AN ASSESSMENT OF THE INFLUENCE OF STRATEGIC PLAN IMPLEMENTATION ON SERVICE QUALITY IN PUBLIC HOSPITALS IN KIAMBU COUNTY

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DECLARATION

I understand that plagiarism is an offence and therefore declare that this project report is my original work and has not been presented to any other institution for any other award.

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DEDICATION

This project report is dedicated to my beloved wife Caroline Wandera for her unlimited support and for understanding me even when I was not available for usual family activities during the very difficult moment of my studies.

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ABBREVIATIONS AND ACRONYMS

ANOVA : Analysis of Variance

FIDA : Kenya Federation of Women Lawyers

HCT: Human Capital Theory

HIT: Health Information Technology

ICT : Information Communication Technology

KHSSP: Kenya Health Sector Strategic Plan

RBVT : Resource Based View Theory

SPSS : Statistical Package for Social Science

ST : System Theory

SWOT: Strength, Weaknesses, Opportunities and Threats

TQM: Total Quality Management

WHO: World Health Organization

DEFINITION OF KEY TERMS

ANOVA : Collection of Statistical model used to analyze the

differences among group means and their associated

procedures such as variation among and between groups

(Fisher, 2015).

COUNTY : According to Webster (2014), County is a political and

administrative division of state, providing certain local

governmental Services.

EVALUATION: Management process where managers try to ensure that the

strategic choice is properly implemented and is meeting the

objectives of an organization. The managers appraise the

progress and try to find out deviations to take appropriate

actions to make strategy work (Blackburn, 2016).

IMPLEMENTATION: According to Management Study Guide (2008),

Implementation is the process of putting a decision or plan

into effect or action to achieve a desired goal.

PUBLIC HOSPITALS: According to World Health Organization (2006), Public

hospitals are government hospitals, health centers or health

institutions which are owned by the government and

receives government funding to provide medical care or

services to the public

SERVICE QUALITY: Degree and direction of discrepancy between customer's

service perceptions and expectations. When the perception

is higher than expectation, then service is said to be high

quality and vice versa (Parasuraman, 2010).

STRATEGIC MANAGEMENT:

This is a continuous planning, monitoring, analysis and assessment of all that is necessary for an organization to meet its goals and objectives (Thompson & Frank, 2010).

STRATEGIC PLAN

An organization's process of defining its strategy or direction and making decisions on allocating its resources to pursue this strategy. It extend to control mechanisms for guiding the implementation of the strategy or A systematic process of envisioning a desired future and translating this vision into broadly defined future and translating this vision into broadly defined goals or objectives and sequence of steps to achieve them (Thompson & Frank, 2010).

SUB-COUNTY

A division or part of a county, decentralized units through which county government provide functions and services (Wechsung, 2012).

ABSTRACT

An assessment of the influence of strategic plan implementation on service quality in public hospitals continues to remain an area that need to be studied. Public hospitals continue to be blamed by the public for their quality of service yet these institutions have implemented strategic plan aimed at improving the service quality. Many scholars have studied on strategy formulation and implementation but little has been done on the influence of the strategic plan implementation on service quality this therefore leaves a research gap for this study. The general objective of this study was to assess the influence of strategic plan implementation on service quality in public hospitals in Kiambu County, with specific objective being; to assess the influence of information system on service quality in public hospitals, to assess the influence of health work force training and welfare on service quality in public hospital, to assess the influence of leadership and governance on service quality in public hospitals and to assess the influence of resource mobilization and allocation on service quality in public hospitals. The literature review focused on theoretical and empirical foundations on the study topic. These theories were system theory, human capital theory, stakeholders' theory and resource based view theory. The study was done in Kiambu County covering all the 12 sub-counties in the County and adopted descriptive survey design which was used to assess the influence of strategic plan implementation on service quality in public hospitals in Kiambu County. A sample size of 50 respondents across Kiambu County was selected from a target population of 156 to answer questions. Questionnaire were used in data collection and collected data analyzed with the aid of statistical package for social sciences (SPSS) version 21 and both descriptive and inferential statistics was used to present data summaries using frequency distribution tables, graphs and pie charts. The study generated information that county and national government, hospital administration, general public and scholars found relevant in solving the current level of service in public hospitals with aid of strategic plan implementation. The study found out that information system, health workforce training and welfare, leadership and governance and resource mobilization and allocation influenced service quality in the public hospitals, with information system and leadership and governance affecting the current service quality positively while the current health work force training and welfare and resource mobilization and allocation affecting the services negatively. Based on these findings, there is a need to enhance current information system and leadership and governance for even better results while health work force training and welfare and resource mobilization and allocation need to be re looked and a radical change required if these factors were to give better result. Training on strategic plans, more funding from government and other sources were also recommended.

CHAPTER ONE

1.0 INTRODUCTION

This chapter provides information on the background of the study with detailed overview of global, continental and local perspective of strategic planning, effectiveness of strategic plan, and bringing out the state of service quality in public hospitals, problem statement, research objectives, research questions, justification of the study, scope of the study, limitation and delimitation of the study.

1.1 Background of the study

Strategic management has been observed as one of the effective management tool in strengthening organization performance through effective decision making and systemic strategic formulation and implementation. This concept of strategic management was first used in private sector than public sector, but due to public sector institutions and organizations facing a number of management challenges, the concept was embraced in public sector in early 1980's (Smith, 2012). Increased technology and competition has created a complex environment to many organizations, its therefore imperative that these organizations formulate strategies that will make them operate as successful entities if they have to survive in their complex environment (Lamb, 2004). Strategic management is therefore an ongoing process that evaluates and controls an organization, assesses its competitors and sets goals and strategies to meet all existing and potential competitors and then reassesses each strategy regularly to determine how it has been implemented and whether it has succeeded or needs replacement by a new strategy to meet changed circumstances (Lamb, 2004). Therefore the institutions are tasked to use strength, weaknesses, opportunity, threat (SWOT) analysis when formulating strategies to adopt.

Although formulating a consistent strategy is a difficult task for any management team, making that strategy work through implementing it throughout the organization is even more difficult (Hrebiniak, 2006). Many factors can potentially affect the process by which strategic plans are turned into organizational action. Unlike strategy formulation,

strategy implementation is often seen as a craft rather than a science and its research history has been described as fragmented and selective (Mwijuma, Omido & Akerele, 2013). Study by Allio (2015), on the study of practical guide to strategy implementation in state of California in America found out that a discouraging 57 percent of firms were unsuccessful at executing strategic initiative over the past three years according to the survey of 276 service operating firms' executives in 2014. It's therefore obvious that strategy implementation is a key challenge for today's organizations and even those institutions that attempt to implement strategies don't achieve their strategic objective. Mwijuma, Omido and Akerele (2013), in their study of strategy implementation using balanced score card in local authority, highlight factors such as people who communicate or implement strategy, lack of cross – functional expertise and efforts on the part of organizational leadership and staffs hence failing to address the interdependent issues effectively. Other factors such as lack of system thinking and actions that assists in incorporating the various organizational variables such as organizational arrangements, social factors, individual behavior, processes and technology, resistance to change, lack of strategic motivation and inability to adopt to rapidly changing environment also affect strategy implementation.

Implementation, rather than strategy formulation alone is a key requirement for superior business performance and most important problems in the field of strategic management are not related to strategy formulation but rather on strategy implementation. The high failure rate of organizational initiatives in a dynamic business environment is primarily due to poor implementation and evaluation of new strategies (Mutunga, 2013). Delivery of quality services in the health sector requires careful strategic planning and implementation. The quality of services in the Kenya's public hospitals has been far from satisfactory judging from public opinion and patient care outcomes (Malei, 2015). There has been an ever pressing urgency to improve the overall quality and adequacy of public health services in Kenya. This was the main reason why the ministry of medical services developed a strategic and investment plan to cover the period 2013-2017. Key strategic objectives in the plan included eliminate communicable conditions, halt and reverse the

rising burden of non-communicable conditions, reduce the burden of violence and injuries, provide essential health services, minimize exposure to health risk factors, strengthen collaboration with health related sectors, improving access to services and improving quality of care (Kenya Health Sector Strategic Plan-KHSSP, 2012).

Strategy co-ordination and leadership was to be ensured from the National level to county level using a top-down approach and presumed that the strategy was adequately communicated downwards and all the stakeholders had the capabilities and support to effectively play their part in effectively implementing the strategy. The first National Health Plan ran from 1999-2004. This was followed by the second plan that covered from 2005-2010, however this was reviewed in 2008 to come up with a strategic plan that covered from 2008-2012 and finally the current strategic plan that covers 2013-2017, (Malei, 2015). At county level, the county government formulates their strategic plan anchored on National Health sector strategic and investment plan. In Kiambu County, the county government has formulated a five year health strategic and investment plan that covers from 2014-2019 with borrowed key strategic objectives from the National health sector strategic and investment plan. There has been general public outcry over quality of the services in public hospitals in the county, yet the county government has health sector strategic and investment plan in place, that was intended to improve the quality of the services in public hospitals to solve this problem. It's therefore essential to assess the influence of this strategic plan on the service quality in Kiambu County public hospitals.

1.1.1 Global Perspective of Strategic Plan

Strategic management concept emerged in 1950's with a number of authors including Peter Drucker, Philip Selznick, Alfred Chadler and Igor Ansoff being the founder of the concept. In the 1970's much of the strategic management dealt with size, growth and portfolio theory before it developed into profit impact of marketing studies by Harvard institute of strategic studies. After second world war, the business emphasis was on sales before the strategic approach was redefined to customers as the driving force behind all

the strategic business decision (Levitt, 2007). The strategic plan orientation has been repackaged under numerous names including customer orientation, marketing philosophy, customer intimacy, customer focus, customer driven and market focus. The concept first started in America then spread to Japan and then the rest of the world. In the late 1970's, people had started to notice how successful Japanese commerce and industry had become; this was due to the development of 7 S' approach by Pascale and Athos (2001). This approach was to steer excellence and included strategy, structure, systems, skills, staff, style and shared value that was anchored in their strategy to achieve effectiveness.

In 1980's and early 1990's saw emergence of theorists explaining how commercial threats might be overcome using strategic planning as most business were facing management challenges. Some businesses even turned to military strategy for guidance. Deming, Juran and Crosby (1992) suggested strategies such as Total Quality Management (TQM), continuous improvement, lean manufacturing and six sigma as appropriate strategies for organization success. By the end of the 1990's these strategies had gone out of favour and non confrontational approach were now found to be more appropriate (Juran, 1992). Finally the information driven theories came to prominence with Bell (1997) examining the sociological consequences of information technology, Peter senge introduced the learning organization, while Stewart (2000), used the term intellectual capital and to describe the network society.

In the twenty first century, competitive strategy has become a prominent feature in strategic planning practices, along with a notable uptake of plans that calls for alliances and mergers, but today's profoundly uncertain times have forced business strategist to acknowledge that strategic planning as usual will not provide the foundation needed to survive tumultuous economic conditions. Dye, Sibong and Viguerie (2009) noted that scenario planning, a tested technique for coping with strategy failure, will play a more critical role in strategic planning and companies must consider more variables and involve more decision makers than in the past. They predict greater emphasis on

measurement to monitor changing market conditions and need to make quick strategic adjustments. Strategic planning is therefore intended to help institutions and organizations deal with and adapt to their changing internal and external circumstances since an effective strategic planning provides a framework to make decisions on how to allocate organizational resources, address challenges and take advantage of opportunities that arise along the way. The environment of public institutions is changing and how top management adapts to the changes will reflect on its ability to cope successfully with unpredictable and unknowable external and internal events (Bryson, 2004). External environment such as market competition, internal political unrest and shifting social value are some of the aspects that are uncertain and therefore must be managed through strategic planning.

Most strategic planning is not strategic since most organization plan constitutes a small portion of an organizations creative potential. Strategic planning should be inquisitive, expansive, prescient, inventive, inclusive and demanding (Hamel, 1996). Mckinsey (2006), on quarterly survey of about 800 business executives in South Africa found out that while over three quarters of the respondents reported that their companies had a formal strategic planning process, fewer than a half were satisfied with their approach to planning strategy, with the most significant concerns being on executing the strategy, communicating it, aligning the organization with the strategy and measuring performance against the plan (Barber, Levy & Mendonea, 2006). Despite the uncertainties about its value, strategic planning is being used frequently and is considered critical to the success of an organization. Globally, a number of institutions have failed in their strategic plans hence not achieving their strategic objectives. This has been caused by lack of proper strategic plan that is effective enough to meet the strategic objective (Ackerman & Eden, 2011).

1.1.2 Continental Perspective of Strategic Planning

Strategic planning has had a slow but a positive impact on the many institutions in African countries. According to African Development Bank (2015), strategic planning in

African has accelerated the economic growth by 5%, with statistics indicating 26 countries out of 54 countries which represent 49% of African countries have achieved middle income status. Although African markets have been faced with a number of challenges, it continues to present opportunities that should be tapped for economic growth. It's out of the need to have a strategy in place to guard against low growth and organization failure in 1950's that has seen many organizations competing effectively in terrifying market and being able to survive (Mckinsey, 2006).

In 1980's, their emerged theories that tried to explain how challenges facing business could be solved, such theories included Total Quality Management, Continuous improvement, lean manufacturing and Six Sigma (World Economic Forum, 2002). Competitive strategy has become prominent in today's African market due to business uncertainty (Dye, Sibong & Virguerie, 2009). Strategic management has helped institutions and organizations deal with and adapt to their changing internal and external circumstances; such as market competition, internal political unrests and shifting social values.

According to Mckinsey (2006), over 800 business executive in South Africa were forced to assess their strategic planning since it was not achieving intended objectives while the organizations that did strategy assessment attained greater performance. Despite the uncertainties about its value, strategic planning is being used frequently and considered critical to the success of an institution. In today's business environment, no organizations can talk of success without having put in place proper strategic plan to guard against external and internal threats that affects organizations during its operation. The success level of an organization will depend on how effective the strategy implemented is, and whether it is addressing the strategic objective. While organizations without strategy are short lived and doomed to fail. Even though many African institutions and organizations have strategies in place, most of these institutions have failed in their strategic plans due to lack of proper strategy and proper strategic management, hence careful selection of a

strategy and strategy assessment, monitoring and evaluation is critical for strategy success (Ackerman & Eden, 2011).

1.1.3 Kenyan Perspective of Strategic Plan

The grand promise of strategic planning in public management is to enable public sector organization to manage the interrelationships and interconnectedness between the various internal and external organizational factors for the purpose of improving the quality of life of residents and promoting public value (Shahin, 2011). Allison and Kaye (1997), highlight key factors for effective strategy. In their study an effective strategy should be clear and comprehensively grasping external opportunities and challenges, realistic and comprehensive assessment of the organizations strengths and limitations, an inclusive approach should be adapted in strategy formulation and implementation, an empowered planning committee should be used in strategy planning, the plan should involve senior leadership to share responsibility with the board and staff members, should be based on the best practices, should have clear priority and implementation plan, should have an element of patience and commitment to change. Failure to observe any of the factors leads to ineffectiveness in strategic plan implementation.

In Kenya, strategic planning and implementation is a statutory requirement for government institutions and state corporations. The developments policies of the government of Kenya are driven by the need of achieving vision 2030, which is a blue print that aims at transforming the country into an industrialized middle income nation (Nyamboga & Gongera, 2014). Organizations have therefore a responsibility of engaging in strategic management process of strategy formulation and monitoring their performance to achieve effective implementation strategies to avoid failure of implemented strategies due to ineffectiveness. Kenyan institutions and organizations have over time embraced the concept of strategic management in order to remain relevant in their operational environment, but even with this concept, many firms have not realized

the full benefit of strategic management concept due to the challenges associated with strategy formulation and execution phase and a number of them have opted to seek this services from consultant firms. Organizations that have fully implemented the strategy have not been able to meet their strategic objectives (Ackermann & Eden, 2011).

Most of the Kenyan government organizations have a strategic plan in place but little is done to evaluate effectiveness of these plans hence end up not achieving their strategic objectives. Many scholars have done extensive research on strategy formulation and implementation but little has been done on strategy evaluation and hence this explains why many organizations strategies are not effective enough to achieve their strategic objectives. For instance in the Kenyan banking industry, a number of banks have adopted Mckinsey (2006) strategic plan with a view of positioning their banks at a competitive edge, a situation that has never worked to their favour. Instead these banks continue to struggle in their performance because their strategic management process has very little or no evaluation is done to determine effectiveness of the strategy they adopt as these banks have copy pasted the same strategy. Kenyan public hospitals have implemented a strategic and investment plan that was intended to improve service quality in these hospitals; however the service quality has remained below the expected standards hence the need to assess the influence of this strategic plan on service quality (Wanjau, Muiruri & Ayodo, 2012).

1.1.4 Effectiveness of strategic plan

Success of any organization depends largely on how it will implement a strategic plan in the turbulent environment it's operating in. Mutuli (2014), states that once a strategy is formulated, it needs to be implemented without which it remains worthless. Strategy implementation is among the final parts of the strategic management process and acts as an acid test to the management's competence which makes effective strategy key to success of an organization. Effective strategy implementation and execution relies on sustaining a delicate balance between preventing failures and promoting success simultaneously with focus being on the future. A strategy if not effective, it will not

achieve its objective even if it's implemented well. An effective strategic planning process provide a framework to make decisions on how to allocate organizational resources, address challenges and take advantage of opportunities that arise along the way. Strategic planning focuses on establishing organizational direction, setting priorities and identifying obstacles and opportunities that may limit or enable one to carry out the mission. According to Rhode (2010), effective strategy should be deeply understood and shared to all members of the organization, should allow flexibility so that the direction of the organization can be adopted to changing circumstances, the strategy results from the varied input of diverse group of thinkers, the strategy should follow through and deep analysis of both the external environment and the internal capabilities of organization and identifies areas of competitive advantage.

Kiambu County government has formulated and adopted a five year health strategic and investment plan that covers 2014-2019. The strategic objectives of this plan aims at general improvement in the service quality in the public hospitals. However even with the strategic plan in place, there is general outcry over the poor quality of services offered in public hospitals, with cases of patients being left unattended, women giving birth on the floor, overcrowding and patients sharing beds and in some cases resulting to death (Mwijuma, Omido & Akerele, 2013). Therefore it's essential that the strategy in place be studied to determine its influence on service quality.

1.1.5Service quality in public hospitals

The standard of service quality is key to the success of any organization. Successful institutions have realized this and invested heavily on the quality of service. Service quality is an achievement in customer service that meets or exceeds customer expectations whilst remaining economically competitive. Organizations with better service quality have continued to increase on their profitability and remained competitive in the market than those with poor service quality. Better service quality would attract and retain customers and increase customers' experience. Kenyans public hospitals continue to face a number of challenges, key among them being poor quality of services

offered, lack of sufficient personnel, health workers strikes, deficient budgetary allocation of funds that leads to inadequate facilities, drugs and equipment (FIDA, 2014). According to FIDA report on the state of public hospitals, resources in public hospitals remain inadequate presenting an impediment to the sustainability of the government policy. As a consequence, the number of preventable maternal deaths in Kenya has increased hindering achievement of Millennium development goal on health. The report site a case in Nyeri county hospital among other cases where an infant died on allegations of having been delivered on the floor due to staff shortage and hospital negligence. Poor infrastructures, few hospitals and health care centers have led to high patient burden at hospitals that are supposed to be only referral hospitals. A great exemplary is Kenyatta national hospital which is primarily referral hospitals. The hospital caters for average of 80,000 in patient and 500,000 outpatient annually (Kenyanya, 2015).

According to Muchangi (2015), devolution has brought new health facilities and medical equipment to all counties, but health workers are largely dissatisfied as a number of nurses and doctors continue to protest over delayed salaries and promotions and claim health was better managed by National government than the way it's being managed by county government. According to world health organization, Kenya has a critical shortage of health workers since independence. The organization has set a minimum threshold of 23 doctors, nurses and midwives per population of 10000. Kenya's current ratio stands at 13 per 10000 far below the world health organization standard, an issue that negatively affects service quality in Kenyans public hospitals. In Kiambu County, cases of public complains due to poor services in public hospitals are on rise, with health workers protesting over poor working conditions, delayed salary and promotion and patient being left un attended in spite of strategic plan being in place to improve the service quality in these hospitals (Wanjau, Muiruri & Ayodo, 2013).

1.2 Statement of the Problem

Kiambu county public health sector has a strategic and investment plan formulated in 2012 that covers from 2013 to 2019 with the main strategic objective being to improve the service quality in public hospitals. Even with the strategy in place to address service quality in public hospitals, there still a large public outcry on the poor quality of services (Wanjau, Muiruri & Ayodo, 2012). Factors such as demotivated heath workers and strikes, inadequate drugs, poor working conditions, high employee turnover, untidiness and overcrowding of patients have affected service quality in public hospitals (Wavomba & Sikolia, 2015). The county government receives public complaints over poor services in public hospitals due to the above factors which have adversely affected the service quality in spite of having implemented a health strategic and investment plan to improve service quality (Ochieng, 2016). This strategic plan is made up of the health work force, infrastructure and service delivery, leadership and governance, financing, information systems and public-private partnership all aimed at improving service quality in public hospitals (KHSSP, 2012). In spite of strategic plan implementation to improve service quality in public hospitals, there is public outcry over quality of service hence the need to assess the influence of the strategic plan implementation on service quality in these hospitals.

1.3 Research objectives

1.3.1 General objective of the study

The general objective of the study was to assess the influence of strategic plan implementation on service quality in public hospitals in Kiambu County.

1.3.2 Specific objectives of the study

The following were specific objectives of the study:

 To assess the influence of information system on service quality in public hospitals in Kiambu County.

- ii) To determine the influence of health work force training and welfare on service quality in public hospitals in Kiambu County.
- iii) To establish the influence of leadership and governance on service quality in public hospitals in Kiambu County.
- iv) To assess the influence of resource mobilization and allocation on service quality in public hospitals in Kiambu County.

1.4 Research Questions

The study attempted to answer the following specific questions:

- i) What is the influence of information system on service quality in public hospitals in Kiambu County?
- ii) What is the influence of health work force training and welfare on service quality in public hospitals in Kiambu County?
- iii) What is the influence of leadership and governance on service quality in public hospitals in Kiambu County?
- iv) What is the influence of resource mobilization and allocation on service quality in public hospitals in Kiambu County?

1.5 Justification of the study

1.5.1 County and National government

This study provided valuable information both to the county and national government on the influence of the strategic plan implementation on service quality in public hospitals and be able to highlight strength and weakness of the plan and determine whether the strategic objective of quality service set in the plan is being achieved. The recommendation of this study would set a precedent for future strategic management in public hospitals.

1.5.2 Hospitals Management

The hospitals management would get valuable information on whether the strategic plan implementation in public hospital is good enough to solve the problem of service quality. They would also gain skills and knowledge of strategic management.

1.5.3 General Public

The study provides the general public with information on the need to have a strategy in public hospitals to address their concerns especially on the quality of services offered.

1.5.4 Scholars

Previous studies done on strategic management have focused on strategy formulation, adoption or implementation with very little done on strategy assessment. This study would therefore add to the body of knowledge on strategy assessment and evaluation especially with focuses being in public hospitals. The scholars would also be able to gain both knowledge and skills on strategic management especially on strategic evaluation and assessment.

1.6 Scope of the Study

The study was conducted in Kiambu County, targetingthe 156 officers in charge of all 78 public hospitals in the county according to the county government of Kiambu department of health services. The study focused on the assessment of the influence strategic plan implementation in public hospitals with implemented strategic objectives such as information system, health work force training and welfare, leadership and governance and resource mobilization and allocation being assessed on how they influence service quality in public hospitals. Service quality was assessed with respect to each objective and the information was collected from the officers in charge of these hospitals since they are the ones responsible with strategic assessment. The period of this study was February 2017 to January 2018, with data collection taking three months from November 2017 to January 2018.

1.7 Limitation and Delimitation of the study

The study was affected by uncooperative respondents especially those who were skeptical about the purpose of the study. In such cases an attempt was made to reassure the respondents of the confidentiality of their response and information given was strictly used for the academic purposes of this study hence being able to convince them to fill the questionnaire. Some respondents were not able to interpret some questions, in such case the research assistant had to explain to them.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter provides extensive information on the subject to be studied and has been divided into three major parts; Theoretical review which looks at different theories on the independent variables; Review of empirical studies done on the variables identifying existing gaps and an explanation of the conceptual framework which illustrate the relationships among the variables studied.

2.2 Theoretical Review

This study was anchored on four theories: System Theory, Human Capital Theory, Stakeholders Theory and Resource Based Theory.

2.2.1 System Theory (ST)

This theory is interdisciplinary study of systems with the goal of discovering patterns and elucidating principles that can be discerned from and applied to systems at every level of nesting. This theory was first introduced by Bertalanffy (1968), which is transdisciplinary and attempts to investigate both the principles common to all complex entities and models which can be used to describe them. It was later improved on by Connors (2007), according to Connors (2007), a system consists of four things; the first one is object which contains parts, elements or variables within the system, second is attributes which refers to qualities and properties of the system and its objects, third is internal relationships among its objects and fourth is environment.

A system is then defined as a set of things that affect one another within an environment and form a larger pattern that is different from any of the parts. The fundamental systems interactive paradigm of organizational analysis features the continual stages of input, throughput (processing) and output which demonstrate the concept of openness and closeness. A closed system does not interact with the environment while open system

receives information which is used to interact with environment hence likelihood to survive and prosper.

According to Connors (2007), organizations that adopt open system in their information systems do prosper and survive for a longer time than those that adopt closed system. Therefore in an organization set up, information is supposed to flow from one stage or department to another to achieve the desired results hence lack of departmental or organizational free flow of information leads to poor output. This theory has been developed and used by other scholars in different disciplines such as politics, economics, biological sciences and management science.

Heil (2006), view organizations as systems of cooperation of human activities to meet the criteria for survival through effectiveness and efficiency. This implies that the organization has to rely on information from one department to another to achieve its overall objective. Kiambu County public hospitals information flows from top management down to the least employee in the organization following top down approach. Information flows from one unit to another until it reaches employees at operational level who are supposed to put it into action to achieve desired results. However in the process of passing information from one unit to another, their challenges such as distort, lack of clearly, lack of proper understanding which end up leading to operational lapses that could be a possibility of poor services hence the need for this study.

2.2.2 Human Capital Theory (H C T)

Jones and Romer (2010), opines that human capital is the stock of knowledge, habits, social and personality attributes, including creativity, embodied in the ability to perform labor so as to produce economic value. It also corresponds to any stock of knowledge or characteristics the worker has that contributes to his or her productivity. This theory is characterized by education and experience which is regarded as a resource that is heterogeneously distributed across individuals. Other early scholars who did the study of human capital theory include Smith (1776) and Schultz (1961).

Human capital is the most important of all factors of production in an organization as it help in setting strategy for realization of organization goals and objectives and combine other resources to create a bundle that gives the organization a competitive edge, therefore the work force need a number of specific skills if the organization is to survive in the competitive environment (Mokyr, 2004).

The work force especially at management level need three basic types of skills in performing their work; the technical, conceptual and human or interpersonal skills to execute the organizational objectives (Saleemi, 2006), hence the assumption that investment in human capital will lead to greater economic outputs. In Kiambu County public hospitals, the level of service quality is attributed to the manner in which the health work force has been managed and their grievances pending unresolved. Health work force attained certain skills and training which should be relevant to their work, however even with this, there has been public complain over the level of services. Thus well management of human capital is an important factor that would contribute to improve quality service hence the overall success of the public hospitals.

2.2.3 Stakeholders Theory

According to Bryson (2004), stakeholder theory tries to address the morals and value in managing an organization. This theory suggests that managers must formulate and implement processes and strategies that satisfy the interests of all stakeholders of the company. This stakeholders includes; employees, suppliers, society, government, creditors, shareholders, customers, owners, managers, financiers and trade union. The stakeholders can be broadly be divided into two; internal stakeholders and external stakeholders. For any business to be successful, it has to create value to for all the shareholders. The theory holds that you can't treat any stakes in isolation, their interest has to go together in the same direction and management decisions must consider the contributions of both internal and external stakeholders.

Therefore during strategy formulation and implementation it's imperative that stakeholders interests are taken into account, since they influence and exchange resources

with the firm. The link between stakeholders and the firm is very important for the future of both entities and so their interests play a key role in the success of an organization. In Kiambu County public hospitals, the level of service quality affects customers (patients) as the staffs are demotivated due to poor management. Even though the stakeholders such as patients, government, health personnel and community interests may have been incorporated in the strategic planning, cases of complains over service quality are evident which informed this study.

2.2.4 Resource Based View Theory (RBVT)

This theory was first found by Wernerfelt (1984), before it was proposed by Barney (2001). The theory seeks to explain why a given firm can have a competitive advantage over others based on the resources. This theory sees resources as key to superior firm performance if that resource exhibits attributes that enables the firm to gain and sustain competitive advantage. The supporters of this view argue that the organizations should look inside the company to find the resources of competitive advantage instead of looking at competitive environment for it.

According to Barney (2001), it's much more feasible to exploit external opportunities using existing resources in a new way rather than trying to acquire new skills for each different opportunity. In this theory, resources are given the major role in helping companies to achieve higher organizational performance and resources are either tangible or intangible (nonphysical) such as brand, reputation, trade mark, intellectual property and as such it's built over a long time and is something other companies cannot buy from the market. These resources stay within the firm and are the main source of sustainable competitive advantage since other companies cannot buy them from the market.

The assumption underlying this theory is that resources are not homogenous nor are they perfectly mobile between firms in an industry otherwise firms capabilities would be equal and no one firm within an industry would achieve competitive advantage over others. The resources must be valuable, rare, inimitable and non-substitutable to create competitive advantage.

Kiambu County public hospitals have unique resources such as financial resource from both national government and donor, human resources, infrastructure, drugs and equipment which with the aid of a well strategic plan in place should help to improve the service quality in these hospitals. Instead with all these resources, the quality of services has led to complains from the public hence the need to study the influence of the strategic plan implemented on the service quality.

2.3 Empirical Review

2.3.1 Information System and Service Quality

An assessment of the influence of information system implementation on service quality in public hospitals in Kiambu County is an area that has not been studied; however scholars have attempted to carry out studies related to strategic management in relation to public hospitals in areas of strategy formulation and implementation. WHO (2003), highlights re-engineering as one of the best strategy for improved quality in public hospitals, even though the study acknowledges that there is no scientific evidence that one type of strategy is better than the other, while Wanjau, Muiruri and Ayodo (2012), in their study of factors affecting provision of service quality in public health sector, identified technology and improved communication as some of the factors contributing to improved services. This study does not specify which technology improves service quality.

Ombaka (2013), in the study on the evaluation of the level of quality health care accorded to patients in public hospitals revealed that patients take a lot of time to be served as a result of poor information systems. The health care strategies such as Information Communication Technology (ICT), management standards and system and innovation in information systems have co-relationship with service delivery (Owino, 2014). The study by Ochieng (2016), on the factors affecting provision of quality service in the public health sector highlights lack of technology advancement and information system as major cause of poor services and therefore recommends investment in technology by the public hospitals for better services; while Juma and Okibo (2016), in their study of the effects of

strategic management practices on the performance of public health institutions in Kisii county agree that Technology Architecture if well implemented in public hospitals it improves on the performance of health care institutions, however the study is silent on what aspect of health care is improved on. Strategic Information system has helped to improve on service quality in high performing organizations. A study by Bharati and Berg (2003), on managing Information Systems for service quality identified system quality, information quality, user information system characteristics, employee information system, performance and technical support as factors influencing service quality.

Studies have shown that information systems have a positive relationship on service quality, with organizations that embrace this technology posting better results than their competitors that are not using information systems. Information system has increased efficiency in service delivery and information passed from one unit to another is more clear and timely (Miller, Nita, Thomas & Lee, 2008). Service quality in many institutions has been used as indicator of information system effectiveness with institutions with poor service quality being considered to be having inefficient information systems. Challenges associated with information system will lead to communication barrier which will eventually results to poor service delivery. This calls upon the organizations to invest heavily on better information system for superior services. It's therefore clear from the above studies that information system has influence on the service quality. In this study the current information system in Kiambu County public hospitals was studied to establish its influence on the service quality.

2.3.2 Health Work Force Training, Welfare and Service Quality

Health providing institutions such as hospitals depends on health work force to provide health services to the patients. Better managed health work force will result to motivated health personnel who will deliver better services. Increasing human resources and proper management has resulted to increased service delivery as highlighted by WHO (2003) in the study of the best strategies for ensuring quality in hospitals. These findings agrees

with Wanjau, Muiruri and Ayodo (2012), who identified employee capacity as the most influential factor that affect service standard in their study of factors affecting provision of service quality in public health sector, a case of Kenyatta National Hospital.

When managing health work force, employee attitude, traits and behavior need to be well managed, since this end up affecting their engagement and commitment level to their service. When employee needs are well taken care of, they get motivated to work hard at their station to produce better results. Kiiru (2012), in the study of the influence of organization culture on performance of hospitals in Nairobi, identified employee attitude as one of the factors likely to affect the service quality. Therefore for the health work force to be productive enough to deliver better services, they ought to be well trained, skilled and knowledgeable with the right attitude, since when they are not knowledgeable and skilled they will deliver low service quality (Mutunga, 2013). Ombaka (2013), carried out a study on the evaluation of the level of quality health care accorded to patients in public hospitals in kiambu and Nairobi. The study identified the relationship and attitude of service provider to be of great influence to the level of service quality provided in public hospitals.

Resource insufficiency especially human resources has been identified by Kihuria (2013), in the study on challenges of strategy implementation in public and private hospital as one of the challenges to strategy implementation which eventually leads to low service delivery. This study agrees with Mutuli (2014) who concluded that inadequate resources especially human resource is the main cause of poor service delivery in public hospitals. Other studies were done by Asuman, Mungara, Kimemia and Warui (2015), on organizational factors affecting the adoption of strategic planning in rural mission hospitals in Kenya. The study identified resource allocation challenges as one of the factor that contributes to poor service delivery in hospitals. Health work force has been studied as one of the factors influencing strategic plan implementation in public hospitals with health work force that's poorly managed leading to poor service delivered. This was

done by Malei (2015), on institutional factors influencing implementation of strategic plans in public hospitals.

Strategic planning if well implemented it will improve on the service quality and overall organization performance (Wachira & Irungu, 2015), however improvement in organizational factors such as health work force will contribute to improved service delivery. Ochieng (2016), in the study of factors affecting provision of quality service in the public health sector in Nyahururu district hospitals identified employee capacity as the major factor influencing service quality in public hospital; while Juma and Okibo (2016), attempted to study on the effects of strategic management practices on the performance of public health institutions in Kisii. In their study human resource management strategy affects service quality and therefore the quality of service delivered in public hospital depend on the effectiveness of human resource management strategy in place, the better the strategy the better the services and vice versa. It's important that institutions should have in place the right strategies for better service delivery.

2.3.3 Leadership, Governance and Service quality

Success of any institution greatly depends on the type of leadership and governance in place, since this is what motivate or de motivate employee to perform (Berman, Pallas, Smith, Curry and Bradley, 2011). WHO (2003), highlights strengthening management standards and guidelines as best strategies for ensuring quality services in hospitals. The management should therefore embrace total quality management practices and must from time to time reorganize their hospitals to ensure that the service quality is not compromised. Since strategy formulation and adoption comes from the top management, its success will depend on management willingness to change and implement it. The leadership should therefore assess implementation capacity before committing to the new strategy and the managers have a responsibility of selecting a strategy that will aid in improving service quality in public hospitals. Leadership and governance style is key

determinant of strategic plan implementation in public hospitals, since implementing a strategy requires organization culture change and desire for greater performance. Poor leadership has therefore hindered success of implemented strategy in public hospitals which has led to poor service delivery (Mutunga, 2003).

Poor management of strategic plan in public hospital was identified as key challenge to strategy success and quality service which has now resulted to poor services in public hospitals (Akerele et al; 2013). Effectiveness of quality health care strategies in improving service delivery at the national referral hospitals in Kenya was done by Owino (2014). The study found out that lack of strategic leadership training in public hospital has contributed to poor strategic implementation which eventually has resulted to poor service delivery in public hospitals. This study agrees with Mutuli (2014), who studied challenges affecting the implementation of strategic reproductive health programs among level five hospitals in Nairobi. Mutuli (2014), identified managerial incompetency as a barrier that is contributing to poor services in public hospitals. Similar findings were revealed by Asuman, Mungara, Kimemia and Warui (2015), in their study on organizational factors affecting the adoption of strategic planning in rural mission hospitals in Kenya where leadership was found to affect the adoption of strategic planning hence contributing to the low service quality in hospitals. The study recommends that mission hospitals should consider designing and implementing strategy taking into account all the internal and external factors and that despite the benefits resulting from strategy implementation, it's important that the leadership be aware of challenges inherent in the activity and the mitigation for each.

The managers in charge of providing leadership in hospitals should always carry periodic monitoring and evaluation of strategic plan in place to determine its effect on service quality (Malei, 2015). Strategic leadership and governance if well implemented, it improves the service quality in public hospitals (Wachira & Irungu, 2015). Even though study by Wachira and Irungu (2015), on how strategic planning improve organization performance, a case study of Kenyatta National Hospital tend to suggest that strategic

planning has improved performance of public hospitals, study by Waromba and Sikolia (2016), on the quality of service delivered in public hospitals in Kenya disagree with the findings since the quality of service delivery in public hospitals is questionable despite the hospitals management having implemented a strategic plan to address this problem.

2.3.4 Resource Mobilization, Allocation and Service Quality

Resource is the most important factor in the success of any institution and therefore organizations that want to excel must learn an art of mobilizing as much resources as possible and allocating them optimally for proper utilization to produce maximum services. In public hospitals, the quality of service delivery depends on availability of resources and how these resources have been allocated. The managers must therefore have the ability to mobilize resources and allocate them properly for better service delivery, since when the resources are inadequate; the quality of service delivered is highly compromised. Public hospitals continue to operate under constrain resources and the available few ones are not allocated appropriately which ends up affecting service delivery (Ochieng, 2016). WHO (2013), has recommended increased resources in public hospitals if they are to improve on the service standards. Wanjau, Muiruri and Ayodo (2012), on their study on factors affecting provision of service quality in public health sector highlighted improper allocation of financial resources as the main factor contributing to low service quality and therefore for better services, the public hospitals should allocate financial resources effectively bearing the fact that they operates under constrain budget.

Resource adequacy has been proved to be key determinant of strategic plan implementation hence having a direct relationship with service quality in public hospital. Mutunga (2013), on the study of determinant of strategic plan implementation in Kenya public hospital found out that inadequate resources has resulted to poor service quality in public hospitals. This study agree with study done by Akerele (2013), on effectiveness of strategy implementation using the balanced score card in local government authority, where it was concluded that strategy effectiveness is affected by inadequate resources.

Ombaka (2013), carried out a study on the evaluation of the level of quality health care accorded to patients in the public hospitals in Nairobi. The study concluded that the level of quality of service was below the standard as per the ministry of health. The study revealed that the service was negatively being affected by the lack of adequate drugs and the few that were available being expensive to many patients. Other findings that concur with Ombaka (2013), include study done by Kihuria (2013), on the challenges of strategy implementation in public hospital, where resources insufficiency was identified as a major factor contributing to low service delivery in public hospitals.

Staff commitment towards offering quality service is key to the success of any institution. In Kenyan public hospital health work force commitment and loyalty to the employer is observed to be low, this has led to high staff turnover in search for greener pasture which has eventually affected service delivery in public hospital as well some staff have ended up opening their own private clinics ending up competing with their employer (WHO, 2003). The resource allocation programs in public hospitals is not in line with the available resources as some hospitals are resource constrained others are enjoying massive resources that are not being utilized for better service delivery. Mutuli (2014), in the study of challenges affecting the implementation of strategic reproductive health programs found out that inadequate resources allocated to public hospital is a major pediment to service quality in public hospital. This finding is in agreement with the study done by Asuman, Mungara, Kimemia and Warui (2015), on organizational factors affecting adoption of strategic planning in rural hospital where inadequate resource allocation was found to be affecting quality of service. Factors affecting provision of quality service in the public health sector in Nyahururu sub-county hospitals were studied by Ochieng (2016), where inadequate financial resources was found to be the major cause of poor service delivery in health sector.

Resource allocation and mobilization in public hospitals has been improperly done which has resulted to poor service delivery. The above mentioned studies have shown that the manner in which resources are mobilized and allocated in public hospitals influence the service delivery which eventually affect the service quality. This therefore creates a need to assess the influence of available resources and their allocation on service quality in public hospitals.

2.4 Research Gap

From the empirical literature above, most of the analyzed research focused on strategy formulation and adoption. These studies have focused on factors or challenges affecting strategy formulation and adoption in public hospitals with no study done to assess the influence of strategic plan implementation on service quality in public hospitals in Kiambu County which leaves a research gap for this study. Kiambu County public hospitals have implemented a five year strategic and investment plan with an aim of improving the quality of service; however even with this strategic plan, the level of service quality is far way below the expectation hence the need for this study.

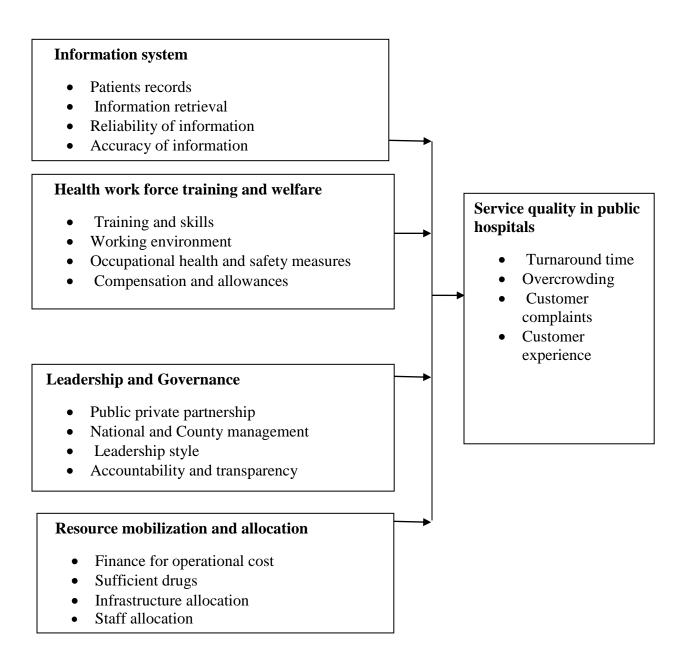
2.5 Conceptual framework

The aim of the study was to assess the influence of strategic plan implementation on service quality in public hospitals in Kiambu County. The researcher conceptualizes that information system, health work force training and welfare, leadership and governance and resource mobilization and allocation that are anchored on health strategic and investment plan adopted by Kiambu County public hospitals have an overall effect on service quality.

For the purpose of this study, information system with its aspects of patient records, information retrieval, information reliability and its accuracy affect service quality. Health work force aspects such as training and knowledge based of the staff, working environment, occupational health and safety measures, staff compensation and allowances affect service quality in Kiambu County public hospitals while leadership and governance aspects such as public-private partnership, national verses county government, transformational verses transactional leadership, accountability and

transparency were assessed on how it affects service quality in public hospitals in Kiambu County.

Resource mobilization and allocation aspects such as finance, drugs, infrastructure allocation and staff allocation were studied on how it affects quality of service in public hospitals in Kiambu County. Service quality in public hospitals in Kiambu County was studied and measures of service quality such as service turnaround time, level of overcrowding, customer complaints and customers experience was used to determine the level of service quality.



Independent Variables

Figure 2.1: Conceptual Framework

Source: Author (2018)

Dependent Variable

Information system

This is an organized system for the collection, organization, storage and communication of information, hence being the study of inter-related networks that people and organizations use to collect, filter, process, create and distribute data or information. It involves passing of information between people or department for the smooth operational activities in an organization. (Source: Researcher)

Health work force training and welfare

This refers to the training and welfare of the people who deliver or assist in the delivery of health services or help operate health care facilities. Health work force can also refer to health human resources. Health work force training and welfare has a significant influence on the service quality. Health work force training involves knowledge and skills acquired to deliver, while their welfare includes working environment, occupational health, safety and compensation which form the variables for this study. (Source: Researcher)

Leadership and governance

This concept encompasses strategic direction, plans and policies, effective oversight, regulations, motivations and partnerships that integrate all health systems building blocks to achieve results. The attributes of leadership and governance such as partnership, type of government, leadership style, accountability and transparency have an influence on service quality in public hospitals hence affects service delivery. (Source: Researcher)

Resource mobilization and allocation

Resource is anything that is valuable and can be put to use to achieve desired objective. Resource mobilization involves putting measures or strategies of acquiring as much needed resources as possible while resource allocation is utilizing available resources in optimum manner so as to achieve superior results. In public hospitals, resource mobilization and allocation measures influence the service delivery. Attributes of resource mobilization and allocation such as sufficient finance, drugs, infrastructure and staff allocation have an influence on service quality, hence need for the study. (Source: Researcher)

Service quality

This is the degree and direction of discrepancy between customer's service perceptions and expectations. When the perception is higher than the expectation, then service is said to be high quality and vice versa. High standard of services in public hospitals can be achieved when the variables in this study are well taken care of by the management. Service quality is therefore an achievement in customer service and its attributes such as turnaround time, overcrowding, customer complaints and customer experience were measured on how independent variables influence them in the study. (Source: Researcher)

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter provides information on the methodology that was adopted by the study. The chapter covers research design that was used for the study, the target population, sample size and sampling procedures, the instruments of data collection, validity and reliability of data collected, pilot testing, data collection procedures, data processing and analysis and ethical considerations in the research process.

3.2 Research design

The study adopted a descriptive survey method. This was preferred because it's efficient in collecting large amount of information within a short time. Descriptive survey collects data from existing population units with no particular control over factors that affects the population characteristics of interest in the study (Gupta, 2008). Kothari (2008), argues that the use of surveys in social science fact finding provide a great deal of information which is accurate. Furthermore, Kothari (2008), state that the intention of survey research is to gather data at a particular point in time and use it to describe the nature of existing conditions. Since the aim of the study was to assess the strategic plan implementation on service quality, a descriptive survey design was the most suitable for the study. Descriptive survey has been used by Malei (2015), in the study of institutional factors influencing implementation of strategic plans in government hospitals in Kitui central sub-county, kitui county, Kenyanya and Kimanzi (2014), in the study of factors influencing provision of quality service in the public health sector, a case of Mwingi sub-county hospital, Kenya.

3.3 Target Population

Target population according to Ngechu (2004), is well defined set of people, services, elements, events, group of things or households that are being investigated in the study. The study population should be homogeneous and more representative because everyone has equal chance to be included in the final sample that is drawn (Mugenda & Mugenda, 2003). According to Kiambu county public health administration, Kiambu county public hospitals are categorized into levels depending on the facilities, region covered and the number of patients the hospital serves in a day. Level five is the highest and level one is the lowest, with level one being managed by the community without the involvement of county government management and level five being the county main hospital followed by 3 level four hospitals, then 20 level three hospitals(health centres), then 54 level two which are mainly government based dispensaries. The study focused on government owned health facilities which ranges from level five to level two. Since level one are owned and managed by the community they are not under county government management hence the county health sector strategic plan does not apply to them.

According to county government of Kiambu department of health services, there are 78 public health facilities distributed across the Kiambu County which are managed by the county government(See appendix vi), with level five and four being manned by medical superintendent and deputy superintendent while level three and two hospital is manned by clinical officer and assistant clinical officer. These officers in charge make a total of 156 which forms the target population for this study. This is because they are the ones in charge of formulating and assessing the county health strategic plan in public hospitals.

3.4 Sample Size and Sampling Procedures

Singh (2007) defines sampling frame as a list of entities from which sampling units are selected for observation in the study. A sample is s a finite part of a statistical population whose properties are used to make estimates about the population as a whole (Kothari, 2008).

A sampling frame is required before sampling in order to select acceptable representative sample of 10-30% if the elements in the sample are more than 30 (Mugenda & Mugenda, 2003). Therefore stratified random sampling at 30% was used. The target population of 156 officers in charge of public health facilities in Kiambu County was stratified per category and the sample size of 50 was drawn as shown in the table below:

Table 3.1: Population and Sample Size Table

Category	Number of Public	Officers in Charge	Population	Sample size
	Hospitals			(30%)
Level 5	1	Medical superintendent	1	1
		Deputy medical superintendent	1	1
Level 4	3	Medical superintendent	3	1
		Deputy medical superintendent	3	1
Level 3	20	Clinical officer	20	6
		Ass clinical officer	20	6
Level 2	54	Clinical officer	54	17
		Ass clinical officer	54	17
Total	78		156	50

3.5 Data collection, Presentation and Analysis

The study used semi-structured questionnaire which contained well organized questions that are grounded on the objectives of the study. The questionnaire was divided into three sections; Section A contained questions on general information on public hospitals, section B; Specific information on the valuation of strategic plan implementation with respect to each objective and section C; specific questions on the service quality in public hospitals. The purpose of using questionnaire to collect data is because it is easy to use and requires limited time as well the questionnaire gives descriptive data that would be used to provide the representative views and opinion of the population under study.

The use of semi-structured questionnaire to collect primary data has also been used by Mbuthia (2013), in the study on "service quality practices in public healthcare facilities in Mombasa County, Kenya" and Malei (2015) on "Institutional factors influencing implementation of strategic plans in government hospitals in Kitui Central sub-county, Kitui County, Kenya". Data collection instrument was administered by the help of 2 research assistants to ensure higher percentage of return rate. The questionnaires were administered on the sampled hospitals management staffs that have the responsibility of formulating, implementing and managing county strategic plan. Research assistants ensured correct interpretation of questions asked. Drop and pick method was used where the questionnaire were self-administered to respondents to allow them enough time to answer the questions before collection.

The questionnaires containing data were checked for completeness and consistency before any processing and analysis can be done. Data capturing was done using excel software. The data from completed questionnaire was coded and entered into computer using the statistical package for social science (SPSS) version 21 for window analysis. Descriptive statistics such as frequencies mean and standard deviation and inferential statistical methods were used to analyze collected data. Descriptive statistics was used to show the general characteristics of the findings from the study population. This is because they are simple to understand and appropriate in summarizing the opinions of the

sample population as it enables the aggregation of raw data in numerical terms. (Nunnally, 2000).

ANOVA was used to test the influence that the variables interactively and each in isolation have on service quality. The data was tested at 5% level of significance. Chisquare and logical multiple regression model was used. The regression model was as below:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Where:

Y- Service Quality (dependent variable)

 β_0 , β_1 , β_2 , β_3 , β_4 - is the constant

 X_1 , X_2 , X_3 , X_4 – independent variables as follows:

X₁-Information system

X₂- Health work force training and welfare

X₃- Leadership and governance

X₄- Resource mobilization and allocation

e – Error term at significant level of 0.05

The error term was used to test the trend of influence the strategic plan implementation has on service quality in public hospitals in Kiambu County. The results of the data analysis were presented using frequency distribution tables, pie charts and bar graphs.

3.6 Pilot Testing of the Research Instrument

A pilot test of the questionnaire was carried on a small sample at Kangemi in Westland before the questionnaires were administered to the selected sample. Mugenda and Mugenda (2003), states that the pre-test sample is between 1-10% of the target population. The sample pilot testing consisted hospital administrators selected randomly from five public hospitals in Kangemi location in Westland, Nairobi County; this did not form part of the sample size which represents 6.4% of the target population. According to Kothari (2008), the aim of conducting a pilot test is to detect weakness in the design and instrumentation and to provide alternative data for selection of a probability sample,

while Mugenda and Mugenda (2003), states that the purpose of pre-testing a tool is to ensure that items in the tool bear the same meaning to all respondents and to assess the average time that is required to administer the instrument.

3.7 Validity of Research Instrument

Mugenda and Mugenda (2003), refers to validity of the research as the degree to which results obtained from the analysis of the data accurately represents the phenomenon under study. The validity of the research instrument is based on the adequacy with which the items in an instrument measure the variables of the study (Nunnally, 2000). To ensure validity, all the possible indicators that can be used to measure the variables were identified and questionnaire was formulated to measure the indicators.

3.8 Reliability of Research Instrument

Reliability is a measure of the degree to which a research instrument yields consistent results or data after repeated trials (Mugenda & Mugenda, 2003). For the purpose of this study, test-retest method was used to determine reliability of the research instrument. This involved administering the questionnaire to the same group of respondent more than once in order to gauge the consistency of their responses hence determine the reliability of information gathered from the research instruments.

3.9 Ethical Considerations

The data collected from the respondents was treated with a lot of confidentiality and only used for the purpose of this study and researchers conclusion and recommendations were made based on the findings of this study.

CHAPTER FOUR

4.0 RESULTS OF THE STUDY

4.1 Introduction

This chapter provides an analysis of the data collected, their interpretation and presentation. It gives a detailed analysis of the coded data in tabular form showing their frequencies and percentages. Interpretation of the analyzed data is also provided. The chapter also provides details on the response rate, demographic characteristics and information on the study variables as collected from the field.

4.2 Response Rate

The study targeted 50respondents from public hospitals in Kiambu County. The researcher was able to distribute questionnaires to all the respondents. Out of the 50 questionnaires, 44 were returned making a total response rate of 88%. According to Mugenda and Mugenda, (2003), a response rate of 50% is adequate for analysis and reporting, a response rate of 60% is good and a response rate of 70% and over is very good. This implies therefore that the achieved rate was representative of the target population and was adequate and good enough to enable the researcher generate a conclusive report.

4.3 Demographic Characteristics of the Respondents

4.3.1 Age of the Respondents

Determining the respondents' age was important as it revealed their level of experience in strategic plan implementation on service quality in the hospitals. Figure 4.1 shows the age distribution of the respondents.

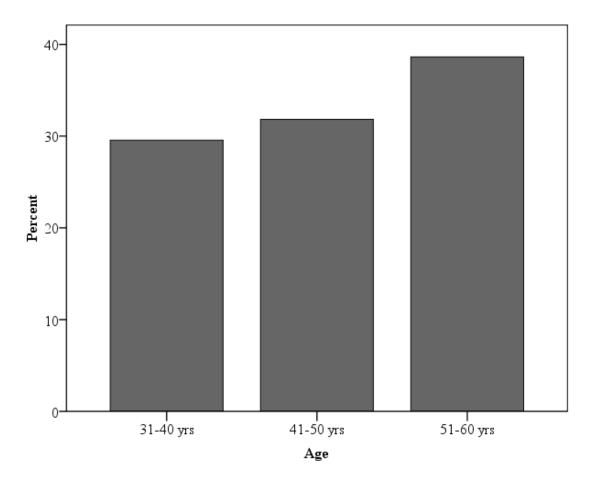


Figure 4.1: Age of the Respondents

The results indicate that 38.6% of the respondents were between the ages of 51-60 years while 31.8% of the respondents were between the ages of 41-50 years. Additionally, 29.5% were in the age bracket of 31-40 years. Based on the findings, the respondents who were between the ages of 51-60 years were the majority. This therefore would suggest that they were able to appreciate and understand the assessment of the influence of strategic plans implementation on service quality in the hospitals.

4.3.2 Educational Level

Education level was necessary in order to understand the literacy level of the respondents which could probably influence their understanding on the topic of study. Table 4.1 shows the results on the educational level of the respondents.

Table 4.1: Educational Level

Education Level	Frequency	Percent
Secondary	3	6.8
College	17	38.7
University	24	54.5
Total	44	100.0

According to the findings, majority of the respondents (54.5%) had university level of education while 38.7% had college education and a small percentage of 6.8% had secondary level. This was an indication that there majority of the respondents had either attained college education or university education, therefore in a position to give the intended information.

4.3.3 Years of Experience

As part of the general information, the respondents were requested to indicate the number of years they have worked for Kiambu county public hospitals. Table 4.2 presents their responses.

Table 4.2: Years of Experience

Years worked		Frequency	Percent	Valid Percent	Cumulative
					Percent
Valid	1-5 yrs	13	29.5	29.5	29.5
	6-10 yrs	25	56.8	56.8	86.4
	11-15 yrs	6	13.6	13.6	100.0
	Total	44	100.0	100.0	

From the findings, most respondents (56.8%) had worked in Kiambu county public Hospitals for 6-10 years, 29.5% for 1 to 5 years while 13.6% had worked for 11-15 years. Hence had experience in strategic plan implementation the public hospitals.

4.4 Information System and Service Quality

The first research objective sought to find out the influence of information system on service quality in public hospitals in Kiambu County. To address this objective, the respondents were requested first to indicate whether they understood information system and its influence on the service. Where 56% understand, while 44% did not, 34.1% said it has affected service quality negatively, 65.9% positively as indicated in the figure 4.2 below.

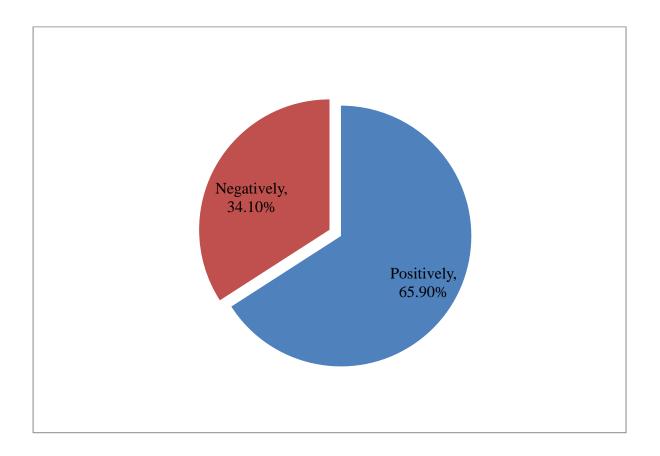


Figure 4.2: Effect of current Information System on service quality

Table 4.3: Influence of Information System on Service Quality

					escrip			stics	
Factor		SD	D	NS	A	SA	N	Mean	Std. Deviation
Patients records not	F	3	21	6	14	0	44	2.7045	1.00185
reliable increasing turnaround time	%	6.8	47.7	13.6	31.8	0			
Information retrieval	F	2	19	7	16	0	44	2.8409	.98697
cumbersome leads to overcrowding	%	4.5	43.2	15.9	36.4	0			
11110111111111011 00 111111101 10	F	4	20	8	10	1	43	2.6279	1.02407
not reliable hence increased complain	%	9.1	45.5	18.2	22.7	2.3			
•	F	5	19	5	13	1	43	2.6744	1.10671
information led to bad patient experience	%	11.4	43.2	11.4	29.5	2.3			
Patients records not	F	3	20	9	9	3	44	2.7500	1.08102
updated contributing to overcrowding	%	6.8	45.5	20.5	20.5	6.8			
Information retrieval	F	4	17	10	10	3	44	2.7955	1.11187
cumbersome increasing turnaround time	%	9.1	38.6	22.7	22.7	6.8			
Information obtained	F	6	17	8	10	2	43	2.6512	1.13145
not reliable leading to bad patient experience	%	13.6	38.6	18.2	22.7	4.5			
Inaccuracy of	F	5	19	5	13	2	44	2.7273	1.14858
information obtained has led to increased patient complains	%	11.4	43.2	11.4	29.5	4.5			
T		D D:		TO 3.T	~			a . a	

Key: **SD**=Strongly Disagree, D-Disagree, NS-Not Sure, A-Agree, SA- Strongly Agree

Table 4.3 indicates the results on the influence of information system on service quality in public hospitals in Kiambu County. The study found that 65.9% of respondents suggests that patient's records are up to date which according to them has improved turnaround time and that information retrieval is not cumbersome which has not led to patient overcrowding as indicated by a mean of 2.7 and 2.8 with standard deviation of 1.00, 0.99 respectively. The study further found that respondents were not sure whether information obtained is reliable which has led to increased patient complain, inaccuracy of information obtained has led to bad patient experience, patients records are not updated which contributes to overcrowding as shown by means of 2.6, 2.7, 2.8 and standard deviations of 1.01, 1.10 and 1.08 respectively. In addition, the respondents were not sure on Information retrieval as cumbersome and increasing turnaround time, information obtained as being not reliable leading to bad patient experience, and that inaccuracy of information obtained has led to patient complains. This is indicated by means of 2.8, 2.7, 2.7 and standard deviation of 1.11, 1.13 and 1.15 respectively.

4.5 Health Work Force Training, Welfare and Service Quality

The study sought to assess the influence of health work force training and welfare on service quality in public hospitals in Kiambu County. First, the respondents were required to indicate whether they understood the health work force strategic objectives and how it has affected service quality in the hospital. As a result, 86.4% said that they understand while 13.6% did not understand. Also, 69.8% of the respondents said that the current health work force training and welfare has negatively affected service quality and 30.2% said it has positive effect. Further findings on this impact are presented in table 4.4.

Table 4.4: Influence of Health Work Force Training and Welfare on Service Quality

		Desc	criptiv	e Stati	stics				
Factor		SD	Ď	NS	A	SA	N	Mean	Std. Deviation
Staff training and skills is not adequate to improve	F	2	5	7	30	0	44	3.4773	.87574
on patient experience	%	4.5	11.4	15.9	68.2	0			
Staff training and skills increases turnaround time	F	0	2	4	35	2	43	3.8605	.55982
	%	0	4.7	9.3	81.4	4.7			
If staffs were well trained and skilled it would	F	0	2	3	36	2	43	3.8837	.54377
increase efficiency	%	0	4.7	7.0	83.7	4.7			
Staff working environment	F	0	3	5	32	4	44	3.8409	.68005
isn't good to reduce on turnaround time	%	0	6.8	11.4	72.7	9.1			
Staff working environment	F	1	6	5	28	4	44	3.6364	.91730
overcrowding	%	2.3	13.6	11.4	63.6	9.1			
Staff working environment	F	1	5	6	29	3	44	3.6364	.86511
doesn't support customer experience	%	2.3	11.4	13.6	65.9	6.8			
The occupational health	F	1	3	5	27	8	44	3.8636	.87845
and safety measures increases turnaround time	%	2.3	6.8	11.4	61.4	18.2			
Occupational health and	F	1	4	4	27	8	44	3.8409	.91355
safety measures in place aids in overcrowding	%	2.3	9.1	9.1	61.4	18.2			
Staff compensation and allowances de-motivating	F	1	1	1	25	16	44	4.2273	.80301
affecting service quality	%	2.3	2.3	2.3	56.8	36.4			
Existing staff	F	2	2	2	21	17	44	4.1136	1.01651
compensation and allowances increases complain	%	4.5	4.5	4.5	47.7	38.6			

From the findings 69.8% of the respondents indicated staff compensation and allowances has de-motivating hence negatively affecting service quality and the existing staff compensation and allowances aids in increase in the number of patient complains as indicated by a mean of 4.2 and 4.1 with standard deviation of 0.80 and 1.01. Still they indicated that staff training and skills aids to increased turnaround time(m=3.9), if staffs were well trained and skilled it would increase efficiency hence reducing overcrowding (m=3.9), staff working environment is not good enough to reduce turnaround time (m=3.8), staff working environment supports overcrowding (m=3.6), staff working environment does not support good customer experience (m=3.6), the existing occupational health and safety measures aids to increased turnaround time (m=3.9) and occupational health and safety measures in place aids in overcrowding (m=3.8). However, other respondents were not sure whether staff training and skills is adequate enough to improve on patient experience as represented by a mean of 3.4 and standard deviation of 0.88.

4.6 Leadership, Governance and Service Quality

The third research objective sought to find out the influence of leadership and governance on service quality in public hospitals in Kiambu County. From the findings, 95.5% said that they understood leadership governance strategic objective while 4.5% did not understand. Regarding how the current leadership and governance has influenced service quality, 56% said it has positively influenced while 44% said the influence was negative. Further results were summarized in table 4.5.

Table 4.5: Influence of Leadership and Governance on Service Quality

				Desc	escriptive Statistics				
Factor		SD	D	NS	A	SA	N	Mean	Std. Deviation
Public private partnership improves service quality by reduction of complain	F	0	2	9	31	2	44	3.7500	.61474
and overcrowding	%	0	4.5	20.5	70.5	4.5			
Patients get better services and experience in private	F	2	3	2	36	1	44	3.7045	.82348
hospitals than public ones	%	4.5	6.8	4.5	81.8	2.3			
Public private partnership has helped in reduction of	F	0	1	19	21	3	44	3.5909	.65833
patient turnaround time	%	0	2.3	43.2	47.7	6.8			
Services in public hospitals were better under National	F	1	1	6	29	7	44	3.9091	.77214
government than under County government	%	2.3	2.3	13.6	65.9	15.9			
Transactional leadership has contributed to current	F	0	3	18	21	1	43	3.4651	.66722
state of service in the public hospitals	%	0	6.8	40.9	47.7	2.3			
Transformational leadership is better than	F	0	5	13	21	4	43	3.5581	.82527
transactional leadership in improving service quality	%	0	11.6	30.2	48.8	9.3			
Lack of accountability and transparency in leadership and governance has	F	2	3	3	32	3	43	3.7209	.88171
contributed to current service quality in public hospitals	%	4.7	7.0	7.0	74.4	7.0			
Valid N (listwise) Key: SD-Strongly Disagree							43		

Key: **SD**=Strongly Disagree, D-Disagree, NS-Not Sure, A-Agree, SA- Strongly Agree

From the findings, 56% of the respondents agreed that public private partnership aids in improving service quality through reduction of customer complain and overcrowding (m=3.8), patients get better services and experience in private hospitals than in public hospitals (m=3.7) and public private partnership has helped in reduction of patient turnaround time(m=3.6). In addition, services in public hospitals were better off under National government management than under current County government management (m=3.9), transformational leadership is better than transactional leadership in terms of improving service quality (m=3.6) and that lack of accountability and transparency in leadership and governance has contributed to current service quality in public hospitals (m=3.7). However, a mean of 3.4 were not sure whether transactional leadership has contributed to current state of service quality in the public hospitals. This implies that leadership and governance strategic objective affect the service quality delivery in the hospitals in Kiambu County. Equally important is the adoption of an effective leadership and governance during strategic plan implementation.

4.7 Resource Mobilization and Allocation and Service Quality

The final research objective sought to assess the influence of resource mobilization and allocation on service quality in public hospitals in Kiambu County. The respondents indicated that they understood the resource mobilization and allocation strategic objective as 81.4% said yes while the rest (18.2%) failed to understand. The strategic objective however was noted to negatively influence service quality (69.8%), while 30.2% said it has positively influenced service quality. Further analyses were summarized in table 4.6.

Table 4.6: Influence of Resource Mobilization and Allocation on Service Quality

		Desc	ripti	ve Stat	tistics				
Factor		SD	Ď	NS	A	SA	N	Mean	Std. Deviation
Insufficient financing has led to the current state of	F	0	4	1	35	3	43	3.8605	.67547
services in public hospitals	%	0	9.3	2.3	81.4	7.0			
Improper resource allocation by the hospital management has led to the	F	0	1	4	8	30	43	3.5581	.76539
current level of service	%	0	2.3	9.3	18.6	69.8			
Insufficient drugs has led to bad patient experience in	F	0	3	1	36	3	43	3.9070	.60999
public hospitals	%	0	7.0	2.3	83.7	7.0			
The current infrastructure allocation has led to	F	1	2	8	29	3	43	3.7209	.76612
overcrowding in public hospitals		2.3	4.7	18.6	67.4	7.0			
Inadequate infrastructure has led to bad patient	F	2	3	4	29	5	43	3.7442	.92821
experience and complains	%	4.7	7.0	9.3	67.4	11.6			
Inadequate infrastructure has led to increased patient	F	2	3	2	35	1	43	3.6977	.83195
turnaround time	%	4.7	7.0	4.7	81.4	2.3			
The current staff allocation has led to bad patient	F	1	4	9	24	5	43	3.6512	.89665
experience and complains	%	2.3	9.3	20.9	55.8	11.6			
Inadequate staff in public hospitals has contributed to	F	0	2	2	28	11	43	4.0698	.85622
patients overcrowding	%	0	4.7	4.7	65.1	25.6			
Inadequate staff in public hospitals has led to	F	2	2	0	30	9	43	3.9767	.91257
increased patients turnaround time	%	4.7	4.7	0	69.8	20.9			
Valid N (listwise)							43		

From the findings, inadequate staff in public hospitals and insufficient drugs was found more influential factors at a mean of 4.1, 4.0 and 3.9 respectively. This led to overcrowding of patients, increased patient turnaround time and bad patient experience in public hospitals. Insufficient financing has led to the current state of services in public hospitals (m=3.9), improper resource allocation by the hospital management has contributed to the current level of service quality in public hospitals (m=3.6) and the current infrastructure allocation has led to overcrowding in public hospitals (m=3.7). Further, inadequate infrastructure has led to both bad patient experience and complains and increased patient turnaround time as indicated by mean of 3.7 each respectively. The current staff allocation has also led to bad patient experience and complains (m=3.7).

4.8 Measurement of the dependent variable

Under this section, the respondents were asked whether current strategic plan has helped to improve on the service quality in public hospitals in kiambu County, where 59.4% indicated No, while 33.6% said Yes and 7% were not sure as represented in the figure below.

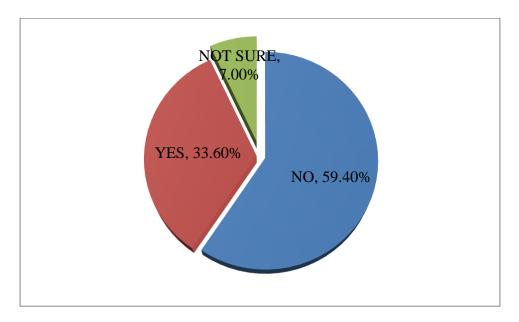


Figure 4.3: Influence of current strategic plan on service quality

Further the respondents were asked to indicate which aspect of service quality is mostly affected negatively and needed improvement and 50.2% indicated efficiency, 21% indicated turnaround time, 19.8% patient experience while 9% customer care.

These results are represented in the figure below:

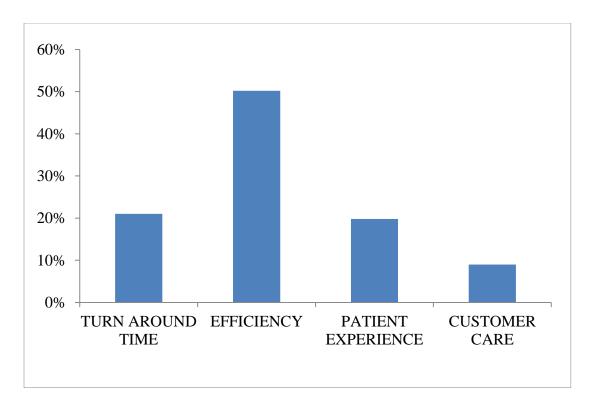


Figure.4.4: Aspect of service quality that is most affected negatively

The respondents were given a chance to rate the service quality in public hospitals in Kiambu County where 41.2% of the respondents said the service quality is low, 38.8% rated the service fair, 11% rated good while 7% and 2% rated very low and very good respectively. This therefore, is an indication that the service quality in public hospital in Kiambu County is low and requires a general improvement.

4.9 Analysis of Variance

In order to test the influence that information system, health work force training and welfare, leadership and governance and resource mobilization and allocation strategic objectives had on the service quality, ANOVA was used.

The regression model used was $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$

Where:

Y- Service Quality (dependent variable)

 β_0 , β_1 , β_2 , β_3 , β_4 - is the constant

 X_1 , X_2 , X_3 , X_4 – independent variables as follows:

 X_1 -Information system

X₂- Health work force training and welfare

X₃- Leadership and governance

X₄- Resource mobilization and allocation

e – error term at significant level of 0.05

A random effects regression model was run and the results are as presented in the table 4.7.

Table 4.7: Analysis of Variance

Co	efficients ^a							
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		В	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	1.163	.874		1.331	.019	606	2.933
	Information system Health work	.199	.139	.226	1.430		083 407	.481
	force training and welfare		12.12	, , ,	.002	.00		,10.
	Leadership and governance	.190	.144	.229	1.322	.019	101	.481
	Resource mobilization and allocation	176	.201	151	875	.039	584	.231

a. Dependent Variable: Service quality in public hospitals

The results presented in the table 4.7 show that, information system had a statistical significance on the service quality having a t-value of 1.430 which was greater than the upper and the lower bounds in absolute terms respectively (0.481 and -0.083). This means that as the current information system continued to be implemented in the hospitals, the rate of service quality also increased. Given by table 4.7, health work force training and welfare in the study area was of statistical significance to provision of quality service in the hospitals by having a t-value of -0.862 that was lower than the upper and lower bounds 0.164 and -0.407 respectively. This means that as implementation of the current health work force training and welfare in the hospitals continues, it reduced the rate of service quality. From the study as indicated by table 4.7,

leadership and governance in the study area was of statistical significance to provision of quality service in the hospitals by having a t-value of 1.322 that was greater than the upper and lower bounds 0.481 and -0.101 respectively. This means that as implementation of leadership and governance strategic objective in the hospitals increased the rate of quality service delivery.

The table also indicated that resource mobilization and also of statistical significance to the quality service delivery having a t-value of -0.875 that was less than the upper and lower bounds 0.231 and -0.584 respectively. This means that the current resource mobilization and allocation strategic objective in the hospitals was not significant on influencing quality service. The above information can be summarized as follows.

$$Y = 1.331 + 1.430X_1 + 1.322X_2 - 0.862X_3 - 0.875X_4 + e$$

From this model, it is evident that the current information system is the most influential strategic factor affecting service quality in public hospitals. This implies that an increase in one unit of information system will increase the service quality in public hospitals by1.430. The current leadership and governance was the second influential aspect of the strategic objective influencing service quality at 1.322. This indicates that a unit increase in leadership and governance increases the service quality by 1.322. The current health work force training and welfare had a negative influence on the service quality at -0.862. This implies that an increase in one unit of current health work force training and welfare will decrease the service quality in public hospital by 0.862. Resource mobilization and allocation was also found to negatively influence service quality at -0.875 hence a unit increase in current resource mobilization and allocation will decrease service quality by 0.875. This therefore point towards a radical change in the current health work force training and welfare strategic objective and resource mobilization and allocation strategic objective if there has to be improvement in service quality.

The study then carried out a regression analysis to test the significance of the influence of Resource mobilization and allocation, Information system, Leadership and governance, Health work force training and welfare. The model summary is depicted in Table 4.8.

Table 4.8: Model Summary

Model Summary									
				Std. Error		tics			
		R	Adjusted	of the	R Square	F			Sig. F
Model	R	Square	R Square	Estimate	Change	Change	df1	df2	Change
1	.332ª	.220	.017	.50158	.220	1.177	4	38	.002

a. Predictors: (Constant), Resource mobilization and allocation, Information system, Leadership and governance, Health work force training and welfare

The R^2 value of 0.220 implies that 22.0% of the variations in the service quality can be explained by the variations in independent variables. This therefore means that other factors not studied in this study contribute 78.0% of service quality.

Table 4.9: Findings summary

Objective	t-value	Influence on service quality
Information system	1.430	Positively influencing service quality hence a
		unit increase in information system increases
		service quality by 1.430
Health work force training	-0.862	Negatively influencing service quality hence a
and welfare		unit increase in health work force training and
		welfare decreases service quality by 0.862
Leadership and Governance	1.322	Positively influencing service quality hence a
		unit increase in leadership and governance
		increases service quality by 1.322
Resource mobilization and	-0.875	Negatively influencing service quality hence a
allocation		unit increase in resource mobilization and
		allocation decreases service quality by 0.875

CHAPTER FIVE

5.0 DISCUSSION

5.1 Introduction

The purpose of the study was to assess the influence of strategic plan implementation on service quality in public hospitals in Kiambu County. The specific objectives explored in guiding the researcher in addressing the research problem were: to assess the influence of information system on service quality in public hospitals in Kiambu County, to determine the influence of health work force training and welfare on service quality in public hospitals in Kiambu County, to establish the influence of leadership and governance on service quality in public hospitals in Kiambu County and to assess the influence of resource mobilization and allocation on service quality in public hospitals in Kiambu County. This chapter presents the discussions based on the results drawn from the study. The discussion is presented according to the objectives of the study.

5.2 Discussion of Research Questions

The study used the following research questions; what is the influence of information system on service quality in public hospitals in Kiambu County? What is the influence of health work force training and welfare on service quality in public hospitals in Kiambu County? What is the influence of leadership and governance on service quality in public hospitals in Kiambu County? What is the influence of resource mobilization and allocation on service quality in public hospitals in Kiambu County? This study adopted a descriptive research design. The independent variables comprised of information system, health work force training and welfare, leadership and governance and resource mobilization and allocation while the dependent variable was service quality in public hospitals. The test-retest method was used to establish the reliability where a coefficient of 0.701 was obtained. A sample size of 50respondents was selected and the study utilized primary data collection method which involved the use of questionnaires. The descriptive statistics such as percentages and frequency distribution were used to analyze

the demographic profile of the participants. The demographic data was tabulated using frequency and percentages. The results of the study were presented using tables and figures. Data analysis was done with the aid of Statistical Package for Social Science (SPSS). The next section deals with discussion of the findings as per the research objectives and the data presented in chapter four. The discussion is arranged according to research objectives and questions.

5.3 Demographic Characteristics

The study established that 38.6% of the respondents were between the ages of 51-60 years while 31.8% of the respondents were between the ages of 41-50 years. Additionally, 29.5% were in the age bracket of 31-40 years. This shows that majority of the respondents were between 51 and 60 years. This therefore would suggest that they had experience and were able to appreciate and understand the influence of strategic plan implementation on service quality in public hospitals in Kiambu County. The study also established that majority of the respondents (54.5%) had university level of education while 38.7% had college education, implying they were in a position to give the intended information. These findings show that the respondents had various qualifications that brought about different levels of expertise in to the study. The study also revealed that majority (56.8%) of the respondents had worked in Kiambu hospitals for 6-10 years, 29.5% for 1 to 5 years while 13.6% had worked for 11-15 years.

5.4 Discussion of Findings

This section presents the discussion of findings as per research objectives. It focuses on how the findings generated are related to findings of other similar studies previously conducted.

5.4.1 Information System and Service Quality

The first research question was on what is the influence of information system on service quality. The study found out that information system positively influenced service quality in the hospitals. The patient's records were easily kept up to date and retrieval helped reduce patient overcrowding. This study concurs with Shekelleet (2006), who undertook large piece of research involving systematic review of the evidence around the cost and benefits of health information technology (HIT) projects, many of which involved electronic health records. Therefore many respondents in the study tend to suggest that the existing information system is contributing positively to the level of service quality in the public hospitals in Kiambu County. The study concluded that health information technology has the potential to enable dramatic transformation in the delivery of health care, making it safer, more effective, and more efficient.

5.4.2 Health Work Force Training, Welfare and Service Quality

Concerning the influence of health work force training and welfare strategic objective, the study found out that majority of the respondents (69.8%) indicated that the current health work force training and welfare has negatively influenced the service quality. Staff training and skills, staff compensation and allowances and occupational health and safety measures in place were not good enough and hence led to poor service quality. From the regression model, it was observed that an additional unit of current health work force training and welfare would significantly lead to decrease in the service quality. This therefore implies that there is need to change the current health work force training and welfare strategic objective if there has to be improved services in public hospitals. This finding agrees with a study by Wachira and Irungu (2015), who suggested that poor management of health work force in Kenyatta National hospital has contributed to low service quality. The study also agrees with Wavomba and Sikolia (2016), on the quality of service delivered in public hospitals in Kenya who found the quality of service delivery in public hospitals was still low despite the hospitals having implemented a

strategic plan to address this problem. According to them, improvement on organizational factors will increase the quality of service delivery.

5.4.3 Leadership and Governance and Service Quality

The study found out that most people understood the leadership governance strategic objectives and that the current leadership and governance has influenced service delivery in a slightly positive way. Factor such as the use of public private partnership helps in improving service quality by reducing customer complains as found in this study. However lack of accountability and transparency as well as transactional leadership has a negative influence on service quality in public hospitals. This study agrees with Owino (2014), who conducted a study on the effectiveness of quality health care strategies in improving service delivery at the National referral hospitals in Kenya. The study used quality management standards and systems, strategic leadership training, Information Communication Technology- (ICT) innovations and results based financing as independent variables against quality health care as dependent variable. The study found out that health care leadership strategies have co-relationship with service delivery, however the service levels at National referral hospital was still below the standards of W.H.O.

This study is in congruence with Asuman, Mungara, Kimemia and Warui (2015), in their research on organizational factors affecting the adoption of strategic planning in rural mission hospitals in Kenya. The study identified leadership, organizational culture, organizational policy, external environment, and resource allocation and organization structure as some of the organizational factors affecting the adoption of strategic planning in rural mission hospitals.

5.4.4 Resource Mobilization and Allocation and Service Quality

The findings of this study found that service quality is influenced by resource mobilization and allocation factor. Insufficient finances, improper allocation of resources, insufficient drugs and infrastructure was found to negatively influence service quality.

The study agrees with Mutuli (2014) who conducted a study on challenges affecting the implementation of strategic reproductive health programs among provincial general hospitals in Nairobi. The study found out that, inadequate resources, communication barriers and infrastructure challenges as some of the main barriers to success of strategic reproductive health programs in provincial general hospitals in Nairobi.

Another study by Ochieng (2016), in the study on factors affecting provision of quality service in the public health sector in Nyahururu Sub-county hospitals where the studyidentifiedemployee capacity, technology advancement and financial resources as the major cause of poor service quality in public hospitals.

CHAPTER SIX

6.0 CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

The aim of this chapter is to present the conclusions drawn from the results of the analysis of the questionnaires and then make recommendations based on the study findings. Suggestions for further research are also presented in this chapter.

6.2 Conclusion

The aims of this study can be restated as follows; to assess the influence of information system on service quality in public hospitals in Kiambu County, to determine the influence of health work force training and welfare on service quality in public hospitals in Kiambu County, to establish the influence of leadership and governance on service quality in public hospitals in Kiambu County and to assess the influence of resource mobilization and allocation on service quality in public hospitals in Kiambu County. To fulfill the above aims of the study, a problem was formulated seeking to assess the influence of strategic plan implementation on service quality in public hospitals in Kiambu County. Extensive literature was consulted to provide a background to the study where descriptive research design was utilized. Data was collected using self-administered questionnaires distributed to subjects. Based on the findings discussed above this study has resulted to four main conclusions as follows.

First, the information system plays a key role in influencing the service quality in public hospitals. Most people understood the information system strategic objectives as contained in the County Health Sector Strategic and Investment Plan. From the data collected and findings of this research, it can be concluded that in Kiambu County Public hospitals patient's records were fully up to date; information retrieval was not cumbersome and information obtained was reliable. This therefore has little contribution

to overcrowding, bad patient experience, increased turnaround time and customer complains as current information system is contributing to improved service. Secondly, it can be concluded that staff training and skills is not adequate enough to improve on patient experience. Staff compensation and allowances has been de-motivating and that staff working environment doesn't support good customer experience. The current health workforce therefore negatively influenced service quality in the public hospitals.

Thirdly, the study concludes that leadership and governance influenced service quality and it was understood by most respondents. Public private partnerships improve quality, better services in private hospitals and that transformational leadership is better than transactional leadership. Lack of transparency and accountability has an influence on service quality in public hospitals but this does not compromise the quality standards. Lastly, the study found out that resource mobilization and allocation was not effective which negatively influenced service quality. Insufficient financing, improper resource allocation, insufficient drugs, inadequate staff and infrastructure have negatively impacted on service quality. This research therefore finds the current strategic plan implementation not effective enough to improve on the service quality.

6.3 Recommendations

Based on the findings of the study, the following recommendations were made on policy, practice and academia.

6.3.1 Recommendations on Policy

Effective information system has great potential of producing superior results if well utilized. The study therefore recommend the government to use integrated information system and training on the strategic plan in the management of public hospitals at all level, for this would greatly improve efficient and service quality. Due to lack of sufficient skills and competencies of stakeholders, regular training of the stakeholders should be done through the effort of the hospital management with the support of the Ministry of Health. This will be accomplished if strategic planning is introduced in the curriculum in the medical training institutions enabling the graduating health workers to

have the skills and competencies on strategic planning as they join the hospitals. In service training should also be organized for all the stakeholders. Hospitals should have resources allocation policies / budgets which they should enforce strictly to ensure they help in the successful implementation of the strategic plans. They should have reward / incentive schemes which can help in the successful implementation of the strategic plans

6.3.2 Recommendation on Practice

Stakeholder involvement should be improved to ensure ownership which contributes to effective implementation. The hospital managers should ensure that all the stakeholders are represented in the strategic planning and also their participation should start from the initial steps of stating the mission, the vision and the final strategic plan. The study recommends that hospital management team should be equipment with the necessary managerial skills to help them successfully implement strategic plans in their respective hospitals. Hospitals should embrace institutional policies which they should enforce strictly to ensure they help in the successful implementation of the strategic plans.

While the government should allocate sufficient fund for strategic planning in hospitals, on their part, the hospital managers should also come up with other sources of funds e.g. money - generating projects or even invite other health interested stakeholders for a fund drive; this would ensure the hospitals have enough financial resources to meet their operational cost hence improving on service quality. The study recommends strategic change on current health work force and resource mobilization and allocation strategic objective to be lined to current challenges to improve on the services.

6.3.3 Recommendation on academia

This study provide valuable information on students and future researchers who would wish to get further knowledge on strategy assessment in public hospital and has suggested areas for further research which future researchers will find important.

6.4 Suggestion for Further Research

This study was carried out in Kiambu County to assess the strategic plan implementation on service quality in public hospitals in Kiambu County. The research therefore recommends that other studies be done: A study on the effect of proper communication channel on implementation of strategic plans in public hospitals should be carried out. Further research can also be carried out on how well to prepare and train users on the utilization of hospital information management systems to improve service quality.

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APPENDICES

APPENDIX I: INTRODUCTION LETTER



SOUTH EASTERN KENYA UNIVERSITY

P.O. BOX 170-90200, KITUI, KENYA Email: info@seku.ac.ke TEL : 020-4213859 (KITUI) : 020-2531395 (NAIROBI) Email: schoolofbusiness@seku.ac.ke

OFFICE OF THE DEAN, SCHOOL OF BUSINESS & ECONOMICS

15th May 2017

The County Minister of Heath Kiambu County

REF: OSCAH WANDERA MUYA STUDENT REG. NO. D61/KIT/201221/2012

The above named is student of South Eastern Kenya University persuing Master of Business Administration.

Please help him access data on list of Public Heath Facilities in Kiambu to help him develop a reaserch proposal.

Any assistance awarded to him be highly appreciated. In case of need for more information, please contact the undersigned.

Dr. JARED ARIEMBA PhD, MKIM

Ag. DEAN, SCHOOL OF BUSINESS AND ECONOMICS

15 JUN 2017

ARID TO GREEN ISO 9001: 2008

Just

APPENDIX II: AUTHORITY FOR DATA COLLECTION



SOUTH EASTERN KENYA UNIVERSITY OFFICE OF THE DIRECTOR BOARD OF POST GRADUATE STUDIES

P.O. BOX 170-90200 KITUI, KENYA Email. info@seku.ac.ke TEL 020-4213859 (KITUI)

Email::directorbps@seku.ac.ke

Our Ref: D61/KIT/20221/2012

DATE: 11th October, 2017

Oscar Muya Wandera Reg. No. D61/KIT/20221/2012 Masters of Business Economics C/O Dean, School of Business Economics

Dear Wandera

RE: PERMISSION TO PROCEED FOR DATA COLLECTION

This is to acknowledge receipt of your Masters in Business Administration Proposal document entitled, "Evaluation of Strategic Plan Implementation on Service Quality in Public Hospitals in Kiambu County".

Following a successful presentation of your Master Proposal, the School of Business and Economics in conjunction with the Directorate, Board of Post graduate Studies (BPS) have approved that you proceed on and carry out your Research Data Collection in accordance with your approved proposal.

During your research work, you will be closely supervised by Dr. Lawrence Kimando. You should ensure that you liase with your supervisor at all times. In addition, you are required to fill in a Progress Report (SEKU/ARSA/BPS/F-02) which can be downloaded from the University Website.

The Board of Postgraduate Studies wishes you well and a successful research data collection as a critical stage in your Master of Business Administration.

Prof. Cornelius Wanjala

Director, Board of Postgraduate Studies

Deputy Vice Chancellor, Academic, Research and Students Affairs

Dean, School of Business and Economics

Director, Kitui Campus

Chairman, Department of Business and Entrepreneurship

Dr. Lawrence Kimando BPS Office - To file

ARID TO GREEN ...

Copy to:

TRANSFORMING LIVES



ISO 9001: 2008 CERTIFIED

APPENDIX III: QUESTIONNAIRE

This questionnaire is to collect data for purely academic purposes. The study seeks to assess the influence of strategic plan implementation on service quality in public hospitals in Kiambu County. All information will be treated with strict confidence. Do not write your name or identification on this questionnaire.

Answer all questions as indicated by either filling in the blank spaces or ticking the applicable opinion.

SECTION A: GENERAL INFORMATION

Please indicate

1.	Age: () 18-30 yrs () 31-40 yrs () 41-50 yrs () 51-60 yrs () above 60 yrs
2.	Educational Level () None () Primary () Secondary () College ()
	University
3.	Professional Training:
4.	Number of years you have worked in Kiambu county hospital: () 1-5 yrs () 6-10
	yrs() 11-15 yrs () 16 -20 yrs () above 21 yrs
5.	Number of years in the Administration and Management: () 1-2 yrs () 3-4 yrs
	() 5-6 yrs () 7-8 yrs () above 9 yrs
6.	How often do you formulate and adopt strategy: () after 1 yr () after 2 yrs ()
	after 3 yrs () after 4 yrs () after 5 yrs () any other(specify)
7.	How often do you evaluate implemented strategy: () after 1 yr () after 2 yrs
	() after 3yrs () after 4 yrs () after 5 yrs () any other (specify)

SECTION B

(i): THE INFLUENCE OF INFORMATION SYSTEM PLANS ON SERVICE QUALITY:

Kindly indicate the influence of information system on service quality in public hospitals Kiambu County. Tick $(\sqrt{})$ as appropriate and as true to you

1.	Do you understand the information system strategic objectives as	contained in the
	County Health Sector Strategic and Investment Plan? () Yes	() No

2.	If yes how	has the	current	Information	System Pla	n affected	service	quality	in the
	hospital? () Posi	tively () Negative	ly				

3. Indicate the extent to which you agree or disagree with the following statement on a scale of 1 to 5.

Where; 5 is strongly agree, 4 is agree, 3 is not sure, 2 is disagree and 1 is strongly disagree

	Information System Strategic objective	Strongly disagree	Disagree	Not sure	Agree	Strongly Agree
a	Patients records are not up to date which has increased turnaround time					
b	Information retrieval is cumbersome which has led to patient overcrowding					
С	Information obtained is not reliable which has led to increased patient complain					
d	Inaccuracy of information obtained has					

	led to bad patient	
	experience	
e	Patients records are not	
	updated which	
	contributes to	
	overcrowding	
f	Information retrieval is	
	cumbersome which	
	increases turnaround	
	time	
g	Information obtained is	
	not reliable which leads	
	to bad patient experience	
h	Inaccuracy of	
	information obtained has	
	led to increased patient	
	complains	

(ii) INFLUENCE OF HEALTH WORK FORCE TRAINING AND WELFARE ON SERVICE QUALITY:

Kindly indicate the influence of Health Work Force training and welfare on service quality in public hospitals Kiambu County. Tick $(\sqrt{})$ as appropriate and as true to you

4.	Do you understand the Health Work Force strategic objective as contained in the
	County Health Sector Strategic and Investment Plan? () Yes () No
5.	If yes how has the current Health Work Force plan affected service quality in the
	hospital? () Positively () Negatively
6.	Indicate the extent to which you agree or disagree with the following statement on
	a scale of 1 to 5.

disagree

Where; 5 is strongly agree, 4 is agree, 3 is not sure, 2 is disagree and 1 is strongly

	Health Work Force training and welfare	Strongly disagree	Disagree	Not sure	Agree	Strongly Agree
	Strategic objective					8 11
a	Staff training and skills is not adequate enough to improve on patient experience					
b	Staff training and skills aids to increased turnaround time					
С	If staffs were well trained and skilled it would increase efficiency hence reducing overcrowding					
d	Staff working environment is not good enough to reduce turnaround time					
e	Staff working environment supports overcrowding					
f	Staff working environment does not support good customer experience					
g	The existing occupational health and safety measures aids to increased turnaround time					
h	Occupational health and safety measures in place aids in overcrowding					
i	Staff compensation and allowances has demotivating hence negatively affecting service quality					
j	The existing staff compensation and allowances aids in increase in complains					

(iii) INFLUENCE OF LEADERSHIP AND GOVERNANCE ON SERVICE QUALITY:

Kindly indicate influence of Leadership and Governance on service quality in Public hospitals in Kiambu County. Tick $(\sqrt{})$ as appropriate and as true to you

- 7. Do you understand the leadership governance strategic objective as contained in the County Health Sector Strategic and Investment Plan? () Yes () No
- 8. If yes how has the current leadership and governance plan affected service quality in the hospital? () Positively () Negatively
- 9. Indicate the extent to which you agree or disagree with the following statement on the scale of 1 to 5.

Where; 5 is strongly agree, 4 is agree, 3 is not sure, 2 is disagree and 1 is strongly disagree

	Leadership and Governance	Strongly	Disagree	Not	Agree	Strongly
	Strategic objective	Disagree		sure		Agree
a	Public private partnership					
	aids in improving service					
	quality through reduction of					
	customer complain and					
	overcrowding					
b	Patients get better services					
	and experience in private					
	hospitals than in public					
	hospitals					
c	Public private partnership has					
	helped in reduction of patient					
	turnaround time					
d	Services in public hospitals					
	were better off under National					
	government management than					
	under current County					
	government management					
e	Transactional leadership has					

	contributed to current state of service quality in the public			
	hospitals			
f	Transformational leadership			
	is better than transactional			
	leadership in terms of			
	improving service quality			
g	Lack of accountability and			
	transparency in leadership			
	and governance has			
	contributed to current service			
	quality in public hospitals			

(iv) INFLUENCE OF RESOURCE MOBILIZATION AND ALLOCATION ON SERVICE QUALITY:

Kindly indicate influence of Resource Mobilization and Allocation on service quality in Public hospitals in Kiambu County. Tick $(\sqrt{})$ as appropriate and as true to you

to you
10. Do you understand the Resource Mobilization and Allocation Strategic objective
as contained in the County Health Sector Strategic and Investment Plan?
() Yes () No
11. If yes how has the current resource mobilization and allocation plan affected
service quality in the hospitals? () Positively () Negatively
12. Indicate the extent to which you agree or disagree with the following statement or
a scale of 1 to 5.
Where; 5 is strongly agree, 4 is agree, 3 is not sure, 2 is disagree and 1 is strongly

disagree

	Resource Mobilization and	Strongly	Disagree	Not	Agree	Strongly
	Allocation Strategic	Disagree		sure		Agree
	objective					
a	Insufficient financing has led					
	to the current state of					
	services in public hospitals					
b	Improper resource allocation					
	by the hospital management					
	has contributed to the current					
	level of service quality in					
	public hospitals					
c	Insufficient drugs has led to					
	bad patient experience in					
	public hospitals					
e	The current infrastructure					
	allocation has led to					
	overcrowding in public					
	hospitals					
f	Inadequate infrastructure has					
	led to bad patient experience					
	and complains					
g	Inadequate infrastructure has					
	led to increased patient					
	turnaround time					
h	The current staff allocation					
	has led to bad patient					
<u> </u>	experience and complains					
i	Inadequate staff in public					
	hospitals has contributed to					
	patients overcrowding					
j	Inadequate staff in public					
	hospitals has led to increased					
	patients turnaround time					

SECTION C: MEASUREMENT OF THE DEPENDENT VARIABLE.

Tick ($\sqrt{ }$) as appropriate and as true to you 13. Has the current strategic plan helped to improve the service quality in public hospitals?) Yes () No 14. Which aspect of service quality is mostly affected negatively and needs improvement?() Patient turnaround time () Efficiency) Patient experience () Customer care 15. How do you rate the service quality in public hospitals in Kiambu County? () Very low () Low () Fair () Good () Very good 16. Indicate the extent to which you think the independent variables influence the current service quality in public hospitals in Kiambu County on a scale of 1 to 5. Where; 5 is strongly agree, 4 is agree, 3 is not sure, 2 is disagree and 1 is strongly disagree

	Independent	Strongly	Disagree	Not	Agree	Strongly
	Variables	Disagree		sure		Agree
a	Information					
	system					
b	Health work					
	force					
	training &					
	welfare					
c	Leadership					
	and					
	governance					
e	Resource					
	mobilization					
	and					
	allocation					

END-Thank you

APPENDIX IV: WORK PLAN

Activity	Jan-June 2017	July-Dec2017	Jan-April 2018	May-Nov 2018
Brain storming on Research Topic	XXX			
Presentation to Supervisors	XXX			
Developing Research Proposal	XXX			
Corrections to the proposal	XXX			
Acceptance of the proposal	XXX			
Field Research	XXX	XXX		
Data Analysis and Compilation		XXX		
Presentation of Final Project Report		XXX		
Correction of the Final Report		XXX	XXX	
Presentation of Final corrected Project			XXX	
Report to the Faculty and Library				XXX

APPENDIX V: BUDGET (KSH)

S/No	ITEM DESCRIPTION	QUANTITY	UNIT PRICE	TOTAL COST
1	Stationery	Assorted		1,500
2	Typing and Printing			5,500
3	Internet Cost	5	1500	7,500
4	Printing Questionnaires/Interview Schedules & Final Report	5	2500	12,500
5	Photocopying	5	1200	6,000
6	Training and Payment of research assistants	2	15000	30,000
7	Local Travels & Subsistence	2	20000	40,000
8	Coordination and Communication	2	2000	4,000
9	Data Analysis (SPSS)	1	15000	15,000
10	Binding	5	1000	5,000
	TOTAL			127,000

APPENDIX VI: LIST OF HEALTH FACILITIES IN KIAMBU COUNTY

COUNTY GOVERNMENT OF KIAMBU **DEPARTMENT OF HEALTH SERVICES**

All correspondence should be addressed to HEAD HRDU – HEALTH DEPARTMENT Email address: mndiritu@gmail.com mkwasa@live.com Tel. Nos: 0721641516

0721974633



HEALTH RESEARCH AND DEVELOPMENT UNIT P. O. BOX 2344 - 00900 KIAMBU

Ref No: KBU/HRDU/GEN/VOL 1/41

Date: 19th June 2017

TO WHOM IT MAY CONCERN

RE: RESEARCH QUERY, KIAMBU COUNTY

Kindly note that we have received a request by Oscar Wandera Muya of South Eastern Kenya University who is preparing his proposal for a research project titled "Evaluation of Strategic Plan Implementation On Service Quality in Public Hospitals In Kiambu County"

He has placed a query on the number of public health facilities in the county. There are a total of 364 health facilities across the county distributed thus; one level 5 hospital, 3 level 4 hospitals, 20 health centres and 54 dispensaries. The remaining facilities comprise of private clinics, private hospitals, faith based hospitals and nursing homes.

I trust this information will be useful as he prepares his proposal for his Masters project.

Kind regards,

DR. KWASA MAGOMA FOR: HEAD, HEALTH RESEARCH DEVELOPMENT UNIT KLAMBU COUNTY

HEALTH FACILITIES IN KIAMBU COUNTY

	SUB COUNTY	WARD	FACILITY	LEVEL	TOTAL PER WARD	TOTAL PER SUB COUNTY
1.	LARI	Lari/Kirenga	Lari sub county hospital	III	5	13
			Githirioni dispensary	111		
			Uplands forest	II		
			dispensary	"		
			Gitithia dispensary	II		THE WILLIAM
			Gituamba dispensary	11	3	OVERNMENT
		Kijabe	Kiriita dispensary	11	3	
		,	Mbau-ini dispensary	II	3	19/06/
			Magena dispensary	II	8	Date 234
		Kinale	Kinale dispensary	II	1	KIAMI
		Kamburu	Kagaa health center	111	2	THE UF L
			Kamburu dispensary	II		
		Nyanduma	Karatina health	II	2	
			Centre			
			Kagwe dispensary	11		
2.	LIMURU	Tigoni/Ngecha	Tigoni sub county	IV	2	6
			hospital			
			Ngecha health Centre	111		
		Ndeiya	Ndeiya health Centre	II	3	
			Thigio dispensary	11		
			Rwamburi dispensary	11		
		Limuru central	Limuru health Centre	111	1	
3.	KABETE	Kabete	Wangige sub county hospital	III	1	3
		Nyathuna	Nyathuna sub county hospital	II	1	
		Uthiru	Uthiru Health Centre	II	1	
4.	KIKUYU	Karai	Lusigetti sub county hospital	Ш	1	2
		Sigona	Gichuru dispensary	11	1	7
5. 1	KIAMBAA	Kihara	Kihara sub county	III	1	5
			hospital			
		Karuri	Karuri sub county hospital	П	2	
			Gathanga health Centre	11		
	- +	Cianda	Cianda dispensary	П	1	-

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		Ndenderu	Ndenderu dispensary	II	1		1	
6.	KIAMBU	KIAMBU	Township	Kiambu sub county hospital	IV	1	5	
		Riabai	Riabai dispensary	II	2			
			Lioki dispensary	II				
		Ting'ang'a	Anmer dispensary	II	2			
			Ting'ang'a dispensary	II				
7.	GITHUNGURI	Githunguri	Githunguri Health Centre	Ш	1	10		
		Ngewa	Ngewa health Centre	III	2			
			Migutahealth Centre	II	150			
		Ikinu	Kariahealth Centre	II	2	-		
*			Kiababu dispensary	II				
		Githiga	Githiga health Centre	II	3			
			Gathangari	II				
			dispensary		10 10 10			
			Gitiha model health	II				
			Centre					
		Komothai	Kigumo sub county	Ш	2			
			hospital					
			Githima dispensary	II				
8.	RUIRU		Ruiru sub county hospital	III	1	3		
		Kiuu	Githurai-Langata health Centre	II	1			
		Gatothua	Tattu health Centre (Ruiru Prison)	II	1			
9.	GATUNDU SOUTH	Nge'nda	Gatundu Sub county hopsital	IV	1	7		
		Kiamwangi	Ng'enda health Centre	111	1	,		
		Kiganjo	Gitare health Centre	II	3			
			Kiganjo dispensary	11				
			Gachika dispensary	11				
		Ndarugo	Karatu sub county	III	2			
			hospital	200000				
			Munyu-ini dispensary	11				
10.	GATUNDU NORTH	Mangʻu	Igegania sub county hospital	III	3	8		
			Mbichi dispensary	11				
			Makwa dispensary	II	1.			
		Githobo		1	1	1.22		1

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			Miiirini dispensary	l II			7
		Chania	Ngorongo health	II	1		
		Gituamba	Mataara dispensary	11	2		
			Kanyoni dispensary	П			
11	JUJA	Juja	Gachororo health Centre	111	1	7	1
		Kalimoni	Juja farm health Centre	III	2		
			Arthi dispensary	li			
		Murera	Mugutha dispensary	11	2		
			Hamundia dispensary	H			
٠	4	Theta	Ndururumo dispensary	III	1		
		Weitethie	Muthara dispensary	11	1		
12.	THIKA	Hospital	Thika Level5 Hospital	٧	1	9	
	TOWN	Township	Kiandutu Health Center	Ш	3		
			Karibaribi dispensary	II	R ¹		
			Thika high school for the blind dispensary	11			
		Kamenu	Makongeni dispensary	11	1		
		Ngoliba	Ngoliba health Centre	III	2		i
			Ndui dispensary	11			-
		Gatuanyaga	Munyu health Centre	III	2		
			Gatuanyaga dispensary	11	i.		

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List of public hospitals in kiambu county (per sub-county)

Sub-county	Level V	Level IV	Level III	Level II	Total
Lari			2	11	13
Limuru		1	2	3	6
Kabete			1	2	3
Kikuyu			1	1	2
Kiambu		1		4	5
Kiambaa			1	4	5
Githunguri			3	7	10
Ruiru			1	2	3
Gatundu South		1	2	4	7
Gatundu North			1	7	8
Juja			3	4	7
Thika Town	1		3	5	9
Population	1	3	20	54	78