FACTORS INFLUENCING DELIVERY OF QUALITY HEALTH CARE IN KASARANI SUB COUNTY, KENYA

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DECLARATION

"I declare that this thesis is my original work and has not been presented in any other university."

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DEDICATION

This thesis is dedicated to my family for all their support during my study period.

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I acknowledge people and institutions that have contributed a great deal towards the development of this thesis. First, to the almighty God who has given me the strength and health to be able to write this thesis successfully. Secondly, to my lecturers (Kenya Methodist University), particularly my supervisors Dr. Muthoni mwangi and Dr. Caroline kawila who greatly inspired me and put skills and knowledge in me to be able to appropriately write this thesis. Lastly is to my family and friends for their continued support during the development of this thesis.

ABSTRACT

Quality in health service delivery is key in ensuring patient satisfaction since delivering quality service has a direct influence on the customer satisfaction and management outcome. The general objective was to determine factors influencing delivery of quality health care in Kasarani Sub-County. Specifically, the study analyzed how organizational factors, interpersonal factors, environmental factors and economic factors influence delivery of quality health care in Kasarani Sub County. The research was quantitative adopting a cross sectional descriptive research design. The target population included 110 Health officers who are members of work improvement teams, quality improvement teams or departmental heads. The research was based on primary data acquired through a self-administered questionnaire. For quantitative data, descriptive and inferential statistics were generated. Under inferential statistics both correlation and regression analysis were undertaken. The analysis' findings were given in tabulated form, along with relevant interpretations as well as discussions. In conclusion organization factors ($r=0.516$; $p<0.05$), interpersonal factors ($r=0.457$; $p<0.05$), environmental factors ($r = 0.378$; $p < 0.05$), and economic factors ($r = 0.614$; $p < 0.05$) were substantially linked to provision of quality healthcare in Kasarani Sub County. Organization, interpersonal, environmental, and economic factors explained 50.1 percent of the variation in the delivery of quality health care in Kasarani Sub County, according to the data. Economic factors ($\beta_4 = 0.274$) were found to be the most critical factors in the delivery of quality health care in Kasarani Sub County while environmental factors ($\beta_3 = 0.179$) were the least important factors. The study concluded that organization, interpersonal, environmental and economic factors have a significant influence on delivery of quality health care. The study recommends that Kasarani Sub County's health facilities should look for additional funding to cover their operating expenditures. They also should make certain that responsible leadership is in place, one that promotes transparency and accountability. The labor must be fairly compensated and motivated. Additionally, medicine and drug distribution should be prioritized based on need to avoid stock outs and guarantee that the quality of health-care delivery is not jeopardized.

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ABBREVIATIONS AND ACRONYMS

HIV: Human Immunodeficiency Virus

KHQIF: Kenya HIV Quality Improvement Framework

KQMH: Kenya Quality Model of Health

NACOSTI: National Council of Science, Technology, and Innovation

SPSS: Statistical Package for Social Sciences

TQM: Total Quality Management

WHO: World Health Organization

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The six pillars of a well-functioning health system are health workforce, health information, stewardship, service delivery, health financing, and medical products vaccines and technological advancements. Delivery of quality healthcare concept is a multidimensional idea which is both complex and subjective. According to Mohammad (2013), delivery of quality healthcare is continually appealing the patient through healthcare services that are efficient and effective as per the newest standards and guidelines, that are able to meet the needs of the patients and gratifies providers. Donabedian (2016) in an investigation where he examined 700 healthcare stakeholders who included patients, policy makes, providers and managers did a pluralistic evaluation aimed on establishing characteristics of quality healthcare. He identified 182 characteristics of a quality healthcare and clustered them in to five categories; efficiency, efficacy, effectiveness, empathy and environment. Delivery of quality healthcare is characterized by attributes like timeliness, availability, affordability, confidentiality, accessibility and responsiveness just to mention a few (Mohammad, 2013).

Healthcare systems are one of the most complex systems that serve humans. In order to deliver quality healthcare services coordination of various number of providers and organizations is needed (Irurita-Ballesteros et al., 2019). Healthcare systems complexity, bureaucracy and too many departments are the some of the hindrances to their quality improvement. In addition, the challenges in healthcare are complex and need solutions that are highly tailored (Shahidzadeh-Mahani et al., 2018). Each patient and every

condition is different. A straightforward issue needs the correspondence and co-activity of different divisions and workers.

Numerous developed countries are using developments in technology, health education, and infrastructure to improve care delivery ensuring that it is value-driven (Adams et al., 2016). This has resulted in an increment in the quality of services provided in the healthcare facilities as compared to developing and least developed countries. The United States, for instance, is known to enjoy high levels of quality in health care although there are financial, insurance complaints amongst the citizens. The Quality of care in America is however thought to be concentrated on cancer care while preventive conditions are given less attention (Docteur & Berenson, 2015).

According to World Health Organization (WHO, 2016), owing to the declining resources and economic variables majority of the countries in sub-Saharan Africa are incapable of providing sufficient quality and wide coverage health services. As a result, this has seen most countries promoting for devolution as a main factor to propagate health sector reforms with a perception of exploiting the utilization of the resources available in improving the accessibility as well as quality of the provided health care services (Hurley et al., 2018).

In South Africa for example the healthcare ranges from the most fundamental primary care provided by the government to specialized and hi-tech services provided in public and private hospitals. Though, in some places the public sector is over resourced though the government contributes around 40% of all expenses on health, the public health

facilities are expected to offer their service to around 80% of the population. As a result of the unequitable distribution of resources it has translated to underfunding, poor management and worsening infrastructure resulting to declining quality of healthcare (Watts, 2017).

The urge to enhance the quality of health care in Africa is extremely vital especially because of the increasing number of individuals dying due to negligence and poor services provided in health facilities. A strategic policy change on health services provision in Nigeria has improved the health sector by enhancing the quality of services provided (Onoka et al., 2015). For the reforms in the health sector to be rooted further, there is a need for all stakeholder involvement and commitment, not only in Nigeria but in Africa as a whole.

With over 4,700 health facilities in Kenya, the delivery of quality health care services has become an important aspect of healthcare organizations. This could be attributed to government regulations especially on public health care institutions, competition, and pressure from customers or hospital management programs. Some of the health institutions in Kenya have implemented Total Quality Management (TQM) practices in an attempt of improving the quality of services rendered. They have also embraced quality out of their customers' will or through management initiatives have succeeded and benefitted from the implementation of TQM practices. The national government of Kenya has made attempts to improve health care through devolution of health services to the county governments. Devolution, however, was viewed as a simple transfer of power from the central government to the lower levels of government. This assumption has

ignored the fact that devolution is a dynamic and continuous event and is probably the path leading to deterioration of healthcare devolution in Kenya (World Bank Group, 2018).

In Kasarani Sub County, there is no health facility that scored more than 60% on quality of health care delivery (Ministry of Health [MOH], 2018). The report revealed that the facilities had even stopped holding quality improvement meetings. This study attempted to establish the factors which affect the provision of quality health care services in Kasarani Sub County and specifically to establish how organizational factors, interpersonal factors, environmental factors and economic factors influence delivery of quality health care in Kasarani Sub County.

1.2 Statement of the Problem

Accessibility of health care services is a universal right for every person. It is vital that the health care services provided are of high quality and that services are right during the first time. Due to the quality of services rendered in most of the healthcare centers, numerous challenges have emerged as a result of inadequate resources, incompetent personnel, poor leadership and recently devolution of health services in Kenya has attributed to poor quality of health services. A number of the challenges have affected trust on the health sector, and especially public and some private facilities. The number of deaths reported due to negligence and poor state of health facilities has increased over the years (Andel et al., 2012).

Kasarani Sub County health facilities has experienced issues ranging from increased number of patients, increased waiting time, issues to do with accessibility, acceptability, affordability and availability of drugs and other services in the health care facilities. There have also been cases of patient complaints and collapse of projects under implementation. According to the Ministry of Health (2018), there is no health facility that scored more than 60% on quality of health care delivery in Kasarani Sub-County.

The various local studies pertinent to quality healthcare delivery (Akacho,2014; Kimanzi, 2014; Muthui, 2018; Mwancha,2018) have not adequately articulated factors influencing delivery of quality health care in Kenya mainly in reference to Kasarani Sub County. This research was created in this context, with the goal of filling knowledge and research gaps by analyzing the factors impacting the delivery of quality health care in Kasarani Sub County.

1.3 Purpose of the Study

The purpose of this study was to evaluate factors influencing delivery of quality health care in Kasarani Sub County, Kenya with a specific focus on organizational factors, interpersonal factors, environmental factors and economic factors.

1.4 Objectives of the Study

1.4.1 General Objective

The general objective of the study was to evaluate factors influencing delivery of quality health care in Kasarani Sub County, Kenya.

1.4.2 Specific Objectives

i. To examine the influence of organizational factors on delivery of quality health care in Kasarani Sub County

ii. To establish the influence of health workers interpersonal factors on delivery of quality health care in Kasarani Sub County

iii. To assess the influence of environmental factors on delivery of quality health care in Kasarani Sub County

iv. To establish the influence of economic factors on delivery of quality health care in Kasarani Sub County

1.5 Research Questions

i. What is the influence of organizational factors on delivery of quality health care in Kasarani Sub County?

ii. To what extent do health workers interpersonal factors influence delivery of quality health care in Kasarani Sub County?

iii. What is the influence of environmental factors on delivery of quality health care in Kasarani Sub County?

iv. To what extent does economic factors influence delivery of quality health care in Kasarani Sub County?

1.6 Justification of the Study

The health sector is very fundamental in that a health nation propels the socio-economic wellbeing of a country. With many challenges affecting the public health sector particularly since the decentralization of the health function to county governments in

2013; it is crucial to come up with ways of addressing the situation. Nairobi County has faced a myriad of challenges in delivery of quality health care such as low uptake of infant and maternal prophylaxis, weak HIV testing and linkage to care and treatment, availability of child tracer drugs (11 recommended ones), health tracer drugs for mothers, and the first line malarial treatment (Kenya HIV Quality Improvement Framework [KHQIF], 2018). Others include proportionate number of doctors and nurses, data registers, work plans, and management boards. The KHQIF was modelled to address existing and potential gaps in delivery of quality health care. This research will shed more light on the most effective ways that health practitioners who include senior medical staff such as medical superintendents, hospital administrators, and county government officials can employ to address the intermittent challenges facing public healthcare at county levels this will contribute to the improvement of delivery of quality health services within the region.

1.7 Scope/Delimitation of the Study

The study was done in Kasarani Sub County. This is one of the 10 Sub-counties in Nairobi County. Kasarani sub-county has a population of 780,656 projected from 2019 census. It has area coverage of 158.1sq Km, composed of 2(two) constituencies namely: Embakasi North with 5 wards (5.5sq km) and Kasarani constituency (152.6 sq. km) with 5 wards too. The Sub County has a total of 66 licensed Health Facilities offering health services. There is 1 private and 1 faith based Sub-County Referral hospital. This study was conducted only in public health facilities in Kasarani Sub County that have been implementing KHQIF 2014 for more than one year. It was only conducted in facilities of levels 2, 3 and 4. It excludes level one and level 5-6 which are not in Kasarani sub-

county. The target group for this research study was the staff of public health facilities in the Sub County and who are under the payroll of the County Government of Nairobi.

A set of predictor and dependent variables were included in the investigation. Predictor variables included organizational factors, interpersonal factors, environmental factors and economic factors, while delivery of quality health care constituted the dependent/outcome variable. Other factors that could influence the delivery of high-quality health care were not explored in this research. In addition, the researcher employed a five-point Likert-type scale to make data handling easier. The findings were only based on health facilities in Kasarani sub-county which might not be enough to make a generalization of other health facilities in Kenya.

1.8 Limitations of the Study

This research was based on primary data. The research used a structured questionnaire to decrease the number of possible outliers. Furthermore, because the projected participants are limited in terms of how and what information they are anticipated to give in their response, this might lead to skewed data collecting. In this context, the researcher made certain that the data collecting instrument allows for the collection of comprehensive data that fulfills study objectives with the least amount of bias necessary.

Furthermore, several of the expected responders were hesitant to participate in the survey. The researcher addressed this deficiency by obtaining the requisite permits, consents (Appendix I), as well as approvals from the appropriate authorities, including but not limited to the University (KeMU/SERC/HSM/26/2020 – Appendix III), Nairobi County

Government (EOP/NMS/HS/131 – Appendix V), various health facility superintendents, as well as the National Council of Science, Technology, and Innovation **(**NACOSTI/P/21/9199-Appendix IV). Furthermore, ethical factors were taken into account, and responders were educated on the subject. Such concerns include not requesting respondents to reveal personal information, such as their names or places of employment. Furthermore, by not sharing the collected data and study conclusions to third parties, the research will be used purely for academic purpose. Finally, the researcher stated that is willing to share the research findings with anyone who is interested.

1.9 Significance of the Study

The study is anticipated to be important and advantageous to three primary entities. These include pertinent policy makers, health practitioners, and scholars. In respect to policy makers, the study findings and recommendations thereof are expected to enable them to formulate policies and strategies for guiding effective provision of quality health care to ensure the primary goal of advancing services closer to the citizenry is met. Moreover, the study findings will shed more light on the most effective ways that health practitioners who include senior medical staff such as medical superintendents, hospital administrators, and county government officials can employ to address the intermittent challenges facing public healthcare at county levels this will contribute to the improvement of delivery of quality health services within the region. More so, the study is anticipated to contribute to scientific knowledge particularly in respect to how organizational factors, interpersonal factors, environmental factors and economic factors

influence delivery of quality health care. In this regard, the study will act as a suitable source of reference for scholars.

1.10 Operational Definition of Terms

Delivery of quality health care: This is the provision of services for the betterment of health wellbeing of individuals seeking such services (Enthoven & Vorhaus, 2017)Accessibility of the stated services, affordability, availability, efficiency and effectiveness are part of key indicators of delivery of quality health care.

Economic factors: This refers to equipping and/or disbursing the requisite funds to public health facilities for effective operations of the stated facilities (Jiminez & Smith, 2015). Adequate finances, efficient financing, user fees, and financial sources characterize this financing.

Environmental factors: This refers to external features of a health facility environment that influences its ability to deliver quality health care (Watts, 1998).This concept encapsulates political interference, conflict of interest, appropriate facilities and favourable working conditions.

Interpersonal factors: These are staff working to provide health services in health institutions (Williamson & Mulaki, 2015). In the context of the present study, interpersonal factors are operationalized by staffing, skills, expertise, remuneration, recruitment, and promotion of staff.

Organization factors: These refers to all elements within a workplace that have an influence on the people who work there (Tumwine et al., 2011). In respect of the present study, they are characterized by organizational cultures and styles, organizational communication, organizational structures, and capacity of the health facilities, among other facets.

2 CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter entails a review of studies done with respect to organizational factors, interpersonal factors, environmental factors, economic factors, and delivery of quality healthcare. The chapter also presents a review of theories that explain the concept of quality health care and a conceptual framework showing the hypothesized relationship between the study variables.

2.2 Empirical Review

This section outlines past studies touching on factors influencing delivery of quality of health care. In particular, the studies focus on organizational factors, interpersonal factors, environmental factors, and economic factors in relation to delivery of quality health care.

2.2.1 Organization Factors and Delivery of Quality Health Care

2.2.1.1 Organization Culture

A latest intervention study dubbed Leadership Saves Lives concentrated on leadership actions aimed on promoting positive changes in organizational culture in 10 hospitals in the United States (US). The findings revealed that over two-year period, changes in culture diverged significantly amongst hospitals (Curry et al., 2018). It was noted that in hospitals that had significant as well as positive cultural shifts, change was more prevalent in certain domains, for example opinion of the learning environment, safety perception and support by management. It was also noted that hospitals experiencing

positive cultural changes also had had notable decline in risk standardized mortality rates in the current context acute myocardial infarction treatment (Curry et al., 2018).

The results from the US hospitals demonstrates the features of culture which require attention from the leaders of the hospitals, particularly, promoting learning environment, providing continued and noticeable senior management supports to clinical teams and ensuring the employee safety is improved and they are able to gives their views on thing they perceive not to be correct (Jacobs et al., 2013). It was also revealed in a qualitative case study of 6 hospitals that there is outright dissimilar in the cultural profile of low and high performing hospital regarding; human resources policies, accountability and information systems, leadership style and management orientation on association amongst organizations in the local health economy. Each of these gives possibly significant focuses to intentional cultural change focused on execution improvement (Mannion et al., 2015).

Panda and Thakur (2016) performed research in India on healthcare systems performance after decentralization. As per the research, decentralization objects have a substantial impact on management processes as well as health outcomes, as well as administrative, political, and financial ramifications, which looked at the problems, dimensions, as well as derivatives in India. The research included an assessment of existing literature using Google Scholar and PubMed's web-based search methods. A total of 180 relevant articles were examined. According to the conclusions of the study, decentralization in the public health sector has numerous features. In this regard, it was observed that at the facility

level, the effectiveness of health unit governance would be determined by elements such as leadership competencies, community involvement, or true decision-makers' interests.

2.2.1.2 Organization Structure

In the last few years there has been a significant growth in the interest of the contributions of organization in delivery of care. It has been a challenge to policy makers, researchers, and practitioners on how they can come up with ways of improving care through first improving the institutions which provide the care, considering the fact that healthcare organizations are complex and the part they perform in influencing the care systems. (Mohammad, 2013) conducted a literature review pertaining the association amongst organizational processes and structural features of hospitals and care quality. In organizing the literature, he used level of analysis frameworks and Donabedian's structure–process–outcome. The findings of this results indicated that most of the studies are done on hospital level of analysis and mostly concentrates on the organizational structure correlation as well as quality of outcome. The research recommended that health services researchers ought to enlarge their research so as to improve their knowledge and insights on the connection amongst quality of care and organizational structure.

Mitki et al. (2017) did a case study on the American –Israeli Paper Mills Corporations Limited located in Israel with the objective of identifying role that organization learning mechanism played in continuous improvement activities. Their findings showed that parallel organization learning mechanism could provide the vital engine required to make continuous improvement an integral part of the organization life and thus improve efficiency. For the success of any project of process improvement, support and leadership

is needed from the organization highest leadership level. The team leaders ought to be the supported and mentors to the employee working in different sections of the process improvement. The leaders in addition have the control of availability of employees and the finances. They can show their commitment through propelling the process from the top, ensuring the process becomes a priority, inspiring the morale of the team and appreciating them.

2.2.1.3 Communication

According to numerous studies, it has been argued that excellent skills of communication skills are important competency skills for providing value based patient centred care. A number of investigations have interrelated enhanced communication to better patients results, reduced transfers delays, reduced negative effects, reduced durations and safer working environments (Onge & Parnell, 2015). In one of the literature review it showed continuous positive relationship amongst caregiver communication behaviours and patients results, comprising of understanding of patient, compliance of patient to therapy and patient recall (King & Hoppe, 2013). The patient's perception of care experience was found to be driven by the degree and quality of caregiver's communication with each other and the patients. For instance, effective communication amongst care team members and with patients and their families has been associated with the rising possibility of patients recommending the organization and rating the overall care highly (Arneill, 2019).

Fryer et al. (2017) did a survey on crucial success factors of public sector continuous improvement. The main variables included; customer management, commitment of management, supplier management, training, learning, employee empowerment and communication. There were seven main factors that influenced TQM implementation and were namely: shared values, process factors, industrial relations, type of employees, management style, organizational structure and number of employees a. The study concluded that communication was not a key factor for continued improvement in the public sector.

Oprime et al. (2011) did a survey on critical factors necessary for effectiveness of continued improvement activities. The findings showed that leadership, employee involvement, reward and support motivation, problem solution models and skills cooperation and integration are among the critical success factors necessary for continuous improvement activities. When activities within the organization are comprehendible it is easier for management to be consistent in terms of predicable outcome which are achieved effectively and efficiently that function as a whole system. The QMS is considered to include interrelated process, thus when the outcome of this system is understood organization will be able to boost the system and its performance.

2.2.1.4 Organization Capacity

In health services research literature, the organization capacity for change is an area that is not developed exhaustively either as a measure or a construct. In any case, it "infers an emphasis on the implementation stages as well as continuous help for the modern practice." Likewise, it ordinarily is "conveyed in structural terms and incorporates

factors, for example, a system of delivery, material, financial, human, as well as informational assets important to help the presentation, routinization, and sustainability of another training" (Alexander et al., 2012). Korst et al. (2011) examined the organizational capacity associated with preparedness of hospital in participating in a health information exchange, that have effects on the succeeding phases of MU. They revealed that the key to engaging in data sharing collaborative was hospital leadership that promotes a quality improvement culture. This finding embodies the human resource factor (e.g., leadership) of limit that identity (Alexander et al., 2012).

Health facilities ought to ensure that care givers and other facilitators for instance nurse, doctors as well as other staffs are equipped with necessary tools and are given support needed in providing high quality medicine on day to day basis, and to recognize and examine quality challenges when they arise (Organization for Economic Co-operation and Development [OECD], 2017). It additionally incorporates accessibility to protocols and guidelines, and provides backing to doctors in building up an accord around their own based best practices with the goal that they have tools they are really ready to utilize (Wagenaar et al., 2016). Other ways include workshop and training, external training, peer networking which afford direction and feedback. For effectiveness of the policies and procedures used by hospital personnel such as nurses doctors, case managers among others, the health care organizations ought to have modern systems which will be able to generate real time data on test status, patient health status among other factors (Ahmed et al., 2013).

Muithya (2016) sought to find factors affecting free maternal health care implementation in government health care facilities in Kisima Location, Samburu County, Kenya. This cross-sectional study used a descriptive survey approach. Lorroki Division residents were the target population, and Kisima Location people were the accessible population, from which a 202 residents' sample was chosen via stratified sampling: 80 adult women, 75 males, as well as 47 youth. The selection of ten health care givers was done via purposive sampling. Document reviews, questionnaires, as well as interviews were utilized to collect data, and descriptive statistics were used to analyze the data using SPSS version 20. The qualitative data was subjected to content analysis. According to the research, 76.2 percent of participants were not employed, while 50% were not educated. Although the quality of health-care services was deemed satisfactory, attendance at prenatal and postnatal clinics was found to be inadequate. Kisima and Mparigon were the two health facilities in the Kisima area. There was only one ambulance accessible for the entire area.

2.2.2 Interpersonal Factors and Delivery of Quality Health Care

2.2.2.1 Staff Numbers

Over the last few decades, hospital staffing and the hospital care outcomes has been reported to be interrelated. Though in most of the studies, hospital staffing and hospital care were mainly background variables and not the studies main focus (OECD, 2017). During the 1990s, the National Center for Nursing Research, forerunner of the National Institute of Nursing Research, hosted an invited symposium on patient outcome research from the perspective of nursing practice adequacy. It was assumed that as the ways of capturing the patient care quality quantitatively became more refined, proof interrelating the structure of staffing for example skill and care hours to quality of care and safety of

patients increased. Regardless, after 5 years, the 1996 IOM report expressing the significance of caregivers and other staffs on outcomes assumed that, round at that point, no proof existed showing that staffing had an impact on the outcomes of acute care hospital patients and the effects was only seen on the long term care outcomes (Mohammad, 2013).

Santric Milicevic et al., (2015) did research in Serbia that focused on mapping the governance of health human resources. With the exception of Sremski, Serbian districts had exceeded the 59.4 accessibility criteria for skilled nurses, midwives, as well as physicians per 10,000 people. Nevertheless, the research showed that there were bottlenecks in the country's financial and human resource distribution, with the abovementioned obstacles having a negative impact on both the provision of healthcare services as well as the implementation of healthcare initiatives by municipal governments. Furthermore, the study discovered that the district accessibility of healthcare workforce differed significantly from the national average.

Miranda (2017) conducted a study in Kenya to examine patient satisfaction levels in a County referral hospital. It was centered on the Busia County Referral Hospital in Western Kenya in particular. The study's main goal was to look at the level of service satisfaction among inpatients at the aforementioned health facility. It was decided to conduct a descriptive cross-sectional study. To make data collection easier, a questionnaire was used. The inpatients were really pleased with both the treatments and the practices. 97 percent of the patients polled said they would return to the hospital for

medical treatment. Furthermore, it was discovered that patients seeking inpatient care at the hospital were pleased with the improved number of physicians.

2.2.2.2 Skills and Expertise

Hospital workers should be provided with the requisite professional training to carry out their jobs effectively, develop their work skills, expand their understanding of their job, and become informed of their potential roles and obligations related to their work, and so on. The nurse-in charge, director of the relevant department along with the director of quality and embedded systems, will be involved in the educational process to enhance the personnel's output in terms of consistency, reliability and accuracy. For starters, well - trained nursing staff will not only offer excellent service to the patients but will also be better in handling emergencies and record the minimum number of needle prick injuries and will adhere to the infection management policy to prevent hospital-acquired infections among others (Sewe, 2018).

Rajendra (2017) goal was to estimate the effect of practicing human resources management on healthcare organizations in terms of service quality and client satisfaction, to the employees' job satisfaction. The research was conducted in a private hospital in the city of Jodhpur, with the goal of achieving the maximum possible number of participants. The knowledge was obtained with the aid of self-governing surveys. Primary information obtained from the hospital employees was used in the analysis. Perceived organizational metrics on performance on the basis of the respondents' opinion. The study demonstrates that effective human resource management has a positive impact on the quality of healthcare organizations and enhances the efficiency of hospital personnel.

1.1.1.1 Staff Remuneration

When employees are adequately compensated and recognized they have been known to deliver excellent health services. The improved services result from better compensation of both clinical and nonclinical staff. Nonetheless, recent labor protests worldwide, and particularly in Kenya, indicates insufficient pay management procedures for healthcare workers in the region. As a result of this Oringo (2018) aimed to examine the impact of reimbursement policy practices on the efficiency of healthcare at Jaramogi Oginga Odinga Teaching and Referral Hospital in Kisumu County , Kenya. Two segments of concern included clinicians, nursing personnel who were on permanent contract, patients' perception on the efficiency and responsiveness of clinical officers and nurses for the third quarter of 2018 fiscal year. The analysis was based on a sequential explanatory mixed method design, the principle of mixed method pragmatism.

While carrying out the hypothesis test it was realized that reimbursement policies have a meaningful correlation with the quality of healthcare. Qualitative research offered further proof of the value of benefit administration activities in ensuring the sustainability of the professional quality of healthcare. Many of the concerns arising from delays in test results as they await for consultation. The delays in serving the patient were attributed to the shortage of clinicians in conclusion, resolving the compensation challenges will enrich the quality of health care in teaching and referral hospitals. The implementation of a strategic approach to reimbursement mitigation could resolve the HR inefficiency and the issue of sit down in teaching as well as referral hospitals in Kenya and beyond (Oringo, 2018).

A study carried out by Yavarzadeh et al., (2015) on remuneration schemes within the medical and elderly care sector. The research aimed to determine their effect on the quality of healthcare by personnel. Six (6) representatives of private and public organizations were questioned. The study showed that compensation was a significant part of the reimbursement system; however, perks such as bonus and stocks were seen to create a fun work place for happier workers. This inspired worker and enhanced their productivity.

2.2.2.4 Staff Recruitment

The staff of public health facilities plays a very significant task in performance of pertinent healthcare services. Bibi, (2018) the aim was to recognize the effect on employee performance of talent management activities among employees in Pakistan's health care organizations. Cross-sectional design and quantitative approach are the methods utilized in this analysis. The sample gathered by utilizing the population convenience sample. The research sample included 364 staff from health institutions, to assess the employee's success on the basis of skills management. Data collection questionnaires have been used. The study results showed that talent management, namely recruiting and selecting talent, coaching and guiding in the learning and talent development, compensation for the retention of talent in the performance of employees were significantly positive.

A study conducted by Sewe (2018) tried to find the impact of recruitment, training, compensation, as well as performance management practices on the quality of health care. The work was rooted in human resource, energy and resources, environmentally

appropriate theories and the value model for services. In the third quarter of the fiscal year 2017/2018, the two demographic groups of concern included permanent clinical and caregivers and patient complaints regarding the clinicians and nurses' reactivity and reliability. The research targeted the views of 97 people out of the 130 permanently working physicians and nurses in a systematic random sample. The significance of the relation between the variables was evaluated using a multiple regression analysis. Hypothesis tests discovered that recruitment as well as compensation, unlike training and performance management, the relationship with quality of health care was statistically important. Qualitative results offered additional proof of the value of training and productivity management to ensure that healthcare is preserved in professional condition.

2.2.2 Environmental Factors and Delivery of Quality Health Care

2.2.2.1 Political Interference

The institution's external environment includes various factors that affect its performance and behaviour. The organization has limited control over these factors despite the impact it has on the efficiency of an entity. Using the PESTEL model of identifying the external factors that affect an organization the following factors were identified to affect health care service delivery under the devolved system of government: Political influence, financial resources, human resource, monitoring and evaluation and national policies. The external environment forms a critical influencing factor in the performance of an organization and is usually beyond the firm’s control (Stoddart, 2017). The exterior environment is a combination of variables that exogenously influence the institution’s efficiency (Murgor, 2014), hence the need to examine the impact of these attributes to the organization efficiency.

In a similar vein, research commissioned by the WHO (2011) found that pharmaceutical inaccessibility, particularly in public health institutions, was a significant barrier to medicine availability. The survey also discovered that generic pharmaceutical items were available in the public sector in less than 60% of WHO areas, ranging from 32% to 58 percent in the Eastern Mediterranean as well as European region. The access of generic medications in the private sector was higher than in the public sector in all of the locations studied. Nevertheless, it was discovered that availability in Africa, Southeast Asia, and the Western Pacific regions was still less than 60%.

Oketch (2017) Evaluated devolution of Kenya's primary health care services and their effects on universal health care. The research examined at how devolution has affected universal health care in terms of quality of treatment, fairness concerns, and the distribution of health resources including medical supplies and vital drugs. Running out of stock of medical supplies and pharmaceuticals were identified as one of the most significant difficulties, according to the study's findings. As per the research, other equity concerns included deteriorated health infrastructure and a disproportionate allocation of health resources. The study came to the conclusion that the pharmaceutical management information system needed to be improved in order to have both reliable as well as accurate evidence based on medical supply requirements as well as essential medicine estimation.

2.2.2.2 Conflict of Interest

Hospitals have no control over external factors such as conflict of interest despite the fact that they affect health care service delivery. The environment supplies enterprises with

inputs that they eventually evolve through operational policies into outputs, and then the outputs are returned to the ecosystem. (Conn Welch et al., 2015), recommends a general overview of the factors impacting today's businesses is critical for its survival. An organization is driven by several factors that emanate from the external environment (Howes et al., 2017)A few external factors affect organizations hence the need to define specific factors to be considered as advised by Machuki and Aosa (2011). The factors chosen are relevant as emphasized by Murgor (2014).

Kinyajui and Awour (2019) examined the effect of the organization environment on health care service delivery under the devolved system. It was conducted in Kiambu County in Kenya. The analysis employed cross-sectional study design, which is a descriptive research that involved collection of data once from 100 respondents at management level both at the county and the three level 5 hospitals in Kiambu County. Primary quantitative data was collected and analyzed. Results indicate that political influence, conflict interest, inadequate human resource capacity and weak monitoring and evaluation negatively affected health care service delivery under the devolved system. National government policies had a positive impact on service delivery by increasing revenue and availability of diagnostic and treatment machines.

Drug availability is critical because a shortage of the same could result in patient fatalities. In relation to this, a research by (Tumwine et al., 2011). Ease of access and expiration of vital supplies as well as medicines in a rural hospital in Uganda have been analysed through 'pull' and 'pull' drug acquisition schemes. The goal of the study was to

see how ‘pull' and ‘push' medication purchase strategies affected the availability as well as decrease of expired medical supplies and vital medicines at Kilembe Hospital, as well as the variables that influence supply. The study found that a lack of transportation, inadequate training, and insufficient money all led to the shortage of needed supplies. The results led to the conclusion that the 'pull' approach improved the affordability of vital pharmaceuticals and reduced the magnitude of medical supply expirations.

2.2.2.3 Appropriate Facilities

Medical care requirement goes over and above health organisations' capacity: poor infrastructure, skilled manpower impede the provision of quality health services. medical services. In order to effectively diagnose and treat patients, for example, a good patient information system is required. The availability of vital drugs and accompanying equipment has a substantial impact on health-care delivery (Mohammad, 2013).

Mwancha (2018) the goal is to research different factors that affect the provision of these health care services, particularly with regard to Nyamira County health centres. In the data collection method, the research employed a descriptive survey approach. The study population was projected to be 1680, consisting of patients, health staff (doctors, nurses, physicians, lab technicians and pharmacists), county health officials and political leaders. A recommended sample size of 323 has been used and is spread over the different layers. For collecting data from respondents there was a semi-structured questionnaire and interview schedule. Data was analyzed using SPSS Version 23 was used to analyze data. For quantitative data analysis, descriptive statistics are used during the thematic analyzes. The researchers concluded that the healthcare system delivered by the county's

government hospitals had also been improved; health facilities were networked to allow information to be exchanged and paperwork was reduced. However, in other healthcare industries, the county of Nyamira has not properly controlled its money and lacked accountability.

2.2.3.4 Favourable Working Conditions

The physical and psychological environment is part of a safe and healthy working environment. Davies et al. (2009) stress that protection at the work - place is among the highest organizational criteria for organizations and in particular the management of human properties. In health facilities, needle stick wounds open expose workers to blood-borne diseases like HIV / AIDS, Hepatitis, Congo and Lazare fever that threaten life while ergonomic injuries, such as back injuries, also risk health-care workers. Job burnout is a proceeding with concern toward human resource management, as it influences workers' levels of profitability and prosperity (European Union, 2010; Moyo et al., 2017;Ndlovu et al., 2006). Lee and Akhtar (2011) argue that the nursing profession is especially an unpleasant occupation that could bring about burnout. This may likewise influence nurse instructors and administrators, where their workplace responsibilities recently extended out to their homes through their computers, tablets and cell phones. To them, it seems as if they cannot leave their work where it belongs – at the office.

Tsofa et al. (2017) looked at the benefits of devolution in terms of hospital management and healthcare personnel. The research focused on the early implementation experiences in Kenya's Kilifi County. The research looked at the impact of early deployment of the system at the county level on one of the main parts of the health system that is the

management of medical supplies as well as vital drugs. The research found that, like other county activities, EMMS management functions were quickly shifted to the counties before the necessary county-level structures and capacities were in place. In the case of EMMS, the research found that devolution was marked by significant procurement delays, resulting in an unserviced stock of vital medications in decentralized public health facilities. Nonetheless, the research concluded that when counties were given the ability to procure pharmaceuticals, order fill rates were substantially higher, especially when compared to the period before the health function was devolved.

2.2.3 Economic Factors and Delivery of Quality Health Care

2.2.3.1 Adequate Funds Allocation

Studies in the past have focused on financial factors before the decentralized health sector. In the current devolved government, there have been few research studies on the financial factors and have not addressed the impact of financial allocation by county governments on health care service delivery under the devolved system. (Grundy et al., 2014) presented an analysis of the restructuring of health services in the Philippines where he pointed out that the decentralization of health services in certain regions, primarily remote and rural areas, culminated in a deterioration in the health care coverage and quality of services. The analysis also stated that the implementation of devolved powers induced a negative attitude, the lack of use of resources in different health care facilities, poor supervision and funding of healthcare operations.

Hartwig et al. (2019) investigated the effects of decentralization of health-care financing on maternity care in Indonesia. The research looks at how sub-national health-care

financing strategies differed in numerous Indonesian districts and evaluated the impact of the indicated local schemes on maternal-care provision between 2004 and 2010. Data from a Pseudo panel was used. The findings of the research study suggested that the adoption of district plans resulted in an increase in prenatal care visits. Furthermore, households without access to a national health insurance financing plan saw a large rise in the availability of basic as well as suggested antenatal care services. Lastly, programs like the Antenatal Care (ANC) package had a positive impact on the research area's local healthcare finance schemes.

2.2.3.2 Timely Disbursement

Most counties' health facilities are experiencing shortage due to financial limitations and lack of prioritization by the county administration leading to inadequate infrastructure and limited supplies hence affecting health care service delivery under the devolved system. Additionally, availability of financial resources ensures high quality services through high quality inputs. The distribution of financial resources often guarantees that workers get paid on schedule as decent jobs appear to be done with full pockets (Mosadeghrad & Ferdosi, 2014). Counties need to explore alternative sources of funds to finance health care service delivery. The combination of reliable sources affects the volume of financial capital to mobilize, performance, healthcare costs and equity trends (World Health Organization, 2002). Some of the options to be considered is the adoption of insurances and Private–Public health partnerships where private entities, including private firms and funders, fund several public health initiatives.

Akacho (2014) sought to identify the variables affecting health services provision in Kenya primarily focusing on the Kenyan public health sector, Uasin Gishu District Hospital case. The analysis was based on the census research concept, which centered on all workers in the hospital in Uasin Gishu District only. A group of 96 employees from the same hospital were pooled and all employees from different hospital divisions were considered. Questionnaires were used in gathering of the data, analytical tools like the median, average, correlation analyses were employed. A research has shown that there is a shortage of adequate financial resources to sustain the daily operations of the hospital, as there are insufficient funds to supply the pharmaceuticals.

2.2.4.3 Financial Sources

Kenya has signed the Abuja pronouncement under which African countries pledged to 15% of the national budget should be channeled health, however Kenya has never honored this commitment and the health sector budget has never been above 10% of total national budget (Briscombe et al., 2010). Combined national and county government budget 2016/2017, health was allocated only 7.6% (MoH budgetary analysis, 2017). The resources allocated are not adequate to address the medical needs for the growing Kenyan People. Moreover (Curry et al., 2018)) asserted that the recurrent expenditures and allocations mostly dominate the general Medical Services sub-sector. In many low and middle income countries, budget allocation does not factor in current changes in health care needs like increased population size and diverse disease patterns restricting the ability of health care services to respond to these changes which in turn negatively influence the delivery of health care.

It is critical to fund the public health sector because it improves the quality of healthcare. Muthui (2018) pursued to discover the influencers of the quality service delivery in health care facilities at Kitui County Referral Hospital. It used an exploratory research design with a sample size of 41 individuals. Open and closed ended questions helped in data collection and interviews which allowed proper triangulation of data. Data analysis has been done in line with the research objectives using SPSS version 20 and Minitab Version 18. Inferential and descriptive statistics were applied in analyzing data and presented using frequency tables, percentages and means. The outcomes of the research resolved that the capacity of healthcare personnel, financial resource availability and utilization, management commitment and monitoring and evaluation had a negative influence on the quality of services provided at Kitui County Referral Hospital.

2.2.4.4 Equitability

There is a need to incorporate all the stakeholders when developing national and county budgets to promote effective participation. Counties need to involve hospitals and communities when developing health budgets to ensure they factor in the necessary requirements to meet the desired needs. Bossert (2013) realized that a formula for allocating budgets to districts resulted in a fair distribution per capita allocation among districts. They also observed that there is a need to consider epidemiological and cost differences among districts, based on their needs. This will ensure health facilities receive adequate resources based on their needs hence affecting the health care service delivery under the devolved system.

Koikai (2015) investigated the impact of devolution on Nakuru County healthcare. Its goal was to see how different aspects of devolution affected health-care delivery in Nakuru County. Prior to and after devolution, a quasi-experimental study approach was used to evaluate healthcare performance. One of the important variables that were investigated in respect to in what manner they influence healthcare delivery was health care financing. The analysis revealed that broad-based health finance guided other components of health-system strengthening. Above 60% of participants said they did not think health financing had increased. Furthermore, it was discovered that under a devolved governance framework, health financing had deteriorated.

Kimanzi (2014) sought to establish the variables that influence quality service delivery within the Mwingi Sub County public sector. The research employed detailed survey design. Mwingi Sub County Hospital medical staff was the study's target group. By virtue of being the officials in charge of delivering medical and public health services, stratified sampling was used to pick 6 medical physicians and 12 public health officers based at the Sub County hospital, while simple random sample was used to select 20 nurses. In total, 38 people took part in the survey. Interview schedules and questionnaires were used to gather information. SPSS was used to examine the data. The study's findings found that the government's funding allocation was insufficient, putting the Mwingi Sub County Hospital's delivery of excellent health services at risk.

2.2.4 Delivery of Quality Health Care

Donabedian (2016) listed 182 quality health service delivery attributes and categorized in five segments the environment, empathy, efficacy and performance, 700 health staff, including politicians, administrators, providers and patients. Quality health care includes

characteristics such as available, accessible, affordable, appropriate, qualified, prompt, private, confidential, cautious, accountable, precise, effective, comprehensive, consistent, reasonable, convenient and facilities-based healthcare. The quality attributes have also been seen to ensure safety and safety, reduce mortality and morbidities, improve quality of life, and improve patient participation (Manaf, 2005).

Abera et al. (2021) focused on delivery of quality healthcare services and concluded that coordination between various organizations and providers is important. It's also important to manage very complex diagnosis, care and organizational processes and practices. Complexity of a health system and its extremely departmentalized and hierarchical structure present a major barrier to improving health quality. In addition, health issues are complex and require a high level of tailored solutions. Every condition and each patient is different. The collaboration and interaction of various departments and staff is a simple task.

In Europe, through legislation, many countries defined patients' rights to quality care. In certain places, accessibility, good health and medical care are included. There are also laws present for the health professionals to provide high quality and competence in healthcare (Mosadeghrad & Ferdosi, 2014). Some of the European countries like France, Finland and Belgium have clearly defined legislation on patient rights. It has also made attempts synchronizing skills and critical operational needs of healthcare workers. However, quality of health care in Europe still has some challenges especially related to

medical errors and diversity of health groups. The World Health Organization is dedicated and prioritized to enhance quality of services (David et al., 2017).

According to WHO (2016), improving healthcare workers' productivity and performance to ensure efficiency of quality medical care remains one of the main challenges for African countries. The most valuable assets of the health system are human services which comprises clinical and non-clinical personnel. The health organizations' success depends on people's awareness, expertise and motivation. Therefore, it is important for employers in ensuring that the performance of employees meets the desired standards. In order to make sure the populations they serve receive prompt quality care, African countries are trying to improve the way in which the health care systems operate.

Hurley et al. (2018) assert that, due to economic factors and declining resources, numerous countries in Sub-Saharan Africa cannot have sufficient healthcare and quality coverage. For maximization of utilization of available sources of information for effective access to health care and higher quality, many countries promote decentralization as a main driver of health sector reforms.

2.3 Theoretical Framework

In this section, both the Donabedian quality of care theory and systems theory is presented and evaluated in the sense of quality health care delivery.

2.3.1 Donabedian Quality of Care Theory

The theoretical and empirical framework of this analysis will be derived from Donabedian's quality of care theory. The concept of delivery of quality healthcare was defined by Avedis Donabedianin his model: Structure Process-Outcomes. Three quality components are distinguished: technological quality, interpersonal quality and amenities. Professional consistency concerns the effectiveness of treatment in achieving measurable health benefits. Interpersonal quality refers to the patient's needs and preferences accommodation level. Options including physical environment comfort and service structure features are included. He believed that the assessment of healthcare quality would be centered on three elements, namely structure, process and outcome (Donabedian, 1989).

The most relevant aspect of this triad is result because the goals are health services and patients ' health status represented in this element. The impact of health care services on the status of a patient's health and the reflection of the patient's health status is known as outcome. Where adequate healthcare is given, the symptoms of the patient's condition will not only decrease, but also complications will be reduced and their ability to cope will be increased; it will therefore be fulfilled (Donabedian, 2016).

Therefore, the Donabedian theory for quality of care is pertinent in the implementation of quality systems. It will also ensure that quality efforts get systematically evaluated in order to improve outcomes (Kunkel et al., 2007).This may in turn increase the chance of effective utilization of resources. However, culture has to be encompassed in the process

as Donabedian did not include culture in his framework. The institution can develop a culture of quality in their daily operations. Although this theory articulates factors influencing delivery of quality health care, it did not take into account how organizational factors, interpersonal factors, environmental factors and economic factors influence delivery of quality health care which is the focus of the current study.

2.3.2 Systems Theory

Von Bertalanffy first proposed the systems theory in the 1940s, and it was further advanced by (Terreberry, 1968) under the general systems theory, and (Klir, 1991) under aspects of systems science. According to systems theory, a system is made up of multiple components (sub-systems) that work together in harmony. Real systems, in theory, are typically transparent and appear to converse with their surroundings. It goes on to say that the systems theory focuses around organizations, wholes, as well as systems Swanson, (2001)and encompasses a wide range of disciplines related to parts, wholes, interconnectivity, and organizations, as well as how these disciplines interact with their surroundings.

Furthermore, there is a notion of how organizations must be understood as a system in systems theory. It gives crucial information about organizational behaviors and structures, as well as the processes and nature of system changes, for example, for a deeper understanding (Swanson, 2001). As a result of systems theory, researchers can gain a comprehensive understanding of the fundamental structure of systems, which includes the interrelationship between components and the environment, part

arrangement, and the goals of the system's design. Every business is a system. As a result, every action made in the system has the potential to effect people as well as other elements of the system (Wyckoff et al., 1998).

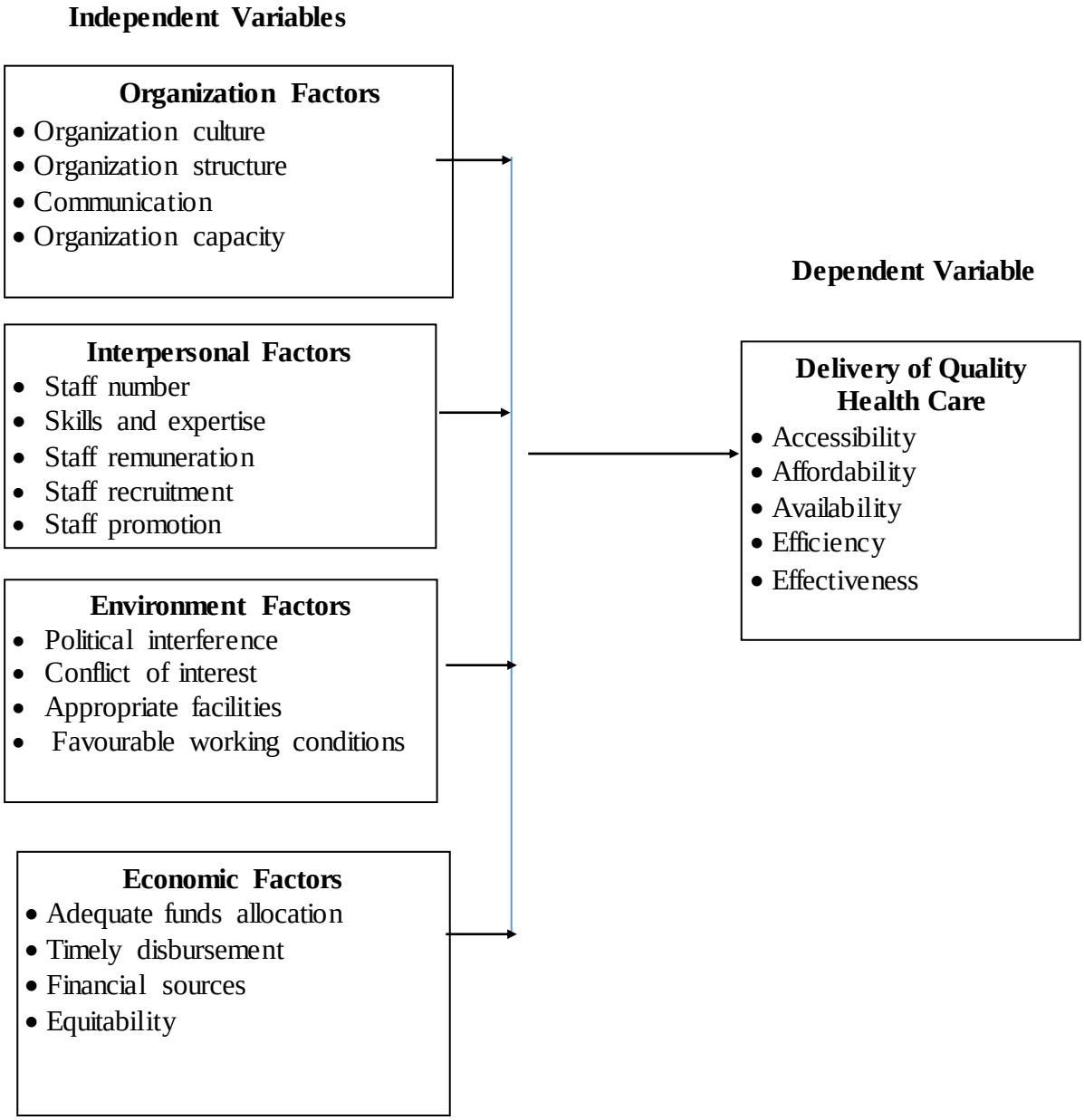
Although its idea was originally developed to explain biological notions, it has since been extended to physics, technology, and the social sciences. It is anticipated that the components of the health-care system will work together to ensure that healthcare services are delivered efficiently. Despite its wide applicability, it has not been tested on its suitability on delivery of quality health services in Kenya and specifically Kasarani Sub-County. It was thus used to establish organizational factors, interpersonal factors, environmental factors and economic factors in which delivery of quality health care have an impact.

2.4 Conceptual Framework

The conceptual framework that steered the present study is outlined in Figure 2.1. As indicated in the framework, two distinct sets of variables were available; predictor (independent) and outcome variables. Predictor variables were organizational factors, interpersonal factors, environmental factors, and economic factors. Delivery of quality health care services constituted the dependent variable. It was hypothesized that the various aspects characterizing devolved healthcare systems influenced delivery of health care.

Figure 2.1

Conceptual Framework



3 CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

Research methodology elucidates the systematic protocols that are followed to arrive at results that are able to effectively address the study objectives and the questions the study aims to answer. In this regard, thus, this chapter covers the research design that guided the study. Others include target population, sampling protocol, data collection instrument and procedure, and lastly the data collection and analysis and presentation of findings.

3.2 Research Design

This was a cross sectional descriptive study. For data analysis, a descriptive design was used. This was due to the fact that the current research proposed a specific description of factors affecting the delivery of high-quality health care, as well as the link (or association) between these two study domains. The study used a quantitative technique in addition to a descriptive survey design. This was based on the claim that the research aimed to collect quantitative data utilizing a structured questionnaire in conjunction with all of the study characteristics defining quality health care delivery in Kasarani Sub County. As per Kothari (2004), a quantitative technique can be reduced to an inferential approach, which allows conclusions to be drawn about correlations in a particular population.

3.3 Target Population

Target population denotes a sum of elements with identical or analogous features. The target demographic for this study was all of Kasarani Sub County's healthcare administrators. Kasarani Sub County has been chosen as there was no health facility in

the Sub County that scored more than 60% on quality of health care delivery (MOH 2018). The report revealed that the facilities had even stopped holding quality improvement meetings. The target population of the study alluded to as a small segment of the target population that a researcher can obtain from the study population. The health care managers of public health facilities in Kasarani Sub County who are either members of work improvement teams, quality improvement teams or departmental heads in their respective positions for not less than a year totaling to 110 from level 2, 3 and 4 comprised the study population.

3.4 Sampling Design

Kothari (2004), advanced sampling is a procedure, a structure or a methodology to determine participation in the analysis of a subgroup of a population. The census method was used in this research, with all members of the study population serving as the unit of analysis. To put it another way, all of the subjects or individuals in the accessible demographic were approached and asked to participate. As a result, all of the specified health managers, a total of 110, were expected to participate in the study; this implies that all members of these teams were eligible to participate. The choice of design was influenced by the small population as well as result reliability. In this way, the strategy reduced sample bias and error, allowing for better applicability of results to the research or target groups (Cooper & Schindler, 2013).

3.5 Inclusion and Exclusion Criteria

In this study consideration was only given to only those health care managers who are currently working at the health facilities and therefore former managers were excluded from the study. Further, The health care managers of public health facilities in Kasarani

Sub County who are members of work improvement teams, quality improvement teams or departmental heads in their respective positions for less than a year were also excluded from this study as they were deemed not to be in a position to respond to the questionnaire comprehensively.

3.6 Research Instruments

Questionnaires are the most appropriate methods for aiding data collection in surveys with dispersed populations (Mugenda & Mugenda, 2010). Because this research had a somewhat huge population (110) that was scattered over the ten wards that make up Kasarani Sub County, structured questionnaires with exclusively close-ended items were used to help data collection. Only members of work improvement teams, quality improvement teams, or department directors were allowed to use surveys. The structured questionnaires were chosen since the research used a quantitative methodology, which is synonymous with numerical data. Structured questionnaires allowed categorical data to be collected that was numerical in character. Furthermore, the data items were on a 5-point Likert scale but were assured to be both exact and explicit in order to reduce the likelihood of ambiguity for the expected answers (see appendix II).

3.7 Instrument Pre-testing

This refers to pretesting of research instruments in the field to establish their reliability and validity. The purpose of the pre-test was to simulate the main study and find out the questions have any ambiguity that could be corrected before being deployed in the conducting of the main study. This was therefore to help improve reliability of the

questionnaires. According to Burns and Burns (2008), a 1-10% sample size for the actual study, is a practical number of participant to consider when conducting a pretest.

A pre-test was undertaken on 33 respondents (about 30% of the unit of analysis) from the neighboring Roysambu Sub County for testing both the validity and reliability of the questionnaire. The researcher gave the questionnaire to be filled by 33 respondents, and got their views about the questions and also possible areas that the respondents thought that there was need for change, to make the instrument more consistent and reliable in answering the research objectives. The respondents in the pretest study were excluded from the main study. The 33 respondents comprised of 3 health care managers from 11 health facilities in Roysambu Sub-County. The specific health facilities were arrived at using simple random sampling. The researcher used a Google form to administer the questionnaire. The pretest enabled the researcher to detect and correct any errors and misunderstood statements the instrument has. This was done to confirm that the questions are well stated and easily comprehended in the intended way by the respondents.

3.8 Reliability

Reliability is a measure which is used to describe the overall consistency of an instrument. A measure is said to be highly accurate when the findings in stable conditions are identical (Burns & Burns, 2008). By demonstrating data collecting instrument internal consistency, the Cronbach alpha analysis helps in determining the research instruments' reliability. Cronbach's Alpha is a measure of reliability that displays a true ‘base' score. Even if the items are interchanged with relevant ones, Cronbach's Alpha is critical to a scholar in guaranteeing consistency and reliability of the questionnaire (Khan, 2008). In most cases, reliability in the 0.7 range is considered adequate, whereas reliability above

0.8 is considered excellent, therefore the reliability results of study in Table 4.1. This criterion was used in the research. See results in Table 4.1

3.9 Validity

Cooper and Schindler (2013) describe the validity as the measurement measurements in a study. In relation to three items: the form of the test, the purpose of the test and the population for which it is intended, the question of validity is posed. Face validity was utilized to determine the validity of the instrument produced in this research. Khan (2008) asserts that the credibility of face applies to the extent to which a test tries to assess what it wants to measure. Experts in the field of health systems and management assessed the instrument's validity. At the end of the exercise, these experts evaluated each of the questionnaires' statements to verify their validity, and all of the invalid questions were removed from the surveys.

3.10 Ethical Consideration

Before collecting data, the necessary permits, consents, as well as approvals were obtained. Approval from Kenya Methodist Scientific Ethical Research Committee (KeMU SERC) was obtained, as well as a research authorization/permit letter from the NACOSTI. The license number was NACOSTI/P/21/9199. Eventually, permission to conduct the study in Kasarani Sub County was sought from the Nairobi County Government's Department of Health. After determining the study-specific data collection tool's reliability and validity, the lead investigator distributed self-administered questionnaires. Closed ended questions were given a maximum of five working days to be answered and resubmitted for examination. The questionnaires were checked and data was analyzed once they were collected.

3.11 Data Analysis and Presentation

Completeness of data was checked, and variables with missing or partial data were removed. Cases with more than 20% missing replies were also removed from the analysis. The goal of data cleaning was to eliminate outliers, which can jeopardize the validity and reliability of research findings. The data was analyzed using the SPSS Version 24 software. Exploration of descriptive and inferential statistics was part of data analysis. The former included distributional measures such as percentages as well as frequencies. Inferential statistics were computed using Pearson's correlation, and determinants of quality health care delivery were identified using multiple regression analyses. Tables were used to present the findings of the studies, which were supported with relevant interpretations as well as discussions.

The empirical model that was used was as follows:

$$\mathbf{Y=\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon}$$

Where:

Y represents 'Quality Health Care Delivery'

$\mathbf{B_0}$ represents 'Constant'

$\mathbf{X_1}$ represents 'Organization Factors'

$\mathbf{X_2}$ represents 'Interpersonal Factors'

$\mathbf{X_3}$ represents 'Environmental Factors'

$\mathbf{X_4}$ represents 'Economic Factors'

$\boldsymbol{\varepsilon}$ represents 'Error Term'

$\boldsymbol{\beta_1}$, $\boldsymbol{\beta 2}$, $\boldsymbol{\beta_3}$, $\boldsymbol{\beta_4}$ represent 'Regression Coefficients of Predictor Variables

4 CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Introduction

The study put into perspective the factors influencing delivery of quality health care in Kasarani Sub County, Kenya. The key issues that have been addressed in this chapter are perceptions of health care managers on the organizational factors, interpersonal factors, environmental factors, and economic factors with regard to delivery of quality healthcare in Kasarani Sub County, Kenya. The descriptive statistics of participants and inferential findings in relation to factors influencing delivery of quality health care in Kasarani Sub County, Kenya are presented and then discussed herein.

4.2 Response Rate and Pre-test Findings

One hundred and ten (110) participants qualified for the study, therefore 110 questionnaires were issued to the health care managers across the 10 wards in Kasarani Sub-County. However, only 84 questionnaires were filled according to the instructions given. This translated to a response rate of 76%. This is an acceptable response rate for descriptive surveys, as postulated by Nulty (2008). The results of reliability test are as shown in Table 4.1

Table 4.1
Results of Reliability Testing

Study Constructs	Test Items	Cronbach's Alpha Coefficient
Organizational factors	9	0.822
Interpersonal factors	7	0.804
Environmental factors	6	0.830
Economic factors	7	0.783
Delivery of quality healthcare	12	0.842

4.3 Socio-demographic Characteristics

The socio-demographic characteristics of participants are presented in Table 4.2. The health care managers in Kasarani Sub-County, have a modest level of education with (52) 62% of the respondents having an undergraduate degree. Furthermore, (14) 17% of them were established to have attained tertiary college level of education. A further, (18) 21% had a postgraduate qualification. It was therefore evident that these members were privy to the matters of factors influencing delivery of quality health care in Kasarani Sub County, Kenya.

In terms of experience, a majority of respondents (32) 38% had spent less than three years executing their duties in their current capacity in the study area. It was further noted that close to a third of the respondents (27) 32% had held the managerial position for a duration ranging from three to five years. It was further established that respondents with over 10 years of experience were the least at (9) 11%. From these findings, it was noted that most health care managers assumed management positions after introduction of devolution. Therefore, it is highly probable that the taking over of the leadership of the County by a new regime might have directly and highly affected the composition of the healthcare managers.

Table 4.2
Educational level and management experience(n=84)

		Frequency	Percentage
Education Level	Tertiary college level	14	62
	Undergraduate	52	17
	Postgraduate	18	21
Experience (years)	less than 3 years	32	38
	3 to 5 years	27	32
	6 to 10 years	16	19
	Above 10 years	9	11

4.4 Descriptive Findings, Interpretations and Discussions

The findings were used to relate the views or opinions of the participants in respect to organization factors, interpersonal factors, environmental factors, economic factors and delivery of quality health care. The views of the participants were on a 5-point Likert Scale where; 1=Strongly Disagree(SD) , 2= Disagree(D) ,3= Not Sure(NS) ,4=Agree(A) ,5=Strongly Agree(SA)

4.4.1 Descriptive Statistics for Delivery of Quality Health Care

The mean as well as standard deviation of the specific attributes of delivery of quality health services, the dependent variable are shown in Table 4.3. From the table Kasarani Sub County delivers quality health care to a great extent. This is supported by the fact that on a five-point likert scale, the mean score for attributes related to delivery of quality health scare was 3.78 which is above the midpoint of 3.4. The mean score for health services provided being available was 3.583 and 1.126 standard deviation implying that those polled concurred that health services provided in this facility are often available. Meanwhile, a (Mean 4.238, SD= 0.701) accessible roads implied that most of surveyed members agreed that there are accessible roads to this health facility. A (mean 3.833,

SD=0.801) for signage at this health facility is an indicator that the respondents agreed there is signage at this health facility. A (mean, 4.393, SD=0.618) for acceptability of health services provided indicated participating members agreed with the statement that health services provided in the facility are acceptable. A (mean, 4.369, SD= 0.870) for affordability of health services implies that majority of surveyed members agreed with the fact that the health services provided in this facility are affordable.

Moreover, a (mean, 3.583, SD=1.014) for complaints lodged by patients implies that the surveyed members averagely agreed with statement that there are rare complaints lodged by patients in the facility. A (mean, 4.226, SD= 0.605) for availability of health workers to offer requisite health services implying that survey members agreed that the health workers are available to offer requisite health services. The (mean, 4.060, SD=0.679) for county government supervision of service delivery implying that surveyed members agreed the county government often supervise delivery of health care in this facility.

A (mean, 3.571, SD=1.003) for ministry of health involvement implying majority of participating members agreed the ministry of health is engaged in entire delivery of service in this facility. Moreover, a (mean, 2.952, SD=1.234) for payers effect and implying that participating members agreed the payers (such as NHIF as well as other insurance firms) hardly affect health service delivery. (Mean, 3.226, SD= 1.115) for service time required implying that surveyed members averagely acknowledged that since health care was devolved, the amount of time it takes to serve a patient has decreased dramatically. Finally, a (mean, 3.321, SD=1.197) for number of patients

seeking services implies that the number of persons seeking assistance from this health center has increased dramatically since devolvement of health care.

Table 4.3
Descriptive Statistics for Delivery of Quality Health Care(n=84)

Statement	N	Mean	Std. Dev.
Health services provided in this facility are always available.	84	3.583	1.126
There are accessible roads to this health facility	84	4.238	0.701
There are signage at this health facility	84	3.833	0.801
Health services provided in this facility are acceptable.	84	4.393	0.618
Health services provided in this facility are affordable.	84	4.369	0.870
There are rarely complaints lodged by patients in this facility.	84	3.583	1.014
The healthcare workers are available to offer requisite health services.	84	4.226	0.605
The delivery of health care in this hospital is frequently supervised by the county government	84	4.060	0.679
In this institution, the Ministry of Health is associated with the quality of all health services	84	3.571	1.003
Payers (such as NHIF as well as other insurance companies) have little impact on health-care delivery	84	2.952	1.234
Since healthcare was decentralized, the amount of time it takes to serve a patient has decreased dramatically	84	3.226	1.155
Since healthcare was devolved, the number of patients seeking assistance at this hospital has risen dramatically	84	3.321	1.197
Overall mean		**3.780**	

These findings were in tandem with a study done by (Shahidzadeh-Mahani et al., 2018) that focused on delivery of quality healthcare services and concluded that coordination between various organizations and providers is important. It's also important to manage very complex diagnosis, care and organizational processes and practices. Complexity of a health system and its extremely departmentalized and hierarchical structure present a major barrier to improving health quality. In addition, health issues are complex and

require a high level of tailored solutions. Every condition and each patient is different. The collaboration and interaction of various departments and staff is a simple task.

4.5 Factors Influencing Delivery of Quality Health Care

4.5.1 Organization Factors

The mean and standard deviation of the specific attributes of organizational factors are shown in Table 4.4. From the table Kasarani Sub County has adopted organizational factors to great extent. It is supported by the fact that on a five-point likert scale, the mean score for attributes related to organizational factors was 3.812 which is above the midpoint of 3.4.

The mean score for existence of organizational structure was 4.060 and standard deviation of 0.713 implying that most respondents agreed that the hospital had organizational structure in place. A mean score of 4.107 and standard deviation of 0.690 for respondents being aware of components of organizational structure is an indication that majority of selected members agreed. The mean score for lack of conflict of 3.369 and standard deviation of 0.99 indicate that the selected members agreed that there are no conflicts arising from organizational structure in this facility.

The mean score of 4.000 for organizational internal values and standard deviation of 0.617 implicated that selected member agreed organizational internal values influenced decision making in this facility. A mean score of 3.071 for managing finances disbursed and standard deviation of 1.173 has an implication that surveyed members agreed the administration of this health facility does not face hitches in disbursed finance

management. A mean for administration transparency of 4.083 and 0.820 standard deviation indicated most of the surveyed members agreed that the health facility's administration was transparent.

Further, a 4.155 mean score as well as 0.587 standard deviation is an implication that surveyed members agreed managers of this facility are held accountable for the operation of the entity. 4.226 mean score as well as 0.605 standard deviation is an indication that the surveyed members agreed that the management of the facility is up to task .A mean score of 3.238 for lack of communication breakdown and standard deviation of 1.119 implies that members agreed moderately that there are no communication breakdown In this health facility.

The results of this research are similar to those of Muithya (2016), who investigated the factors that influence the implementation of free maternal health care in government health care facilities in Kisima, Samburu County, Kenya. According to the research, 76.2 percent of participants were unemployed, and 50% were uneducated. Although the quality of health-care services was deemed satisfactory, attendance at prenatal and postnatal clinics was found to be inadequate. Kisima and Mparigon were the two health facilities in the Kisima area. There was only one ambulance accessible for the entire area.

The findings of this study also corroborated results of an earlier study by Mohammad, (2013) that conducted a literature review pertaining the association amongst organizational processes and structural features of hospitals and care quality. In

organizing the literature, he used level of analysis frameworks and Donabedian's structure–process–outcome. The conclusions of this research designated that most of the studies are done on hospital level of analysis and mostly concentrates on the relationship of organizational structure and quality of outcome. The study recommended that health services researchers ought to enlarge their research so as to improve their knowledge and insights on the connection amongst quality of care and organizational structure.

Table 4.4
Descriptive Statistics for Organization Factors (n=84)

Statement	N	Mean	Std. Dev
This facility has in place an organization structure	84	4.060	0.713
I am aware of the components of the organization structure	84	4.107	0.690
There are no conflicts arising from organization structure in this facility.	84	3.369	0.997
The organization internal values influence decision making in this facility.	84	4.000	0.617
The administration of this health facility does not face difficulties in managing finances disbursed to them.	84	3.071	1.173
The administration of this health facility is done in a transparent manner.	84	4.083	0.820
The managers of this health facility are held to account for the operations of the entities.	84	4.155	0.587
The management of this facility is up to the task.	84	4.226	0.605
There are no communication breakdowns in this health facility	84	3.238	1.119
Overall mean		**3.812**	

4.5.2 Interpersonal Factors

The mean and standard deviation of the specific attributes of interpersonal factors are shown in Table 4.5. From the table Kasarani Sub County has not adequately adopted interpersonal factors. It is supported by the fact that on a five-point likert scale, the mean score for attributes related to interpersonal factors was 2.197 which is below the midpoint of 3.4. The mean score for adequate staffing in all departments was 2.083 and standard deviation of 0.954 implying that very few respondents agreed that the hospital had

adequate staff in all departments. However, a mean score of 4.012 for possession of relevant skills and expertise by staff and 0.932 standard deviation indicates that the majority of those polled agreed that health-care employees have the necessary skills and expertise to carry out their duties. A mean of 2.262 for the health care adequate staff remuneration and standard deviation of 1.264 is an indicator that majority participating members did not agree the health care staffs are adequately remunerated as per job group placements.

A mean score of 1.952 for facility's management involvement in recruiting devolved health care staff and standard deviation of 1.204 indicated majority of participating members disagreed. A mean score of 1.702 for regular staff recruitment and standard deviation 0f 1.055 implies that majority of surveyed members disagreed with the fact that the health care staff recruitment is done regularly. Moreover, a mean score of 1.786 for merit-based staff promotion and standard deviation of 1.103 implies that the surveyed members disagreed with statement that staff promotion is affected on merit in the facility. Finally, a mean score of 1.583 for regular staff promotion and standard deviation of 0.978 implies that participating members disagreed that staff promotion is done regularly in the facility.

A 2017 study at Meru Level 5 hospital by Miriti and Keiyoro reported similar results. In the study, staffing low and had a negative influence on the delivery health services in the County. The situation is the same all over Kenya with the ratio of doctors to nurses reported to be 1:10,000, which is significantly lower than the 1:1000 ratio proposed by the WHO. The ratio of nurses to patients is around 6:50,000, which also over shadows the

1:280 ratio recommended by the WHO. These significant staff shortages have led to poor service delivery in County hospitals and are projected to worsen as doctors and nurses leave public hospitals for private practice because of poor working conditions and ongoing conflicts around personnel transfers, terms of service, and support for continuous education (Okech, 2016). To realize universal health delivery, county hospitals should recruit well-trained personal and create a conducive environment for work.

The results are also in agreement with the results of Rajendra (2017) whose goal was to estimate the effect of practicing human resources management on healthcare organizations in terms of service quality and client satisfaction, to the employees' job satisfaction. The research was conducted in a private hospital in the city of Jodhpur, with the goal of achieving the maximum possible number of participants. The knowledge was obtained with the aid of self-governing surveys. Primary information obtained from the hospital employees was used in the analysis. Perceived organizational metrics on performance on the basis of the respondents' opinion. The study demonstrates that effective human resource management has a positive impact on the quality of healthcare organizations and enhances the efficiency of hospital personnel.

Table 4.5
Descriptive Statistics for Interpersonal Factors (n=84)

Statement	N	Mean	Std. Dev
This facility is adequately staffed in all departments.	84	2.083	0.954
Healthcare employees have the necessary skills and knowledge to carry out their duties	84	4.012	0.932
The healthcare staffs are adequately remunerated as per their job group placements.	84	2.262	1.264
The management of the facility is involved in the recruitment of the devolved healthcare professionals	84	1.952	1.204
The healthcare staff recruitment is done regularly (at least every year).	84	1.702	1.055
The staff promotion is effected on merit.	84	1.786	1.103
The staff promotion is done regularly (at most in every 3 years).	84	1.583	0.978
Overall mean		**2.197**	

4.5.3 Descriptive Statistics for Environmental Factors

The mean and standard deviation of the specific attributes of environmental factors are shown in Table 4.6. From the table Kasarani Sub County has adopted environmental factors to a small extent. It is supported by the fact that on a five-point likert scale, the mean score for attributes related to environmental factors was 3.008 which is below the midpoint of 3.4. The mean score for cases of medicine and supplies stock-out was 1.905 and standard deviation of 0.934 implying that very few respondents agreed that cases of medicine and supplies stock-out in this facility are rare. However, a mean score of 3.262 for no cases of political interference in decision making process in this facility and standard deviation of 1.114 implies that most of surveyed members agreed that are no cases of political interference in decision making process in this facility. A mean of 3.298 for expired drugs and supplies cases and standard deviation of 1.008 is an indicator that majority participating members agreed the facility rarely experienced cases of expired drugs and supplies.

A mean score of 2.167 for availability of adequate infrastructure to address all health needs of patients and standard deviation of 0.974 indicated respondents disagreed. A mean score of 3.595 for cases of conflict of interest in management and standard deviation of 0.914 implying most surveyed members disagreed with the fact cases of conflict of interest in managing this facility are rare. Moreover, a mean score of 3.821 conducive working environment and standard deviation of 0.861 implies that the surveyed members agreed with statement that this facility offers a conducive working environment.

Observation that Kasarani Sub-County health care experienced medicine and supplies stock-out mirrored the results of a previous study by Oketch (2017) evaluated devolution of Kenya's primary health care services and their effects on universal health care. The research looked at how devolution has affected universal health care in terms of quality of treatment, fairness concerns, and the distribution of health resources including medical supplies and vital drugs. Running out of stock of medical supplies and pharmaceuticals were identified as one of the most significant difficulties, according to the study's findings. As per the report, other equity concerns included deteriorated health infrastructure and a disproportionate allocation of health resources. The study came to the conclusion that the pharmaceutical management information system needed to be improved in order to have both reliable as well as accurate evidence based on medical supply requirements as well as essential medicine estimation.

A similar trend was reported in Sudan in which devolution of health services influence negatively the allotment of medicine to hospitals (Mohamed et al. 2016). Similarly, Tsofa

et al., (2017) in their study in Kilifi County, essential medications were running out in devolved public health facilities. This could have been attributed to delays in procurement brought about by unnecessary bureaucracies between the county government and KEMSA. By retaining to Kenya Medical Supply Agency (KEMSA) as the sole supplier for drugs, Williamson and Mulaki (2015) argue that the government and county governments, via their memorandum with the MoH to source solely from KEMSA, created the bureaucracy. Many cases of stock outs of pharmaceutical supplies and drugs have been in County hospitals with the supplier citing delays in payments for its supplies.

Table 4.6
Descriptive Statistics for Environmental Factors (n=84)

Statement	N	Mean	Std. Dev
Cases of medicine and supplies stock-out in this facility are rare.	84	1.905	0.934
There are no cases of political interference in decision making process in this facility.	84	3.262	1.114
This facility rarely experiences cases of expired drugs and supplies.	84	3.298	1.008
This health facility has adequate infrastructure to address all health needs of patients.	84	2.167	0.974
Cases of conflict of interest in managing this facility are rare.	84	3.595	0.914
This facility offers a conducive work environment.	84	3.821	0.861
Overall mean		**3.008**	

4.5.4 Descriptive Statistics for Economic Factors

The mean and standard deviation of the specific attributes of economic factors are shown in Table 4.7. From the table Kasarani Sub County is performing poorly in regards to economic factors. It is supported by the fact that on a five-point likert scale, the mean score for attributes related to economic factors was 2.027 which is below the midpoint of 3.4. The mean score for funds disbursed being sufficient was 1.881 and standard

deviation of 1.040 implying that respondents disagreed that funds disbursed to this heath facility are sufficient to cater for the hospital budget. Meanwhile, a mean score of 1.893 for timely fund disbursement and standard deviation of 0.802 implies that most of surveyed members disagreed that fund disbursement to this health facility is executed timely. A mean of 2.345 for equity in finance disbursement to county health facilities and standard deviation of 1.029 is an indicator that few participating members agreed that the distribution of cash to county health facilities is fair.

A mean score of 1.595 for significance user fee charged to patients and standard deviation of 0.847 indicated participating members disagreed with the statement that this health facility gets significant finances from user fees charged on patients. A mean score of 2.155 for significant donor funding and standard deviation of 1.052 implies that majority of surveyed members disagreed with the fact this health facility receives significant funding from donors. Moreover, a mean score of 2.726 for receiving minimal funding from private corporate bodies and standard deviation of 1.483 implies that the surveyed members agreed with statement that the health facility receives minimal funding from private corporate bodies. A mean score of 1.595 for the facility income generating activities and standard deviation of 1.092 implies that survey members disagreed that this health facility has income generating activities that bring in significant revenue.

The economic status of health care facilities in Kasarani Sub-County was deplorable, going by the reports of the respondents. This is in agreement with a study by Akacho

(2014) who sought to identify the variables affecting health services provision in Kenya primarily focusing on the Kenyan public health sector, a case of Uasin Gishu District Hospital. The research has shown that there is a shortage of adequate financial resources to sustain the daily operations of the hospital, as there are insufficient funds to supply the pharmaceuticals. The study findings are also in tandem with Muthui (2018) who sought to establish the influencers of the quality service delivery in health care facilities at Kitui County Referral Hospital. The findings of the study concluded that the capacity of healthcare personnel, financial resource availability and utilization, management commitment and monitoring and evaluation had a negative influence on the quality of services provided at Kitui County Referral Hospital.

Table 4.7
Descriptive Statistics for Economic Factors (n=84)

Statement	N	Mean	Std. Dev
The funds disbursed to this health facility are sufficient to cater for the hospital budget.	84	1.881	1.040
Funds disbursement to this health facility is executed timely.	84	1.893	0.802
The distribution of cash to county health facilities is equitable	84	2.345	1.029
This health facility gets significant finances from user fees charged on patients	84	1.595	0.847
This health facility receives significant funding from donors.	84	2.155	1.052
This health facility receives minimal funds from private corporate bodies.	84	2.726	1.483
This health facility has income generating activities that bring in significant revenue.	84	1.595	1.092
Overall mean		**2.027**	

4.6 Inferential Results, Interpretations and Discussions

To show the relationship between each of the specified independent factors and the outcome/dependent variable, the Pearson Correlation was utilized. In addition, multiple

regression was utilized to determine the extent to which our independent variables influenced the delivery of high-quality health care.

4.6.1 Relationship between Organization Factors and Delivery of Health Care Services

The research looked at the link between organizational variables and the delivery of health-care services. Table 4.8 shows the findings of the correlation analysis.

Table 4.8
Correlation Analysis

	Delivery of Quality Health Care	
	Pearson 's correlation	P
Organization factors	0.516	0.000
Interpersonal factors	0.457	0.002
Environmental factors	0.378	0.010
Economic factors	0.614	0.000

*. Correlation is significant at the 0.05 level (2-tailed).

Table 4.8 shows that there was a positive, substantial, and statistically significant association between organizational characteristics and the delivery of high-quality health care ($r = 0.516$; $p < 0.05$). There was a strong and substantial probability that organization factors would improve delivery of quality health care in Kasarani Sub County. These findings back the observations obtained by Hartwig et al., (2019) in a previous empirical research study. Organizational characteristics enhanced access to healthcare services, including antenatal services and other vital services, according to the latter research. Furthermore, the current study's findings paralleled those of a previous study that found that organizational characteristics predisposed Chad health outcomes (Kim & Kim, 2019).

4.6.2 Relationship between Interpersonal Factors and Delivery of Quality Health Care

Table 4.8 revealed that there was a positive, relatively robust, and statistically significant association between interpersonal characteristics and the provision of high-quality health care ($r = 0.457$; $p < 0.05$). According to the findings, improving interpersonal factors was probable to advance the delivery of excellent healthcare services in Kasarani Sub County in a moderate to significant way. The findings highlight the significance of addressing the wellbeing of the aforementioned employees in attempts to guarantee that the County's health facilities provide vital services in a more effective and efficient manner. Aspects affecting the healthcare personnel, like proper remuneration and a healthy working environment, are likely to have an impact on the quality of care provided. These findings corroborated those of previous local research, which found that interpersonal factors influenced hospital development plans (Muchomba & Karanja, 2015). Interpersonal factors, in turn, have an impact on service delivery in decentralized health institutions.

4.6.3 Relationship between Environmental Factors and Delivery of Quality Health Care

Environmental factors and the provision of high-quality health care had a positive, fairly strong, and statistically significant link, as shown in Table 4.8 ($r = 0.378$; $p < 0.05$). This indicated the well environmental matters were handled, the more likely Kasarani Sub-delivery County's of quality health care would improve. Enhancing or strengthening the mechanism that regulates medical supply was bound to improve health care delivery in Kasarani Sub County. A good system will reduce bureaucracies and guarantee that

KEMSA procures, provides, and delivers necessary medical supplies to devolved health facilities in a timely and efficient manner, reducing or eliminating stock outs. As a result, the aforementioned institutions would be able to provide better service.

The findings supported previous studies that demonstrated that how patients were treated in government-funded health facilities had an impact on how they sought treatment from those facilities (Ansari et al., 2011). Similarly, Miranda (2017) led a local study that found that environmental variables within health facilities influenced the level of satisfaction of patients who require hospital treatments.

4.6.4 Relationship between Economic Factors and Delivery of Quality Health Care

A favorable, substantial, and statistically significant association existed between economic considerations and the provision of quality health care, as Table 4.8 depicts ($r = 0.614$; $p < 0.05$). Meaning economic factors had a chance of influencing the delivery of high-quality health care. As a result, county governments and entities in charge of administering health facilities should place a premium on variables critical to health care funding, like the cost of financing, easy accessibility to financing, and prioritizing financially strapped divisions. As a result, it's possible that health-care delivery will improve. These findings support previous results arguing county governments with the ability to acquire pharmaceuticals when compared to when Kenya's public health services were devolved, the fill-rate for orders has increased dramatically (Tsofa et al., 2017)

4.6.5 Regression Analysis, Results, Interpretations, and Discussions

More research was done to see if there was a link between certain independent factors and the provision of high-quality healthcare in Kasarani Sub-County. Table 4.9, Table 4.10, and Table 4.11 give the results and related discussions. The outcomes of the general relationship between independent variables and quality healthcare delivery, as well as the coefficient of determination (R^2), are presented in the first table (Table 4.9).

Table 4.9
Model Summary

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	.708[a]	.501	.496	. 4053917

a. Predictors: (Constant), Economic factors, Organization factors, Interpersonal factors, Environmental factors

There was a positive and moderately substantial connection between the independent factors and the delivery of quality health care (R = 0.708), as indicated in Table 4.8. As shown in Table 4.9, this link was found to be statistically significant (p 0.05). Furthermore, the data in Table 4.9 (R^2 = 0.501) indicated that 50.1% variance in delivery of quality health care in Kasarani Sub County could be explained by organization factors, interpersonal factors, environmental factors and economic factors. Other aspects that are not included in the aforesaid, could account for the remaining amount (49.9%).

Table 4.10 shows the outcomes of the analysis of variance (ANOVA) that were made use of in determining the significance and adequacy of the chosen multiple regression model.

Table 4.10
Analysis of Variance

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	4.814	4	1.203	7.414	.000[a]
Residual	12.823	79	.162		
Total	17.637	83			

a. *b. Predictors: (Constant), Economic factors, Organization factors, Interpersonal factors, Environmental factors*

b. Dependent/Outcomes Variable (Delivery of quality health care)

The F-statistics outcomes revealed in Table 4.9 demonstrate that F (4, 83) = 7.414; $p < 0.05$. This means that the sample data collected as well as analyzed was adequate for testing the regression model at a 95% confidence level (p value = 0.05). As a result, more research might be conducted to determine the factors influencing the delivery of high-quality health care in Kasarani Sub County. The outcomes in Table 4.11 were utilized to analyze the regression model in question.

Table 4.11
Model Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.266	.382		3.357	.000
Organization factors	.252	.116	.178	3.181	.001
Interpersonal factors	.199	.085	.192	2.376	.011
Environmental factors	.179	.075	.204	2.346	.019
Economic factors	.274	.075	.330	3.646	.000

a. Dependent Variable: Delivery of quality health care

The multiple regression model used is illustrated below:

$$\mathbf{Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_{3+} \beta_4 X_4 + \varepsilon,}$$

Where,

Y denoted delivery of quality health care

β_0 denoted the constant

X_1 represented organization factors

X_2 represented interpersonal factors

X_3 denoted environmental factors

X_4 economic factors

ε was the error term when there was assumed normal distribution

$\beta_1,\beta_2\beta_3,\beta_4$ denote independent variable coefficients

The regression model was substituted as follows.

$$\mathbf{Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon,}$$

$$\mathbf{Y = 0.266 + 0.252 X_1 + 0.199 X_2 + 0.179 X_3 + 0.274 X_4}$$

In terms of interpretation, a unit change in the delivery of quality healthcare necessitated a 0.252 unit change change in organizational factors, 0.199 unit change in interpersonal factors, 0.179 unit change in environmental factors, and 0.274 unit change in economic factors, whilst also non-study factors were kept constant. The four factors examined in this study were critical in improving healthcare delivery in Kasarani Sub-County. It is obvious that economic factors ($\beta_4 = 0.274$) were the most critical component while environmental factors ($\beta_2 = 0.179$) were the least crucial factor.

It was also mentioned that if the four components chosen for this study were to be held constant, there would still be some significant aspect of quality health care delivery ($\beta = 0.266$, $p < 0.05$). Further, each of the four selected independent variables were found to have a significant positive effect on delivery of quality health care, that is, organization factors ($\beta = 0.252$; $p < 0.05$), interpersonal factors ($\beta = 0.199$, $p < 0.05$), environmental

factors ($\beta = 0.179$, $p < 0.05$), and economic factors ($\beta = 0.274$, $p < 0.05$). This implies that management and policy makers should ensure they enhance organization factors, interpersonal factors, environmental factors and economic factors as this will enhance the provision of high-quality health care.

The findings of this study are in line with Oringo (2018) who found out that interpersonal factors have a meaningful correlation with the quality of healthcare. The delays in serving the patient were attributed to the shortage of clinicians. In conclusion, the study postulated that resolving the compensation challenges will enrich the quality of health care in teaching and referral hospitals. The study findings also concur with Bibi (2018) whose aim was to recognize the effect on employee performance of talent management activities among employees in Pakistan's health care organizations. The study concluded that interpersonal factors such as staffing and remuneration have a positive effect on health care quality.

Muchomba and Karanja (2015) conducted study on the health sector's performance in Kenya following the introduction of devolved administrations, and their findings differed from those of this research. While the current research had designated that organizational factors and ecoonomic factors have a significant influence on healthcare delivery significantly, their study had noted that these factors do not significantly affect performance of the devolved health facilities.

5 CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The chapter highlights the summarized findings of our study, that is, both the descriptive and inferential results, the conclusions arising from the study results and the recommendations. The foregoing is discussed in tandem with our specific study objectives. The study further suggests other areas of interest that scholars and researchers can embark in in Kenya.

5.2 Summary

The purpose of this study was to evaluate factors influencing delivery of quality health care in Kasarani Sub County, Kenya with a specific focus on organizational factors, interpersonal factors, environmental factors and economic factors. A descriptive cross-sectional survey design was applied. The population of the study was health care managers of public health facilities in Kasarani Sub County who were either members of work improvement teams, quality improvement teams or departmental heads in their respective positions for not less than a year. The demographic results revealed that the respondents were educated and therefore in a position to be respondents in this study. In addition, they had all spent more than one year in their current position and therefore they understood the factors influencing healthcare delivery in their facilities.

A summary of the study results are presented in this section. The descriptive results are first outlined followed by inferential findings. The findings relate to first, the organization

factors, interpersonal factors, environmental factors, economic factors, and delivery of quality healthcare services and influence of the stated variables on the delivery of quality health care services.

5.2.1 Organization Factors and Delivery of Quality Health Care

The results of descriptive statistics revealed that the hospitals in Kasarani Sub County had an organizational structure in place and that there are no conflicts arising from organizational structure in this facility. The respondents also agreed that organizational internal values influenced decision making in their facilities and that the management of health institutions has no problems handling the funds that are disbursed to them. The health-care facilities were likewise managed in an open and transparent manner and managers of the facilities are held accountable for the operation of the entity. Further, the respondents agreed that there are no communication breakdowns in the health facilities. The bivariate results showed that there was a positive, substantial, and statistically significant association between organizational characteristics and the delivery of high-quality health care ($r = 0.516$; $p < 0.05$). The multivariate results showed that improving organizational elements could significantly improve the provision of high-quality health care ($\beta = 0.252$; $p < 0.05$).

5.2.2 Interpersonal Factors and Delivery of Quality Health Care

The research revealed health facilities were not adequately staffed in all departments and ensure that health-care employees have the necessary skills and expertise to carry out their duties. Further, the health care staffs are not adequately remunerated as per job group placements and facility's management are not involved in recruiting devolved

health care staff. Furthermore, employee recruiting is not done on a regular basis, and promotions are not necessarily merit based. The bivariate results showed that there was a positive, relatively robust, and statistically significant association between interpersonal characteristics and the provision of high-quality health care ($r = 0.457$; $p < 0.05$). According to regression analysis, interpersonal characteristics have a favorable and statistically significant impact on the delivery of high-quality health-care services ($\beta = 0.199$; $p < 0.05$).

5.2.3 Environmental Factors and Delivery of Quality Health Care

The research revealed that cases of medicine and supplies stock-out are common but cases of political interference in decision making process are rare. The results also revealed that the facilities rarely experienced cases of expired drugs and supplies and that there is no adequate infrastructure to deal with all health desires of patients. Additionally, the study revealed that cases of conflict of interest in management are common but the facilities offer a conducive working environment. The bivariate results showed that environmental factors and the provision of high-quality health care had a positive, fairly strong, and statistically significant link ($r = 0.378$; $p < 0.05$). In regards to multivariate analysis, there was a significant influence of environmental factors on delivery of quality health care in Kasarani Sub County ($\beta = 0.179$; $p < 0.05$).

5.2.4 Economic Factors and Delivery of Quality Health Care

According to the findings, money disbursed to health institutions in Kasarani Sub-County are insufficient to cover the hospital budget, and disbursements are not made on time. Furthermore, the research found that the distribution of funding to county health facilities

is not equitable. In addition, the user fees charged to patients are not significant and neither is the funds received from donors. Moreover, the funding received from private corporate bodies is minimal. Finally, the study revealed that the health facilities have no income generating activities that bring in significant revenue. The bivariate results showed a favorable, substantial, and statistically significant association existed between economic considerations and the provision of quality health care ($r = 0.614$; $p < 0.05$). According to regression analysis, there was a positive, substantial, and statistically significant association between economic considerations and the provision of high-quality health care ($\beta = 0.274$; $p < 0.05$).

5.3 Conclusions

The conclusions are drawn on the findings of the study that has been summarized. The findings are presented in a logical order based on the study components of organizational factors, interpersonal factors, environmental factors, as well as economic variables.

5.3.1 Organization Factors and Delivery of Quality Health Care

The research concludes organization factors have a significant as well as positive effect on delivery of quality health care in Kasarani Sub-County. The health facilities in Kasarani Sub- County have in place an organization structure, organization internal values influence decision making in this facility, administration is done in a transparent manner and managers of the health facility are held to account for the operations of the entities. Organization factors could enhance quality delivery of health care at the surveyed health facilities.

5.3.2 Interpersonal Factors and Delivery of Quality Health Care

The research concludes that interpersonal factors have a significant positive effect on delivery of quality health care in Kasarani Sub-County. The research also discovered that health-care workers had the essential skills as well as expertise to perform their jobs. The health-care workers, on the other hand, did not receive pay commensurate with their job group placement. The health facility administration was scarcely involved in the recruitment of the devolved healthcare employees. A catalyst in offering great health care services was found to be competent, well-paid, motivated, and having an acceptable quantity of employees.

5.3.3 Environmental Factors and Delivery of Quality Health Care

This study concludes that environmental factors have a positive as well as significant influence on delivery of quality health care in Kasarani Sub-County. It was also discovered that there were instances of drug stockouts in health facilities. The health institutions evaluated totally lacks the potential to address all of their patients' health needs. The facilities were also found to be lacking in basic and adequate medical infrastructure. Allotment of drugs after ordering from KEMSA, as well as infrastructure size were all issues that the county's medical supply system had to deal with. Environmental factors were fundamental in delivery of quality health care.

5.3.4 Economic Factors and Delivery of Quality Health Care

The research concludes that economic factors have a positive as well as significant influence on delivery of quality health care in Kasarani Sub County. According to the

findings, there was no equality in the distribution of funding to sub-county health facilities. The monies were not disbursed on time, and the funds were insufficient to cover the hospital's budget. It was also discovered that the healthcare facilities examined failed to get adequate funding from donors. The importance of health-care financing in ensuring that operations run smoothly was critical. Enhancement in economic factors would result in improved delivery of quality health care.

5.4 Recommendations

A number of recommendations were made as a result of the research. In terms of organizational considerations, it is critical for health facility management to be transparent in their administrative duties. The overall healthcare community in the survey ought to be open and honest, both financially and in terms of dealing with patient complaints. In the event of financial difficulties, it would be smart for the facilities to hire highly trained professionals to fill roles in finance management as well as administration. Mishandling as well as misappropriation would be avoided, and resources would be better allocated to crucial aspects.

It is also recommended that health institutions in Kasarani Sub-County review their human resources to identify any areas of concern. To eliminate service delivery gaps, management should continue to hire competent individuals such as nurses as well as support staff. The labor must be fairly compensated and motivated. In terms of promotion and salary increases in the facilities, the management should continue to follow the policy requirements.

In respect to environmental factors, it is recommended that Nairobi County government and the Nairobi Metropolitan service ought to, set up medical infrastructure for the decentralized health facilities in order to improve their service delivery. Well-equipped laboratories and other support facilities are among these infrastructures. It's also a good idea for the institutions to maintain a consistent supply of high-quality drugs as well as medical equipment. In order to avoid running out of stock and assure regular supply, medicine and drug distribution ought to be prioritized depending on necessity.

In relation to economic factors, suggestion was studied health-care facilities allocate funds fairly. In attempts to keep operating expenses down and acquire cutting-edge equipment, the facilities should also seek additional finance to augment regular income. Obtaining extra capital may be combined with the development of income-generating activities.

5.5 Suggestions for Further Research

The research suggested themes that could be studied in Kenya. We recommend that a similar research ought to be done in a different sub-county, preferably rural, where there have been doctors and nurses strikes. Further, future studies should consider other factors that can influence of delivery of quality health care and which were not considered in this study. A comparative study on private and public health facilities may be conducted to ascertain the delivery of quality health care in Kenya.

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APPENDICES

APPENDIX I: INFORMED CONSENT FORM

SUBJECT: INFORMED CONSENT

Dear Participant,

Introduction:

My name is ROBERT KARIUKI MBANGUA, a Master of Science student at the Kenya Methodist University. For the conferment of a degree of Master of Health Systems Management, I intend to do a study on the "FACTORS INFLUENCING DELIVERY OF QUALITY HEALTH CARE IN KASARANI SUB COUNTY." This is a cross-sectional study whose findings will inform the government, researcher, and health professional in management on the factors that influence delivery of quality health services in Kasarani Sub Counties. Such information will help the management of hospitals and the government to improve quality of health care in the country. It will also inform management on strategies for optimizing quality of health care and therefore have a healthy population that contributes to the development and growth of Kasarani Sub County and Kenya as a whole.

You can reach me through email kmbangua@yahoo.com or through mobile number +254721775610 for any clarification

Study protocols

Participation in our research study is not mandatory. However, if you are willing to be a participant, you will be required to fill a questionnaire that evaluates the four factors that are expected to influence delivery of quality health care in Kasarani Sub County. The questionnaire has short closed ended questions that will take you a few minutes to complete. As stated earlier, you are not obliged to be a participant in our study. There are no penalties for refusing to participate. Moreover, your refusing to participate will not have a bearing on you in the country nor affect how you access and or utilize health care services in Kenya and Kasarani Sub County. If you have any questions during this process or at any stage of the study, feel free to ask. You can also request for withdrawal from the study whenever you feel like or to decline to respond to some statements and or questions that you deem inappropriate or that you do not feel comfortable answering.

Discomfort and risks

This will be a self-administered interview and therefore will not harm you in any way. However, the questionnaire that we will offer you might have intimate questions that you

might feel uncomfortable or embarrassed to answer. If this is a problem for you, feel free to skip the question or ask the principle investigator for clarifications. You are also at liberty to stop the interview process if you deem that to be appropriate or to relax your mind. We estimate that the questionnaire will take you 40 minutes to fill.

Benefits

Your participation in this study will benefit Kasarani Sub County and the government of Kenya in many ways. First, by providing truthful information, you will help us to identify gap in the health system in Kasarani Sub County and therefore formulate policies on how to improve and or strengthen it. As a result, men, women, and children from Kasarani Sub county and Kenya in general will have better access to quality health care and live healthier and more productive lives as a result. Your participation will also help us to learn more about this area of research.

Rewards

You will not be offered any monetary compensation for being a participant in our study.

Confidentiality

We will strive to maintain your confidentiality throughout the data collection process and dissemination of results. We will not capture your name, ID number, or any other personal identifier in the questionnaire. Second, this will be a self-administered questionnaire. You can complete at the privacy of your home or office and submit without anybody knowing. All consent forms will be kept in locked cupboards after completion of the study.

Contact Information

If you happen to have concerns, sentiments, and or questions about our research study, feel free to contact the deputy vice chancellor in charge of academics at the Kenya Methodist University.

Statement from participant

The details about my being a participant in this research study have been clarified to me. Moreover, I have had the opportunity to read the consent and the principle investigator has answered my questions satisfactorily. I understand that being a participant in this research study is voluntary. I have also been informed that, whenever I want, I can stop participating in the study at any time without prejudice in my workplace or daily life.

Participant's name: …….
Date: …….
Signature: ……..

Investigator's Statement

I, the undersigned, have given the participant a chance to read and understand the consent form. The procedures have been explained and the participant offers a chance to ask questions.

Interviewers name: ……

Date: ……..

Interviewer signature: ……..

APPENDIX II: RESEARCH QUESTIONNAIRE

Instructions:

This questionnaire will be used to collect data for a research study on "*factors influencing delivery of quality health care in Kasarani Sub County, Kenya*". To contribute to knowledge on this subject, we have invited you to be a participant in our research by completing this closed ended questionnaire. Mark a response with a tick (√) on your choice. While responding to the questionnaire you are advised not write your name, facility or institution, or information that somebody can use to identify you on the questionnaire. The data that we collect from you will be handled with confidentiality and shared only for informational purses and for the attainment of an academic degree.

Part I: Background Information

1. Kindly indicate highest level of education that you have attained

   Tertiary college level [ ]

   Undergraduate level [ ]

   Postgraduate level [ ]

2. How long have you been in a management position?

   Less than 3 years [ ]

   3 to 5 years [ ]

   6 to 10 years [ ]

   Above 10 years [ ]

Part II: Organization Factors

Using the Likert scale that we have provided you below, please indicate whether you agree or disagree with the illustrated statements and to what level.

5=Strongly Agree (SA)

4=Agree (A)

3= Not Sure (NS)

2=Disagree (D)

1=Strongly Disagree (SD)

	SA	A	NS	D	SD
1. This facility has in place an organization structure					
2. I am aware of the components of the organization structure					
3. There are no conflicts arising from organization structure in this facility.					
4. The organization internal values influence decision making in this facility.					
5. The administration of this health facility does not face difficulties in managing finances disbursed to them.					
6. The administration of this health facility is done in a transparent manner.					
7. The managers of this health facility are held to account for the operations of the entities.					
8. The management of this facility is up to the task.					
9. There are no communication breakdowns in this health facility					

Part III: Interpersonal Factors

Using the Likert scale that we have provided you below, please indicate whether you agree or disagree with the illustrated statements and to what level.

5=Strongly Agree (SA)

4=Agree (A)

3= Not Sure (NS)

2=Disagree (D)

1=Strongly Disagree (SD)

	SA	A	NS	D	SD
10. This facility is adequately staffed in all departments.					
11. The healthcare workers have the required skills and expertise to undertake their responsibilities.					
12. The healthcare staffs are adequately remunerated as per their job group placements.					
13. The facility's management is involved in recruitment of the devolved healthcare staff.					
14. The healthcare staff recruitment is done regularly (at least every year).					
15. The staff promotion is effected on merit.					
16. The staff promotion is done regularly (at most in every 3 years).					

Part IV: Environmental Factors

Using the Likert scale that we have provided you below, please indicate whether you agree or disagree with the illustrated statements and to what level.

5) = Strongly Agree (SA)

4) = Agree (A)

3) = Not Sure (NS)

2) = Disagree (D)

1) = Strongly Disagree (SD)

	SA	A	NS	D	SD
17. Cases of medicine and supplies stock-out in this facility are rare.					
18. There are no cases of political interference in decision making process in this facility.					
19. This facility rarely experiences cases of expired drugs and supplies.					
20. This health facility has adequate infrastructure to address all health needs of patients.					
21. Cases of conflict of interest in managing this facility are rare.					
22. This facility offers a conducive work environment.					

Part IV: Economic Factors

Using the Likert scale that we have provided you below, please indicate whether you agree or disagree with the illustrated statements and to what level.

5=Strongly Agree (SA)

4=Agree (A)

3= Not Sure (NS)

2=Disagree (D)

1=Strongly Disagree (SD)

	SA	A	NS	D	SD
23. The funds disbursed to this health facility are sufficient to cater for the hospital budget.					
24. Funds disbursement to this health facility is executed timely.					
25. There is equitability in disbursement of funds to county health facilities.					
26. This health facility gets significant finances from user fees charged on patients					
27. This health facility receives significant funding from donors.					
28. This health facility receives minimal funds from private corporate bodies.					
29. This health facility has income generating activities that bring in significant revenue.					

Part VI: Delivery of Quality Health Care

Using the Likert scale that we have provided you below, please indicate whether you agree or disagree with the illustrated statements and to what level.

5) = Strongly Agree (SA)

4) = Agree (A)

3) = Not Sure (NS)

2) = Disagree (D)

1) = Strongly Disagree (SD)

	SA	A	NS	D	SD
30. Health services provided in this facility are always available.					
31. There are accessible roads to this health facility					
32. There are signage at this health facility					
33. Health services provided in this facility are acceptable.					
34. Health services provided in this facility are affordable.					
35. There are rarely complaints lodged by patients in this facility.					
36. The healthcare workers are available to offer requisite health services.					
37. The County Government often supervises delivery of health care in this facility.					
38. The Ministry of Health is involved in all health service delivery in this facility.					
39. The Payers (such as NHIF and other insurance firms) hardly affect health service delivery.					
40. The waiting time required to serve patient has greatly					

reduced since healthcare was devolved.					
41. The number of patients seeking services from this health facility has greatly increased since healthcare was devolved.					

Thank you for your time and cooperation.

APPENDIX III: ETHICAL CLEARANCE CERTIFICATE

KENYA METHODIST UNIVERSITY
P. O. BOX 267 MERU - 60200, KENYA
TEL: 254-064-30301/31229/30367/31171
FAX: 254-64-30162
EMAIL: serc@kemu.ac.ke

November 26, 2020

KeMU/SERC/HSM/26/2020

Robert Kariuki Mbangua
Kenya Methodist University

Dear Robert,

SUBJECT: FACTORS INFLUENCING DELIVERY OF QUALITY HEALTH CARE IN KASARANI SUB COUNTY

This is to inform you that Kenya Methodist University Scientific Ethics and Review Committee has reviewed and approved your above research proposal. Your application approval number is KeMU/SERC/HSM/25/2020. The approval period is 24th November 2020 – 24th November 2021.

This approval is subject to compliance with the following requirements

I. Only approved documents including (informed consents, study instruments, MTA) will be used.

II. All changes including (amendments, deviations, and violations) are submitted for review and approval by Kenya Methodist University Scientific Ethics and Review committee.

III. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to KeMU SERC within 72 hours of notification.

IV. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to KeMU SERC within 72 hours.

V. Clearance for export of biological specimens must be obtained from relevant institutions.

VI. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal

VII. Submission of an executive summary report within 90 days upon completion of the study to KeMU SERC.

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://oris.nacosti.go.ke and also obtain other clearances needed.

Yours sincerely,

KENYA METHODIST UNIVERSITY KEMU SERC 26 NOV 2020

Dr. A. WAMACHI
Chair, SERC

APPENDIX IV: NACOSTI CLEARANCE CERTIFICATE

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **452452**

Date of Issue: **09/March/2021**

RESEARCH LICENSE

This is to Certify that Dr.. Robert Kariuki Kariuki of Kenya Methodist University, has been licensed to conduct research in Nairobi on the topic: FACTORS INFLUENCING DELIVERY OF QUALITY HEALTH CARE IN KASARANI SUB COUNTY for the period ending : 09/March/2022.

License No: **NACOSTI/P/21/9199**

452452

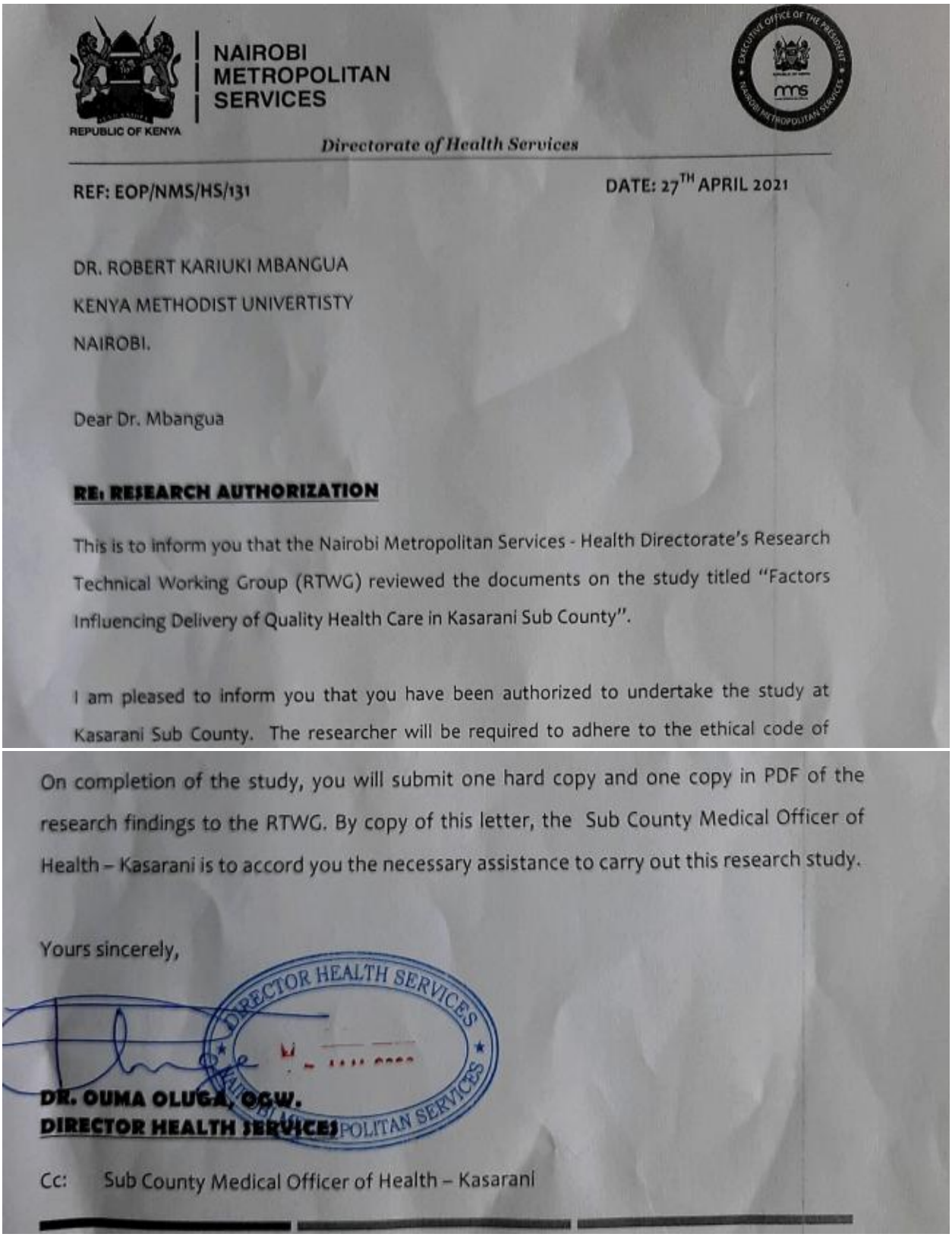
Applicant Identification Number

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.

APPENDIX V: NAIROBI METROPOLITAN SERVICES CLEARANCE



NAIROBI METROPOLITAN SERVICES

REPUBLIC OF KENYA

Directorate of Health Services

REF: EOP/NMS/HS/131

DATE: 27TH APRIL 2021

DR. ROBERT KARIUKI MBANGUA
KENYA METHODIST UNIVERTISTY
NAIROBI.

Dear Dr. Mbangua

RE: RESEARCH AUTHORIZATION

This is to inform you that the Nairobi Metropolitan Services - Health Directorate's Research Technical Working Group (RTWG) reviewed the documents on the study titled "Factors Influencing Delivery of Quality Health Care in Kasarani Sub County".

I am pleased to inform you that you have been authorized to undertake the study at Kasarani Sub County. The researcher will be required to adhere to the ethical code of

On completion of the study, you will submit one hard copy and one copy in PDF of the research findings to the RTWG. By copy of this letter, the Sub County Medical Officer of Health – Kasarani is to accord you the necessary assistance to carry out this research study.

Yours sincerely,

DIRECTOR HEALTH SERVICES

NAIROBI METROPOLITAN SERVICES

DR. OUMA OLUGA, OGW.
DIRECTOR HEALTH SERVICES

Cc: Sub County Medical Officer of Health – Kasarani