

**ASSESSMENT OF FACTORS INFLUENCING SERVICE DELIVERY AT SUB-
COUNTY HOSPITALS IN MERU COUNTY, KENYA**

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**A RESEARCH THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE
REQUIREMENTS FOR THE CONFERMENT OF A MASTER OF SCIENCE DEGREE
IN HEALTH SYSTEMS MANAGEMENT OF KENYA METHODIST UNIVERSITY.**

OCTOBER 2020

DECLARATION

I hereby declare that this research Thesis is my original work and effort. It has not been submitted for any award in any other institution or university.

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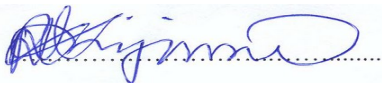
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DEDICATION

I dedicate this work to my parents, David and Ruth, my wife Priscilla and to my children Kinoti, Mwiki and Kiguunda

ACKNOWLEDGEMENT

My sincere thanks go to the Almighty God for giving me strength, grace and courage to undertake this course successfully. I also owe special thanks and feel indebted to my supervisors Dr. Wanja Mwaura-Tenambergen and Ms. Roselyn Kinyamu for their professional guidance, patience and many hours spent in guiding me through the thesis. Secondly, I would like to thank the entire department of health system management for assisting me in many ways.

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I sincerely take this opportunity to say God bless you all.

ABSTRACT

Integrated and people-centred health services are critical for realizing universal health care coverage. This can only be achieved through provision of efficient and effective health services. Service delivery is one of the key building blocks of any health system; it is an immediate output of the inputs into the health system, such as the health workforce, procurement and supplies, infrastructure and financing. The rising burden of disease and weak health systems are being compounded by the poor health service delivery. The purpose of the study was to determine factors influencing service delivery at sub-county hospitals in Meru County, Kenya. The objectives of the study was to determine the influence of staff on service delivery in sub-county hospitals in Meru County; to assess the influence of facilities on service delivery in sub-county hospitals in Meru County; to establish the influence of management practices on service delivery in sub-county hospitals in Meru County and to evaluate the influence of Drugs procurement process on service delivery in sub-county hospitals in Meru County. The study adopted a descriptive cross-sectional design. The target population consisted of five officers from each of the twenty three sub-county hospitals which totalled up to one hundred and fifteen. Open and closed ended question were used to collect data. Data was analyzed using Epidata and SPSS version 22.0. Correlation and multi linear regression analysis were respectively used to establish the strength and direction of the relationship between the variables and the extent of independent variable on service delivery while descriptive statistics were used to generate means and standard deviation from the collected data. There was a positive significant relationship between staff, facilities, management practices and drugs procurement (Staff $r= 0.892$, $p=.000$; Facilities $r= 0.969$, $p=.000$; Management practices $r= 0.891$, $p=.000$; and Drugs procurement $r=0.930$, $p=.000$.respectively) and service delivery in Meru sub-county hospitals. It is concluded that staff, facilities, management practices and drugs procurement had positive and significant effect on service delivery among Meru sub-county hospitals. This study recommends that management of Meru sub-county hospitals should motivate and have the required number of staff, have adequate and useable facilities, engage in management practices that will add value to hospital operations as well as procure drugs in a timely manner, of the right quality and quantity.

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LIST OF ABBREVIATIONS AND ACRONYMS

AIDS	:	Acquired Immune Deficiency Syndrome
CCS	:	Comprehensive Community Strategy
CDC	:	Center for Disease Control.
CHW	:	Community Health Worker
CU	:	Community Unit
DHO	:	District Health Office.
EHR	:	Electronic Health Record System
EHS	:	Essential Health Services
EMR	:	Electronic Medical Records
EMS	:	Emergency Medical Services
EOP	:	Emergency Operating Procedures
GOK	:	Government of Kenya.
HIV	:	Human Immuno deficiency Virus
ICT	:	Information and communication technology
IP	:	In-Patient
KEMRI	:	Kenya Medical Research Institute
KEMSA	:	Kenya Medical Supply Agency.
KEMU	:	Kenya Methodist University.
KEPH	:	Kenya Essential Package for Health
KHP	:	Kenya Health Policy
KHPF	:	Kenya Health Policy Framework.
KHSRS	:	Kenya Health Sector Referral Strategy

MDG	:	Millennium Development Goals
MOH	:	Ministry of Health
MOH	:	Ministry of Health.
MRC	:	Ministerial Reform Committee.
NPHRL	:	National Public Health Reference Laboratory.
OP	:	Out-Patient
SI	:	Satisfactory Index
SOP	:	Standard Operating Procedures
TB	:	Tuberculosis
WHO	:	World Health Organization.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Integrated and people-centred health services are critical for realizing universal health care coverage. This can only be achieved through provision of efficient and effective health services. Service delivery is one of the key building blocks of any health system, it is an immediate output of the inputs into the health system, such as the health workforce, procurement and supplies, infrastructure and financing. Adequate provision of inputs should lead to enhanced service delivery and access to services.

Ensuring availability of health services that meet a minimum quality standard and securing access to them are key functions of a health system. According to World health organisation [WHO] (2007), good health services are those which deliver effective, safe, quality personal and non-personal health interventions to those who need them, when and where needed, with minimum waste of resources.

Services is a process consisting of a series of more or less intangible activities that normally, but not necessarily always, take place in interactions between the customer and service employee and/or physical resources or goods and/or systems of the service provider, which are provided as solutions to customer problems (Grönroos, 2011). Moreover, service is seen as any act or performance one party can offer to another that is essentially intangible and does not result in the ownership of anything (Kotler, 2008).

Service delivery as a series of highly localized actions by agents in public agencies or private enterprises to provide needed goods and services to citizen beneficiaries in a way that meets their expectations. Service delivery has a life-cycle span (i.e plan, design, operate, maintain, and

monitor) to sustain services such as nutrition or transport or goods such as electricity or water to citizen beneficiaries (Lockwood & Smits, 2011). Getting (or Delivering) these services or goods requires access by citizen beneficiaries, and the goods or services should meet the expectations of the beneficiaries, which implies taking into account their needs and demands (Fiszbein et al., 2011).

WHO (2010), states that patients' service delivery includes provision of health services at all levels as per the standard which include speed of delivery, harmonization at service delivery point, effectiveness of the services, patient safety, ethics and professionalism in during provision of service. To better understand the degree of service delivery, there is need to understand customer satisfaction because the level of service delivery and quality of service are mainly related to customer satisfaction. Customer satisfaction is a person's feeling of pleasure or disappointment resulting from and coverage of health care services.

Most countries in Africa are gaining reputation of poor service delivery, ineffectiveness, and incompetence and high levels of corruption, although numerous initiatives have been put in place in order to enhance service delivery, challenges relating to service delivery still abound, nonetheless poor interdepartmental cooperation and lack of horizontal integration has hampered effective local development planning and thereby contributed to crippling service deliveries (Manyaka & Nkuna, 2014).

Service delivery in Africa faces difficult challenges such as shortage of health workers, increased caseloads for health workers due to migration of skilled health personnel and the double burden of disease and the HIV/AIDS scourge that affect both the general population and health personnel, shortage/low motivation of health workers. Moreover, Inappropriate quality of service delivery results in loss of customer lives, revenue, material resources, time, morale, staff,

recognition, trust and respect and individual and communities' apathy towards health services, all of which contribute to lowered effectiveness and efficiency of service provider (Mohapatra et al., 2010).

According to WHO (2013) any country that has unhealthy population bounds to suffer in the implementation of development program to improve the quality life of its citizens. Each country needs to offer quality health services and it is important to recognize that a healthy population is better disposed to achieving the productivity that is needed so as to increase and sustain continued growth of the country's economy (Andaleeb, 2015).

Service delivery needs responsiveness by service providers, managers, and policy makers to be answerable, to provide enforcement, and to make relevant organizational changes in order to make services "people-centred" (Gonzalez Asis & Woolcock, 2015) . Mcloughlin and Batley (2012) propose viewing service provision as a two-way process "in which services are formed by, and formative of, state-society relations and processes of state building," and placing service provision in a broad question of control "that is, how and by whom is control exercised over which services are delivered to whom.". Improving the level of basic service delivery is partly a question of resources but it is also a question of governance and allocation.

When an organization tries to offer service to customers, it is time for management to exercise leadership. Leaders should become the role models for the rest of the staff and manifest behavior that demonstrate what is expected from employees in relation to the service delivery. In addition, during a time of service delivery, management needs to send positive messages about the service itself (Auerbach & Silverstein, 2003). Some sort of reinforcement is necessary to produce service delivery; Management should be very active in instituting reinforcement tactics even

those that are costless such as verbal reinforcement or altering its structure and policy by simply writing new rules and procedures.

The Kenyan health service delivery system is organized into 6 levels of care that fits into four tiers. Each level has specified scope health services that it should provide to its populace. Tier 1 community units, Tier 2 dispensaries and health Centres, Tier 3 County health facilities (Sub County and County referral hospital) and Tier 4 national referrals (Njuguna, 2015).

Health services are provided through a network of over 4,700 health facilities countrywide, with the public sector system accounting for about 51 percent of these facilities while 49 percent is accounted for by the private sector. The public health sector consists of the national referral hospitals, county referral hospitals, Sub-county hospitals, health centres, and dispensaries. Health services are integrated as one goes down the hierarchy of health structure from the national level to the county levels (Chodzaza & Gombachika, 2013).

Since the government cannot fully meet the health needs of its citizens, its effort to offer health service is supplemented by privately owned and operated hospitals and clinics and faith-based organizations' hospitals and clinics, which together provide between 30 and 40 percent of the hospital beds in Kenya. Depending on their comparative advantage, Non- Governmental Organizations, Faith Based Organizations and community-based organizations (CBOs) undertake specific health services.

In most developing countries in Africa, in Kenya, premature deaths and preventable diseases still inflict a high toll in communities and its people because there inadequacy in access to basic health services is affecting distinct regions, areas, communities, and social groups in these countries (Ajayi & Tokon, 2009). Most public hospitals in the recent past have witnessed employee dissatisfaction presented in terms of refusal to offer services due to failure of payment

of dues, poor working environment, inadequate infrastructure and lack of commitment by the management to engage with employees. This gap in service delivery in public hospitals has led to unwarranted suffering by the patients who lay their hopes on the services offered by these hospitals.

Meru County is one of the Forty Seven (47) counties of Kenya strategically located east of Mt. Kenya, whose peak cuts through the outskirts of its southern boundary. The county has a total area of 6,936.2Km² out of which 972.3Km² is gazetted forest. The county borders five counties; to the North it borders Isiolo County, to the East Tharaka/Nithi County, to the South West Nyeri County and to the West Laikipia County. The County's population growth rate is estimated at 2.1 per cent per annum. The projected population of the county in 2018 is 1,635,264, consisting of 808,596 males and 826,668 females (Kenya National Bureau of Statistics [KNBS], 2009).

Health Services provision at the County Level is centred around the tenets described by both the Kenya Essential Package of Health Services (KEPH) and Schedule IV of the Kenya Constitution 2010. These two key documents define mandates/roles/responsibilities for interventions and service delivery of the health system. The county has twenty three sub-county hospitals and one referral hospital (Meru County Data, 2017)

1.2 Statement of the Problem

Health is anchored in Vision 2030 under social pillar in which the country's aim is to provide an efficient integrated and high quality affordable health care for all citizens with a priority being given to preventive care at the community and household levels using a decentralized national health care system strategy (Government of Kenya [GOK], 2007). The health policy 2014-2030 spells out the organization of health services delivery system and what should be provided at the specific hospitals, geared towards strengthening the referral mechanism in place (Njuguna, 2015).

The Sub- County Health Facilities (Levels 4) managed by the county is mandated to; offer comprehensive patient diagnostic, medical, surgical and rehabilitative care, including reproductive health services; specialized outpatient services; and Facilitate, and manage referrals from lower levels, and other referral(Ministry of Health , 2014). Despite this, patients still prefer accessing services from the county referral hospital (level 5) due to several challenges at the sub county hospitals.

A study done by (Makheti, 2017) reveals that Sub County Hospitals in Meru lack of equipment and drugs forcing health workers to rely on conventional diagnosis further putting patients in danger of misdiagnosis. Another report by the ministry of Health done in 2013 on service availability and readiness assessment mapping, showed that the County Hospitals offered a higher percentage of services delivery e.g. pharmaceuticals ,clinical laboratory, maternity which accounted for 70%, 85% and 74% respectively (GoK, 2013). This has caused an increased and continued congestion and strain on the County Referral Hospital thus hampering quality of care Despite the tremendous efforts by the government to improve the referral system in Kenya in order to improve efficiency in the health system and health outcomes, service delivery remain a

big challenges impeding access to equitable, quality and responsive health services by the populace equity quality services. Should the problem of underutilization health services in the Sub -County Hospitals continue, the County and the country at large might not be able to achieve its health goal of attaining the highest standards of health by the year 2030 (Njuguna, 2015).

A need therefore arises to investigate as to whether the Sub County Hospitals in Meru County are delivering services commensurate to the concerted effort by the county government to provide cost-effective priority healthcare interventions and services to ensure affordable, equitable, accessible and acceptable health services. Therefore, this study sought to assess the factors influencing service delivery at the Sub County Hospitals in Meru County.

1.3 Purpose of the Study

The purpose of the study was to assess the factors influencing service delivery at Sub-County Hospitals in Meru County, Kenya.

1.4 Specific Objectives

- i. To determine the influence of staff on service delivery in sub-county hospitals in Meru County.
- ii. To assess the influence of facilities on service delivery in sub-county hospitals in Meru County.
- iii. To establish the influence of management practices on service delivery in sub-county hospitals in Meru County.
- iv. To evaluate the influence of Drugs procurement process on service delivery in sub-county hospitals in Meru County.

1.5 Research Questions

- i. What is the influence of staff on service delivery in sub-county hospitals in Meru County?
- ii. How do facilities influence service delivery in sub-county hospitals in Meru County?
- iii. What is the influence of management practices on service delivery in sub-county hospitals in Meru County?
- iv. How does Drugs procurement process influence service delivery in sub-county hospitals in Meru County?

1.6 Justification of the Study

The National and County Government since devolution have put efforts in trying to provide equitable health services to its population in every corner of this country. This has not been achieved because of several factors affecting the health sector which touches on all pillars of health. Meru County is not an exception to this challenge with the fact that the County is still experiencing mortalities and morbidity from communicable and non-communicable diseases. Service delivery is a key pillar in ensuring access to safe and quality health services at all levels of care.

Despite the challenges experienced by the County there is no evidence of studies investigating the factors in influencing service delivery in Meru County especially at the Sub county Hospitals. Identifying and addressing the barriers to utilization of services at the level 4 Hospitals is key to increasing access and utilization of services thereby strengthening the referral system.

Various studies that have been carried out mainly focused on general public health issues, for instance a study by (Njuguna, 2015) looked at utilization of maternal health services. Many

other studies investigated aspects of Health information system, Human resources for Health among others but none has been done on service delivery at the Sub County Hospitals. It is in this regard that the researcher intended to carry out this study to determine factors influencing service delivery at the Sub County Hospitals in Meru County.

1.7 Limitations of the Study

During data collection the researcher experienced challenges of accessing the sub-county hospitals due to their remote location, this caused a delay in collecting data. However, to overcome this challenge, the researcher prior planned before data collection to ensure easy and timely access to the hospital this made data collection possible and easy.

Additionally, the researcher experienced a challenge of uncooperative respondents due to their tight schedules at work and fear of feeling like the hospital is under investigation. The researcher worked hard to avail more time and was patient in order to access the respondents during their free time as well as surety of confidentiality and anonymity of the information shared.

1.8 Delimitations of the Study

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1.9 Significance of the Study

The study was to determine which factors influence service delivery in Sub County Hospitals in Meru County. The research findings were expected to provide current and adequate information to the national, county government and other stakeholders on the status of service delivery in public hospitals which would inform policy formulation thereby enabling design of evidence based, cost effective interventions and strategies to ensure proper and safe services are delivered. Moreover, the findings are beneficial to other researchers since is expected to provide a basis upon which other related studies can be done.

1.10 Assumptions of the Study

The study assumes that the respondents were free, honest and gave the right information. It also assumes that participants had a sincere interest in participating in the research and didn't have any other motive for participating in the study. The inclusion criterion of the sample is appropriate and therefore, assures that the participants had all experienced the same or similar phenomenon of the study.

1.11 Operational definition of terms.

- Staffing factors:** These are factors that entail training, experience and compensation of health workers.
- Healthcare facility factors:** They include attributes of health care facility such as equipped laboratories, geographical access and functional ambulances
- Drug supply processes:** This is the process used by hospitals in procuring drugs that include procurement process, procurement policy and procurement planning.

Management practices:	They refer to the activities managers engage in to ensure the organization runs on a daily basis, these activities include planning, supervision and staff motivation.
Public Health Hospital:	A hospital which is owned by a government and receives government funding
Health workers:	Health workers are people whose job is to protect and improve the health of their communities.
Experience:	Knowledge or skills in a particular activity which one has gained through having done that activity for a specified span of time

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter entails the review empirical and theoretical literature. In addition, it also contains the conceptual framework of this study.

2.2. Service Delivery

2.2.1. Quality service

Quality is one of the things that consumers look for in an offer, which service happens to be one. Quality can also be defined as the totality of features and characteristics of a product or services that bear on its ability to satisfy stated or implied needs (Kotler et al., 2019). It is evident that quality is also related to the value of an offer, which could evoke satisfaction or dissatisfaction on the part of the user. Service quality in the management and marketing literature is the extent to which customers' perceptions of service meet and/or exceed their expectations. Thus service quality can intend to be the way in which customers are served in an organization which could be good or poor.

Service quality is a multidimensional concept. There are differences between objective quality and perceived quality. The service quality is derived from customers' cognitive evaluations of a service and viewed as a transaction-specific level or a global level (Boonlertvanich, 2019). The service quality is also the result of comparison between the expected services and perceived services. The service quality as a global judgment or attitude relates to the superiority of a

service. Service quality and customers' value have direct effect on customers' loyalty (Lai et al., 2009). Providing a high level of service quality is very important for service providers to compete with other peers (Kemp & Rotmans, 2005).

In India a study was conducted to examine whether the service quality of Indian commercial banks increases customers' satisfaction that fosters customers' loyalty (Lenka et al., 2009). The unique integration of the resources and capabilities is the essence of overall service innovation (Kowalkowski & Kindström, 2014). Service innovation can be equated with the creation of new value propositions by means of developing existing or creating new practices and/or resources (Skalen et al., 2015).

While studying the link of service quality, customers' satisfaction and loyalty was investigated in the context of six casinos in Macau to provide membership to customers. For instance, the chain effect was investigated in a health setting, but conditional in the casino context (Shi et al., 2014).

In a relevant study in the post office context to investigate the relationship between the service quality of postal services and customers' loyalty with customers' satisfaction as a mediating variable. In other words, the research mentioned above highlights the existence of causal relationships among service quality, satisfaction and loyalty (Moez & Gharbi, 2012).

An investigation into the link between service quality, value, satisfaction and behavioural intentions in a public sector bank in India and one of their results states that “ Service quality was found to significantly impact on customer satisfaction and value perceptions”.

The good quality of service will convincingly client to repeat the demand of service. It show customer behavioural towards service provider. The quality of service that fulfils customer expectation will gain the customer loyalty. This intention will make customers' favourable inclination a service relative to other firms offering the same service (Kaura et al., 2015).

2.2.2. Accessible Service

As costs and demand for healthcare services rise, access to care is becoming more challenging globally (Byrne & Callaghan, 2014). Many healthcare systems have also been reported to have demand versus capacity issues that are extending wait times for care services, and in many cases deny access. Despite the efforts to improve the systems, numerous healthcare systems around the globe are faced with huge challenges in accommodating the high demand for healthcare services as a result of acute workforce shortages, infrastructure limitation, patient locations and cost. In its submission, proclaim that over one billion population globally lack access to healthcare systems, from amenities to caregivers (Deloitte, 2014).

Globally, steps have been taken by some countries to address healthcare issues in order to enhance patient access to care. From workforce shortage perspective, in the United States for instance, employment in the healthcare sector has risen drastically, and it is expected to increase to 11.9 percent in 2018. Australia on the other hand has launched a General Practice Training program to increase the number of trainee general practitioners to 600 by 2014, while numerous countries have identified the need to invest in healthcare infrastructure as a priority (Byrne & Callaghan, 2014).

2.2.3. Affordable service

Poverty has been identified as being the greatest threat to health. The poor, who use public facilities, have less access to healthcare than the more affluent, who are often covered by medical aid insurance (Swinnerton, 2006). Health services should not only be accessible but should include physical accessibility and affordable, as substantiated by the United Nations(Yamin et al., 2003).

Statistical relationship between the health status of the poor and that of the wealthy was established. It was identified that chronic diseases such as asthma, smoking and abuse of alcohol were more prevalent amongst the poor than the rich; poorer areas are still plagued by a high burden of disease (Bradshaw & Steyn, 2001). To further substantiate this finding, Stellenberg et al. (2008) found a statistical relationship between the health status and the socioeconomic level of the coloured people of the Western Cape. The use of health services may alter, depending on where the individual lives. Patient factors may be more important than supply factors in explaining the differential use of health services (Heyden et al., 2003).

2.3 Influence of Staffing Factors

2.3.1 Training of Health workers

Training enhances the speed at which staff in hospitals learns specific knowledge (Hatch & Dyer, 2004). Training is focused to enhance staff's skills. More skilled staff tends to provide better and superior service (Ployhart & Moliterno, 2011). However, this does not always hold true for all jobs. Staff with less complex service jobs seems to benefit less from training compared to staff with more complicated service jobs.

Staff satisfaction in service firms is achieved in the internal satisfaction. Staffs who are satisfied are staffs that are motivated and committed to convey their concern to others (Mukucha et al., 2020). Satisfied and committed staffs are those who can be empowered.

In other words, staffs who are satisfied will have the resources and the responsibility to understand and meet the customer's demands and needs. Staffs who are satisfied assessed as having emotional resources sufficient to show empathy, understanding, respect, and attention to the customer as they serve them. Assessment of service quality performed during the service

delivery process which usually requires the presence of a relationship between the customers and hospital staff who provide services.

Results of research conducted by (Wimonphan & Nuttawuth, 2012) showed a positive and significant relationship between staff satisfaction and service quality of hospitals.

Staff are said to be associated significantly satisfied with the service quality and customer satisfaction. Satisfied staffs are more productive, innovative, and loyal, so is the impact on customer satisfaction. Staffs who are satisfied will be able to play the role of a strong core in achieving excellence and hospital effectiveness. Effect of staff satisfaction on service quality and customer satisfaction has also been widely discussed (Gupta, 2016).

Staff who are dissatisfied or unhappy would not be able to provide excellent service to the customer (Ariani, 2015). Job satisfaction has a positive impact on the quality of service which will affect customer satisfaction. Job satisfaction of staff in the service sector has a significant influence on the quality of service and concluded that job satisfaction also affects customer satisfaction (Lim, et al., 2018).

In a research study carried out in Busia County, Kenya, 61% of the respondents revealed that the nature of services provided in public health facilities were poor. Respondents credited doctor absenteeism to: taking care of individual issues, different employments, requiring some investment off to oversee private facilities, poor state of mind towards work and absence of supervision among different reasons. (Oduor, 2013)

As noted by previous researchers, front line staffs' ability to adapt to individual customers' behaviour is directly related to service quality rendered (Chebat & Kollias, 2000). More adaptable staff, especially if they are empowered, will find it easier to offer individual attention to customers and hence satisfy their individual needs (Singh, 2000). On the contrary, staff who

do not have the necessary ability or willingness to adapt their behaviour to the circumstances and just follow their supervisors' instructions cannot deliver high quality of service (Sony & Mekoth, 2012).

Staff coordination describes the degree to which staff work successfully together to achieve mutually agreed goals (Ellinger et al., 2011). The effective coordination or cooperation of staff has always a beneficial influence on a company's organizational function (Appelman et al., 2002). Service providers in particular, always aim to improve the communication between staff and to optimise the way they work together in teams and departments. This is because better coordination among individual staff, apart from improving the company's overall organizational function, also enables organizations to generate value for their customers (Demirbag et al., 2012).

A research study was carried out to compare perceptions of bank service quality among Tunisian and Canadian customers, and to determine which dimensions of service quality contribute most to overall customer satisfaction and loyalty. From their result, they found that responsiveness were the most important causes of satisfaction and loyalty in the Tunisian. An organization can exceed the expectation of a customer by communicating with that customer using a method that the customer wants (Ladhar et al., 2011). In another study to evaluate the determinants of customer satisfaction in the Kenyan banking industry. The customers reported to be satisfied with the accuracy and timeliness of bank statements and staff understanding of customer needs (Mburu et al., 2013).

2.3.2 Compensation of Health workers

Every organization's reward system should focus on these major areas; compensation, benefits, recognition and appreciation (Sarvadi, 2010). Benefits such as car loans, medical covers, club

membership, ample office space, parking slots and company cars are ways of rewarding and employees do note the Cash bonus is another form of reward that organizations use to reward employees for exemplary performance that is if they have performed higher or exceed their set targets, this hence makes them eligible (Finkle, et al., 2011).

The amount of cash is determined by how high the employee has over exceeded the set targets or they can also be based on ranks or job groups. Nowadays, companies are rewarding performance bonuses to junior employees to increase output, unlike the past where they used to be a privilege of top executives. Performance bonuses are now on the rise in many organizations because managers want to link performance to reward. Companies use cash bonuses to reward their employees' performance during the year under appraisal. But there is also the unspoken expectation that these bonuses will be a factor in motivating employees' performance next year as well. Employees who receive a large bonus will likely want to get it next year too. On the other hand, employees who receive a miserly bonus and it reflects how the company assessed their performance, might consider improving next year types of benefit that their organization offers (Finkle, et al., 2011).

Rewards can be used to improve performance by setting targets in relation to the work given e.g. surpassing some sales targets. When the employee surpasses their target, he or she can be given an additional amount to their salary; this will make them strive to achieve more (Maund, 2001). Research has proven that when human being are appreciated and praised they tend to improve their performance. This is another way an organization can apply as a reward so as to improve performance. Praise could be shown in the organization newsletter or in meetings.

When managers take time to meet and recognize employees who have performed well, it plays a big role in enhancing employees' performance (Torrington & Stephen, 2008). Organizations

should reward employees more often. This greatly improves performance compared to having the rewards maybe only once a year. This is because frequent rewards are easily linked to the performance (Thompson & Rampton, 2003).

In a research on the “impact of reward and recognition programs on employee motivation and satisfaction”. Research design used was exploratory. Sample chosen for the study was 80 employees of Unilever companies and data collection instrument used was a questionnaire. Pearson’s correlation was used to analyse data to determine the degree of relationship between reward and satisfaction and motivation. Major findings indicated a positive relationship between rewards and work satisfaction as well as motivation. Factors affecting satisfaction were identified; payment 86%, promotion 74%, work conditions 61%, personal 37%. Analysis showed support for a positive relationship between reward and employee satisfaction. The researchers recommended that further studies can be done on ‘impact of reward and recognition on motivation and satisfaction for diverse groups of people’ example gender, race and disability (Ali & Ahmad, 2009).

In a study focusing on reward systems within the health and geriatric care sector. The problem of the study was how reward systems designed in health and geriatric care are and whether the current reward systems affect the care quality. The thesis aimed to extend the knowledge of reward systems in health and geriatric care and know how these systems are designed and what their effects on quality of health and geriatric care are. The methodology took a qualitative approach and interviewed a sample of six leaders in both private and public organizations. Two of the leaders worked in geriatric care and four in health care.

The theoretical framework was based on scientific literature about motivation and reward systems. Findings showed that salary is an important aspect in the reward system; however other

incentives like bonuses and shares were seen to generate an enjoyable work place and happy workers than motivate employees to be more efficient. Results showed that conditions for working with reward systems in the public sector are limited due to the lack of resources and complex large organisation structures with old traditions. This must be reconsidered to be able to work with well-designed reward systems similar to those in private care organizations (Duberg & Mollen, 2010).

2.4 Influence of Healthcare facility Factors

2.4.1 Geographical access

Accessibility to healthcare services in hospitals can be evaluated on the basis of geographical distances between patient's households and healthcare services and also considering the healthcare opportunities in terms of the number of healthcare services a person can choose from (DeLamater & Ward, 2013). Failure to have access to the use of facilities will render some limited services since they are not used optimally and yet services depend on the use of the facilities (Sserwanga, 2005). Services that are not accessible are regarded as being of poor quality and those that can be easily accessible are regarded as high quality services.

Distance and other geographical factors are often viewed as major intervening aspects for access to medical care and resultant health outcomes, specifically for the disadvantaged population from both developed and developing nations (Cromley & Cromley, 2009). Studies in developing nations have shown that the absence of good roads and lack of proper communication particularly in the poor, remote and adverse physiography constrain access to healthcare and results in poor health outcomes (Peters, et al., 2008). Hence the innovative measures for facilitating geographical accessibility is viewed having control over the increased level of service utilization and help in achieving equity in health (Hodgson, 2005).

The roles of geographical accessibility differ as per the perceived health needs. Where, the population that has a higher perceived need for services gets less influenced by geographic inaccessibility (Arcury et al., 2005). Additionally evidence from India and other developing nations conform to the fact that for childbirth and maternal health needs in particular, the role of geographical accessibility gets overshadowed by the tradition linked to it (Furuta et al., 2006). In other words, even with favourable geographical accessibility, a pregnant woman may not seek health services, if it is not customary according to the culture. Along this line of thought the emerging view proposes that the role of geographical access is best evaluated when it is seen from the service user's perspective.

Utilization of antenatal services is reduced by increased distance to the health facility, as evidenced by a number of studies. In Kwale district, Kenya, women living further than 5 km from a dispensary were less likely to attend for antenatal care (Brown et al., 2008). Poor geographical access has its greatest influence on the potential of women to reach a health facility during labouring the rural areas that transport interventions are crucial.

2.4.2 Availability of Ambulance Services

There have been several recent reviews on the subject (Hussein et al., 2012). The range of physical transport options includes: pick-up trucks; taxis; buses; reconditioned vehicles; tractors; motorcycles; tricycles; bicycles; bicycles/tractors/tricycles with trailers; motorboats; canoes; wheelbarrows; animal-drawn carts; home-made stretchers; rickshaws; aircraft and trains. Car ambulances, private cars and taxis would be the most effective method of transferring women, but the problem is availability and affordability.

Public sector ambulances stationed at district hospitals are extremely busy and not dedicated to obstetric emergencies only. Vehicles often get put into service for other non-emergency

messenger services once available. The positive reports on the impact of using car ambulances are few. In Sri Lanka, the government equipped every district hospital with between three and five ambulances, which greatly reduced the delay in transporting women (Pathmanathan, et al., 2003). Due to the cost of running a public sector ambulance service in rural areas, women and their families have to depend on private transport using either their own funds or financing schemes. A detailed description of the initiatives in a wide variety of developing country settings was provided and concluded that community-based schemes have demonstrated some potential to overcome financial barriers to reaching hospitals (Holmes & Kennedy, 2010).

2.5 Influence of Management Practices

2.5.1 Staff motivation

Health-care service managers need to have skills, knowledge and expertise required to fulfil day-to-day responsibilities. Some of these skills and responsibilities include the requirement to develop and maintain professional standards, procedures, and policies for various institutional activities (Hamoud et al., 2016). They are also responsible for developing and expanding programs for scientific research, preventive medicine, medical & vocational rehabilitation, and community health welfare. Excellent, assertive communication skills, both verbal and written, are paramount to a leader's ability to carry out an effective healthcare operation. Information Communication Technology skills are also essential as healthcare machinery and information systems continue to evolve (Harrison et al., 2010).

2.5.2 Planning

The motivating concept underlying employees' incentives is to foster employees to put in more effort to improve organisations performance, (Imberman, 2015). Motivation is one of the factors influencing the work attitude of any establishment. To learn how to motivate employees

to execute assigned duties and responsibilities in the organisation is the objective of work motivation. Motivation is a set of courses concerned with a kind of strength that boosts performance and directs towards accomplishing some definite targets (Shoraj & Llaci, 2015). These explanations show that to achieve positive goal, employees must be adequately active and their objective clearly stated. Organisational growth, rest on identification factor analysis that ascertains the success of the organization (Kennedy & Chew-Graham, 2014).

In a study to investigate managers' perception of customer expectations in hotel industry in Kenya. The results revealed that assurance, empathy and tangibles were regarded as the most important factors affecting service quality (Kiange, 2011). Moreover, the findings established that customers have the highest expectations on promptness of service, accuracy of transactions and security issues. The researcher advised managers to prioritize on attention to details and promptness in addressing customer complaints. The researcher noted that customers' expectations and perceptions are subjective and the findings can only be generalized to a pre-defined market and economic scenarios (Rungtusanatham et al., 2010).

The study on motivational factors affecting professional conduct in the workplace, evinced that poor professional conduct has been put forward as a precursor to low morale and is said to lead to poor work performance. The low state of the spirits of a person or group as exhibited by confidence, cheerfulness, discipline, and willingness to perform assigned tasks emanate from lack of motivation and failure by Employers to address employee needs, drives and capabilities, (Buhr et al., 2020). Financial incentives are preferred by the junior staff, because they perceived non-financial incentives as not a motivational technique.

Although not denying the strength of financial incentives per se, their limited ability to resolve complex problems in areas have seen support from complementary non-financial incentives

(Iyke et al., 2014). Consequently, they may not be effective if they are the only method used in the public sector (Chaix et al., 2000).

It has been documented by many that the motivation approach has helped to improve efficiency and employee motivation and their collective capabilities enhances employee performance (Iqbal & Waseem, 2012). These lead to maximum productivity, but how best to get employees committed to their work in accomplishing organisational goal has been the main concern of managers (Iyoke et al., 2014). Intrinsic factors are considered to be those rewards (or outcomes) that derive directly from or are inherently connected to the job/task, such as recognition, degree of autonomy and responsibility, sense of accomplishment and growth, demanding and challenging job. Consequently, the individual receives the intrinsic rewards by the very act of performance (Tetteh, 2015).

Reward influences positively on employee performance (Hameed et al., 2014). The obligation to assess the impact of compensation meant that attracting and motivating employees for effective performance has been a challenged. Compensation attracts, retain and help increase employee's performance. In a research to determine the motivational factors affecting employee motivation and their relationship with the resulted employee performance outcome in Pakistan, and disclosed that access to quality experience, good environmental working condition, positive, alignment of employee skills and job need as well as incentive packages have a notable influence on job performance (Javed & Javed, 2014).

2.6 Influence of Drugs Procurement

2.6.1 Length of procurement process

Procurement process starts when an entity has identified a need and decided on its procurement requirement. Procurement goes through the process of risk assessment, seeking and evaluating

alternative solutions, contract award, delivery of goods, services and works, and payment for the property and/or services and, where relevant, the ongoing management of a contract and consideration of options related to the contract. Procurement also extends to the ultimate disposal of property at the end of its useful life. Furthermore, the procurement function is responsible on one hand for the identification of the end-user's needs and, by utilizing suppliers, meeting them. Therefore, by its very nature, procurement is a "service" function (Dacha & Juma, 2018).

In a procurement process therefore, efforts must be dedicated to ensuring the complete satisfaction of not only the end-user or customer of a product and/or service, but, also the satisfaction of the suppliers whose products or service are incorporated into the end-user/customer order and whose performance impacts the end user satisfaction (Gordon, 2009).

2.6.2 Procurement policy

Procurement policy is a factor influencing service delivery. Procurement policy is one of the primary functions of procurement with a potential to contribute to the success of government operations and improved service delivery (Nichols, 2002). It is a function that sets in motion the entire acquisition or procurement process of acquiring services in governments (Lambsdorff, 2007). The contribution of procurement policy in facilitating an efficient and effective service delivery in public sector organizations is generally undisputed in both developed and developing countries (Schooner & Whiteman, 2000). Sound public procurement system needs to have good procurement laws and regulations. In practice and theory, public procurement laws and regulations have been considered as one of the most important pillars of a sound procurement system. Procurement laws and regulations lead to procurement efficiency or inefficiency.

All procurements regardless of their value or complexity follow a standard sequence of actions. This is known as the procurement process (Bashuna, 2013). The procurement process is a series of steps involved in the process of acquiring goods for sale or use by a company or agency. It starts with identifying the need for a given product, moves through the process of purchase and delivery. Although it is important to ensure that the tactical procurement process is effectively done to improve service delivery in areas of quality management, cost and time of delivering of services. The main challenge facing most procurement entities engaged in the tactical process is how to determine the length of each step in the procurement process and its duration. Failure to determine its length can pose negative implication on cost, quality and time delivering services, hence leading to poor service delivery management (Basheka, 2004)

2.6.3 Procurement planning

Procurement planning procedures may be convenient and useful tools, but the planning effort will succeed only with the complete commitment and involvement of top management. This also calls for measurement of the effectiveness to ensure proper business controls by conducting periodic supplier audits to correct compliance errors. Contribution of procurement policy in facilitating an efficient and effective service delivery in public sector organizations is generally undisputed in both developed and developing countries (Schooner & Whiteman, 2000)

One of the major setbacks in public procurement is poor planning and management of the procurement process which include needs that are not well identified and estimated, unrealistic budgets and inadequacy of the skills of staff responsible for procurement (Mamiro, 2010). When planning is properly conceived and implemented, it can serve as an important mechanism for extracting, distributing and allocating resources (James, 2004). Research study was carried out on the challenges of implementing procurement policies in state corporations in Kenya by

Badaso (2014), while in another research on the effects of public procurement policies on organizational performance by Nyaboke et al. (2013) focused on the water sector. Obiero (2008) study focused on the challenges in the implementation of the Public Procurement & Disposal Act 2005 in the Ministry of Higher Education, Science and Technology in Kenya.

2.7 Theoretical Review

This section contains the theories addressing the variables of this study ie staff, facilities, management practices and drugs procurement process as the independent variable while service delivery is the dependent variable. This study was anchored on Attribution Theory, Complexity Theory and Nursing Services Delivery Theory and Theory of reasoned Action.

2.7.1 Nursing Services Delivery Theory

This theory was put forward by (Meyer & O'Brien-Pallas, 2010). It explains an open system approach. It indicates that healthcare organization is conceptualized as an open system characterized by energy transformation, a dynamic steady state, negative entropy, event cycles, negative feedback, differentiation, integration and coordination, and equifinality. The Nursing Services Delivery Theory proposes that input, throughput, and output factors interact dynamically to influence the global work demands placed on nursing work groups at the point of care in production subsystems. Implications for nursing are that the Nursing Services Delivery Theory can be applied to varied settings, cultures, and countries and supports the study of multi-level phenomena and cross-level effects. The Nursing Services Delivery Theory gives a relational structure for reconciling disparate streams of research related to nursing work, staffing, and work hospital environments. The theory can guide future research and the management of nursing services in large-scale healthcare organizations.

The underlying mechanisms by which staffing indicators influence outcomes remain under-theorized and unmeasured, resulting in a 'black box' that masks the nature and organization of

nursing work. Theory linking nursing work, staffing, work environments and outcomes in different settings is urgently needed to inform management decisions about the allocation of nurse staffing resources in organizations. In many countries, the sustainability and quality of nursing services are threatened by global shortages of healthcare professionals (International Council of Nurses, 2006).

As one component of a multifaceted response to this crisis, policy and decision-makers have prioritized the nursing practice environment and organizational performance as key areas for intervention (International Council of Nurses, 2006).

Nursing services are generally contracted through an employment relationship. To recruit, retain, and deploy scarce nursing human resources effectively and to produce quality and cost-effective care, the associations between organizational structures, human resource management policies and the goals, resources, context, and outcomes of nurses' work need to be understood. A challenge in nursing health services research has been the need for a unifying theory to conceptualize and examine the delivery of nursing services (Edwardson, 2007). In the conceptual model for nursing and health policy, there are four levels of focus: nursing practice processes, administrative practices for nursing service (or healthcare) delivery subsystems, healthcare system administrative practices and world health administrative practices. The Nursing Services Delivery Theory (NSDT) addresses the second level of phenomena in this model by examining the effectiveness and efficiency of administrative practices for nursing service delivery subsystems. Using the strategy of theory derivation, the NSDT gives a theoretical understanding of the nature of an organization, situates the work of nurses in the organizational context, and integrates the design and organization of nursing work (Russell & Fawcett, 2005).

This theory was used in linking all health workers in Meru County hospitals in their different departments of work, staffing numbers of the workers and in all hospitals and offices which indicated how workers work, how and the challenges they experience in their work environments. The theory helped on how various health practices were carried out in hospitals in Meru County. It also explained on administrative practices in the hospitals the respondents. It also showed how Healthcare system administrative practices were carried for different professions and in different hospitals. Implications for practice and/or policy is that future research can be guided by this theory to examine how variations in inputs, throughputs, and organizational characteristics result in optimal outputs related to nursing services delivery. Hospital Managers can use this theory as an overarching framework to manage the key components conceptualized to influence the delivery of nursing services at the point of care in organizations.

Nursing Services Delivery Theory explains Theory linking nursing work, staffing, hospital work environments and outcomes in different settings is urgently needed to inform management decisions about the allocation of nurse staffing resources in organizations. It explains policy and decision-makers in the environment that the sustainability and quality of nursing services are threatened by global shortages of healthcare professionals. In health service delivery

2.7.2 Theory of reasoned Action

The Theory of reasoned action model was proposed in 1975. It focuses on the construction of a system of observation of two groups of variables, which are attitudes that are defined as a positive or negative feeling in relation to the achievement of an objective as well as subjective norms, which are the very representations of the individuals' perception in relation to the ability of reaching those goals with the product (Fishbein & Ajzen, 1975).

The Theory of Reasoned Action (TRA) suggests that a person's behavior is determined by their intention to perform the behavior and that this intention is, in turn, a function of their attitude toward the behavior and subjective norms (Fishbein & Ajzen, 1975). The best predictor of behavior is intention or instrumentality (belief that the behavior will lead to the intended outcome). Instrumentality is determined by three things: their attitude toward the specific behavior, their subjective norms, and their perceived behavioral control. The more favorable the attitude and the subjective norms and the greater the perceived control, the stronger the person's intention to perform the behavior.

In theory of reasoned action and in trying to observe the relationship between attitude and behavior, they found out that, individuals are rational in considering their actions and the implication of their action (Conner, 2002).

People have different behavior intentions. Decision to act or not to act is the results of an assessment of the like hood of specific outcomes. When the assessment produces a positive evaluation, decision is made to act. This argument is valid as hospital' mangers decision to obtain external support depends on the purpose for which they want finance and the associated terms. As a result managers intend to obtain external support such as finances without collateral security attached as opposed to that attached with collate security (Stoof, 2005).

According to Ministry of Finance, Planning and Economic Development (MFED) 2008, health facilities find it difficult to access financing partly due to lack of collateral to secure such loans but also because they consider high risk clients. High risk is attributable to a number of factors including poor management skills, uncertainty of their businesses and poor recording practices. As a result, in addition to highly valued collateral the interest rate charged to business is very high often ranging from 22% to 30% on short term lending.

The application of this theory is relevant in this study as because one of the variables of this research is management practices and in health facilities in Kenya there are managers who manage them. Managers of health facilities rationally consider the perspective their actions towards accessing finances as setback in case of failure to comply with the terms set by health institutions. The fear of hospital managers to access external factors will leave them with little capital to help in the running of their business and eventually lead to failure. This is supported by finding of Gallup organization's survey 2006, Who found out that managers who had positive attitude towards external finance improved their capital through borrowing from competition, innovation and growth.

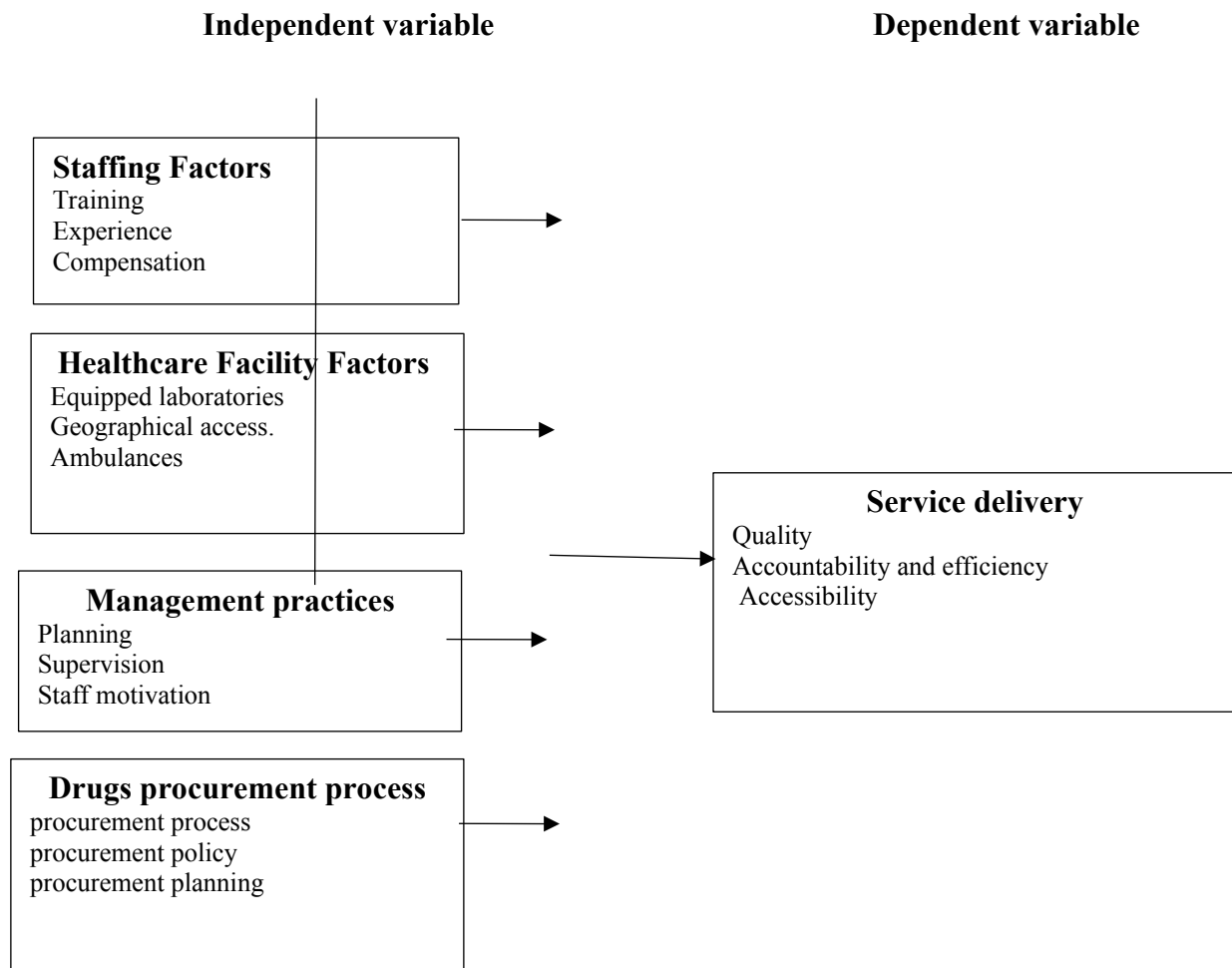
This theory is vital to this study by addressing Management Competency variable. Health service delivery in Meru Sub-county hospitals is also dependent on the management practices. When management engage in best practices of sound management like comprehensive planning, resource allocation, controls, supervision as well as benchmarking. Actions and behavior of management in health facilities is very key in service delivery since the rest of service providers within the setup will follow what the management sets as an example to them.

2.8 Conceptual Framework

A conceptual framework provides a clear links between the independent and dependent variables as they relate to each other in this research. Conceptual framework is a hypothesized model identifying the concepts under study and relationships (Mugenda & Mugenda, 2003). The relationship between staff, facilities, drug procurement, management practices and service delivery is depicted diagrammatically in the framework Figure 2.1.

Figure 2.1

Conceptual framework



CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the study methodology and materials that were used. It explains the study design, study population, sampling procedures and sample size determination, data collection, data management and analysis, lastly describes the ethical considerations for the study.

3.2 Research Design

The researcher adopted a descriptive cross-sectional study design. In a cross sectional study the researcher gathers data just once (Sekaran & Bougie, 2010). This design is appropriate for this study because it provides quantitative and qualitative description of facts, attitudes, or opinions of a population by studying a sample of that population. From sample results, the researcher has generalized or drawn inferences to the population (Creswell, 2003).

3.3 Study Site

The Study was conducted in Sub-County Hospitals in Meru County. Meru County is one of the Forty Seven (47) counties of Kenya strategically located east of Mt. Kenya. The county has a total area of 6,936.2Km². The county borders five counties; to the North it borders Isiolo County, to the East Tharaka/Nithi County, to the South West Nyeri County and to the West Laikipia County. It spans the equator lying 0° 6' North and 0° 1' South and between latitudes 37° West and 38° East (Meru County, 2018). According to the Kenya National Bureau of Statistics, the population in the county is 1,365,301 people (male-670,656, females-685,645) (KNBS, 2015). The county's administrative structure comprises of nine recognised (9) sub-counties. The 9 sub-counties include: Imenti South, Meru Central, Imenti North, Buuri, Tigania East, Tigania West, Igembe Central, Igembe South and Igembe North. There are a total of 498 facilities

covering all levels of health and out of this number, Sub County hospitals are 23. The county also has 1872 health care workers distributed evenly across the county (Meru County, 2018).

3.4 Target population

Target population refers to the entire group of individuals, elements or groups studied (Orodho, 2009). Meru County has a total of 23 sub-county hospitals that were involved in this study. In each sub-county hospital there are five officers in the management of the facility. These officers include In-charge of the sub-county hospital, head of Pharmacy, head of Nursing, head of laboratory and head of Clinical services. Therefore the total target population for this study consisted of one hundred and fifteen staff in all the sub-county hospitals. These officers oversee service delivery in these sub county hospitals.

3.5 Sample Size Determination and Sampling Procedure

3.5.1 Sample Size Determination

Meru County has a total of 23 sub-county hospitals that were involved in this study. Every sub-county hospital has five officers who are at the helm of running and managing them. These officers include the In-charge of the sub-county hospital, head of Pharmacy, head of Nursing, head of laboratory and head of Clinical services. These officers oversee service delivery in all the sub county hospitals and are well versed with knowledge about service delivery. Therefore the sample size of this study was 115 employees of the 23 sub county hospitals.

3.5.2 Sampling Procedure

These officers were purposively selected to participate in the study due to their positions, specialist knowledge, capacity and understanding of health matters and variables under this study. Purposive sampling is a form of non-probability sampling in which decision concerning the individuals to be included in the sample are taken by the researcher, based upon a variety of

criteria which may include specialist knowledge of the research issue, or capacity and willingness to participate in the research (Oliver, 2006). The sample size of the study will consist of all the one hundred and fifteen officers from the twenty three sub-county hospitals.

3.6 Instrumentation.

In this study, the researcher collected data using a self-administered structured questionnaire. The questionnaire was made up of questions formulated using a 5 point likert scale (SA-Strongly Agree; A-Agreed; U-Undecided; SD-Strongly Disagree; D-Disagreed) where the respondent chose the answer that suited their response. The questionnaire consisted of sections that measured staff, facilities, drug procurement; management practices factors that influence service delivery in the facilities.

To ensure reliability and validity of the instrument, the researcher pre-tested the questionnaire to ensure that it was measuring what it was supposed to measure and that the wording was clear for the respondents. Pre-testing of the questionnaires was done in the neighbouring isiolo county and involved 10% of the sample size which was 12 respondents from the sub county hospitals.

3.6.1 Validity

Validity is often defined as the extent to which an instrument measures what it asserts to measure (Cooper, 2005). Validity of a research instrument assesses the extent to which the instrument measures what it is designed to measure (Robson, 2011). It is the degree to which the results are truthful. So that it requires research instrument (questionnaire) to correctly measure the concepts under the study (Pallant, 2011). It encompasses the entire experimental concept, and establishes whether the results obtained meet all of the requirements of the scientific research method. Qualitative research is based on the fact that validity is a matter of trustworthiness, utility, and dependability (Zohrabi, 2013). Validity of research is an extent at which

requirements of scientific research method have been followed during the process of generating research findings. It is a compulsory requirement for all types of studies (Oliver, 2010). Validity determines whether the research truly measures that which it was intended to measure or how truthful the research results are (Golafshani, 2003).

3.6.2 Reliability

Reliability refers to whether an assessment instrument gives the same results each time it is used in the same setting with the same type of subjects (Sullivan, 2011). It refers to a measurement that supplies consistent results with equal values (Cooper, 2005). It measures consistency, precision, repeatability, and trustworthiness of a research (Chakrabarty, 2013). It indicates the extent to which it is without bias (error free), and hence insures consistent measurement cross time and across the various items in the instruments (the observed scores). Reliability is used to evaluate the stability of measures administered at different times to the same individuals and the equivalence of sets of items from the same test (Kimberlin & Winterstein, 2008). The better the reliability is perform, the more accurate the results; which increases the chance of making correct decision in research. Reliability is a necessary, but not a sufficient condition for the validity of research. In this study, the researcher will use Cronbach's alpha to test the reliability of the instrument. Cronbach's alpha measures how consistently participants respond to one set of items. Cronbach's alpha is thought of as a sort of average of the correlations between items. Cronbach's alpha ranges from 0.0 to 1.0 (a negative alpha means probably there is need to reverse some items). Since the late 1960s, the minimally acceptable measure of reliability has been 0.70; in practice, though, for high-stakes questionnaires, aim for greater than 0.90.

A questionnaire is reliable and valid, if both α and β are greater than 0.77. Once the pre- test study has been done, necessary amendments will be made to the questionnaire. The researcher

did not use the pre-test sample in the actual study since the pre-test was carried out among participants who did not form part of the main study.

3.7 Methods of Data Collection.

Data was collected by use of a questionnaire which was administered by the researcher on the basis of drop and pick once the respondent has finished filling it. To be allowed for data collection, the researcher applied for research permit from national commission for science technology and innovation. Moreover, Heads of departments (In charge of the sub-county hospital, head of Pharmacy, head of Nursing, head of laboratory and head of Clinical services) in the sub-county Hospitals was approached and recruited into the study. The purpose of the research and procedure will be explained to them and those who will consent to participate will be interviewed by the researcher and the assistants. Confidentiality will be assured by ensuring that the names of the respondent do not appear anywhere in the questionnaire. The researcher will ensure that no respondent will be issued with a questionnaire more than once by asking if they had previously been issued with one.

3.7.1 Ethical Considerations

The researcher obtained an introduction letter from Kenya Methodist University that was used to apply for research permit from National commission for science technology and innovation. This research permit enabled the researcher to collect data from the various respondents.

The researcher also obtained Ethical clearance from the Ethics and Research Committee of Kenya Methodist University and permission sought from the respective hospital administrations before the study was conducted. The researcher explained the purpose of the research and those who volunteered were given the responses after informed consent and voluntary participation. The names of the officers were not be recorded and the officers s' identities were not included

anywhere in the data collection sheets to maintain confidentiality. All data collected was protected during the study. During the entire process of carrying out this research, all ethical considerations were made to ensure high levels of confidentiality, anonymity, respect for other people's property and objects as well as convenience of the respondents.

3.8 Operational measure of Variables

Operationalization refers to the process of developing indicators or items for measuring constructs (Bhattacharjee, 2012). Operationalization of variables is shown in Table 3.1.

Objective	Type of Variables	Indicator	Measuring of Indicators	Scale	Type of Analysis
To determine the influence of staff on service delivery	Independent	Staff	Training Experience Compensation	Interval ordinal	Descriptive stats, Pearson's r
To assess the influence of facilities on service delivery	Independent	Facilities	Wards Ambulances Geographical access.	Interval	Descriptive stats, Pearson's r
To establish the influence of management practices on service delivery	Independent	Management practices	Planning Supervision Staff motivation	interval	Descriptive stats, Pearson's r
To evaluate the influence of Drugs procurement process on service delivery	Independent	Drugs procurement process	Procurement process. Procurement policy Procurement planning	Interval	Descriptive stats, Pearson's r
	Dependent	Service Delivery	Quality Accountability and efficiency Accessibility	Nominal	Descriptive stats, Regression analysis.

Table 3.1

Operational measure of variable

3.9 Methods of data analysis.

To ensure confidentiality and anonymity, the data collection tools will not bear a participant's name or ethnicity and will be identified by the study code numbers. Once the data has been transferred from the instrument to the computers, the instrument will be kept safe in a secure

lockable cabinet for future reference. The completed instruments will not be destroyed or thrown away for at least 3 years after the completion of the research. Access to data about individual participants will be restricted to the researcher, supervisors and any research assistants on a need-to-know basis.

The data will be checked for consistency, coded appropriately, and entered into SPSS software package version 21 for analysis. Preliminary analyses will be conducted and any inconsistency in the data will identified and corrected. The data will be explored and general features displayed to identify problem areas before commencing data analyses. Descriptive and inferential statistical tests will be used in the analysis. The output will be presented in tables and charts.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents study findings of the analysed data as per research variables. This research study sought to determine factors influencing service delivery at Sub-County Hospitals in Meru County, Kenya. Specific objectives included: i) to determine the influence of staff, ii) to assess the influence of facilities, iii) to establish the influence of management practices, and iv) to evaluate the influence of drugs procurement process on service delivery in Sub-county Hospitals in Meru County

4.2 Response Rate

In this study, the number of questionnaires administered were 115 and 84 were successfully completed and returned making the response rate of 73%. See Table 4.1. Response rate of 50% is fit for analysis and publishing, 60% is good while 70% is very good (Babbie, 2014).

Table 4.1

Study Response Rate

Response	Frequency	Percentage %
Respondents	84	73
Non-respondents	31	27
Total	115	100

4.3 Reliability Test Results

The reliability of the instrument is the ability to give clear and stable measurement. In this study research, the reliability was carried out using Cronbach's coefficient test alpha. Coefficient alpha is normally used during a scale development with items that have several items. A Cronbach's $\alpha \geq 0.7$ implies that the tool delivers a moderately decent measurement tool and therefore is

consistent (Flick, 2015). The reliability results shown in Table 4.2 confirmed the reliability of the instrument with a least Cronbach’s alpha of >0.704.

Table 4.2

Reliability Test Results

Scale	Cronbach’s Alpha	Number of items
Service delivery	0.736	9
Staff	0.704	9
Facilities	0.804	9
Management Practices	0.763	9
Drugs Procurement Process	0.765	9

4.4 Demographic Characteristics of the respondent

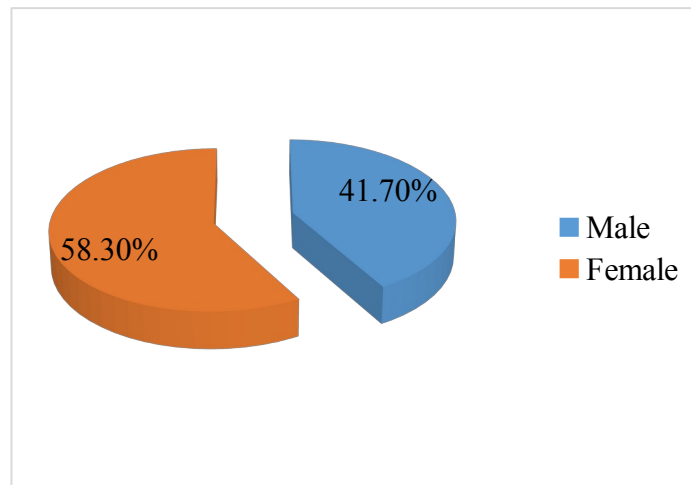
The demographic characteristics of the respondents were collected. It was necessary to investigate the relevance of age, level of education, gender and years worked and their influence service delivery in Sub-County hospitals in Meru County, Kenya.

4.4.1 Gender of the respondents

It was necessary to investigate the relevance of age and their influence service delivery in Sub-County hospitals in Meru County, Kenya. There were 84 respondents who participated in the survey. All the respondents indicated their gender, most of the respondents (n=49, 58.3%) were female while (n=35, 41.7%) were male as shown in figure 4.1

Figure 4.1

Gender of respondents

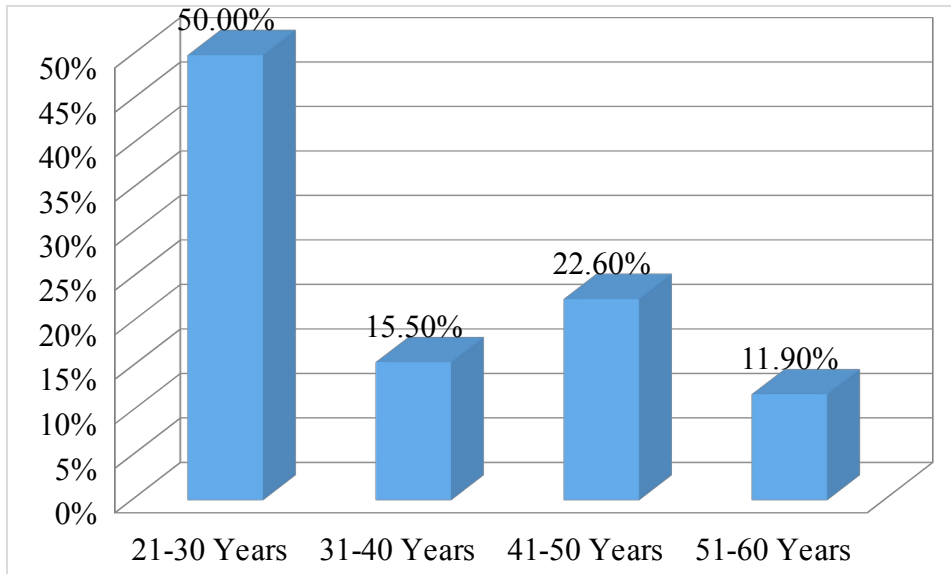


4.4.2 Age of the respondents

Similarly it was necessary to investigate the relevance of age and their influence service delivery in Sub-County hospitals in Meru County, Kenya. Among the 84 respondents who participated in the survey, 77 of the respondents indicated their age-group. From figure 4.2 it is clear that most of the respondents (n=35, 41.2%) were between age 31-40; (n=19, 22.4%) were between age 21-30; (n=13, 15.4%) were between the age of 41-50; (n=10, 11.9%) were between age 51-60.

Figure 4.2

Age of the respondents

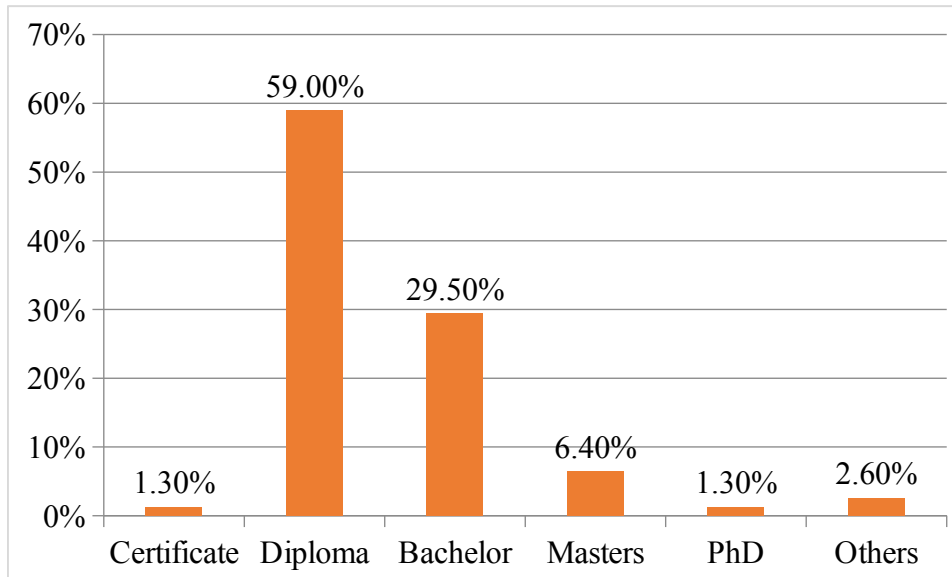


4.4.3 Education level of the respondents

As shown in Figure 4.3 most of the respondents (n=46, 59.0%) indicated that they had gone up to the Diploma level; (n=23, 29.5%) of the respondents had attained a Bachelor's degree; (n=5, 6.4%) of the respondents had gone up to the certificate level ; (n=1, 1.3%) of the respondents had attained a master degree and (n=1, 1.3%) of the respondents had gone to an extent of attaining a PhD and (n=2, 2.6%) had other level of education, that is Hospitality Nutrition & Diatec.

Figure 4.3

Education level of the respondents

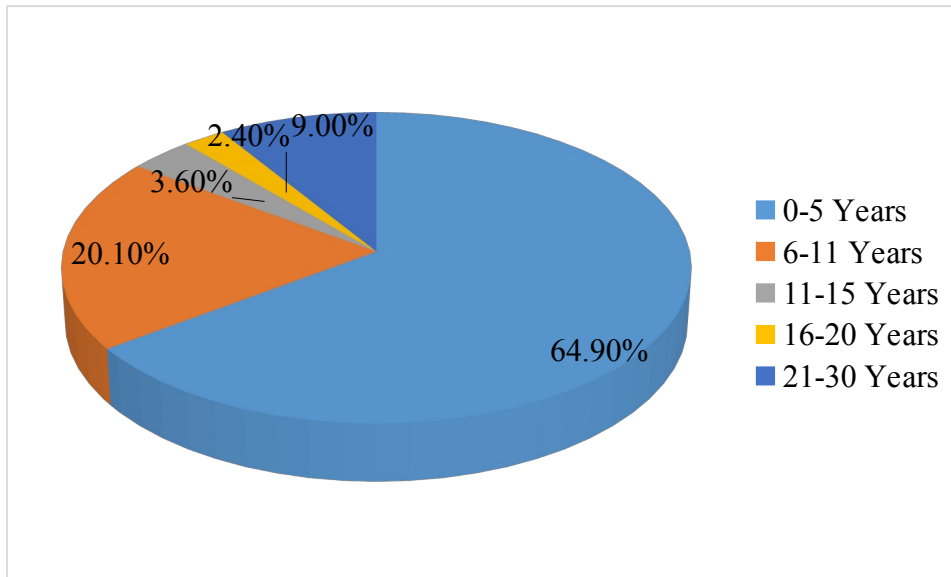


4.4.4 Years worked of the respondents

The number of respondents that participated in the survey was 84. Figure 4.4 indicate that most of the respondents (n=55, 64.9%) indicated they had worked at the hospitals for 5 years and below; (n=17, 20.1%) of the respondents indicated that they had worked at the hospitals for 6-11 years; three (3.6%) of the respondents indicated that for 11-20 years they had been working at the hospital and (n=2, 2.4%) of the respondents had been at the hospital for 21 years and above.

Figure 4.4

Number of years worked by the respondents



4.5 Responses on Staff Issues in Sub-county Hospitals in Meru County

The first objective of the study was to determine the influence of staff on service delivery in sub-county hospitals in Meru County. See results in Table 4.3.

Table 4.3

Responses on Staff Issues

Statements	N	Mean	Std. Dev.
We always get an opportunity to advance our skills through CME/CPD	84	3.63	.875
The hospital has a policy to support staff financially to further their education	84	3.39	.761
The hospital always gives staff enough time for their training	84	3.55	.856
Most of the staff have many years of experience	84	2.71	.505
Staff are rotated in hospital sections to acquire experience	84	3.83	1.128
Staff are taken for benchmarking to build on their experience	84	3.98	.931
There is adequate compensation package for staff	84	2.74	.604
Compensation is always given in good time to staff	84	3.76	1.158
Compensation packages for all staff is competitive enough	84	3.90	1.001

The respondents agreed that compensation package for all staff is competitive enough mean of 3.90, that they always get an opportunity to advance their skills through CME/CPD mean of 3.63, that staff are rotated in hospital sections to acquire experience mean of 3.83, and staff are taken for benchmarking to build on their experience mean of 3.98. The respondents disagreed that the hospital has a policy to support staff financially to further their education mean of 3.39, most of the staff have many years of experience mean of 2.71, and that there is adequate compensation package for staff 2.74.

This study found that there was great extent of agreements on staffing issues in all sub-county hospitals in Meru County. Moreover, “Staff are taken for benchmarking to build on their experience” is the attribute of staff that received the highest mean ($M=3.98$, $SD= 0.931$). This means that management of these sub-county Hospitals was keen in taking their staff for benchmarking since it was an important ingredient in service delivery compared to other attributes such as “Most of the staff have many years of experience” which attained the lowest mean ($M=2.71$, $SD= 0.505$) implying that many years of experience was not very key in service delivery. This means that staffing issues like training and compensation package are critical in delivery of healthcare services. These results are supported by the findings of a study conducted by (Mwaniki & Dulo, 2008), in their study "Migration of Health Workers in Kenya: The Impact on Health Service Delivery", training influences the capacity of health workers. High quality and accessible health services cannot be delivered without sufficient numbers of well-skilled, well distributed and well-managed health workers. In their study "Decentralizing Kenya's Health Management System: An Evaluation" observed that patient satisfaction is a critical component in health care service delivery (Ndavi et al., 2009).

4.6 Responses on Hospital Facilities in Sub-county Hospitals in Meru County

The second objective of the study was to determine the influence of facilities on service delivery in sub-county hospitals in Meru County. The results in Table 4.4 present the responses on state of hospital facilities in sub-county hospitals in Meru County.

Table 4.4

State of Facilities in Sub-county Hospitals of Meru County

Statements	N	Mean	Std. Dev.
The hospital has functional laboratories that serve patients	84	4.17	1.051
The hospital has state of the art laboratories	84	3.80	1.170
The hospital laboratories are always open to offer services	84	3.39	.761
The hospital is always accessible by road	84	3.58	.853
The proximity to the hospital is near to my home	84	2.75	.557
Hospitals are strategically located	84	3.85	1.135
Hospitals have functional ambulances	84	3.51	.898
Ambulances are well equipped	84	2.70	.555
Use of ambulances is affordable	84	3.79	1.162

The respondents agreed that the hospital has functional laboratories that serve patients scoring a mean of 4.17, the hospital has state of the art laboratories scoring a mean of 3.80, hospitals are strategically located 3.85, hospitals have functional ambulances 3.51, and the hospital is always accessible by road 3.58. However the respondents disagreed that the hospital laboratories are always open to offer services mean of 3.39, the proximity to the hospitals is near to their homes, mean of 2.75, and that ambulances are well equipped mean of 2.70.

From the findings of this study, it was evident that the respondents agreed that the sub-county hospitals had laboratory facilities. Aspects of facilities such as “the hospital has functional laboratories that serve patients” had the highest mean (Mean=4.17; SD=1.051) implying that functional laboratories were key in delivery services to patients. However, some aspects of facilities such as “ambulances are well equipped” had the least mean (M=2.70; SD=0.557). This

meant that overall ambulances in sub-county hospitals were not well equipped which affects service delivery. Overall, most respondents agreed that the hospital have laboratory facilities to provide health services to all the patients. This implies that these laboratories in in usable state and can meet the expectations of patients when they are receiving the services in the Hospital.

Results revealed that the hospitals are strategically located ad that hospitals are accessible by road (Mean=3.85; SD=1.135 and Mean 3.58; SD=0.853) respectively. These results are supported by Hall et al., (2006) who conducted a study in the Eastern Cape province of South Africa with a view to understanding the impacts of transport to healthcare service delivery. Their findings demonstrated not only the need for improved transport services in the delivery of health, but also the importance of using the right type of vehicles. Their study also revealed that during the rainy season, it was exceedingly difficult for delivery vehicles laden with drug supplies to access health facilities largely because of poor road infrastructure running along hilly, often broken and generally difficult terrain that characterize the province. In wet weather, these roads become muddy and slippery. In fact, health transport problems are indeed most severe in the wet season for most rural areas not only in South Africa but also in other developing countries (Gray & Suleman, 1999). In a study done by Mobility and Health (2008) in Namibia, it was demonstrated that transport for emergency cases comes at a higher cost for people living in rural and largely marginalized areas. Very often, patients get too exhausted or die while waiting for Ambulances, which take over three hours on average to report at the scene after a callout.

Lack of adequate and affordable transport services particularly in remote rural and marginalized areas, under-girded by sound transportation infrastructure, are obstacles to achieving meaningful service delivery. Clearly, without proper transport infrastructure and services, healthcare facilities in these areas will remain under-serviced in terms of maintaining adequate levels of

medical supplies and retaining medical staff as well as eliciting confidence and therefore regular utilization of the facilities by locals (Mashiri et al., 2016) .

4.7 Management Practices in Sub-county Hospitals of Meru County

The third objective of the study was to determine the influence of management practices on service delivery in sub-county hospitals in Meru County. Table 4.5 presents the results. The study findings show that on average the respondents agreed that the management practices have an influence on service delivery in sub-county hospitals in Meru County. The respondents agreed that management supervises staff adequately mean of 3.86, management has various reward systems for motivating employees mean score of 3.85, there is sound relationship between staff and supervisors 3.62, resources are availed for implementing plans mean score of 3.55, and that the hospital has a motivation policy for staff mean score of 3.54. They however disagreed that adequate resources are budgeted for implementing plans mean of 3.37, management follows and adhere to hospital plans mean of 2.76, supervisors lead by examples to staff 3.38, and that the hospital management follows and adheres to motivation policy 2.79.

Table 4.5

Management Practices in Sub-county Hospitals of Meru County

Statements	N	Mean	Std. Dev.
Adequate resources are budgeted for implementing plans	84	3.37	.788
Resources are availed for implementing plans	84	3.55	.827
Management follows and adhere to hospital plans	84	2.76	.652
Management supervises staff adequately	84	3.86	1.121
There is sound relationship between staff and supervisors	84	3.62	.675
Supervisors lead by examples to staff	84	3.38	.805
Hospital has a motivation policy for staff	84	3.54	.884
Hospital management follows and adheres to motivation policy	84	2.79	.678
Management has various reward systems for motivating employees	84	3.85	1.146

Management practice such as “Management supervises staff adequately” was found to be very key for service delivery to patients. Meaning that when staff are well and adequately supervised, they are able to deliver services appropriately. This is after the aspect received the highest mean (Mean=3.86; SD=1.12) compared to other aspects of management practices. This result is in agreement with the results of (Sato, et al., 2017), healthcare employees raised issues regarding compensation. For instance, in Uganda, health workers have raised concerns about poor remuneration relative to other civil servants of equitable professions. Providing opportunities for career development is considered the basis for promoting employee motivation in healthcare organizations. This encourages them to give their best towards achieving the changing medical needs for their communities (Momanyi et al., 2017). Moreover According to Jooste and Hamani (2017), improved communication, introducing modern hospital facilities, improving working environments and providing proper water and sanitation systems are vital to ensuring employee motivation. Health workers’ productivity and quality services can only be achieved in instances where there are safer and more pleasant working conditions (Fort et al., 2017).

4.8 Drugs Procurement Processes in Sub-county Hospitals of Meru County

The fourth objective of the study was to determine the influence of drugs procurement process on service delivery in sub-county hospitals in Meru County. The results are shown in Table 4.6. The respondents agreed that procurement plans are flexible drugs mean of 3.77, procurement policies are adhered to during procurement 3.76, procurement process is flexible scoring and there are adequate resources for drugs procurement both mean of 3.58. However, they disagreed that there is minimum lead time during drugs procurement 3.40, staff understand and are familiar with procurement policy mean of 3.33, there is a hospital policy for drugs procurement mean = 2.74 and that hospitals adhere to procurement plans 2.76.

Table 4.6*Drugs Procurement Process in Sub-county Hospitals of Meru County*

Statements	N	Mean	Std. Dev.
Adequate resources are budgeted for implementing plans	84	3.37	.788
Resources are availed for implementing plans	84	3.55	.827
Management follows and adhere to hospital plans	84	2.76	.652
Management supervises staff adequately	84	3.86	1.121
There is sound relationship between staff and supervisors	84	3.62	.675
Supervisors lead by examples to staff	84	3.38	.805
Hospital has a motivation policy for staff	84	3.54	.884
Hospital management follows and adheres to motivation policy	84	2.79	.678
Management has various reward systems for motivating employees	84	3.85	1.146

Drug procurement process in sub-county hospitals in Meru County was found to be in place. Attribute of drug procurement process such as “procurement plans are flexible” had the highest mean (Mean=3.77; SD=1.19) compared to others. This implies that flexibility of procurement plans is very important in the drugs procurement process which has an implication on service delivery. This result contradicts with the findings of Oketch et al. (2014) whose report indicated that though devolution of health-care services was planned to be seamless and designed to be fool-proof, it was hard to maintain. Even as doctors resigned all over the place citing tribalism and missed salaries, hospitals ran the risk of going without crucial medical supplies as some counties turned their backs on state provider KEMSA, which they accused of inflating costs. This also disagrees with results of Muhingi et al. (2015) who argues that as a result of these procurement challenges, there have been numerous reports on drug shortages in various counties.

4.9 Respondents’ Opinion on Service Delivery

Respondents were asked to respond to the set of questions related to service delivery at Sub-County Hospitals in Meru County, Kenya. The results in Table 4.7 show that respondents agreed

that managers are allocated the necessary authority to achieve planned objectives and held accountable for overall performance and results mean score of 3.82, services may be provided in the home, the community, the workplace, or health facilities as appropriate mean of 3.82, hospital services are effective in serving patients' needs mean of 3.61, and services are directly and permanently accessible with no undue barriers of cost, language, culture, or geography means score of 3.55.

Table 4.7

Respondents' Opinions on Service Delivery

Statements	N	Mean	Std. Dev.
Hospital services are effective in serving patients' needs	84	3.61	.932
Services offered in this hospital are safe to the patients	84	3.40	.778
Services offered here are centered on the patient's needs	84	3.58	.867
Health services are well managed so as to achieve the core elements described above with a minimum wastage of resources	84	2.80	.636
Managers are allocated the necessary authority to achieve planned objectives and held accountable for overall performance and results	84	3.82	1.153
Health services are delivered in a timely manner to the patients	84	3.36	.801
Services are directly and permanently accessible with no undue barriers of cost, language, culture, or geography	84	3.55	.870
Health services are close to the people, with a routine point of entry to the service network at primary care level	84	2.77	.588
Services may be provided in the home, the community, the workplace, or health facilities as appropriate	84	3.82	1.153

However, respondents disagreed that health services are well managed so as to achieve the core elements described above with a minimum wastage of resources means of 2.80, health services are close to the people with a routine point of entry to the service network at primary care level 2.77, and health services are delivered in a timely manner to the patients means score of 3.36.

From the responses of the respondents it was evident that “Managers are allocated the necessary authority to achieve planned objectives and held accountable for overall performance and results and Services may be provided in the home, the community, the workplace, or health facilities as appropriate” were good indicators of service delivery. This is because these two attributes of service delivery received the highest mean (Mean= 3.82; SD=1.153 and Mean=3.82; SD=1.153 respectively). This meant that there was proper service delivery in all sub-county Hospitals in Meru County. These findings concurs with the findings of (Umeano-Enemuoh, et al., 2015) who examined patients’ satisfaction of service delivery and care in tertiary institution in Southeast Nigeria. In their contribution, they aim to determine the factors which enhance and deter patients’ satisfaction in a tertiary institution and service delivery and care. To do this, the study used a cross sectional survey design in which 360 carefully selected participants completed self-administered questionnaire to rate their satisfaction level, quality of services provided, as well as factors of importance where best service was provided. Overall, participants were quite satisfied (Mean score = 3.75) with the services delivered by the different service providers. Equally, respondents also noted that the overall quality of care of the health facility was good (mean score = 3.45). Pharmacy received the highest satisfaction level with a mean rating of 4.1. Over a third participants (38 %) rated the services provided by the doctors as best despite giving the highest quality ratings with a mean of 3.9 to pharmacy compared to mean ratings of 3.4 for the doctors.

Moreover, the findings also agree with the findings of (Ogunfowokan and Mora, 2012) who focused on the experiences of patients on time, expectation and satisfaction of service delivery. They determined the time spent by patients at the service points in the general Outpatient Departments (OPD) at the National Hospital Abuja (NHA), to establish the perception of patients

regarding the patient–clinic encounter time, and to describe their level of satisfaction with the services received. A cross-sectional study was conducted at the general OPD of the NHA. Information which relate to the time spent at the various service points amongst others were obtained from 320 randomly selected patients, using a patient administered validated questionnaire. Eighty four per cent (84%) of the patients who responded adequately were identified and analysed. There was a significant relationship between a short waiting time as perceived by patients, clinic visit encounters where patients’ expectations were met or surpassed, and overall patients’ satisfaction with the clinic visit encounters. Based on the outcome of their results, they concluded that reduction in patient–clinic encounter time and meeting patients’ pre-visit expectations may significantly improve patient satisfaction after clinic visit encounter at the general OPD of NHA.

4.10 Correlation Analysis: Relationship between Independent and Dependent Variables

The researcher further did a Karl Pearson correlation analysis to determine the relationship between the independent variables and dependent variable. This inferential statistics was since it can analyze the degree of relationship between two variables. The computation of a correlation coefficient yields a statistic that ranges from Negative 1 to Positive 1. This statistic is called a correlation coefficient(r) which indicates the relationship between the two variables and the bigger the correlation the stronger the coefficient between the two variables being compared. The results are shown in Table 4.8.

Table 4.8*Relationship between independent and Dependent Variables*

		Service delivery
Service delivery	Pearson Correlation	1
	Sig. (2-tailed)	
	N	84
Staff	Pearson Correlation	.892**
	Sig. (2-tailed)	.000
	N	84
Facilities	Pearson Correlation	.969**
	Sig. (2-tailed)	.000
	N	84
Management practices	Pearson Correlation	.891**
	Sig. (2-tailed)	.000
	N	84
Drugs procurement process	Pearson Correlation	.930**
	Sig. (2-tailed)	.000
	N	84

Looking at the outcome the results shows that there is a strong and positive association between independent variable (staff, facilities, Management practices and drugs procurement process) and dependent variable (service delivery). From the analysis, the results show that the coefficient of correlation of staff showed ($r=0.893$, $p=0.001$), facilities showed ($r=0.969$, $p=0.001$), management practices showed ($r=0.891$, $p=0.001$) while drugs procurement process model showed ($r=0.930$, $p=0.001$). This shows that there was a strong and positive association between independent variables (staff, facilities, Management practices and drugs procurement process) and service delivery at Sub-County Hospitals in Meru County, Kenya.

4.11 Regression analysis

The study used the entered method by the name multiple regressions analysis to analyze the collected data to measure and determine factors influencing service delivery at Sub-County Hospitals in Meru County, Kenya. The use of this inferential statistics was informed by the fact

that multiple regression attempts to determine whether a group of variables together predict a given dependent variable

4.11.1 Model summary

This research sought further to establish the extent to which independent variables (staff, facilities, management practices and drugs procurement process) influence the service delivery. The summary mode results in Table 4.9 shows that the overall p-value is less than 0.05 (5%). This shows that the overall regression model is significant at the calculated 95% level of significance. It further inferred that the studied independent variables (staff, facilities, management practices and drugs) model have significant influence on the service delivery at Sub-County Hospitals in Meru County, Kenya. The regression model specifies coefficient of determination R^2 as 0.956, this means that at 95.6% of the relationship has been explained by the studied four independent variables (staff, facilities, management practices and drugs) model. The rest 4.4% are yet to be explained by other further researchers.

Table 4.9

Model summary

Model	R	R ²	AdjustedR ²	Std. Error of the Estimate
1	.978 ^a	.956	.954	.23713

4.11.2 Analysis of Variance (ANOVA)

The study used ANOVA to establish the significant of the regression model. The model is considered significant if the p-value is less than 0.05. Table 4.10 shows that p-value is 0.001 implying that the regression model used was statistical significant and is good for predicting the influence of (staff, facilities, management practices and drugs procurement process) on the service delivery. Basing the confidence level at 95%, the analysis indicates the highly reliability

of results obtained. The overall ANOVA results indicate that the model was significant at $F=427.648$ meaning that the overall model was significant and that (staff, facilities, management practices and drugs procurement process) have influence on the service delivery at Sub-County Hospitals in Meru County, Kenya.

Table 4.10

Analysis of Variance (ANOVA)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	96.186	4	24.047	427.648	.000 ^b
Residual	4.442	79	.056		
Total	100.628	83			

4.11.3 Multiple Regression

The researcher further conducted multiple regression analysis as shown in Table 4.11 to determine the extent of the (staff, facilities, management practices and drugs) have influence on the service delivery at Sub-County Hospitals in Meru County, Kenya. The beta coefficients in the regression model show that all of the tested independent variables had significant and positive relationship between independent variable and dependent variables. All variables showed a p-value less than 0.05 (5%).

Table 4.11*Multiple Regression Analysis*

Model	Unstandardized		Standardized		t	Sig.
	B	Std Error	Beta	Coefficient		
1 (Constant)	.035	.095			.366	.716
Staff	.295	.125	.261		2.365	.020
Facilities	.967	.100	.973		9.707	.000
Management practices	.709	.144	.686		4.937	.000
Drugs	.431	.107	.421		4.036	.000

As shown in Table 4.11 is the estimation of regression model equation:

$$Y = B_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

$Y = 0.035 + 0.295 X_1 + 0.967 X_2 + 0.709 X_3 + 0.431 X_4 + e$ This equation was relevant since all the four independent variables studied (staff X_1 , facilities X_2 , management practices X_3 and drugs X_4) were found to influence the service delivery at Sub-County Hospitals in Meru County, Kenya because all p-values came to values less 0.05. From the finding, Y-Intercept ($B_0 = 0.035$) depicts that holding all independent variables (staff, facilities, management practices and drugs) model constant, the service delivery at Sub-County Hospitals in Meru County, Kenya is performing at 3.5%.

Further, from the findings staff ($X_1 = \beta_1 = 0.295, P = 0.02$) it implies that a unit change of X_1 (staff) = 0.295, will improve the service delivery by 29.5%, and the improvement is statistically significant. In addition from the findings, facilities, ($X_2 = \beta_2 = 0.967, P = 0.001$) it implies that a unit change of X_2 (facilities) = 0.967, will improve the service delivery by 96.7%, and the improvement is

statistically significant. Further, from the findings, management practices model, ($X_{3=i} B_{3=i,0.709, P=0.001, i}$) it implies that a unit change of X_3 (management practices model) =0.709, will improve the service delivery by 70.9%, and the improvement is statistically significant. Finally, from the findings, drugs model, ($X_{4=i} B_{4=i,0.431, P=0.001, i}$) it implies that a unit change of X_4 (drugs model) =0.431, will improve the service delivery by 43.1%, and the improvement is statistically significant.

From these findings it is evident that state of service delivery in sub-county Hospitals in Meru County is influenced by staff, facilities, drugs procurement process and management practices. This implies that if hospital staffs are increased in terms of their aspects (such as advancement of skills, financial support to further education, enough time for training, rotation as well as competitive compensation packages) service delivery will be improved. Additionally when Hospital facilities are increased by a unit (functional laboratories, state of the art laboratories, accessibility by roads, affordable use of ambulances etc) service delivery to patients will also increase in Meru County. Moreover when management practices (adequate budgeting of resources, resource allocation, adequate supervision of staff, managers leading by example, adherence to motivation policy) increase by a unit in all sub-county Hospitals in Meru County subsequently service delivery also increases. Consequently, when drugs procurement process increases by a unit (flexible procurement process, minimum lead time in drugs procurement, adequate resources for drugs procurement, adherence to procurement plans etc) service delivery in all sub-county Hospitals in Meru County increases.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the findings and it gives the conclusions and recommendation of the study based on the objectives of the study. Specific objectives included determining the influence of staff on service delivery in sub-county hospitals in Meru County, assess the influence of facilities on service delivery in sub-county hospitals in Meru County, establish the influence of management practices on service delivery in sub-county hospitals in Meru County and evaluate the influence of Drugs procurement process on service delivery in sub-county hospitals in Meru County.

5.2 Summary of the findings

This research study sought to determine factors influencing service delivery at Sub-County Hospitals in Meru County, Kenya. In this study, the number of questionnaires administered amounted to 115 out of which 84 were successfully completed and returned making the response rate of 73%. To collect the data, the researcher used closed structured questionnaires that were personally administered to all the sampled respondents. The target population for undertaking this study included all Meru County 23 sub-county hospitals that were involved in this study. In this study, data was analyzed using SPSS and findings were presented in the form of mean std deviation, correlation and regression analysis. Findings revealed that majority of the respondents were aged between 21-30 years and over. In addition this demographic result reveals that all of the respondents have at least gone to school with over 50% having attained diploma.

5.2.1 Influence of staff on service delivery

The results confirmed that, on average the respondents agreed that staff have influence on service delivery in sub-county hospitals in Meru County. Among the aspect agreed upon included we always get an opportunity to advance our skills through CME/CPD, the hospital has a policy to support staff financially to further their education, the hospital always gives staff enough time for their training, most of the staff have many years of experience, staff are rotated in hospital sections to acquire experience, staff are taken for benchmarking to build on their experience, there is adequate compensation package for staff, Compensation is always given in good time to staff and Compensation packages for all staff is competitive enough.

5.2.2 Influence of facilities on service delivery

The findings confirm that, on average the respondents agreed that facilities have influence on service delivery in sub-county hospitals in Meru County. Among the aspect agreed upon included hospital has functional laboratories that serve patients scoring, the hospital has state of the art laboratories, the hospital laboratories are always open to offer service, the hospital is always accessible by road, the proximity to the hospital is near to my home, Hospitals are strategically locate, hospitals have functional ambulances, ambulances are well equipped while use of ambulances is affordable.

5.2.3 Influence of management practices on service delivery

The study confirms that, on average the respondents agreed that the management practices have influence on service delivery in sub-county hospitals in Meru County. Among the aspect agreed upon included with the aspect of adequate resources are budgeted for implementing plans, resources are availed for implementing plan, management follows and adhere to hospital, management supervises staff adequately, there is sound relationship between staff and

supervisors, supervisors lead by examples to staff, hospital has a motivation policy for staff, hospital management follows and adheres to motivation policy and management has various reward systems for motivating employees.

5.2.4 Influence of drugs procurement process on service delivery

The results confirm that, on average the respondents agreed that the drugs have influence on service delivery in sub-county hospitals in Meru County. Among the aspect agreed upon included the aspect of drugs procurement process is flexible scoring, there is minimum lead time during drugs procurement, there are adequate resources for drugs procurement, there is a hospital policy for drugs procurement, procurement policies are adhered to during procurement, staff understand and are familiar with procurement policy, hospital plans for procurement of drugs , hospitals adhere to procurement plans and procurement pans are flexible.

5.3 Conclusion

This study makes the following conclusion;

Staffs working in sub-county Hospitals in Meru County have an influence on service delivery in these Hospitals and there was a strong and positive relationship between staff and service delivery in sub-county Hospitals in Meru County. Moreover, Facilities in all sub-county Hospitals in Meru County have an influence on service delivery. In addition, facilities have a strong positive relationship with service delivery. Management practices influences service delivery in all sub-county Hospitals in Meru County. Additionally, management practices were found to have a strong and positive relationship with service delivery in all sub-county hospitals in Meru County. Consequently, Drugs procurement process influences service delivery in all sub-county Hospitals in Meru County. Moreover there was found a strong positive relationship

between drugs procurement process and service delivery in sub-county Hospitals in Meru County.

5.4 Recommendations

This study recommends the following:

- i. Management of Meru sub-county hospitals should provide adequate financial support to their staff to enable them further their education in order to acquire more skills that can empower them in delivering services to patients.
- ii. Management of Meru sub-county hospitals should ensure that all sub-county hospitals have adequate facilities that are in usable state to facilitate smooth service delivery to all the patients.
- iii. Management should follow and adhere to hospital plans, motivation policy and lead by example to ensure smooth service delivery to the patients.
- iv. Procurement department as well as Hospital administrator should always use and adhere to drugs procurement plans to ensure there are drugs of right quality and quantity in the Hospital at all given times to facilitate seamless service delivery.

5.5 Suggestions for further research

Carry out research study to widen the current knowledge on factors influencing service delivery at Sub-County Hospitals in the neighbouring counties such as Tharaka Nithi so that the result is obtained and used as a benchmark.

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Appendices

Appendix i: Letter of Introduction

Kenya Methodist University

P. O Box 267- 60200

MERU, Kenya

SUBJECT: INFORMED CONSENT

Dear Respondent,

My names are Jason Maingi Anampiu, I am an MSc student from Kenya Methodist University.

I am conducting a study titled: Factors influencing efficiency of service delivery in public hospitals in Kenya: a case study of Meru County. The findings will be utilized to strengthen the health systems in Kenya and other Low-in- come countries in Africa. As a result, countries, communities and individuals will benefit from improved quality of healthcare services. This research thesis is critical to strengthening health systems as it will generate new knowledge in this area that will inform decision makers to make decisions that are research based.

Procedure followed

Participation in this study will require that I ask you some questions and also access all the hospital's department to address the six pillars of the health system. I will record the information from you in a questionnaire check list. You have the right to refuse participation in this study. You will not be penalized nor victimized for not joining the study and your decision will not be used against you nor affect you at your place of employment. Please remember that participation in the study is voluntary. You may ask questions related to the study at any time. You may refuse

to respond to any questions and you may stop an interview at any time. You may also stop being in the study at any time without any consequences to the services you are rendering.

Discomforts and risks

Some of the questions you will be asked are on intimate subject and may be embarrassing or make you uncomfortable. If this happens; you may refuse to answer if you choose. You may also stop the interview at any time. The interview may take about 40 minutes to complete.

Benefits

If you participate in this study you will help us to strengthen the health systems in Kenya and other Low-in- come countries in Africa. As a result, countries, communities and individuals will benefit from improved quality of healthcare services. This field attachment is critical to strengthening the health systems as it will generate new knowledge in this area that will inform decision makers to make decisions that are research based.

Rewards

There is no reward for anyone who chooses to participate in the study.

Confidentiality

The interviews will be conducted in a private setting within the hospital. Your name will not be recorded on the questionnaire and the questionnaires will be kept in a safe place at the University.

Contact Information

If you have any questions you may contact the following supervisors:

- i. Ms. Roselyn Kinyamu, Department of Health Systems Management – Riara University.

- ii. Dr. Wanja, Mwaura Tenambergen Chair of Department of Health Systems Management - Kenya Methodist University, Nairobi Campus.

Participant’s Statement

The above statement regarding my participation in the study is clear to me. I have been given a chance to ask questions and my questions have been answered to my satisfaction. My participation in this study is entirely voluntary. I understand that my records will be kept private and that I can leave the study at any time. I understand that I will not be victimized at my place of work whether I decide to leave the study or not and my decision will not affect the way I am treated at my work place.

Name of Participant..... **Date**.....

Signature.....

Investigator’s Statement

I, the undersigned, have explained to the volunteer in a language s/he understands the procedures to be followed in the study and the risks and the benefits involved.

Name of Interviewer..... **Date**.....

Interviewer Signature.....

Appendix ii: Research Questionnaire

Section A: General Information:

(Please tick in the box provided)

- 1. Gender: Male [] Female []
- 2. What is your age?
- 3. Name of the hospital (Optional)
- 4. Level of education
Certificate [] Diploma [] Bachelors []
Masters [] PhD [] others (specify).....
- 5. How many years have you worked in this hospital?

Section B. Staff

Rate the following statements on staffing issues and how they influence service delivery.

Statement	SA	A	U	SD	D
Training We always get an opportunity to advance our skills through CME/CPD The hospital has a policy to support staff financially to further their education The hospital always gives staff enough time for their training					
Experience Most of the staff have many years of experience Staff are rotated in hospital sections to acquire experience Staff are taken for benchmarking to build on their experience					
Compensation There is adequate compensation package for staff Compensation is always given in good time to staff Compensation packages for all staff is competitive enough					

SA- Strongly Agree; A-Agreed; U-Undecided; SD-Strongly Disagree; D-Disagreed

Section C. Facilities

Rate the following statements on facilities issues and how they influence service delivery.

Statement	SA	A	U	SD	D
Equipped laboratories					
The hospital has functional laboratories that serve patients					
The hospital has state of the art laboratories					
The hospital laboratories are always open to offer services					
Geographical access					
The hospital is always accessible by road					
The proximity to the hospital is near to my home					
Hospitals are strategically located					
Ambulances					
Hospitals have functional ambulances					
Ambulances are well equipped					
Use of ambulances is affordable					

SA- Strongly Agree; A-Agreed; U-Undecided; SD-Strongly Disagree; D-Disagreed

Section D. Management practices

Rate the following statements on management practices issues and how they influence service delivery.

Statement	SA	A	U	SD	D
planning					
Adequate resources are budgeted for implementing plans					
Resources are availed for implementing plans					
Management follows and adhere to hospital plans					
Supervision					
Management supervises staff adequately					
There is sound relationship between staff and supervisors					
Supervisors lead by examples to staff					
Staff motivation					
Hospital has a motivation policy for staff					
Hospital management follows and adheres to motivation policy					
Management has various reward systems for motivating employees					

SA- Strongly Agree; A-Agreed; U-Undecided; SD-Strongly Disagree; D-Disagreed

Section D. Drugs procurement process

Rate the following statements on drugs procurement process and how they influence service delivery.

Statement	SA	A	U	SD	D
Procurement process					
Drugs procurement process is flexible					
There is minimum lead time during drugs procurement					
There are adequate resources for drugs procurement					
Procurement policy					
There is a hospital policy for drugs procurement					
Procurement policies are adhered to during procurement					
Staff understand and are familiar with procurement policy					
Procurement planning					
Hospital plans for procurement of drugs					
Hospitals adhere to procurement plans					
Procurement plans are flexible					

SA- Strongly Agree; A-Agreed; U-Undecided; SD-Strongly Disagree; D-Disagreed

Section E. services delivery

Rate the following statements on service delivery as a result of staff, facilities, management practices and drugs procurement process

Statement	SA	A	U	SD	D
Quality					
Hospital services are effective in serving patients' needs					
Services offered in this hospital are safe to the patients					
Services offered here are centered on the patient's needs					
Accountability and efficiency					
Health services are well managed so as to achieve the core elements described above with a minimum wastage of resources					
Managers are allocated the necessary authority to achieve planned objectives and held accountable for overall performance and results					
Health services are delivered in a timely manner to the patients					
Accessibility					
Services are directly and permanently accessible with no undue barriers of cost, language, culture, or geography					
Health services are close to the people, with a routine point of entry to the service network at primary care level					
Services may be provided in the home, the community, the					

workplace, or health facilities as appropriate
SA- Strongly Agree; A-Agreed; U-Undecided; SD-Strongly Disagree; D-Disagreed

Thank you for your time

Appendix iv. Ethical clearance



KENYA METHODIST UNIVERSITY

P. O. BOX 267 MERU - 60200, KENYA
TEL: 254-064-30301/31229/30367/31171

FAX: 254-64-30162
EMAIL: INFO@KEMU.AC.KE

17TH SEPTEMBER 2019

KeMU/SERC/HSM/74/2019

Jason Maingi Anampiu
HSM-3-1314-3/2011
Kenya Methodist University

Dear Jason,

SUBJECT: ETHICAL CLEARANCE OF A MASTERS RESEARCH THESIS

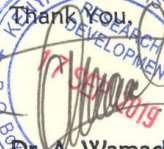
Your request for ethical clearance for your **Masters Research Thesis** titled “**Factors influencing service delivery at sub-county hospitals in Meru County Kenya.**” has been provisionally granted to you in accordance with the content of your research thesis subject to tabling it in the full Board of Scientific and Ethics Review Committee (SERC) for ratification.


As Principal Investigator, you are responsible for fulfilling the following requirements of approval:

1. All co-investigators must be kept informed of the status of the thesis.
2. Changes, amendments, and addenda to the protocol or the consent form must be submitted to the SERC for re-review and approval **prior** to the activation of the changes. The Thesis number assigned to the thesis should be cited in any correspondence.
3. Adverse events should be reported to the SERC. New information that becomes available which could change the risk: benefit ratio must be submitted promptly for SERC review. The SERC and outside agencies must review the information to determine if the protocol should be modified, discontinued, or continued as originally approved.
4. Only approved consent forms are to be used in the enrollment of participants. All consent forms signed by subjects and/or witnesses should be retained on file. The SERC may conduct audits of all study records, and consent documentation may be part of such audits.

5. SERC regulations require review of an approved study not less than once per 12-month period. **Therefore, a continuing review application must be submitted to the SERC in order to continue the study beyond the approved period.** Failure to submit a continuing review application in a timely fashion will result in termination of the study, at which point new participants may not be enrolled and currently enrolled participants must be taken off the study.

Please note that any substantial changes on the scope of your research will require an approval.

Thank You,

Dr. A. Wamachi
Chair, SERC
Cc: Dean, RD&PGS



Appendix v. Introduction letter from the University



KENYA METHODIST UNIVERSITY

P. O. Box 267 Meru - 60200, Kenya
Tel: 254-064-30301/31229/30367/31171

Fax: 254-64-30162
Email: info@kemu.ac.ke

18th September 2019

Commission Secretary,
National Commission for Science, Technology and Innovations,
P.O. Box 30623-00100,
NAIROBI.

Dear sir/ Madam,

RE: ASON MAINGI ANAMPIU(HSM-3-1314-3/2011)

This is to confirm that the above named is a bona fide student of Kenya Methodist University, Department of Health Systems Management undertaking a Degree of Health Systems Management. He is conducting research on, **Factors influencing service delivery at sub-county hospitals in Meru County Kenya.**

We confirm that his Research proposal has been defended and approved by the University.

In this regard, we are requesting your office to issue a permit to enable him collect data for his research.

Any assistance accorded to him will be appreciated.




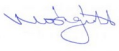

Thank you.



Dr. John Muchiri, PHD.

Dean, Research Development and Postgraduate Studies

Appendix vi. Research Licence

 REPUBLIC OF KENYA	 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
Ref No: 416345	Date of Issue: 04/October/2019
RESEARCH LICENSE	
	
This is to Certify that Mr.. Jason Anampui of Kenya Methodist University, has been licensed to conduct research in Meru on the topic: FACTORS INFLUENCING SERVICE DELIVERY AT SUB-COUNTY HOSPITALS IN MERU COUNTY, KENYA for the period ending : 04/October/2020.	
License No: NACOSTI/P/19/1748	
416345 Applicant Identification Number	 Director General NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
	Verification QR Code 
NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.	

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013

The Grant of Research Licenses is Guided by the Science, Technology and Innovation (Research Licensing) Regulations, 2014

CONDITIONS

1. The License is valid for the proposed research, location and specified period
2. The License any rights thereunder are non-transferable
3. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research
4. Excavation, filming and collection of specimens are subject to further necessary clearance from relevant Government Agencies
5. The License does not give authority to transfer research materials
6. NACOSTI may monitor and evaluate the licensed research project
7. The Licensee shall submit one hard copy and upload a soft copy of their final report (thesis) within one of completion of the research
8. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice

National Commission for Science, Technology and Innovation
off Waiyaki Way, Upper Kabete,
P. O. Box 30623, 00100 Nairobi, KENYA
Land line: 020 4007000, 020 2241349, 020 3310571, 020 8001077
Mobile: 0713 788 787 / 0735 404 245
E-mail: dg@nacosti.go.ke / registry@nacosti.go.ke
Website: www.nacosti.go.ke

Appendix vii. Approval to collect data in Meru County

COUNTY GOVERNMENT OF MERU



DEPARTMENT OF HEALTH

Email: merucountyhealth@gmail.com
When Replying Please Quote

COUNTY PUBLIC HEALTH OFFICE
P.O. Box 120-60200
Meru

17/10/2019

MCPHO/VOL/1/7

Jaton Maingi Anampiu
HSM -3-1314-3/2011
Kenya Methodist University
Meru Campus.

RE: APPROVAL TO COLLECT RESEARCH DATA

Your request to collect data for your Research on "Factors influencing service delivery" at sub-County Hospitals in Meru County, Kenya has been approved.

You will stick to the approved timelines by the KEMU Board of Scientific and Ethics Review Committee (SERC) and NACOSTI.

Upon completion of your data collection, you are requested to submit one (1) copy of hard cover bound report and discuss the findings with Director of Medical Services.

Congratulations and wish you the best.

Paul Kimathi
Asst. Director Public Health
County Government of Meru