

**FACTORS INFLUENCING THE PROVISION OF QUALITY SERVICES IN HEALTH  
CARE FACILITIES: A CASE OF KITUI COUNTY REFERRAL HOSPITAL**

**BY**

**RUTH MWENDE MUTHUI**

**A RESEARCH PROJECT REPORT SUBMITTED IN PARTIAL FULFILLMENT OF  
THE REQUIREMENT FOR THE DEGREE OF MASTERS OF ARTS IN PROJECT  
PLANNING AND MANAGEMENT OF THE UNIVERSITY OF NAIROBI.**

**2018**

**DECLARATION**

This research project is my original work and has not been presented for any degree in any other institution of higher learning.

**RUTH MWENDE MUTHUI**

**L50/71734/2014**

Signature: ..... Date:.....

This research project has been submitted for examination with my approval as a University of Nairobi Supervisor.

Signature:..... Date:.....

**PROF. HARRIET KIDOMBO**

**SCHOOL OF CONTINUING AND DISTANCE EDUCATION**

**UNIVERSITY OF NAIROBI**

## **DEDICATION**

This research project is dedicated to my parents Dr. and Mrs. Daniel Muthui Kitheka for the efforts, guidance and support they put into my education. I will forever remain indebted to them. I also extend the dedication to my daughters Mueni and Waeni to always aspire to exceed their mothers' education level; together with my siblings Mumo and Ngumbau for their great support. May God bless you all.

## **ACKNOWLEDGEMENT**

I am extremely grateful to my supervisor Professor Harriet Kidombo for the guidance and support she provided to me while undertaking my project proposal. The advice, guidance and support were key to the development of this proposal. I am grateful to the university of Nairobi admissions board for giving me an opportunity to study in this prestigious university. I also appreciate my colleagues in the Master's Degree in Project Planning and Management class with whom we exchanged ideas and encouraged each other. Special thanks to my lecturers, Prof. Harriet Kidombo, Mr. Bwibo Adieri, Prof. Christopher Gakuo, Dr. Nzuki, Dr. Ann Ndiritu, Dr. Mwaura, Dr. Fred Jonyo, Esther Magambo, Koyio Levi, Dr. Kathata, Mr. Eliud Muriithi, Margaret Mwago and Kamotho Njenga who taught me during the time that I have been in the university.

## TABLE OF CONTENTS

DECLARATION .....	ii
ACKNOWLEDGEMENT .....	iv
TABLE OF CONTENTS.....	v
ABSTRACT.....	xii
CHAPTER ONE .....	1
INTRODUCTION .....	1
1.1 Background of the Study.....	1
1.2 Statement of the Problem.....	3
1.3 Purpose of the Study .....	4
1.4 Research Objectives.....	4
1.5 Research Questions .....	5
1.6 Significance of the Study .....	5
1.7 Basic Assumptions of the Study.....	5
1.8 Limitation of the Study .....	6
1.9 Delimitation of the Study .....	6
1.10 Definition of Significant Terms .....	7
1.11 Organization of the Study .....	8
CHAPTER TWO .....	9
LITERATURE REVIEW .....	9
2.1 Introduction.....	9
2.2 Provision of Quality Healthcare Services .....	9
2.3 Personnel Capacity and Provision of Quality Health care Services.....	10
2.4 Resource Availability and Utilization and their Influence in the Provision of Quality Health Care Services.....	11
2.5 Patient Socio-demographic factors and their influence on provision of quality health care services.....	13

2.6 Management Commitment and its Influence on the Provision of Quality Healthcare Services .....	14
2.4 Monitoring and Evaluation and Provision of Quality Health care Services.....	16
2.5 Theoretical Framework .....	17
2.5.1 Donabedian Quality of Care Framework .....	17
2.6 Conceptual Framework .....	19
2.7 Gaps in Literature Reviewed.....	22
CHAPTER THREE .....	23
RESEARCH METHODOLOGY .....	23
3.2 Research Design.....	23
3.3 Target Population .....	24
3.4 Sampling Procedures.....	25
3.5 Data Collection Instruments.....	27
3.5.1 Pilot Testing of the Instruments.....	28
3.5.2 Validity of the instruments .....	28
3.5.3 Reliability of the Instruments .....	28
3.6 Data Collection Procedures.....	29
3.6 Data Analysis Techniques.....	29
3.7 Ethical Considerations .....	29
3.8 Operational Definition of Variables.....	30
CHAPTER FOUR.....	33
RESEARCH FINDINGS AND DISCUSSIONS.....	33
4.1 Introduction .....	33
4.2 Questionnaire Response Rate .....	33
4.3 Health Care Personnel and County Officials’ Demographic Information .....	37
4.4 Personnel Capacity and Provision of Quality Health Care Services.....	42

4.4.1 Patients’ Responses on Personnel Capacity .....	42
4.4.2 Health Care Personnel Responses on Personnel Capacity .....	44
4.5 Resource Availability and Utilization and their Influence in the Provision of Quality Health Care Services.....	45
4.6 Socio-demographic Factors and their influence on provision of quality health care services .....	48
4.7 Management Commitment and its Influence on the Provision of Quality Healthcare Services .....	54
4.7.1 Patients’ Responses on Management Commitment .....	54
4.7.2 Health Care Personnel Responses on Management Commitment.....	56
4.8 Monitoring and Evaluation and Provision of Quality Health care Services .....	58
4.9 Provision of Quality Health Care Services .....	64
CHAPTER FIVE .....	68
SUMMARY, CONCLUSION AND RECOMMENDATIONS .....	68
5.1 Introduction.....	68
5.2 Summary of Findings.....	68
5.2.1 Objective 1: Influence of personnel capacity on the provision of quality health services .....	68
5.2.2 Objective 2: Resource availability and utilization.....	71
5.2.3 Objective 3: Management Commitment.....	72
5.2.4 Objective 4: Patient Socio-Demographic Factors.....	74
5.2.5 Objective 5: Monitoring and Evaluation .....	75
5.2.6 Provision of quality health care services .....	78
5.3 Conclusion.....	79
5.4 Recommendations.....	80
REFERENCES .....	82
APPENDICES .....	87

## LIST OF FIGURES

Figure 1: Components for measuring healthcare quality.....	17
Figure 2: Conceptual Framework.....	20



## **LIST OF TABLES**

Table 3.1: Target Population

Table 3.2: Sample Size

Table 3.3: Operationalization of Variables

Table 4.1 Questionnaire Response Rate

Table 4.2: Distribution of Respondents Gender

Table 4.3: Age distribution of Patients

Table 4.4: Patient distribution of by education

Table 4.5: Gender Distribution of HealthCare Personnel and County officials

Table 4.6: Age distribution of Health Care Personnel and County Officials

Table 4.7: Healthcare Personnel and County Health Officials education status

Table 4.8: Area of Work distribution

Table 4.9: Positions held by respondents

Table 4.10: Length of Employment of Respondents

Table 4.11: Patients responses on Personnel Capacity

Table 4.12: Healthcare personnel responses on Personnel capacity

Table 4.13: Patient Responses on Resource Availability and Utilization

Table 4.14: Healthcare Personnel Responses on Resource Availability and Utilization

Table 4.15: Patients' Responses on their Socio-demographic Factors

Table 4.16: Age of the Patients

Table 4.17: Marital status of Patients

Table 4.18: Level of education of patients

Table 4.20: Influence of Marital Status on Service Provision

Table 4.21: Influence of patients' level of education on the demand of quality services

Table 4.22: Economic Status of Patients

Table 4.23: Patients' Responses on Management Commitment

Table 4.24: Health Care Personnel Responses on Management Commitment

Table 4.25: Patients' Responses on Monitoring and Evaluation

Table 4.26: Time Taken For a Patient to Be Attended To

Table 4.27: Health Care Personnel Responses on Monitoring and Evaluation

Table 4.28: Healthcare personnel responses on availability of time for different activities

Table 4.29: Promoters of quality and safety improvement in the hospital

Table 4.30: Extent of Documentation Existing In the Hospital

Table 4.31: Patients responses on provision or quality healthcare services

Table 4.32: Health Care Personnel Responses on the Provision of Quality Health Care Services

## **LIST OF APPENDICES**

Appendix 1: Questionnaire

Appendix 2: Cost and Material estimates

Appendix 3: Activity Schedule

Appendix 4: Informed consent Form

## ABSTRACT

This study was conducted to study the Factors Influencing the Quality of Service Delivery in Health Care Facilities at Kitui County Referral Hospital. Proper healthcare is fundamental in the lives of individuals in order to perform their duties effectively and efficiently to build up their lives and families. The research had five objectives for establishing the factors influencing the quality of service delivery in health care facilities; the influence of capacity of health care personnel on the provision of quality services, the influence of resource availability and utilization on delivery of quality health care services, the influence of leadership on the delivery of quality health care services, the influence of patient socio-demographic factors on the quality of health care services and the influence of monitoring and evaluation on the quality of health care services in health facilities. It used an exploratory research design with a sample size of 41 individuals that targeted patients between the ages 0 to 65 years, staff members of Kitui County Referral Hospital and Kitui county officials in the health docket. The study employed both probability and non-probability sampling techniques, whereby a sample of 10% was selected according to Mugenda and Mugenda formula. Non-probability methods used were convenience sampling applicable to patients and purposive sampling for the county officials and Kitui County Referral Hospital staff since the population is heterogeneous, and not every staff member was authorized to give information. The data collection instruments used were questionnaires both open and closed ended questions and interviews which allowed proper triangulation of data. The questionnaires mostly were disseminated at employees work stations, while for the patients, they were handed over individually depending on the availability of time for the patients. Each patient was assisted throughout the process of filling questionnaires. The patients were not allowed to take away the questionnaires for later collection, assuming that they come from different parts of the county and it would be hard to get them back. The inpatients were also not allowed to keep the questionnaires, they were assisted individually by the researcher. Prior to this, pilot testing of the instruments was conducted in a controlled environment using a small number of respondents mostly the personnel to test the appropriateness of the instruments. Validity and reliability of data was done to ensure consistency and reliability. The Cronbach's Alpha was used in this case to determine reliability and a measure of 0.75 was achieved. Data analysis has been done in line with the research objectives using SPSS version 20 and Minitab Version 18. Data was analyzed using descriptive and inferential statistics and presented using frequency tables, percentages and means. The findings of the study concluded that the capacity of healthcare personnel, resource availability and utilization, management commitment and monitoring and evaluation had a negative influence on the quality of services provided at Kitui County Referral Hospital. Patient socio-demographic factors however had no positive or negative influence on provision of quality healthcare services This study has come up with solutions that will assist the County government as well as the management and staff of Kitui County Referral Hospital to come up with improvement and development strategies in order to boost quality of Health care services as requested by both parties.

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

Health facilities have the purpose of providing, improving and maintaining health through the various activities that are undertaken within them. The provision of quality health care in African countries has been a problem which has been majorly fueled by reduced economic performance and limited resources. This is the same case as in Kenya in both rural and urban-based health facilities.

In developed countries, the influencing factors for healthcare are having a significant impact causing healthcare needs to expand. Globalization, for example, has led to an increase in markets for goods and services leading to competition and other economic pressures (Adams, Mounib, Pai, Stuart, Thomas and Tomaszewicz, 2006). As economies in these nations develop and populations become more educated, the health care needs also increase. Numerous developed countries are using developments in technology, health education, and infrastructure to enhance care delivery ensuring that it is value-driven (Adams, Mounib, Pai, Stuart, Thomas and Tomaszewicz, 2006). This has resulted in an increase in the quality of services provided in the healthcare facilities as compared to developing and least developed countries. The United States, for example, is known to enjoy high levels of quality in health care although there are financial, insurance complaints amongst the citizens. The Quality of care in America is however thought to be concentrated on cancer care while preventive conditions are given less attention (Docteur and Berenson, 2009). The United States institute of Medicine defines quality as “the degree to which health services for individuals and populations enhance the possibility of desired health outcomes and are consistent with the present professional information (Institute of Medicine, 2001).” According to Docteur and Berenson, quality can be either clinical or technical- effectiveness. In Europe, many countries have defined the rights of patients to quality care through legislation. Some of these laws include accessibility, good quality health, and medical care. There are also laws present for the health professionals to ensure competency and high quality of health care. Some of the European countries like France, Finland and Belgium have clearly defined legislation on patient rights (Eltarp, 1999). It has also made attempts to synchronize the qualification of health care personnel and the vital structural requirements.

However, quality of health care in Europe still has some challenges especially related to medical errors and diversity of health groups. The World Health Organization regards quality improvement a permanent commitment and priority for health service improvement.

The quality of health care in Africa has been of a major concern because of poor health indicators in most countries. This can be seen in high mortality and infant morbidity rates in the region. About half a million mothers die in Africa due to pregnancy-related complications and during childbirth (WHO, 2003). According to a study conducted by WHO (2008), infant mortality was the highest in Angola, followed by Zambia. The country in Africa with the lowest infant mortality rates at the time of the study was South Africa. The need to improve the quality of health care in Africa is extremely vital especially because of the increasing number of individuals dying due to negligence and poor services provided in health facilities. In South Africa, health care ranges from basic services to highly specialized services offered mostly by the private sector. The public sector usually is the most accessible to most individuals as it offers cheap services, but has been deteriorating in the past years because of limited resources provided by the government. These health facilities are poorly managed and the infrastructure is worsening leading to poor quality of health care. The country has implemented the National Health Insurance scheme to bring out the change of health care delivery. Additionally, the NHI intends to ensure that all citizens of South Africa are treated equally in health facilities regardless of their status. This scheme has improved the quality of health care delivery in South Africa and some individuals from other African countries head to the country for specialized treatment. A strategic policy change on health services provision in Nigeria has improved the health sector by enhancing the quality of services provided (Federal Ministry of Health, 2004). For the reforms in the health sector to be rooted further, there is a need for all stakeholder involvement and commitment, not only in Nigeria but in Africa as a whole.

With over 4,700 health facilities in Kenya, the provision of quality health care services has become an important aspect of healthcare organizations. This could be attributed to government regulations especially on public health care institutions, competition, and pressure from customers or hospital management programs. Some of the health institutions in Kenya have implemented TQM Practices in a bid to improve the quality of services rendered. They have also embraced quality out of their customers' will or through management initiatives have succeeded and benefitted from the implementation of TQM practices. The national government of Kenya has made attempts to improve health care through devolution of health services to the county governments. Devolution, however, was viewed as a simple transfer of power from the central government to the lower levels of government. This assumption has ignored the fact that devolution is a dynamic and continuous event and is probably the path leading to deterioration of healthcare devolution in Kenya.

This study attempted to show the factors that influence the provision of quality health care services in Kitui County Referral hospital. The purpose of this study was to investigate the situation and performance of health care in Kitui County Referral Hospital to ensure quality of healthcare services.

## **1.2 Statement of the Problem**

It is a universal right for every individual to access health care services. It is vital that the health care services provided are of high quality and that services are right during the first time. Problems have arisen with relation to quality of services provided in a majority of health facilities probably because of incapacitated personnel, insufficient resources, lack of proper leadership and recently devolution of health services in Kenya has attributed to poor quality of health services. **Some of** these problems have affected trust on the health sector, and especially public and some private facilities. The number of deaths reported due to negligence and poor state of health facilities has increased over the years (Andel, Davidow, Hollander and Moreno, 2012), with private hospitals and clinics having the highest percentage-70% in Kenya (Magoha, 2014). A research study to investigate the underlying causes of provision of poor quality of services in Kitui County Referral Hospital was essential especially with the recent unrest of health workers and lack of studies conducted for Kitui County. This study also investigated on probable options likely suitable for making health facilities hospitable, and the reasons for

patient dissatisfaction. Most of the studies that had been previously conducted mainly focused on the provision of health care services in Kenya with no focus on the aspect of quality. For example, a study conducted by Akacho, 2014 on factors affecting provision of health care service delivery in Kenya. There were limited studies that focused on health service provision in Kitui County. Kitui County which performs below the national average by scoring a 0.53 on the Human development Index (HDI), (Population Action International, 2014) needs solutions and enhancements to ensure that basic services are provided sufficiently, effectively and efficiently. HDI is a combined measure of development that focuses on life expectancy, educational accomplishment and income. The county has had limited or tight access to basic services including health making the county an appropriate case for study and an investigation of the factors influencing quality of service delivery in Kitui County Referral Hospital would facilitate the growth of the facilities and other sub-county health facilities under the Referral hospitals' umbrella.

### **1.3 Purpose of the Study**

The purpose of this study was to investigate and analyze the factors that influence the provision of quality services in health care facilities at Kitui County Referral Hospital with a focus on management commitment to quality, devolution, capacity of health care personnel and the aspect of monitoring and evaluation for quality management.

### **1.4 Research Objectives**

The objectives of the study were:

1. To assess the influence of personnel capacity on the provision of quality health services in Kitui County Referral Hospital.
2. To assess the availability of resources and resource utilization on delivery of quality health care services in Kitui County Referral Hospital.
3. To determine patient socio-demographic characteristics that influences the provision of quality healthcare services in Kitui County Referral Hospital.
4. To determine the level of management commitment to the delivery of quality health services in Kitui County Referral Hospital
5. To assess the influence of monitoring and evaluation of health facilities and on quality of service delivery.



### **1.5 Research Questions**

1. What is the capacity of health care personnel in the provision of quality services in Kitui County Referral Hospital?
2. How does the availability and utilization of resources influence delivery of quality healthcare services?
3. How do patient socio-demographic factors affect the provision of quality health care services?
4. How does the level of management commitment influence the quality of health care service delivery?
5. What is the influence of monitoring and evaluation of health facilities on quality service delivery?

### **1.6 Significance of the Study**

The study aimed at providing an insight and understanding on the value of maintaining quality in health care facilities for the benefit of health workers, members of the public, the county government of Kitui, and interested parties who seek to understand the issues related to provision of quality health care services. The study gave a strategic direction to facility management and the improvement of quality management and improvement strategies efficiently and effectively. The county governments, with the help of this study, can also come up with policies that are inclusive and flexible concerning quality health care provision since health has since been devolved to the counties. The governments through this study can also come up with new or a re-structuring the existing strategies on ensuring that citizens have access to quality health care. This could reduce the number of cases reported to the Medical Board relating to provision of inadequate quality services and medical negligence. To the researchers and scholars, this study will provide a significant base upon which future studies related to the area of study can be conducted. The research study will also seek to show the gaps that exist in the area of study.

### **1.7 Basic Assumptions of the Study**

This study made assumptions that:

1. The capacity of health workers had an influence on quality service provision.

2. Resource availability and utilization had an influence on delivery of quality health care services.
3. Management commitment had an influence on the provision of quality health care services.
4. With monitoring and evaluation quality and performance will be improved in health facilities.
5. The sample selected was representative of the population
6. The respondents during the study were honest

### **1.8 Limitation of the Study**

This study was limited to the Kitui County Referral Hospital in Kitui County and intended to determine the factors that influenced the quality of service delivery in health facilities. The sample was only a representation of health facilities in the country. The behavior of one unit of study, in this case the Kitui County Referral Hospital did not reflect the behavior of similar entities. The aspect of time did not allow for a large sample size and studies with a larger sample size will be required to ensure proper generalization from the study findings. Additional studies will also be required to validate that the findings of one study can be generalized. Little research had been conducted on the subject of quality health care in Kenya and especially in Kitui County. This, however, opens an opportunity for the need of further research. Another limitation for this study was time, which is constrained leaving little time to investigate a research problem and also to measure change over time. This study was conducted for a period of 6 months and more would be needed to study quality in healthcare. This study touched only on a few issues that affect healthcare in Kenya; capacity of health personnel, patient socio-demographic factors, availability of resources and their utilization, management commitment, monitoring and evaluation and their influence on the provision of quality health care services in health facilities.

### **1.9 Delimitation of the Study**

This study covered only one health facility in Kitui County amongst numerous other facilities in the county and only the health personnel in that hospital participate with only a few county officers in the health docket. Only the patients in the hospital at the time of the study were interviewed and filled the questionnaires. The study only focused on investigating how quality of health care services was influenced by personnel capacity, resource availability and

utilization, patient socio-demographic factors, management commitment, and monitoring and evaluation and not any other issues of interest to the public, hospital or other researchers. Due to the huge number of participants in the study population, the participants of the study were individuals within Kitui County Referral Hospital.

## **1.10 Definition of Significant Terms**

### **Quality of services**

This is the degree to which a provided activity upholds customer satisfaction. It's an evaluation of expectations about a service and performance according to the clients' expectations.

### **Resources**

A resource is anything that is used to satisfy human needs, which can be economic or productive. Resources are needed to achieve the desired outcome.

### **Health care facilities**

These can be defined as buildings with necessary medical equipments and health care professionals aimed at practicing medicine.

### **Health care Personnel**

These are persons who have special education on health care and who are directly related to the provision of health care services. These are individuals in a hospital/health centre who have the potential to get exposed to infections and patients.

### **Monitoring and evaluation**

This is an essential management tool that checks whether the intended results are being achieved as planned.

## **Management commitment**

This is the direct participation of top level management in a specific and significantly important program of the organization for it to be successful

## **Socio-demographic factors**

They refer to a group defined by its sociological and demographic characteristics. Sociological factors are objective characteristics such as household status, values while demographic factors usually refer to age, marital status, sex, educational level and place of residence.

## **Personnel capacity**

The ability of a person employed in an organization to carry out stated objectives.

## **Quality of service delivery**

Service quality is defined as customer perception of how a service meets or exceeds their expectations.

### **1.11 Organization of the Study**

This study was organized into five chapters; the first chapter being the introduction that provides the general overview and comprehension of the topic of research study. It includes the background of the study, a statement of the study, which gives an insight on the reason for the study in that area. This chapter also includes the purpose of the study, research objectives as well as the assumptions, limitations and delimitations of the study. Literature that is relevant to this research topic is reviewed in chapter two. It aims to establish the factors that influence the quality of service delivery in health care with reference to the study's objectives. Chapter three examines the research methodology that will be used and includes, the research design to be used, the target population, sample selection, data collection instruments and procedures, and how the data collected will be analyzed. Chapter Four will deal with data analysis, presentation, interpretation and discussion of the findings and lastly chapter five will deal with the conclusions and recommendations as well as further proposed areas for research and contributions to the body of knowledge.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

This Literature review seeks to examine in detail the existing literature and studies that are related to the topic under study. The literature review for this research provides an overview of the factors influencing the delivery of quality services in health facilities. It begins by reviewing literature on the capacity of healthcare personnel in provision of quality services, the need of facilities and equipments for quality services, the influence of hospital leadership on quality, the impact of devolution on the quality of services delivered and the significance of monitoring and evaluation for quality improvement. This is followed by a review of theories relevant to this study and a representation of the relationship between the independent and dependent variables.

#### 2.2 Provision of Quality Healthcare Services

In Kenya, health sector is comprised of the public system and the private system with the public health sector accounting for about 51 percent of health facilities. It consists of national referral hospitals, county referral hospitals, sub-county hospitals, health centers and dispensaries. Public health facilities provide health services to the population at affordable rates. It is the role of the government both at the national and county levels to ensure that its populace can access health services. Quality of care in these health facilities is mostly defined in terms of clinical quality and patient perceptions of quality. They assist for the provision of care to continue and the continuation of health outcomes.

According to the Institute of Medicine (2001) quality is “the degree to which health care services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge”. Quality of healthcare according to the World Health Organization is the level of attainment of health systems’ intrinsic goals for health improvement, and responsiveness to legitimate expectations of the population. There are certain dimensions of quality of care, access, equity, efficiency and effectiveness, whereby effectiveness has some elements- effectiveness of clinical care and effectiveness of inter-personal care (Campbell, Roland and Buetow, 2000). The definition of quality is different among groups of people because they have different perspectives and understanding of what quality means. All

stakeholders in health care industry should therefore be involved when it comes to decisions for quality.

Services are adequate when they are provided to satisfy the reasonable expectations of the patients, the provider and the community. There are different stakeholders in the quality progress, which requires participative approach to promote ownership in a bid to improve quality in health care. These include the patient, the health care funder, health care service provider, health professionals and health service managers. All these stakeholders should be involved in the health care quality cycle, and made aware of the quality efforts and outcomes. Accountability among stakeholders has to be embraced as it shows whether quality care has been delivered. This can be possible if a monitoring and evaluation system is implemented. The evaluation of health care is, therefore, a multifaceted integrated process - the effectiveness of individuals as well as the effectiveness of the total health care delivery system need to be monitored and evaluated. If these results are to be made known to the various stakeholders, the evaluation system should be dependable, reflecting the actuality of the quality of health care being delivered by that particular health care delivery system (Muller, 1996). A quality management system should be in operation to minimize the risks and problems associated with health care management to enable delivery of quality health care.

### **2.3 Personnel Capacity and Provision of Quality Health care Services**

The role of personnel in the provision of quality healthcare is very critical and should be recognized by a health facilities management. The process of achieving an every time high quality of care in a dependable way consists of “doing the right thing right.” To do the right thing calls for physicians, nurses, and all healthcare providers to make the right choices regarding appropriateness of services and care for all patients (high-quality decision making), and to achieve it right requires skill, judgment, and timeliness of implementation (high-quality performance) (Buttell, Hendler, and Daley, 2007). The staff members are expected to improve the workplace and communicate widely. The capacity also needs to be built for both the county government leaders and the hospital staff. There are threats to quality that are as a result of incapacitated personnel; overuse (giving treatment of no value), underuse (failing to offer treatment) and misuse (errors and defects in treatment) (Chassin and Galvin, 1998). The health care personnel should understand that once an error or a defect occurs, there is no chance of

changing. This is a situation that is not subject to change and, therefore, the patient is at a risk of either losing their life or a deformity. The physicians and practitioners that are making treatment decisions must be doing so in a manner that properly uses resources with no overuse, underuse, or misuse. The provision of quality services is usually after the treatment decisions are made which lies on the performance of the health care personnel (high quality performance) and the facilities and equipment being utilized. The personnel should ensure that the correct procedures and practices are followed during treatment to ensure that there is no misuse (Buttell, Hendler, and Daley, 2007).

In order to create and maintain sustainable change in an institution, multiple changes have to be implemented. Efforts are made to renew the organization of work, to improve skills among staff and to transform the vision that pushes for the delivery of care and services. Skills development for staff integrates improvement methods and sharing of a common vision that will sustain improvement efforts (Baker, 2011). There has been a limitation in the capacity of personnel in relation to hospital management especially the Chief Executive Officers. It has been argued that hospital chiefs should be localized such that they should be Medical doctors. In order to improve quality in health care facilities, there is need to recruit local leaders. According to Baker (2011), Health care professionals, particularly doctors, play a critical role in the redesign of care delivery. For efficiency, effectiveness, accessibility and equity in healthcare, it is also significant that the individual in charge of health in county governments be a medical doctor. This is the best way to redesign services effectively and make sustainable changes in the care industry.

#### **2.4 Resource Availability and Utilization and their Influence in the Provision of Quality Health Care Services**

High quality outputs require high quality inputs. The availability of resources usually affects the quality of medical services provision. It will only be fair for the health organizations to provide their members of staff with the resources they need to provide high quality services. The relevant resources required in this case are financial, physical, consumables and information technology. All these resources must be managed appropriately both dependently and independently. Financial resources are the monies available for a business to operate in the form of cash, credit lines and liquid securities. Finances are required for the smooth operation of the

health facility. Quality of care and its relationship with finances is very critical. Poor quality care generates unnecessary costs through the underuse, overuse, and misuse of interventions and services (McLoughlin and Leatherman, 2003). Quality of care, on the other hand, will not just flow; investments have to be made in terms of training or infrastructure improvement or development. There is need to ensure that overall levels of expenditure on health are sufficient to provide the infrastructure necessary for health services such as medicines, equipment, facilities and providers to the entire eligible population. The capacity to manage the pressures that come along with the need to satisfy customers through the improvement of quality of care is determined by those who provide these services and those who provide funding (McLoughlin and Leatherman, 2003). Finances are required to purchase equipments and support services. There is need for the staff members to be educated on performing financial reviews and proper budgetary allocations are necessary to give room for evaluations and analysis. Financial accountability using monitoring, auditing and accounting mechanisms defined by the country legal and institutional framework is a requirement to ensure that allocated funds are used for the planned purposes (Oliveira-Cruz, Hanson, and Mills, 2001)

Physical resources are the tangible material resources that a business or an institution owns. Physical capital is composed of non-human healthcare infrastructure, such as buildings and medical equipment (Sleeth and Bach, 2012). Sufficient facilities and equipment must be available for the smooth running of health facilities. The utilization of facilities and equipment in health facilities should be monitored and regular assessments of satisfactoriness made through consultations with doctors and other staff in the facility. The availability of proper working equipment and facilities will have an impact in the quality of services delivered. This means that laboratory facilities should be sufficient, imaging equipment should be maintained properly, availability of IT equipment to ease operations and ensure accuracy. Information technology is critical to improving quality of healthcare. A study reported that almost a half of all severe medication errors resulted from insufficient information (Bates and Gawande, 2003). Clinical care information should be available across the institution which can only be made available through information technology. Implementation of information technology frameworks in health institution will enhance communication and faster delivery of reports. It will also improve accessibility whereby medical reports will be made available to all the relevant individuals. For example in the X-ray department, the images taken will be transferred immediately to the



radiologists who will study the images via the computer. Extensive implementation of health-care IT will play a significant role in addressing the quality agenda. The implementation of health-care IT has been conceived by many to be very expensive, and it will be essential to develop plans to synergize and regulate quality-improvement efforts, thus spreading the fixed-cost weight across several clinical service elements and institutions (Glickman, Baggett, Krubert, Peterson, and Schulman, 2007). Use of electronic health records is beneficial to the doctors and promotes easy access of data.

The hospital administration should facilitate the development of a Medical Equipment Management Plan that defines the mechanisms for interaction and oversight of the medical equipment used in the diagnosis, treatment, and monitoring of patients. The purpose of this plan is to ensure that equipment utilized in patient care is safe, available, accurate, and affordable. That explains why it is a necessity that health facilities especially at district and national levels to have an engineering department, which provides guidelines in selection of medical equipment and training of users prior to use of acquired equipments. The facility should also maintain records of all the equipment available in the hospital in the plan. In addition, all equipment should be ranked in relation to the risks associated with it. All medical equipment and facilities should be maintained and inspected as per the requirements of the manufacturer.

Consumables are those resources that are disposable and are used regularly in the delivery of healthcare. These include drugs, gloves and syringes and make up the biggest percentage in the day to day expenditures of a hospital (Sleeth and Bach, 2012). Health systems resources are the means that are available to a healthcare system for delivering services to the population and are, therefore, very critical in the pursuit of high quality health care. Resource constraints in low-resource settings can affect quantity and quality of system resources. It will be essential that all the branches of the health system are properly balanced to avoid a mismatch of resources.

## **2.5 Patient Socio-demographic factors and their influence on provision of quality health care services**

Socio-demographic factors refer to a group defined by its social and demographic-population characteristics. They include gender, age, and level of education, employment

status, marital status and number of children. Socio-demographic factors influence the interaction between a provider and the patient and consequently the quality of services. Healthcare workers must be conscious of the socio-demographic characteristics of their patients in order to provide high-quality services. Patients' financial status may affect the quality of healthcare services. Sometimes the patient cannot afford the costs associated with his or her treatment probably because they have no source of income and decides to cancel the treatment. They might eventually not get treatment or be held at the hospital premises for lack of payment.

Quality of patient care depends directly on the quality of patient education and responsibility. Patients' familiarity of their rights influences their expectations of quality service. More educated patients might have more sensible expectations of the healthcare providers than the less educated or un-educated. The level of satisfaction from provision of quality health services is sometimes influenced by gender of the patient. Male patients could exhibit more level of satisfaction as compared to female patients. Marital status is also a major contributor of assessing the level of satisfaction by patients. Married patients might register more satisfaction with the services provided than single people or vice versa. Some studies show that single patients are easily satisfied with the services provided by the health facility (Afzal, Rizvi, Azad, Rajput, Khan and Tariq, 2014). Patient satisfaction is a good indicator of health care quality.

## **2.6 Management Commitment and its Influence on the Provision of Quality Healthcare Services**

Management commitment refers to the direct participation by the highest level management in all specific and important safety aspect or programs of an organization. Management commitment provides the motivating force and resources for organization and controlling activities within the organization. Managers in healthcare have a legal and moral responsibility to make sure that a high quality of patient care is provided. It is a role of hospital leaders to influence the staff and push the quality agenda forward failure to which the institution will fail or reduce their competitive advantage. Senior executives who sit at the top of an organization, and their guidance facilitate setting the direction of the organization and guide

quality improvement endeavors. These leaders produce ideas, convey new ideologies, and propagate them throughout their organization. Leadership in health care institutions is extremely critical to the success of the facility but also very challenging (Schyve, 2009). For a health care organization to succeed, it has to work as a system whereby all the components of the institution come together for the benefit of succeeding and provide quality services. This requires the leadership of the 'leaders' of the institution to work together in order to achieve its goals (Schyve, 2009). Senior executives of a health facility and their leadership assist in setting a direction for the organization and also guide it towards quality improvement efforts. However, there are different types of leaders and the leader that is thought to bring impact in an organization is a transformational leader. Transformational leaders are thought to realize goals by providing intellectual inspiration, individualized deliberation and inspiration motivation to clearly communicate the significance of an organization's mission and vision (Glickman, Baggett, Krubert, Peterson, and Schulman, 2007). Successful leaders have the following characteristics, personal motivation, and communication skills, flexible, ability to deal with people, action-oriented judgment and capacity to motivate others (Osland, Kolb and Rubin, 2000).

One of the greatest challenges facing the quality of these health care facilities is lack of commitment by top management. For genuine commitment to occur there should be a clear appreciation of a positive benefit/cost ratio. Existing literature on quality improvement and leadership are largely qualitative and limited as found by Waldman et al (1998) who also noted that there is a link between leadership and quality. There are problems with the management that make it difficult for quality to be improved, whereby there is inadequate knowledge among the hospital's administration, poor communication between administration and physicians, disjointed communication lines among the stakeholders, insufficient investment and disorganized committee structures. Management commitment in health care systems plays a vital function in the development of plans, implementation of initiatives to build capability, the development of closer association between micro-systems and levels of care, and in the safeguarding from external influences that threaten to weaken or undermine leadership efforts (Baker, 2011). The time that the management spends on quality of care issues is relevant in the determination of their level of commitment to quality. It is also relevant that they play a role in the quality

enhancement plans. The managers' impact on quality of care should also be assessed to determine the level of management commitment.

#### **2.4 Monitoring and Evaluation and Provision of Quality Health care Services**

Monitoring is simply the routine tracking of information about a programme or project and its intended outputs, outcomes and impacts. The major aim of monitoring is to measure progress towards achieving programme or project objectives. Monitoring is a continuous assessment of project implementation in relation to the project plans, resources, infrastructure and use of services by project beneficiaries. Evaluation on the other hand is a process that involves systematic collection; analysis and interpretation of project related data that can be used to understand how the project is functioning in relation to the project objectives. It is usually rigorous and is based on scientific analysis of information about a programme's activities, characteristics and outcomes to determine the merit or worth of a specific programme.

System inputs, processes and outputs reflect health systems capacity, whereas outcomes and impact reflect health systems performance (Boerma, T. Abou-Zahr, C., Bos, E., Hansen, P., Addai, E. and Low-Beer, 2009). The health care providers and workers should evaluate in terms of misuse, overuse or underuse and should ask questions like: Are resources utilized appropriately? Are the practitioners ordering too many tests or administering too much drugs? Are they ordering too little tests? Are the drugs and therapies consistent with the patients' illness? Are there abnormalities, disabilities or deaths reported as a result of medical errors and defects? Have finances been disbursed? Have policies and plans been implemented as scheduled? Has the quality of services improved? Has service utilization and coverage been enhanced? Are services responsive to the requirements of the customers? Has efficiency improved?

Monitoring and evaluation must, therefore, tackle performance in terms of access, quality, efficiency, health status, responsiveness, customer contentment and financial risk protection. Health care facilities should have monitoring and evaluation frameworks which should include inputs, processes, outputs, outcomes and impacts. The outputs, outcomes and impacts are largely dependent on the inputs and processes that are utilized in the Monitoring and evaluation plan. The individuals in charge of monitoring and evaluation should select indicators that would support the smooth running of the M&E plan. These indicators could be; the number of periodic

reports delivered by all department heads, the number of health workers trained in monitoring and evaluation, number of performance improvement, planning and resource allocation choices made based on the M&E results, the percentage of patients satisfied by the facilities services. Evaluation is significant in assessing the performance of the hospital in terms of efficiency, effectiveness and equity (Aday, 2004).

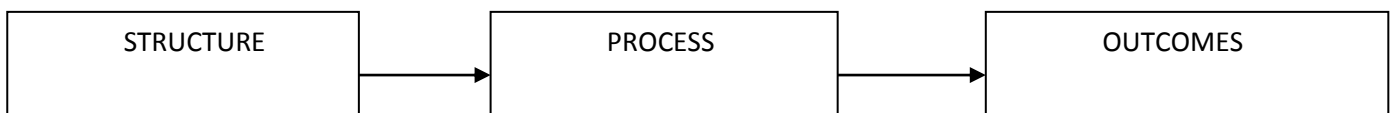
## 2.5 Theoretical Framework

Theories are formulated to explain, predict, and understand phenomena and, in many cases, to challenge and extend existing knowledge within the limits of critical bounding assumptions. The theoretical framework is the structure that can hold or support a theory of a research study (Swanson, 2013). The theory below was used to support the study;

### 2.5.1 Donabedian Quality of Care Framework

The theoretical and empirical framework of this study will be derived from Donabedian's quality of care framework. The concept of Healthcare quality was defined by Avedis Donabedian in his model: Structure Process-Outcomes. He distinguishes three components of quality: technical quality, interpersonal quality, and amenities. Technical quality relates to the effectiveness of care in generating achievable health gain. Interpersonal quality refers to the level of accommodation of patient needs and preferences. Amenities include features such as comfort of physical surroundings and attributes of the organization of service provision. He assumed that the measurement of Healthcare quality should be based on three components: Structure, Process and Outcomes and that each component has an influence on the next one.

**Fig. 1: Components for measuring healthcare quality (Source: Donabedian, 1988)**



#### Structure

Structures of health care are defined as the physical and organizational aspects of care settings. These include facilities, equipment, personnel, operational and financial processes supporting medical care (Donabedian, 1988).

## **Process**

Process refers to the approaches or means of providing health care which includes the services and treatments the patients receive. Process indicates what is actually done in offering and receiving care. It includes the patient's actions in looking for care and carrying it out, as well as the practitioner's activities in making a diagnosis and recommending or executing treatment (Donabedian, 1988). In health care, processes can be: Patient flow processes, Information flow processes or Material flow processes.

## **Outcomes**

This refers to the result or impact of care on the health status of patients and populations (Donabedian, 1988). It may also be defined in terms of improvements in patient's knowledge and behavior and degree of patient satisfaction. Outcomes can be classified as: Clinical for example, mortality, Functional, for example, ability to perform daily activities, Perceived, for example, patient satisfaction, Financial for example cost savings and Utilization i.e. productivity. These elements of quality care assessments as described by Donabedian are dependent on each other. A good structure will result to a good process and consequently a good outcome. It is, therefore, relevant as that these elements are established in such a way that they can be used to assess the quality of care. The health outcomes are largely dependent on medical care offered to the patient. The coordination of a health facility is dependent on the structures that are in place, for example the information technology in place. If better structures are not in place in order to deliver quality care, there is need for structural changes (McDonald, Sundaram, Bravata, Lewis, Lin, Kraft, McKinnon, Paguntalan, and Owens, 2007). In this case it would involve the purchase of information technology systems which could in turn have a positive impact on health outcomes.

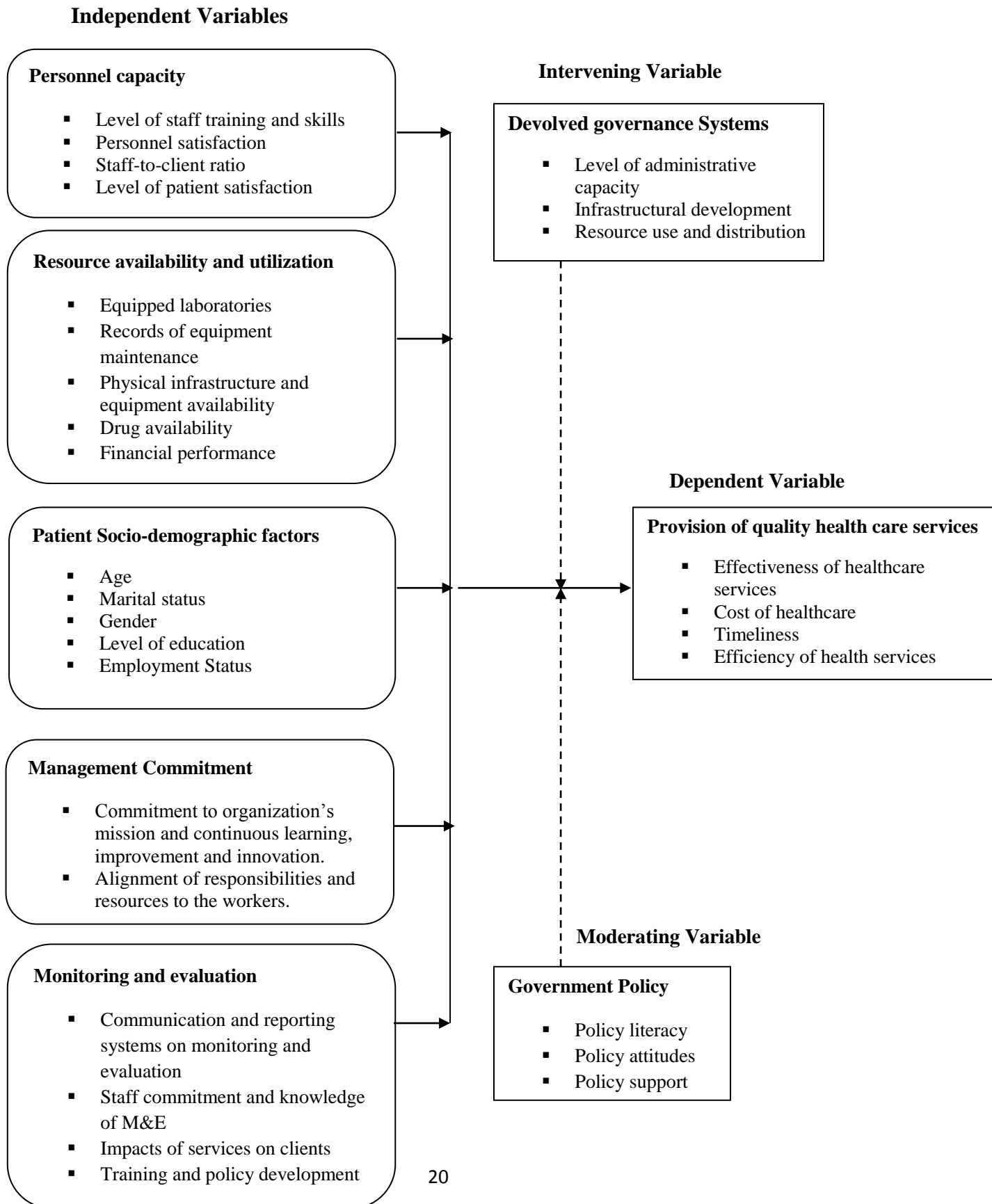
The most relevant aspect of this triad is outcome since the aim of health care services and health status of the patients are represented in this element. The impact of health care services on the status of a patient's health and the reflection of the patient's health status is known as outcome. If high-quality health care is provided, not only will the symptoms of patient's illness lessen, but the complications will be also delayed, and the patient's ability to handle the complications will be enhanced; therefore it will result to satisfaction (Donabedian, 2003). Therefore, the Donabedian theory for quality of care is relevant in the implementation of quality

systems. It will also ensure that quality efforts get systematically evaluated in order to improve outcome (Kunkel, Rosenqvist, and Westerling, 2007). This may in turn increase the chance of effective utilization of resources. However, culture has to be encompassed in the process as Donabedian did not include culture in his framework. The institution can develop a culture of quality in their daily operations.

## **2.6 Conceptual Framework**

The current study was guided by the conceptual framework below, used to explain the interrelationship between the variables. Miles and Huberman (1994) defined a conceptual framework as a visual or written product, one that “explains, either graphically or in narrative form, the key things to be studied, the major factors, concepts, or variables and the supposed relationships among them”

**Fig. 2: Conceptual Framework**





The independent variables for this study are personnel capacity, resource availability and utilization, patient socio-demographic factors, management commitment and monitoring and evaluation. The dependent variable for the study is provision of quality health care services. The provision of quality health care services in this study was dependent on personnel capacity, resource availability and utilization, patient socio-demographic factors, management commitment monitoring and evaluation processes. These independent variables determined whether the services provided in the hospital observe quality guidelines and requirements. The independent variables were used as indicators for measuring quality of services in the Kitui County Referral Hospital.

Personnel capacity was used to determine health outcomes and the overall performance in terms of sustainability, coverage and quality. This study assessed the level of personnel capacity at Kitui County Referral Hospital to determine whether quality health care services are provided. Resource availability and utilization at the Hospital was also used to determine the level of quality in health care services. Poor or inadequate distribution of hospital; resources had an effect on the provision of quality healthcare services. Resource availability also determined whether the hospital was capable of meeting the needs of the patients adequately, without straining the available resources. Patient socio-demographic factors such as age, gender, marital status, and education level and employment status of the patients were used as determinants of patients' perception of quality, and their satisfaction with the services provided with regards to their various statuses. The provision of quality services is also dependent on the management commitment of the hospital. Poor leadership or lack of proper management might indicate that the services provided are of poor quality. The type of commitment by the management of the health facility determined the behavior of the employees in the middle and lower levels. It was also indicative of whether the middle and lower level management were committed to quality. Lastly, monitoring and evaluation structures at the hospital were used to determine whether quality and sustainability were embraced. Quality is a continuous process which has to be monitored and the results evaluated. Lack of proper monitoring and evaluation systems would indicate that the efforts of the management to enhance quality would not be sustainable. Government policy is the moderating variable which in this case is determined by the level of

policy literacy, policy support and policy attitudes. Government policy can either have a negative or a positive influence on the provision of quality health care. Policy literacy determined the attitudes by hospital staff on the policy but did not necessarily affect policy support. The intervening variable in this study is devolved governance system, which could have had an influence on the provision of quality services through infrastructural development in health facilities, administrative capacity and resource distribution. These might have had an effect on the health care provision at Kitui County Referral Hospital as health services in Kenya have been devolved to the county governments.

### **2.7 Gaps in Literature Reviewed**

The existing research indicated that research had been done on healthcare provision in Kenya, factors affecting the provision of health services in Eldoret, Kenya. Little or no empirical research has been conducted dealing with provision of quality health services in Kitui County or even other parts of Kenya. In order to bridge this gap, a study into the factors influencing the quality of health care service provision in Kitui County is needed. A systematic review of the topic and area of study indicated that little has been done in terms of research to assess the quality of healthcare at Kitui County Referral Hospital or any other health facility in Kitui County. However, prior studies have been conducted in other parts of the country but had not included certain aspects such as monitoring and evaluation, devolved governance systems and patient socio-demographic factors. This created a gap for research. In this study, more factors for quality improvement in healthcare had been included and were analyzed through the use of qualitative and quantitative methods to better illustrate the effects on particular factors on quality of healthcare provision. This study also analyzed and assessed the influence of human behavior on quality by studying both outpatients and inpatients, the managers of the health facility and various personnel as they perform their duties. It also assessed the organizational interventions targeting quality of care at Kitui County Referral Hospital.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter provides a description of the research design, target population, the sampling procedures as well as the methods used to select the sample representative of the population. The chapter further explores the data collection instruments, procedures and the validity and reliability of the research instruments to be selected. Data analysis techniques and operational definition of variables is also looked at in this chapter.

#### **3.2 Research Design**

Owing to the complexity of healthcare systems and its multi-dimensionality, research on healthcare quality is methodologically complicated, thus the study employed an exploratory research design to explore the factors influencing the quality of service delivery in health care facilities in Kitui County Referral Hospital. The exploratory designs' intent was to answer questions about the current state of individual variables without the availability of prior structures and plans for the study. Exploratory studies are meant to provide an understanding of the meanings that people draw from situations and activities in which they are involved. This study represented an exploratory effort in understanding factors affecting healthcare services quality in Kitui Hospital. The designs utilized a census method to collect data from the target population in order to determine the current status of the population in relation to topic of study, to ensure that the views of all groups are represented it attempts to explore such things as behavior, attitudes, values and characteristics. A qualitative approach was suitable to answer the research questions. A qualitative research usually produces comprehensive and in-depth information regarding a much smaller number of people and cases. This enhances understanding of the cases and situations studied and enhance the validity of the data obtained. Exploratory studies rely much on qualitative approaches. However, qualitative approach suffers the limitations in generalizing the results to a larger population. In this design, all the individuals were allowed to give their personal experiences instead of the group views. This was achieved through personal interviews as well as semi-structured and unstructured questionnaires.

### 3.3 Target Population

A target population can be defined as the entire set of units for which data is used to make inferences. The study population included patients from the ages of 0-65 years, the members of staff of Kitui County Referral Hospital working in various departments, managers at county levels nurses, doctors, laboratory assistants, pharmacists, clinical officers and the management. It also involved the county officials responsible for the health docket. Items under study also included the medical equipment available at the hospital. Target population included Patients of the age 0-65, individuals willing to answer to interviews or fill the questionnaires (Patients and staff) and staff available during the study (Including hospital staff and county health officials). It will exclude patients who are in serious conditions, patients who have mental health issues and the members of staff undertaking medical procedures.

**Table 3.1: Target Population**

(Source: Kitui County Level V Hospital Records)

<b>Target Population</b>	<b>Population</b>
Patients (outpatients per day)	170
Patients (Inpatients)	120
County health officials	3
Doctors	12
Nurses	33
Laboratory assistants	9
Pharmacists	5
Clinical officers	15
Medical superintendent	1
<b>Total</b>	<b>364</b>

Patients were the major respondents, and those of the ages 0 to 65 were targeted, also individuals willing to answer interviews or fill the questionnaires (Patients and staff) and staff available

during the study (Including hospital staff and county health officials). The study excluded patients who were in serious conditions, patients who had mental health issues and the members of staff undertaking medical procedures or attending to patients.

### **3.4 Sampling Procedures**

A sample is “a smaller collection of units from a population used to determine truths about that population” (Field, 2005). This study used a census a method of research because of the heterogeneity of the population; therefore, a large sample was required for the study to ensure that the results are conclusive, reliable, complete and valid. (Cooper and Schindler, 2006). The target population was heterogeneous and consisted of patients and staffs from various departments. This study used both probability and non-probability methods of sampling. Probability sampling was used to pick the groups with a large number of potential participants, determined through the Mugenda and Mugenda (1999) formula, which asserts that 10% is a good representation of the target population. From the total population of 364, a sample size consisting of 41, patients, hospital staff and county officials was used with the proportionate distribution shown in Table 3.2. Non-probability sampling was used in the study because not each item or individual has a chance of being included. The study was dependent on availability of individuals from the population. It therefore, employed convenience and purposive sampling. Convenience sampling is a non-probability sampling method that relies on data collection from population members who are conveniently available to participate in the study (Gravetter and Forzano, 2015). Limited control of participants is always expected during the study of health institutions. Convenience sampling in this case was used partly in the collection of data for the patients as it is based on the availability.

Purposive sampling is a non-probability technique of sampling that involves the selection of certain units based on a specific purpose rather than randomly (Tashakkori and Teddlie, 2003). Purposive sampling seeks to address specific purposes related to research questions rather than representativeness. The cases selected in this type of sampling were cases that were relevant to give the desired results. Purposive sampling was used on this study targeting partly the hospital staff and county health officials. Some were hard to get members of the target population, hence purposive sampling. A sample size of 41 was used as shown in table 3.2.

According to the Mugenda and Mugendi formula that asserts that 10% is representative of the total population in descriptive study:

**Patients (Outpatient)**

$$\frac{10}{100} * 170 = 17$$

**Patients (Inpatients)**

$$\frac{10}{100} * 120 = 12$$

**County Officials**

$$\frac{10}{100} * 3 = 0.3 \sim 1$$

**Doctors**

$$\frac{10}{100} * 12 = 1.2 \sim 2$$

**Nurses**

$$\frac{10}{100} * 33 = 3.3 \sim 4$$

**Lab Assistants**

$$\frac{10}{100} * 9 = 0.9 \sim 1$$

**Pharmacists**

$$\frac{10}{100} * 5 = 0.5 \sim 1$$

**Clinical Officers**

$$\frac{10}{100} * 15 = 1.5 \sim 2$$

**Table 3.2: Sample size**

<b>Target Population</b>	<b>Population</b>	<b>Sample Size (10%)</b>
Patients (outpatient per day)	170	17
Patients (Inpatients)	120	12
County health officials	3	1
Doctors	12	2
Nurses	33	4
Laboratory assistants	9	1
Pharmacists	5	1
Clinical officers	15	2
Medical superintendent	1	1
<b>Total</b>	<b>364</b>	<b>41</b>

### **3.5 Data Collection Instruments**

The study utilized both primary and secondary data. Primary data refers to the information a researcher obtains in the field, from the subjects in the sample. Secondary data refers to the information obtained from research articles, books and journals. Primary data was collected through unstructured personal interviews, open-ended questions and closed-ended questions. The data was gathered by using semi-structured questionnaires. Questionnaires are efficient, cost effective and time efficient tools of data collection (Bryman, 2004). They obtain comprehensive information, including the elements that are inherent in the personal attributes of the respondents. Each item in the questionnaire was developed to address a specific objective or research question. They were distributed to all sampled groups of individuals in Kitui County Referral Hospital and Kitui county officials in the health docket. The questionnaires were closed-ended and open-ended to obtain as much relevant information as possible. Because of the nature of the research design as exploratory, the questionnaires were semi-structured and unstructured. They were two questionnaires, one for the patients, and another for the members of staff for the county health docket and Kitui County Referral Hospital.

The interview was used to interview select staff and patients who could not write for various reasons, including their education level or their health status so as to get their opinions on the various research objectives. The interview was carried out with staffs that were not issued with

questionnaires. The interview is able to collect information which otherwise may not have been captured in the questionnaire (Mugenda and Mugenda, 2003).

### **3.5.1 Pilot Testing of the Instruments**

A pilot study is a small scale trial run of all the procedures planned for use in the main study (Monette, Sullivan, and DeJong, 2002). Pilot testing of research instruments was relevant especially on questionnaires because it was an opportunity of testing the research questions, and a chance to reduce problems and errors in the study. Piloting would also reduce costs likely to be incurred by faulty instruments. In this study, the questionnaires were given out to different individuals so as to test the instruments before the actual administration. The errors found in the questionnaires were rectified before running the actual study. There were two questionnaires, Appendices I-II, which had 7 sections each for this study.

### **3.5.2 Validity of the instruments**

Validity relates to the appropriateness of the measure to assess the construct it intends to measure (Burns and Burns, 2008). To ensure that the instruments accurately measured the variables of interest to the study, each of the items in the questionnaire was tested by conducting a pilot study by administering the questionnaire to some individuals, to ascertain if the questionnaire was valid enough to be used and collect enough and valid information. To ascertain the validity of the instruments, content validity was used to check whether an instrument provides adequate coverage of the topic of study. The researcher prepared the instruments in close consultation with the supervisor, whose expert judgment helped improve content validity.

### **3.5.3 Reliability of the Instruments**

Reliability is related to the question of whether the results of a study are repeatable (Bryman, 2012). According to Burns and Burns (2008), reliability is the consistency and stability of findings that enables findings to be replicated. To ensure that the instruments accurately measured the variables of interest to the study, each of the items in the questionnaire was discussed with peers and the research supervisor. Reliability was established using the split half method. Questionnaires were administered to two groups including patients and personnel. The internal consistency of the questionnaire was also determined by using Cronbach's Alpha. This method estimated reliability of test scores by means of a single administration of a test. The more the test items inter-correlate, the higher the internal reliability. The greater the range of test



items, in terms of abilities needed to establish the correct answers, the lower the relationships of the performance on the different test items (Burns and Burns, 2008). According to Gupta (2004), a standard minimum value of 0.6 is recommended. This study achieved 0.75, which was considered a good measure for ascertaining reliability in the study.

### **3.6 Data Collection Procedures**

Data was collected for the research project which would determine the quality of healthcare at Kitui County Referral Hospital by the researcher. Before the collection of data, a letter from the University of Nairobi was obtained and also a permit from Nacosti obtained. Information was obtained from informants including doctors, nurses, county health officials, laboratory assistants, patients, pharmacists, clinical officers and management present at the time of research study. To ensure that all information collected was relevant, questionnaires and structured interview guides were utilized for the study. Once data was collected by the researcher, it was recorded and entered into a database, i.e SPSS and Minitab. It was further analyzed and presented.

### **3.6 Data Analysis Techniques**

This process involved summarizing the collected data and putting it together so that the researcher could meaningfully organize, categorize and synthesize information from the data collecting tools. In the data analysis, the researcher examined each piece of information in each instrument for completeness, organized data as per research questions and for coding. Content analysis was used to detect and code factors affecting quality of healthcare services, organize them into logical and meaningful categories, formulate connections between and among categories, and explain the link between categories. For qualitative data, patterns or themes were identified and for all the research questions data was analyzed descriptively using frequency tables, the Statistical Package for Social Science (SPSS) version 20 and Minitab version 18.

### **3.7 Ethical Considerations**

Ethics has become the foundation of conducting meaningful and effective research. During a research study, researchers should consider whether they are causing physical or emotional harm with their data collection techniques and research procedures. One may violate the informants' right to privacy by asking sensitive questions or by trying to access records which may contain personal information, concealed observation, making public personal information offered by

informants who would prefer their data to be made private and failing to observe cultural values of the study group. In order to deal with these issues it will be vital that: informed consent was used on the patients before the study began, not investigating sensitive issues before a good relationship is established with the informant, ensuring confidentiality of data obtained and getting to know enough about the culture and traditions of the informants. It was important to observe privacy and confidentiality or as the informant requires (Patton, 1990). It was also important that all the answers given by informants were not tailored to favor a certain research direction. Informed consent was obtained from patients and an approval from NACOSTI was also obtained to ensure that the research process is official and certified. Most importantly, the researcher sought permission from various authorities representing the hospital. The researcher also consulted the supervisors on matters pertaining the research study.

### 3.8 Operational Definition of Variables

This is a way of defining a variable such that it is measurable or can be manipulated in the real world.

**Table 3.3: Operationalization of Variables**

<b>Variable</b>	<b>Type</b>	<b>Indicators</b>	<b>Measurement Scale</b>	<b>Data Analysis Method</b>
Personnel capacity	Independent	-Level of staff training and skills -Personnel satisfaction -Staff-to-client ratio -Level of patient satisfaction	Ordinal	Descriptive statistics, median, percentiles, correlation, mean
Resource use and availability	Independent	-Equipped laboratories -Records of equipment maintenance -Infrastructural development	Ordinal	Descriptive statistics, median, percentiles, correlation
Management commitment	Independent	-Commitment to organization's mission	Ordinal	Descriptive statistics, median,

		and continuous learning, improvement and innovation.  -Alignment of responsibilities and resources to the workers		percentiles, correlation
Monitoring and evaluation	Independent	-Communication and reporting systems on monitoring and evaluation  -Staff commitment and knowledge of M&E  -Impacts of services on clients  -Training and policy development	Interval	Descriptive statistics, mean, standard deviation
Provision of Quality health care services	Dependent	- Effectiveness  -Cost  -Timeliness  -Efficiency	Ordinal, interval	Descriptive statistics, median, percentiles, percentages, correlation
Devolved governance systems	Intervening	-Level of administrative capacity  -Financial performance  -Citizen involvement  -Physical infrastructure and equipment availability  -Drug availability	Ordinal	Descriptive statistics, median, percentiles, correlation

Government policy	Moderating	-Policy literacy -Policy attitudes -Policy support	Ordinal	
-------------------	------------	--	---------	--

## CHAPTER FOUR

### DATA ANALYSIS, PRESENTATION AND INTERPRETATIONS

#### 4.1 Introduction

This study was conducted in Kitui County Level IV Hospital and its purpose was to determine the factors that influence the provision of quality services in health care facilities. This chapter deals with the analysis of collected data from the area of study into meaningful information and its presentation to forms that are easily comprehended. Data was collected through questionnaires, interviews and observation methods. Data obtained from the interviews conducted is also outlined and discussed in relation to the various aspects of the research objectives.

Data for analysis was both qualitative and quantitative and it was obtained from the administered questionnaires and interviews seeking clarification from the target population. Data collected from the study was from various respondents in the county referral Hospital and partly county health executives. Information was required to assess different aspects that are of concern in health facilities with relation to quality of services.

Given that this study had different types of respondents: patients, health care personnel and county officials, the succeeding section of this chapter will discuss and present the findings according to the different questionnaires administered to the different typed of respondents.

#### 4.2 Questionnaire Response Rate

The researcher distributed 50 questionnaires to the patients, hospital personnel and county workers.

**Table 4.1 Questionnaire Response Rate**

<b>Respondent</b>	<b>Questionnaires sent</b>	<b>Questionnaires returned</b>	<b>Response Rate (%)</b>
Patients	25	21	84

Health care personnel and county officers	25	19	76
<b>Total</b>	50	40	80

According to Mugenda and Mugenda in their book Educational Research Competence for Analysis and Application, 1999 observed, the respondents' can be evaluated as shown below;

1. 70% - very good response
2. 60% - good response
3. 50% - adequate for analysis and reporting

Therefore a response rate of 80% is a very good response and offers a good basis for analysis of data. The response rate was achieved as a result of proper co-ordination with medical superintendent and the chief executive officer of health services in Kitui County. This indicates that the findings on this research were adequate for data analysis, presentation, conclusions and giving recommendations.

### **4.3 Demographic Data of Respondents**

The following section presents the demographic information of respondents.

#### **4.3.1 Patients' Demographic Information**

The study targeted patients, health care personnel and county health officials. This section outlines the demographic information of patients, that is, their gender, their age bracket, their level of education, and their place of residence.

##### **4.3.1.1 Gender of Patients**

Out of the 21 patients that participated in this study, 11 (52.4%) were female while 10 or (47.6%) represented the male. The said demographics are illustrated in Table 4.2 below.

**Table 4.2: Distribution of Respondents Gender**

Gender of Patients	Frequency	Percentage (%)
Female	11	52.4
Male	10	47.6
<b>Total</b>	<b>21</b>	<b>100</b>

**4.3.1.2 Age Bracket of Patients**

2 or 6.9% of the patients that participated in this study were between 0-16 years while 11 were 18 to 33 years, 10 were between the ages of 34 and 49 while 6 patients were between 50 and 65 years old. Table 4.3 below captures the age of patients described in the preceding sentence.

**Table 4.3: Age distribution of Patients**

**Age distribution of respondent**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-16	2	9.5	9.5	9.5
	17-33	11	52.4	52.4	61.9
	34-50	5	23.8	23.8	85.7
	51-67	3	14.3	14.3	100.0
	<b>Total</b>	<b>21</b>	<b>100.0</b>	<b>100.0</b>	

**4.3.1.3 Level of Education of Patients**

Table 4.4 below represents the levels of education attained by the patients who participated in this study.

**Table 4.4: Patient distribution of by education**

	<b>Level of education</b>			
	Frequency	Percent	Valid Percent	Cumulative Percent
Bachelor's	1	4.8	4.8	4.8
Diploma/certificate	5	23.8	23.8	28.6
Secondary school	9	42.9	42.9	71.4
Other	6	28.6	28.6	100.0
Total	21	100.0	100.0	

Among all the 21 patients who participated in this study, none had a PhD or a Master's Degree, and only 1 (4.8%) had Bachelor's Degree. Majority of the respondents' highest level of education was Secondary School at 42.9%. The patients who had attained a diploma or certificate were 5 (23.8%). Those represented in the 'others' group had either attained a primary certificate or had not attained it. There were a total of 6 (28.6%) in that category. The data is indicative of lowered levels of education amongst patients, and especially inpatients as observed during the study.

#### **4.3.1.4 Place of Residence of Patients**

All the 21 patients that participated in the study lived in Kitui County.



#### 1.2 4.3.2 Health Care Personnel and County Officials' Demographic Information

This section presents the demographic information of health care personnel and county officials, that is, their gender, age bracket, the highest level of education attained, the respondents' place of work, position held, and the duration worked.

To begin with, a total of 19 Health Care Personnel and County Officials participated in this study in which the response rate was higher than anticipated. Table 4.5 below represents the response rate relative to the sample size.

##### 4.3.2.1 Gender of Health Care Personnel and County Health Officials

Of the 19 health care personnel and county officials that participated in this study, 10 or 52.6% were female while 9 or 47.4% were male and this is illustrated in Table 4.5 below.

**Table 4.5: Gender Distribution of HealthCare Personnel and County officials**

Gender of Health Care Personnel and County Health Officials	Frequency	Percentage (%)
<b>Female</b>	10	52.6
<b>Male</b>	9	47.4
<b>Total</b>	<b>19</b>	<b>100</b>

##### 4.3.2.2 Age Bracket of Health Care Personnel and County Officials

The respondents were asked to state their ages, and the results are indicated in Table 4.6 below;

**Table 4.6: Age distribution of Health Care Personnel and County Officials**

<b>Age Bracket of Health Care Personnel and County Officials</b>	<b>Frequency</b>	<b>Percent (%)</b>
<b>Below 18</b>	0	0
<b>18-33</b>	10	52.6
<b>34-49</b>	7	36.8
<b>50-65</b>	2	10.6
<b>Total</b>	<b>19</b>	<b>100</b>

Categorisation in accordance to the age of respondents was done in a number of ranges as shown in table 4.6 above. 10 or 52.6% staff members were between the ages of 18 and 33, 7 or 36.8% were between 34 and 49 years old, while only 2 or 10.6% were between the ages of 50 and 65.

#### **4.3.2.3 Highest Level of Education Attained by Health Care Personnel and County Officials**

The respondents were asked to state their levels of education, and the results are indicated in Table 4.7 below;

**Table 4.7: Healthcare Personnel and County Health Officials education status**

<b>Highest Level of Education of Health Care Personnel and County Officials</b>	<b>Frequency</b>	<b>Percentage (%)</b>
PhD	0	0
Master's Degree	2	10.5

Bachelor's Degree	5	26.3
Diploma/Certificate	12	63.2
Secondary School	0	0
Others	0	0
<b>Total</b>	<b>19</b>	<b>100</b>

Majority of the respondents at 63.2% had a Diploma or Certificate as their highest level of education. 5 or 26.3% of the respondents had a Bachelor's Degree while 2 or 10.5% had a Master's Degree. No respondent in this study had a PhD. The table X below illustrates the highest level of education of the respondents.

This particular question wished to find out if indeed the level of education amongst the health care personnel influenced them in providing for quality health care services. While no respondent had a PhD, most of the respondents, in a later question, indicated that they would be willing to participate in further training programs. This therefore might be an indicator that the current personnel do not feel that they have an optimum level of education necessary to provide quality services at the hospital.

#### **4.3.2.4 Place of Work of Health Care Personnel and County Officials**

The respondents were also categorised in terms of their place of work: either the Kitui County Level IV Hospital (Health Care Personnel) or the Kitui County Government (County Officials).

**Table 4.8: Area of Work distribution**

<b>Place of Work of Education of Health Care Personnel and County Officials</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Kitui County Level IV	15	78.9

Hospital		
Kitui County Government	4	21.1
<b>Total</b>	<b>19</b>	<b>100</b>

15 or 78.9% of the respondents worked at the Kitui County Level IV Hospital while 4 or 21.1% worked for the county government as shown in Table 4.8 above.

#### **4.3.2.5 Positions Held by Health Care Personnel and County Officials**

The positions held by the respondents fell into 11 general categories, these are: Nurse, Health Records Officer, Clinical Officer, Technical Officer, Medical Officer Intern, Medical Superintendent, County Medical Laboratory Service Coordinator, Nursing Officer, Doctor, Dental Services, and Pharmaceutical Services. The following table 4.9 represents the aforementioned positions.

**Table 4.9: Positions held by respondents**

<b>Positions Held by Respondents</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Nurse	5	26.3
Health Records Officer	1	5.3
Clinical Officer	2	10.5
Technical Officer	1	5.3
Medical Officer Intern	1	5.3
Medical Superintendent	1	5.3
County Medical Laboratory Service Coordinator	1	5.3

Nursing Officers	2	10.5
Doctor	3	15.8
Dental Services	1	5.3
Pharmaceutical Services	1	5.3
<b>Total</b>	<b>19</b>	<b>100</b>

This question to the health care personnel sought to find out if there are any similarities or lack thereof when it comes to particular positions held by the health care personnel. Indeed, as will be discussed later, respondents in certain similar positions responded in similar ways.

#### **4.3.2.6 Length of Employment of Health Care Personnel and County Officials**

Lastly, this study sought the duration that the respondents have worked at their respective places of work. 6 or 31.6% of the staff members had worked for less than a year while 5 or 26.3% had worked for more than a year but not more than 5 years. 2 or 10.5% had worked between 6 and 10 years, 1 or 5.3% had worked for a period between 11 and 15 years while 5 or 26.3% had worked for more than 16 years. The information is represented by Table 4.10 below;

**Table 4.10: Length of Employment of Respondents**

<b>Duration Worked by Health Care Personnel and County Officials</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Less than 1 year	6	31.6
Between 1 and 5 years	5	26.3
Between 6 and 10 years	2	10.5
Between 11 and 15 years	1	5.3
More than 16 years	5	26.3
<b>Total</b>	<b>19</b>	<b>100</b>

This indicates that majority of the respondents were new employees who had worked for less than one year while the least had worked for 11 to 15 years.

#### **4.4 Personnel Capacity and Provision of Quality Health Care Services**

##### **4.4.1 Patients' Responses on Personnel Capacity**

This particular research objective intended to measure the extent to which the respondents (in this case, patients) believed that the health care personnel had the capacity to provide quality health care services at the hospital. Additionally, the objective was measured using four questions, if: the health care personnel are trained and qualified, if the health care personnel are friendly, the kind of personal experience that the patients have had in the hospital, and finally the kind of customer skills the patients experienced in the hospital. The respondents' responses to the said questions are outlined in Table 4.11 below

**Table 4.11: Patients responses on Personnel Capacity**

	Measure	Poor (Frequency)	Fair (Frequency)	Average (Frequency)	Good (Frequency)	Excellent (Frequency)	Total Responses
i.	Trained and Qualified Staff	<b>1</b> (4.76%)	<b>2</b> (9.52%)	<b>7</b> (33.33%)	<b>7</b> (33.33%)	<b>4</b> (19.05%)	21
ii.	Friendliness of Staff	<b>4</b> (19.05%)	<b>4</b> (19.05%)	<b>6</b> (28.57%)	<b>5</b> (23.81%)	<b>2</b> (9.52%)	21
iii.	Personal Experience	<b>2</b> (9.52%)	<b>5</b> (23.81%)	<b>2</b> (9.52%)	<b>9</b> (42.86%)	<b>3</b> (14.29%)	21
iv.	Customer Skills	<b>3</b> (14.29%)	<b>3</b> (14.29%)	<b>6</b> (28.57%)	<b>5</b> (23.81%)	<b>4</b> (19.05%)	21

From the data outlined above, majority of the patients felt that the health care personnel were well trained. And none felt that the staff's training was poor. However, when it came to the friendliness of the health care personnel, majority of the patients stated that the staff were not friendly enough (below average) Additionally, 79.2% of the patients indicated that they had an average and above average personal experience while seeking the services from the hospital. Even though the largest percentage of the respondents stated that the staff members had poor customer skills, the cumulative number of respondents thought that the staff members had average and above average customer skills.

#### 4.4.2 Health Care Personnel Responses on Personnel Capacity

As asserted previously, this research question was meant to be answered by both patients and health care personnel in Kitui County Level IV Hospital. Regarding the latter, this question measured the level of satisfaction on four main aspects: the availability of opportunities to improve their knowledge and skills, the comparability of work activities and the skills possessed by the health care personnel, the satisfaction based on the training activities available, and their level of satisfaction based on the feedback given by patients. The scale used was ordinal which had values of 1 to 10 with 1 representing ‘not satisfied at all’ and 10 ‘completely satisfied’. The mean responses of the 19 respondents is outlined in Table 4.12 that follows. **Table 4.12: Healthcare personnel responses on Personnel capacity**

	<b>Measure</b>	<b>Mean Response</b>
I.	Available opportunities for improving skills and knowledge	5.879
II.	Comparability between work activities and skills	6.7
III.	Level of satisfaction based on training activities	6.6
IV.	Level of satisfaction based on the feedback given by patients	5.5

Majority of the respondents were of the view that they were somewhat satisfied with the available opportunities for them to improve their skills and knowledge. This was captured by a mean of 6.1 out of a maximum response of 10. This meant that the hospital had provided just what was enough to ensure that the personnel have the capacity to deliver services to patients.

Regarding the comparability of the skills that the health care personnel had with the work activities, the mean response was 6.7 out of a maximum of 10. This could be taken to mean that majority of the work activities were related to the skills that the staff members had or the skills possessed by the staff members were sufficiently used in the work activities.



Asked whether they were satisfied with the training activities provided by the employer, the health care personnel’s mean response was 6.6 out of maximum of 10. This meant that even though the employer had exceeded the bare minimum, there was still room for improvement with regards to equipping the personnel with more skills and knowledge through training.

Lastly, the health care personnel were barely satisfied with the feedback given by patients; a mean rating of 5.5 out of a maximum of 10. Probed further, the personnel stated that either, the feedback given was not sufficient or it was not clear or not given at all. This, therefore, pointed on the need to educate the patients on the significance of evaluating the services given at the hospital through giving feedback. All the senior nurses interviewed and who responded to the questionnaires were satisfied with the activities. On the basis of the work activities in the determination of personnel capacity.

### **2.7 4.5 Resource Availability and Utilization and their Influence in the Provision of Quality Health Care Services**

#### **2.2 4.5.1 Patients’ Responses on Resource Availability and Utilization**

To measure this research objective, patients were asked different questions with regards to the availability of relevant resources and their utilization in the hospitals. The said questions were: if there were sufficient laboratory services in the hospital, if there are enough accommodation beds, and if the available machines are in working conditions. The patients’ responses are recorded in Table 4.13 that follows.

**Table 4.13: Patient Responses on Resource Availability and Utilization**

	<b>Measure</b>	<b>Yes</b>	<b>Sometimes</b>	<b>No</b>	<b>Total Response</b>
I	<b>Availability of sufficient laboratory tests facilities</b>	13 61.9%	7 33.3%	1 4.8%	21
II	<b>Sufficiency of accommodation beds</b>	6 31.6%	4 21.1%	9 42.9%	19
III	<b>Efficiency in hospital machines</b>	9 42.9%	4 21.1%	8 38.0%	21

Majority of the patients (55.2%) stated that there were sufficient test facilities such as laboratory services at the hospital and that they did not need to go to other clinics to have some tests done. However, 27.6% of the respondents stated that the availability of the test facilities was not constant- an indicator of either down times or high demand of such services. Another group comprising of 17.2% respondents were confident to state that the test facilities were not sufficient, maybe out of personal experiences.

Accommodation, being a key resource in a hospital setting, was also tested. Majority of the patients who participated in the study felt that there were no sufficient accommodation beds at the hospital as indicated in Table 4.13 above. This occurrence led to over-crowding at the wards, especially the maternity ward, whereby some patients were seen sharing beds as many as three per bed. Additionally, a few patients felt that the availability of bed was not constant while only 28.5% felt that the accommodation beds were sufficient. This is an indicator that the hospital has to invest in more accommodation facilities for patients. It was, however, observed that the actual maternity wing had begun sinking and the patients were transferred to another ward.

On the efficiency of the machines available at the hospital, majority of the patients indicated that the machines were efficient while 17.2% indicated that the efficiency in the machines was not constant and a third of the respondents felt like the machines did not meet the required objectives in a cost and time effective manner.

#### 3.2 4.5.2 Health Care Personnel Responses on Resource Availability and Utilization

On resource availability and utilization, the health care personnel and county health workers were required to indicate their level of satisfaction based on 3 questions which were measured using an ordinal scale with values of 1 to 10 with 1 representing 'not satisfied at all' and 10 'completely satisfied'. The questions were: access to equipment necessary for performing tasks, the maintenance of buildings and medical equipment, and the maintenance of hygiene in the hospital. The mean response for the responses given by the health care personnel is presented in Table 4.14 that follows.

**Table 4.14: Healthcare Personnel Responses on Resource Availability and Utilization**

	<b>Rating</b>	<b>Mean Response</b>
I	<b>Access to necessary equipment for work</b>	4.4
II	<b>Maintenance of buildings and medical equipment</b>	4.4
III	<b>Hygiene maintenance</b>	5.1

The health care personnel were not satisfied with the available equipment necessary for them to perform their work activities. This is based on a mean response of 4.4 out of a maximum of 10. The main reasons for the low level of satisfaction were obsolete or non-performing equipment and also the inadequacy in the equipment available.

Just like the access to the necessary equipment question, the respondents felt the same way with regards to the maintenance of building and medical equipment. This assertion is based on a 4.4 mean rating out of a maximum of 10. Perhaps the similarity in responses between the previous and the current question is that the obsolescence and poor maintenance of equipment inhibited the personnel from accessing to them.

On the hygiene maintenance question, and based on the mean of the responses from the rating scale, the respondents were almost neutral as to whether they were or were not satisfied with the hygiene maintenance at the hospital. The mean rating for this particular question was 5.1 out of a maximum of 10. This means that the hygiene at the hospital was barely satisfactory. Most patients interviewed at the neonatal unit were satisfied with the hygienic services provided by the personnel to care for their premature babies.

## 4.6 Patient Socio-demographic Factors and their influence on provision of quality health care services

### 4.6.1 Patients' Responses on their Socio-demographic Factors

The age of respondents is very significant in mapping the socio-demographic factors. From the assessment of the respondents, most patients were between the age of 18 and 35 years and the lowest age group of the respondents was from 0 to 16 years according to the patients.

**Table 4.15: Patients' Responses on their Socio-demographic Factors**

AGE	MARITAL STATUS	EDUCATION LEVEL	EMPLOYMENT STATUS
28	Single	Secondary	No
27	Single	Secondary	No
38	Married	Certificate	Yes
28	Married	Primary	No
29	Single	Primary	No
30	Married	Secondary	Yes
32	Widow	0'level	No
52	Married	Diploma	Yes
34	Married	Primary	Yes

<b>32</b>	Married	Secondary	No
<b>16</b>	Single	Secondary	No
<b>27</b>	Married	Certificate	Yes
<b>21</b>	Single	Primary	No
<b>37</b>	Married	Secondary	No
<b>2</b>	Child	Child	Child
<b>35</b>	Married	Diploma	Yes
<b>60</b>	Married	Secondary	Yes
<b>36</b>	Married	Secondary	No
<b>34</b>	Married	Diploma	Yes
<b>34</b>	Single	Secondary	Yes
<b>41</b>	Married	Primary	No

### Age of the Respondents

The most frequent age of the respondents was 34 years followed by 28 years, 27 years and 32 years with other ages distributed amongst the patients from age 2 years to 60 years. The youngest patient was 2 years old while the oldest was 60 years old.

**Table 4.16: Age of the Patients**

Age	Frequency
<b>2</b>	1
<b>16</b>	1
<b>21</b>	1
<b>27</b>	2
<b>28</b>	2
<b>29</b>	1
<b>30</b>	1
<b>32</b>	2
<b>34</b>	3
<b>35</b>	1
<b>37</b>	1
<b>38</b>	1
<b>41</b>	1
<b>52</b>	1
<b>60</b>	1
Total	<b>21</b>

### **Marital Status of Patients**

From the patients' responses, it was noted that they were either single, married or widowed. The table below indicates that 28.5% of the patients were single, while 61.9% of the respondents were married. 4.8% of the respondents were widowed and others were 4.8%, which represented a minor.

**Table 4.17: Marital status of Patients**

Marital Status	Frequency	Percent
<b>Single</b>	6	28.5%
<b>Married</b>	13	61.9%
<b>Widow</b>	1	4.8%
<b>Other</b>	1	4.8%

From the responses above, we can conclude that most of the respondents were married.

### **Education Level of patients**

The level of education of patients in determining the socio-demographic factors of patients was distributed to primary level, secondary, diploma, certificate and others. At the primary level as represented in the table below were 23.8% respondents, while at the secondary level, there were 47.6% respondents. There were 9.5% respondents at the certificate level, 14.3% with diploma education and others had a 4.8%.

**Table 4.18: Level of education of patients**

Level of Education	Frequency	Percent
<b>Primary</b>	5	23.8%
<b>Secondary</b>	10	47.6%
<b>Certificate</b>	2	9.5%

<b>Diploma</b>	3	14.3%
<b>Others</b>	1	4.8%
<b>TOTAL</b>	<b>21</b>	<b>100</b>

From the table above, the most patients had an education level of 47.6% while the least had a percentage of 4.8%. The ‘others’ in this case represents the minor who was part of the study.

### **Employment status**

The question on employment status was closed ended and the respondents were supposed to either respond with a Yes or a No.

**Table 4.19: Employment Status of Patients**

Are you Employed?	Yes	No	others
	9 (42.8%)	11 (52.4%)	1 (4.8%)

From the table above, 42.8% of the respondents were employed while 52.4% of the respondents were unemployed and 4.8% were in the group of others. The ‘others’ in this case was a child who was part of the study, although the guardian stated that she was unemployed. This indicates that most of the patients were not employed, while a few stated that they were self-employed during the interviews and a significant percentage was employed.

## **4.6.2 Health Care Personnel Responses on Patient Socio-demographic Factors**

### **4.6.2.1 Age of most patients**

When asked the ages of most patients, the personnel gave different responses depending on their experiences. The question was open ended, which gave them room to express themselves and from the responses, all ages were represented. From infants up to 70 years of age as they indicated. However the most age quoted was 18-35 years.



#### 4.6.2.2 Influence of marital status on the type of services received

The healthcare personnel were asked if marital status influenced the type of services provided at the facility. The question was also open ended but their responses were limited to ‘Yes’ or ‘No’.

**Table 4.20: Influence of Marital Status on Service Provision**

Does marital status of a patient influence the type of services one receives?	Yes	No	Total Responses
	3 (15.8%)	16 (84.2%)	19 (100%)

From the table above, marital status does not have an influence on the type of services one receives while at the facility as represented by 84.2% of the respondents. 15.8% of the respondents stated that marital status had an influence on the type of services provided.

#### 4.6.2.3 Influence of patients’ level of education on the demand of quality services

In a bid to establish the influence of socio-demographic on provision of quality healthcare services, the level of education of patients and its influence on the needs and demands was assessed. The responses were limited to ‘Yes’, ‘sometimes’ or ‘No’.

**Table 4.21: Influence of patients’ level of education on the demand of quality services**

Does the level of education influence the patients’ needs and demands while at the hospital?	Yes	Sometimes	No	Total Responses
	5 (26.3%)	4 (21.1%)	10 (52.6%)	19 (100%)

The table above indicates that 26.3% of the respondents thought that the level of education influenced the patient needs and demands. When interviewed, they indicated that the more the patient was educated, the more they knew their rights and demanded for their rights and also their level of expectations were raised. According to 21.1% of the healthcare personnel respondents, sometimes education influenced the patients' needs and demands and sometimes it did not influence in any way. 52.6% stated that education did not have an influence on their needs and demands, which constituted of the biggest percentage.

#### **4.6.2.4 Economic Status of Patients**

The study further wanted to establish the economic status of most patients, which could only be determined by engaging the healthcare personnel.

**Table 4.22: Economic Status of Patients**

Patients Who Visit Are Mostly Of?	High Economic Status	Low Economic Status	Both	Total Responses
	0 (0%)	13 (68.4%)	6 (31.6%)	19 (100%)

The table above indicates that there was no patient purely of high economic status according to the healthcare personnel. However, most patients were of low economic status at a percentage of 68.4%. 31.6% other respondents stated that the economic status of most patients was both high and low.

### **4.7 Management Commitment and its Influence on the Provision of Quality Healthcare Services**

#### **4.2 4.7.1 Patients' Responses on Management Commitment**

Regarding this research objective: management commitment, the patients were required to indicate whether they believed that the employees of the hospital are qualified to perform their roles and responsibilities and also whether or not they had interacted with the Medical

Superintendent of the hospital. The responses of the said respondents are summarized in Table 4.23 below.

**Table 4.23: Patients’ Responses on Management Commitment**

	Measure	Yes	Not Sure/ Maybe	No	Total Response
<b>I</b>	<b>Are the people employed qualified to fulfill their roles and responsibilities?</b>	16 (76.2%)	5 (23.8%)	0 (0%)	21
<b>II</b>	<b>Have you interacted with the Medical Superintendent of Kitui County Referral Hospital?</b>	3 (14.3%)	7 (33.3%)	11 (52.4%)	21

Asked whether they think that the health care personnel were qualified to perform their roles and responsibilities, a slight majority (at 51.7%) of the patients agreed with the statement while 48.3% were not entirely sure. No respondent, however, thought that the staff members were unqualified to perform their duties and responsibility. This partially means that the staff members are viewed to be competent by the patients.

The interaction of the patients with the Medical Superintendent of the hospital was tested because the latter represents the management whose key role is to ensure that the needs of the clients (in this case, the patients) are sufficiently met. However, a substantial majority of 72.4% had never interacted with the Medical Superintendent of the hospital. Most of the respondents were not aware of the existence of such a title in the hospital. This raised some concerns because as stated earlier, the management has a role to ensure that they are in the know as to whether the needs of the clients are met. This further begged the question, whose fault was it that led to such a low interaction between the management and the patients? However, it was noted that the current medical superintendent was very new to the job, as the previous one had resigned.

#### 4.7.2 Health Care Personnel Responses on Management Commitment

To measure this research objective, an array of questions were used. The questions, which were distributed to health care personnel, ranged from the leadership skills of managers to management's commitment to quality improvement to sufficiency of staff members. Different scales were used to measure the said questions and the results are summarized in the tables that follow.

**Table 4.24: Health Care Personnel Responses on Management Commitment**

	Rating	Completely Satisfying	Not Satisfying	Total Responses
<b>I</b>	<b>Leadership skills of supervisors</b>	13 (68.4%)	6 (31.6%)	19

68.4% of staff members who participated in this study believed that the leadership skills of their supervisors were completely satisfying while 31.6% found such skills to unsatisfying. This could be taken to mean that the management's leadership skills are a way of showing their commitment towards achieving the core objective of the organization: the provision of quality healthcare services.

	Rating	Yes	No	Neutral	Total Responses
<b>II</b>	<b>Is management committed to quality improvement and control?</b>	12 (63.2%)	2 (10.5%)	5 (26.3%)	19
<b>III</b>	<b>Are staff members involved in planning, developing and implementing quality documents?</b>	5 (26.3%)	11 (57.9%)	3 (15.8%)	19

Regarding the first question in Table 4.24 above, majority of the respondents agreed that the management was committed to quality improvement and control. However 10.5% of the respondents did not agree with this statement. The results in this particular question imply that the management engaged in quality improvement and control activities. It was, however, observed that there was an absence of a quality statement in the different departments of the hospital.

Even though the majority of the members of staff agreed that the management was committed to quality improvement and control, they did not feel that they were involved in planning, developing and implementing quality documents. In fact only 26.3% agreed that they were involved in such a process and these were mainly the doctors, some clinical officers and senior nurses.

	Rating	Yes	Maybe	Not aware	Total Responses
<b>IV</b>	<b>Is transparency and accountability observed through the management?</b>	4 (21.05%)	11 (57.9%)	4 (21.05%)	19

Regarding whether transparency and accountability were observed by the management, majority of the respondents were unsure (at 57.9%) while 21.05% were not aware if the said attributes were being observed. Only 21.05% of the respondents agreed to the question.

	Rating	Yes	No	Not Sure	Total Responses
<b>V</b>	<b>Are there enough members of staff to provide health services?</b>	1 (5.2%)	17 (89.4%)	1 (5.2%)	19

An overwhelming majority of 89.4%, when asked whether there were enough members of staff to provide health services, stated that this was not the case. It is important to note that sufficiency of staff is a key contributor to the quality of services delivered to patients. Therefore, this finding could mean that the current personnel have to work for extra hours in order to deliver quality services or quality services are not delivered at all; a question that will be answered in succeeding sections of this paper.

#### **4.8 Monitoring and Evaluation and Provision of Quality Health care Services**

##### **4.8.1 Patients' Responses on Monitoring and Evaluation**

To measure this research objective on the patients, the researcher adopted three questions: whether the patients are given a chance to give feedback, whether the services offered at the hospital have improved in the past 1 year and also the duration taken before a patient is attended to by a healthcare personnel.

**Table 4.25: Patients' Responses on Monitoring and Evaluation**

Rating	Agree	Strongly Disagree	Neither	Total Responses
Opportunities to give feedback	<b>6</b> <b>(28.6%)</b>	<b>9</b> <b>(42.8%)</b>	<b>6</b> <b>(28.6%)</b>	<b>21</b>
Improvement in services offered in the past 1 year	<b>15</b> <b>(71.4%)</b>	<b>2</b> <b>(9.5%)</b>	<b>4</b> <b>(19.1%)</b>	<b>21</b>

Regarding the opportunities to give feedback, 55.2% of the respondents states that this was provided while only 3.4% disagreed with the statement. This generally implies that the hospital gives an opportunity to the patients to give feedback regarding the services rendered at the hospital. Most of the patients interviewed, however, had never found a reason for giving feedback. Most of them felt that it was a lot of work to give feedback, some felt that they would be shunned by the hospital personnel, others simply did not have sufficient time.

An overwhelming majority of 58.6% indicated that the services offered at the hospital have improved over the past one year. However, 20.7% did not agree with this statement. This indicates a favourable trend especially due to the fact that it is coming from the patients. It also indicates that the new management is working harder to raise the level of patient satisfaction.

In addition to the two statements, the researcher also wanted to know the time it took for patients to be attended to by a health care personnel at the hospital. Table 4.26 below outlines the patients' responses on the same.

**Table 4.26: Time Taken For a Patient to Be Attended To**

0 minutes to 1 hour	1 hour to 2 hours	More than 2 hours	Total Responses
<b>12 (57.1%)</b>	6 (28.6%)	3 (14.3%)	21

Majority of the patients (at 62.1%) took between 0 minutes to 2 hours before being attended to. However, a guardian of a patient who was 1 year old indicated that it had taken them more than 2 hours to be attended to due to the fact that there was insufficiency of specialised doctors to attend to certain needs of infants and lack of adequate emergency services. The hospital does not actually have a paediatrician.

#### **4.8.2 Health Care Personnel Responses on Monitoring and Evaluation**

To measure this research objective, the researcher used an array of questions which revolve around the availability of an environment where employees can deliver quality health care services to patients. The results are illustrated and discussed in succeeding paragraphs.

**Table 4.27: Health Care Personnel Responses on Monitoring and Evaluation**

	Rating	I agree	I disagree	Total Responses
<b>I</b>	<b>Supervisor takes time to listen to staff</b>	16	3	19

		(84.2%)	(15.8%)	
<b>II</b>	<b>Training for monitoring and evaluation processes is provided</b>	11 (57.9%)	8 (42.1%)	19

Most of the respondents, 84.2%, indicated that their respective supervisors take time to listen to them. Open communication is key when delivering quality services because both parties can communicate about any issues that might hinder the provision of the same.

A slight majority of 57.9% also agreed that training for monitoring and evaluation processes is provided while 42.1% of the respondents who were mainly the nurses and the laboratory technician disagreed on this question. This therefore implies that training for monitoring and evaluation processes is holistic; that is, it should encompass the entire workforce in the hospital.

The table below outlines the responses of healthcare personnel on availability of time for different activities as listed in Table 4.28 below.

**Table 4.28: Healthcare personnel responses on availability of time for different activities**

<b>Activity</b>	<b>Respondents who feel that time is made available</b>
Post graduate and further professional training	8 (42.1%)
Training in the methods and techniques of Q & S improvement	9 (47.4%)
Multi-disciplinary patient-health status discussions	8 (42.1%)
Internal or external audit	5 (26.3%)
Participation in quality improvement projects	13 (68.4%)
Development of protocols or guidelines	8 (42.1%)



This particular set of questions had an objective of testing whether time is made available for certain activities that are crucial to delivering quality health care services.

On post graduate and further professional training, only 42.1% of the respondents believed that time was made available for such. These statistics indicate that in order for quality services to be provided, it is important for more time to be created with an objective of enhancing the personnel's skills and knowledge through training.

Asked whether they have received any training on the methods and techniques of quality and safety improvement, only 47.4% indicated that they indeed have received such training. Most of the respondents who agreed to the statement were nurses. However, being a hospital environment, it is important that all staff members are trained on matters Q&S.

Only 42.1% of the respondents felt that time was made available for multi-disciplinary patient-health status discussions. Again, most of the respondents who felt this way were nurses particularly those in senior positions.

Only 26.3% of the respondents were aware of any internal or external audit at the hospital. These were mainly those in senior positions of management. The other staff members, doctors and nurses, were not aware of any internal and external audit activities in the organisation. This finding was quite strange since audits should ideally involve all parts of the institution and not just the upper levels of management.

A 68.4% majority of the respondents agreed that time was indeed made available for their participation in quality improvement projects. Again, this is a good sign as it shows that there are strides that are being made with regards to improving the quality of services provided at the hospital. Majority of the respondents were not aware of any time that is usually made available for the development of protocols and guidelines. Only 42.1% stated that time was available for such. Again, most of the respondents who responded this way were nurses.

The follow table represents the respondents' responses regarding the promoters of quality and safety improvements in the hospital.

**Table 4.29: Promoters of quality and safety improvement in the hospital**

Promoter	Respondents who ticked off the box
<b>Nobody in particular</b>	0
<b>The steering group/committee</b>	10
<b>The quality and safety officer</b>	5
<b>An external company/advisor</b>	3
<b>The professionals (care-providers)</b>	6
<b>The directors or management</b>	7
<b>The heads of department/supervisory staff</b>	11

At least all employees felt that there was a promoter of quality and safety improvements in the hospital. Majority of the personnel felt that the promoter of Q & S improvements was their head of department or supervisory staff. Close to the majority, some respondents indicated that there was a steering group or committee whose mandate is to promote Q & S improvements. However, very few respondents, as shown in Table 4.29 above, stated that the promotion of Q & S improvements was done by an external company or advisor.

The Table below represents the respondents’ responses on the existence of certain documents that are meant for policy and control cycle.

**Table 4.30: Extent of Documentation Existing In the Hospital**

Document	No, Document not available	Yes, document available but not used	Yes, document available and is used	Total Responses

		part of annual policy and control cycle	part of annual policy and control cycle	
<b>Written description of the mission</b>	0 (0%)	9 (47.4%)	10 (52.6%)	<b>19</b>
<b>Description of care processes</b>	2 (10.5%)	11 (57.9%)	6 (31.6%)	<b>19</b>
<b>Written description of quality and safety policy</b>	2 (11.8%)	10 (58.8%)	5 (29.4%)	<b>17</b>
<b>Quality and safety plans (including plans for improvement)</b>	3 (21.4%)	4 (28.6%)	7 (50%)	<b>14</b>
<b>Quality and safety manual</b>	5 (33.3%)	3 (20.0%)	7 (46.7%)	<b>15</b>
<b>Monitoring and evaluation plan</b>	4 (28.6%)	7 (50.0%)	3 (21.4%)	<b>14</b>
<b>Resource utilization plan</b>	1 (7.1%)	7 (50.0%)	6 (42.9%)	<b>14</b>

All the respondents agreed that a written description of the mission was available in the hospital. However, 52.6% or the majority of the respondents indicated that there was a written mission available in the organization which is used as part of the annual policy and control cycle while the rest did not think the mission statement was used as part of the annual policy and control cycle.

A majority of 89.5% agreed that the description of care processes was available. Of the total number of respondents, 57.9% did not think that the description of care processes was used as part of the annual policy and control cycle only 31.65% did.

88.2% agreed that a written description of the quality and safety policy was available. However, only 29.4% stated that the said policy was used as part of the annual policy and control cycle. Around 58.8% did not feel that the said policy was used for the annual policy and control cycle while 11.8% believed such a policy was non-existent in the organization.

Again, a majority of 78.6% agreed that quality and safety plans including plans for improvement were available in the hospital. Half of the total respondents indicated that these plans are usually used as part of the annual policy and control cycle while 28.6% did not think they were used for this purpose.

66.7% of the total respondents agreed that the quality and safety manual was available in the organization. However, only 46.7% felt that this particular manual was used as part of the annual policy and control cycle while 20% did not think the manual was utilized for this purpose.

Around 71.4% of the respondents agreed that the monitoring and evaluation plan was in place. Of the total respondents, only 21.4% specified that this particular plan was used for the annual policy and control cycle; 50% disagreed that this was the case.

An overwhelming majority of 92.9% stated that the resource utilization plan was available in the hospital. However, half of the respondents felt that the resource utilization plan was not used as part of the annual policy and control cycle. 42.9% were of the opinion that the said plan was used for the annual policy and control cycle.

#### **4.9 Provision of Quality Health Care Services**

To summarise on the quality of health care services, the researcher adopted a common measure for both respondents that measure the effectiveness, cost, timeliness and efficiency in offering services at the hospital. The findings are presented in the sections that follow.

##### **4.9.1 Patients' Responses on the Provision of Quality Health Care Services**

The patients were asked different questions to determine their satisfaction on the provision of quality healthcare services.

**Table 4.31: Patients responses on provision or quality healthcare services**

<b>Factor</b>	<b>Poor</b>	<b>Fair</b>	<b>Average</b>	<b>Good</b>	<b>Excellent</b>	<b>Total Responses</b>
<b>Effectiveness of Services</b>	0 (0.0%)	7 (33.3%)	6 (28.6%)	6 (28.6%)	2 (9.5%)	21
<b>Cost of Services</b>	3 (14.3%)	5 (23.8%)	7 (33.3%)	5 (23.8%)	1 (4.8%)	21
<b>Timeliness in Offering Services</b>	4 (19.0%)	8 (38.1%)	1 (4.8%)	7 (33.3%)	1 (4.8%)	21
<b>Efficiency in Offering Services</b>	0 (0.0%)	6 (28.6%)	6 (28.6%)	9 (42.8%)	0 (0.0%)	21

On the effectiveness of the services, majority of the respondents indicated that the services were average and above average; a cumulative percentage of 55.1%. In general terms, this means that the personnel usually deliver what is expected of them. At least no respondent termed the effectiveness of services to be poor.

Majority of the respondents found the cost of services to be average and above average; also a cumulative figure of 58.6%. 20.7% of the respondents, however, rated the cost to be poor while another 20.7% rated the costs to be fair.

Cumulatively, 65.5% of the respondents found the timeliness of the services to be average and above average. This is a relatively good rating which means that services are rendered on time. This is in line with the finding that majority of the patients who participated in this study stated that the waiting time ranges from 0 minutes to an hour.

On the efficiency of the services provided at the hospital, 58.6% of the respondents rated the efficiency of the services to be fair while 41.4% thought that the efficiency of the services was good.

#### 4.9.2 Health Care Personnel Responses on the Provision of Quality Health Care Services

The healthcare personnel were asked different questions to evaluate their views on the provision of quality healthcare services.

**Table 4.32: Health Care Personnel Responses on the Provision of Quality Health Care Services**

<b>Factor</b>	<b>Poor</b>	<b>Fair</b>	<b>Average</b>	<b>Good</b>	<b>Excellent</b>	<b>Total Responses</b>
<b>Effectiveness of Services</b>	0 (0.0%)	1 (5.9%)	8 (47.1%)	3 (17.6%)	5 (29.4%)	17
<b>Cost of Services</b>	0 (0.0%)	3 (17.6%)	2 (11.8%)	8 (47.1%)	4 (23.5%)	17
<b>Timeliness in Offering Services</b>	1 (5.9%)	3 (17.6%)	4 (23.5%)	4 (23.5%)	5 (29.4%)	17
<b>Efficiency in Offering Services</b>	0 (0.0%)	1 (5.9%)	7 (41.2%)	2 (11.8%)	7 (41.2%)	17

Majority of the respondents rated their own effectiveness in rendering the services to be fair (47.1%). However, cumulatively 94.1% of the personnel rated average and above average. This implies that the respondents feel that they are delivering the services they ought to be delivering.

47.1% of the respondents felt that the cost of services offered was good. Overall, the majority of the respondents indicated that the cost of services was average and above average: a cumulative percentage of 82.4%. None of the respondents felt that the cost of services was poor.

Again, a majority of the respondents rated their timeliness as average and above average. However, 23.5% of the respondents stated that the timeliness was below average (both poor and fair). This might be attributed to the fact that majority of the respondents indicated that the staff members were not sufficient.

Regarding the efficiency in offering health care services, majority of the respondents rated themselves as average and above average (a cumulative percentage of 94.1%). Only 5.9% of the respondents indicated that their efficiency was below average.

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATION

#### 5.1 Introduction

This chapter concludes this project report. A summary of the research is presented, and findings of the study are discussed and interpreted. Recommendations for further research end the chapter. The scope of the following conclusions is limited to the context and unique characteristics of Kitui County Referral Hospital. Thus, applied to other situations and facilities, these conclusions may yield incorrect assumptions. These conclusions, still, can be appropriate in the process of recognising and relating with the factors that could influence the quality of services in healthcare facilities.

#### 5.2 Summary of Findings

This section presents an overview of the findings of the research study on the factors that influence the provision of quality services in healthcare facilities in Kitui County Referral Hospital in Kitui County. The following were the research findings:

##### 5.2.1 Objective 1: Influence of personnel capacity on the provision of quality health services

The research study was focussed on patients and healthcare personnel and both groups had their views on personnel capacity and its influence on provision of quality services. For the healthcare personnel, four factors were used to determine personnel capacity; available opportunities for improving knowledge and skill, work activities as compared to skills, training opportunities and feedback by patients. The factor of available opportunities for the personnel had a mean of 5.789 which is above average in a scale of 1 to 10 used for data collection. This indicated that the most of the healthcare personnel were satisfied with the available opportunities for improving knowledge and skills. It was noted that 4.211 (mean) of those dissatisfied were junior employees, mostly those who had worked for less than 1 year in the institution. The personnel were asked if their work activities compared to their skills. A mean of 6.421 was realized from the respondents, and on a scale of 1-10 to determine their satisfaction, most of the respondents were satisfied with their work activities as compared to their skills. The healthcare personnel were also supposed to respond on the training opportunities available. A mean of 6.211 was realized in a sample of 19 healthcare personnel, which is above average. Only 4.789 were dissatisfied with the



training opportunities provided, which is a significant measure that should be addressed by the management. In terms of provision of feedback by the patients, a mean of 5.158 was obtained from a sample of 19 on a scale of 1-10. This mean is slightly above average, indicating that there needs to be improvement in the area of providing feedback from patients. Most of the patients interviewed stated that they feared providing feedback as it was likely to influence service provision. Some indicated that there was no room for providing feedback as most of the employees were not as friendly as expected. The grand mean is 5.895 indicating that the findings concerning personnel capacity for healthcare personnel is quite sufficient and satisfactory.

On the part of patients, of which 21 were sampled were several factors used to determine personnel capacity. These included; trained and qualified staff, friendliness of staff, personal experience and customer skills. The research utilized a satisfaction rating to measure personnel capacity of poor, fair, average, good and excellent with poor being given a score of 1 while excellent was given a score of 5. When asked if the staff were trained and qualified, a mean of 3.524 was attained. With the highest score being 5 and the lowest being 1, the score was above average, indicating that most of the respondents were satisfied with the training and qualifications of staff. The item with the lowest mean was friendliness of staff at 2.857. This is indicative that most of the respondents were not satisfied with how the staff were handling them. The respondents were also required to state their personal experience, 42.86% rated that their personal experience was good while at the facility, 14.29% as excellent, 23.81% as fair experience, for 9.52%, the personal experience was average, and only 9.52% rated the personal experience to be poor. From this response, it can be deduced that personal experience satisfactory rate was average and there was much room for improvement. The customer skills of staff was however found to be unsatisfactory for most of the respondents, with the highest score being average at 28.57%. Most of the respondents felt that the customer skills were poor and fair. This was mostly observed at the outpatient centre whereby most of those interviewed were highly unsatisfied with the customer skills of the members of staff and especially the doctors.

In conclusion, the healthcare personnel were satisfied that they had sufficient skills for their work activities as well as the patients who were also sufficiently satisfied of the healthcare personnel skills and qualifications. There is however, need for the hospital management to provide their workers with opportunities for advancing their knowledge base and skills as only a

part of them were satisfied with the training opportunities. It was also evident from the response that junior workers were overworked and did not have time available for training activities. The healthcare personnel need to improve their customer skills as a significant number of customers were not satisfied. They also need to give room for feedback provision and embrace feedback positively. The hospital management could create an independent team responsible for handling customer feedback. From the research, the hospital staff should work on being friendly while attending to the patients.

The patients also took part of the study to determine their level of satisfaction in personnel capacity. The patients were supposed to state whether the staff was trained and qualified depending on their experiences in the facility. The responses were either poor, fair, average, good or excellent. Only 4.76% rated the training and qualification of staff as poor. 9.52% of the respondents thought that the training and qualification of staff was fair, while 33.3% rated it as average. Another 33.3% thought the training and qualification of staff was good and 19.05% rated the staff's training as excellent. This is indicative of satisfaction amongst the patients on the level of training and qualification of the healthcare personnel. In terms of friendliness of staff, the level of satisfaction for 19.05% of the patients was poor, it was also fair to another 19.05% and average to 28.57%. A percentage of 23.81% thought that the friendliness of the staff was good and another 9.52% rated the friendliness of staff members to be excellent. From these results, it can be concluded that most of the patients were not satisfied with the friendliness of the staff members. It is, therefore, important that the staff be educated on customer service and how to treat the patients so that they come back or give referrals. Another item studied was their personal experience while at the facility. 9.52% stated that it was poor, 23.81% stated that it was fair, 9.52% responded that their experience was average while 42.86% stated that it was good and another 14.29% terming their experiences as excellent. Majority of the respondents, therefore, were satisfied with the way services were carried out in the facility. However, an improvement on the side of the health personnel is imminent.

The other attribute studied was the level of satisfaction with the customer skills of the personnel. 14.29% of the respondents indicated that the customer skills were poor amongst the personnel, while a similar 14.29% termed them as fair. A total of 28.57% of the respondents stated that the customer skills were average, while another 23.81% stated that they were goods. 19.05% rated

the customer skills of the health care personnel to be excellent. From the responses above majority of the patients were satisfied with the customer skills of the staff. It is however important to educate all members of staff on how to handle their customers who mostly are patients. In conclusion, the personnel capacity is satisfying to patients who were involved in the study

## **5.2.2 Objective 2: Resource availability and utilization**

### **Healthcare personnel responses**

Patients and healthcare personnel were asked different questions to assess the influence of resource availability and utilization on provision of quality healthcare services. The healthcare personnel were supposed to respond to questions regarding the access of equipment, maintenance of building and medical equipment and hygiene maintenance. A mean of 4.158 was realized indicating that the staff were not satisfied with equipment access to perform their duties, because the score is below average of 5 in a scale of 1 to 10. Most of the staff members indicated that they had not seen equipment maintained or repaired in years. The facility does not have a maintenance team. The maintenance of buildings and equipment obtained a mean score of 4.2 which shows their level of dissatisfaction. During the study, it was observed that a maternity wing building had collapsed and patients had been transferred to occupy part of the children's ward. This can be attributed to poor management and maintenance of buildings. The personnel were also not satisfied with the hygiene maintenance especially. During the study very few cleaners were seen performing their duties.

### **Patient Responses**

For the patients, three items were used to capture the availability of health resources in Kitui county referral hospital. The first item was the availability of sufficient laboratory facilities, 61.9% of the respondents stated that the laboratory facilities were sufficient, 33.3% responded that sometimes they were present and other times they were not. 4.8% of the respondents felt that the facilities for laboratories were not sufficient. Sufficiency in bed space was also studied, which received a 90% response rate. Some of the respondents from the outpatient did not know anything about bed space as maybe they had never had an access to the wards. 31.6% responded

that beds were sufficient in the facility, 21.1% responded that sometimes bed space was sufficient and other times not sufficient. 42.9% of the respondents felt that bed space was not sufficient. This is indicative that the management needs to work on increasing the number of beds especially in the maternity wing and the neonatal care unit to enhance the quality of healthcare services. Efficiency in hospital machines was assessed to determine the availability of resources. 42.9% said that the machines were efficient, 21.1% said that sometimes they were efficient, other times they were not, while 38.0% responded that the machines were not efficient enough. There is need by the management to employ a maintenance team that would take care of the hospital machinery in the facility.

Although most of the patients were satisfied with the machines in the facility, most of the healthcare personnel were not satisfied. Since it is the employees who feel the most impact on machines not working, the management should ensure that they are regularly serviced and replaced if broken. To make things easier and less expensive in the long term, they could employ a team of maintenance experts to regularly check and maintain the hospital facilities.

### **5.2.3 Objective 3: Management Commitment**

#### **Healthcare Personnel Responses**

Management commitment was measured differently amongst the patients and healthcare personnel. This is dependent on their level of understanding of their management needs, which might differ between the two groups. In healthcare personnel, 68.4% were satisfied with the leadership skills of their supervisors while 31.6% were not satisfied, a bigger percentage comprising of nurses. The healthcare personnel were also asked if the management was committed to quality improvement and control, 63.2% agreed that they were committed, 26.3% chose not to reveal their responses and were neutral and only 10.5% disagreed with the statement. They were further asked if staff members were involved in planning, developing and implementing of quality documents, and 57.9% were in disagreement, 26.3% agreed that they were and 15.8% decided to remain neutral on the matter. It was noted that those in agreement were senior members of staff. A larger percentage of those who disagreed and were neutral on their involvement in planning and implementation of quality documents were junior members of staff, most of whom had worked for less than 1 year. To measure and assess management commitment, the personnel were required to respond to the issue of transparency and

accountability and whether it was observed in management. A big percentage of 57.9% were not aware if the management practised transparency and accountability, while 21.05% were in agreement that transparency and accountability was observed and another 21.05% were in disagreement that the management observed transparency and accountability. This is indicative that the management does not include most of its members of staff in decision making. Respondents were further asked if there were enough members of staff to provide healthcare services. Only one respondent (5.2%) agreed that there were enough members of staff in the facility. A total of 89.4% responded that there were not enough members of staff to execute their duties sufficiently, effectively and efficiently. A further 5.2% comprising of one respondent were not sure if the members of staff were enough. This could mean one thing, that the facility is understaffed according to the responses of healthcare personnel. During the study, it was observed that there were very few doctors available at the facility, with most undertaking long shifts of up to 36 hours. The absence of specialist doctors was also noted, during an interview with an outpatient who had a paediatric emergency and there was no paediatrician to attend to them.

### **Patient Responses**

Management commitment was assessed differently on patients from the health care personnel. The respondents were required to state if the employees were qualified, and 76.2% agreed that they were qualified, while 23.8% were not sure if they were qualified or not. These responses could be related to their personal experiences or the experiences of their family members. They were also required to state whether they had interacted with the medical superintendent in the facility; 14.3% said they had, 33.3 were not sure if they had and 52.4% had not interacted with the medical superintendent who is in charge of the facility. These responses show non-commitment by the management to interact with the patients. Some of the respondents did not know who the medical superintendent was and to them the research had widened their view about the facility. The management needs to conduct walk-about around the facility to ensure management commitment.

#### **5.2.4 Objective 4: Patient Socio-Demographic Factors**

This objective was responded to by both the patients and healthcare personnel to assess if patient socio-demographic factors affected service delivery at the facility in any way. These factors assessed in this study include, age, marital status, level of education and economic status. The respondents when asked about the age of most patients, they responded differently and the ages ranged from 0-70 years with the most being in the group of 18-35 years and the least of the ages being 70 years. When asked whether marital status of the patients influenced the type of services given, 84.2% of the respondents stated that it did not influence service provision, while 15.8% thought that marital status influenced the type of services offered. Although the majority thought that it did affect service provision, it is important to investigate how marital status could be affecting the type of services provided at the facility by the management. The healthcare personnel were further asked if the education status influenced the patients' needs and demands while at the hospital. 52.6% said 'No', 26.3% responded with a 'Yes' and 21.1% responded that sometimes the education level influenced the patients' needs and demands. When some personnel were interviewed, they indicated that the educated patients asked for more as they were more exposed and most of them knew what they wanted and the type of services to expect. The economic status was also assessed to determine the level of economic status of most patients. 68.4% of the respondents stated that they were of low economic status, while 31.6% responded that they were of both economic statuses; high and low economic status. None of the respondents thought that the patients were of purely high economic status.

For the patients that were part of the study, the most common age was 34 years, which lies in the age group 18-35 years that the healthcare personnel stated that was common. This indicates that the healthcare personnel are well knowledgeable about their patients. The children, teenagers and the aged respondents were few. Most of the patients were of adult age in the study. The marital status of the respondents would also help to determine the socio-demographic factors and if they influence the provision of quality services. The findings in the study show that there were more married respondents than single respondents with a significant margin. Only a few were widowed and a minor in the study. It was noted from the healthcare personnel responses that marital status does not affect the provision of quality healthcare services. From these findings, it would not matter if the patient was married or single or widowed, they would all get quality healthcare services. With relation to education, most patients had attained their education up to

the secondary school level followed by the primary school level, with the least of the respondents having attained a certificate. With a small number of diploma holders and it being the highest level of education amongst the patients, a high number of healthcare personnel thought that education level does not influence their needs and demands. A significant number however thought that the more educated the patient is the more their demands. It can however be noted that very minimal number of respondents had high level of education. The other factor studied was the employment status of the respondents and according to the findings, most of the patients in the study were unemployed with a percentage of 52.8%. This corresponds with the responses of the healthcare personnel who indicated that most patients were of low economic status. The patient socio-demographic factors have no significant influence on the quality of healthcare services offered by the facility.

### **5.2.5 Objective 5: Monitoring and Evaluation**

#### **Healthcare personnel responses**

The findings of this study show that monitoring and evaluation has moderate influence on provision of quality healthcare services. Healthcare personnel respondents were required to state if their supervisors took time to listen to them, 84.2% agreed that he/she listened to them and 15.8% disagreed with the question. They were also required to indicate if training for monitoring and evaluation was provided, 57.9% were in agreement, while 42.1% disagreed. This analysis displays a small gap between those in agreement and those in disagreement. This shows that there is need for training in monitoring and evaluation amongst the personnel. The study also sought to establish if the working hours were flexible for undertaking several activities. If working hours were planned to allow post-graduate or further training, 42.1% agreed they were while 57.9% were not satisfied with the flexibility of the working hours. 47.4% of the respondents indicated that training in methods and techniques of quality and safety was provided, while 52.6% were not aware of any training activities in quality and safety. On the part of holding multi-disciplinary discussions concerning patient-health status, 42.1% indicated that such discussions were held, while 57.9% could not agree on the occurrence of any discussions related to patient health status. These findings reveal that monitoring of patient health status is not a common thing amongst the members of staff. The study under this objective, sought to establish the occurrence of internal or external audits and if the working hours are planned

accordingly to allow for auditing. 26.3% agreed that internal and external audits were part of their activities, while 73.7% were of the opinion that auditing was not in their work plan activities. The respondents were supposed to indicate if their working hours provided time to participate in quality improvement projects. 68.4% were in agreement, while 31.6% were in disagreement. These findings indicate that majority of the respondents have been involved in quality improvement projects, which is a positive inclination for the provision of quality healthcare services. The study also sought to establish if the respondents were involved in development of protocols and guidelines. 57.9% indicated that they were not involved in development of protocols and guidelines, and their working hours did not allow for such engagements. 42.1% agreed that their working hours allowed for the development of protocols and guidelines. These findings reveal that working hours did not give majority of the respondents' flexibility to participate in various activities that promote monitoring and evaluation in the facility.

The study also sought to establish the promoters of quality and safety improvement in the hospital. 52.6% indicated that the steering committee was, 26.3% thought that the quality officers was, with others stating that AMREF was providing quality and safety; 15.7% of the respondents thought that the promoters of quality was an external company, 31.6% thought that the care providers were the promoters of quality, while 36.7% indicated that the management was responsible and 57.9% stated that the heads of departments were the promoters of quality and safety improvement. From these findings, we can deduce that the staff members are do not have roles and responsibilities clear. They were not sure about who the promoters of quality and safety improvement were in the facility. However, majority of them indicated that the heads of departments were responsible for promoting quality and safety.

The respondents were further required to state the existence of certain documents in the hospital. The first document was the written description of the mission, a mean of 2.368 was attained within a scale of 1 to 3. This is indicative that most of the respondents (57.9%) responded that the document was available and was used in the facility. 21.05% of the respondents were not aware of the existence of the document, while another 21.05% were aware of the existence of the written description of the mission, but it was not used in policy and control cycle. However, it is important to make available the document to all personnel. Another document assessed was the



description of care processes, whereby, a mean of 2.579 was attained. This is above average and indicates that most of the personnel attested that the document existed and was part of policy control. 15.79% had not seen the document while 31.58 knew of its existence but stated that it was not used in policy and control cycle. According to 47.4%, the written description of quality and safety policy was available and in use in the facility, while to 26.3%, the document was available but its use was not known. 26.3% did not think that the document existed in the facility. From these findings, we can conclude that the description of quality and safety policy document is not in use in the healthcare facility. Quality and safety plan was another document whose existence would be paramount for the provision of quality healthcare services. Its existence and utilization to 36.8% of the respondents was known, while, 31.6% responded that the document was available but not utilized in the facility. 31.6% of the respondents indicated that the document was not available in the facility. It is important that the document be formulated and adopted in the day to day activities in order to show commitment to quality services. The quality and safety manual was utilized and existed only to 36.8% of the respondents, and to 15.8%, it was available but not used in the facility. 47.4% of the respondents were not aware of the existence of such a document in the hospital, meaning that a quality manual should be put in place. To ensure the efficacy of this task, the development of a committed quality department is vital. While a monitoring and evaluation plan is a significant document in any institution, it was not in existence according to 42.1% of the respondents. It was existing and in use according to 26.3% and not in use to 31.6%. It is important for the hospital management to involve all employees in quality improvement activities, which would be properly coordinated if there was a quality team present. Lastly, the resource utilization plan was in existence and used in the hospital according to 42.1% of the healthcare personnel. However, it was not used according to 47.4% and was not in existence to 10.5% of the personnel. From these findings, we can deduce that the resource utilization plan should be used all around the hospital in order to ensure that resources are used in the right way. We can conclude that, most of the documents are present in the hospital and in use, however, the same documents are also not being utilized to 34.6% of all the personnel, and are also not in existence to 26.3% of the respondents. All the responses should be respected and proper measures be put in place by the management to ensure that all the personnel are on the same page.

## **Patients' Responses**

In order to determine monitoring and evaluation the patients were required to respond to several questions. They were required to state whether they were offered opportunities to give feedback. 42.8% disagreed, 28.6% agreed and 28.6% were not sure of it. This is indicative of lack of platforms to provide feedback from the patients. The respondents were also supposed to state whether the services had improved in the past one year, 71.4% agreed that they had improved, 9.5% disagreed and 19.1% were not sure whether they had improved or not. This response was good for the hospital as it shows that the facility was growing. Improvement was also observed by the researcher for the 6 months the study was being carried out.

Time taken for the respondents to be attended to at the facility was also assessed, and most of the respondents took 0 minutes to 1 hour with a percentage of 57.1%. 28.6% stated that it took 1 to 2 hours to be attended to and 14.3% said that it took more than 2 hours to be attended to by a healthcare officer. There is a relationship between patient satisfaction and waiting times. From the study, the facility has done considerably well in terms of timeliness and waiting periods as 0 minutes to 1 hour is not dissatisfying for a hospital of that level. However, the management needs to investigate the factors that contribute to long waiting periods for the rest of the respondents who had to wait for more than 1 hour to be attended to.

### **5.2.6 Provision of quality health care services**

Quality of services was measured by assessing the effectiveness of services, cost of services, timeliness and efficiency in offering services. They were rated as either, poor, fair, average, good or excellent.

## **Patient Responses**

Effectiveness of services was fair to 33.3%, average to 28.6%, good to 28.6% and excellent to 9.5% for the patients. This implies that the patients were not satisfied with the benefits of healthcare determined by improvements in health since a bigger percentage rated it as fair. In terms of cost of services, 14.3% rated cost as poor, 23.8% rated cost as fair, 33.3% thought that the cost was average, 23.8% as good and 4.8% rated it as excellent. The cost of services can therefore be termed as average according to the patients. Timeliness was also measured to determine the level of satisfaction for the patients in the time taken to provide services. 19% of

the respondents felt that timeliness was poor, 38.1% rated timeliness as fair, 4.8% rated it as average, 33.3% thought that timeliness was good and only 4.8% rated it as excellent. These results show that most of the patients did not receive care quickly or as required. In terms of efficiency in offering services, 28.6% thought that the services were fair in relation to efficiency. An additional 28.6% rated efficiency as average, while a significant 42.8% of the respondents responded that efficiency was good. From these results it can be concluded that most of the respondents were satisfied with the outputs or benefits that they attained from healthcare.

### **Healthcare personnel responses**

In relation to effectiveness of services, 47.1% rated the services as average, 29.4% rated effectiveness to be excellent, 17.6% rated it to be good and 5.9% thought that in relation to effectiveness the services were fair. The second item assessed was cost of services. According to 47.1%, the cost of services was good, excellent to 23.5%, fair to 17.6% employees and average to 11.8%. This is indicative that the cost of services is favorable to the patients according to the healthcare personnel. Timeliness in offering services was also assessed to measure the provision of healthcare services. 29.4% of healthcare personnel thought that timeliness in delivery of services was excellent, 23.5% thought it was good, while another 23.5% also responded that timeliness was average and 17.6% rated timeliness in offering services as fair. These findings according to healthcare personnel indicate that they are satisfied with the time taken to offer their services to the end. Efficiency In offering services was also assessed to determine the provision of quality of services. According to 41.2%, the services were excellently efficient. 41.2% also responded that the efficiency of services was average, while 11.8% thought that they could rate efficiency as good. Only 5.9% respondents thought that they were fair in providing efficient services. From these findings, we can deduce that the services provided in the facility are efficient.

The responses of both patients and healthcare personnel differ greatly, this shows a major disparity in that aspect of quality healthcare provision. They have different views of what needs are, the patients demand services, and the healthcare personnel supply their demands which are the expressed needs. It is the work of the personnel to satisfy the needs of the patients in terms of cost, timeliness, effectiveness and efficiency of services. This will improve the quality of

services provided at the facility, therefore, provision of quality healthcare services is influenced by cost and timeliness.

### **5.3 Conclusions**

The general purpose of the study was to determine the influence of certain factors on the provision of quality health care services in Kitui county referral hospital. Findings from this study show that the personnel capacity is satisfactory to both patients and healthcare personnel. However, there are several aspects that are not satisfactory to the personnel, the training opportunities, the available opportunities for improving skills and feedback by patients. According to the study findings, resources were not sufficient, and their availability was not satisfactory to both patients and personnel. The personnel were not satisfied with the equipment available, their maintenance and the general hygiene at the facility. They were, however satisfied with the leadership skills of their supervisors and their commitment to quality improvement. What bothered most of the healthcare personnel respondents was the fact that they were not involved in planning and developing of quality control documents. The study findings concluded that transparency and accountability was not observed in the facility. It also concluded that the facility was understaffed. It can be concluded that management commitment has an influence of the provision of quality healthcare services. From the findings in this study, patient socio-demographic factors do not affect the provision of quality healthcare services.

It can be concluded that the supervisors' work is satisfactory and most of the respondents were pleased with their leadership. In a bid to assess the influence of monitoring and evaluation on quality of services. However, training for monitoring and evaluation processes needs to be widespread. There is also need to make time for post-graduate studies for the employees as well as, training in quality and safety methods and development of guidelines. It can also be concluded that the facility does not hold patient status discussions and internal or external audits which are very significant in the growth of any institution. It is not clear as to who is the main promoter for quality and safety in the facility as all respondents chose almost all the promoters listed. However, most of them indicated that the heads of departments were the main promoters of quality. From the findings, it can be concluded that most of quality and safety documents do not exist in the facility. This was due to most of the respondents not being aware of their existence. Most of the documents like the mission, quality plans, monitoring and evaluation

plans and resource utilization plans were existing but not in use at the facility. Therefore, monitoring and evaluation has a definite influence on provision of quality healthcare services.

#### **5.4 Recommendations**

The study recommends the following

1. That the facility should make time for training of healthcare personnel on various areas and especially on quality and safety.
2. That all factors should be considered, whether they have shown a weak positive influence in the provision of quality healthcare services.
3. It also recommends that a team of experts be appointed to handle matters of quality control and improvement in the facility. This will also help with the issue of transparency and accountability.
4. That the patients should be allowed and encouraged to give feedback as it helps the hospital know their weakness areas and their areas of strengths.
5. There is need for the county government to hire more employees at the hospitals in order to improve the services provided.
6. There is also a great need to hire more cleaners at the facility to ensure hygiene at all times, in the outpatient area and the inpatient areas. This is because hygiene is a major concern.
7. A system should also be discussed and set to reduce the waiting times for the patients.
8. Days should also be set when the specialist doctors are available, and there should be one on call in case of emergencies.

## REFERENCES

- Adams, J., Mounib, E., Pai, A., Stuart, N., Thomas, R. and Tomaszewicz, P. (2006). *Healthcare 2015: Win-win or lose-lose? A portrait and a path to successful transformation*. IBM Corporation, United States of America.
- Aday, L. (2004). *Evaluating the Healthcare System: Effectiveness, Efficiency, and Equity*. Health Administration Press: Chicago.
- Andel, C., Davidow, S., Hollander, M. and Moreno, D. The Economics of Health Care Quality and Medical Errors *Journal of Health Care Finance*, Vol. 39, No. 1, Fall 2012, published by Wolters Kluwer Law & Business
- Baker, R. (2011). *The Roles of Leaders in High-Performing Health Care Systems*. The Kings Fund, United Kingdom.
- Barber M (2007). *Instruction to Deliver: Tony Blair, the Public Services and the Challenge of Achieving Targets*. Politico.
- Bates, D and Gawande, A. Improving Safety With Information Technology. *New England Journal of Medicine*, 2003; 348:2526-34
- Besley, T., Burchardi, K. and Bevan, G. (2009). *Naming and Shaming: The Impacts of Different Regimes on Hospital Waiting Times in England and Wales*. Discussion Paper, 7306. Centre for Economic Policy Research, London, UK.
- Bevan, G. (2014). *The Impacts of Asymmetric Devolution on Health Care in the Four Countries of the UK*, The Health Foundation and Nuffield Trust.
- Boerma, T. Abou-Zahr, C., Bos, E., Hansen, P., Addai, E. and Low-Beer, D. (2009), *Monitoring and Evaluation of Health Systems Strengthening; An Operational Framework*. WHO, Geneva.
- Burns, RP. and Burns, R. (2008) *Business Research Methods and Statistics Using SPSS*. SAGE, Great Britain.

- Buttell, P., Hendler, R. and Daley, J. Quality in HealthCare: Concepts and Practice. *The Business of Healthcare*, 2007, 394 (3). Chicago, US.
- Bryman, A. (2004). *Social Research Methods*, Oxford University Press, Oxford.
- Bryman, A. (2012). *Social Research Methods*, Oxford University Press, Oxford, New York, USA
- Campbell, M, Roland, O and Buetow, A. Defining Quality of Care. *Soc Sci Med*. 2000, vol. 51(11); 1611-25. Manchester, United Kingdom.
- Chassin, M., Galvin, W. and The National Roundtable on Health Care Quality. 1998. “The Urgent Need to Improve Health Care Quality: Institute of Medicine National Roundtable on Health Care Quality.” *Journal of the American Medical Association* 280: 1000–1005
- Cooper, D. and Schindler, P. (2006). *Business Research Methods*. McGraw-Hill Irwin: United States.
- Cronin, J., and Taylor, S. (1992). Measuring service quality - A reexamination and extension, *Journal of Marketing*, 56(3), 55-68.
- Czepiel, J., 1990, “*Managing Relationships with Customers: A Differentiation Philosophy of Marketing*,” in *Service Management Effectiveness*, D. E. Bowen, R. B. Chase, and T. G. Cummings, eds. San Francisco: Jossey-Bass, 299-323.
- Docteur, E. and Berenson, R. (2009), How does the quality of U.S. health care compare internationally?; Timely analysis of immediate health policy issues. Urban Institute.
- Donabedian, A. The Quality of Care How Can It Be Assessed? Avedis Donabedian, *Journal of American Medical Association*, 1988; 260(12):1743-8
- Donabedian A. (2003). *An Introduction to Quality Assessment in Health Care*. America Oxford University Press.
- Eltarp, L. (1999), The European co-operation for accreditation. Abstract in EA conference on health care. Nuremberg.

Federal Ministry of Health, (2004). Health Sector Reform Programme: Strategic Thrusts And Plan Of Action, 2004- 2007. Federal Ministry of Health, Abuja, Nigeria.

Field, A. (2005). *Discovering Statistics Using SPSS* (2nd ed.). London: Sage.

Ghaffari Sardasht F, Jahani Shourab N, Jafarnejad F, Esmaily H. Application Of Donabedian Quality-Of-Care Framework To Assess The Outcomes Of Preconception Care In Urban Health Centers, Mashhad, Iran in 2012. *Journal of Midwifery and Reproductive Health*. 2014; 2(1): 50-59.

Glickman, S., Baggett, K., Krubert, C., Peterson, E. and Schulman, K. (2007), Promoting Quality: The Health-Care Organization from a Management Perspective. *International Journal for Quality in Health Care*, vol. 19:6

HealthCare in South Africa (2012). Available at:  
<[www.southafrica.info/about/health/health.htm#.VfLJxW\\_6jIY](http://www.southafrica.info/about/health/health.htm#.VfLJxW_6jIY)>

Health Systems Resources and Resource Constraints Jessica Sleeth MPH, Paxton Bach MSc, and Alex Summers BScH Office of Global Health, School of Medicine, Queen's University March 2012

Institute of Medicine, (2001).

Kunkel, S., Rosenqvist, U. and Westerling, R. *The Structure Of Quality Systems Is Important To The Process And Outcome, An Empirical Study Of 386 Hospital Departments In Sweden*, , *BMC Health Services Research* 2007, **7**:104 BioMed Central Ltd. Available at:

<<http://www.biomedcentral.com/1472-6963/7/104>>

Lohr, K. (1990). Committee To Design A Strategy For Quality Review And Assurance In Medicare, Institute of Medicine. Washington D.C., USA.

Magoha, G. (2014). *Medical Litigation and How to Manage It*-A KMA Presentation. Medical Practitioners and Dentists Board. Available at:  
<[http://www.rmhc.rw/IMG/pdf/KMA\\_PRESENTATION\\_FINAL-2.pdf](http://www.rmhc.rw/IMG/pdf/KMA_PRESENTATION_FINAL-2.pdf)>



- McDonald, K., Sundaram, V., Bravata, D., Lewis, R., Lin, N., Kraft, S., McKinnon, M., Paguntalan, H. and Owens, D. *Closing the Quality Gap: A Critical Analysis of Quality Improvement Strategies*. Rockville (MD): Agency for Healthcare Research and Quality (US); 2007. Available from: <<http://www.ncbi.nlm.nih.gov/books/NBK44015/>>
- Monette, D., Sullivan, T. and DeJong, C. (2002). *Applied Social Research*. Orlando, FLA: Harcourt Press.
- Monette, D., Sullivan, T. and DeJong, C. (2010). *Applied Social Research: A Tool for the Human Services*, Brooks and Cole, United States.
- Mugenda, O and Mugenda, A. (2003). *Research Methods, Quantitative and Qualitative Approaches*, Acts Press, Nairobi.
- Osland, J., Kolb, D., and Rubin, I. (2000). *Organizational Behavior: An Experiential Approach*. 7. Upper Saddle River, NJ: Prentice Hall.
- Population Action International, (2014). *Population Dynamics, Environment, and Sustainable Development in Kitui County*. PAI, Washington, DC.
- Schyve, P. (2009). *Leadership in Healthcare Organizations; a Guide to Joint Commission Leadership Standards*. The Governance Institute, California: USA.
- Swanson, R. (2013). *Theory Building in Applied Disciplines*. San Francisco, CA: Berrett-Koehler Publishers.
- Tashakkori, A., & Teddlie, C. (2003a). *Handbook of Mixed Methods in Social & Behavioral Research*. Thousand Oaks, CA: Sage.
- Waldman, D., Lituchy, T., Gopalakrishnan M, et al. A Qualitative Analysis of Leadership and Quality Improvement. *Leadership Quarterly* 1998; 9:177-202.
- WHO, (2008), World Health Statistics. WHO: Geneva.
- World Health Organization, (2003). *Quality and Accreditation in Health Care Services: A Global Review*. World Health Organization: Geneva.

Yamane, T. (1967). *Elementary Sampling Theory*. Prentice-Hall Inc: New Jersey.

Quality Improvement In Health Care - A Fundamental Analysis And South African Perspective,  
ME Muller, *Curationis*, Vol. 19: 4, December 1996

Quality or financing: what drives design of the health care system? V McLoughlin, S  
Leatherman, *Qual Saf Health Care* 2003;12:136–142

Muhammad, A., Farwa, R., Azad, A., Rajput, A., Khan, A., Tariq, N. Effect of Demographic  
Characteristics on Patient's Satisfaction With Health Care Facility, 2014 *JPMI*, Vol. 28:2

**APPENDICES**

**Appendix 1**

**Questionnaire**

**FACTORS INFLUENCING THE QUALITY OF SERVICE DELIVERY IN  
HEALTHCARE FACILITIES: A CASE OF KITUI COUNTY REFERRAL HOSPITAL**

**A. Patients Questionnaire**

Dear respondent, kindly respond to the questionnaire items below;

**SECTION 1: DEMOGRAPHIC INFORMATION**

1. Gender

Male

Female

2. Age bracket

18 to 33

34 to 49

50 to 65

3. Highest Level of education attained

PHD

Masters Level

Bachelors Degree

Diploma/Certificate

Secondary School

Others (Specify) \_\_\_\_\_

4. Do you live in Kitui County?

Yes

No

**SECTION 2: CAPACITY OF HEALTH CARE PERSONNEL**

Poor

Fair

average

good

excellent

Trained and Qualified staff					
Friendliness of staff					
Personal experience					
Customer skills					

### SECTION 3: RESOURCE USE AND AVAILABILITY

5. Do you have all the recommended tests done at the hospital or do you get them from other health care facilities?

Yes, they are ever provided

Sometimes

No, I always get them from outside

6. Are there enough beds for admission cases?

Yes

No

Sometimes

7. Is there an instance that you've been informed by staff that a certain machine is not working e.g. X-ray or that there is no oxygen for a theatre procedure?

Strongly agree

Strongly Disagree

Neutral

**SECTION 4: MANAGEMENT COMMITMENT**

8. Do you think the people employed are qualified to fulfill their roles and responsibilities diligently?

Yes

Maybe

No

9. Do you know the person in charge of Kitui County Referral Hospital?

Yes

Not sure

No

**SECTION 5: PATIENT SOCIO-DEMOGRAPHIC FACTORS**

10. How do you rate the performance of the Kitui county government in terms of providing and improving health care provision?

Excellent  Very good  Good  Average  Poor

11. Drug availability

Excellent  Very good  Good  Average  Poor

12. If no. 11 is rated Poor, What is/are the reasons? \_\_\_\_\_  
\_\_\_\_\_

13. Public involvement in decision making?

Excellent  Very good  Good  Average  Poor

**SECTION 6: MONITORING AND EVALUATION**

14. Are you allowed to give feedback for the services provided?

Agree

Strongly Disagree

Neither

15. In your view, have services at the Kitui Hospital improved in the past one year?

Agree

Strongly Disagree

Neither

16. How long does it take for you to get attended to?

0 minutes-1hour

1 hour – 2 hours

2hours and above

**SECTION 7: PROVISION OF QUALITY HEALTH CARE SERVICES**

17.                      Poor                      Fair                      average                      good                      excellent

Effectiveness (produce desired results)					
Cost					
Timeliness					
Efficiency (Level of performance)					

**B. Health Care Personnel and County Officials Questionnaire**

**SECTION 1: DEMOGRAPHIC INFORMATION**

1. Gender

Male  Female

2. Age bracket

18 to 33

34 to 49

50 to 65

3. Highest Level of education attained

PHD

Masters Level

Bachelors Degree

Diploma/Certificate

Secondary School

Others (Specify) \_\_\_\_\_

4. Place of work

Kitui Sub-county Hospital

Kitui County

5. What is your position at the institution?

\_\_\_\_\_

6. How long have you worked for your institution?

<1 year

1- 5 years

6- 10 years

11- 15 years

Over 16 years

**SECTION 2: PERSONNEL CAPACITY**

7. What have you been trained in?

\_\_\_\_\_

8. How many employees are working for the hospital?

---

9. **How satisfied are you with...**

	Not at all satisfied					completely satisfied				
	1	2	3	4	5	6	7	8	9	10
The available opportunities for Improving your skills and knowledge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The work activities compared to your Skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How satisfied are you with the training Opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The feedback by the patients and Kitui County citizens	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**SECTION 3: RESOURCE USE AND AVAILABILITY**

**10. How satisfied are you with...**

The access to equipment necessary for Performing your tasks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The current maintenance of the building And Medical equipments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The hygiene maintenance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**SECTION 4: MANAGEMENT COMMITMENT**

11. Are the leadership skills of your supervisors satisfying?

Completely satisfying

Not satisfying

12. Is the leadership committed to quality improvement and control?

Yes

No



Neutral

13. If yes, are you involved in planning, developing and implementing quality documents?

Yes

No

Neutral

14. Is transparency and accountability observed through the management?

Yes

Maybe

Not aware

15. Are there enough members of staff to provide health services?

Yes

No

Not sure

## SECTION 5: PATIENT SOCIO-DEMOGRAPHIC FACTORS

16. What do you think is the level of the county administrative capacity?

Competent

Not competent enough

Incompetent

17. Are citizens allowed to raise questions and participate in decision making process for the new governance system?

Yes

No

Sometimes

18. Has the county government developed or improved any infrastructure at the Hospital?

Yes

No

Not all

19. If yes, kindly state which ones?

---

---

20. Are drugs available and sufficient?

Yes

Maybe

No

## SECTION 6: MONITORING AND EVALUATION

21. My supervisor takes time to listen to me

I agree

I disagree

22. Training is provided for monitoring and evaluation processes

I agree

I disagree

23. Are working hours timetabled or made available for the nursing staff or medical specialists for one or more of the following activities?

Working hours are planned/made available for: -

Post-graduate and further professional training

Training in the methods and techniques of Q&S improvement

Multi-disciplinary patient-health status discussions

Internal or external audits

Participation in quality improvement projects

Development of protocols/guidelines

24. Who are the 'promoters' of quality and safety improvement in your hospital?

Nobody in particular

The steering group/committee

The quality and safety officer

An external company/advisor

The professionals (care-providers)

The directors or management

The heads of departments/supervisory staff

25. To what extent do the following documents exist in your hospital?

1 No, not applicable 2 Yes, this document is present in our hospital, but not used as part of the policy & control cycle 3 Yes, this document is used as part of the annual policy & control cycle

	1	2	3
Written description of the mission	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
'Process' description: a detailed description of	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The care processes the organization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Written description of the quality and safety	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Policy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quality & safety plan (including plans for	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improvement)			
Quality & Safety Manual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Monitoring and evaluation plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Resource Utilization Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**SECTION 7: PROVISION OF QUALITY HEALTH CARE SERVICES**

26.                      Poor              Fair              average              good              excellent

Effectiveness (produce desired results)					
Cost					
Timeliness					

Efficiency (Level of performance)					
---	--	--	--	--	--

## APPENDIX 2

### COST AND MATERIAL ESTIMATES

S. No.	Items	Specifications	Quantity	@ Kshs	Amount, Kshs
1.	Printing paper	A4, high quality	5 reams	500	2,500
2.	Printer Ink		2	4000	8,000
3.	Writing pad	A4, high quality	5	100	500
4.	Transport				5,000
5.	Equipment				15,000
6.	Subsistence		15 days	1,500	22,500
	Total				53,500

### APPENDIX 3

#### ACTIVITY SCHEDULE

Items of Work/Activities	Months											
	1	2	3	4	5	6	7	8	9	10	11	12
Proposal writing and submission to BPS	■											
Preparation for and data collection		■										
Data analysis			■									
Project writing				■	■	■						
Submission of draft Project Report for review							■					
Submission of final Project Report								■				
Project defense									■			
Corrections and final submission									■			