisfaction will be increased through improvements that will be made in the doctor-patient interaction and service quality from recommendations based on this study. It will also

provide information that will help inform training policy for doctors. Finally, this document will also be a source document that will serve as a guide for other related health institutions on how to improve their doctor-patient interaction and service quality, and therefore increase their patient loyalty levels and revenue.

1.7 Brief Description of Research Methodology

The research design employed was of the descriptive and explanatory (causal) type. A sample size of 450 was selected using accidental sampling method. Questionnaires were the primary tool used for data collection. An initial pilot test was done and necessary changes made to the questionnaires, after which the questionnaires were administered. Data gathered was analyzed with the Statistical Package for Social Sciences (SPSS) and Microsoft Excel. Reliability and validity tests were done on the data, after which descriptive and inferential statistical tools were employed to help describe an accurate profile of persons and situations and to help determine the associations existing amongst the variables under study. Hierarchical regression analysis was also done.

1.8 Limitations of the Study

This study relied on questionnaires for the collection of data and would therefore be limited to the extent to which respondents were willing and able to provide valid responses to the questions.

Also, the findings of this study cannot be generalized to the entire population since the convenience sampling method was used.

1.9 Organization of the Study

The study looks at the effect of doctor-patient interaction on patient loyalty, and the mediating role of service quality. It discusses the importance of good doctor-patient interaction, and factors that constitute quality service, and how to improve on it to

increase patient loyalty. The study is organized into five chapters. Chapter one gives an overview of the entire study. It discusses the background to the study and states the problem. It also outlines the objectives of the study and the research questions answered in the study. It concludes with the organization of the study and its limitations. Chapter two presents a review of some of the relevant literature available on the key concepts being discussed in this study. It lays the foundation of the theoretical issues being discussed and develops the theoretical framework. Chapter three details the methodology employed in this study. It covers the research design, research population and sample size, sampling methods, sources of data, data collection instruments, data presentation, and data analysis methods. Chapter four deals with the presentation and analysis of the data. Chapter five concludes the study by presenting the significant findings, and drawing conclusions and making recommendations for implementation.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews relevant related literature on the effect of doctor-patient interaction on patient loyalty and the mediating role of service quality. With this in mind, a broad discussion as well as a review of the theories involved is provided. Empirical evidence from previous research has also been discussed in line with the objectives of the study.

2.2 Doctor-Patient Interaction

According to Arora (2003), sound doctor-patient interaction is a critical clinical task, and the subsequent interaction is the core and art of medicine and a vital element in the provision of health care.

The sole aim of the doctor-patient interaction is to accomplish three major objectives including the under listed;

1. A good interpersonal relationship (doctor is polite, friendly, shows concern etc.)
2. Facilitating exchange of information (explaining of symptoms, being patient and listening to patients, being knowledgeable and competent)
3. Including patients in decision making (patient being allowed to take part in decisions) (Aziz et al., 2015).

Sound doctor-patient interaction is usually a reflection of the doctors' "bedside manner," which most patients normally consider as a sign of the doctor's general level of competence and professionalism in the delivery of effective health service. (Hall et al., 1981).

With a decent doctor-patient interaction, various improvements within the health care system are achievable including the effective regulation of the emotions of patients, enhancing the understanding of medical information by patients, and aiding doctors to accurately identify patients' problems, expectations as well as perceptions. Patients who enjoy good interaction with their doctor are usually pleased with the services they receive and are therefore more willing and likely to offer critical information to aid in the accurate diagnosis of ailments, adhering to doctors' advice as well as following all treatments prescribed.

2.2.1 Doctor-Patient Relationship

The relationship between doctors and patients within health economics is usually considered as an agency one. Arrow (1963) noted that, within the context of health economics, the principal-agent model stresses the information asymmetry between the

physician and the patient. The model indicates that in order to maximize the patients' utility, the doctor must act like an agent. It also states that the patient has less knowledge about his/her health status and the necessary treatments available, unlike the doctor who holds more information about the patients' health conditions. On the contrary, the patient has more in depth knowledge about how the various treatments suit his/her lifestyle, and has unique perceptions concerning the illness and associated medication. This superior knowledge of the patient concerning his/her health preferences are communicated to the doctor who then plays the agent role for the patient.

According to Arrow (1963), in the typical agency model, which is an ideal case of the principal-agent theory, the doctor utilizes the patient's utility as if it were his own. Due to the conceptual simplicity and the lack of generally acceptable alternative, the agency model has been widely used within the context of health economics.

2.2.2 Medical Sociology Theory

According to the medical sociology theory, three major theoretical models emerged to offer explanation to the relationship that exist between the doctor and the patient in the area of decision-making. Charles *et al.* (1999) identified the paternalism, shared decision-making and informed decision-making theoretical models.

A. Paternalism

In the doctor-patient relationship analysis, paternalism is normally considered the traditional model in which the doctor (usually the expert in such a relationship) examines the patient in order to diagnose sicknesses, and then makes decisions unilaterally on the necessary treatments. The role of the patient in this model in terms of decision-making is less active, and thus the patient only plays a passive role in the relationship. Coulter (2002) shuns the word

‘paternalistic’ but instead refers to the model as the ‘professional choice’, arguing that it may be suitable under certain conditions for the doctor to make decisions alone without the patient playing any active role. As a result of the less active role of the patient in the paternalism model, it is usually considered as the perfect agency model in the field of health economics.

B. Shared decision-making theory

Charles et al (1997) developed the shared decision-making theory, arguing that for effective interaction between the doctor and the patient, four shared decision-making features must exist. These include;

- ✓ Both the doctor and the patient must be involved in decision-making up to a certain acceptable level when taking decisions regarding treatments.
- ✓ The two parties involved in the relationship must be willing to share information.
- ✓ Both the doctor and the patient should make conscious effort to take part in the decision-making by articulating treatment preferences.
- ✓ Both parties should agree to the treatment decision once it has been made and adopted.

As can be seen, both the doctor and patients play active roles in the decisionmaking process in this framework. However, empirical evidence supporting the practical operations of the model has not yet been obtained. For instance, in a study using 62 consultations in Britain, together with interviews with patients and physicians, Stevenson et al. (2004) found little evidence in support of the operation of the model in which both patients and doctors were actively involved in the decision-making process as required by the model. It

was also concluded from the same study that even the basic factors necessary for shared decision-making to take place were missing in the consultations and interviews considered in the study.

C. Informed decision-making theory

Since both the shared decision-making and the informed decision-making models show reaction to the paternalism model, they are normally presented (Stevenson *et al.*, 2004). However, it has been argued that the shared and informed decision-making models, which are mainly concerned with the exchange of information, have some dissimilarities in terms of the information content (Charles *et al.*, 1999). They noted that the exchange of information between the doctor and the patient in the shared decision-making model flows in two directions, mainly on the medical level, whereas the flow of information between the two parties focuses on information on the personal level in the informed decision-making model, such as preferences and experiences. Also, the decision-making is one-sided in the informed decisionmaking model. In this model, the doctor, who is the expert in the field, provides all the necessary information relating to the health status of the patient without any inputs from the patient. More so, at the end, the patient makes his/her decision based on the expert information from the doctor. This contrasts the shared decision-making model, in which decisions are arrived at on the basis of consensus between both the doctor and the patient involved.

2.2.3 Measuring Doctor-Patient Interaction

The delivery of efficient health care services is a product of the sound interaction between the doctor and patient. However, due to the difficulty in identifying and

measuring the interaction between doctors and patients, the issue of doctor-patient interaction presents serious challenges to researchers. In order to properly identify and measure the level of interaction between doctors and patients, the varying features that result from the interaction between the two parties involved in the relationship need to be considered.

According to Arora (2003), the three major characteristics that need to be observed in the interaction between doctors and patients includes the extent to which patients are involved in decision-making, how well the doctor enhances the exchange of information, and good interpersonal relationship between the two parties involved in the decision-making process. In measuring interpersonal relationship, parameters such as how polite a doctor is, how friendly and welcoming he is, as well as how much concern he shows are considered. In measuring facilitation of exchange of information, parameters such as how patient the doctor is, how well he listens to patient complaints and explains patient symptoms, as well as how much time was spent in consultation is considered. In measuring patient participation in decisionmaking, factors such as how much patient involvement the doctor permitted, as well as how confident the patient feels about the interaction is considered.

Also, Hall et al. (1981) established that the doctors' —bedsidel manners towards the patient on admission is a true reflection of the level of effectiveness in the doctorpatient interaction.

2.2.4 The Role of Doctor-Patient Interaction on Patient Loyalty

In this modern day business environment, the contribution of efficient interaction to institutional success cannot be over emphasised. Effective and efficient interaction among all parties of an organization is required for the effective sharing and

dissemination of organizational policies and procedures necessary for sustained goal and objective accomplishment. Interaction is often considered an integral component of managerial responsibility normally required for the manipulation and breaking down of policies to aid the understanding between one person and other(s) for successful implementation. According to Itodo (2007), effective interaction in an organization aids in the provision of unity of direction, operational guidelines, a sense of common expectations, attitude and feelings to all employees which are crucial ingredients for maintaining collective efforts and achievement of shared goals and objectives.

In the area of medical practice within the health care delivery system, the relationship between patients and doctors remains the cornerstone for efficient health service delivery. Notwithstanding the critical role of the interaction between the two parties, it remains one of the most complicated relationships within the health care subsector which extends beyond clinical practices and consultations but to certain elements outside of the encounter.

To one side of this interaction is the doctor, who acts as the expert with the necessary experience for diagnosing, referring and prescribing, and whose actions do not only determine health outcomes, but also to a larger extent determine the cost involved in the process. The patient in the doctor-patient relationship also stands at the opposite side of the relationship, and has the responsibility to make decisions on his/her health issues based on the expert advice of the doctor. In many instances, the patient selects from a number of health experts, gathers information from other sources other than the doctor, and eventually decides based on the information obtained whether or not to obey or adhere to the doctor's medical recommendations. In the final analysis, it is not only

the patient's health status which is affected by these decisions, but also health care costs and utilization are equally affected (Itodo, 2007).

2.3 Service Quality

According to both Yang (2010) and Hsieh (2010), within the areas of commercial and academic fields, there has been comprehensive and wide discussions as well as emphasis on the subject of service quality for the purposes of efficient business management and academic excellence. Conferring from Zeithaml (1988) and Bitner and Hubbert (1994), service quality can be described as the customer's total perception or assessment regarding the relative superiority or inferiority of the services of an organization. Also, from Parasuraman et al. (1985), service quality is the outcome of the customer's comparison of their perception of the actual service rendered against their expectation.

Before the consumption or utilization of a particular service, customers often form an expectation. During the service delivery process, customers establish their perceptions, and at the end of the service encounter, they draw comparison between their prior expectations and the service experience that they eventually received and make their conclusions of the service quality based on that.

As noted by Tan et al. (2010), the satisfaction of customer's specific expectations and requirements specifically reflects the level of service quality delivered by an organization. Based on the various views discussed above, how well the service performance meets customer's expectations is a true reflection of the level of service quality.

According to Woodside et al. (1989), service quality in the health care delivery system is often seen as the differences that exist between patient's perceptions and

expectations. Expectations in the medical services sector involve what the patient considers necessary to be offered, whereas perceptions can be seen as the assessment by the patient concerning the key medical service qualities relative to expectations. In practical terms, the level of a health facility service quality is determined by the balance of perceptions and expectations of patients.

More so, Taylor (1994) suggest that when patients are pleased with the level of service quality delivered, it forms the basis for further assessment of the service quality of the health facility by considering the service outcome, process of the service as well as the physical surroundings of the hospital.

Also, Dagger et al (2007), concludes that the health care subsector of the public services system is highly dynamic and fast growing, as well as witnessing intense and growing competition and significant changes. Matters are even more common and complex and also almost unavoidable for the private health facilities in today's open market system (Arasli *et al.* 2008). The current complexities and extensive competition associated with the open market system for the private health facilities have resulted in serious management problems. To survive, health facilities need to establish long term value-laden relationships with patients in order to maintain patient loyalty which consequently leads to increased market share and competitive advantage (Deng et al 2010). Gleaning from Roshnee (2008), for the long term profitability and continuous survival of the organization, all efforts must be geared towards delighting patients so as to keep them loyal, since it is much more expensive to attract and retain new patients considering the extent of competition caused by the open market system in the health care subsector.

2.3.1 Measuring Service Quality

In recent times, quality has become a strategic weapon by which management can improve their ability to enhance organizational effectiveness and performance.

Attaining the appropriate quality standards has become the order of the day within both the services and goods subsectors. Despite the need to meet acceptable quality levels in the delivery of both goods and services, managers still have problems doing so. This is partly due to the inherent nature of quality, which makes it very difficult to identify and measure it in the same way that other items are measured, especially in the goods industry. Just like the other organizations involved in the rendering of services to meet appropriate quality standards, competition and complexities within the health care subsectors have also forced administrators to consider the issue of measuring service quality. Even though the aforementioned is very crucial for long term survival, the biggest problem remains the ability to adequately define and measure service quality.

Service Quality (SERVQUAL), has dominated the majority of studies in the areas of service quality and customer satisfaction. It indicates that service quality is basically the difference between what the customer expects relative to the service provider's general class and their appraisal of the actual service outcome. (Cronin and Taylor, 1992; Parasuraman et al., 1991).

The SERVQUAL model represents a new approach to predicting customer satisfaction with the quality of services rendered. This departs significantly from the traditional way which uses perception-based measure as a customer satisfaction predictor. Rather than relying on customer perception as the enduring means to predict customer satisfaction, the SERVQUAL approach suggests the application of

expectation/perception (the service quality gap) as the reliable predictor of customer satisfaction with the level of service quality delivered by the service provider (Babakus and Mangold, 1992; Parasuraman et al., 1991). It is further noted that the interaction that exists between customer satisfaction and service quality is reciprocal (Babakus and Mangold, 1992).

Within the services industry, the SERVQUAL approach is generally considered as the robust scale for measuring the level of service quality. However, the adoption of the SERVQUAL approach as the robust scale for service quality measurement within the health sector has received various criticisms because of the fact that it produces mixed results.

The Service Performance (SERVPERF) scale for example has been developed and is usually considered by many to be superior to the SERVQUAL scale as a means of measuring customer satisfaction with service quality levels. The SERVPERF scale represents marked improvement over the SERVQUAL scale. Not only does it reduce the various dimensions normally measured by almost half, but it has also been seen to be able to explain greater variance in the total service quality measured through the use of single-item scale. SERVPERF is the judgement and consequences of customers after matching their expectation with their perception of actual services rendered to them by an organization, and any notable short fall that exists is considered as a gap (Irfan, and Ijaz, 2011; Parasuraman, et al. 1985). Prior to the emergence of the SERVPERF scale, service parameters were measured using the scale of service quality.

Gefen (2002) described service performance as the difference that occurs when customers compare the quality of services they expect to be rendered and what the

service provider actually delivers. Cronin and Taylor (1992) examined the theoretical basis of the SERVQUAL scale and suggested that it is confusing with service satisfaction. It was therefore concluded by Cronin and Taylor (1992) that the expectation (E) component in the SERVQUAL approach be dropped, and performance (P) alone used instead. The above positions and changes to the components of the SERVQUAL approach culminated in the now generally considered approach known as the 'SERVPERF' scale. As a test of the SERVPERF scale, Oliveira-Brochado and Marques (2007) considered the outcome of five different dimensions of service quality in some selected high schools in the education sector and concluded that one of the best results obtained in terms of validity of criterion, convergent validity and explained variance came from the SERVPERF scale. In a similar way, Gaur and Agrawal (2006) noted that the SERVQUAL scale lacked the ability to be used as a universally accepted scale, and as a reliable valid measure of service quality. In an attempt to compare the relative strength of the two approaches in terms of the quality of outcomes produced, Nadiri and Hussain (2005) conducted a study and the outcome of their work indicated that the SERVPERF scale is a much better predictor of service quality as compared to the results obtained by the SERVQUAL model. Furthermore, within the context of the fast food industry, Jain and Gupta (2004) considered the results obtained by both the SERVQUAL and SERVPERF scales and discovered that the SERVPERF scale was more convergent and a more distinguished valid scale than the SERVQUAL scale in the measurement of service quality in fast food restaurants. Again, a number of researchers including Brady et al. (2002) and Dabholkar *et al.*, (2000) found that the SERVPERF scale completely outclassed that of the SERVQUAL. Considerable works have been carried out all in an attempt to compare both the SERVPERF and SERVQUAL scales in terms of effectiveness and analysis of the difference between the

customers' expectations and actual services rendered by the service provider and all the results once again lend full support to the SERVPERF scale (Babakus and Boller, 1992; Bolton and Drew, 1991; Gotlieb et al. 1994; Hartline and Ferrell, 1996).

Table 2.1: The Dimensions of Service Quality as Modified for the Health Sector

Variables	Measurement
Tangibility	Cleanliness Good diagnostic equipment Comfortable chairs Waiting space Well furnished Lighting
Reliability	Good services Qualified and experienced staff Qualified and experienced doctors Keeping promises Accurate billing Sympathy Organized records
Responsiveness	Quick response Respond to comments Organized time tables Quick services Enough staff Helping patients
Assurance	Confidence Staff patience Comfort and safety Experience handling
Empathy	Affection Individual care Equality Priority to patients
Costing	Cost versus quality Reasonable costs

Source: Adopted from Anbori et al. (2010).

2.4 Customer Loyalty

Zeithaml et al. (1996) define customer loyalty as the decision and intention of a customer to stick and stay with one organization for the provision of certain services or

goods. Customer loyalty is basically a reflection of the customer's desire and commitment to consume the goods and services of the chosen organization in a bid to aid its growth and continuous survival mostly through the use of word of mouth or open recommendation. According to Dick and Basu (1994), the failure to consider the behavioral intentions perspective of customer loyalty and rather merely focusing on the repeat purchases perspective of customer loyalty could result in confusion between spurious loyal customers, (those customers who are constrained by circumstances to remain loyal to an organization) and those customers who are actually genuine loyal customers.

Parasuraman, (1985) as well as Sharma and Patterson (1999) used two unique classes to categorize service quality. These are functional service quality and technical service quality. The functional service quality attempts to indicate or reflect the kind of relationship that exists between the service provider and the customer, as well as the manner in which the needed service is rendered. The technical service quality class intends to reflect the quality of the service output.

According to Campbell et al. (2001), the recognition of the importance of establishing enduring and long term doctor-patient relationship is being considered by health care facilities only in recent times which resulted in only a few empirical works in the field of patient loyalty to health organizations. However, both Bendapudi *et al.* (2006) and Corbin *et al.* (2001) have discovered in their respective studies that there is now an increasing recognition of the fact that in the current free market system, patient loyalty and retention is very crucial for the long term existence of health care institutions. As noted by Brown *et al.* (2005) and Evanschitzky & Wunderlich (2006), this recent recognition opened the door for further research findings on the cost to businesses in

relation to customer defections and the contribution of customer loyalty to organizational success.

As a result of the growing interest in loyalty in both the health and business institutions, both practitioners and academics have offered divergent views on the real definition of loyalty.

For the purposes of this research, a popular definition from the marketing literature was adapted, and this described *loyalty* as —a profoundly held commitment by a customer to rebuy or re-patronize a desired service unswervingly in the future, thereby leading to repetitive same-service provider purchasing, irrespective of conditional influences and marketing strategies having the power to cause the customer to switch behavior (Oliver, 1999).

This description of loyalty appropriately reflects the significance of both behavior (repeat purchasing of services) and attitude (commitment) which falls in line with Roberge et al. (2001) as well as with Folkman et al. (2002). Regularly, Roberge et al. defined the fundamental elements for loyalty in the health care situation by outlining patient loyalty as a —behavior, which is influenced by varied enhancing features comprising the commitment of the two parties involved that is the patient’s trust in the medical officer and the quality of the personal relationship (p. 57). On the basis of these theoretical perspectives in both the health and business institutions, a model showing the pattern of relationship between the patient and doctor was developed and tested in this study.

2.4.1 Patient Satisfaction as an Antecedent of Patient Loyalty

Satisfaction is the total psychological state of mind which is concerned with the expectation for passions and familiarity from shopping behavior (Oliver, 1997).

Customer satisfaction within the services industry is recognized as a unique kind of customer attitude. It involves an analysis of the extent to which a customer enjoys or dislikes a service after its purchase (Woodside et al., 1989). This can also be regarded as an accomplishment of consumptive outcome as experienced and defined by customers. More so, the tactical significance of customer satisfaction for institutions is even more emphasized in today's competitive business environment (Wang and Pho, 2009; Khattak, 2010).

Baier et al. (2008) considered the concept of customer satisfaction within the health care industry to be simply the judgment of observed value and consistent response regarding service related stimulus, before, during and after the consumption of medical services by the patient from the services provider. The extent to which the medical services rendered by the health facility to the patient meets his/her expectation is a reflection of the level of patient satisfaction. Furthermore, and more importantly, satisfaction of patients is seen as an appropriate measure for determining the levels of service quality in the medical services field.

According to Lee et al. (2000), medical service providers must as a matter of great importance consider measures to properly understand patient's expectations and do well to deliver that in order to satisfy the patient. Hekkert et al. (2009) also noted that when the health facility is able to please the patient, there is the potential that the hospital will not only succeed in retaining that particular patient, but will also stand the chance of benefitting from patient recommendations as well as getting the patient to strictly adhere to prescribed treatment plans. It could therefore be concluded without any fear that patient satisfaction with the medical service offered serves as a gateway to profitability and long term success within the health care environment. Also, Da Silva

and Alwi (2008) argued that patient loyalty has a huge positive impact on an organization's brand or image.

Universally, loyalty has been defined and described by various individuals in diverse ways, including positive word-of-mouth and the desire to repeat purchases among others. For instance Dick and Basu (1994) originally proposed that the model of loyalty can be intellectualized as a two-dimensional paradigm, including attitude and behaviour. Successively, Claessens et al. (2000) expounded that loyalty is nearer to a behavioural aim rather than an attitude. On the opposite side, Buttle and Burton (2002) reasoned that loyalty is perhaps better understood as attitude than behaviour. However, despite the divergent views as to whether loyalty should be theorized as attitude, behaviour or both, it is obvious that most research works have hypothesized loyalty as a behavioural intent or behavioural reaction (Vedula, 2004).

In the health services environment, many of the studies referred to repeat purchase intentions by customers as an indicator of patient loyalty (Boshoff and Gray, 2004; Baier et al., 2008). Based on this, patient loyalty may be more adequately seen as a behavioural intention.

Irrespective of whether the conversation concentrates on patient loyalty in the health care environment or customer loyalty in the general service setting, it holds true that similar benefits of customer loyalty accrue to a health facility in the same way as it does to the other business entities. In fact, loyalty has been demonstrated as the market place legal tender for the twenty-first century (Singh and Sirdeshmukh, 2000).

2.4.2 Customer Retention Theory

The customer retention theory, as noted by Lam and Shankar (2014), is a popular hypothesis that has been developed from the TQM measure, and proposes that the

decisive alleyway to keeping customers is by satisfying their needs. According to the theory, without appropriately identifying the expectations of customers and adequately satisfying them, they are likely to switch to competitors in order to have their needs satisfied.

From the above theory, various classes of customers can be identified on the basis of two distinct elements;

Some customers are usually classified as the “**Safe**” customers on the background that apart from them being satisfied, they do not also have the plans of switching service providers even if their level of satisfaction declines.

The other characteristic on which customers are classified according to the above theory is the level of risk associated with the particular customer (“**High risk**”). These kind of customers have the tendency to switch even if they are satisfied with the level of service quality rendered, and so it is usually more sensible for management to consider not wasting so much effort on such customers since they could still leave the provider even when they are satisfied.

Based on this, the theory suggests that efforts must be concentrated on those class of customers normally described as the “**unhappy but static**” customers. Lam and Shankar (2014) discovered that such calibre of customers exist in every business organization and are usually willing to stay and rely on the company for the satisfaction of their needs despite the fact that they are not really satisfied. Even though they are less likely to switch providers, management still needs to focus on them and continually work on solving their problems. This is because they could eventually try a new brand, which could potentially lead to a change of providers if they are satisfied with the new brand.

The “**Happy but mobile**” group of customers refers to those usually content with their current service providers but are usually in the habit of trying various brands and also being receptive to pressure from marketers. The strategic way forward in dealing with these customers is to adopt the strategy known as —watching the chickens in the henhouse. This involves watching them closely to pick up possible switching cues. In addition, management should design their pricing policies to make it more economically rewarding for such customers to have reason to stick around.

2.5 Empirical Review

2.5.1 Effect of Doctor-Patient Interaction on Patient Loyalty

Both Caruana & Fenech (2005) and Mariani & Zavarrone (2011) as well as Patterson (1996) pointed out that research works on the relationship between doctors and patients in certain fields within the health care system, especially the eye and dental clinics, are not common. However, works in other fields such as the relationship between health practitioners and patient satisfaction, service quality and others are wide spread (Olivera-Brochado, 2007; Ueltschy et al., 2007).

Despite the scanty works conducted in the area of the relationship between doctors and patients and the effect that such a relationship has on patient loyalty, the few studies that exist point out that age and occupation of the patient correlate strongly and are significantly related to patient loyalty. Thus, the older the patient is, the higher the possibility that he/she is going to be loyal to a particular health facility (Makarem and Coe, 2014).

Makarem et al. (2014) again observed that the nature of the relationship that exists between the health service provider and the patient has a significant effect on patient loyalty and retention. Holt and McHugh (1997) also discovered that the amount of

attention and care provided to the patient are equally significant factors that could retain patients in one health facility. Caruana & Fenech (2005) further emphasized that patient satisfaction is an important predictor of patient loyalty to a clinic.

It is generally noted that in the services sector, the level of trust and friendship with the service provider has a strong effect on the development of loyal attitudes by customers (McAlexander et al., 2003). It can therefore be concluded that repeat visits to a clinic by a patient could be a direct result of the friendly attitude that a doctor exhibits towards the patient. The amount of attention and care that health service providers offer patients leads to satisfaction and also to recommendations by patients to new potential patients (Prados-Torres *et al.*, 2012).

Crow et al. (2002) reviewed 139 studies and provided consistent confirmation that the level of doctor-patient relationship quality is one of the most significant elements generally affecting patient satisfaction with health care services and quality. In a study conducted using data from the English National Health Service in order to examine in detail the heart of consultation, Gilman et al. (2008) discovered that confidence and trust in the health physician were considered to be the two most significant elements in explaining the differences in the total level of patient satisfaction and loyalty, better than any other factors such as the experience level of the general practitioner, waiting time and others. In addition, Makarem and Coe (2014) found that various factors such as the availability of insurance, older age and proximity to the service centre are important contributors of patient loyalty.

On the contrary, Prados-Torres *et al.* (2012) discovered evidence that indicate that there are some patients that are not loyal and only consider cost as a basis for deciding on

which health facility to choose. Evidence has also been found that suggests that financial constraints remain a popular factor for non-retention (Gilman et al. 2008).

Based on the above review, the first hypothesis is developed as follows;

H1: Doctor-Patient interaction has a positive effect on patient loyalty

2.5.2 Effect of Doctor-Patient Interaction on Service Quality

There exists various studies conducted on the subjects of doctor-patient interaction on one hand, and health service quality on the other. However, the literature available has not been able to demonstrate any relationship between doctor-patient interaction and the service quality that the hospital is able to render to patients. Therefore, it is inferentially assumed that the nature of doctor-patient interaction results in the quality of health services that are being offered to patients.

According to Hall et al (1981) — Medicine is an art whose magic and creative ability have long been acknowledged to be inherent in the interpersonal characteristics of patient-doctor relationship.

Duffy et al. (2004) found that a doctor's communication and interpersonal skills include the capacity to obtain facts in order to expedite correct diagnosis, counsel accurately, give therapeutic advice, and create caring relationships with patients. In the field of medicine, the above are considered the most critical clinical skills, and aim at achieving the appropriate medical outcome and patient satisfaction, which are crucial for the enhancement of health care delivery.

The improvement of the patient's health status and medical care in general remains the overriding aim of doctor-patient interaction in any health care system.

Xu *et al.* (2010) and Aaltonen *et al.* (2010) suggested that one of the most important factors in today's business management is service quality, which has been hugely debated and discussed within both the commercial fields and academia. According to both Zeithaml (1988) and Bitner and Hubbert (1994), service quality is referred to as the consumer's complete perception or impression and assessment relating to the comparative superiority or inferiority of the services offered by the provider.

Parasuraman *et al.* (1985), went further to indicate that the association of consumer's expectations with their impressions of the actual service performance is the measurement of service quality. Woodside *et al.* (1989) had it that within the context of the health sector, service quality should be seen as the gap between the patient's expectations and perceptions. Expectations are usually regarded in the health system as what the patients consider appropriate to be offered in terms of medical services. In a similar manner, perceptions are normally seen as the assessment of patients concerning particular medical service qualities comparative to their expectations. In practice, the balance of perceptions and expectations of patients remains the back bone on which the service quality of a hospital rests.

Based on the inferences drawn from the above definitions of both doctor-patient interaction and service quality, the second hypothesis is described as below:

H2: *Doctor-Patient Interaction has a positive effect on Service Quality*

2.5.3 Effect of Service Quality on Patient Loyalty

In an analysis of previous research works, loyalty was found to be a result of customer satisfaction with the perceived service quality level (Oliver, 1997). 15 out of the 17 correlations studies in a meta-analysis showed that there is a positive significant correlation between satisfaction as an outcome of service quality and repeat purchase

(Szymanski and Henard, 2001). Also, Woodside et al. (1989) found that within the settings of the health care system, there is a positive relationship between loyalty due to service quality and patient satisfaction.

Baier et al. (2008) studied the association between patient satisfactions and intentions to re-visit a large-sized hospital, and established that the impact of patient satisfaction with the level of service quality on re-visit decision is significant.

Furthermore, it has been suggested that while perceived service quality is a perceptive construct, consumer satisfaction and loyalty are sentimental, and this proposes a causal relationship between these two constructs, in which service quality acts as the originator of consumer satisfaction and loyalty (Wilson et al., 2005). The influence of service quality opinions on consumer loyalty has been explored at length in literature. This not an exception in the healthcare industry, where observed evidence has also been established to back the perceived service quality—patient loyalty relationship (Scotti et al., 2007).

Wilson et al. (2005), Armah et al. (2010) and Zaim et al. (2010) all indicate that within the confines of the health service industry, patient satisfaction and service quality has received massive academic attention.

Bitner (1997) and Lee et al. (2000) pointed out that service quality is a predecessor of the wider concept of customer loyalty. Schipper (2008) in his work found that there is a linear relationship between service quality and loyalty, which suggests that improved levels of service quality has the potential of augmenting patient retention levels in the context of the health sector.

The influence of service quality on patient satisfaction with health services has been established in the work of Helena (2008). Alrubaiee et al., (2011) researched the quality

of Greek health systems by concentrating on patients' perceptions. A patient satisfaction model comprising of four indicators including reliability/assurance, tangibles, responsiveness and interpersonal interaction was used in the measurement of the performance of the hospitals. Also, Alrubaiee et al., (2011) emphasized the manner in which the population is prone to pay higher for care and attention from institutions with quality services with which they were pleased.

Hammer et al. (2009) argued that the correlation between loyalty and patient satisfaction is positive. Rust and Zahorik (1993) recognized components of service satisfaction that could meaningfully influence customer loyalty and market share; however, the concentration of their work was on maintaining the existing business versus new customer development. Patient loyalty was also found to be a multifaceted health care concept, being influenced by various variables (Naidu, 2009). Naidu (2009) further discovered that health care quality influences patient satisfaction which affects patient behaviors such as loyalty.

Eisingerich and Bell (2007) surveyed the influence of perceived service trust, loyalty and quality on repeat purchase decisions. Their results showed that perceptions that customers had concerning the service quality had an impact on their trust and loyalty. It further revealed that trust had a significant impact on customers' intention to repurchase.

Therefore, it is most likely that patients satisfied with the level of service quality will be more loyal to their hospital. The third hypothesis is described as follows;

H3: *Service quality has a positive effect on patient loyalty*

2.6 Concept of Mediation

Making predictions remains one of the main aims of social science research. However, this prediction only permits the determination of the nature of the association between the dependent and independent variables. Another important aim of social science research is also to obtain knowledge by explaining the association. A means of understanding the relationship between the variables and the mechanisms is equally very significant. In order to appreciate these relationships much better, researchers in the social sciences have recognized the existence of mediators, also referred to as intervening variables.

According to Sobel (1982), mediation is a hypothesized causal chain in which one variable affects a second variable that, in turn, affects a third variable. As can be seen in the figure below, the variable, **Z**, is the mediator in the relationship between the variables **X** and **Y**. It —mediates| the relationship between a predictor, **X**, and the outcome variable **Y**. Graphically, mediation can be depicted in the following way: **a**

b



Figure 2.1 Concept of Mediation

Source: Adopted from Sobel (1982)

The direct effects in the figure above are paths (a) and (b). The indirect effect is the path from X influencing Y through Z. The indirect effect represents the portion of the relationship between X and Y that is mediated by Z.

Based on the figure above, for mediation to occur, the direct relationship between the independent variable (X) and dependent variable (Y) should be insignificant. However, when the relationship between the independent and dependent variables with the introduction of the mediating variable (Z) is significant, mediation has occurred.

2.6.1 Testing for Mediation with Regression Analysis

Baron and Kenny (1986) proposed a four step approach in which several regression analyses are conducted and significance of the coefficients is examined at each step.

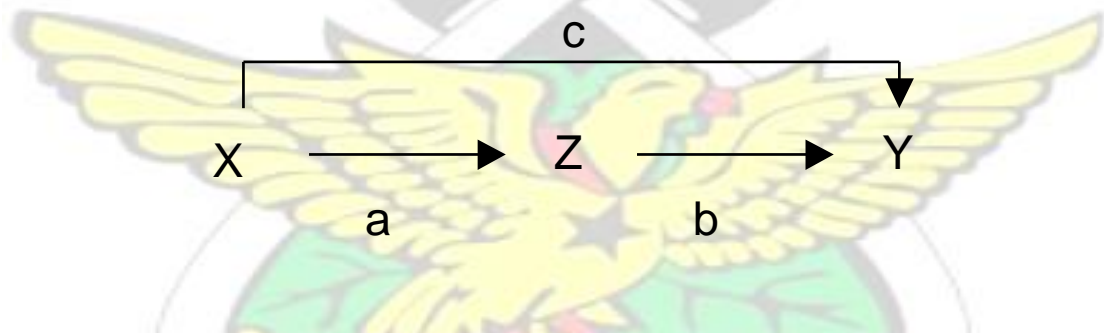


Figure 2.2 Testing for Mediation with Regression Analysis

Source: Baron and Kenny (1986)

Step 1. A regression analysis is conducted with X predicting Y (path c).

Step 2. A regression analysis is conducted with X predicting Z to test for path a.

Step 3. Conduct a regression analysis with Z predicting Y to test the significance of path b.

Finally in **step 4**, a regression analysis with X and Z predicting Y.

In the final step, mediation is supported if the partial direct effect for path **c** is nonsignificantly different from zero and path **b** is significantly greater than zero. If **c** is non-significantly different from zero, results are consistent with a full mediational model. If path **b** is significant after controlling for the direct effect of **X** (path **c**), but path **c** is still significant, the model is consistent with partial mediation.

2.6.2 Mediating Effect of Service Quality

Various previous studies have investigated the association between customer satisfaction and service quality. Most of their examinations proved that high level service quality has positive correlation with customer satisfaction in the general context of the service industry (Patterson et al., 1996; Cronin et al., 2000; Oyeniya and Joachim, 2008). The association between patient loyalty and service quality in the health care system has also been extensively discussed. However, literature is yet to establish any direct influence of service quality on the relationship between doctor-patient interaction and patient loyalty. Therefore, in this study, it has been inferentially assumed that service quality has some effect on the relationship between the two variables, and hence the fourth hypothesis is described as follows;

H4: *Service quality has a positive effect on the relationship between doctor-patient interaction and patient loyalty.*

2.7 Conceptual Framework

According to Ridd (2009), the concept of patient-doctor relationship is very relevant in the area of health care. However, research done in this important area has been fragmented over the years simply because the subject matter is somehow complicated and difficult to appreciate.

Therefore, in the absence of a good and universally accepted conceptual framework to guide research into the doctor-patient relationship, the researcher decided to undertake a synthesis of the qualitative literature on patient's views of the doctor-patient relationship.

Among the few frameworks developed in this area include that of Jayadevappa and Chhatre (2011); Patient-Centered Care-Conceptual model. This framework looked at the relationship among patient-centered care (treatment choice) as a focal point to that of provider characteristics (hospital and physician nurse), patient, cost, and outcomes (survival and satisfaction with health care and the maximization of health related quality of life, functional status and psychological wellbeing). Another framework developed in this area is that of Mead and Bower (2000), which looks at the five dimensions of patient-centeredness (doctor and patient behavior). These five areas highlighted by Mead and Bower are;

- ✓ Shapers (cultural norms and societal expectations, socio-economic background, medical training and clinical experience of the doctor, etc)
- ✓ Consultation-level influences (physical barriers, communication barriers, time limitations, etc).
- ✓ Professional context influences (performance targets, professional norms, government initiatives, etc)
- ✓ Patient factors (knowledge, expectations, personality, ethnicity, age, etc)
- ✓ Doctor factors (knowledge, personality, attitude, age, gender, etc)

Source: Mead and Bower (2000)

As a result of the non-existence of a generally accepted conceptual framework in this field, the doctor-patient interaction is conceptualized by the author through a framework

of how doctor-patient interaction can positively affect patient loyalty, with doctor-patient interaction and patient loyalty being the independent and dependent variables respectively. The framework also depicts how doctor patient interaction can affect patient loyalty with health service quality as a mediating variable.

This is presented in the diagram below.

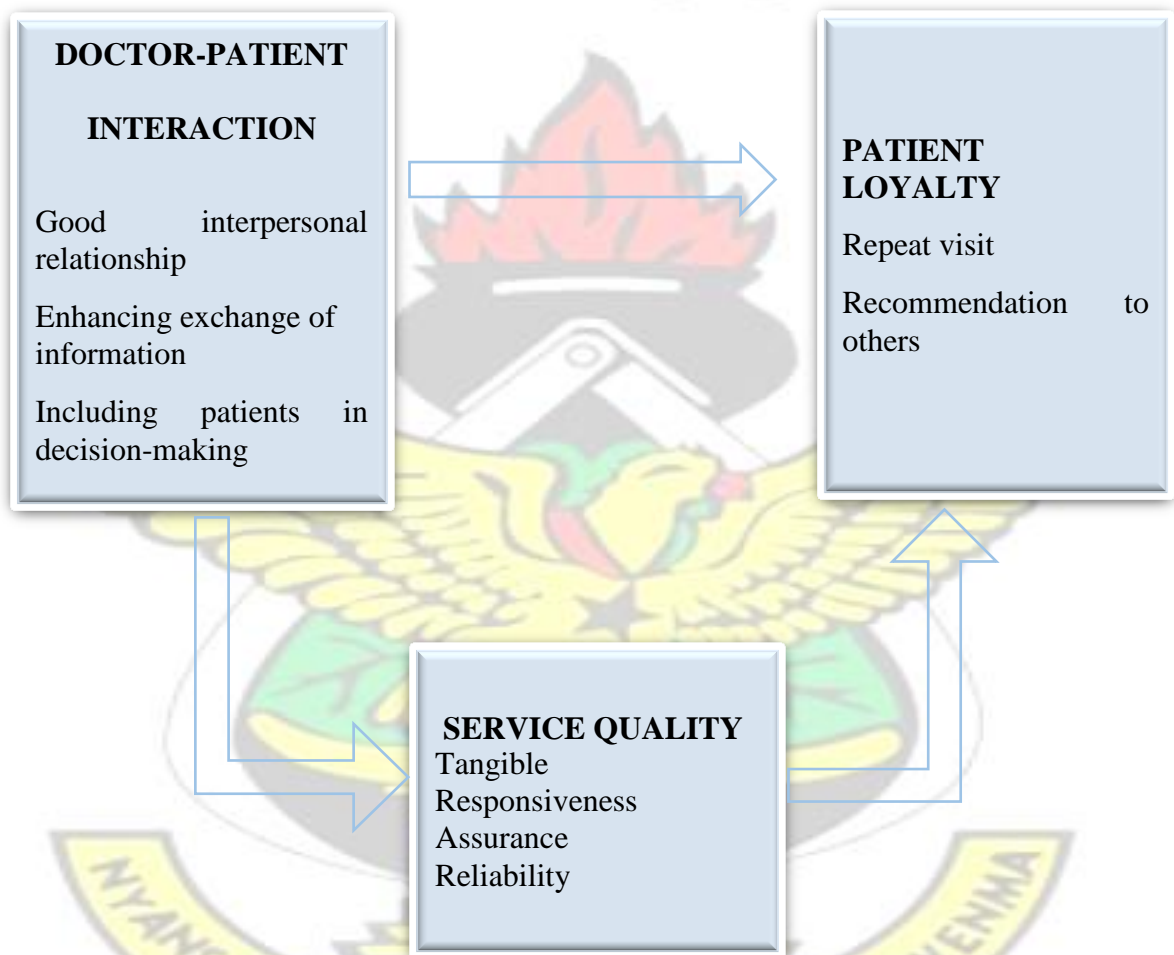


Figure 2.3 Conceptual Framework

Source: Developed by researcher **CHAPTER THREE**

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the analytical tools and techniques that were used to achieve the objectives of this research. The methods applied in analyzing the data, including the description of the data collected—data type, source, procedure, etc have all been discussed in this chapter. Also, the chapter covers the research design, study population, sample size, sampling techniques and data collection and analysis procedures. The theoretical basis for the work was based on numerous secondary sources. This included texts, journal articles and academic papers relating to doctorpatient interaction, patient loyalty and service quality.

3.2 Research Design

Research design refers to the general plan of how the researcher intends to go about answering the research question, and it is determined by the purpose of the research (Saunders et al, 2009). It contains clear objectives derived from the research question, specifies the sources from which data will be collected, and considers inevitable constraints to the study. Research purpose is classified by most research methods' literature as exploratory, descriptive and explanatory (Saunders et al, 2009). The research design employed was of the descriptive type.

3.3 Population for the Study

The population for the study was all patients who presented to the KATH Eye Clinic for treatment of eye problems. The KATH Eye Clinic is a major referral centre in Ghana for eye conditions and has two main groups of patients; referred patients and walk-in patients. Referred patients are those who are referred from other health institutions for further management, whereas walk-in patients are those who come for eye healthcare service without having been referred from another health institution.

Records from the KATH Eye Clinic showed that between 2013 and 2015, an average of 24,520 people visited the clinic each year (KATH Eye Clinic Records, 2015). This value was taken as the number of patients expected to visit the Clinic for the year 2016.

3.4 Sample Size and Sampling Technique

A sample size of 450 was selected for the study. Using Slovin's sample size formula at 95% confidence level, a sample size of 393.58 was obtained. According to Gomez and Jones (2010), this formula may be used to determine sample size when the population is known. This is given as $n = N / (1+Ne^2)$, where n=number of samples, N=total population, and e = error tolerance.

$$n = \frac{N}{1 + Ne^2}$$

$$n = \frac{24,520}{1 + 24,520 \times (0.05)^2}$$

$$n = 393.58$$

Jensen (2005) also proposes that sample size may be calculated using $n = z^2pq/E^2$. Where n is sample size required, p = expected percent accuracy, q = 100-p, and Z is the Z-score 95% confidence. This gave a sample size of 384.16 for the study.

Also, statisticians have proven that even for populations not normally distributed, a sample size of 30 or more will usually result in a sampling distribution for the mean that is very close to a normal distribution (Saunders et al, 2009). Based on this, Stutely (2003), advises a minimum number of 30 for statistical analysis. A sample size of 450 was therefore considered adequate since it was above the number required per calculations done.

Accidental sampling procedure was employed to obtain the patients to be included in the study over the period of data collection. Patients who presented to the clinic and were willing to participate in the study were selected.

3.5 Data Collection and Research Instruments

A pilot testing of the data collection instruments was done, and questionnaires were first administered to 20 respondents to ensure the validity of the instruments, and the necessary changes were made. A total of 450 questionnaires were then administered. These were administered to patients who had finished receiving the service at the facility and were about to leave. The administered questionnaires were filled instantaneously. 419 responses were received, representing a 93.1% response rate.

The primary data was gathered through questionnaires. Some information required for sample size calculation was collected from annual reports and other documents such as registers of the hospital. The questionnaire designed for this study included some aspects based on the 5-point Likert scale.

3.6 Data Analysis

Reliability testing was done. Data gathered was analyzed with the aid of the Statistical Package for Social Sciences (SPSS) and Microsoft Excel. Descriptive and inferential statistical tools were employed to help describe an accurate profile of persons and situations, and to help determine the associations existing amongst the variables under study. Hierarchical regression analysis was also done to analyze the mediation role as proposed by Baron and Kenny (1986) in their four step approach.

3.7 Operational Definitions of Variables

The operational definitions of the variables seeks to explain the variables as used in this research.

3.7.1 Dependent Variable

The dependent variable of the study is patient loyalty. This was assessed using a measuring scale with two items. A five-point Likert scale was used, with 1 representing strongly disagree, and 5 representing strongly agree.

3.7.2 Independent Variable

The independent variables measured for the study were doctor-patient interaction and service quality. Doctor-patient interaction was measured using a measurement adopted from Arora (2003). This consisted of nine items broken down into good interpersonal relationship (2 items), facilitation of exchange of information (5 items), and patient participation in decision making (2 items). A five-point Likert scale was used, with 1 representing strongly disagree, and 5 representing strongly agree.

Service quality was measured using a modified SERVQUAL adopted from Anbori et al (2010) for measurement of service quality in the health sector. This consisted of 14 items broken down into tangibility (3 items), reliability (2 items), responsiveness (2 items), assurance (4 items), and administrative procedures (3 items). A five-point Likert scale was used, with 1 representing very poor, and 5 representing very good.

3.8 Profile of the Komfo Anokye Teaching Hospital

The Komfo Anokye Teaching Hospital (KATH) is situated in Kumasi, which is the capital city of the Ashanti Region, and it functions as the major referral centre for hospitals in the Middle Sector and some parts of the Northern Sector of Ghana. Due to the presence of a good interconnecting major road network and the hospital's unique geographical location, being almost in the centre of the country, the Hospital is quite accessible to most hospitals in the region and nearby surrounding regions. Some

referrals are received from some regions which are even further away, such as the Northern Region, Volta Region, Upper-East Region and the Upper-West Region.

KATH envisions that within the next five years it will be a medical centre of excellence, and offer services which are of the highest quality and comparable to any international standards. The mission is to use well-motivated and committed staff, who apply best practice and innovation, to meet the needs and expectations of all its clients through the provision of quality services.

Under the Ghana Health Services and Teaching Hospitals Act 525, 1996, Teaching Hospital Boards were established and deemed as being autonomous. The governance of the hospital is therefore carried out by an autonomous board, and comprises 6 executive members, 4 non-executive members (who are appointed by the government), and the Dean of the Kwame Nkrumah University of Science and Technology School of Medical Sciences (KNUST-SMS). The operations of the hospital are limited to the Ministry of Health's broad policy framework. The day to day management of the hospital is the responsibility of the Chief Executive Officer.

The KATH Eye Centre is part of the Eye, Ear Nose and Throat (EENT) directorate of KATH. Inaugurated on the 25th of Feb, 2014, the modern eye centre unit functions as a health service provider, and a training facility for the training of eye specialist surgeons in West Africa. The KATH Eye Centre was built with funding from the United States Agency for International Development (USAID), the Himalayan Cataract Project (HCP), and Orbis International among others. KATH also contributed towards the project with some of its internally generated funds. The building has two storeys and a basement, and has a theatre complex with 5 operating tables, a large outpatients

department, multiple consulting rooms, a 50-bed capacity ward, an optics and refraction department, a conference room, a library, and administrative offices among others.

As part of its activities, the KATH Eye Centre runs daily clinics for general consultation, as well as some specialist clinics such as the retina, pediatric, oculoplastic, cornea and glaucoma clinics. Eye investigations such as refraction, visual field testing, B-scans, optical coherence tomography (OCT), and camera funduscopy are also done. Medical treatment and surgical interventions for eye conditions are done at the clinic, including other procedures such as Yag laser treatment. The department also has rotations for medical school trainees, and a residency training program for the training of eye specialists.

As part of its commitment and contribution to society, the KATH Eye Clinic engages in monthly eye outreach programs to deprived communities, providing them with free cataract surgeries.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION OF RESULTS

4.1 Introduction

This chapter presents and discusses the results from the analysis of the data collected from respondents. This was done to determine the effect of doctor-patient interaction on patient loyalty in the KATH Eye Clinic, the mediating effect of service quality. This chapter presents the findings based on the objectives which were set for the study. It describes the demographic characteristics of the respondents, the effect of doctor-patient interaction on patient loyalty, the effect of doctor-patient interaction on service

quality, the effect of service quality on patient loyalty, and the mediating effect of service quality on the relationship between doctor-patient interaction and patient loyalty in KATH Eye Clinic. The data was presented in the form of tables. The survey was conducted on a total of 450 respondents out of which 419 responses were received, representing a 93.1 % response rate.

4.2 Descriptive Analysis of Demographic Data

Table 4.1 discusses the summary results of the descriptive statistics of the sample. These include the age, gender, educational background, religious background, marital status and type of visit to the Komfo Anokye Teaching Hospital (KATH) Eye Clinic. With regard to age, the results show that 23.2% of the respondents are of age 60 and above with those falling between the ages of 20 to 29 representing 22.9%. The remaining respondents of the sample are of ages ranging from 30 to 59, representing a combined percentage of 35.1%, while only 18.9% of them fall within 10 to 19 years. This suggests that respondents of ages 20 to 29 years and 60 above years are the majority of patients who visit the eye clinic.

On gender, about 51.1% and 48.9% of the respondents are males and females respectively, indicating that the number of males who visit the eye clinic is marginally above that of females.

Table 4.1: Frequency Distribution Table of Demographic Data VARIABLE

FREQUENCY	PERCENTAGE	
AGE		
10 to 19	79	18.9
20 to 29	96	22.9
30 to 39	62	14.8
40 to 49	52	12.4
50 to 59	33	7.9
60 Plus	97	23.2

GENDER

Male	214	51.1
Female	205	48.9

EDUCATIONAL BACKGROUND

None	67	16
Basic	127	30.3
Secondary	129	30.8
Tertiary	81	19.3
Post Graduate	15	3.6

RELIGIOUS BACKGROUND

Christian	310	74
Muslim	103	24.6
Traditionalist	2	0.5
Atheist	2	0.5
Other	2	0.5

MARITAL STATUS

Married	187	44.6
Single	209	49.9
Divorced	10	2.4
Widow/Widower	13	3.1

TYPE OF VISIT

First Time Visit	134	32
Repeat/Review Visit	285	68

Source: Field Survey, 2016

Relating to the educational backgrounds of participants, the results reveal that respondents with none, basic, secondary, tertiary and post graduate education represent 16%, 30.3%, 30.8%, 19.3% and 3.6% respectively. This suggests that majority of the participants have at least some form of formal education, with only a few of them having either no formal education or post graduate education.

Relating to religious background, majority were Christian, which made up 74% of the respondents. This was followed by Muslims, who made up 24.6% of the respondents. Traditionalists, Atheists and others together comprised 1.5% of the respondents.

Only 3.1% and 2.4% of the sample were either widows/widowers or divorced respectively, while about 44.6% were married. Majority of the respondents were single, and represented 49.9% of the respondents.

In terms of participants' visit to the eye clinic, the results reveal that 32% of them were first timers whereas 68% of them indicated that they were repeat visitors.

4.3 Descriptive Analysis of Doctor-Patient Interaction, Service Quality and Patient Loyalty Data

4.3.1 Descriptive Analysis of Doctor-Patient Interaction Data

Table 4.2 displays the results of the descriptive findings of respondent's perception of their interaction with the doctors of the eye clinic. Arora (2003) describes three major components of doctor-patient interaction. Each of these is further comprised of other components which together are measured and used to determine the respondent's perception of their overall interaction with doctors of the eye clinic. These three major components of doctor-patient interaction are: good interpersonal relationship, facilitation of exchange of information, and patient participation in decision-making.

Table 4.2: Descriptive Findings of Respondents' Interaction with Doctor

	<u>A %</u>	<u>B %</u>	<u>C %</u>	<u>D %</u>	<u>E %</u>
DOCTOR-PATIENT INTERACTION					
Good Interpersonal Relationship					
Doctor was nice (Polite, & friendly welcoming)	1.2	3.3	4.3	55.8	35.3
Doctor Showed concern	1.0	0.7	6.4	55.8	36.0
Mean	1.10	2.00	5.35	55.8	35.65

Facilitating Exchange of Information

Doctor explained my symptoms to me	1.9	3.3	8.8	52.7	33.2
Doctor was patient and listened to me	0.5	2.2	5.7	53.9	37.7
Doctor was knowledgeable	0.5	1.0	6.7	52.5	39.4
Doctor spent enough time with me	1.2	1.9	6.4	52.3	38.2
Doctor was professional	0.7	1.4	4.5	49.9	43.4
Mean	0.96	1.96	6.42	52.26	38.38
Patient Participation in Decision-making					
Doctor allowed me to take part in decision making	1.9	3.3	16.5	46.5	31.7
The interaction made me feel confident	1.0	1.2	5.5	49.9	42.5
		2.25	11.00	48.20	37.10
OVERALL MEAN		2.07	7.59	52.09	37.04
Mean	1.45				
	1.17				

A=Strongly Disagree, B=Disagree, C=Somewhat agree, D=Agree, E=Strongly Agree

Source: Field Survey, 2016.

In determining participant's perception of whether they had a good interpersonal relationship with the doctors of the eye clinic, two dimensions were used. The results revealed that 55.8% indicated that they agree to having had a good interpersonal relationship with their doctor, while 35.65% of them strongly agree to having good interpersonal relationships with the doctor. Only a combined 8.45% of the respondents showed that they did not have a good interpersonal relationship with the doctor. These results suggest that over 91% of the respondents actually agree that they had good interpersonal relationship with the medical staff of the eye clinic.

In determining how well doctors facilitated the exchange of information, five parameters were considered. The outcome of the results indicate that 0.96%, 1.96% and 6.42% responded that they strongly disagree, disagree and somewhat agree

respectively, that doctors facilitate the effective exchange of information during consultation. On the other hand, 52.26% said they agree, while 38.38% said that they strongly agree that during consultation at the eye clinic, the doctors facilitate sound sharing of information. It can be concluded from the above outcome that many of the respondents (90.64%) agree to a large extent that doctors of the eye clinic enhance the exchange of information during consultation to elicit the necessary details required from patients in order to properly diagnose ailments.

The final criteria identified by Arora (2003) to establish the extent of doctor-patient interaction relates to whether patients are allowed to participate in decision-making during their interaction with doctors at the eye clinic. Evidence in this regard from table 4.2 above demonstrates that 48.2% and 37.1% agree and strongly agree respectively to being allowed to participate in decision-making, while only a combined 14.7% of the participants indicated that they did not feel involved in the decision-making process when they visited the eye clinic.

In conclusion, table 4.2 above reveals that many of the respondents (89.13%) agree to a large extent that they have effective interaction with doctors when they visit the eye clinic, with only a few pointing to the contrary. This suggests that at the KATH Eye Clinic, there exists sound doctor-patient interaction during consultation, and this helps to enhance adequate diagnosis of ailments and hence results in the prescription of appropriate medications to improve the health outcomes.

4.3.2 Descriptive Analysis of Service Quality Data

Table 4.3: Descriptive Findings of Respondents' Perception of Service Quality

	<u>A%</u>	<u>B%</u>	<u>C%</u>	<u>D%</u>	<u>E%</u>
PERCEIVED SERVICE QUALITY					

Tangibility					
General Environment (Clean & Tidy)	0.0	0.5	10.0	45.3	44.2
Bathrooms (Clean & Tidy)	0.0	5.5	14.1	42.2	38.2
Waiting Area was comfortable (Spacious)	0.7	1.9	9.5	50.1	37.7
Mean	0.2	2.6	11.2	45.9	40.0
Reliability					
There are enough staff at the clinic	3.3	7.2	16.7	41.8	31.0
Availability of drugs at the pharmacy	2.9	7.6	19.3	42.2	27.9
Mean	3.1	7.4	18.0	42.0	29.5
Responsiveness					
Waiting time to see doctor	2.6	4.3	20.8	39.4	32.9
Staff were patient with me	0.7	1.2	10.3	51.3	36.5
Mean	1.7	2.8	15.6	45.4	34.7
Assurance					
Records staff (Getting cards)	0.2	0.2	9.3	50.1	40.1
Nursing staff attitude (Interaction)	0.7	1.2	12.9	50.6	34.6
Pharmacy staff attitude (Interaction)	0.5	0.2	7.6	54.9	36.8
Screening room/preliminary procedures	1.0	0.5	6.4	53.9	38.2
Mean	0.6	0.5	9.1	52.4	37.4
Administrative procedures					
Fairness of system (No jumping over queues)	0.5	4.8	17.2	44.4	33.2
Ease of payment procedures	0.5	2.9	8.6	54.7	33.4
Cost of services	1.2	1.9	14.6	48.7	33.7
			13.5	49.3	33.4
OVERALL MEAN			13.5	47.0	35.0
Mean	0.7	3.2			
	1.3	3.3			

A=Very Poor, B=Poor, C=Fair, D=Good, E=Very Good

Source: Field Survey, 2016

Table 4.3 presents the descriptive findings of respondent's perception service quality they benefit at the eye clinic. The Zeithaml et al. (1990) service quality dimensions are employed in this study to measure the participant's perception of the service quality.

Regarding the physical environment (tangibility) of the eye clinic, 0.2%, 2.6%, 11.2% of the participants indicated that it was very poor, poor and fair respectively in terms of

cleanliness and comfort when they visit the clinic. On the opposite side, 45.9% and 40% respectively held opinions that the eye clinic was good and very good in terms of how clean, tidy and comfortable the environment is anytime they visit the clinic. This suggests that majority of the participants (85.9%) have the perception that the eye clinic, at least in terms of the physical environment, meets their service quality expectations.

On the dimension of reliability, only a few of the participants, representing a combined 28.5%, responded that the service quality was very poor, poor or fairly poor when they visit the clinic. 42% and 29.5% of the respondents said the clinic performed good and very good respectively in this regard. This indicates that majority of the respondents (71.5%) agreed that the services provided by the eye clinic are reliable.

Also, majority (80.1%) of the respondents as shown in the above table reveal that they find the responsiveness of the eye clinic staff to be good and very good towards their needs anytime they visit the clinic. Only a few (20%) of the participants found the staff to be less responsive towards them when they visit. This therefore suggests that the responsiveness of the clinic staff, from the perspective of the patients, is either good or very good.

In terms of assurance, a few of the participants indicated that it is very poor, poor or fair, while 52.4% and 37.4% indicated that the assurance level of the staff at the clinic is good and very good respectively. Similarly, 49.3% and 33.4% of the participants indicated that the administrative procedures of the clinic in terms of fairness of systems, cost of service and payment processes are good and very good respectively.

From the perception of participants, it is clear from table 4.3 above that majority (82%) of them agree that the service quality of the clinic is good or very good.

4.3.3 Descriptive Analysis of Patient Loyalty Data

Table 4.4: Descriptive Findings of Respondents' Loyalty to the Hospital

	A%	B%	C%	D%	E%
PATIENT'S LOYALTY					
I will recommend this hospital to someone	0.5	0.5	6.0	43.0	50.1
I will visit this hospital again	0.0	0.2	3.6	37.5	58.7
OVERALL MEAN	0.25	0.35	4.8	40.3	54.4

A=Strongly Disagree, B=Disagree, C=Somewhat agree, D=Agree, E=Strongly Agree

Source: Field Survey, 2016

Regarding the loyalty of patients to the eye clinic, the findings from table 4.4 show that 40.3% and 54.4% of the respondents indicated that they agree and strongly agree respectively that they were loyal to the Eye Clinic. This is consistent with the earlier findings which indicated that majority of the respondents found their interaction with medical staff at the clinic to be effective and also that the service quality offered them met their expectations.

4.4 Reliability Measurement

Cronbach alpha (CA) was used to examine the level of reliability of the scale items and Table 4.5 shows the results. A scale item is reliable if the cronbach alpha value is 0.7 or better (Pallant, 2007). Cronbach Alpha of patient loyalty is 0.800 which is high and shows that all the dimensions are internally consistent. This simply means that the variables used under each measurement are the representation of items under consideration, hence the need for further analysis. Further, the composite reliability

(CR) and average variance extracted (AVE) are shown in table 4.5. CRs above .70 suggest convergent validity for the scales (Hair et al., 2014).

Table 4.5: Reliability and Validity Measurement

CONSTRUCTS	ITEMS	CA	CR	AVE
Patient Loyalty	2	0.800	0.818	0.556
Doctor-Patient Interaction	9	0.919	0.801	0.545
Service Quality	14	0.920	0.832	0.566

Source: Field Survey, 2016

Table 4.6: Correlational Results

	1	2	3
Constructs:			
1 Patient Loyalty	1.000		
2 Doctor-Patient Interaction	.474**	1.000	
3 Service Quality	.528**	.501**	1.000

Source: Field Survey, 2016

Notes: *p< .05; **p< .01

Table 4.6 shows that patient loyalty is significantly associated with doctor-patient interaction and service quality. The implication of this is that efforts aimed at attracting patient loyalty must concentrate on improving doctor-patient interaction and service quality.

There is a positive correlation between patient loyalty and doctor-patient interaction (0.474). The positive correlation suggests that patient loyalty and doctor-patient interaction move in the same direction. Thus, the higher the doctor-patient interaction, the higher the patient loyalty.

The results also show positive correlation between patient loyalty and service quality (0.528). The positive correlation between them suggests that they move the same

direction. Thus, the more the service quality level improves, the more likely it is that patient loyalty will also be enhanced.

4.5 The Effect of Doctor-Patient Interaction on Patient Loyalty

Table 4.7: Regression Results showing the Effect of Doctor-Patient Interaction on Patient Loyalty

Variable	Unstandardized Coefficients(B)	Std. Error	Beta	T	Sig.
(Constant)	2.541	.176		12.876	.000
DPINTER	.460	.042	.528	12.658	.000
R	.474				
R Sq.	.224				
Adj. R. Sq.	.223				
F Statistic	119.802***				

Dependent Variable: PLOYAL

KEY

DPINTER = Doctor-patient interaction

PLOYAL = Patient Loyalty

SERQUAL = Service Quality

Source: Field Survey 2016

Table 4.7 reports the regression results for the relationship between doctor-patient interaction and patient loyalty. The R-squared value of 0.224 with significant Fstatistics, show good fit of the model. Thus, the results show that the predictive variables are able to explain about 22.4% of the change in the dependent variable. The results confirm positive and significant relationship between doctor-patient interaction and patient loyalty. Thus, a 1 percent increase in the effectiveness of the doctorpatient interaction would raise patient loyalty by approximately 46 percent. This finding confirms evidence from prior studies such as (Makarem and Coe, 2014) who noted that, the patient that has completed his/her treatment has a significant loyalty ratio, and that

the relationship with the service provider is an important driver of patient retention. Similarly, McAlexander et al., (2003) concluded that friendship and trust with the provider are influential on the development of a loyal behavior, suggesting that friendship with the patient and service recommendation could positively influence the visits to the clinic. More so, a review of 139 studies provided consistent evidence across different settings that the quality of doctor-patient relationship is the most important factor affecting general satisfaction with health care and loyalty (Crow et al. 2002). The findings are also consistent with the hypothesis that doctor-patient interaction has significant impact on patient loyalty. The level of interaction between doctors and patients has a positive relationship with the level of patient loyalty. This therefore means that when doctor-patient interaction is improved, the level of patient loyalty improves, and vice-versa. Therefore to improve the loyalty of patients at the KATH Eye Clinic, efforts should be made to improve the doctorpatient interaction that occurs at the clinic.

4.6 The Effect of Doctor-Patient Interaction on Service Quality

Table 4.8: Regression Results showing the Effect of Doctor-Patient Interaction on Service Quality

Variable	Unstandardized Coefficients(B)	Std. Error	Beta	T	Sig.
(Constant)	2.094	.176		11.909	.000
DPINTER	.483	.041	.501	11.737	.000
R	.501				
R Sq.	.251				
Adj. R. Sq.	.249				
F Statistic	137.748***				

Dependent Variable: SERQUAL

Source: Field Survey 2016

Though there are scanty prior studies on doctor-patient interaction and service quality, the results shown in table 4.8 reveal a positive and statistically significant relationship.

Thus, a 1 percent improvement in the interaction between doctors and patients would increase service quality by 48.3 percent. The implication of the results reveal that when the relationship between doctors and patients during consultation is effective, the service quality is likely to improve as a result. Thus, the outcome confirms the hypothesis that doctor-patient interaction has a positive effect on service quality.

4.7 The Effect of Service Quality on Patient Loyalty

Table 4.9: Regression Results showing the Effect of Service Quality on Patient Loyalty

Variable	Unstandardized Coefficients(B)	Std. Error	Beta	T	Sig.
(Constant)	2.269	.176		12.876	.000
SERQUAL	.534	.042	.528	12.658	.000
R	.528				
R Sq.	.279				
Adj. R. Sq.	.277				
F Statistic	160.218***				

Dependent Variable: PLOYAL

Source: Field Survey 2016

The coefficient from table 4.9 above for service quality from the regression result is reported as .534 which suggests that on the average, a one unit change increase in service quality will lead to approximately 53.4% improvement in patient loyalty. The impact of service quality on patient loyalty is also statistically significant at the 0.1 level with a reported T statistic of 12.658. This is consistent with the hypothesis that service quality has a positive significant influence on patient loyalty. This finding also confirms previous literature. A meta-analysis revealed that a positive significant correlation between satisfaction as a result of service quality and repurchase was found in 15 of the 17 correlations studied (Szymanski and Henard, 2001). Also, a positive relationship has been noted between patient satisfaction and loyalty (Woodside et al., 1989).

It can be deduced from the above results that since there exist strong significant relationship between service quality and patient loyalty, measures taken by health facilities to improve their service quality would have a positive influence on their ability to retain patients. This will have the benefit of aiding the long term survival of the hospital especially in the case of the private facilities since it is much more costly to attract new patients from competitors as compared to retention.

4.8 The Mediating Effect of Service Quality on the Doctor-Patient Interaction and Patient Loyalty Relationship

Table 4.10: Regression Results showing the Mediating Effect of Service Quality on the Relationship between Doctor-Patient Interaction and Patient Loyalty

	Variable	Unstandardized Coefficients(B)	Std. Error	Beta	T	Sig.
Model 1	(Constant)	2.541	.176	-	12.876	.000
	DPINTER	.460	.042	.528	12.658	.000
Model 2	(Constant)	1.722	.193		8.942	.000
	DPINTER	.269	.045	.277	5.987	.000
	SERQUAL	.393	.047	.391	8.442	.000
	R	.582				
	R Sq.	.339				
	Adj. R. Sq.	.335				
	F Statistic	105.226***				

Dependent Variable: PLOYAL

Source: Field Survey 2016

Table 4.10 shows the regression analysis results for the effect of doctor-patient interaction on patient loyalty and the mediating role of service quality. Model 1, shows the regression results when doctor-patient interaction was used as the independent variable, with patient loyalty as the dependent variable. This has already been described in section 4.5 of this work.

Model 2 shows the regression results when doctor-patient interaction and service quality were combined and considered together as the independent variable, with patient loyalty as the dependent variable.

From the results, Model 2 is capable of explaining the behavior of patient loyalty up to 33.9% since the results reported an R^2 value of .339. Also from Table 4.10 above, the ANOVA analysis reveals a statistically significant relationship between the independent variable of doctor-patient interaction and service quality on the dependent variable of patient loyalty. The ANOVA results also reveal that the model is fit since the results indicate the F Statistic to be 105.226 significant at the 0.1 level. This suggests that doctor-patient interaction (independent variable) and service quality (mediating variable) have a combined statistical significance on patient loyalty (dependent variable).

The regression outcome also indicates that both doctor-patient interaction and service quality have a positive and significant relationship with patient loyalty, with a coefficient of .269. This suggests that when the interaction between doctors and patient with service quality improves by 1%, the patient loyalty would be enhanced by about 26.9%, holding all other things constant.

Applying the Baron and Kenny (1986) proposed four step approach in testing for mediation, it is evident from foregoing regression results that service quality has partial mediation effect on the doctor-patient interaction and patient loyalty. According to Baron and Kenny (1986), for mediation to occur, the direct relationship between the independent variable (**X**) and dependent variable (**Y**) should be significant. However, when the relationship between the independent and dependent variables with the introduction of the mediating variable (**Z**) is significant, mediation has occurred. Also,

Baron and Kenny (1986), further explained that if the relationship between the mediator variable and dependent variable is significant after controlling for the direct effect of the independent variable, then there is partial mediation. Partial mediation also occurs when the regression coefficient of the independent variable when run alone, reduces after both the independent and mediator variables are run combined.

Following the explanation of Barron and Kenny (1986) above, it can be concluded from Table 4.10 above that service quality plays a partial mediating role in the relationship between doctor-patient interaction and patient loyalty. This is because, the results obtained reported the individual regression coefficient for doctor-patient interaction to be .460, but this reduces to .269 when both doctor-patient interaction and service quality are considered together (as independent variables) to determine their effect on patient loyalty (dependent variable). This therefore suggests that without the mediating role of service quality, even though there is still a significant relationship between doctor-patient interaction and patient loyalty, it is however reduced. Service quality therefore plays a partial mediation role in the doctor-patient interaction and patient loyalty relationship. Various previous studies which investigated the association between customer satisfaction and service quality have proven that high levels of service quality has a positive correlation with customer satisfaction in the general context of the service industry (Patterson et al., 1996; Cronin et al., 2000; Oyeniya and Joachim, 2008). A meta-analysis revealed that a positive significant correlation between satisfaction as a result of service quality and repurchase was found in 15 of the 17 correlations studied (Szymanski and Henard, 2001). Also, a positive relationship has been noted between patient satisfaction and patient loyalty (Woodside et al., 1989). However, literature is not readily available on the mediating role (partial or otherwise) of service quality in the relationship between doctor-patient interaction and patient loyalty.

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CHAPTER FIVE

SUMMARY, RECOMMENDATIONS AND CONCLUSION

5.1 Introduction

The chapter presents a summary of the main findings of the study, recommendations based on the study, and conclusion of the study.

5.2 Summary of Main Findings

The summary of findings are discussed under the objectives of the study

5.2.1 The Effect of Doctor-Patient Interaction on Patient Loyalty in the KATH Eye Clinic

The results showed a positive and significant relationship between doctor-patient interaction and patient loyalty. Doctor-patient interaction was found to be able to explain 22.4% of the change in patient loyalty. It also found that a 1% increase in the effectiveness of the doctor-patient interaction would raise patient loyalty by approximately 46%. Since patient loyalty depends on the doctor-patient interaction, the higher the effectiveness of this interaction, the higher the level of patient loyalty.

5.2.2 The Effect of Doctor-Patient Interaction on Service Quality in the KATH Eye Clinic

The results revealed a positive and statistically significant relationship between doctor-patient interaction and service quality. It was found that a 1% improvement in the interaction between doctors and patients would increase service quality by 48.3%. The implication of this finding is that when the relationship between doctors and patients during consultation is effective, the patient's perception of service quality is also likely to improve.

5.2.3 The Effect of Service Quality on Patient Loyalty in the KATH Eye Clinic

It was found that service quality has a positive and significant relationship with patient loyalty. Service quality was found to be able to explain 27.9% of the change in patient loyalty. It also found that a 1% increase in service quality would lead to approximately 53.4% improvement in patient loyalty. This confirms that when service quality is high, patient loyalty is also likely to be high.

5.2.4 The Mediating Effect of Service Quality on the Relationship between Doctor-Patient Interaction and Patient Loyalty in the KATH Eye Clinic

After applying the Baron and Kenny (1986), four-step approach of testing for mediation, the results obtained indicate that service quality plays a partial mediation role in the relationship between doctor-patient interaction and patient loyalty.

5.3 Conclusion

The results of this study show that doctor-patient interaction has a positive and significant effect on patient loyalty, and that service quality has a partial mediation effect on this relationship. This means that in order to improve patient loyalty at the KATH Eye Clinic, efforts must be aimed at both improving the doctor-patient interaction and the level of service quality rendered at the Eye Clinic.

5.4 Recommendations

The following recommendations are made in the light of the findings of the study:

1. The KATH Eye Centre should make a conscious effort to build up and improve upon the communication skills of its staff, especially the doctors. This could be done by organizing customer relationship management seminars and workshops periodically for the medical staff.

2. Efforts should be made towards improving the level of service quality rendered at KATH Eye Clinic in order to keep its patients loyal to the Eye Centre. This includes ensuring a clean and congenial environment, providing adequate and well-trained personnel, being responsive to patients' needs, and having an effective and efficient administrative system.
3. In order to further improve the health service quality in Ghana, the Ministry of Health, in collaboration with the Ghana Standards Authority, should set up an independent Services Review Board which would be responsible for conducting practice reviews for the health facilities in the country. This will help to ensure that they are consistently complying with the requisite service quality standards.
4. The Ghana Education Service should also incorporate into its doctor training program, training in good interpersonal relationship and communication skills. This will help produce doctors who will be able to manage the doctor-patient interaction better.
5. The Ghana Medical and Dental Council (MDC), which is the regulatory body for medical practitioners, should conscientize its members on the importance of good doctor-patient interaction. This can be done by including such topics relating to this issue as mandatory continuous professional development (CPD) points in its requirements for yearly registration.

5.5 Suggestions for Future Research

Since this study involved only one eye healthcare centre and used accidental sampling, it is recommended that this study be done as a multi-centre one and with randomized sampling technique in order to be able to generalize the findings. It is also recommended that a more in-depth study be done into the individual components of doctor-patient

interaction, and how each individually influences patient loyalty. This will enable us to know which components of doctor-patient interaction have a greater impact on patient loyalty.

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APPENDIX

Kwame Nkrumah University of Science and Technology, Kumasi

School of Business Administration

Department of Marketing and Corporate Strategy

QUESTIONNAIRE

SECTION B: DOCTOR-PATIENT INTERACTION

To what extent do you agree with the following statements concerning your interaction with the doctor?

Statement about Dr-Patient interaction	Level of agreement with statement				
	1 = strongly disagree	2 = disagree	3 = somewhat agree	4 = agree	5 = strongly agree
1.Doctor was nice (polite, friendly, and welcoming)					
2.Doctor explained my symptoms and condition to me, and treatment options					
3.Doctor was patient and listened to me and answered my questions					
4.Doctor allowed me to take part in decision-making					
5.Doctor was knowledgeable and showed competence at his job					
6.Doctor spent enough time on me					
7.Doctor was professional					
8.Doctor showed concern/empathy					
9.The interaction made me feel confident in my doctor and trust him/her					

SECTION C: PATIENT LOYALTY

To what extent do you agree with the following statements?

Statement	Level of agreement with statement				
	1 = strongly disagree	2 = disagree	3 = somewhat agree	4 = agree	5 = strongly agree

I will recommend this hospital to someone who seeks my advice					
I will visit again if I have an eye problem					

SECTION D: PERCEIVED SERVICE QUALITY

How would you rate the quality of service you experienced in terms of the following?

	Service Quality Rating				
	1 = very poor	2 = poor	3= fair	4= good	5 = very good
1.General environment (clean, tidy)					
2.Bathrooms (clean and tidy)					
3.Waiting area was comfortable (spacious and with adequate chairs)					
4.Records staff (Getting a card/folder)					
5.Nursing staff attitude (interaction)					
6.Pharmacy staff attitude (interaction)					
7.Screening room/preliminary procedures done before seeing doctor					
8.There are enough staff at the clinic					
9.Availability of drugs at pharmacy					
10.Waiting time to see doctor					
11.Staff were patient with me					
12.Fairness of system (not jumping queues, no favouritism)					
13.Ease of payment procedures					
14.Cost of service (value for money)					

SECTION E: PATIENT SATISFACTION

On a scale of 1 to 5, how satisfied were you with the overall service you received at the facility? (please tick box beneath)

1 = Very satisfied	2 = Satisfied	3 = Fairly satisfied	4 = Dissatisfied	5=Very dissatisfied

Thank you for your assistance.