ASSESSMENT OF THE INFLUENCE OF QUALITY MATERNAL HEALTHCARE SERVICES ON CLIENT SATISFACTION IN RONGAI SUB COUNTY, NAKURU, KENYA

WENDY JEMELI TIROP

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF MASTERS OF SCIENCE DEGREE IN HEALTH SYSTEMS MANAGEMENT OF MOUNT KENYA UNIVERSITY

OCTOBER 2021

DECLARATION AND APPROVAL

Declaration by Student

I hereby declare that this thesis is my original work and has not been submitted to any university for the award of a degree or any other award.

Signature: _____ Date: 1/10/2021

Wendy Jemeli Tirop

MHSM/2018/22372

Approval by the Supervisors

We confirm that the work presented in this thesis was done by the candidate under our supervision.

Signature: _____ Date: 2/10/2021

Dr. Moses Esilaba.

Senior Lecturer,

Department of Environmental Science,

Egerton University.

Signature: _____ Date: 2/10/2021

Dr. Oscar Donde.

Lecturer,

Department of Environmental Science,

Egerton University.

DEDICATION

I dedicate this Thesis to my entire family and all the healthcare practitioners, may God bless you for your dedication of serving mankind.

ACKNOWLEDGEMENT

Firstly, I thank God for his grace and strength to undertake this work. Great appreciation to Dr. Moses Esilaba, Dr. Oscar Donde for their support, encouragement and contribution to this work. I also acknowledge the support of my mentors; Dr Ruth Nyambura and the late Mr. Samuel King'ori for their great support during this task.

I thank my employer, Nakuru County Government Department of Health services (DOHs) for allowing me to undertake my studies on part-time basis. To Mount Kenya University fraternity, thank you for the support and cooperation and allowing me use the educational materials in the institution.

Finally, I thank my family; Mr. Paul Mwangi, daughters' Mercy and Lynne for their support, love and endurance during this study period. My study mates Fancy Kipkech and Jacky Selvesta you made it bearable, thank you so much.

ABSTRACT

An effective medical intervention to prevent maternal morbidity and mortality is maternal health care (MHC). Therefore, quality of MHC is an important concern in addressing the challenges faced by Kenya as a country with high maternal mortality. This study assesses the influence of quality maternal healthcare service on client satisfaction in Rongai Sub-County health institutions. The study targeted all women of reproductive age (18-49 yrs.) seeking maternal health services in Rongai sub-county health facilities. The study adopted a descriptive cross-sectional design. The health care facilities were clustered according to administrative regions (wards) and the respective levels of care. That is, hospitals, health centers, and dispensaries, and simple random sampling were employed to choose the health facilities for the study. Convenience sampling was used to get 465 mothers, and purposive sampling method used to get healthcare practitioners in charge of the selected healthcare facilities. A questionnaire was administered to women searching for maternal healthcare services within Rongai Sub County to measure client satisfaction. An observational checklist was used to assess the facilities' ability to provide quality maternal health care as per WHO validated indicators for the provision of quality maternal medical care. An interview schedule was administered to the key informants (health care providers) to ascertain facilities' readiness to offer maternal healthcare. The data was analyzed descriptively (Means) and inferentially (Pearson Chi-Square) to test the relationship between the categorical variables and Spearman's correlation analysis to determine the co-relation between structural organization and items availability with clients' satisfaction. All the test was performed at 95% (P=0.05) level of significance. Through Pearson Chi-Square analysis, it was indicated that the level of education, employment status, income level and distance from the health facility are some of patients' related factors that influence their satisfaction with maternal health services (P value less than 0.05). It was also noted that referrals influenced the choice of facility the most and there was inadequate availability of some critical healthcare items in most facilities. Spearman's correlation analysis indicated that the need for adequate delivery services had the strongest and statistically significant correlation with client satisfaction (R= 0.998, P=0.003). This study concluded that the dimensions of quality maternal healthcare positively influence client satisfaction. The outcomes also indicate that 50% of the facilities were found to be inadequate with infrastructure such as placental pits, equipments, incinerators and 83.3% of the facilities not utilizing the partograph in monitoring mothers in labour. It is recommended that the county government strengthen the infrastructural aspects in the facilities and mechanisms for monitoring quality of healthcare delivery. Employment and equitable distribution of staff across the facilities. The County government to embrace stakeholder involvement in provision of quality maternal healthcare as this enhances equitability, efficiency, and effectiveness service delivery. Mechanisms for dissemination, implementation and monitoring of the policies/guidelines should be put in place.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS AND ACRONYMS

ANC	-	Antenatal care
COPE	-	Client Oriented Provider Efficiency
DOHs	-	Department of health service
DNA	-	Deoxyribonucleic Acid
DRH	-	Division of Reproductive Health
EIC	-	Educational Information and communication
HBM	-	Health Belief Model
IFAS	-	Iron and Folic Acid Supplements
KQMC	-	Kenya quality Model of health
KDHS	-	Kenya Demographic Health Survey
MCHIP	-	Maternal and Child Health Integrated program
MHC	-	Maternal Health Care
MNH	-	Maternal Neonatal Health
MHTF	-	Maternal Health Taskforce.
MMR	-	Maternal Mortality Rate
MOH	-	Ministry of Health
NACOSTI	-	National Commission of Science, Technology and innovation
NGO	-	Non Governmental Organization
NHSSP	-	National Health Strategic Sector Plan
PIA	-	Performance Improvement Approach

ROK	-	Republic of Kenya
SDGS	-	Sustainable Development Goals
SBM-R	-	Standard Based Management Recognition
TBAs	-	Traditional Birth Attendants
UNDP	-	United Nation Development Program
UNFPA	-	The united Nations Population Fund
UNICEF	-	United Nations International Children's Fund
UHC	-	Universal Health Care
USAID	-	United states Agency for International Development
WHO	-	World Health Organization

CHAPTER ONE

INTRODUCTION

1.0 Introduction

The section comprises the study background, statement of the problem, the purpose of the study, objectives of the study, research questions, justification, scope of the study, study limitations, delimitation, assumptions of the study, operational definitions of terms.

1.1 Background of the Study

High maternal death is an issue that most states and non-government institutions have tried to solve over a very long time. Globally maternal death ratio nearly halved in the last 25 years, according to (Ginsburg et al., 2017). However, little development has been experienced in the third world countries where the Maternal Mortality Rate (MMR) is currently unacceptably high. In many third-world countries, and specifically in remote areas and villages, the Maternal Health Care (MHC) services are still unreachable. In few areas where they are available, the community uptake of the MHC has continued to remain low. Even though the MHC service use is noted to have slightly improved in the past 10 years, there is still need for increased utilization and safe deliveries, and reduced MMR. A big variation in quality of maternal healthcare still exists in developing nations, a condition that has created inequalities in the MHC service delivery leading to imbalances in the provision of maternal health (Rooij & Frank, 2016).

The poor status of African MHC has been an issue of concern, and most governments in the regions have initiated efforts to improve the situation. Within the Africa region, MHC accounts for 62% of the global maternal deaths, with an MMR of 289: 100,000 births

against 16: 100,000 births in the developed countries. Such intraregional disparities in maternal health coverage clearly explain the discrepancies in the quality of MHC services. According to the WHO (2010), Africa as a region has large intraregional disparities in MHC. For instance, in South Africa, by the year 2010, universal maternal health coverage was spread across the nation, while in West Africa, only one-third of pregnant women had access to ante-natal care.

The level of clients' satisfaction can determine the standard and quality of MHC service. Providing good quality healthcare to the pregnant women leads to higher levels of client satisfaction, and is an indispensable aim of healthcare systems. In recent years, client fulfillment has achieved substantial consideration making it a parameter to measure the quality of healthcare service delivery and prime concerns of health programme managers and implementers. To attain the required MHC service distribution and clients' satisfaction, much focus needs to be directed on improved health services as weak health systems are a significant setback to achieving the global health goals. Therefore, to improve MHC, strengthening the existing health care systems, replacing the outdated ones and eliminating the non-functional ones is a step towards straightening the health systems and providing efficient quality health services that are client-oriented. Indeed, strengthening healthcare systems has been recognized as a critical improvement of health service provision (Okumu & Oyugi, 2018).

In any country, the health of its citizen is based on the delivery of quality medical services. Quality health care is critical in health service delivery for achievement of effective universal health coverage (UHC) (Berwick, Kelley, Kruk, Nishtar, & Pate, 2018). The success of the health service delivery requires quality as a building block. The systems' core

mandate is to provide safe effective people-centered healthcare to all (Ghebreyesus, 2018). Quality has significant effects on cost of healthcare. According to Juran & Godfrey, (1999), a good quality implies freedom from traceable errors or avoidable mistakes in service delivery. Provision of high quality health services helps to minimize errors/professional negligence and increases customer satisfaction and retention. Just like in other sectors such as agriculture, education and construction, quality is a status achieved based on gradual improvements. Indeed, to increase quality within the health system, there is a need to master the universal continuous total quality improvement strategy by adopting various approaches in reducing errors and deficiencies. Mastering the universal continuous total quality improvement strategy will experience a lengthy way in reducing the poor medical care services (Bustreo et al., 2013). The costs that arise from poor health quality to the community, the health organization, and the individuals/families are huge. From proper planning and better prioritization, more resource allocation in quality improvement will ensure provision of better health care outcomes to the individual and entire society, and give value for money (WHO, 2018a). In this regard, it is always highly recommended to invest in a high quality healthcare as this will give a satisfactory output (Ali & Wajidi, 2013).

To have a well-structured maternal healthcare service delivery, there is a need for increased utilization and access of the existing medical care services and improving the poor ones as this will sufficiently result in improved maternal health care outcomes. An improved maternal healthcare system ensures safe deliveries and protects the health of the mother and baby. Indeed, the skilled medical care a pregnant woman gets during the prenatal period, delivery and postnatal improves the wellbeing of the mother and her newborn and the possibility that the client will come again to seek care is also improved (Wilson, Tabrizi,

Gholipour, & Farahbakhsh, 2013). There is also need for the medical care service personnel as well as policy makers within the health care sector to have a stronger understanding of the dimensions of quality in the healthcare setup. This is because quality of healthcare given at all levels of service delivery should be in accordance with the healthcare setup's quality attributes and meets the client needs. The health care quality set-ups are based on the existing health care standards, which must be stipulated in accordance with the policy provisions. Therefore, for the success of quality healthcare provision, the system should ensure safety to both the client and the provider. This is achieved by following the set standards to minimize risks (Watkins et al., 2017). Additional clients' preference and perception are two components that determine the health care service set-up. From that perspective, delivery of effective services should be based not only on the available evidence but also on the patients' preferences and perceptions according to set standards and guidelines (Barton, 2009). The health ministry has invested so much on standards and guidelines however there are no mechanisms to consistently ensure implementation of the same at the different levels of service delivery hence disparities in the quality of care given.

Having a healthcare facility does not necessarily indicate its availability for utilization by the community. The availability is based on other factors such as distance from the clients as well as the operation times. For instance, timeliness in opening the health facility is a factor that can hinder utilization of the MHC services. The attribute of timeliness in health service delivery is a major factor that aims to address the three delays associated with maternal morbidity and mortality(WHO, 2018a). Timeliness does not just promote the availability, but also ensure efficiency and equity. Efficiency and equity should always be maintained as the two ensure quality health service provision, including maternal health care services

(Olatunbosun, 2014). People-centered health care aims to meet the peoples' health needs and deliver in their preference and aspirations (Organization, 2014). Quality is defined as "doing the right things with little resources incrementally will result to better outcomes and lead to client satisfaction" according to (Juran &Godfrey, 1999). Quality is compliance with standards and is also a basic component of the right to health (WHO, 2016b).

Providing consistent quality healthcare boosts the possibility of attaining expected health benefits. Embracing medical science and technology remains key in ensuring quality health care service provision. Therefore, the measure in quality levels of technical care implies the application of medical science and technology, thus getting the most benefits out of healthcare with minimal risks and errors (Shifraw, Berhane, Gulema, Kendall, & Austin, 2016). Studies have recorded higher maternal deaths in developing nations than the well-up countries. Developing nations contribute 99% of maternal deaths due to pregnancy-related causes annually (WHO, 2016b). Therefore, it is imperative to augment the availability of services while ensuring quality standards towards service delivery that leads to client satisfaction and improve uptake of services, which will help reduce delays that could result in maternal deaths (WHO, 2016a).

Clients' expectation and satisfaction are the major aspects of promoting quality maternal health care provision. Services that do not meet client's expectations even with good access and affordable cost will still hinder the universal health coverage's effective achievement. Additionally, trust and acceptance of the healthcare is to ensure efficient health service provision. Communities do not utilize services they consider to be of insignificant benefits to them. Therefore, it's important for the health system to ensure continuous improvement in total quality improvement (WHO, 2018a). Client satisfaction is a factor that needs to be

promoted within the healthcare sector. In provision of health services, client contentment or satisfaction has been utilized to measure the value of a service in the health sector. Various studies have established that good medical services provision brings forth client's satisfaction and enables the client to come again to be attended (Okumu & Oyugi, 2018). As such, client satisfaction is considered a valued indicator in healthcare quality assessment that when considered in any health service promotion plan, ensures that quality of health care service is improved. To ensure that clients satisfaction is achieved, there is need to ensure accurate and proper understanding of satisfaction predictor. Prediction of other factors that can influence clients' satisfaction of healthcare services such as privacy, respect and short waiting duration and a chance to interact with the service provider by asking questions and seeking clarifications (Aldana, Piechulek, & Al-Sabir, 2001; Uzochukwu, Onwujekwe, & Akpala, 2004).

Global maternal mortality is a matter of concern within the health sector. Globally high maternal mortality remains a problem that requires a timely solution. The death of pregnant mother within the pregnancy period up to 6 weeks post-delivery remains a substantial public health burden in Africa, and Kenya as a whole is not an exception. According to the WHO (2018b), every year, 536,000 women succumb to pregnancy-related causes, and many of those deaths may be avoided if women get access to quality maternal healthcare during pregnancy. To have a well-structured health care service provision, there is a need to promote consistency in assessing and upgrading maternal health care services. Consistency in the provision of services, ensures sustainability and prosperity in availing services to the clients. Ensuring consistency in the provision of quality maternal health care services is an important intervention that will promote the utilization and appropriate use of the services

(Kitui, Lewis, & Davey, 2013). Additionally, studies have recommended that taste, preference, and satisfaction be top in the list of factors to improve health service delivery. Tastes, as well as satisfaction, strengthen the status of service delivery process. It's acceptable that individuals' choice of healthcare facilities is determined by their taste, contentment with the service in line with the service quality dispensed (Okumu & Oyugi, 2018).

The focus of promoting healthcare services has been based on the standard and quality of medical service. Quality medical service is imperative in effective application of health services in developing countries including Kenya (Gitobu, Gichangi, & Mwanda, 2018). To improve the standard and value of health care, there is need to understand the prevailing driving forces. The main driving forces of healthcare service provision are good policies, quality standards, Human resource and appropriate guidelines. When good policies, quality standards and proper guidelines are available in any organization, the chances of attaining the expected performance target becomes a possibility. Furthermore, such driving forces need to be based on continuous accurate monitoring and evaluation to achieve that. Additionally, efficient healthcare delivery also calls for strict adherence to the laid down measures. Indeed, most countries have developed health policies, standards and guidelines to ensure quality healthcare delivery. However, the extent to which they are adhered to is still a big challenge since no measures are put in place for consistency in its monitoring and evaluation (Luoma et al., 2010). From that observation, maternal health facilities are encouraged to develop monitoring and evaluation strategies, and ensure that such are strictly adhered to. When all the factors discussed above are properly structured within a health facility, it is expected that the clients' satisfaction will be boosted as all his or her

expectation will be met to its near fullness. Client satisfaction relates to a person's positive assessment regarding different healthcare aspects and their judgment on value of medical services dispensed in the health facility. The clients' judgement of the quality of medical service is relies on the kind of service they receive from the health care facility. Clients whose expectations and needs are not met by the healthcare service in a particular health centre will ignore the facility and never come back for treatment (Gitobu et al., 2018).

Several studies have emphasized the need to have proper and appropriate monitoring tools at all health service provision levels. Monitoring the quality of maternal healthcare is key in informing the policy makers on the efforts and priority areas to consider in resource allocation to address preventable causes of maternal deaths. Monitoring also opens ways to understand the level of access to the existing health services and facilities. It also ensures proper and accurate utilization of the existing health facilities and services with a maternal health care unit. Measures of access and utilization have always been used to know the progress towards maternal health service uptake. Identifying and understanding such goals ensures that the existing maternal health goals are achieved. However, despite the interventions put to improve maternal healthcare access by the Kenyan government (Linda mama initiative), maternal deaths are still far too many at 510: 100,000 over time and remain an issue of concern. The sustainable development Goals (SDGs) aspiration is to minimize the MMR to 70:100,000 by the year 2030. Quality of maternal healthcare is basic in achieving this goal (WHO, 2018a), hence need to be considered for improvement. Indeed, Nakuru county was rated among the top 15 counties contributing to the burden of maternal mortality in Kenya with a MMR of 367: 100,000 live births, creating the need to have much focus in the county for improved maternal medical care and reduced maternal death rate.

Furthermore, attention needs to be given to remote Sub-counties such as Rongai Sub-County, which still experience inadequate healthcare coverage.

1.2 Statement of the Problem

Reduction or elimination of occurrences of illnesses and deaths related to pregnancy has remained a challenge in Kenya. Many initiatives to increase the uptake of the MHC services have been instituted, but the progress to realize this is still slow. Nationally only 62.1% of deliveries are conducted in the health facilities, and 43% of the pregnant mothers make the recommended 4 ANC visits. Good maternal care from conception to post delivery is a great intervention in prevention and reduction of maternal morbidity and mortality. Nakuru County has a proportion of 54% on hospital deliveries and 34% attendance of 4 ANC visits (Njeri, 2017). Kenya's maternal mortality has remained unacceptably high at 510:100,000 live births and Nakuru county's MMR stands at 367: 100,000 live births (KDHS, 2014). Rongai Sub County where the study will be carried out is equally not doing well in the uptake of maternal healthcare with the expected 7000 deliveries per year only 36.5% of them manage to have the WHO recommended 4 antenatal care visits, and 23.4% of the mothers deliver in the health facility (DHIS, 2017). Studies have been done on challenges facing provision of MHC services and mainly human resource has been a significant factor identified. However, limited literature exists on client perception on maternal health services received as a feedback mechanism on quality of services given and the effect of patient factors on the utilization of the services.

1.3 Purpose of the Study

The purpose of this study was to assess the influence of quality maternal healthcare service on client satisfaction in Rongai Sub-County of Nakuru county.

1.4 Objectives of the Study

1. To assess structural organization's influence on clients' satisfaction receiving maternal healthcare in Rongai Sub-County health institutions.
2. To evaluate the influence of processes of maternal healthcare service delivery on client satisfaction in Rongai Sub-County health institutions.
3. To establish the influence of client/provider interaction on clients' satisfaction receiving maternal healthcare in Rongai Sub-County health institutions.
4. To determine patients-related factors that influence clients' satisfaction receiving maternal healthcare in Rongai Sub-County health institutions.

1.5 Research Questions

1. What is the influence of structural organization on satisfaction of clients receiving maternal healthcare in Rongai Sub-County health institutions?
2. What is the influence of processes of maternal healthcare service delivery on client satisfaction in Rongai Sub-County health institutions?
3. What is the influence of client/healthcare provider interaction on satisfaction of clients receiving maternal healthcare services in Rongai Sub-County health institutions?
4. What are the patients' related factors which influence the satisfaction of clients receiving maternal healthcare in Rongai Sub-County health institutions?

1.6 Justification of the Research

Client/customer opinion is important in getting to understand their perception of a quality service. Understanding the determinants of client contentment, helps in policy making and implementation of the programs to tailor them to meet clients' needs and provider's

expectations according to the vision 2030, as outlined in the Kenya Health Policy (2014-2030). The health system should strive to be an efficient and effective system that provides accessible, equitable and affordable health services for all. Understanding client satisfaction in relation to quality of care would, identify what client value most in relation to their needs, provide feedback to management and staffs on how clients' view their services, Support cost-effective interventions to ensure access and effective care and ensure that programs are client oriented and that they are delivered efficiently and effective as possible. Despite introducing free maternity services by the government, there is still an escalation in the trend of maternal mortality within the county and the maternal health care service uptake is still low; that is the reason that triggered my desire to pursue the study. This study serves as an eye-opener to the County Health Management Team and helps the community improve maternal health care. Other researchers could use information gotten from this study later to expound the research findings.

1.7 Scope of the Study

The study respondents were medical care staff working in the County health facilities in Rongai Sub County and females of reproductive age (18-49 yrs.) who were seeking maternal medical services.

1.8 Study Limitation

Some interviewees were hesitant to provide information. This might have led to some questions not being answered or the respondents giving some misleading information. Language barrier was a challenge in areas where respondents could not understand or speak either English or Kiswahili.

1.9 Delimitations

The researcher created rapport by explicating to the respondents about the need for the study and promised them confidentiality. This ensured that the respondents cooperated in giving correct information that will provide meaningful research findings. The researcher used different data collection instruments to get a wide range of responses. The researcher used proxies as indicators of quality of maternal healthcare as well as satisfaction. The researcher sought assistance of a translator in cases where language was a barrier.

1.10 Assumptions of the Study

The study assumed that the sample size chosen adequately represented the whole population. The respondents (Health care providers and the selected clients) also cooperated in responding to the questions accurately and honestly.

1.11 Operational Definitions of Terms

Maternal Death – This is the demise of a woman during prenatal period, when giving birth or within the first six weeks following delivery and arising from complications associated with the pregnancy or how it was managed. The cause of death is exclusive of accidental or incidental causes (WHO, 2010). In this study, maternal death was used to indicate the deaths of mothers within the pregnancy period up to 42 days after delivery (Firoz et al., 2013).

Maternal mortality Ratio - The term was used to refer to the number of women dying due to pregnancy associated factors per 100,000 live births, excluding accidental or incidental causes.

Structural factors -For the purpose of this study, program factors are institutional based factors that promote client comfort, dignity and safety eg privacy, infection prevention measures, waiting space, range of services and information flow.

Awareness - Knowledge gained through own perception or being informed and cognizant of current developments regarding maternal health care and its importance.

Process – In this study, process was used to mean services offered and client provider interaction which includes waiting time, creating awareness on the maternal child health care, danger signs in pregnancy, birth preparedness.

Maternal Healthcare service/delivery - The services offered to a pregnant woman, including prenatal care, Labor and delivery care, and postnatal services.

Antenatal/Prenatal care - These are services/care provided to a pregnant woman from conception up to the beginning of labor pains.

Intra-partum care - This term was used to indicate service provided to a pregnant woman during labor and delivery

Post-partum care - This is the service provided to a woman immediately after giving birth up to 42 days' post delivery

Quality Measure -This is the criteria for assessing, measuring and monitoring a quality service as per specified standards.

CHAPTER TWO

LITERATURE REVIEW

This part goes through the previous works done in relation to quality of maternal service delivery and client contentment/satisfaction. The chapter comprises quality of maternal healthcare, structural factors, process factors, client/provider interaction and Patient related factors on client satisfaction.

2.2 Empirical Review

Quality and quantity in health care services is a factor of great consideration within the health service sector. Quality of health service provision is a foremost goal of any medical care system. The constitution of Kenya, 2010 is keen on quality service delivery (Murugami, 2014). This is in line with the pillars of vision 2030 that promote the need to offer the best healthcare services to all Kenyans (Herrler et al., 2015). These sources were key in enlightening the researcher on the Universal Health Care in the Kenyan perspective and the WHO building block on service delivery. Maternal healthcare refers to the care given to women of procreative age (15-49 years) before conception (preconception care), during pregnancy (antenatal care), delivery and post-partum period. Maternal health is the health of a mother while pregnant, childbirth and postnatal (Bustreo et al., 2013).

2.2.1 Structural Factors for Maternal Healthcare Delivery

Quality in healthcare delivery covers the entire dimension, including the structural factors. Structural factors which include: good physical environment, cleanliness, proper signaling, and adequate supplies of commodities among others are important component for satisfactorily delivering the medical care services. Additionally, it is paramount to ensure that the delivered healthcare services are consistent with the current technology, skills and

knowledge (Gitobu et al., 2018). This includes the facility's readiness to offer the basic maternal healthcare services and "skilled birth attendant" indicators, which have not been sufficiently validated and customized to suit the county's local maternal health needs (Alden, Lowdermilk, Cashion, & Perry, 2013).

To improve any function within an organization, there is need to develop quality models and the main guiding principles. Most developing countries have tried to adopt this strategy to enable them work towards accomplishing their development agenda within the health sector. Indeed, the government of Kenya in conjunction with the development partners developed the Kenya Quality Model of Health (GOK, 2014) which provides dimensions that seek to make quality improvement in the health sector. However, such models need to be anchored on some result-oriented principles that ensure that the model's objective and goal remains clears for its execution. To ensure that minimum measures for the dimensions are effective, the consideration should be based on the principles such as; it being effective, it being efficient, it being accessible, it being acceptable, it being patient-centered, it being equitable, and being safe. Additionally, with the necessary models and driving principles, additional aspects of ensuring sustainability and consistency should also be incorporated. However, strategies to cascade this to the lower points of service delivery and measures to ensure sustainability and consistency are not in place therefore there still exist disparities in implementation of the model in the different levels of service delivery.

Globally, antenatal care is an important period that requires sufficient and efficient health attention. The capacity and quality of services for basic essential obstetrical care offered in the first contact of a pregnant woman and availability of effective referral are imperative for prenatal care to be operational. Despite antennal care being an essential health service

requirement, especially in the wake of several opportunistic infections that have increasingly put the life of both the pregnant mothers and their fetus in danger, most developing nations are still struggling to ensure that its quality and quantity are up to the required level. Kenya Service Provision Assessment, 2010 indicated that 74% of the health facilities provide maternal healthcare. However, the availability of the Maternal Neonatal Health (MNH) providers is inadequate and their competencies are grossly poor. In Kenya efforts have been introduced to ensure that such shortfalls are improved upon and appropriate and acceptable level of maternal health service provision is attained. For example, the Kenya maternal and newborn health model (2009) came up with six pillars to enhance maternal healthcare quality in what is referred to as "The Safe motherhood initiative." The safe motherhood initiative was introduced as an effort towards promoting maternal health care in Kenya. The initiative is a strategy employed by the Kenyan ministry of health to reduce morbidity and mortality of expectant women by ensuring that every woman gets access to the information and quality maternal healthcare they require to go through the pregnancy period safely. Despite this initiative having proved to be able to positively contribute to the quality of maternal healthcare that mothers require to go through the pregnancy period safely, it also faced some challenges. For instance, it lacked the needed adequate manpower. This greatly derailed its implementation and success as its strength was to be anchored on the foundation of available skilled human resource and functional health system (Rani, Bonu, & Harvey, 2007).

Most health-based programs require the full corporation of the community for their successful implementation. Kenyan government has tried to engage the communities in most of its health programs. For example, the Kenya Maternal Neonatal Health (MNH) model

appreciates the important role the community plays in the promotion of its own health. Additionally, most health programs also strongly anchored on the existing laws of the land such as the Kenyan constitution. The MNH emphasizes the need and importance of building on the linkage between the community and the health facilities and offering healthcare services that are human right sensitive. This corresponds to the Kenyan constitution of 2010 and Kenya health policy 2014-2030 (Glenngård & Maina, 2007). The quality of maternal health is attained and sustained by implementing the quality assurance guidelines and ensuring consistency (MCHIP, 2016).

Quality improvement strategies are program and project implementation pillars that are key to any program and project's success. Within the health sector such strategies have paid a pivotal role in ensuring improved health programs and projects. For example, by observing the continuous quality upgrading strategies like implementation of the facility service charters, Client-Oriented Provider Efficiency (COPE), Performance improvement Approach (PIA), Kenya quality model (KQM), Standard Based Management Recognition (SBM-R), together with the above strategies support supervision and enhances consistency and success to the service provider (DRH, 2010). This is an important aspect in promoting good maternal health services and establishing a functional referral system, which are key in achieving improved maternal health. Furthermore, effective means of communication is also a key factor that needs to be incorporated to the quality improvement strategies. For instance, cell phone, a fully equipped ambulance with adequate fuel allocation to ensure timely movement of emergency cases all the time is an extreme important intervention to reduce on the delays in receiving maternal health care (SRHR, 2013). Communication can also be enhanced through physical or electronic letters. For example, good documentation

and use of standardized referral letters assist in the accountability of emergency cases and ensure that actions are taken as strictly stipulated (Glenngård & Maina, 2007).

2.2.2 Process Factors for Maternal Healthcare Delivery

For appropriate maternal health service delivery, there is need to identify, implement and adopt quality health services. Quality health services are those health services delivered timely and are effective and efficient and meets the clients' needs and preferences at the same time minimizes the risks. Quality medical care should be available as well as affordable to all for good and quality health service provision (WHO, 2018a). Furthermore, appropriate health service provision also requires the consideration of well-informed process factors. A process factor remains key to quality health service provision as it indicates areas where the health service provider does cover, and this ensures proper maintenance and improvement of the health service provision to the consumer/client. It also informs the service user on the available services and what they expect to get from the provider. Quality in healthcare service delivery is crucial to attainment of global health security. Indeed, quality is not a onetime even, but it requires proper planning and prioritization in implementation and achievement for the achievement of Universal Health Coverage (UHC) (WHO, 2018b). Quality medical system is not only for the reach county but is a key component of health service provision that requires to be embraced by all countries irrespective of their economic, education or social status. Moreover, failure to build quality health systems from the start is what raises the cost and makes it a challenge for countries, specifically from third world to have the capability to incorporate it into their weak health service provision systems. Indeed, poor quality is the result of health systems failure, not the fault of individual providers (WHO, 2018a). Quality healthcare delivery does not focus only

on availability of service but also on the process involved in service delivery as well as accessibility of the service. Quality services ensure that the health service provision process is based on strong service delivery and readily accessible program.

Child bearing and motherhood are life stages that must be given the attention as it is through them that there is reproduction and population growth. Motherhood is meant to be often a positive and satisfying experience; however, many mothers have had to go through suffering ill-health and even death. Most of these deaths and pregnancy complications can be prevented by offering quality pre-conceptual care, prenatal care, care during delivery, and post-natal care (WHO, 2016b). Prenatal care connotes the attention provided to an expectant woman before delivery. The safety of the mother and the fetus or the new born child relies so much on the quality of the prenatal care, as it is through this intervention that the wellbeing of the mother and the fetus is taken care of and appropriate remedial actions can be achieved within the right time without delays. If identified during the antenatal period and managed effectively, most of the pregnancy-associated complications can reduce maternal morbidity and Mortality. Ensuring safe motherhood is of human right importance and is at the core of every health system (WHO, 2018a). However, many mothers fail to get access to quality antenatal care and effective referral, which are essential in prevention of major causes of maternal death; such situation has remained worse in less developed nations (Brenner et al., 2015).

To ensure the success of UHC, there is need to have more emphasis laid on maternal mortalities. Countries have put more efforts in strategies to reduce maternal mortality ratio, however, such progress has been slow. The WHO has remained focused on promoting health service provision and maternal medical service has been a major agenda, and working

to ensure that maternal mortality is greatly reduced in developed nations and within the developing nations. Indeed, as a road map to attaining the SDG's target and realization of the vision 2030, World Health Organization (WHO) in 2015 defined and developed a framework on improving quality maternal healthcare to guide in the standard measures of service delivery to women of procreative phase seeking maternal medical services in all the health facilities. This framework was seen as a basis that would strengthen healthcare service provision and promote better maternal health care. However, the framework has not been customized nor cascaded to the service providers in different levels of care (Alden et al., 2013). The health care service programs need to be anchored on relevant frameworks that will ensure their efficiency and sustainability. The frameworks are functions of domains specifically for a given health care program. Within the health care framework, there are eight domains of quality of healthcare delivery that needs to be monitored to enhance quality of service and to reinforce the medical systems (WHO, 2010). To measure medical service quality, the framework focuses on six domains; effectiveness, appropriateness, accessibility, acceptability, equity, and safety. Providing high-quality maternal healthcare (prenatally, during delivery up to 42 days post-delivery care) must be fundamental to any quality improvement strategy (Warren et al., 2013).

2.2.3 Client-Provider Interaction for Maternal Healthcare Delivery

For any service provision, it is fundamental to ensure that the intended patients shall be contented with the proposed health service. The degree of contentment may be grounded on the service provider's characteristics and how the service provider drives the service provision process. Provider characteristics may influence patient/client satisfaction and care seeking (Okumu & Oyugi, 2018). Such characteristics are courteous provider attitude and

competency. Therefore, cultural wrongness of attention, impolite and brutal services, absence of emotional encouragement can influence the clients' satisfaction and deter them from accessing MHC services. Pre and Post maternity being a risky period to both the life of the mother and the unborn baby or the newborn baby, there is need to ensure that emotional and health support is efficiently and appropriately availed to the mother and the baby/fetus. Indeed, the nature of emotional care and support being provided to the mother influences her assessment of the maternal health care quality (Okumu & Oyugi, 2018). Quality healthcare service should reflect the community's desires as a major stakeholder and incorporate all partners including the providers in planning and decision making (WHO, 2018a). The concept of level of quality in healthcare is however, difficult to comprehend due to its subjective nature (Acharia, 2018). Most countries still have different health care provision levels based on quality and the availability of trained health care providers that can be attached to a particular health facility or to a particular pregnant mother or newborn baby. From the perspective of Kenyan health demographic survey (KDHS, 2014) 62% of deliveries were attended by experienced providers. However, this data does not provide a clear reflection of a well-operating system because many challenges continue to obstruct proper implementation of free maternal medical care. There are reported cases of verbal or physical mistreatment of expectant mothers who seek medical attention. Others reported include inadequate allocation of the budget, poor infrastructure; frequent industrial actions that deny women rights to quality maternal healthcare (ROK, 2010)

Despite different organizations and countries putting more efforts on maternal health service provision, there is still a wide gap between provision and utilization of maternal healthcare service. The wide gap is due to several factors that range from the available physical

amenities, level of community awareness creation to the health service providers' behaviors. In many parts of the world, women continue to give birth at home aided by the unskillful traditional birth attendants, these groups of people must be educated to understand the importance of skilled birth assistance (Padma, Rajendran, & Sai Lokachari, 2010). Additionally, countries need to embrace equity in the distribution and provision of health services to ensure that each and every corner of the country has equal access to quality health services. Equity towards the provision of health care as well as interventions has been a guiding standard in Kenya's health plan of 2014-2030 but most of those who do not get quality medical attention are women in the lowest socio-economic positions (Mathew, Cissell, & Liamthong, 2007).

2.2.4 Patient-Related Factors influencing Client Satisfaction on Maternal Healthcare

The demographics for patient namely; sex, age, cultural background, employment and heath condition are associated with perceived satisfaction (Kim & Lee, 2016). Socio-cultural determinants, perceived value and need of antenatal care visits, skilled care at birth, postnatal care visits, and economic and physical accessibilities have a prominent role in the utilization of maternal medical attention. A review in 2009 shows low usage and limited access to maternal care services were the major causes of high maternal morbidity and deaths in South East Asia as well as Sub-Sahara Africa regions (Gabrysch & Campbell, 2009).

The place one stays, ethnicity, religion, economic position, and geographical regions are considered factors influencing maternal health care services. Studies further reveal that long journeys to the health facilities, unfriendly provider's attitude, poor service delivery systems, and physical facilities were prominent factors in the low usage of maternal medical services.

Other determinants include the education level, perceived attitude towards safer pregnancy, delivery and postnatal care, gender inequality, traditional socio-cultural practices, low decision-making position of women, and low socio-economic levels inhibit women from seeking maternal healthcare services. Women's accessibility to financial and physical means, freedom of movement, and ability to make household decisions are indicators of women autonomy in India (Gallo & Matthews, 2003). Women education and employment influence positively in their decision-making autonomy at household level and seeking maternal medical services in most third world countries (Woldemicael 2007). Studies have also shown disparities in the use of maternal health care in various high burden counties in Kenya by education level and economic status (Nanjala & Wamalwa, 2012).

2.3 Theoretical Framework

2.3.1 Donabedian's Model for Assessing Healthcare Quality

This study adopted the Donabedian's (2006) model for evaluating quality of care for health services; it is based on a three-component approach. The model, information determining quality of healthcare service is derived from the three components- structure, process and health outcome. The structure as a measure of quality will assess the care setting's characteristics, availability of skilled personnel to provide the service, policies and standards related to the specific care and delivery(Nwaeze, Enabor, Oluwasola, & Aimakhu, 2013). Examples of such structural organizational measures are the service charter, availability of Job Aids. The waiting times, service availability, and service provider attributes. These are basic inputs towards provision of quality healthcare delivery. The other measure for quality health care delivery is the processes which is used to asses and determine if services provided are consistent with the standard guidelines of routine care set for the specific level

of care. In relation to this study an aspect of routine antenatal profile testing to all mothers seeking ANC services, the waiting times, Health education to the clients, promptness in identification of emergency cases and referral, is a measure for the quality of maternal healthcare provided. This focuses on how the system works to provide desired health outcomes. The perceptions of the clients are the main indicators of the output. This model focuses on assessing whether the healthcare provided has impacted the patient and meets the expected standards. Examples of the outcome as a measure are the proportion of the 4 ANC visits, reduced length of stay and improved patient experience (WHO, 2018a).

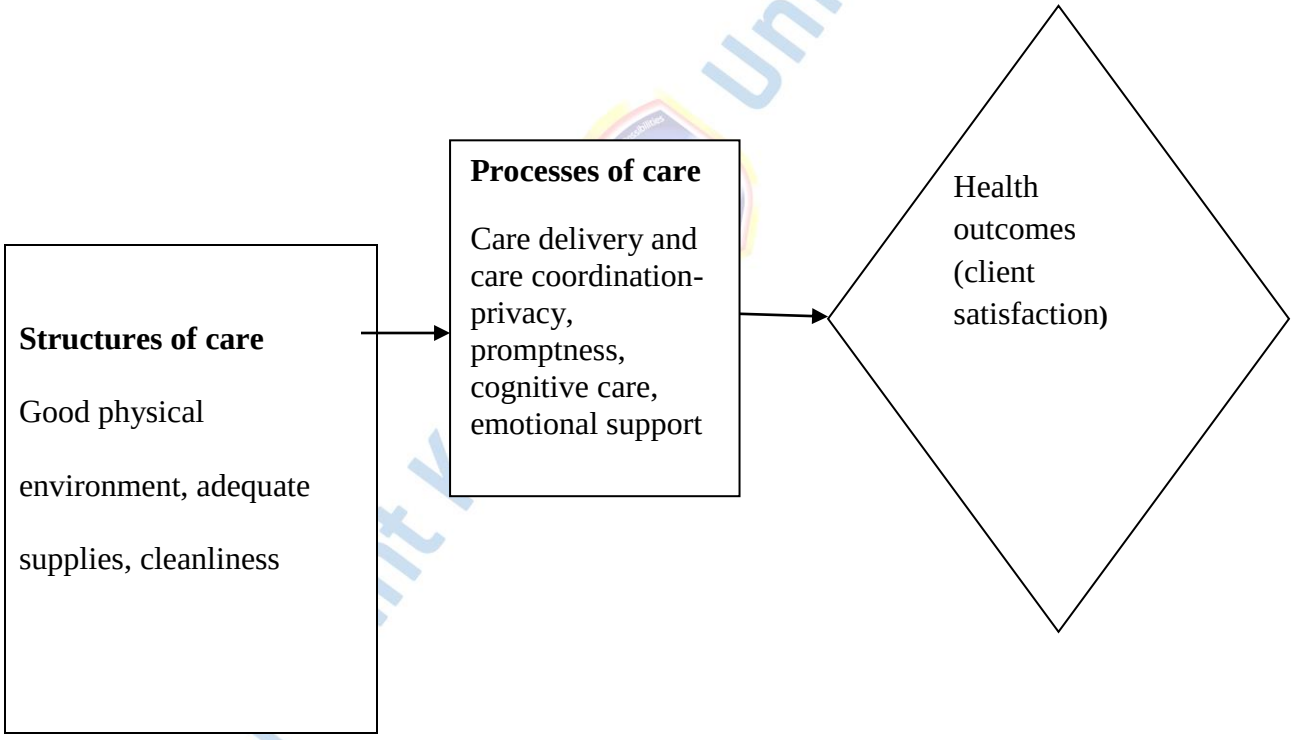


Figure 2.1: Theoretical framework on quality of care

2.3.2 Health Belief Model

The Health Belief Model (HBM) is a model that describes and forecasts health behaviours of individuals. It is a reliable framework that is used to examine how people behave health-wise. The models' components are considered to be factors that predict health behavior independently. This includes; threats considered high, obstacles to seeking health, and expected benefits are considered to elevate the probability of individuals seeking health (Armitage and Conner, 2000). The possibility of a future gain is a catalyst to health seeking behavior among individuals. There must be a balance that ensures that the perceived future benefit of a service is feasible enough given the requirements and constraints in terms of time spent, costs incurred as well as other sacrifices made (Adams, 2012).

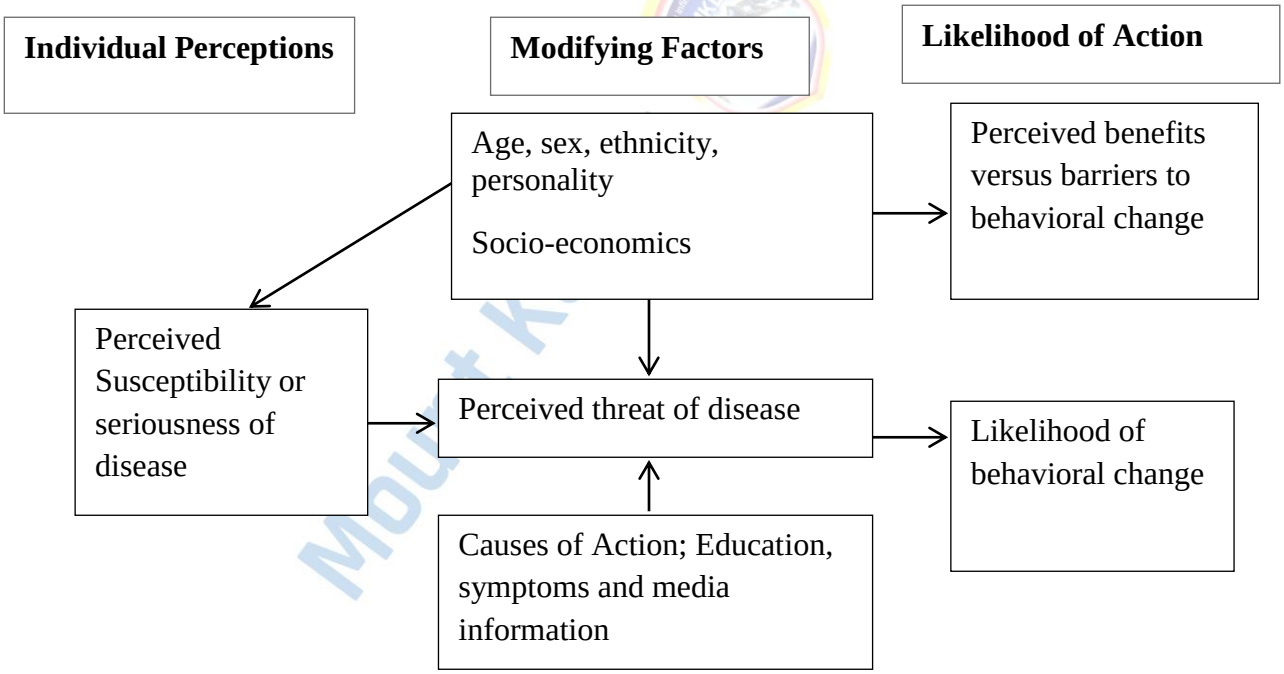


Figure 2.2: Health Belief Model (Poss, 2001)

2.3.3 Andersen's Behavioral Model

This study adopted Andersen's behavioral model that focuses on the health services accessibility. The Andersen model consisted of predisposing, enabling, and need factors. The first category of factors consists of the fundamental population features namely; age, gender, and marital status for individuals believed to influence their health-seeking behavior. Secondly, the model highlights the conditions that are prone to change based on the efforts by the individual and that of society (Andersen & Newman, 2005). This includes; academic qualifications, economic empowerment, health insurance cover among others. Thirdly, the model talks about the necessity that triggers the urgency of individuals seeking healthcare services. This is highly associated with how individuals perceive the consequences and complications that come with illness, hence making them seek medical attention (Gelberg, Andersen, & Leake, 2000).

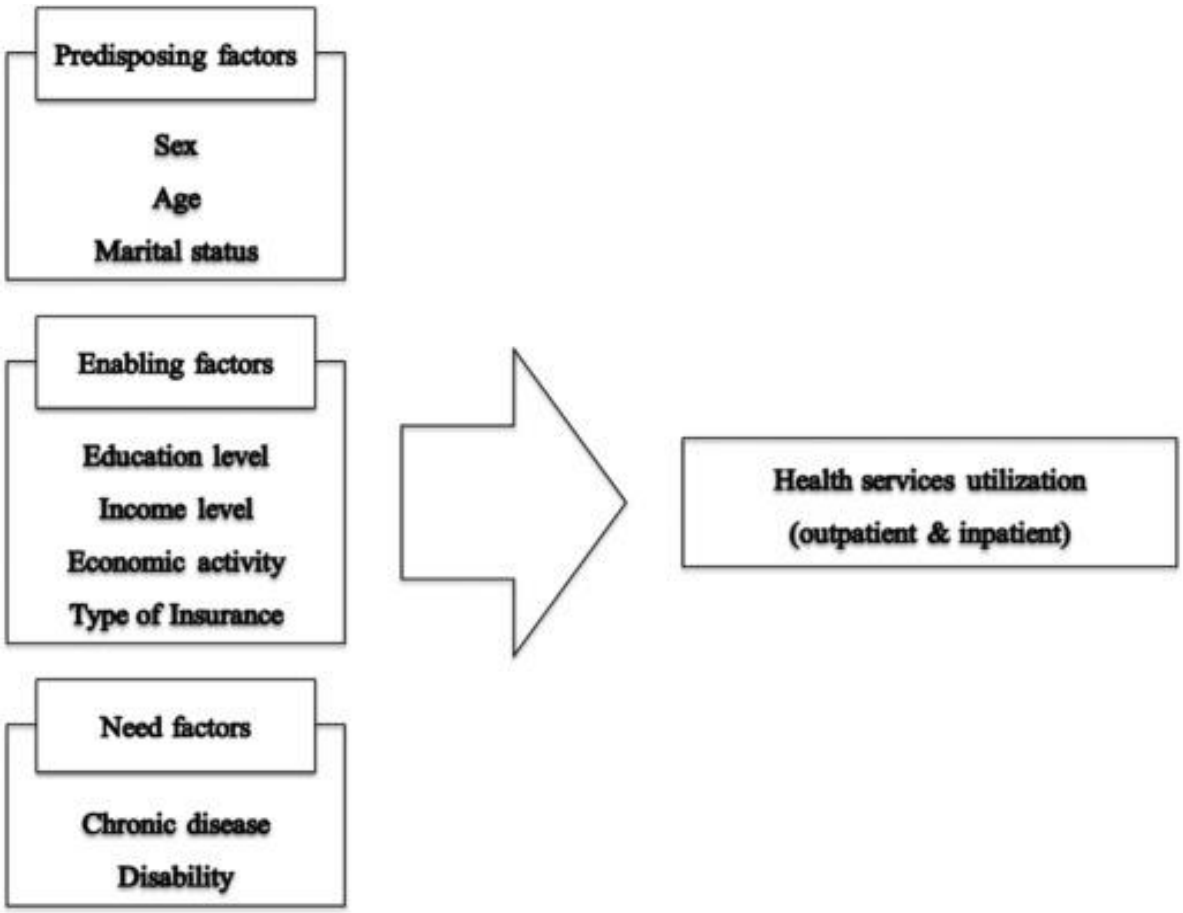


Figure 2.3: Behavioral Model of Healthcare Utilization (Andersen & Newman, 2005).

2.4 Conceptual Framework

The conceptual framework is constructed on the objectives and shows the relationships between the independent variables, intervening variables, and the dependent variables. The predictor variables were quality of maternal healthcare focusing on structural factors, process factors, client/provider interaction, and patient-related factors. The dependent variable was the satisfaction expressed by clients seeking maternal healthcare. The study was guided by the following conceptual framework.

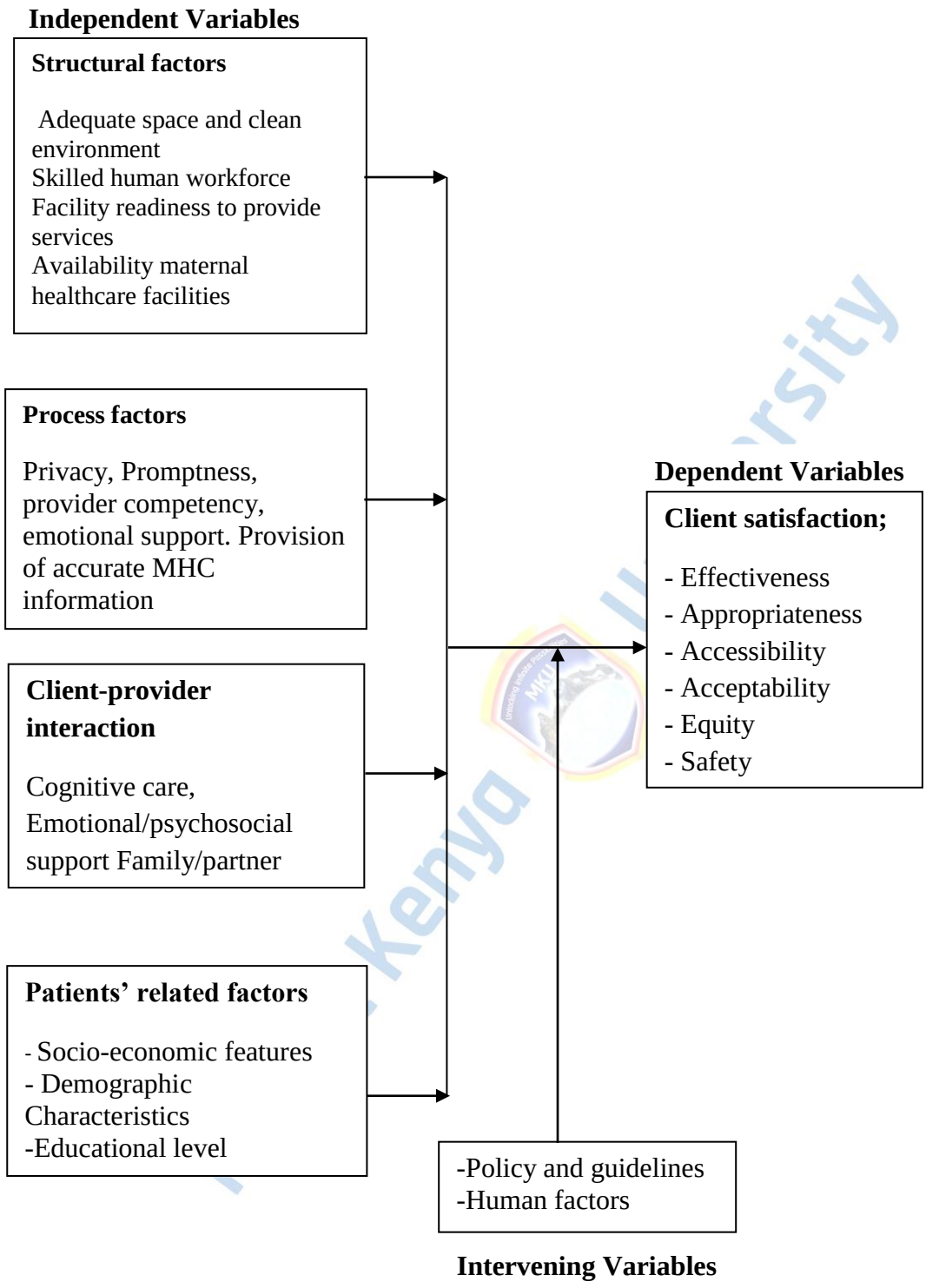


Figure 2.4: Conceptual Framework showing the relationship between the independent, intervening and dependent variables

2.5 Summary of Reviewed Literature

Quality of care is measurable and aims to improve the population's health status rather than put more into service inputs or change the systems' process. However, the source does not display how this intervention has been cascaded to healthcare providers' local healthcare service delivery points. Globally, the percentage of women delivering under the attendance of a skilled service provider and the percentage of deliveries occurring in health centres are a measure of the quality of maternal healthcare (Kitui et al., 2013). These pointers are consistently and regularly monitored and reported by health personnel both nationally and internationally, with no clear indicators to measure quality of maternal healthcare, these indicators have been adopted to measure progress on maternal health goals. According to Warren et al., (2015) these indicators may not firmly and continually be linked with positions or trends in maternal deaths. The quality of maternal medical service delivery, indicators for measuring quality, the healthcare quality and the continuous quality improvement model of health (KQMH) and client satisfaction.

2.5.1 Critical Review

Those who use services provided by an organization are its customers. Therefore the patients/clients are customers of the health systems (Gitobu et al., 2018). When clients are content with the service they receive and reportedly appreciate the service, this is interpreted as client satisfaction. Client contentment can be viewed as a subjective judgment of value of care (Yue, Zhang & Zhou, 2017). Clients understand level of care to be multidimensional in nature that is both ability to offer the service and interpersonal aspect where they consider provider relation, waiting time, cleanliness of the facility, availability of commodities and supplies as important aspects of quality (Twahir, 2017).

A study done in Nepal reported that dissatisfaction by women following longer waiting times, overcrowding which hindered effective interaction with the service providers and failure to be given time to ask questions (Mehata et al., 2017). Client background (age, income and educational level) can influence client contentment. On the other hand, the medical fee though significant may fail to provide much effect on client's degree of contentment once quality care has been provided (Nwaeze et al., 2013). According to Donabedian model a three key component is used to evaluate the customer satisfaction (Nwaeze et al., 2013). The first is the perceived value a patient derives once he visits a health centre; the second is whether the right tools were used, and thirdly is the basic issues such as timeliness, conduct of service providers.

2.5.2 Research Gap

Following devolution of health services in 2013, more health facilities have been constructed to enhance on access, however not much efforts have been made to ensure these facilities provide quality services as per the listed domains. Many innovations have been employed for enhancing usage of maternal health care. Kenya as a country abolished the charges for health facility delivery through the June 1 2013 directive with the aim of promoting skilled birth deliveries and increasing the access of antenatal care services however This has not in any way improved on the maternal healthcare service utilization which has remained low as indicated in the DHIS, 2017/2018 performance data. Studies have indicated that perception is an important parameter to assess quality of care and not only the uptake of service (Gunguly & Sharma, 2014). Low quality is a major element in non-usage or by avoiding medical services by clients (Okumu & Oyugi, 2018). The county focus has mainly been on the proportion of women seeking healthcare but not the quality of

care offered. The study aimed at identifying the influence of quality of maternal healthcare on client satisfaction based on the WHO framework (Warrenetal.2013).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The section describes research design used, putting into consideration the basic characteristics of the targeted population, sampling procedure, sample size, data gathering methods and instruments, the pilot testing for reliability and validity of the tools, procedures on data gathering, analysis of data, and ethical deliberations

3.2 Research design

The work adopted descriptive cross-sectional design to collect information from various cohorts of interviewees. The researcher applied qualitative as well as quantitative research approaches. The quantitative data investigated the extent of the quality in the delivery of maternal healthcare. The qualitative approach involved asking the respondents about their opinions concerning maternal healthcare services to determine the aspect of client contentment or satisfaction.

3.3 Description of the site/ study Area

The sub-county total population is 172,438 (KNBS, 2019). It is divided into five county assembly wards: Menengai ward with a population of 37,214, Mosop ward with a population of 27,662, Soin ward has a population of 36,179, Visoi ward has a population of 46,796 and Solai ward with a population of 24,587(KNBS,2019). It has a total of 19 health facilities that offer maternal healthcare.

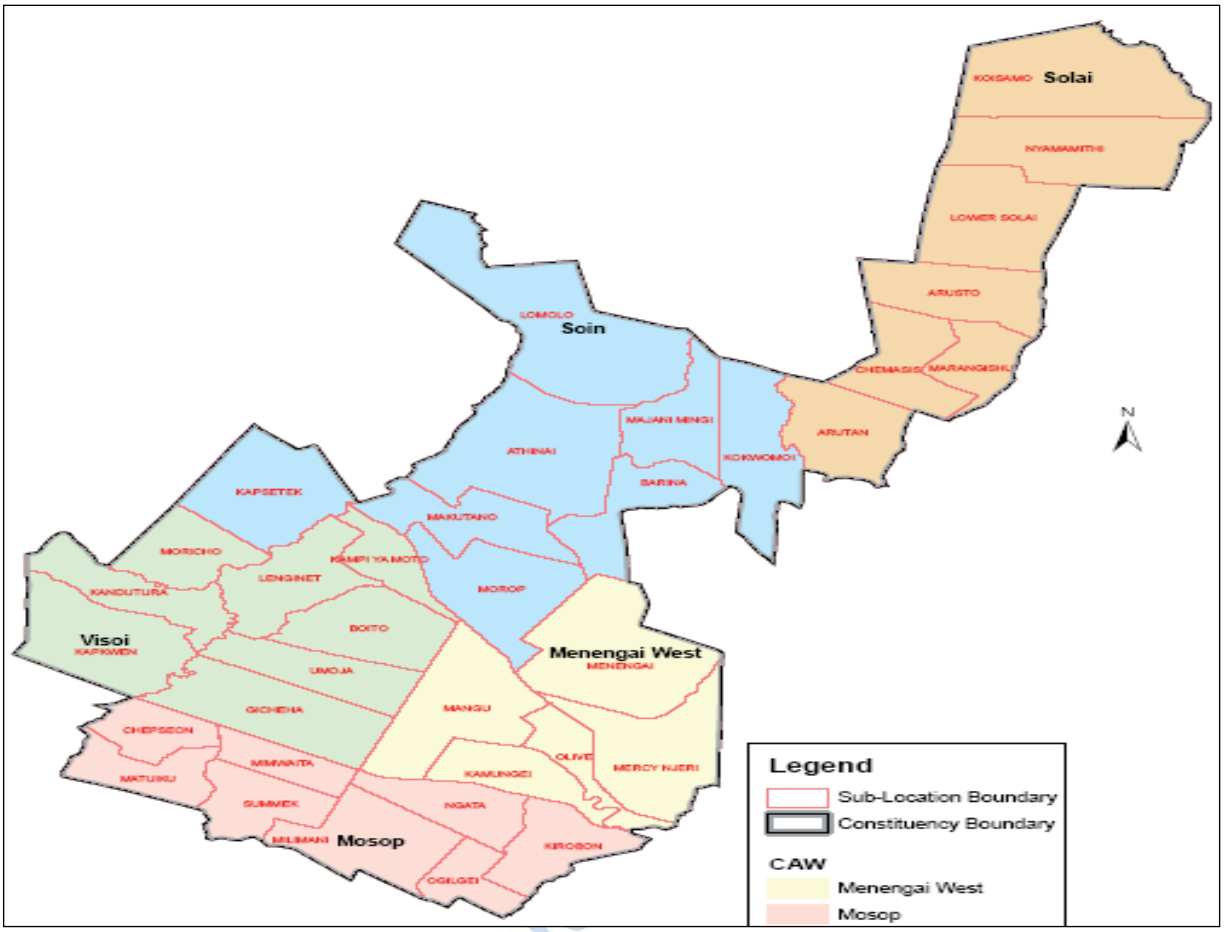


Figure 3.1: Rongai Sub-County map (Source: KHIS, 2019)

3.4 Target Population

The study population included all the expectant women attending Antenatal care, delivery, and postnatal care up to 42 days post-delivery in the Public (county) facilities in Rongai Sub County. The respondents included all women between the ages of 18 and 49 living in Rongai Sub-County. The desired target population is women of reproductive age, 15-49 but citing ethical issues, such as not including those below 18 years in the study, hence selected ages between ages of 18 to 49 years. The study's target population comprised 19 healthcare

personnel from 19 health facilities in the sub-county and 5305 expectant women. The distribution of the target population is shown in Table 3.1.

Table 3.1: Ward Population (KHIS, 2019)

Wards	**Number of Health facilities**	**Expected Deliveries**
Menengai	5	996
Soin	4	1401
Solai	3	672
Mosop	3	625
Visoi	4	1611
Total	**19**	**5305**

3.5 Sampling Procedures and Sample Size

3.5.1 Sampling Procedures

Cluster random sampling was employed to choose the health facilities offering maternal healthcare services. They were clustered into the administrative wards in Rongai Sub-County, namely; Menengai, Soin, Solai, Mosop and Visoi. The sample size in every cluster was calculated proportionally. The convenience and purposive sampling methods were used to get the mothers attending the health facilities on ANC, maternity care, postnatal care services, and key informants.

3.5.2 Sample Size

The researcher adopted Fishers formula as described by Mugenda and Mugenda (2003), expressed as

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

Where **n** is the sample size, **N** (5306) the population targeted and ***e*** (5%) the desired level of precision or confidence level.

The calculations for the sample size are displayed as follows;

$$n = \frac{5305}{1 + 5305(0.05)^2} = 371.95 \approx 372$$

To cater for the non-response, which according to Eng (2003), could be estimated to be 25%, it is advisable to expand the sample size; thus, 465 respondents were considered. The researcher sampled 2 health facilities per ward, and only 2 sub-county hospitals were also sampled, as well as 14 key informants. The remaining 451 respondents comprised of women attending health facilities for maternal health services. The spread of the sample size is shown in Table 3.2.

.

Table 3.2: Sample Size Distribution

Wards	Target Population	Proportion ($N_i / \Sigma N$)	Sampled Clients	Sampled KI	Sample Size
Menengai	996	18.8	85	4	89
Soin	1401	26.4	120	3	123
Solai	672	12.7	58	2	60
Mosop	625	11.8	54	2	56
Visoi	1611	30.4	137	3	140
Total	**5305**	**100**	**451**	**14**	**465**

3.6 Instruments of Research

The research adopted a semi-structured questionnaire on women seeking maternal healthcare service in health institutions in Rongai Sub-County. The questionnaire was designed to have both structured and unstructured questions. The questionnaires' testing was done to enhance the validity and accuracy required in the actual data gathering. The questionnaires were ideal since they enabled the researcher to cover a large population. The research used an observational checklist to establish the condition of fundamental aspects of maternal healthcare. To get in-depth info from the key informants, interview schedules were employed.

3.6.1 Validity of Instruments

The study instruments were subjected to validity verification by experts in the field of health systems management. Their remarks and recommendations were followed so as to ensure that the tools have both external and internal validity which is essential for gathering the required information.

3.6.2 Reliability of Research Instruments

The questionnaire was pretested in Nakuru West Sub-County, where 2 health facilities were identified for the pretesting. This was to identify necessary changes and thereafter make revisions. Cronbach's alpha was employed to establish consistency in the response for the piloted instruments. Cronbach's alpha threshold of 0.7 will imply reliability (Drost, 2011). The resultant Cronbach's alpha was 0.87, which is more than 0.7, implying that the questionnaire was a reliable tool for collecting data.

3.7 Data collection methods and procedures

Data gathering was done using questionnaires administered by the researcher to the MHC clients visiting the facility on that specific day. The researcher used passive observation guided by the checklist to gather information on facilities' readiness to provide MHC services. The researcher booked an appointment followed by an oral interview with the hospital management of the selected facilities.

3.8 Data Analysis

Data gathering was done using questionnaires administered by the researcher to the MHC clients visiting the facility on that specific day. The researcher used passive observation guided by the checklist to gather information on facilities' readiness to provide MHC services. The researcher booked an appointment followed by an oral interview with the hospital management of the selected facilities.

Table 3.3: Data analysis matrix

Variables	Indicators	Data Collection Instrument	Analytical Tool
Dependent variable Client Satisfaction	Individual counseling Group counseling Career counseling	Questionnaire Interview schedule	Descriptive Statistics Content Analysis
Independent Variable Structural factors	Skilled staff Facility adequacy Hospital management	Questionnaire Observation checklist	Descriptive (%) and Inferential statistics (Chi-Square)
Process factors	Privacy measures, Emotional support systems, waiting time	Questionnaire	Descriptive (%) and Inferential statistics (Chi-Square)
Client/provider interactions	Provision of accurate information. Family involvement	Questionnaire	Descriptive (%) and Inferential statistics (Chi-Square)
Client/provider interactions	Socio-economic features Demographic features	Questionnaire	Descriptive (%) and Inferential statistics (Chi-Square)

3.9 Ethical considerations

Authorization was received Mount Kenya University research and ethics committee. The researcher got Permit from National Commission for Science Technology and Innovation (NACOSTI). A study permit was given by the Department of health services Nakuru County that allowed the researcher to access the subjects and reflected the time and duration of data collection. The researcher ensured adequate and clear explanation of the work's aim to the interviewees to enable them to give informed consent. The researcher ensured absolute confidentiality.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction

The study's findings comprise the response rate, patients related factors influencing client satisfaction, influence of processes of maternal healthcare services delivery on client satisfaction, influence of client/provider interaction on client satisfaction, influence of structural organization on client satisfaction, and client satisfaction.

4.2 Response Rate

The results (Figure 4.1) demonstrate that of the sampled 465 respondents' 78 % response rate and only 22 non-responses. According to Fowler (2004), response rate is the rate that equals the number of persons to whom semi-structured questionnaires were effectively administered to. This indicates that the 78.3% response rate was appropriate and adequate to make some meaningful conclusion of the study's findings. Kothari (2005) posits that 50% response is adequate, 60% is good, while 70% and beyond significant for analysis.

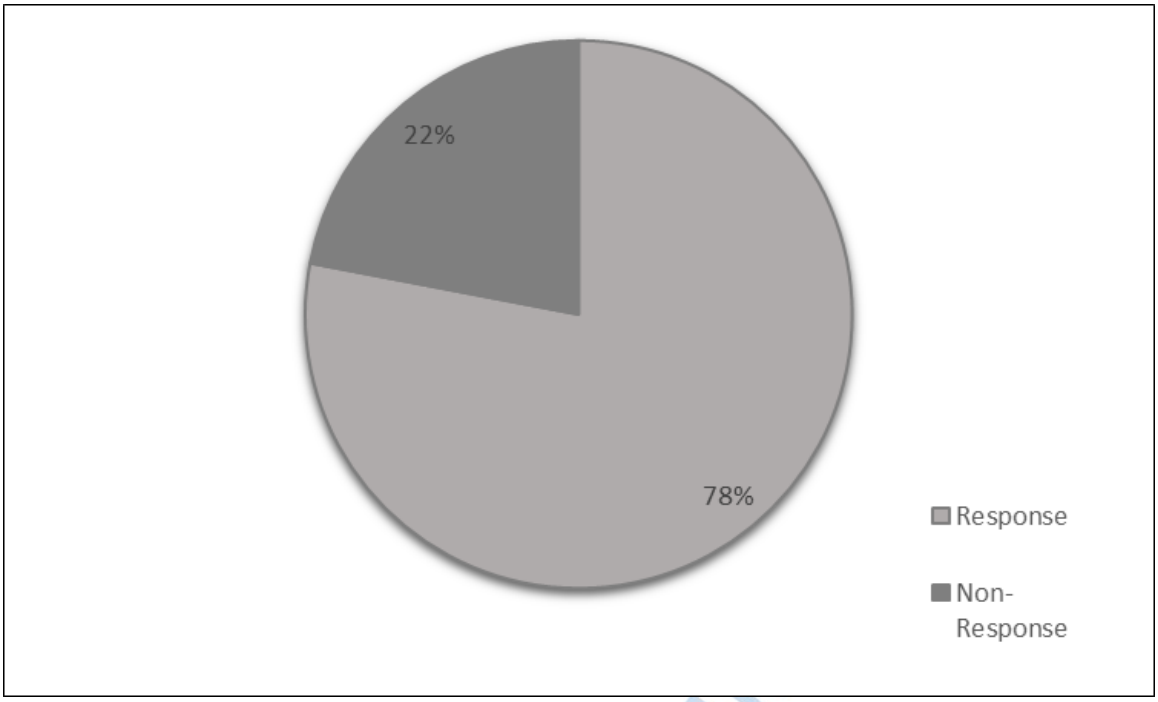


Figure 4.1: Unit Response Rate

4.3 Patients Related Factors that Influence Client Satisfaction

4.3.1 Gender

The results show the majority (93%) of respondents who participated in the study were females, with only 7% being males (figure 4.2). This indicates that there is low male involvement in maternal healthcare services. Through the Chi-Square test and the results [$\chi 2(2, N= 364) =5.232, p=0.073>0.05$], it indicates no significant relationship between gender and client satisfaction, this implies that the gender of respondents has no positive effect on respondents' satisfaction. In fact, according to Mangeni, Nwangi, Mbugua & Mukthar (2012), women who go with their spouses for at least one ANC appointment were more likely to seek hospital delivery. Their study's results emphasized the importance of men going with their wives to the clinic for ANC.

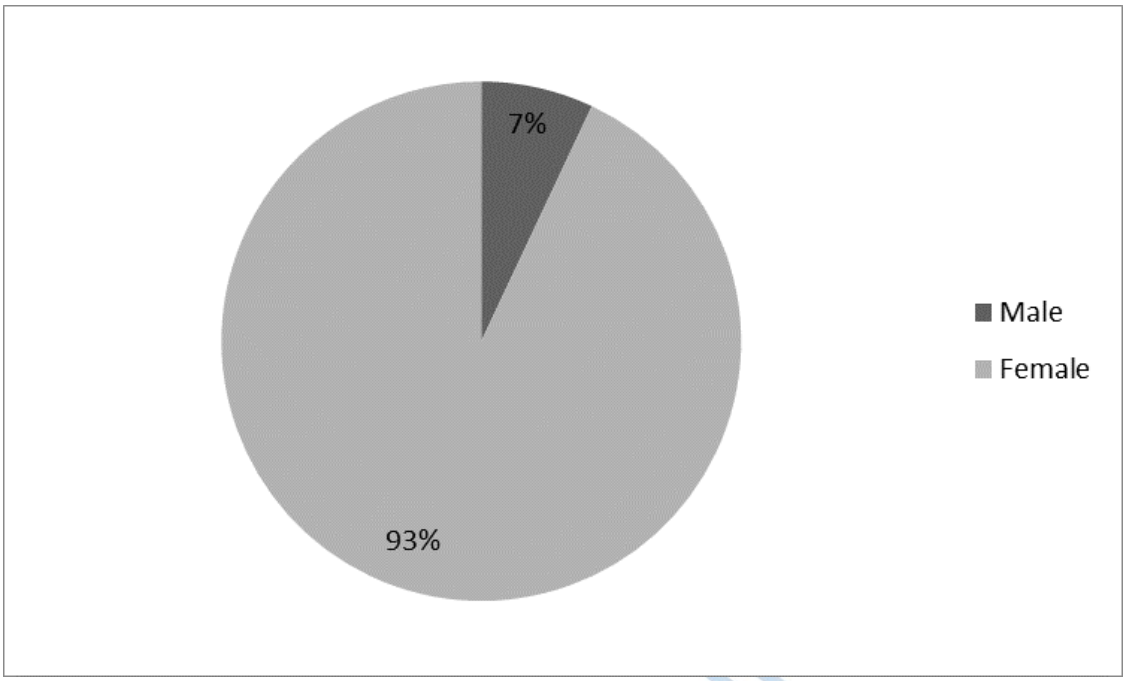


Figure 4.2: Gender of Respondents

4.3.2 Age

The response category was categorized into five categories - namely 18 – 27, 28 – 32, 33 – 37, 38 – 42 and > 42 years. The results (Figure 4.3) majority (49.2 %) respondents attending the health facility seeking maternal health services were 18 – 27 years, 24.6 % were aged 28 – 32 years, while only 5.6 % of the respondents were more than 42 years in age. Based on the Chi-Square results ($\chi 2$ (2, N= 364) = 9.963, p= 0.268>0.05), there was no significant variation in the age of the respondents and the degree of satisfaction. This implies that respondents' age has no significant relation between age and respondents' satisfaction (p>0.05). The findings of the current study agree with findings of Mwaniki, Kabiru & Mbugua (2002) which also indicated that the average age of mothers attending maternal health clinics was an average age of 25 years. It indicates that young mothers prefer to attend the clinic more.

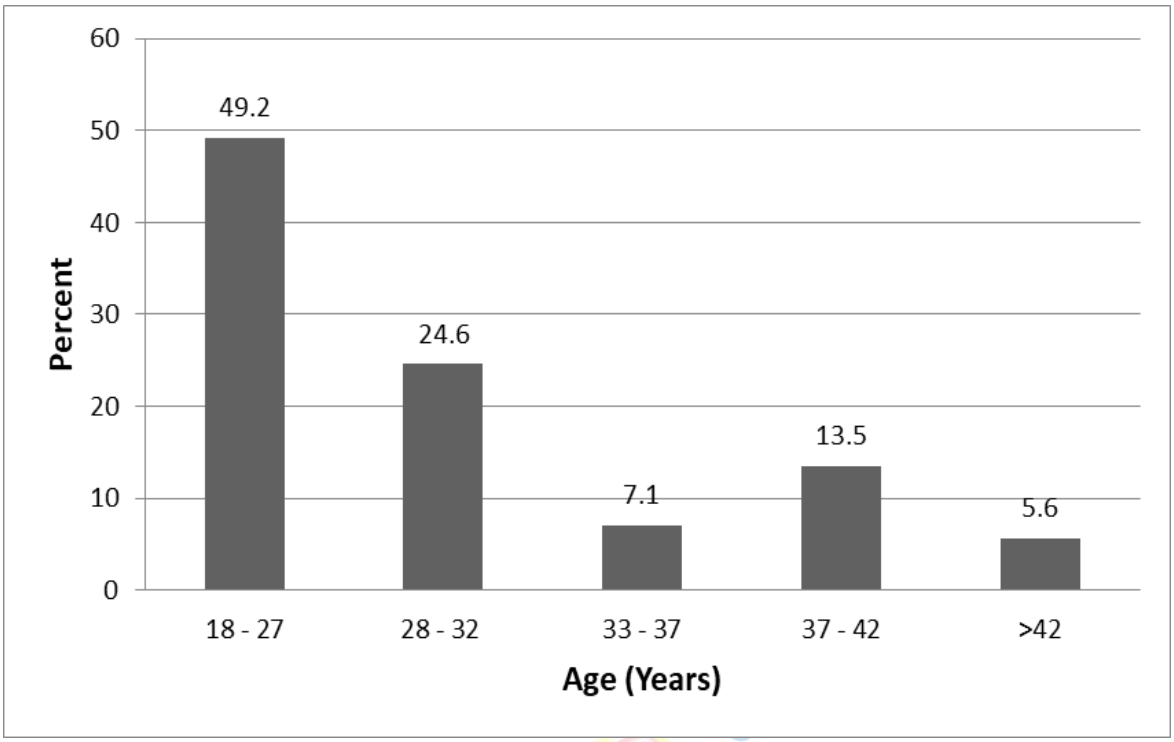


Figure 4.3: Age of Respondents

4.3.3 Pregnancy History

The majority (61 %) respondents were not first-time parents, with 39 % stating that they were first-time parents (Figure 4.4). This showed that a sizeable percentage of women who attend the ANC clinics are not first-time mothers. The researcher conducted the Chi-Square which yielded of $\chi 2(2, N = 364) = 1.895$, p-value = 0.388>0.05(Table 1). This implies respondents' pregnancy history has a positive effect on respondent's satisfaction that is not significant at 5% levels of significance. This agrees with Mwaniki, Kabiru & Mbugua (2002), whose study established that most 77% had 1-3 children more likely to seek MHC services.

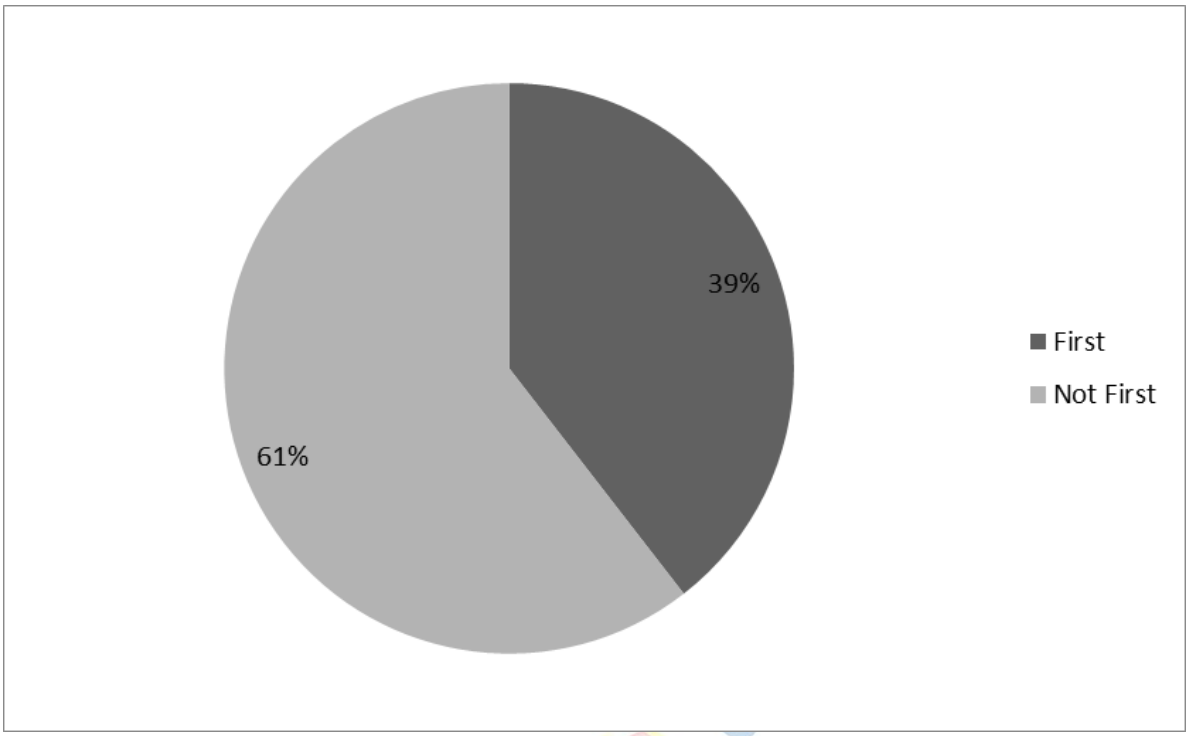


Figure 4.4: Pregnancy History of Respondents

4.3.4 Level of Education

A majority (45.7 %) of interviewees had secondary education, 31.8 % University education with only 20.2 % primary education, 2.4 % had postgraduate studies (figure 4.5). The results of Chi-Square, $\chi 2(6, N = 364) = 16.138$, $p = 0.040<0.05$ implies that respondents' level of education had a positive effect on respondents' satisfaction because there was a high significant between education level and client satisfaction. This could be attributed to the capability of literate people following the instructions and thus facilitating the process of maternal healthcare service delivery, leading to client satisfaction and good pregnancy outcomes. Education for parents is important as indicated by Abuya, Onsomu, Kimani & Moore (2011) in an enquiry done in Kenya that found out that education level positively influenced the uptake of maternal healthcare services.

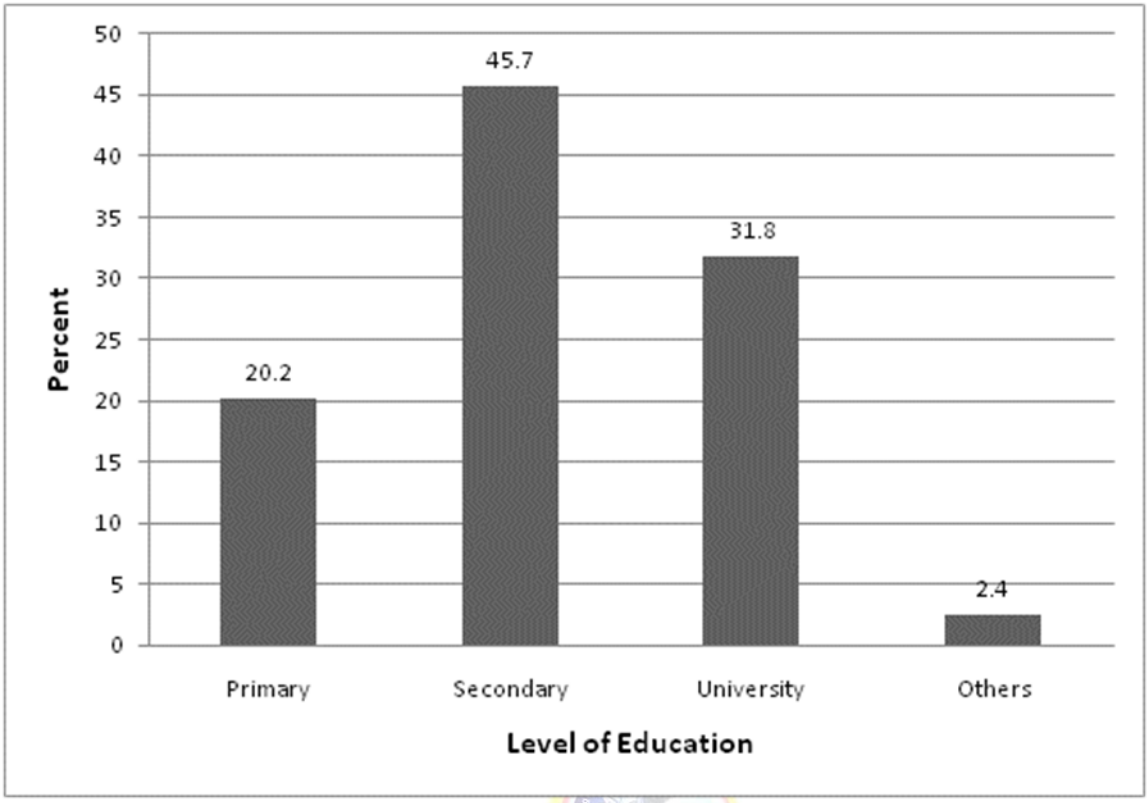


Figure 4.5: Level of Education of Respondents

4.3.5 Employment Status

Majority (44.9 %) of interviewees were self-employed, 18.9 % employed, 15.8 % casual workers, whereas 20.5 % not employed (Figure 4.6). The result showed very high relationship among employment status and client contentment as indicated by $\chi 2(6, N = 364) = 21.499$, p – value = 0.006 <0.05 (Table 1). This implies the employment status of respondents has a positive effect on respondents' satisfaction. This concurs with Andersen & Newman (2005) results who stated that the patients' behaviours could be influenced by their social-economic status, which is to investment in health insurance cover among others, which is a key factor enabling them afford quality healthcare.

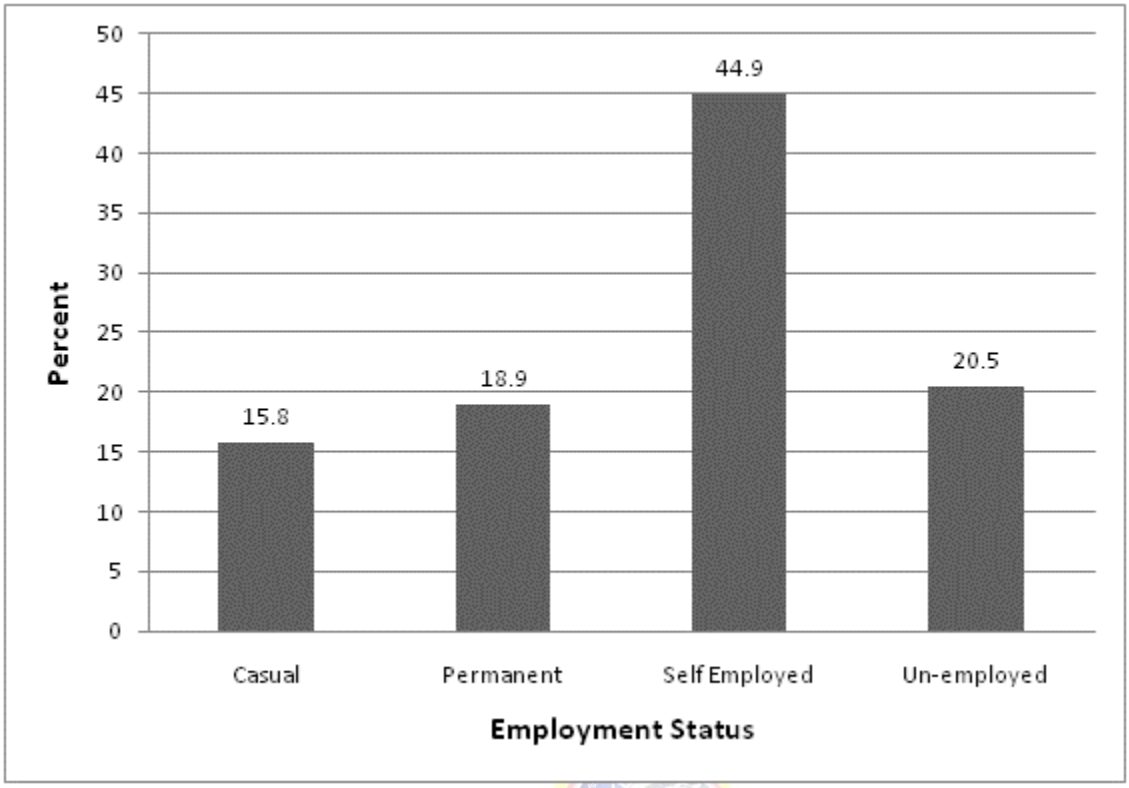


Figure 4.6: Employment Status of Respondents

4.3.6 Income Level

The income level was categorized into five: <11,000, 11,000 – 20,999, 21,000 – 30,999, 31,000 – 40,999 and more than 41,000 Kenya Shillings. The results, majority (45.9 %) of the respondents or respondents earn less than 21,000 Kenya Shillings 31.2 % earning 11,000 and 45.9 % earning between 11,000 – 20,999. However, 12.8 % earn 21,000 – 30,999, 6.4 % 31,000 – 40,999 whereas only 3.7 % stated that they earn more than 41,000 Kenya Shillings (Figure 4.7). The $\chi 2(8, N = 364) = 17.780$, $p = 0.0.023 < 0.05$ results imply the income level of respondents have a positive effect on respondents' satisfaction. An individual's income is important as it gives them the ability to choose among the available opportunities. This supports Woldemicael's (2007) argument, which postulates that the economic status of

patients/clients, especially women, positively influences their decision-making autonomy at household level and seeking maternal health care services in most developing countries.

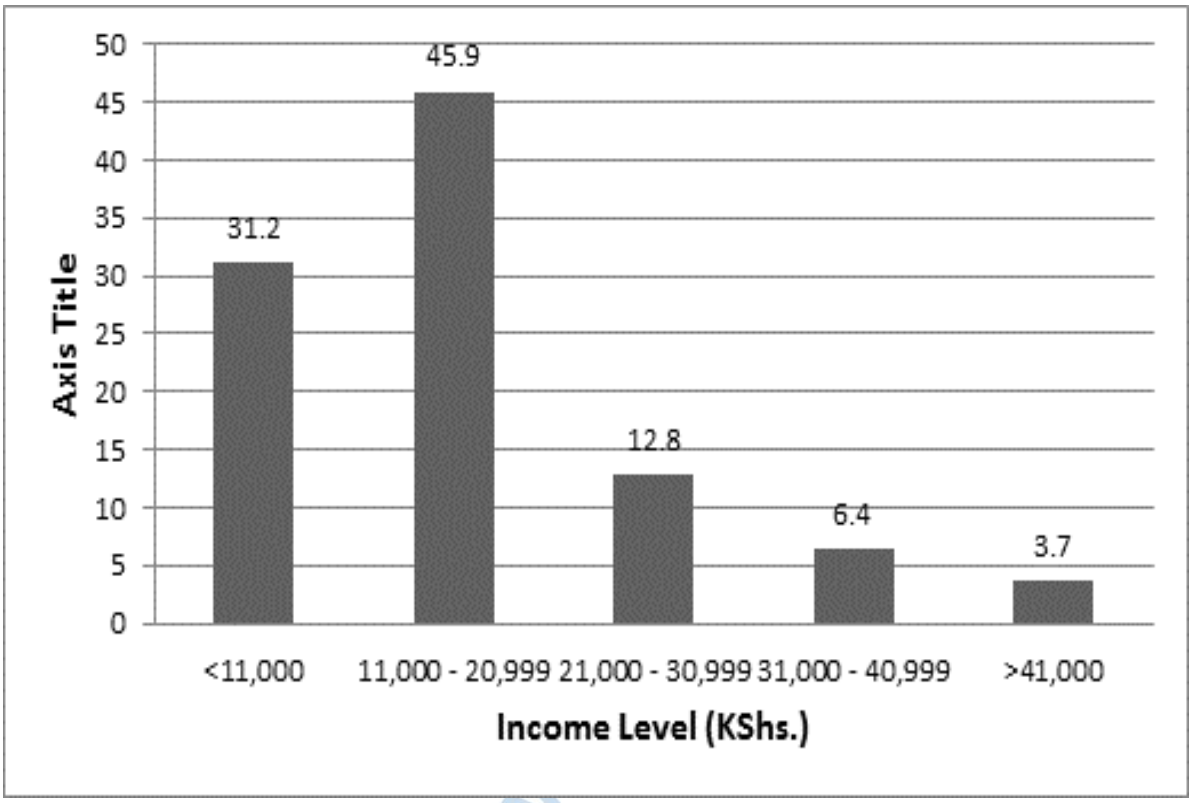


Figure 4.7: Income Level of Respondents

4.3.7 Duration of Health Facility Attendance

The study tried to find the distribution of interviewees by the duration they visited the health facility. The response category was categorized into five, namely; less than 1 year, 1 – 2 years, 2 – 3 years, 3 – 4 years, and more than 4years. According to Figure 4.8, the results indicate 51.2% have been visiting the facility for less than 1 year, 23.6% for 1-2 year, 11% for 2-3 years, 4.7% for 3-4 years and 9.5% for more than 4 years.

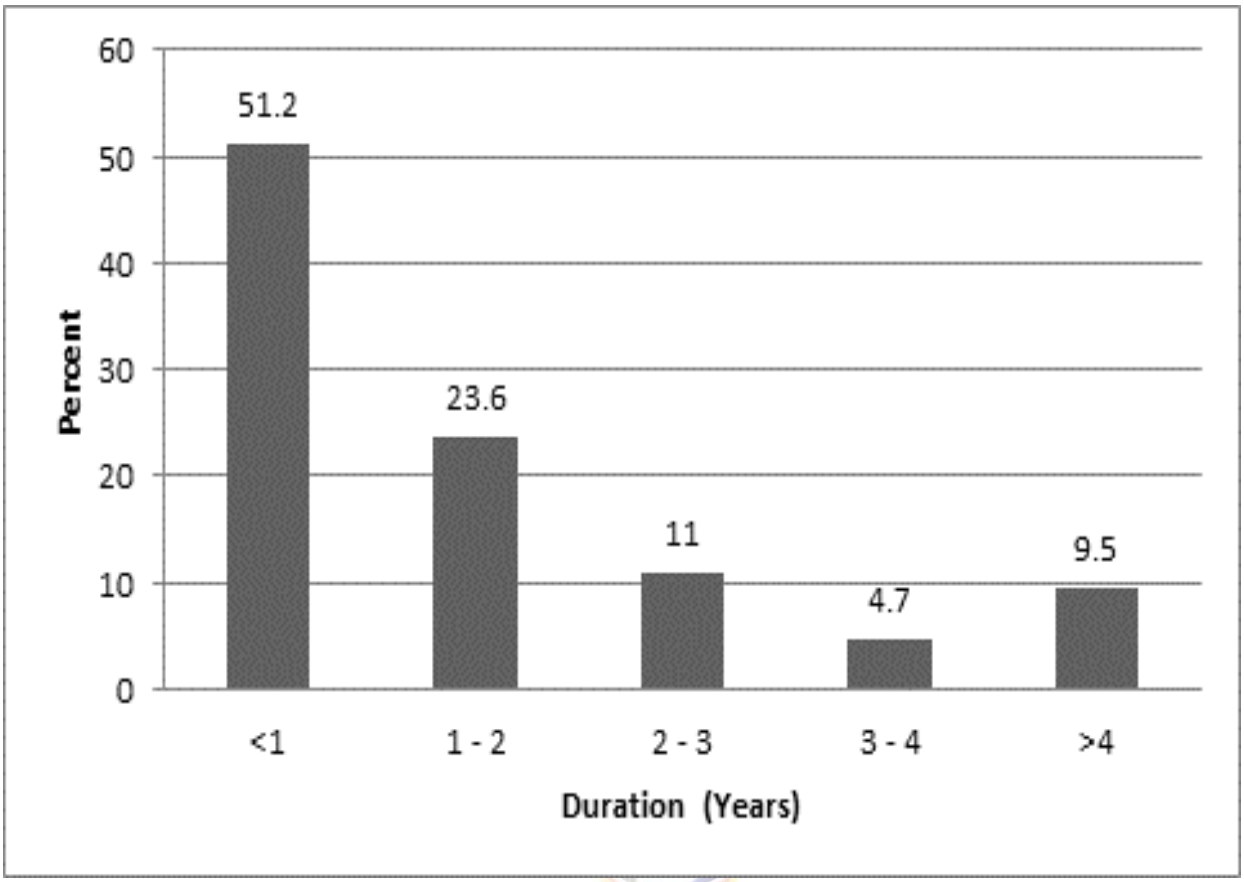


Figure 4.8: Duration the Respondents had attended the Health Facility

4.3.8 Distance from the Health Facility

The distribution of respondents by distance from the health centre was categorized into three: <5, 5 – 10 and >10 kilometres. 61.2% of the respondents indicated that they live less than 5 kilometers from the health facility, 30.2 % that they reside within 5 – 10 kilometers from health facility and only 8.6 % are far than 10 kilometers (Figure 4.8). The $\chi 2(6, N = 364) = 10.330$, $p = 0.031 < 0.05$ results indicate a significant relationship between distance from health facility and client satisfaction. This implies that the nearer the health facility the more mothers get encouraged to visit for maternal health care services. This conquers with Nanjala and Wamalwa (2012), who found out that the geographical regions and long

distance to the health structure are considered to be determinants of the utilization of maternal health care services as well as the satisfaction of the clients.

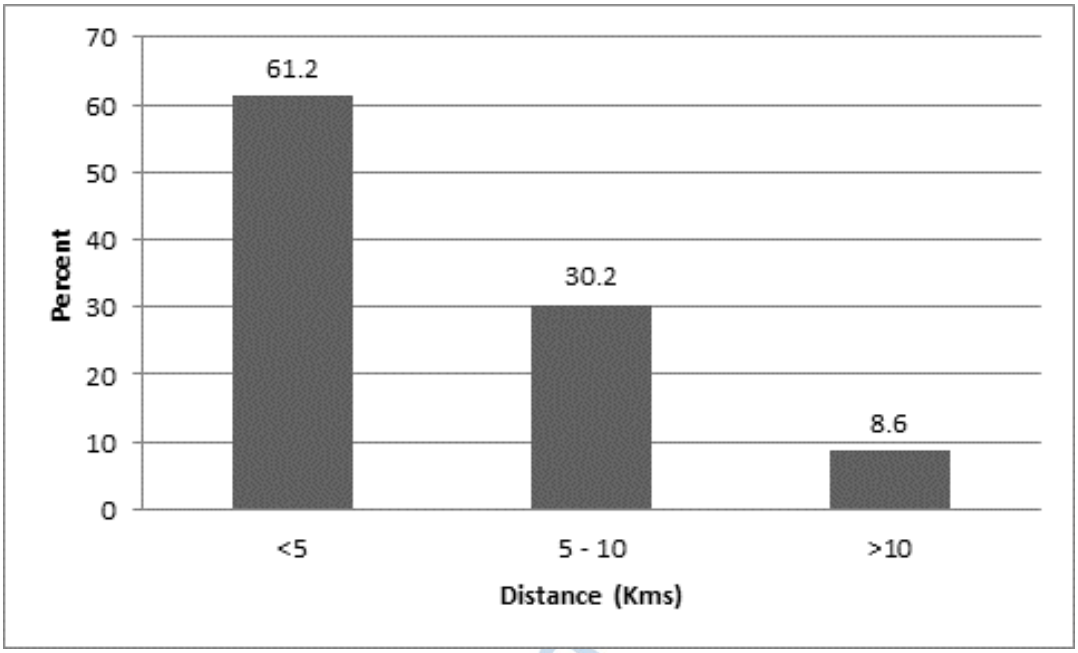


Figure 4.9: Distance from the Health Facility

4.3.9 Chi-Square Results on Patients Related Factors Influencing their Satisfaction

The researcher conducted a Karl Pearson Chi-Square test to indicate the influence of patients related factors on client satisfaction. From Table 4.1, the client's satisfaction was significantly influenced by the patients' level of education, employment status, income level, health facility attendance duration, and the distance from the health facility. This was clear as their p-values were less than 0.05, which was considered the critical value since the test was done at 95 % significance levels. The findings agree with Nwaeze et al., (2013), whose study found out that client background (age, income and educational level) may also have a bearing in client satisfaction. The demographics for patients namely; sex, age, cultural

background, employment, and heath condition are also associated with perceived satisfaction (Kim & Lee, 2016). Studies have also shown disparities in utilization of maternal health services in various high burden counties in Kenya based on education level and economic status (Nanjala and Wamalwa, 2012).

Table 4.1: Chi-Square Results on Influence of Patients Related Factors on Client Satisfaction.

Patient Related Factors	Pearson Chi-Square	df	P-Value
Gender	5.232	2	0.073
Age	9.963	2	0.268
Pregnancy history	1.895	2	0.388
Level of education	16.138	6	0.040**
Employment Status	21.499	6	0.006**
Income	17.780	8	0.023**
Health facility attendance	16.132	8	0.036**
Distance from health facility	10.330	6	0.031**

*(**Significant at two tailed, P=0.05)*

4.4 Influence of Processes of Maternal Healthcare Services Delivery on Client Satisfaction

4.4.1 Health Facility Visitation

The results (Figure 4.10) indicated that majority (68.2 %) of the respondents were on a follow-up visit, whereas 31.8 % were on their first visit to the health facility. This is an indication that respondents demonstrated their consistency in seeking maternal health services. Patient's contentment with the services provided has been employed to measure service quality within the health sector. Various research works have established that

quality medical care leads to a high degree of patient contentment, bringing her back for health services (Okumu & Oyugi, 2018).

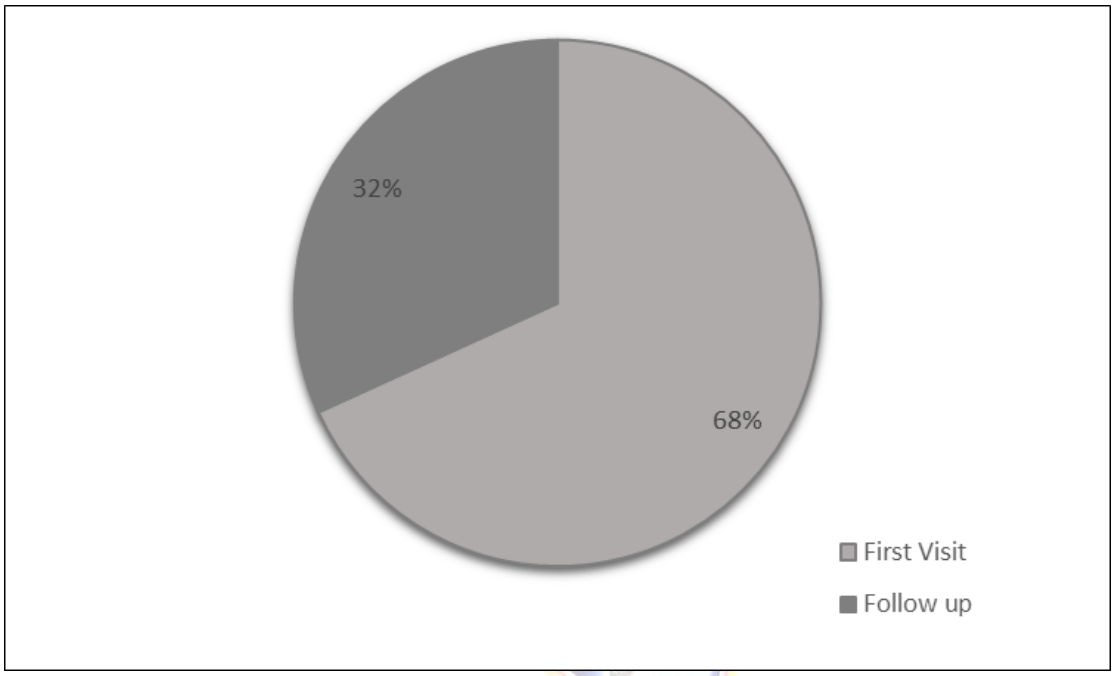


Figure 4.10: Health Facility Visitation

4.4.2 Service Delivery

Results (Figure 4.11) show that the majority (90. 1%) of the client had received the maternal health services they were looking for in the health facility. However, 8.9 % stated that services received were not satisfactory. This implied that most of the maternal health services were available in health facilities in Rongai Sub-County, Nakuru. Quality of care is imperative in effective maternal health services utilization in developing countries including Kenya (Gitobu, Gichangi, & Mwanda, 2018).

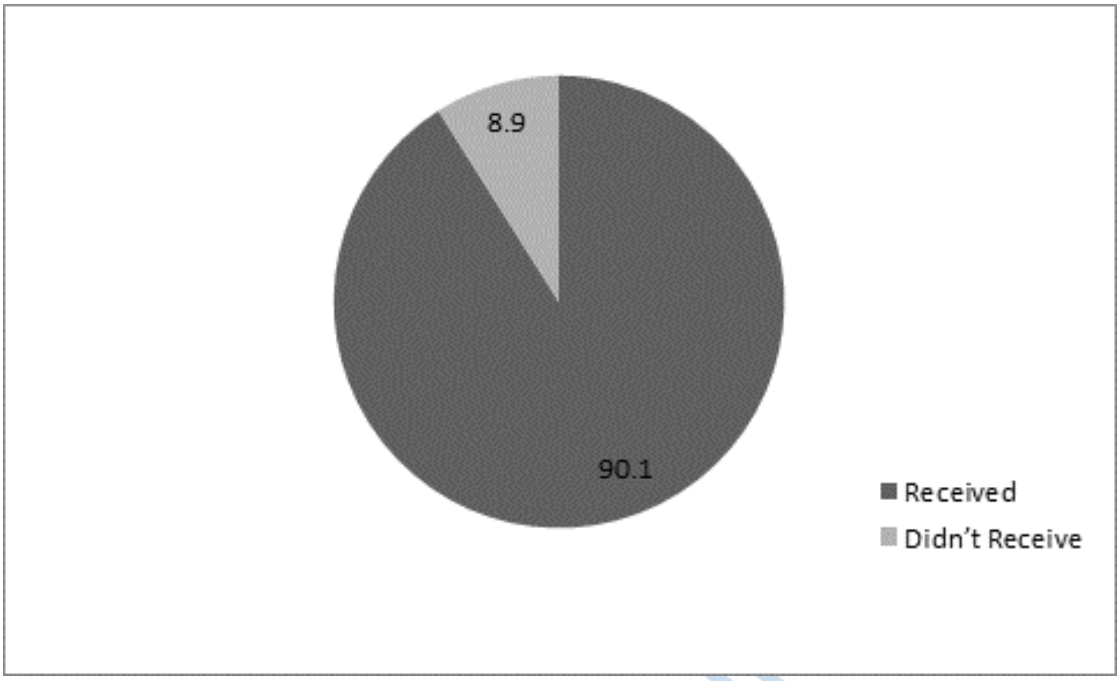


Figure 4.11: Service Delivery

4.4.3 Influence on the Hospital Choice

Majority (68.5 %) of respondents visiting the health facility were through referral to the facility from other health facilities and only 14.2 % visited due to the health facility's good reputation. However, 8.7 % were referred to the health facility by friends, while 5.5 % chose the facility because it was affordable, 1.6 % lack other choices with 0.8 % citing convenience and similar proportion just because of their previous visit. This is evident that respondents have a wide range of factors that determine the choice of health facility. Respondents whose expectations were not met in a certain health facility are most likely not to revisit the facility for treatment (Gitobu et al., 2018). It's acceptable that individuals' choice of healthcare facilities is determined by their, contentment with the service and perceived value of care offered (Okumu & Oyugi, 2018).

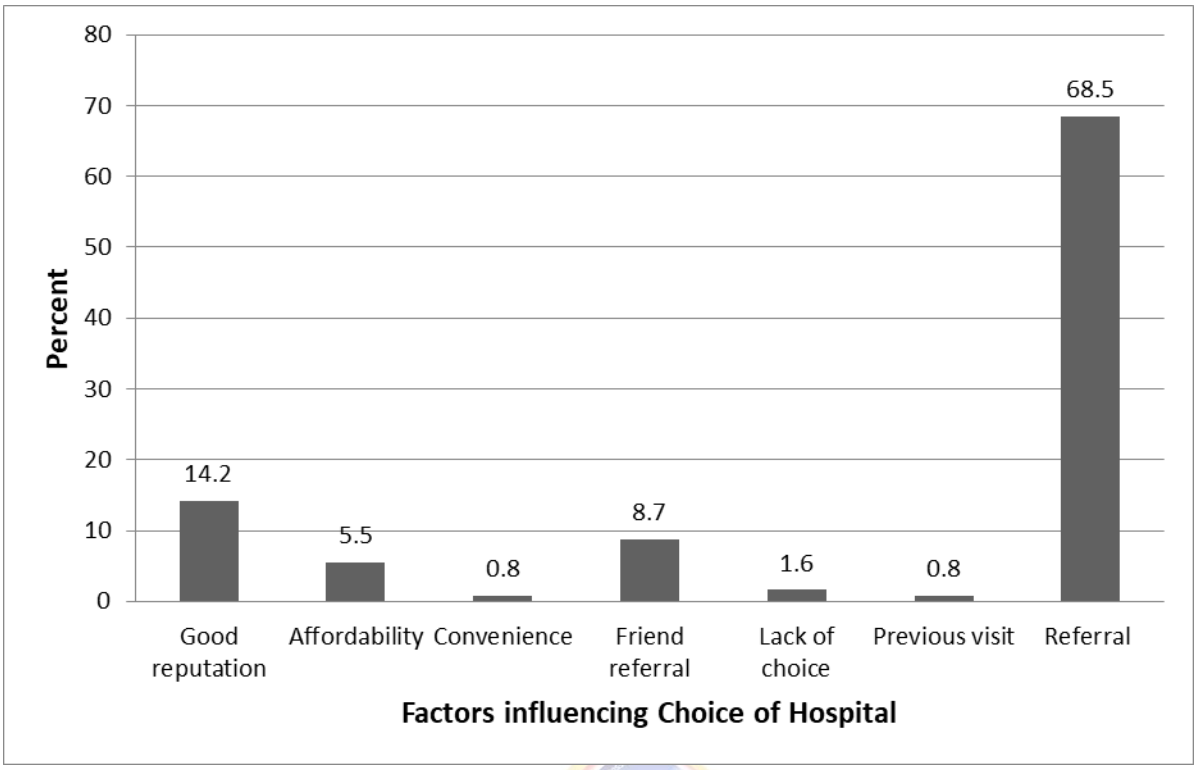


Figure 4:12: Factors Influencing Hospital Choice

4.4.4 Respondents Adherence to Appointments

The study findings as indicated show that 77 % of the respondents pointed out that they did not keep the health appointments as per the recommended WHO guidelines- 4 ANC visit, Postnatal visits and family planning clinics schedule hence reducing the number of clinic visits they make. It was also noted that they start their visits late, leading to an early delivery before completion of the 4 visits, or missing the PNC at 6 weeks. This agrees with Gitobu et al., (2018) who postulated that clients whose expectations were not met in a certain health centre affects their adherence and utilization of the services.

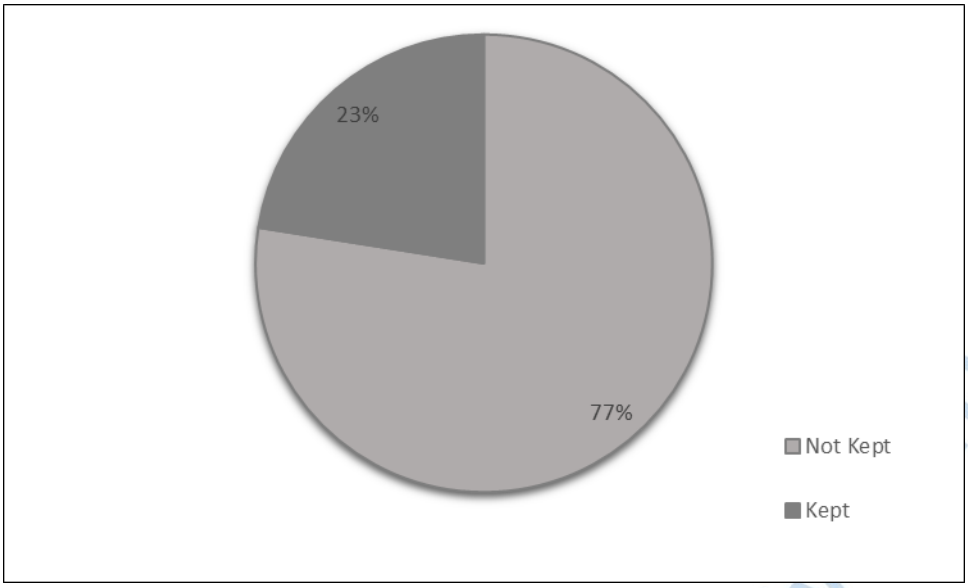


Figure 4.13: Respondents Keeping Appointments

4.4.5Affordability of Health Services

The study revealed that the maternal healthcare services offered at the sampled health facilities are affordable, as cited by most of the respondents (94 %) with only 6 % considering the services not affordable (Figure 4.14). The findings support Mehata et al. (2017), who considered that medical fee does not matter much once quality service has been rendered.

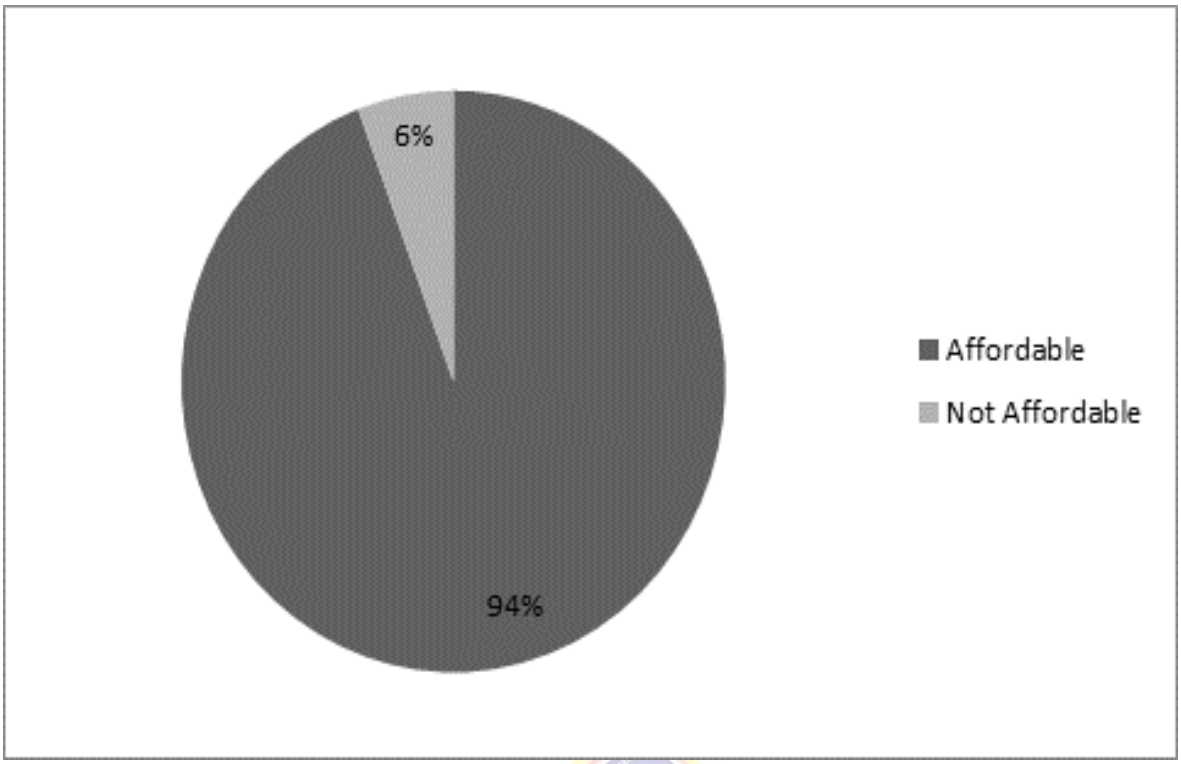


Figure 4.14: Affordability of Health Services

4.4.6 Duration taken to get Health Services

The response was categorized into intervals of 15 minutes, within 30 minutes of arrival, within 1 hour and beyond 1 hour. The results (Figure 4.15) most of the interviewees (59.2 %) stated that they had waited only for 15 minutes before they were served by the clinician/nurse and put on treatment during their visit at the health facility, while 15.2 % were served within 30 minutes of arrival. However, 22.4 % stated that they waited for the services for about 1 hour and 3.2 % for more than 1 hour, most of those who waited for longer times sited the number of staffs to be a major contributing factor. The results emphasized the importance of time of delivery of services in relation preference of respondents to visit to a health facility. This supports a study done by Mehata et al. (2017) in Nepal that reported dissatisfaction by women following longer waiting times, overcrowding

which hindered effective interaction with the service providers, and failure to be allowed time to ask questions.

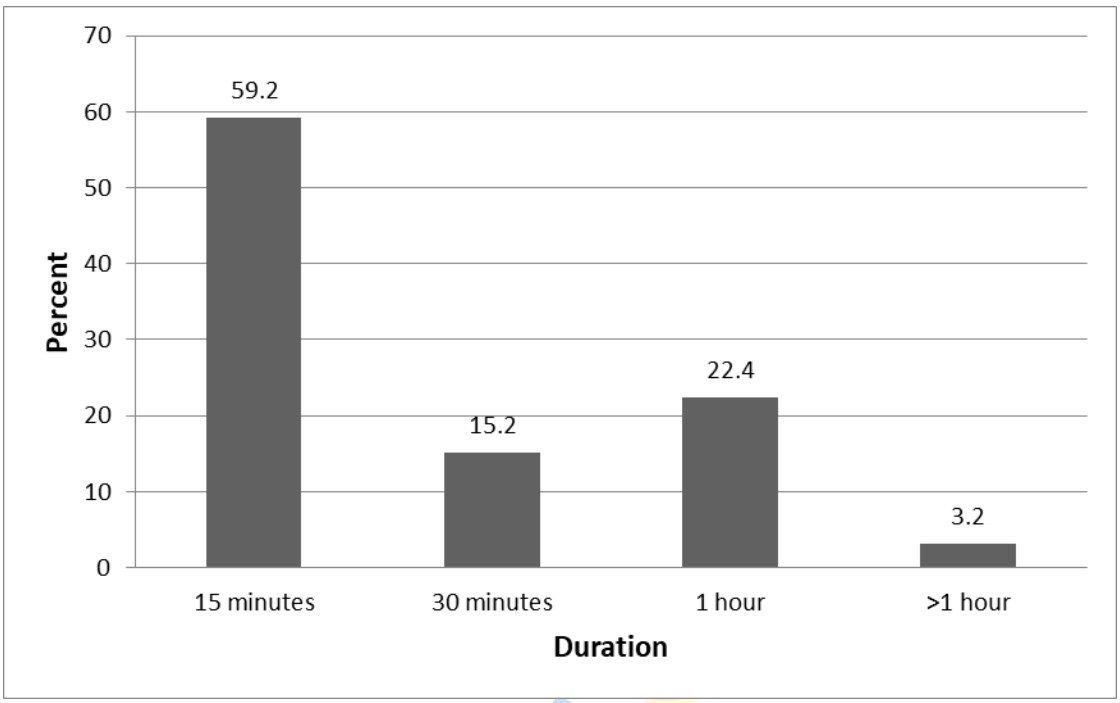


Figure 4.15: Duration taken to get served

The results pointed out that 85.3 % of the interviewees supported that the time allocated for service delivery was enough whereas 4.9 % stated that it was too short.

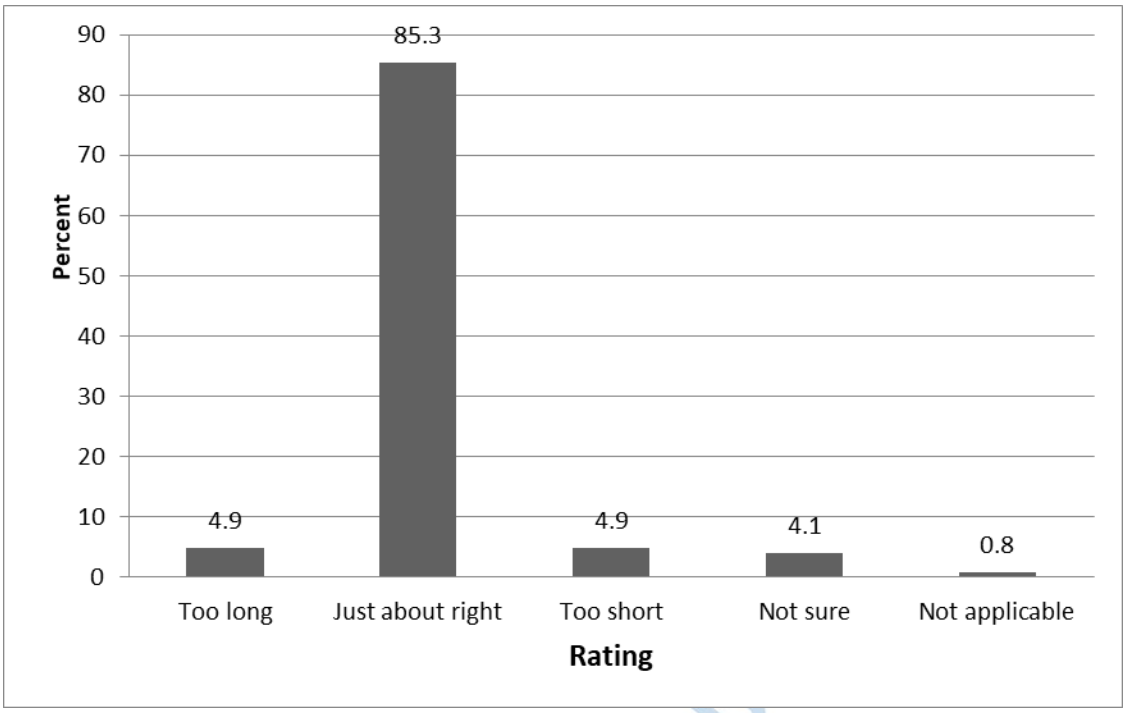


Figure 4.16: Rating the Service Duration

4.4.6. Explanation Given for Delayed Services

However, 4.1 % were not sure, further inquiry was done to establish whether the healthcare practitioners in the health facilities that were sampled were kind enough to give explanations in instances where the maternal health services were delayed. According to the findings presented in Figure 4.17, no explanation is given as pointed out by the majority of the interviewees (60 %) while 40 % said that it is given.

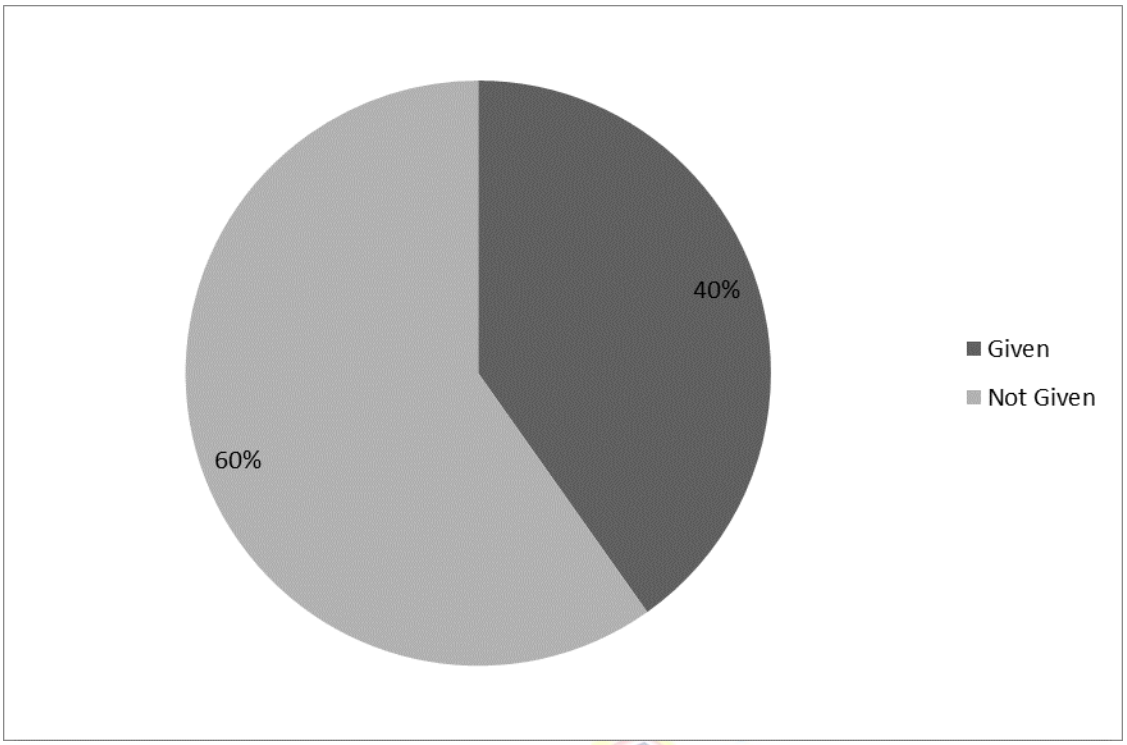


Figure 4.17: Explanation Given for Delayed Services

4.5 Influence of Client/Provider Interaction on Client Satisfaction

This section comprises the results showing the influence of Client/Provider Interaction on client satisfaction.

4.5.1 Diagnosis Accuracy

Majority (86 %) of the respondents attending the sampled health facilities confirmed that the diagnosis by the healthcare practitioners was good and accurate in terms of quality of Maternal care and actual referral, which are considered necessary in prevention of major causes of maternal death (Brenner et al., 2015) as seen in figure (4.18). However, 14 % considered the diagnosis not accurate based on the assumption that the equipments in the facility are old and staff shortage that leads to inconsistency of availability of services. One

client said *"My pressure was not taken today because sister said the machine is not working" (responded 36)*. This agrees with Nwaeze, Enabor, Oluwasola, & Aimakhu (2013) who considered service provider attributes as one of the key inputs towards the provision of quality healthcare delivery.

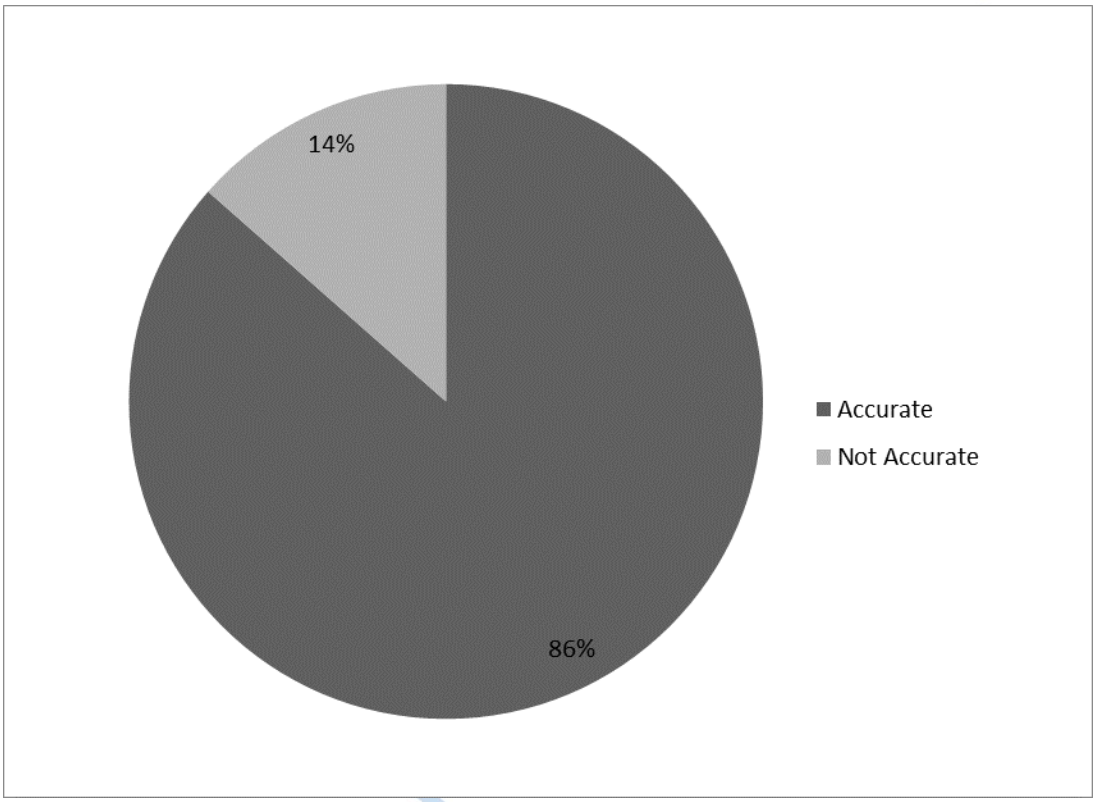


Figure 4.18: Accuracy in Diagnosis

4.5.2 Time Spent with Health Practitioner

According to the results (Figure 4.19), the majority (85.2 %) of the participants spent about 10 minutes with the clinician during their consultation when seeking maternal healthcare services, while 9.8 % spent 5 minutes. Only 4.1 % indicated to have spent more than 10 minutes. Provider characteristics may instill confidence in patients seeking health care services and hence client satisfaction (Okumu & Oyugi, 2018). Such characteristics are

courteous provider attitude and competency and where cultural wrongness of care, impolite, cold-hearted services, absence of emotional encouragement can discourage the client from seeking MHC services. The findings of (Figure 4.20) show that most (85.2 %) respondents considered clinician consultation time to be enough to get maternal healthcare services. However, 9.8 % stated that the consultation time was too long, and only 4.1 % said it was too short. Thus, client satisfaction is considered a valued indicator in healthcare quality assessment. Prediction of other factors that can influence respondents' satisfaction of healthcare services such as privacy, courtesy and short waiting duration, and a chance to interact with the service provider by asking questions and seeking clarifications (Aldana, Piechulek, & Al-Sabir, 2001; Uzochukwu, Onwujekwe, & Akpala, 2004).

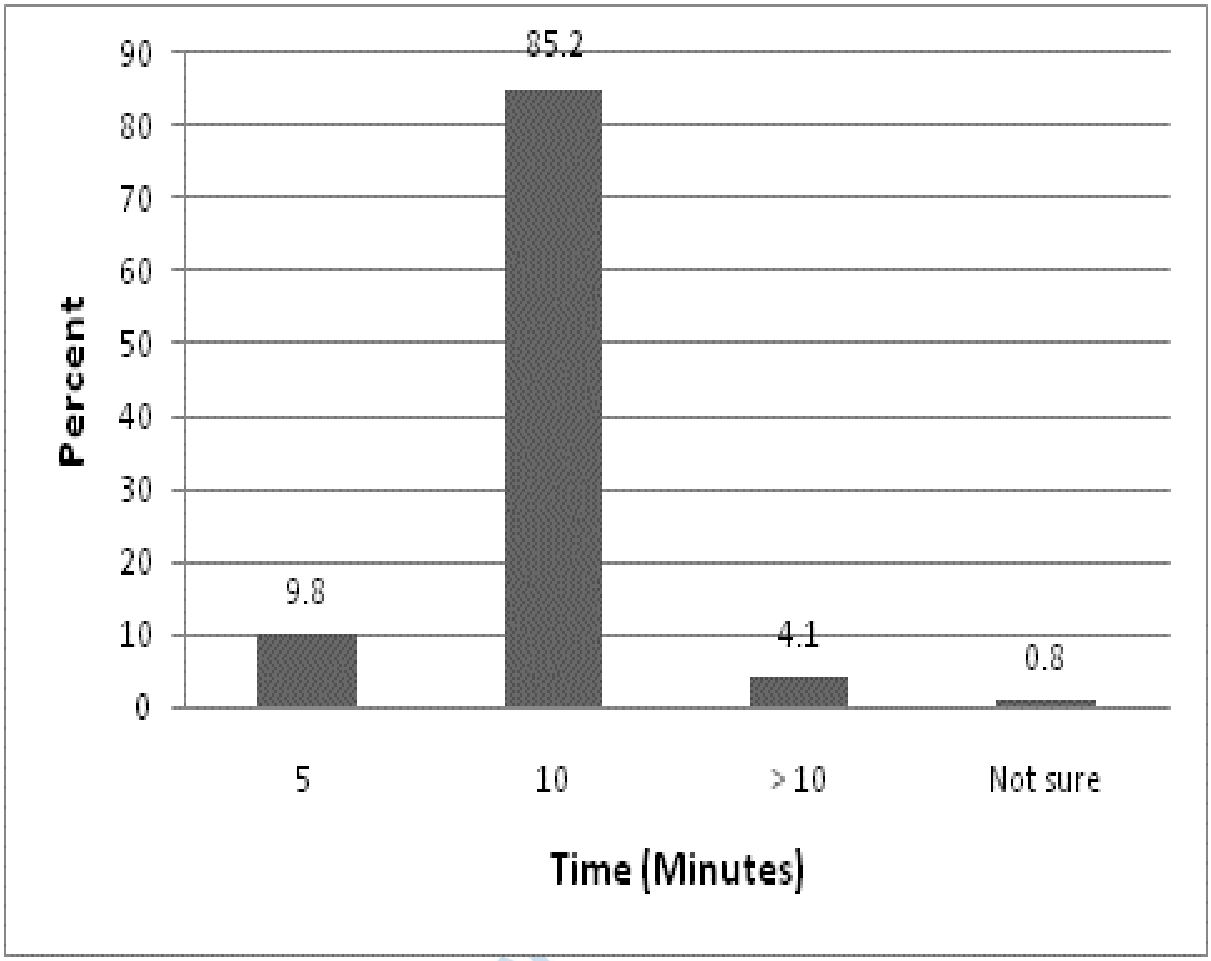


Figure 4.19: Clinician Consultation Time

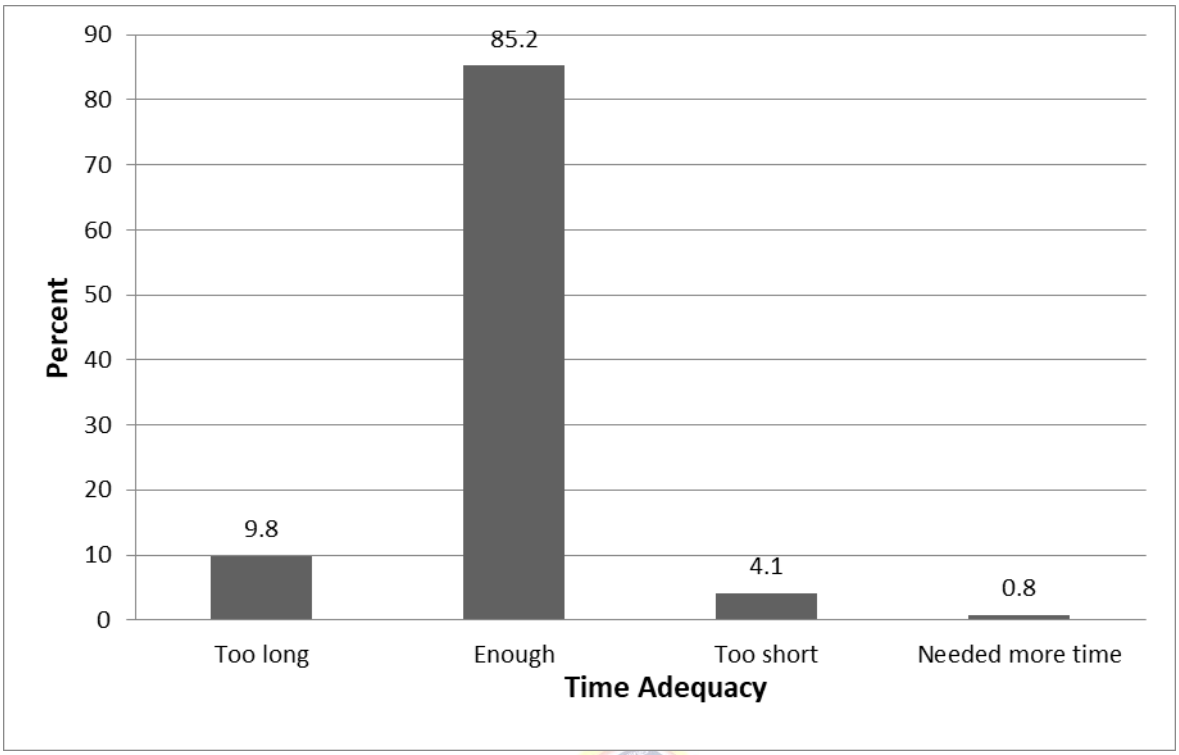


Figure 4.20: Consultation Time Adequacy

4.5.3 Healthcare Practitioners Consistency

The results (Figure 4.21) reveal that 66 % of the respondents are happy with healthcare practitioners' consistency in healthcare services delivery. According to Kitui, Lewis, & Davey (2013), ensuring consistency in delivery of quality maternal medical care services is an important intervention that will promote utilization and appropriate use of the services. However, 34 % stated that there was no consistency due to shortage of staff in the facility *"sometimes you don't find the Nurse in the facility, when you ask you are told they have gone to collect items from the main office in Kampi ya Moto" (respondent 76, a 34-year-old).* This agrees with Aluko, Anthea, and Modeste (2019) that there is a shortage of health providers, affecting the quality of maternal healthcare services

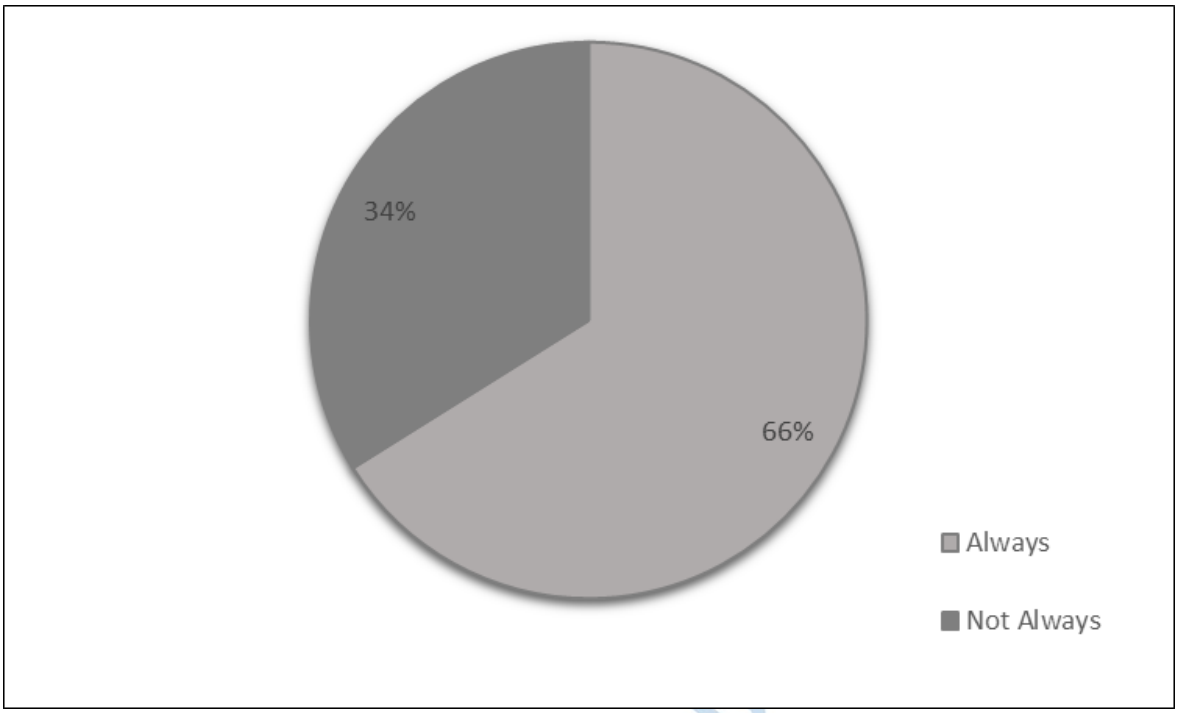


Figure 4.21: Healthcare Practitioners Consistency

Furthermore, respondents would prefer being attended to by same practitioners rather than different practitioners. This is indicated by the 91 % of the respondents who support that they wish to see the same healthcare practitioner with only 9 % stating otherwise. Majority of the clients would prefer to be attended by the same practitioner to avoid repeating their history all over again. They feel the person who attended them in the previous visit will still remember their history, and therefore there will be continuity. However, some clients 9%, felt they needed a different person to get another person's perspective of their condition. One of the clients cited a female provider's preference, which would make them more comfortable and open to sharing their issues.

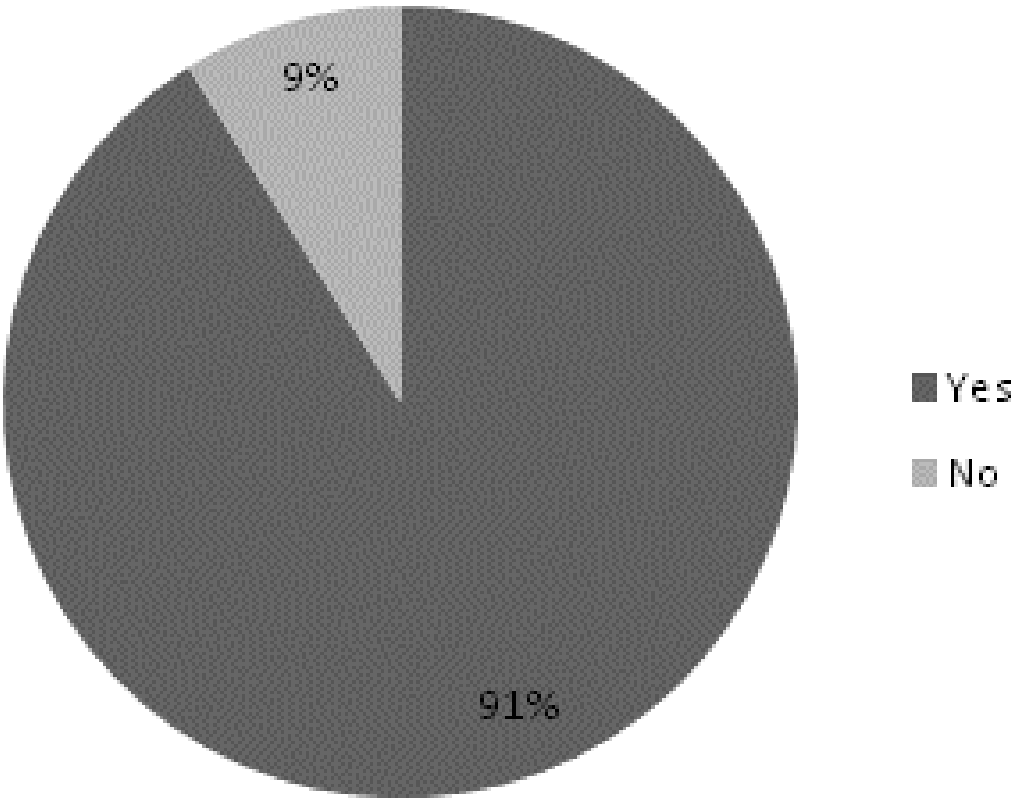


Figure 4:22: Wish to See the Same Healthcare Practitioners

4.5.4 Communication, Information and Interpersonal Relationship

Results (Figure 4.23) show that 75 % of the respondents were treated with respect by the healthcare practitioners who attended to them when seeking maternal healthcare services. Only 25 % stated that they were not impressed by the healthcare practitioners' interpersonal relationships. One issue that came out from the clients was how providers responded to some of their questions *"I asked my provider why I get frequent itchiness and she shouted back that by now I should know how to hygienically wipe myself (respondent 26, 22yrs).* The findings support Uzochukwu, Onwujekwe, & Akpala (2004) which reported that respect as well as a chance to interact with the service provider by asking questions and seeking clarifications are among the factors that influence patients' satisfaction.

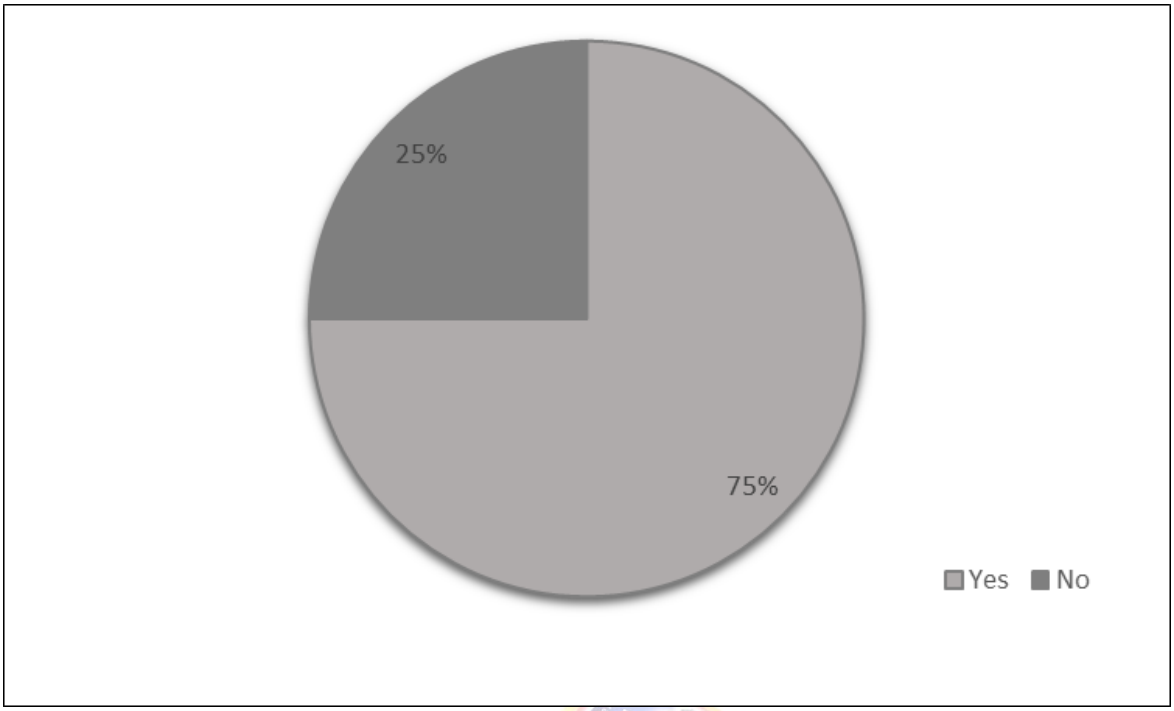


Figure 4.23: Interpersonal Relationship

Furthermore, majority of the respondents (63 %) felt that the nurses/in-charges of the maternity wings from the health facilities were eloquent in their explanation and were well understood by the respondents when they explained the medical procedures, test results, and next step in treatment during their consultation (Figure 4.24). However, 37 % stated that the communication was not clear. This could be due to literacy level and language barrier hindering them from communicating or understanding English or Kiswahili clearly. These findings agree with those of Rani, Bonu, & Harvey (2007), who argued that it is possible to reduce morbidity and mortality of expectant women by ensuring that every woman gets access to the information and quality maternal healthcare they require to safely go through the pregnancy period which they said is strengthened by a skilled human resource and functioning health system.

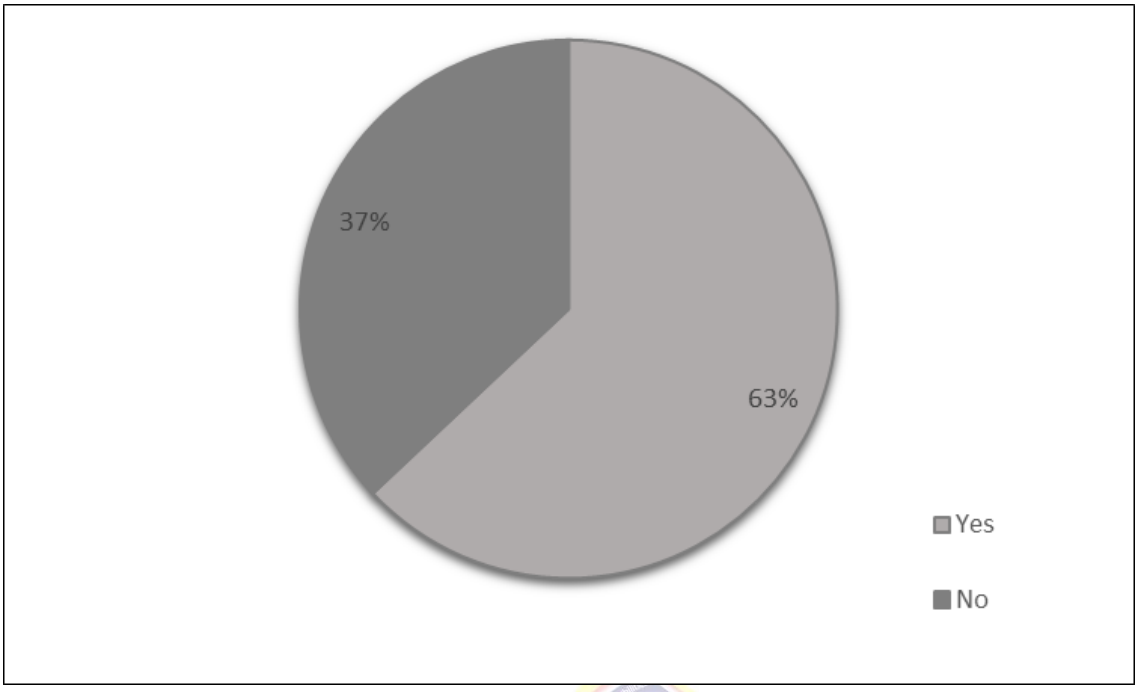


Figure 4.24: Clear Communication

Figure 4.25 shows that the majority (58 %) of respondents were unable to ask the health service provider questions when receiving maternal healthcare, whereas 42 % confirmed that they were able to. Perhaps the staff present were supposed to serve many clients therefore reducing the interaction time. This is alarming because knowledge is power if the client does not get adequate information, they may not be able to make the right decisions concerning their health. Uzochukwu, Onwujekwe, and Akpala (2004) postulate that it is necessary to give respondents a chance to interact with the service provider by asking questions and seeking clarifications. Furthermore, majority of the respondents were contented with the answers to the questions that they asked the maternal healthcare service provider at the time of consultation. Providing emotional care and support to the mother influences the client's quality assessment (Okumu & Oyugi, 2018).

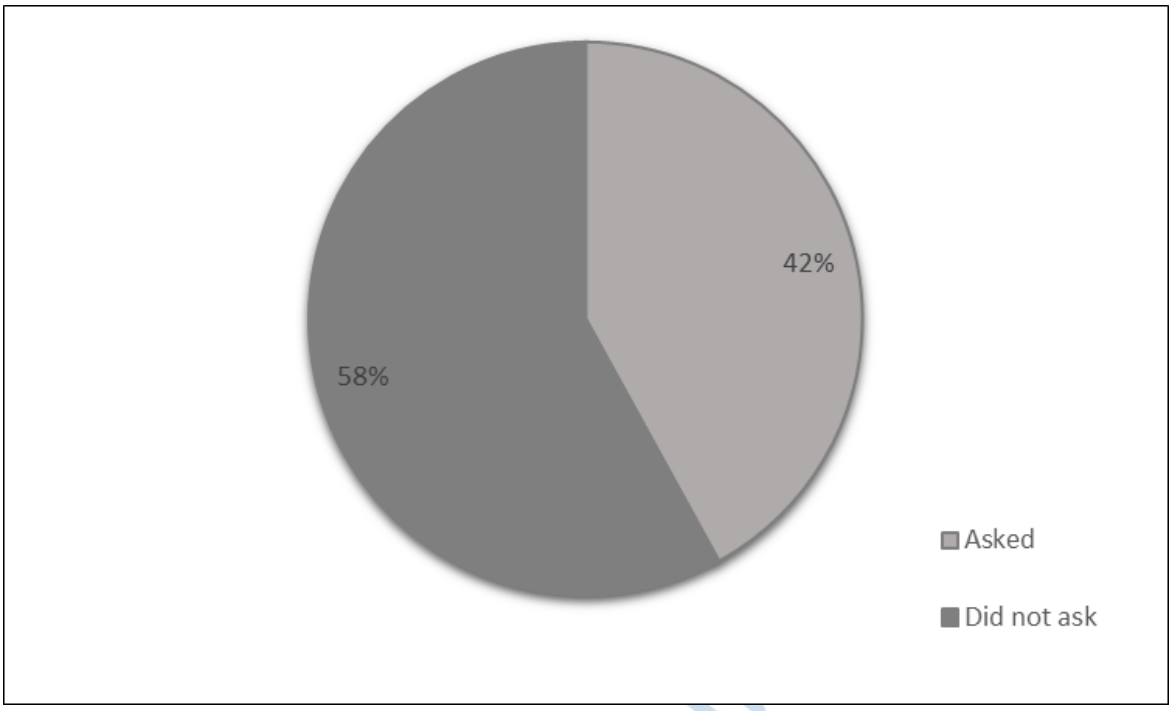


Figure 4.25: Respondents asking Questions about the Pregnancy

4.5.5 Physical Environment

69% of the sampled healthcare facilities needed physical improvements. Most of the facilities required renovations. Some were reported to be pre-colonial buildings and respondents wished modern buildings were done to create more room and space for the growing population. *"This building was a club before it was converted to a health facility when clubs were closed in the 80's (respondent 120, 47 yrs.)"*. However, 31 % stated that there was no need to improve the facilities since they are in a good state and the equipment are new. This shows an effort to increase heath care service availability while ensuring good practice that leads to client satisfaction and improve uptake of services to reduce delays that could result in maternal deaths (WHO, 2016a).

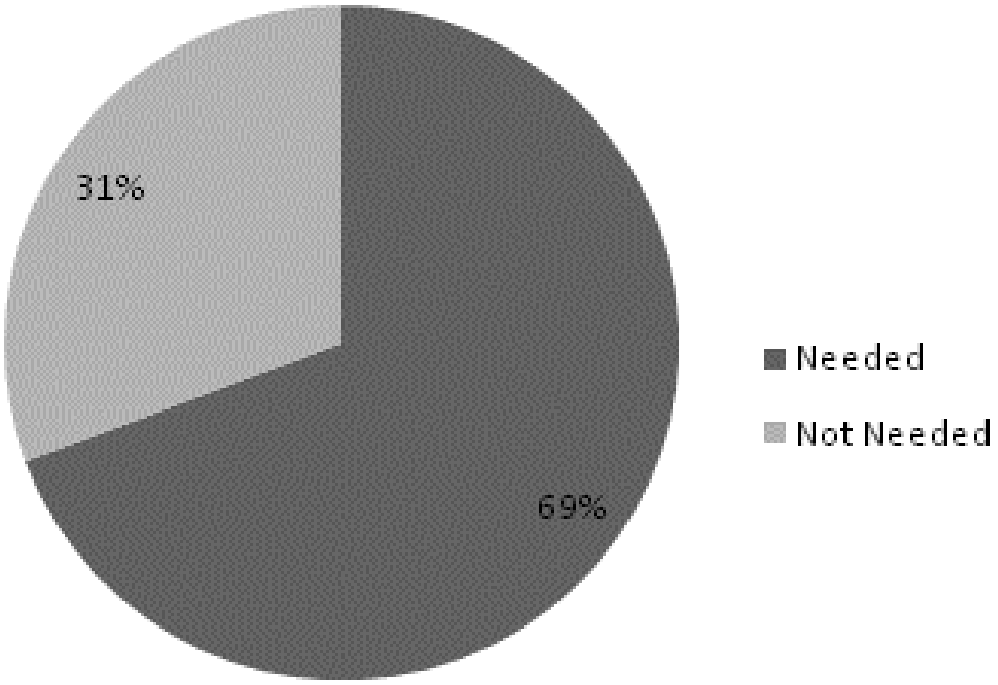


Figure 4.26: Physical Improvement Needed

The results (Figure 4.28) show that 69 % of the respondents felt confidentiality in the information given was kept, i.e., the information given by respondents is kept confidential by the health care providers. However, only 31 % stated that there was no privacy since there was no separate room for MHC services, the available room was used for both mothers and child health services and there are more than two people at same time which made it difficult for mothers to share sensitive issues for fear of lack of confidentiality. Aldana, Piechulek, & Al-Sabir (2001) indicated that patients should be given privacy when seeing a physician to interact with the service provider by asking questions and seeking clarifications.

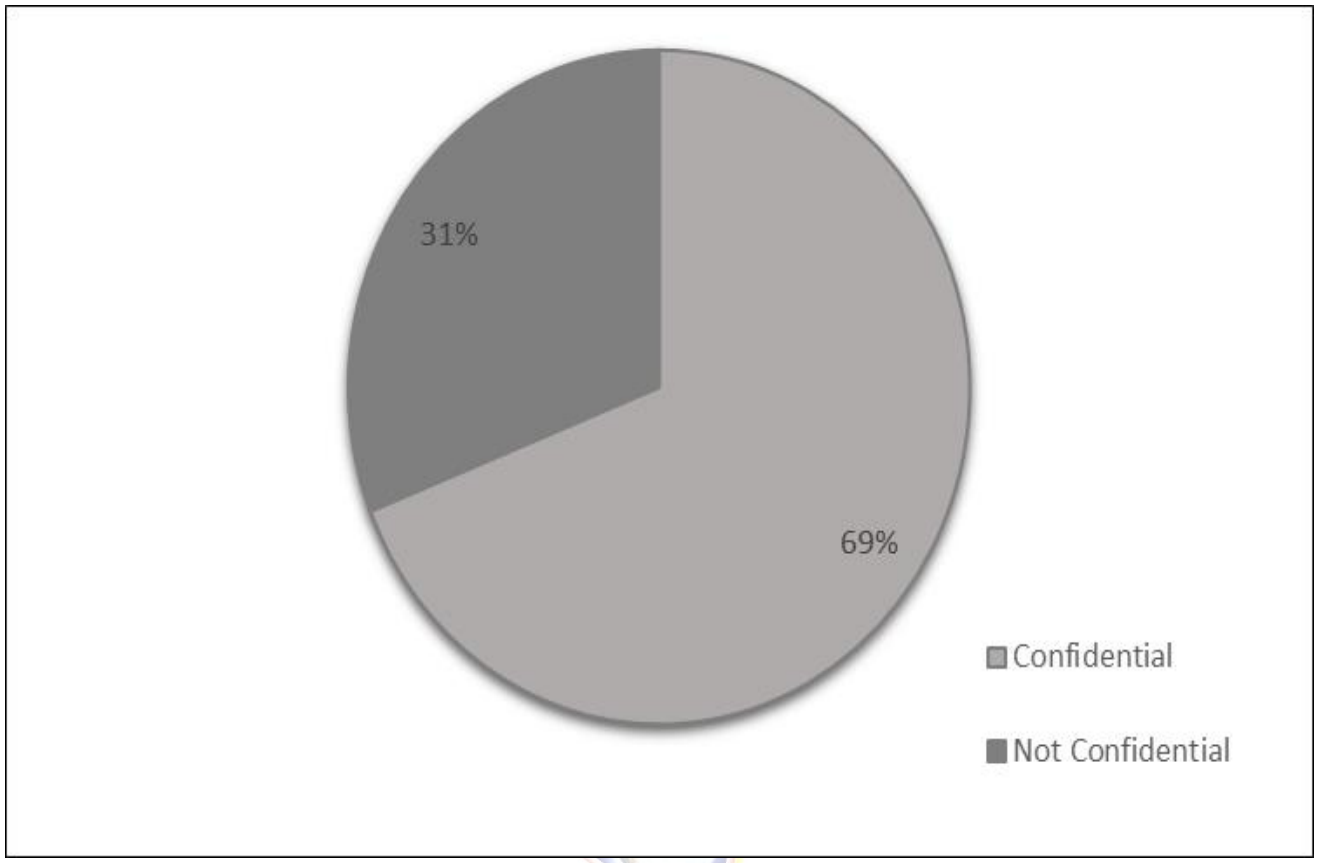


Figure 4.27: Confidentiality during Consultation

Through Karl Pearson Chi-Square test to determine the influence of processes of maternal healthcare services delivery on client satisfaction, it was noted that diagnosis accuracy, interpersonal relationship and good physical improvement had a significant influence on client satisfaction (Table 4.2).

Table 4.2: Chi-Square Results on Influence of Processes of Maternal Healthcare Services Delivery on Client Satisfaction.

Patient Related Factors	Pearson Chi-Square	df	P-Value
Diagnosis Accuracy	8.212	2	0.024**
Time Spent with Health Practitioner	11.234	4	0.268
Consultation time adequacy	6.846	4	0.388
Healthcare Practitioners Consistency	10.437	2	0.055
Interpersonal Relationship	18.246	2	0.003**
Physical Improvement Needed	13.742	2	0.004**

*(**Significant at two tailed, P=0.05)*

4.6 Influence of Structural Organization on Client Satisfaction

This section comprises of the outcomes on the influence of structural organization on patient/client satisfaction.

4.6.1 Structural Organization of the Health Facility

The findings sought to shed light on the structural organization of healthcare facility. Information was gathered using an observation checklist. The scoring was categorized into a scale of 1to 5 in an ascending order with 1 = Very Poor, 2 = Poor, 3 = Moderate, 4 = Good and 5 = Excellent. The response was also summarized using descriptive inferential statistics (Table 4.2).

The availability of maternal healthcare job aids /EIC materials in the sampled health facilities was moderate according to 37.5 % of the facilities supported by the mean response

was 3.3 with a standard deviation of 1.0. This is attributed to the inadequacy of mother baby booklets where in some facilities mothers were asked to buy exercise books. The educative posters and charts on maternal healthcare were either few, old or torn, and some were not well updated. According to Shifraw, Berhane, Gulema, Kendall, and Austin (2016), the measure in quality levels of technical care implies applying medical science and technology, thus getting the most benefits out of healthcare with minimal risks and errors.

The signals to guide the client flow were found to be good in 50 % of the health facilities who were the majority. The mean response was 3.3 and a standard deviation of 1.5. Since the mean is more than 3, it was evident that signals to guide the client flow were adequate in the healthcare facilities. People-centered health care aims to meet the peoples' health needs and deliver in their preference and aspirations (Organization, 2014).

The study also verified whether the health facility had service charter. Majority of the heath facilities (44.4 %) had a good charter, with 22.2 % observed to be very poor. Nwaeze, Enabor, Oluwasola, & Aimakhu (2013) consider one of the important structural organizational measures to be the service charter. The study sought to establish whether the maternal health services were offered as it was indicated in the service charter. The majority of the health facilities (34.6 %) service delivery was considered good, with 23.1 % saying that it was very poor. Since the mean response was 3.3 which exceeds 3 and a standard deviation was 1.5, the study concludes that maternal health services were offered as it was indicated in the service charter. Quality is compliance with standards and is also a basic component of the right to health (WHO, 2016b).

It was found that in majority of the health facilities (48 %), the accessibility of maternal care emergency services was found to be poor and 20 % very poor with only 8 % citing it to be good. This could be attributed to facility emergency trays not being updated according to obstetrical emergency checklists and there were no oxygen administration commodities in most of the facilities. The only available ambulance in Rongai Sub-County was stationed at the sub-county hospital which is more than 5 km away from other facilities. This will delay mothers in accessing emergency obstetrical care which is among the barriers highlighted by Cannoodt, Mock, and Bucagu (2012).

It was established that there was inadequate use of partograph in monitoring of mothers in labour as majority of the facilities (37.5 %) were found to be poor with only 16.7 % considered to be good. Since the mean response was 2.6 which is less than 3, it implies that partograph is not adequately used to monitor mothers in labour for mothers in the health facilities in Rongai Sub-County in Nakuru County. An increase in utilization and access to health care service is not sufficient for improving maternal health outcomes. The Technical care an expectant woman gets during the expectancy period, delivery, and post-delivery improves the well-being of the mother and the new born. The possibility that the client will go for care in the future is also improved (Wilson, Tabrizi, Gholipour, & Farahbakhsh, 2013). The need for signals to guide the client flow and client to access maternal care emergency services within the facility showed the strongest and statistically significant positive Spearman's correlation with client satisfaction (R= 0.955 & 0.944, P= 0.002 & 0.004 respectively).

Table 4.3: Structural Organization

Structures	1	2	3	4	5	μ	σ	R values	P values
Availability of maternal healthcare job aids /EIC materials	0	4.2	37.5	29.2	29.2	4	1	0.763	0.115
Signals to guide the client flow	7.1	14.3	10.7	50	17.9	3.6	1.2	0.955	**0.002****
Does the facility have a service charter	22.2	7.4	7.4	44.4	18.5	3.3	1.5	0.904	0.322
Maternal health services indicated in the service charter	23.1	7.7	7.7	34.6	26.9	3.3	1.5	0.899	0.104
Can the client access maternal care emergency services within the facility	20	48	20	8	4	3.2	1.3	0.954	**0.004****
Use of partograph in monitoring of mothers in labour	37.5	12.5	16.7	16.7	16.7	2.6	1.6	0.846	0.145

(** Significant two tailed at 0.05)

4.6.2 Items Availability

The work tried to find the items availability and their condition in terms functionality in the provision of medical services in the facility. The information was gathered using an observation checklist. The scoring was categorized into a scale of 1to 5 in an ascending order with1 = Very Poor, 2 = Poor, 3 = Moderate, 4 = Good and 5 = Excellent. The response was also summarized using descriptive statistics namely mean (μ) and standard deviation (σ). The results are presented in Table 4.3.

The study tried to find the minimum measures that the facilities had put in place to enable earlier identification of obstetrical emergencies. The results as indicated in Table 4.3 show that the availability of blood pressure machine was poor since the mean was 2.8 which is less than 3 and 57.1 % of the observations that rated the facilities to be moderate. Majority

of the facilities (59.3 %) were rated to be good in terms of the availability of fetal scope/Doppler. The mean was 4.1 which is more than 3. The stethoscope availability was poor in 53.5 % of the health facilities with only 6.4 % rated good. The mean was 2.6 which is less than 3. The availability of urine test strip for protein was poor in 36 % of the health facilities, with 2.5 % being good. The mean response was 2.4 which is less than 3. The completeness of the delivery packs was moderate in 20.8 % with a mean response of 3. This agrees with Crofts et al, (2015) who found that most lower level facilities in Zimbabwe lack the equipment and supplies needed to treat maternal emergencies.

The study sought to establish the health facilities' ability to handle waste generated during maternal health services provision. It was observed that the septic pit was poor in 37.5 % of the facilities with a mean of 2.3 which is less than 3. 50 % of the facilities did not have placental pit with a mean of 2.1. The incinerator was also lacking in 54.5 % of the health facilities with a mean of 2, which is less than 3. This fall short the recommendation by Tedesse and Kumie (2014) who found that waste segregation at the generation point with appropriate collection materials is paramount in enhancing quality health care. The study also highlighted the importance of constructing incinerators and placenta pits to enable proper waste disposal and community safety. This supports Glenngard & Maina (2007) who postulate that the capacity and quality of services basic essential obstetrical care offered in the first contact of a pregnant woman and availability of effective referral are important for antenatal care to be effective. They emphasized important aspects in promotion of good maternal health services, establishment of a functional referral system is vital.

As for the medical supplies and drugs, the study established that HIV/Syphilis dual tests were available in majority of the facilities, 42.9 % with a mean of 3.7. The iron and folic

(IFAS) supplements were also excellent in 50 % of the facilities with a mean 4, which is greater than 3.

However, 32 % of the facilities were rated poor in the availability of dewormers for mothers and 20 % were found to have inadequate cord clamps. This agrees with Shiferaw, Zegeye, & Mengistu (2017) who argue that here is high risk of warm infestation among pregnant women and low practices of prevention and control both in the community and the health facilities that include inadequate commodity availability. The study established that 34.9 % of the facilities in Rongai Sub-County lack delivery services. Additionally, 34.6 % lack an Infection Prevention Committee. This conquers with Person and Shoo (2005) who postulate that lack of basic emergency obstetrical care services limits access to life saving services during obstetrical complications. This also agrees with Twahir (2017) who proposes that respondents understand level of care to be multidimensional in nature that is both ability to offer the service and interpersonal aspect where they consider provider relation, waiting time, cleanliness of the facility, availability of commodities and supplies as important aspects of quality. Spearman's correlation analysis indicated that the need for adequate delivery services had the strongest and statistically significant Spearman's correlation with client satisfaction (R= 0.998, P=0.003).

Table 4.4: Items Availability

Items	1	2	3	4	5	μ	σ	R values	P values
Blood pressure machine	0	32.1	57.1	7.2	3.6	2.8	1.1	0.789	**0.046****
Fetal scope/Doppler	7.4	0	14.8	59.3	18.5	4.1	1.2	0.882	**0.001****
Stethoscope	4.1	53.5	25.3	10.7	6.4	2.6	1.3	0.942	**0.003****
Urine test strip for protein	28	36	24	9.5	2.5	2.4	1.6	0.784	**0.032****
Complete delivery packs	25	12.5	20.8	16.7	25	3	1.5	0.894	**0.001****
Adequate gloves	3.6	0	10.7	32.1	53.6	4.3	0.9	0.904	**0.001****
Septic pit	29.2	37.5	8.3	8.3	16.7	2.3	1.7	0.895	**0.047****
Placental pit	50	0	0	22.7	27.3	2.1	1.8	0.897	**0.002****
Incinerator	54.5	9.1	18.2	13.7	4.5	2	1.3	0.928	**0.006****
Cord clamps	18.6	20.7	26.2	23.4	11.1	2.8	1.3	0.848	**0.014****
Mebendezole/Albendezole tabs	21.4	32.1	10.7	28.6	7.2	2.6	1.5	0.933	**0.028****
HIV/Syphilis dual test	21.4	3.6	0	32.1	42.9	3.7	1.6	0.914	**0.005****
Iron and /or folic (IFAS)	12.5	0	8.3	29.2	50	4	1.3	0.876	**0.045****
IP committee	23.1	34.6	26.9	10.1	5.3	2.7	1.6	0.899	**0.024****
Availability of delivery services	34.9	0	21.7	21.7	21.7	3	1.6	0.998	**0.003****

(** Significant two tailed at 0.05)

4.7 Client Satisfaction

The respondents were asked whether they would recommend the health facility to others. The (Figure 4.28) most (81%) of the interviewees recommended a heath facility to others and only 19 % stated the contrary. This was an indicator that most of the respondents attending health facilities were contented with services offered in the existing health centres.

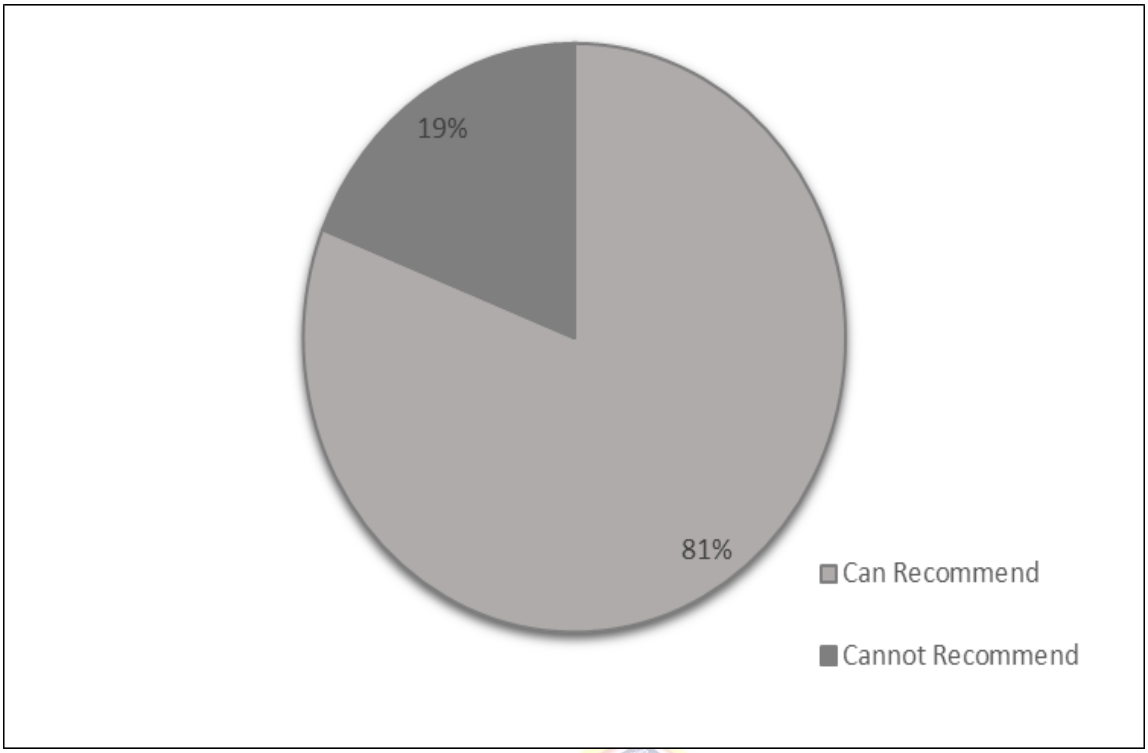


Figure 4.28: Recommendation

This is based on the fact that 10.2 % stated that the services were excellent (4.29). Majority of the respondents (60.2 %) rated the healthcare they had received from the facility as good. Only 29.7 % rated the services provided as fair. This shows that despite the services being received well by the respondents, there was room for improvement. This agrees with Alden, Lowdermilk, Cashion, & Perry (2013) who postulated that there are deficiencies in the health facility offering maternal healthcare services and "skilled birth attendant" indicators, which he argued have not been sufficiently validated and customized to suit the local maternal health needs of the county.

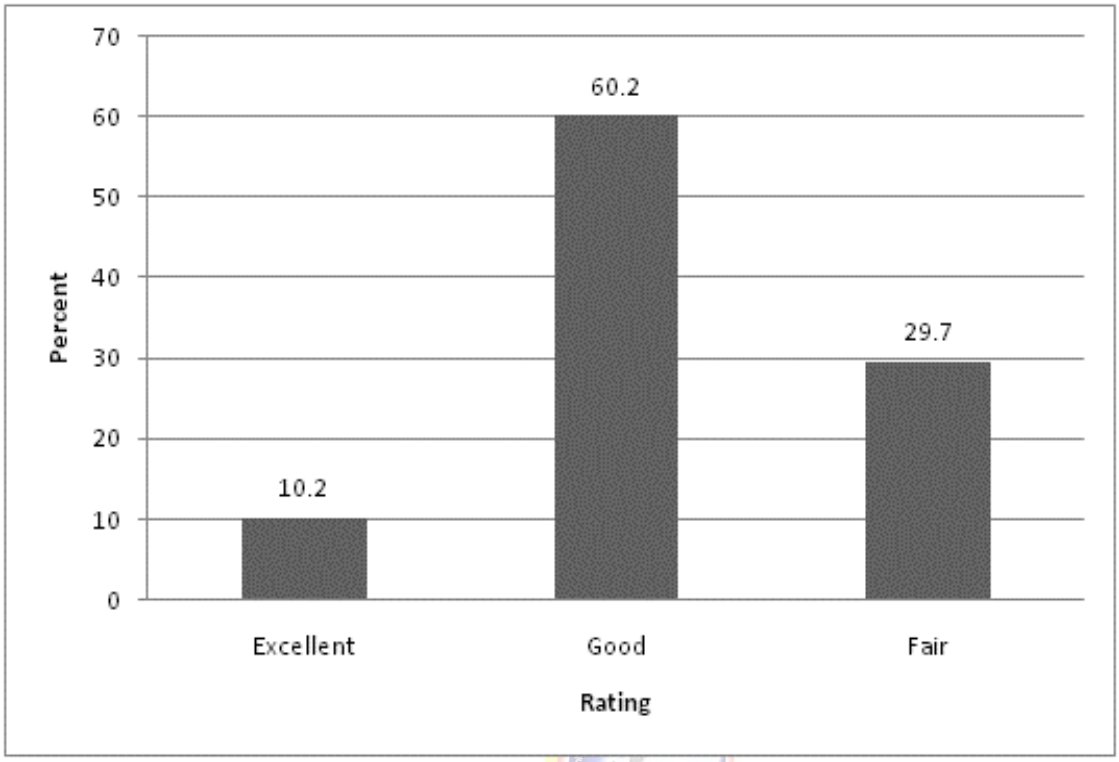


Figure 4.29: Rating of Quality of Care

The results (Figure 4.30) show 71.7% of the participants ticked that their overall satisfaction with the health services received in the facilities was average, with 24.4% considering to be high and only 3.9 % being very high. This shows that the respondents rated the services moderately, making it necessary for the health facilities to put more effort to ensure that they satisfy their respondents. This agrees with the Donabedian model that suggested three key component in evaluating customer satisfaction in a survey. The first is the perceived value a patient derives once she visits a health centre; the second is whether the right tools were used, and thirdly is the basic issues such as timeliness, conduct of service providers (Nwaeze et al., 2013).

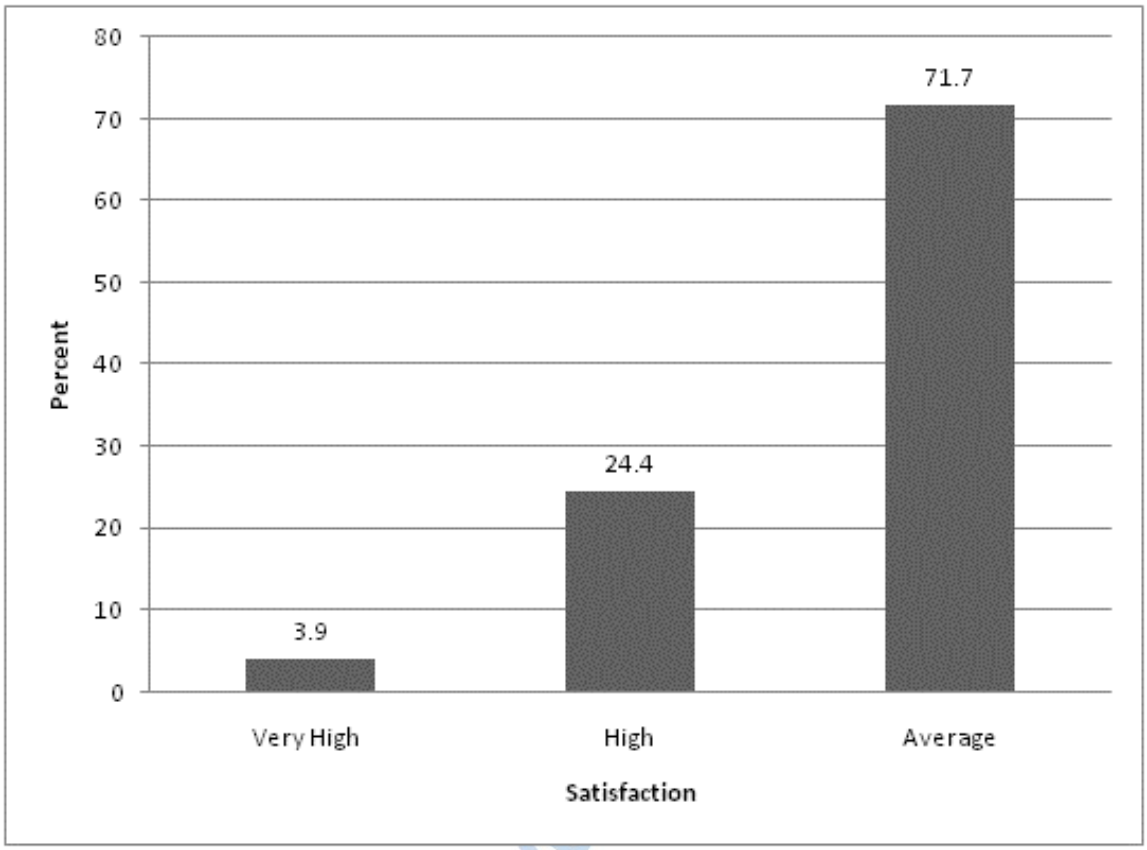


Figure 4.30: Client Satisfaction

Moreover, as exposed in Figure 4.31, majority of the interviewees (59 %) confirmed that they have noted improvements in several departments when receiving healthcare services. Continuous improvement is important as it enables a balance that ensures that a service's perceived future benefit is feasible enough given the requirements and constraints in terms of time spent, costs incurred, and other sacrifices made (Adams, 2012)

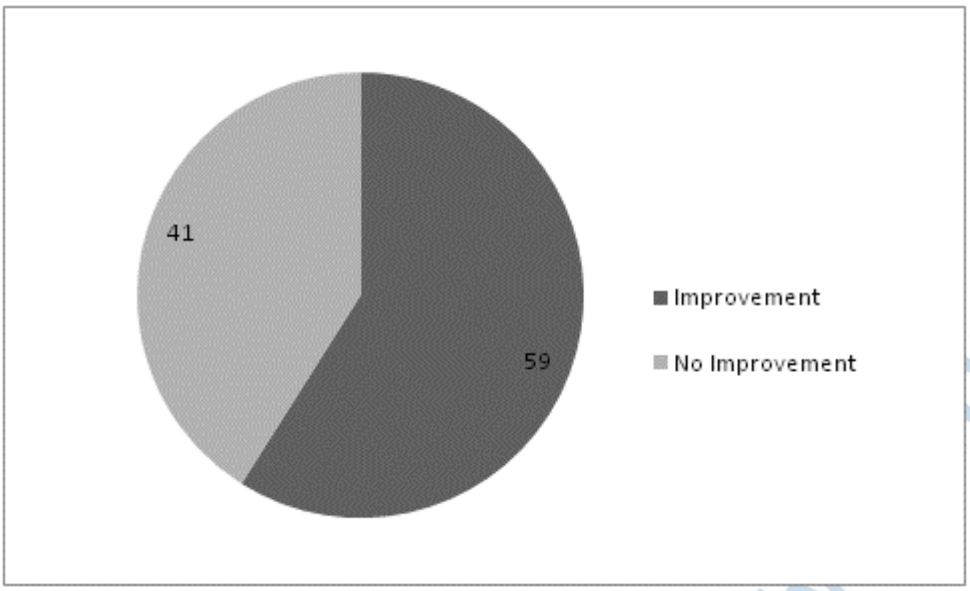


Figure 4.31: Improvement in Service Delivery

4.8 Key Informants' Opinions on Influence of Quality Maternal Healthcare Service on Client Satisfaction

An interview schedule was administered to the key informants, who are the healthcare providers to try and establish the readiness of the facilities to provide quality maternal healthcare service to assess the client's level of satisfaction, the key informants were perceived to have firsthand experience hence had enough level of experience to help with the study. Of the 10 key informants from the 5 wards and 4 from the 2 sub-county hospitals, 8 had a job cadre of Nurses. At the same time, 6 were clinicians with 8 of the key informants having a working experience ranging from 0-5 years while 6 of them had more than 5 years working experience.

According to the key informants, the staffing levels were inadequate since each facility had only an average of 4 trained Healthcare Practitioners and, hence, greatly affected the quality of service given and in return resulted in reduced clientele satisfaction levels. The findings

agree with Aluko et al. (2019), who state that healthcare providers' shortage affects the quality of maternal healthcare services. The key informants disclosed that on average they see about 40 clients per day in their respective facilities and this is an overwhelming number of clients which translates to a high workload since they have to apportion their time to service all the clients which culminate to reduced quality of service offered and reduced level of clients.

The key informants were asked the type of RH skill they had been trained on and a majority of them stated that they had been trained primarily on LARC (Long-Acting Reversible Contraception) while a few had been trained on BeMOC (Basic Emergency Obstetric Care), CRH (Comprehensive Reproductive Health), and EMOC (Emergency Obstetric Care) and this enabled them to adequately advise clients on reproductive health matters and offer quality RH services.

When asked about the facilities' equipment, the key informants disclosed that the facilities did not have adequate equipment to provide the required level of obstetrical care. Majority of them felt that their facilities could provide better obstetrical care if they were supplied with additional equipment units of Scrub-up units with elbow-operated taps, Ultrasound machine, Myomectomy instruments, Fetal scopes, Oxygen cylinders, Neonatal resuscitation tray, Suction machine among others.

Since the introduction of free maternal care, the key informants reported that there were slight improvements in the quality of maternal healthcare, however, the issue of staffing and lack of adequate equipment continues to hamper the effectiveness of the programme and

they believed if the issues of staffing and equipment were looked into it would result in improved service delivery to the clients' satisfaction (Gitobu et al., 2018).

The researcher pursued the factors that resulted in long waiting time for clients, the informants believed that among the influencing factors are the staff shortages in the facilities, the high volume of workload, previous negative provider experience, inadequate supply of equipment and commodities, inadequate structural facilities designated for maternal services, and mothers who fail to keep their set appointments dates and time.

The key informants relayed information about the structural organization of their respective facilities and stated that the majority of them were availed with EIC materials, signals to guide workflow, and offered the majority of the maternal health care services as indicated in the public health service charter. In this respect, the facilities were able to fully offer maternal health services. When it came to having a service charter, maternal healthcare emergency services, and the use of partograph in monitoring mothers during labor, most of the facilities failed in this area since they lacked a stated service charter and facilities to provide the emergency services culminated into low service delivery.

Finally, the key informants were asked about the range of maternal services that they offered. The majority of the facilities provided physical examination-palpation, biometric measurements, tetanus, health education on birth preparedness, and screening services like Anaemia, HIV/Syphilis, blood grouping, and screening services for PMTC. This was attributed to the fact that adequate facilities, equipment, and trained were availed to the health care providers and in return, maximum service was being offered in those services. Some of the facilities lack the necessary equipment and facilities to offer some of the

services, especially the screening services that hampered their overall service delivery and resulted in low client satisfaction levels.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter entails the summary on the findings from the study, the study conclusions, the study recommendations as well as suggested areas necessary for further studies.

5.2 Summary of Study Findings

This section provides the summary of key findings as per the study objectives.

5.2.1 Patient-Related Factors that influence client Satisfaction

In this study, the client's satisfaction was significantly influenced by the client demographic factors such as, level of education, employment status, income level, health facility attendance duration, and the distance from the health facility. This was indicated by the p – values which were less than 0.05, considered as the critical value since the test was done at 95 % levels of significance.as stipulated in table 4.1. Patients' health-seeking behaviours could be determined by their social-economic empowerment. For this case employment status is linked with health insurance cover, indicating that an individual's income is important as it gives them the ability to choose among the available health services opportunities as per findings illustrated in figure 4.7.

The distances of the sampled facilities were within the World health organization recommended radius of 5 Kms, which is easily accessible to the mothers. Geographical regions and lengthy distance travelled or walked to the health centre are considered to be

among the factors that determine utilization of maternal healthcare services as well as the satisfaction of clients.

5.2.2 Influence of Processes of Maternal Healthcare Service Delivery on Client Satisfaction

Satisfaction (contentment) of a client with service delivery has been employed to measure the quality of service in a health institution. Most of the maternal health services were available in the studied health facilities in Rongai Sub-County, Nakuru. Maternal healthcare services offered at the sampled health facilities were found to be affordable.

Safe motherhood initiative has emphasized skilled care attendance both antenatal, during delivery, and postnatal as a measure to improve maternal healthcare service utilization and uptake among the community, hence bringing achievement of good pregnancy outcomes and ensuring quality continuum of care at antenatal, during delivery and postnatal period. In figure 4.10, the study showed that 62.8% of the respondents were on their follow up visits however, the study did not establish which visit the client was making as antenatal visits are categorized into 4 visits and postnatal visit into 3. This study also showed that 77% of the respondents reported not have kept their appointments and started the clinic at the second trimester (Figure 4.13).

Maternal health services were available at 90% of the studied facilities in Rongai Sub County, and this indicated an increase in access of the MHC services within the health facilities. However, 8.9% of the respondents stated that services received were not satisfactory to them. On the influence of processes of maternal healthcare services delivery on client satisfaction, it was noted that diagnosis accuracy, interpersonal relationship and good physical assessment had a significant influence.

5.2.3 Influence of Client/Provider Interaction on Clients Satisfaction.

In this study, respondents attending the sampled health facilities pointed out that the healthcare practitioners' diagnosis was accurate. Findings presented in Figure 4.19 indicates that majority of the respondents (85.2 %) spent about 10 minutes with the clinician during their consultation, which was considered adequate consultation for getting appropriate maternal healthcare services. There was consistency in healthcare service delivery, however, according to the findings presented in Figure4.22, staff shortage was noted as a factor that affected the continuity. The study established that there was a good interpersonal relationship between the service providers and the clients, which promoted a good health seeking behavior according to the findings represented in Figure 4.23. However, as per the findings in 4.26 and Table 4.2, the respondents pointed out that the healthcare facilities needed improvements on their physical infrastructure, expansion to accommodate the growing population, and improved privacy of the clients by creating a separate room for MHC services. Patients should be given privacy when consulting a physician so as to interact with the service provider by asking all the questions, including the confidential ones and seeking clarifications whenever necessary. This concurs with Aldana, Piechulek, & Al-Sabir (2001), which postulates that patients should be given privacy when consulting a physician so as to increase confidentiality and free interaction.

5.2.4 Influence of Structural Organization on Clients Satisfaction

The need for signage to enable prompt emergency care services within the facilities had the strongest spearman's correlation with clients' satisfaction, and the need to have delivery services in all the level 2 and level 3 facilities had a significant influence on client

satisfaction as per the findings in Table 4.3. clear signage will facilitate easy access to MHC services and timely intervention for obstetrical emergencies.

Maternal healthcare job Aids /EIC materials were available in some of the sampled health facilities, however, some facilities reported inadequate supply of the mother-baby booklets. Additionally, educational posters were few or Old, with pamphlets and posters being torn and in poor state. Data tools for delivery of maternal healthcare services were adequate in the sampled health facilities, signals to guide the client flow were also adequate and MHC services were offered as was indicated in the service charter (Table 4.3).

The accessibility to emergency MHC services in the health facilities was rated to be poor at 48% (Table 4.2). Partograph was not adequately used to monitor mothers in labour while increase in utilization and access to HCS was not sufficient for improving maternal health outcomes.

This study established that availability of equipments like fetal scope and other supplies like cotton wool, gauze, and gloves were adequate and in good condition. Blood pressure machines, delivery packs, stethoscopes, urine test strips were rated poor in most of the facilities. Those who had some of these equipments reported constraint in adequacy since they were being used by more than one department.

For vailability of drugs and supplements, the study established that, Tetanus toxoid vaccine, iron and /or folic (IFAS) and HIV/syphilis dual test were adequate as observed in majority of the health facilities. However, the supply of Mebendezole/Albendezole tablets was rated poor as its availability was a big challenge.

On infection prevention and waste disposal, the study indicated that the availability and functionality of the infection prevention committee in the sampled facilities were poorly rated as none of them had evidence of the committees' meetings and members. Availability of the placental pit, septic pit, and incinerator was also poorly rated in most of the visited health delivery units.

5.3 Conclusions

From the above study findings, it was evident that clients' satisfaction with the maternal healthcare services was influenced by some of the patients' related factors, for instance, the level of education of the respondents. The employment status of clients also had a significant impact on patient's satisfaction. Similarly, the clients' level of income also had a positive effect on clients' satisfaction.

For the influence of processes of maternal healthcare service delivery on client satisfaction, the clients were found to be consistent in seeking maternal health services. However, it was noted that 1st ANC attendance was mostly in the second trimester, thus reducing the number of visits before delivery. Most of the sampled facilities offered maternal health care services, and the study indicated that the services were affordable. The results manifested a good indication as far as health-seeking behavior was concerned among the clients seeking the MHC services. This showed that there were a wide range of aspects that determined the choice of service delivery point or health facility by the client, such as referral to the facility from another health facility, the health facility having a good reputation, referral to the health facility by friends as well as the cost of care.

The healthcare practitioners were considered to be consistent in healthcare service delivery. The study established that facilities were adequate for maternal healthcare job aids /EIC materials in the sampled health facilities. However, the capacity to provide quality care in some facilities were found to be inadequate in terms of basic equipment and infrastructure such as the delivery packs, placental pits and incinerator. In the process of maternal healthcare delivery, the management of mothers during labour by use of a partograph was not consistent in most of the sampled facilities. This would lead to delay in identifying the obstetrical emergencies, hence delaying intervention, leading to poor delivery outcomes. The structural organization proper signage is necessary to ease clients access to emergency services and reduce delays.

5.4 Recommendations

From the study findings the following recommendations are provided

i. The county government to focus on empowering the community on maternal healthcare services to promote uptake and utilization of services, and the community should be sensitized on the Linda mama initiative which will enhance access of the services.

ii. Improvement of the infrastructural facilities is necessary to promote quality care across all the facilities and enhance client privacy.

iii. Strengthening of emergency services in Level 2 and Level 3 facilities is urgently needed for improved health service provision.

iv. The is need to employ and equitably distribute healthcare providers in all the levels of care.

v. The county government should ensure adequate and equitable provision of tracer items and train health care providers on use of the partograph to ensure effective management of mothers in labour and reduce negative outcomes.

vi. The county government should also equip all the facilities to enable them provide basic maternal healthcare services.

5.5 Suggestion for Further Study

A study to establish the barriers and facilitators of access to maternal healthcare services for women who are mentally and physically challenged is recommended for effective universal and equitable maternal health service provision.

REFERENCES

Acharia, S. (2018). *Study of select issues in knowledge management in new product development.*

Adams, J. (2012). Consideration of immediate and future consequences, smoking status, and body mass index. *Health Psychology*, *31*(2), 260.

Aldana, J. M., Piechulek, H., & Al-Sabir, A. (2001). Client satisfaction and quality of health care in rural Bangladesh. *Bulletin of the World Health Organization*, *79*, 512-517.

Alden, K. R., Lowdermilk, D. L., Cashion, M. C., & Perry, S. E. (2013). *Maternity and women's health Care-E-book*: Elsevier Health Sciences.

Ali, R. M., & Wajidi, F. A. (2013). Factors influencing job satisfaction in Public Healthcare Sector of Pakistan. *Global Journal of Management and Business Research*.

Aluko, J. O., Anthea, R., & Modeste, R. M. (2019). Manpower capacity and reasons for staff shortage in primary health care maternity centres in Nigeria: a mixed-methods study. *BMC health services research*, *19*(1), 10.

Andersen, R., & Newman, J. F. (2005). Societal and individual determinants of medical care utilization in the United States. *The Milbank Quarterly*, *83*(4), Online-only.

Armitage, C. J., & Conner, M. (2000). Social cognition models and health behaviour: A structured review. *Psychology and health*, *15*(2), 173-189.

Barton, A. (2009). Patient safety and quality: An evidence-based handbook for nurses. *Aorn Journal*, *90*(4), 601-602.

Berwick, D. M., Kelley, E., Kruk, M. E., Nishtar, S., & Pate, M. A. (2018). Three global health-care quality reports in 2018. *The lancet*, *392*(10143), 194-195.

Brenner, S., De Allegri, M., Gabrysch, S., Chinkhumba, J., Sarker, M., & Muula, A. S. (2015). The quality of clinical maternal and neonatal healthcare–a strategy for identifying 'routine care signal functions'. *PLoS One*, *10*(4), e0123968.

Bustreo, F., Say, L., Koblinsky, M., Pullum, T. W., Temmerman, M., & Pablos-Méndez, A. (2013). Ending preventable maternal deaths: the time is now. *The Lancet Global Health*, *1*(4), e176-e177.

Cannoodt, L., Mock, C., & Bucagu, M. (2012). Identifying barriers to emergency care services. *The International journal of health planning and management*, *27*(2), e104-e120.

Crofts, J. F., Mukuli, T., Murove, B. T., Ngwenya, S., Mhlanga, S., Dube, M., ... & Wilcox, H. (2015). Onsite training of doctors, midwives and nurses in obstetric emergencies, Zimbabwe. *Bulletin of the World Health Organization*, *93*, 347-351.

Drost, E. A. (2011). Validity and reliability in social science research. *Education Research and Perspectives*, *38*(1), 105.

Eng, J. (2003). Sample size estimation: How many individuals should be studied? *Radiology*,*227*: 309–313.

Firoz, T., Chou, D., von Dadelszen, P., Agrawal, P., Vanderkruik, R., Tunçalp, O., . . . Say, L. (2013). Measuring maternal health: focus on maternal morbidity. *Bulletin of the World Health Organization*, *91*, 794-796.

Gabrysch, S., & Campbell, O. M. (2009). Still too far to walk: literature review of the determinants of delivery service use. *BMC pregnancy and childbirth*, *9*(1), 34.

Gallo, L. C., & Matthews, K. A. (2003). Understanding the association between socioeconomic status and physical health: do negative emotions play a role? *Psychological bulletin*, *129*(1), 10.

Ganguly, E., & Sharma, P. K. (2014). Client satisfaction with quality of health care in a rural area in Southern India. *Journal of public health and epidemiology*, *6*(8), 239.

Gelberg, L., Andersen, R. M., & Leake, B. D. (2000). The Behavioral Model for Vulnerable Populations: application to medical care use and outcomes for homeless people. *Health services research*, *34*(6), 1273.

Ghebreyesus, T. A. (2018). How could health care be anything other than high quality? *The Lancet Global Health*, *6*(11), e1140-e1141.

Ginsburg, O., Bray, F., Coleman, M. P., Vanderpuye, V., Eniu, A., Kotha, S. R., . . . Dvaladze, A. (2017). The global burden of women's cancers: a grand challenge in global health. *The lancet*, *389*(10071), 847-860.

Gitobu, C., Gichangi, P., & Mwanda, W. (2018). Satisfaction with Delivery Services Offered under the Free Maternal Healthcare Policy in Kenyan Public Health Facilities. *Journal of Environmental and Public Health, 2018*.

Glenngård, A. H., & Maina, T. M. (2007). Reversing the trend of weak policy implementation in the Kenyan health sector? –a study of budget allocation and spending of health resources versus set priorities. *Health research policy and systems, 5*(1), 3.

Greenberg, J. A., Bell, S. J., Guan, Y., & Yu, Y. H. (2011). Folic acid supplementation and pregnancy: more than just neural tube defect prevention. *Reviews in Obstetrics and Gynecology, 4*(2), 52.

Herrler, C., Bramesfeld, A., Brodowski, M., Prytherch, H., Marx, I., Nafula, M., . . . Szecsenyi, J. (2015). Integrated Quality Management System (IQMS): a model for improving the quality of reproductive health care in rural Kenya. *Zeitschrift für Evidenz, Fortbildung und Qualität im Gesundheitswesen, 109*(9), 739-747.

Juran, J. M., & Godfrey, A. B. (1999). Juran's quality handbook. *RE Hoogstoel, & EG Schilling, Dü) New York: McGraw-Hill*.

Kim, H. K., & Lee, M. (2016). Factors associated with health services utilization between the years 2010 and 2012 in Korea: using Andersen's behavioral model. *Osong public health and research perspectives, 7*(1), 18-25.

Kitui, J., Lewis, S., & Davey, G. (2013). Factors influencing place of delivery for women in Kenya: an analysis of the Kenya demographic and health survey, 2008/2009. *BMC pregnancy and childbirth, 13*(1), 40.

Luoma, M., Doherty, J., Muchiri, S., Barasa, T., Hofler, K., Maniscalco, L., . . . Maundu, J. (2010). Kenya health system assessment 2010. *institutions*.

Mangeni, J. N., Nwangi, A., Mbugua, S., & Mukthar, V. K. (2012). Male involvement in maternal healthcare as a determinant of utilisation of skilled birth attendants in Kenya. *East African medical journal, 89*(11), 372-383.

Mathew, A. G., Cissell, R., & Liamthong, S. (2007). Antibiotic resistance in bacteria associated with food animals: A United States perspective of livestock production. *Foodborne pathogens and disease, 4*(2), 115-133.

Mehata, S., Paudel, Y. R., Dariang, M., Aryal, K. K., Paudel, S., Mehta, R., . . . Barnett, S. (2017). Factors determining satisfaction among facility-based maternity clients in Nepal. *BMC pregnancy and childbirth, 17*(1), 319.

Murugami, R. W. (2014). *Challenges of Implementing Kenya Quality Model for Health Strategy in Kiambu County, Kenya.* School Of Business, UON.

Mwaniki, P. K., Kabiru, E. W., & Mbugua, G. G. (2002). Utilisation of antenatal and maternity services by mothers seeking child welfare services in Mbeere District, Eastern Province, Kenya. *East African medical journal*, *79*(4), 184-187.

Njeri, K. A. (2017). Level of knowledge on national infant and young child feeding recommendations among mothers with infants of 0-24 months in Nakuru municipality, Kenya.

Nwaeze, I., Enabor, O., Oluwasola, T., & Aimakhu, C. (2013). Perception and satisfaction with quality of antenatal care services among pregnant women at the university college hospital, Ibadan, Nigeria. *Annals of Ibadan postgraduate medicine, 11*(1), 22-28.

Okumu, C., & Oyugi, B. (2018). Clients' satisfaction with quality of childbirth services: A comparative study between public and private facilities in Limuru Sub-County, Kiambu, Kenya. *PLoS One, 13*(3), e0193593.

Olatunbosun, O. A. (2014). Research Methods in Sexual and Reproductive Health. *Confronting the Challenge of Reproductive Health in Africa: A Textbook for Students and Development Practitioners*, 21.

Organization, W. H. (2014). *WHO recommendations on postnatal care of the mother and newborn*: World Health Organization.

Padma, P., Rajendran, C., & Sai Lokachari, P. (2010). Service quality and its impact on customer satisfaction in Indian hospitals: Perspectives of patients and their attendants. *Benchmarking: An International Journal, 17*(6), 807-841.

Pearson, L., & Shoo, R. (2005). Availability and use of emergency obstetric services: Kenya, Rwanda, Southern Sudan, and Uganda. *International Journal of Gynecology & Obstetrics*, *88*(2), 208-215.

Poss, J. E. (2001). Developing a new model for cross-cultural research: synthesizing the health belief model and the theory of reasoned action. *Advances in Nursing Science*, *23*(4), 1-15.

Rani, M., Bonu, S., & Harvey, S. (2007). Differentials in the quality of antenatal care in India. *International journal for quality in health care*, *20*(1), 62-71.

Rooij, R., & Frank, A. I. (2016). Educating spatial planners for the age of co-creation: the need to risk community, science and practice involvement in planning programmes and curricula: Taylor & Francis.

Shifraw, T., Berhane, Y., Gulema, H., Kendall, T., & Austin, A. (2016). A qualitative study on factors that influence women's choice of delivery in health facilities in Addis Ababa, Ethiopia. *BMC pregnancy and childbirth*, *16*(1), 307.

Shiferaw, M. B., Zegeye, A. M., & Mengistu, A. D. (2017). Helminth infections and practice of prevention and control measures among pregnant women attending antenatal care at Anbesame health center, Northwest Ethiopia. *BMC research notes*, *10*(1), 274.

Tadesse, M. L., & Kumie, A. (2014). Healthcare waste generation and management practice in government health centers of Addis Ababa, Ethiopia. *BMC public health*, *14*(1), 1221.

Twahir, M. (2017). *Determinants of Patients' Choice of Healthcare Facilities in the Private Sector in Kenya: Optimizing Hospital Strategic Positioning.* United States International University-Africa.

Uzochukwu, B., Onwujekwe, O., & Akpala, C. (2004). Community satisfaction with the quality of maternal and child health services in southeast Nigeria. *East African medical journal*, *81*(6), 293-299.

Warren, C., Abuya, T., Kanya, L., Obare, F., Njuki, R., Temmerman, M., & Bellows, B. (2015). A cross sectional comparison of postnatal care quality in facilities participating in a maternal health voucher program versus non-voucher facilities in Kenya. *BMC pregnancy and childbirth*, *15*(1), 153.

Warren, C., Njuki, R., Abuya, T., Ndwiga, C., Maingi, G., Serwanga, J., . . . Karanja, J. (2013). Study protocol for promoting respectful maternity care initiative to assess,

measure and design interventions to reduce disrespect and abuse during childbirth in Kenya. *BMC pregnancy and childbirth, 13*(1), 21.

Watkins, D. A., Jamison, D. T., Mills, A., Atun, R., Danforth, K., Glassman, A., . . . Norheim, O. F. (2017). Universal health coverage and essential packages of care *Disease Control Priorities: Improving Health and Reducing Poverty. 3rd edition*:

WHO (2010). *World health statistics 2010*. World Health Organization.

WHO. (2016a). Report on the public consultation to inform development of the Framework on integrated people-centred health services.

WHO. (2016b). Standards for improving quality of maternal and newborn care in health facilities.

WHO. (2018a). Delivering quality health services: a global imperative for universal health coverage.

WHO. (2018b). WHO country cooperation strategy at a glance: Kenya: World Health Organization.

Wilson, A., Tabrizi, J. S., Gholipour, K., & Farahbakhsh, M. (2013). Technical quality of maternity care: the pregnant women's perspective. *Health promotion perspectives, 3*(1), 23.

Woldemicael, G. (2007). Do women with higher autonomy seek more maternal and child health-care. *Evidence from Ethiopia and Eritrea*, 2007-035.

Yue, Z.J., Zhang, C.Z., & Zhou, Q. (2017). Mining User Diet Preference with Online Reviews, A Case Study of Beijing City. *Library Tribune, 3*, 017.

APPENDICES

APPENDIX I: INFORMED CONSENT

I am performing a study on "**Assessment of influence of quality maternal healthcare service on client satisfaction in Rongai Sub-County**". This is in partial fulfillment of the requirements for the award of a Master of Science degree in health systems management of Mount Kenya University.

I kindly request you to assist me to respond to this questionnaire/interview frankly and precisely to the best of your knowledge. The entire information shall be considered confidential and used only to meet the intention of the foregoing study. The overall findings of this study may be availed to the participants upon request.

Thanks for your kind participation.

Yours sincerely,

Wendy Tirop,

Masters Student.

APPENDIX II: CLIENT EXIT QUESTIONNAIRE

Questionnaire No……...

PART A: SOCIO-DEMOGRAPHIC QUESTIONNAIRE

I am Wendy Tirop a student at the Mount Kenya University doing Masters in Health Systems Management. I am conducting a study to get information on influence of quality maternal healthcare services on client satisfaction in Rongai Sub-County. The interview will target mothers seeking maternal services and covers basic information that will include demographic information, health status, and the day to day activities that are relevant to maternal healthcare. The respones to the following questions shall be treated strictly confidential; the information shall not be disclosed to other publications and reports

SECTION A: Profile and Demographic Factors of Respondents

1. Sex of respondents
   i. Male [ ]
   ii. Female [ ]
2. Age of participant in years
   i. 18 -27 [ ]
   ii. 28-32 [ ]
   iii. 33-32 [ ]
   iv. 33-42 [ ]
   v. 43- And above [ ]
3. Pregnancy history
   iii. 1st pregnancy [ ]
   iv. Not 1st pregnancy [ ]
4. What is your highest education level?
   i. Primary [ ]
   ii. Secondary [ ]
   iii. University [ ]
   iv. Others Specify _____
5. Employment status
   i. Casual [ ]
   ii. Permanently employed [ ]

iii. Self employed [ ]

iv. Not employed [ ]

6. Income level

   i. <11,000 [ ]

   ii. 11,000-20,999 [ ]

   iii. 21,000-30,999 [ ]

   iv. 31,000-40,999 [ ]

   v. 41,000-Above [ ]

7. How long have you been attending this clinic?

   i. Less than 1 year [ ]

   ii. 1-2 years [ ]

   iii. 2-3 years [ ]

   iv. 3-4 years [ ]

   v. 4 years and above [ ]

8. Distance of the health facility form your home?

   i. < 5Kms [ ]

   ii. 5-10Kms [ ]

   iii. >10Kms [ ]

SECTION B: Client Satisfaction

(i) Accessibility of the facility

9. Is this your first visit to this facility, or is it a follow up?

First visit ☐ Follow-up ☐

10. (i) Did you receive the services you wanted?

Yes ☐ No ☐

(ii) If no: why not what happened?.....

11. What is the main influence on your choice of this hospital?

Good reputation ☐ Affordable ☐ Convenient ☐

Referred by a friend ☐ Had no choice ☐

Previous visit ☐ Referral from another heath facility ☐

12. (i) If coming for follow-up visit, have you been keeping appointments?

Yes ☐ No ☐

(ii) If no why? .....

13. Are the services in this clinic affordable to most people in the community?

Yes ☐ No ☐

14. (i) How long did you wait before you were seen by the clinician/nurse and put on treatment?

Within15 minutes of arrival ☐ Within 30 minutes of arrival ☐

Within 1 hour ☐ Beyond 1 hour ☐

(ii) Kindly rate the time taken.

Too long ☐ Just about right ☐ Too short ☐ Not sure ☐ Not applicable ☐

(iii). If delayed over 15 minutes were you given an explanation for the delay?

Yes ☐ No ☐

(ii) Medical - Technical competence

15. Was the nurse/provider thorough and accurate with the diagnoses?

Yes ☐ No ☐

What were you examined today ?.....

16. (i). How much time did you spend with your clinician?

5 minutes ☐ 10 minutes ☐ above 10minutes ☐ not sure ☐

(ii). Was this time?

Too long ☐ Enough ☐ Too short ☐ Needed more time ☐

Not applicable ☐

17. (i). When you come for scheduled appointments how often do you see the same doctor/clinician?

Always ☐ Not always ☐

(ii). If not always would you like to see the same doctor/clinician?

Yes ☐ No ☐

(iii) Communication, information and interpersonal relationship

18. During your visit to the clinic were you treated with respect by the health provider who examined you? Yes ☐ No ☐

19. i. Did you feel that the nurse/provider was easy to understand when he/she explained medical procedures, test results and next step in treatment during your consultation?

Yes ☐ No ☐

ii. What issues did you discuss today? .....

(iv) Patients' Expectations and Participation

20. (i). Did you have any expectations before you came to this hospital?

Yes ☐ No ☐

(ii). If yes were they all met?

Yes ☐ No ☐

21. (i). Did you have any questions to ask the service provider concerning your pregnant?

Yes ☐ No ☐

(ii). If yes were you given a chance to ask the questions, concerning the services you required? Yes ☐ No ☐

iii. Were your questions answered to your satisfaction?

Yes ☐ No ☐

(v) Physical environment

22. Are there areas of the clinic that you think need improvement to make them cleaner or more comfortable?

Yes ☐ No ☐

If yes: please tell me which ones and why? …….

23. Are the services offered in a manner that is private and confidential?

Yes ☐ No ☐

(vi) Taking everything into account

24. Would you recommend this facility to others?

Yes ☐ No ☐

25. Overall rating of quality of care.

Excellent ☐ Good ☐ Fair ☐ Poor ☐ Very poor ☐

26. How would you rate overall satisfaction with the services?

Very high ☐ High ☐ Average ☐ Low ☐ Very low ☐

27. Could the services you received in any of the departments have been improved?

Yes ☐ No ☐

If yes: what could have been better? .....

28. What do you like most about this clinic? .....

29. What do you like least about this clinic? .....

Thank you for participating.

APPENDIX III: KEY INFORMANTS INTERVIEW SCHEDULE

1. What is your job Cadre?
2. What is job experience (Years)?
3. How many Healthcare Practitioners (HCs) are deployed in this facility?

   In your opinion, is the staffing adequate?
4. What is the approximate number of clients seen per day in your facility?
5. Have you been trained on any RH skilled courses;

   If yes, which one?

   I. EMOC

   II. BeMOC

   III. CRH

   IV. LARC
6. Does the facility have adequate equipment to provide basic obstetrical care?
7. In your own perspective, has quality of MHC improved since the introduction of maternal care?
8. Kindly indicate by ticking (√) where it is appropriate your extent of agreement with regard to the subsequent statements on structural organization of maternal healthcare in Rongai Sub-County health institutions.
9. What are some of the factors that make clients wait for long in receiving services in your facility?

   ……

   ……

   ……..

10. Kindly indicate by ticking (√) whether the following maternal healthcare services are present in the health institution visited

Service	**Present**	**Not Present**
Physical examination – palpation		
Biometric measurements		
Tetanus		
Health education on Birth preparedness		
Screening services for Aneamia		
Screening services forHIV/Syphilis		
Screening services for blood grouping		
Screening services for PMTCT		

APPENDIX IV: OBSERVATION CHECKLIST

The observations are to be scored in an ascending order scale of 1– Very Poor, 2 – Poor , 3 – Moderate, 4 – Good and 5 – Excellent.

S/No.	Structural organization	Scores				
1	Signals to guide the client flow?	1	2	3	4	5
2	Does the facility have a service charter	1	2	3	4	5
3	Maternal health services indicated in the service charter	1	2	3	4	5
4	Designated point/Room for provision of maternal medical services	1	2	3	4	5
5	Can the client asses maternal care emergency services within the facility	1	2	3	4	5
6	Privacy observed in the maternal healthcare room	1	2	3	4	5
7	Availability of maternal healthcare job aids /EIC materials	1	2	3	4	5
8	Data tools for provision of maternal healthcare services	1	2	3	4	5
9	Use of partograph in monitoring of mothers in labour?	1	2	3	4	5
	Items Availability					
11	Blood pressure machine	1	2	3	4	5
12	Stethoscope	1	2	3	4	5
13	Fetal scope/Doppler	1	2	3	4	5
14	Adult weight scale	1	2	3	4	5
15	Urine test strip for protein	1	2	3	4	5
16	HIV/Syphilis dual test	1	2	3	4	5
17	Iron and /or folic(IFAS)	1	2	3	4	5
18	Tetanus toxoid vaccine	1	2	3	4	5
19	Mebendezole/Albendezole tabs	1	2	3	4	5
20	Does this facility provide delivery services	1	2	3	4	5
21	How many complete delivery packs are available	1	2	3	4	5
22	Does the facility have gloves	1	2	3	4	5
23	Cotton wool	1	2	3	4	5
24	Gauze	1	2	3	4	5
25	Cord clamps	1	2	3	4	5
26	Does the facility have IP committee	1	2	3	4	5
27	Does the facility have a placental pit	1	2	3	4	5
28	An incinerator	1	2	3	4	5
29	Septic pit	1	2	3	4	5

APPENDIX V: RESEARCH PERMIT

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **683239**

Date of Issue: **27/August/2019**

RESEARCH LICENSE

This is to Certify that Ms.. Wendy Jemeli of Mount Kenya University, has been licensed to conduct research in Nakuru on the topic: ASSESSMENT OF INFLUENCE OF QUALITY MATERNAL HEALTHCARE SERVICES ON CLIENT SATISFACTION IN RONGAI SUB COUNTY, NAKURU. for the period ending : 27/August/2020.

License No: **NACOSTI/P/19/624**

683239

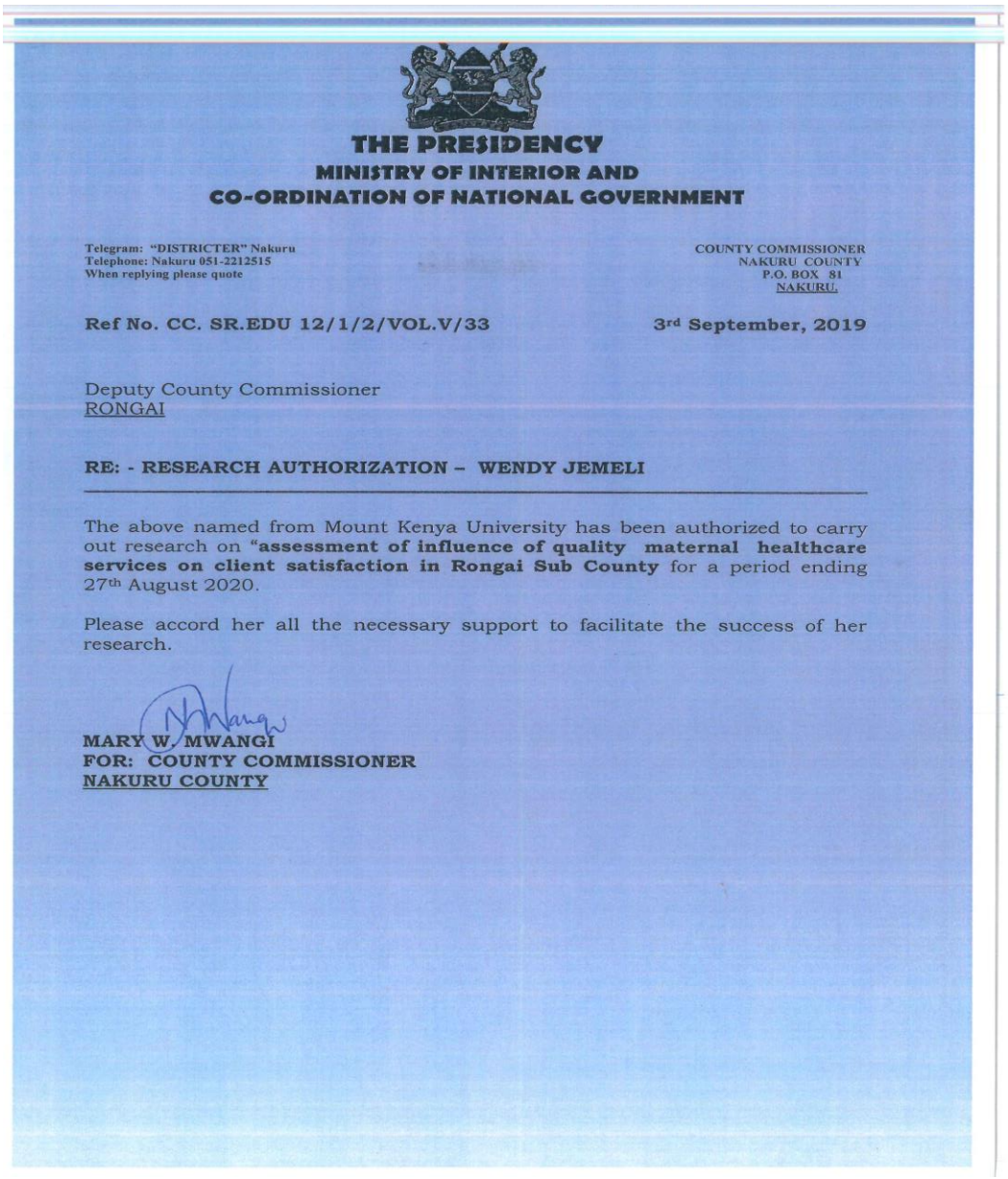
Applicant Identification Number

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 VI: AUTHORIZATION FROM MINISTRY OF INTERIOR AND CO-ORDINATION OF NATIONAL GOVERNMENT



THE PRESIDENCY
MINISTRY OF INTERIOR AND
CO-ORDINATION OF NATIONAL GOVERNMENT

Telegram: "DISTRICTER" Nakuru
Telephone: Nakuru 051-2212515
When replying please quote

COUNTY COMMISSIONER
NAKURU COUNTY
P.O. BOX 81
NAKURU.

Ref No. CC. SR.EDU 12/1/2/VOL.V/33 **3rd September, 2019**

Deputy County Commissioner
RONGAI

RE: - RESEARCH AUTHORIZATION – WENDY JEMELI

The above named from Mount Kenya University has been authorized to carry out research on **"assessment of influence of quality maternal healthcare services on client satisfaction in Rongai Sub County** for a period ending 27th August 2020.

Please accord her all the necessary support to facilitate the success of her research.

MARY W. MWANGI
FOR: COUNTY COMMISSIONER
NAKURU COUNTY

APPENDIX VII: AUTHORIZATION FROM COUNTY DIRECTOR OF EDUCATION

MINISTRY OF EDUCATION
STATE DEPARTMENT OF BASIC EDUCATION

Telegrams: "**EDUCATION**",
Telephone: **051-2216917**
When replying please quote

Ref.CDE/NKU/GEN/4/21/VOL.VI/50

COUNTY DIRECTOR OF EDUCATION
NAKURU COUNTY
P. O. BOX 259,
NAKURU.

3rd September,2019

TO WHOM IT MAY CONCERN

RE: RESEARCH AUTHORIZATION –WENDY JEMELI – PERMIT NO. NACOSTI/P/19/624

Reference is made to letter NACOSTI/P/19/624
27th August, 2019.

Authority is hereby granted to the above named to carry out research on "***Assessment of influence of quality maternal healthcare services on client satisfaction in Rongai Sub-County, Nakuru***" for a period ending ***27th August, 2020***

Kindly accord her the necessary assistance.

For: COUNTY DIRECTOR OF EDUCATION
NAKURU COUNTY

AKOKO OKAYO
FOR: COUNTY DIRECTOR OF EDUCATION
NAKURU

Copy to:

Mount Kenya University
P.O Box 342-01000
THIKA

APPENDIX VIII: AUTHORIZATION FROM COUNTY DIRECTOR OF HEALTH

DEPARTMENT OF HEALTH SERVICES

NAKURU COUNTY

Email:copublichealth.nakuru@gmail.com

CHIEF OFFICER, PUBLIC HEALTH
NAKURU COUNTY
P.O BOX 2870-20100
NAKURU
3rd September, 2019

REF: CGN/CPH/HR/VOL.1/5/2019/133

TO
MS. WENDY JEMELI
MOUNT KENYA UNIVERSITY
NAKURU

RE: RESEARCH PERMISSION

This letter serves as an authorization from the Department of Health Services Nakuru to allow the researcher to conduct research on **"Assessment of influence of quality maternal healthcare services on client satisfaction in Rongai Sub County, Nakuru."**

The Department has no objection to the said research.

Thank you.

CHIEF OFFICER
PUBLIC HEALTH SERVICES
NAKURU COUNTY

SAMUEL KING'ORI
CHIEF OFFICER, HEALTH SERICES
NAKURU

C.C:
- All facility In/charges, Nakuru County

APPENDIX IX: ETHICAL CLEARANCE

Mount Kenya University

SCHOOL OF POSTGRADUATE STUDIES

MHSM/2018/22372

17th July, 2019

The Director, Research Coordination Division
National Commission for Science, Technology & Innovation
Utalii House, 8th & 9th Floor
P.O Box 30623- 00100
NAIROBI

Dear Sir/Madam,

RE: WENDY JEMELI TIROP – REGISTRATION NO. MHSM/2018/22372

The purpose of this letter is to introduce the above named student who is pursuing **Master of Public Health** in the **Department of Epidemiology & Biostatistics** in the **School of Public Health.**

The title of her research is *"Assessment of Influence of Quality of Material Healthcare Services on Client Satisfaction in Rongai Sub-County, Nakuru, Kenya."*

She has been cleared by the University's Ethics Review Committee (Certificate attached) and now has to proceed to the field to collect data for her research between **July and September, 2019.**

Any assistance accorded to her will be highly appreciated.

Thank you.

Mount Kenya University
Dean, School of Postgraduate Studies
P. O. Box 342 - 01000
Thika

Dr. Samuel M. Kareriga, Ph.D
Dean, School of Postgraduate Studies
Enc.

APPENDIX X: LETTER OF INTRODUCTION FROM THE UNIVERSITY

Mount Kenya University

SCHOOL OF POSTGRADUATE STUDIES

MHSM/2018/22372

17th July, 2019

The Director, Research Coordination Division
National Commission for Science, Technology & Innovation
Utalii House, 8th & 9th Floor
P.O Box 30623- 00100
NAIROBI

Dear Sir/Madam,

RE: WENDY JEMELI TIROP – REGISTRATION NO. MHSM/2018/22372

The purpose of this letter is to introduce the above named student who is pursuing **Master of Public Health** in the **Department of Epidemiology & Biostatistics** in the **School of Public Health.**

The title of her research is *"Assessment of Influence of Quality of Material Healthcare Services on Client Satisfaction in Rongai Sub-County, Nakuru, Kenya."*

She has been cleared by the University's Ethics Review Committee (Certificate attached) and now has to proceed to the field to collect data for her research between **July and September, 2019.**

Any assistance accorded to her will be highly appreciated.

Thank you.

Mount Kenya University
Dean, School of Postgraduate Studies
P. O. Box 342 - 01000
Thika

Dr. Samuel M. Kareriga, Ph.D
Dean, School of Postgraduate Studies
Enc.

APPENDIX XI: SIMILARITY INDEX CHECK

thesis June 2020

ORIGINALITY REPORT

14%	12%	6%	12%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

MATCH ALL SOURCES (ONLY SELECTED SOURCE PRINTED)

4%

★ Submitted to Kenyatta University

Student Paper

Exclude quotes	Off	Exclude matches	Off
Exclude bibliography	Off