

**WOMEN SATISFACTION WITH MATERNAL HEALTH SERVICES
IN MURANG'A COUNTY REFERRAL HOSPITAL, KENYA.**

BY

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**A RESEARCH THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE
OF MASTER OF PUBLIC HEALTH (REPRODUCTIVE HEALTH)
OF KENYATTA UNIVERSITY**

NOVEMBER, 2021

DECLARATION

This thesis is my original work and has not been presented for a degree in any other university.

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DEDICATION

I dedicate this project to God for being my source of strength. Utmost regards to my family, parents, sisters and brothers. May God Bless you all.

ACKNOWLEDGEMENT

I would like to pay special thankfulness and appreciation to the following persons who worked devotedly towards my success. My deepest gratitude goes to Almighty God for seeing me through and for strengthening me through my most difficult times.

My Supervisor Dr. Eliphaz Gitonga and Co-Supervisor Dr. Maurice Kodhiambo whose invaluable support, persistence, encouragement and constructive criticism made it possible for me to achieve my goal. I say a big thank you and may God bless you.

Dr. Jane Kieru, lecturer and head of Population, Reproductive health & community resource management department for her advice that proved to be a landmark effort towards my success whom without was impossible to accomplish the end task. Thank you, Madam. I wish to extend my special thanks to Dr. Peter Kithuka for helping me to finalize my work..

Kenyatta University faculties for their support and encouragement

Kenyatta University Library and staffs who assisted me to access much of the information I needed.

My family, Dad, mum, brothers and sisters for laying my education foundation and their unwavering support throughout my academic journey.

Last but by no means least all those who shared their experiences and all those in one way or the other contributed to my success.

May God Bless you all.

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LIST OF ABBREVIATIONS AND ACRONYMS

ANC:	Antenatal care
PNC:	Post Natal Care
FMC:	Free Maternity Care
KNH:	Kenyatta National Hospital
WHO:	World health organization
MMR:	Maternal mortality ratio
KDHS	Kenya Demographic Health Survey
MHCS	Maternal Health Care Services
SPSS	Statistical Package for Social Sciences

DEFINITION OF OPERATIONAL TERMS

Free maternal health care utilization: making use of free child birth delivery services by women throughout pregnancy period.

Implementation of free maternal healthcare services: The execution of unpaid services in public hospital in relation to women delivering in these hospitals

Maternal care: this refers to the wellbeing of women when pregnant, during child delivery and birth and the after-delivery period.

Maternal health: refers to the welfare of women in the course of pregnant period and after delivery.

Maternal health Services: are services offered to a pregnant woman they include, antenatal, delivery and post delivery service

Mortality: A term used to describe new cases of deaths reported during child delivery

Public facilities: Government operated hospitals e.g. Kenyatta National hospital

Patient Satisfaction: Feeling of the patient that their needs were met

Quality of services: a state of how good or bad health services are. It measures whether healthcare services meet at least the basic requirements

Skilled birth attendant: refers to people with midwifery skills including doctors, midwives, clinical officers or other trained health worker.

Utilization of service: it is the use of free maternal care by women during pregnancy.

ABSTRACT

In this 21st century, expectant women continue to lose lives during delivery period. Maternal mortality rate has been recorded to be approximately 585000 deaths annually across the world while that of sub-Saharan region is approximated to be around 685 per 100000 live births. The Kenyan government has played its role in ensuring that antenatal care, maternal and postnatal services are put in place and properly maintained. The general objective of this study is to establish the level of satisfaction of women on the basis of the free policy on maternal services utilization in Murang'a county. Structured questionnaires, direct interviews, were used to collect data from 387 mothers who had given birth in Murang'a county hospital and were waiting to go home. Systematic sampling was used to sample individual mothers while Murang'a County Referral Hospital was purposively selected. Data analysis was done through qualitative and quantitative approach whereby, descriptive and correlation analysis played role in this study to establish the relationship between criterion and predictor variables. The study findings indicated that the satisfaction level to mothers who benefitted from this service was established to be high at 67.2%. The majority of the respondents were aged between 21 years and 30 years (47.9%, n=184), the married mothers were more than half (63.8%, n=245) and the majority were having secondary level of education (47.4%, n=182). On religion of the mothers, majority were Christian protestants (78.4%, n=301), with 57.3% (n=220) reporting to be self-employed and majority were earning 5-10 thousand per month (39.6%, n=152). The study evaluated socio-demographic factors and hospital related factors. On socio demographic factors affecting maternal satisfaction on free maternity services were found to be marital status ($P<.001$) and mothers' level of education ($p<.001$). Significant health facility related factors included; availability of bed and linen ($p<.001$), cleanliness of the hospital ($p<.001$), availability of incubators for each child (not sharing incubator) ($p=.029$), and bed occupancy (not sharing a bed) ($p<.001$). The staffs were available when needed ($p<.001$) and treated the patients with respect ($p<.001$). In conclusion the majority of mothers were satisfied with the services. The hospital should maintain cleanliness, provide bed and incubator for each client respectively and maintain privacy of their clients' and information. The ministry of health ought to increase civic education to all citizens to welcome this initiative and ensure the facilities are available all through.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Satisfaction with healthcare services is defined as the extent to which the patients seeking treatment experience positive perception of the care provided by the nursing or medical staff (Jha *et al.*, 2017). Patients' satisfaction reveals the magnitude with which the healthcare needs are met and provides an essential gauge of high-quality healthcare which is used for the assessing and planning health interventions (Okumu & Oyugi, 2018). Ideally, patients who are satisfied with the care provided by the healthcare staff, are more likely to utilize health services in future and comply with the prescribed medical treatment to completion (Karkee & Pokharel, 2014). For patients to be more satisfied with treatment, there is need to provide high quality healthcare which is viewed as safe, timely, effective, efficient, equitable, and patient-centered (Srivastava *et al.*, 2015). Providing high quality of care in maternity services involves giving mothers the best possible medical care and outcome during antenatal, delivery, and postnatal period which can be measured against standard guidelines (Okumu & Oyugi, 2018).

Measuring women's satisfaction with childbirth services not only helps in improving client-friendliness and cultural sensitivity of facility-based intrapartum and postpartum care (Parajuli & Paudel, 2019); it also has clinical significance. Studies show that women who are satisfied with childbirth services tend to have better self-esteem and confidence, are faster in establishing a maternal–neonatal bond, and are more likely to breastfeed compared with women who are dissatisfied (Rahman, Ngadan & Arif, 2016). Women who are dissatisfied with their childbirth experiences are more prone to develop a fear of

childbirth and postnatal depressive symptoms, and to face difficulties in breastfeeding and in performing baby and self-care (Sapkota et al., 2018).

The mortality rate is higher among the women in the reproductive age of (15-49) years. According to the World Health Organization (WHO) 585,000 women who lost their lives globally 99% come from developing countries. This rate can be reduced if the timely and appropriate care is given to women (WHO,2016). It was further reported that, countries with developing economy continues to suffer from higher maternal morbidity and mortality rate. Among records indicated that 99% of the 585000 estimated cases come from the developing countries. Recommendations indicate that appropriate care of pregnant mothers from skilled personnel's and provisions of proper maternal healthcare facilitates can prevent increase of these numbers (WHO,2016)

Public health especially for pregnant mothers is a priority across the continent. In Kenya for instance, greater efforts and appropriate initiatives has been put in place to maintain and sustain good health to curb mortality rate. Despite all these efforts, the targeted objectives has not been realized. The estimated maternal mortality rate (MMR) is at 354 deaths per 100000 live births which is far much higher compared to the vision 2030 target of 72 deaths per 100000 live births (KDHS, 2017). These higher rates persist mainly since lots of pregnant women are being attended by unskilled personnel's when giving birth. The unskilled personnel's hardly manage pregnancies with complications due to lack of amenities to handle deliveries (KDHS 2017). Improved maternal and neonatal outcome has been connected to the utilization of maternal healthcare services (MHCS). Government initiatives of free policy of maternity service is critical in

reduction of maternal mortality. Access to the maternal services of skilled attendance and quality care is critical in reducing maternity deaths (Odebola *et al.*,2018).

The high cost of maternal services is the key factor limiting pregnant ladies from accessing skilled attendance and quality maternal services (Mukaban & Mukaka, 2017).

In the developed countries, this is not a challenge since there are more healthcare facilities and amenities (Sapkota, 2018). Sapkota (2018) reported that in the developed countries insurances programs exists that ensures people afford quality maternity care. Maternity care skilled labor, i.e. doctors and health care workers are adequate in comparison to the size of the population. Many insurance plans that bear expenses of pregnancies exists in these developed countries like USA. For instance, in Ireland free policy on maternity services is provided in all public hospitals under the maternity and infant care service program (Gitobu *et al.*,2018). India also took the initiative of paying prenatal service which greatly reduce infant mortality and morbidity and there was tremendous improvement such that many researchers in the field quoted India as the principal course for reduced maternal mortality globally (Mukabana & Mukaka, 2017). A study in Nepal indicated that free services for expectant mothers and infants with at most 5 years was launched in 2008, attracting utilization though no formal assessment has been undertaken (Parajul *et al.*,2019).

The African continent nations are now paying more intentions to maternal services (WHO, 2016). The governments in these countries are now allocating more fund to sustain maternity services to susceptible groups. Proper healthcare services especially on maternal healthcare is regarded as one of lives most tragic outcomes. Utilization of

antenatal and maternal services is a major health index and step in the right direction to raise the proportion of mothers who are attended in the healthy facility during pregnancy delivering and post-delivery (WHO, 2016). The existence of free maternal health services does not guarantee that all mothers could utilize the service or guarantee pregnant outcome or gratifications with the services. Maternal services should be a satisfactory to the expectant women to enhance their use, therefore, this has motivated world health organization (WHO,2016) to closely monitor the level of satisfactions of mothers from maternal service. Patient satisfaction with healthcare services is one of the measures for quality of care that promotes user's confidence in healthcare facility and the subsequent utilization of services (Karaca & Durna, 2019). Patients satisfactions and dissatisfactions with healthcare services indicates their perceptions about strengths and weaknesses of the health system. Dissatisfactions of patients in Kenya has been attributed to by the cost of services. Healthcare workers unethical behavior for instance being un-accommodative and unfriendly and mistreatments of expectant women in public hospitals are a major hindrance to optimum maternal services in Kenya.

On 1st June, the government of Kenya carried out free maternal health policy to facilitate an opportunity for women to utilize free maternal health services from skilled healthcare staff. In addition to this, more initiatives have been put in place to enhance utilization of these services. Despite all these efforts maternal healthcare services are still low which could have been detrimental effects on maternal mortality rate. However, use of components professional delivery has decreased from 51% in 1998 to 42% in 2004 indicating poor utilization of maternal health care services (Gitobu et al.,2017; Odwe et al.,2015).

1.2 Statement of the problem

Improvement of the maternal health is one of the sustainable developments goals. Maternity services from skilled personnel reduces significant morbidity and mortality rate. Accessible health services of higher quality calls for proof-based goals dictated towards healthiness and communal policy and intervention that is enlightened by the best informed practices. Presence of midwives and high maternity fee are key factors limiting utilization of maternal healthcare services.

When women utilize maternity services, it is easier to reach them with important information regarding pregnancy healthiness, safe birth and postnatal revitalization which includes new born care, promoting accessible breastfeeding and supporting decisions regards to the future pregnancies which again is dependent on competent healthcare givers in a well-functioning healthcare system with leadership and satisfactory services.

During preliminary survey in hospitals in Murang'a county it was found that numbers of mothers utilizing health facilities for maternity services had greatly improved since the inception for free maternity services. However, despite the increase in number of the mothers utilizing the free maternity services, the hospital infrastructure has remained the same in terms of health care personnel and physical infrastructure. The level of quality care provided for the mothers and their satisfaction level with the services may change with increased numbers of users. Therefore, this study was to establish the satisfaction level of the mothers with free delivery services in Murang'a County hospitals and to the identifying factor associated with satisfaction.

1.3 Justification of the study

In the year 2013 the government of Kenya implemented a free maternity healthcare policy to reduce maternal mortality. This initiative was introduced in a public health facility with an aim of improving access to the skilled delivery services. This initiative was predetermined to ensure that mothers did not pay for delivering in public health institutions and consequently enhance maternal healthcare services policy utilization and to improve hospital deliveries hence lowering related complications. Free maternity policy has increased the numbers of mothers seeking maternity services in the hospitals. However, the number of midwives handling the mothers have not been increased. Key stakeholders in health fraternity have expressed concerns on the practicality and then sustainability of the policies all in which they warn might lead to poor service quality delivered. This can further decrease reproductive variations through the country and as well as deepen human rights abuse in public facilities.

When the maternity services offered are unfulfilling due to high numbers of mothers being admitted, some mothers will opt to seek care from unprofessional traditional birth attendants whose culture the government wants to wipe out. Services from the unskilled birth attendants have been linked to increased maternal mortality and morbidity rate (Baker *et al.*, 2017). If the mothers are unsatisfied with the quality of services provided, they will opt to deliver at home or in private hospitals at a cost, which means the government not accomplish its goal after huge investment in the project. To transform this the government needs to put up more health care facilities to promote usage of these services. Murang'a County Hospital is a Ministry of Health County hospital located in Karuri, in Murang'a County.

1.4 Research Questions

1. What is the satisfaction level of mothers using free maternity services in Murang'a County hospital?
2. What are the factors affecting satisfaction level of mothers using free maternity services in Murang'a County hospital?
3. What is the effect of quality of maternity health services provided on satisfaction levels of mothers using free maternity services in Murang'a county hospital?

1.5 Hypothesis

There is no association between satisfaction levels, free maternal policy and maternal health services utilization in Murang'a County hospital, Kenya.

1.6 General Objective

To determine women satisfaction regarding utilization of free policy on maternal health services in Murang'a County Referral Hospital, Kenya.

1.6.1 Specific Objectives

1. To determine satisfaction level of mothers using free maternal services in Murang'a County hospital after implementation of free maternal health policy
2. To establish the factors affecting satisfaction level of mothers using free maternal services in Murang'a County hospital after implementation of free maternal health policy.
3. To assess the effects of quality of maternal health services provided on satisfaction level of mothers using free maternal services in Murang'a County

hospital after implementation of free maternal health policy.

1.7 Significance of the study

Comparing those mothers receiving maternal services from unskilled attendants to those mothers accessing quality services from qualified personnel is worrying. In developing countries for instance with inadequate service coverage regards high standardized care as luxurious. The beneficiary of this research was but not limited to; expectant mothers, researchers, county and national government, and stakeholders. When conducting research on this area, considerations on structure, process outcome and challenges facing free maternity policy played the central part. Men and women who fall on reproductive age bracket benefited from this service greatly and generally achieving national and international reproductive health and sustainable development goals.

Policy makers can take advantage of this study to structure a policy framework to lead the execution in all new system operations. This can be a crucial intervention to improving the overall status of men and women in the reproductive age in Kenya and a critical strategy to reproductive health and sustainable development goals. This further adds value to more incorporated executions, improved services, and a reduced maternal neonatal morbidity and mortality. Finally, the study can form a basis for further research in addition to existing data on maternal healthcare services.

1.8 Limitations and Delimitations of the study

Data collection was done by use of questionnaires and interviews which was more tedious since some respondents were not willing to participate in fear of confidentiality. To solve this issue, they were assured that, the research was meant for scholarly purposes

and privacy was guaranteed. This research was conducted based on skills of student since it was part of fulfillment of master's degree program. The responses given were taken to be a true picture of the services offered in the hospital. The researcher did not have satisfaction level of services before introduction of free maternity services so that it could be concluded if it has increased or decreased.

1.9 Theoretical framework

The paper was based on Donabedian theory for examining health services and evaluating quality of care which allows insight into patient satisfaction at the various level of treatment (Donabedian, 1988). According to the model, quality of care is drawn from three categories: structure (e.g., facilities, equipment, personnel, operational and financial processes supporting medical care, etc.), process (rely on the structures to provide resources and mechanisms for participants to carry out patient care activities), and outcomes (improve patient health in terms of promoting recovery, functional restoration, survival and even patient satisfaction).

In this paper, the variables from the framework which were used to measure how process services influence quality of childbirth services included–clients level of satisfaction with (outcome-dependent variable), turnaround time/waiting time (process-independent variable), treatment during labour and delivery (process-independent variable), privacy and confidentiality accorded during labour and delivery (process-independent variable) and information offered after delivery and before discharge (process-independent variable).

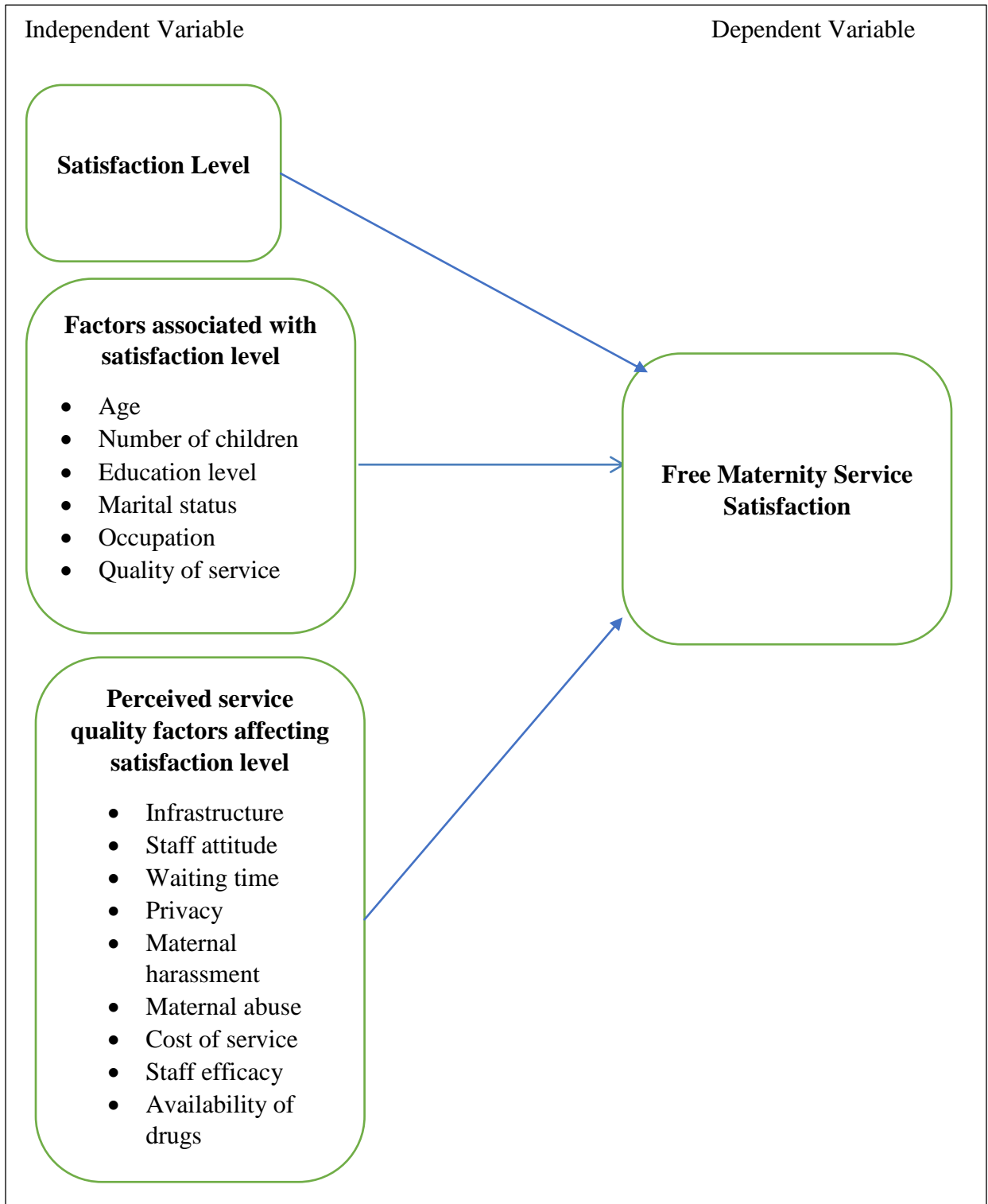


Figure 1.1: Conceptual framework

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter takes into account of various research that has been done on this topic. The studies here attempt to analyze the level of satisfactions that patients get from free maternal policies that has been put in place by the government. The literature here in, has been reviewed in line with the objectives indicated in chapter one. The study reviews first; the trends in utilization of the free maternity services starting with antenatal care services, secondly, the satisfaction level of the mothers utilizing free maternity services, thirdly the factors affecting satisfaction level and finally how the quality of care provided affects the satisfaction level of the clients.

2.2 Trends in the Antenatal care Access in the Health Care Facility

Antenatal care is an assessment targeting at preparing women and her household for gestation, giving birth and lactation. Being among the four pillars of motherhood, it was revived to advance maternal services hence avoiding the negative outcomes, maternal death, parental and infant death. A study in Nepal showed that ANC minimized possibility of all perinatal death and intrapartum asphyxia in particular. The number, timing, place and supervision at antenatal visit as the major gestation out measures in a retrospective cohort's study of case record of antenatal care (Parajul *et al.*,2019)

Odetola et al (2018) suggested that free antenatal care includes free healthcare services which are; immunization, lab services, ultra and gynecological sessions and free supplements. In addition to the above free services, Ibadan found in Nigeria had their policy frame of this subject matter indicating that free maternity care services include;

free theater and free medicine. Ambulance services was ranked as a free emergency medical service during gestation and 42 days after giving birth. After delivery care involved guidance on family choices, free gynecology services for the patient and free medication. The mothers were satisfied with the perinatal care given at 98.5%. however, some mothers were discontented with dirty hospital environment, cost of materials used in the hospital, wastage of time while waiting for services, inadequate staffing, inadequate water supply, and distance of hospital location (Akeju, Oladapo, & Vidler, 2016).

Through antenatal care most complications related to pregnancy have been averted. Records indicates that proper nursing of pregnancy prevents most maternal related complications and proper delivery of information to expectant mothers on services found in public health facilities ensures that the value of executing these services will be realized. Inadequate utilization of these services leads to lack of economic sense (Odwe *et al.*,2015). Moreover, if women get informed well or benefits from antenatal care, they will realize the importance of utilizing health facility. However, this will depend on how information on risks, causes and symptoms of labour, dangers of labor and delivery is passed to them. This relies heavily on quality of antenatal care. Precisely antenatal care links expectant mothers with the health system which is critical to save her life in case of complications (Baker *et al.*,2017; Gitobu *et al.*,2018)

2.3 Satisfaction levels of mothers utilizing free maternity services in public health facilities

In Egypt 3% of mothers who received postnatal services were satisfied fully with orientation services where 18% of them were completely satisfied about scheduled time

for household and doctors to see them, information passed from healthcare attendants received different level of satisfaction where 21%,36%, and 15% had low, medium and full satisfaction respectively. When the dialect was conducted in their first language 29%-22% of them were moderately satisfied. 30% were moderately satisfied while 26% were fully satisfied from answers they got from nurses concerning doubts arising from treatment results and prognosis. In addition, 25% and 20% had low satisfaction on comfort and care received from nurses during their stay in hospital respectively. 28% had low satisfaction when they got help. Considering friendliness of nurses 25% had medium satisfaction on the same. More than a third of the participants had no satisfaction on postnatal services provided to them. In addition, 37% of the mothers were not satisfied with the teaching they were given regarding signs and symptoms of neonatal conditions and immunization and weaning of the baby. However, records indicate that out of these mothers,44% would refer their friends to the same family with 23% and 21% having medium and full satisfaction.

Health facility at El-Shabby maternity university Hospital had the following satisfaction level on postnatal services;41%had minimal satisfaction and at least $\frac{1}{4}$ of them either had medium satisfaction or satisfied to some extent. 5%of the respondent were not contented at all 'in conclusion only 1% of them got fully contented with the maternal services received. (Al-Battawi &hafiz,.2017)

Various studies in various countries have indicated different levels of satisfaction with free maternity services policy. In India expectant mothers who delivered normally were not satisfied with the process around meeting their neonates while those who underwent

caesarian delivery got low contentment with postnatal care. Using regression analysis approach with predictor variables being women having virginal birth, intermingling with health care attendants, confidentiality on privacy matters and being free from fear of childbirth had a significant impact on general satisfaction with the child delivery (Paridhi, Larson, Christenson, & Svaneberg, 2017). For those women who had caesarean birth, being dependent financially and having positive perception of self-health had associations with overall birth satisfaction (Paridhi *et al.*, 2017).

In Nigeria, mothers receiving services from Ibadan hospital were found to be satisfied with the services offered at 98.5% (Odetola & Fakorede, 2018). It was considered that the quality of services was good, the mothers who were satisfied had higher odds of coming back to the hospital in subsequent deliveries (Galle, Vanparys, Roelens, & Keygneart, 2015). Every woman visiting the hospital has varied perception of the care to be provided. Satisfaction has positive relationship with perception. It is expected that every woman seeking maternity services has certain expectations and perceptions of services offered at that certain health facility. The level to which these expectations are met will determine the level of satisfactions and likelihood of subsequent utilization of these facilities. Therefore, midwives should pay special attention to these expectations and needs of the expectant mothers and give chance for them to share their feelings. They all want to be handled with respect and be well informed to make sound decisions in regards to pregnancy care, the process of delivery, and care of the baby following delivery (Akej, Oladpo, & Vidler., 2016)

Research has shown that apart from competence and skills at maternal healthcare attendants, their frame of mind and interpersonal relations between them and the mothers have foundation of maternal perception of quality care and their level of contentment. In order to record full satisfaction of mothers from maternal services healthcare attendants ought to make cognizant effort to provide patient-centered, personalized care and advancement of primary health centers (Bitew, Ayichiluhm & Yimam, 2015). Skilled birth attendants should be friendly; pass critical information properly; have respect to mothers; give encouragement support and praise; and give quality health education. Nurses should champion for favorable surroundings for the patient and avail required proper facilities of high quality (Bitew, Ayichiluhm & Yimam, 2015).

In Ethiopia mothers who recorded full satisfaction with healthcare was ranging between 2.4% to 21%. 82% were not satisfied completely when asked about pain control. Communications between midwives and mothers recorded satisfaction between 0.7% to 26%. Major sources of dissatisfaction was also recorded from inadequate information about prescriptions of the drugs and illustration of treatments to be done to the patients. Full satisfaction with environment factor of the hospital was between 3.3 to 40.2% (Tadele, Gebrhiwot, Bisetegene & Habte, 2014). In another study in Ethiopia, the level of contentment of expectant women with the labor and maternal services was poor. Living in remote areas and chronic, co-morbidity was negatively associated with low level of satisfaction while travel time, mode of delivery, and free cost maternal services had a significant impact on level of contentment (Gash aye, *et al.*, 2019)

Various mothers had varied experiences on free delivery care services in Kenya. Some of the experiences that those who benefitted from this initiative is provision of mosquito nets, sharing of hospital beds, sharing of infant incubators and provision of warm water bath (Gitobu, *et al.*,2018). This majorly occurred as a result of low infrastructure and resources availability in the hospitals. This free maternity services initiative led to overcrowding of clients in public hospitals leading to running out of beds. In Nakuru for instance, some were forced to sleep on the floor as others were forced to leave the hospital early (Gitobu *et al.*, 2018). In another county referral hospital in Kenya, more than half of the mothers served were willing to come back to the facility in their subsequent deliveries. This was among those served in clean environment. However, they reported that, if the environment is dirty, they cannot be satisfied. Close to half of the respondents had reported to have received quality services. The better the quality of the services, the more the clients were satisfied (Mukabana & Mukaka, 2017).

Comparing satisfaction levels among mothers attending private hospitals and public hospitals records indicated that 98.1% got attended within 0-30 minutes of arrival to the facility as compared to 87% that attended public facilities. Out of the maximum score of 5.00 respondents from public facilities recorded satisfaction mean score of 4.46 as compare to 4.6 of respondents from private institutions. Concerning satisfactions of pain relief after delivery those attending public hospitals recorded higher satisfaction than those attending private hospitals. Also, public facility beneficiaries indicated higher satisfaction on functional equipment than those attending private institutions (Umoke & Nwimo, 2020).

2.4 Factors affecting satisfaction levels of mothers utilizing free maternity services in public health facilities.

Satisfaction and dissatisfaction of mothers with delivery of free maternity services is associated with specified factors. Research has shown that these factors are different from one study to another. These factors can be related to the mother's individual characteristics or associated with the health facility. A study in Nepal, concluded that majority of the expectant women were satisfied with the delivery services availed at Kathmandu Medical College Teaching Hospital. The level of satisfaction was higher on environmental factors, maternal care services and communications of staff. Mothers who conceive male babies were more satisfied hence sex was associated with satisfaction. The findings of the study indicated that improving staff attitude will improve clients' satisfaction (Parajuli & Paudel, 2019). Satisfaction surveys in Nepal among pregnant mothers showed that 55.5%,40.7% and 3.8% of respondents were moderately fully and lowly satisfied with maternal services respectively). Waiting time and satisfaction level had significant association (Sapkota, *et al.*,2018). Another study in Nepal showed that 38% had satisfaction with ANC services provided. To analyze this subject those who were highly contented with the service were taken as an indicator of client satisfaction with the ANC services while the rest were grouped as unsatisfied (Parajuli & Paudel, 2019).

A cross sectional study in Malaysia showed that 29.9% of the educated respondents were less likely to be satisfied with care given. Those that had low level of education were 1.6% less likely to be satisfied. The cost of the services was also associated with satisfaction. Those who paid more were less satisfied compared to those who paid less. In

the same study 24.6% were poorly satisfied, 51% had average satisfaction and 24.6% had high satisfaction. The level of satisfaction was influenced by ethnic group the client was coming from. (Rahman, Ngadan, & Arif, 2016)

In Italy, Age, education level and nationality of mothers had significant association with level of satisfaction regarding pregnancy. Considering delivery, age proved insignificant while education and citizenship maintained the association with satisfaction. Contrary to the expectations, the number of previous pregnancies turned out to be insignificant (Tocchioni, Segheleri, Santis, & Nuti, 2018). A similar study in Iraq indicated that the level of satisfaction was associated with predicting variables like education, age, number of midwives, and quality of maternal services. Patient satisfaction with childbirth experience was not associated with parity, the experience of pregnancy and antenatal attendance were significant relationship with labor duration, returning back to hospital and highly significant relationship with giving Oxytocin was found (Atiya & Mohammed, 2016).

Another study in Palestine revealed that those mothers receiving care from mid-wives received higher satisfaction compared to those receiving regular care. The adjusted mean difference between the groups was calculated and found to be significant at 0.6 (95% CI 0.35 to 0.83) $p < 0.0001$ (Mortensen *et al.*, 2019). It was reported in another study that the aspects that were significantly associated with client satisfaction were; free maternal services; regularity of conducting facility management commitment management meetings and sex of service provider. Other aspect like waiting time at the facility staff

category, system of collecting opinions were not significant factors for client satisfaction with ANC services (Acharya, Sharma, Dulai, & Aryl, 2015)

A cross section study in Russia showed that 99% of mothers were contented with antenatal care provided. Mothers who had low satisfaction had low level of satisfaction. The pregnant women in Russia preferred regular checkups, more time with care providers and shorter waiting times. Longer waiting times and inadequate know how for pregnancy of health outcomes of lab tests. Care during gestation period, breastfeeding and service cost caused low satisfaction (Dauletyaova *et al.*,2018). Another cross-sectional study in Mozambique indicated that 92.5% got fully satisfied to an extent of referring household members to utilize the same facility. 94.7 %,92.0%, and 49.8% got satisfied on facility cleanliness, interaction with nurses and assistance to feed the baby respectively. Disrespect, humiliation and being abandoned when in need amongst mothers cost them to have low level of satisfaction when compared to those who had not such experiences (58.5% vs. 93.5%). Additionally, the indicated higher levels of dissatisfaction (20.1% vs. 2.1%). Regressions indicated that those mothers who receives care services from primary facilities had higher satisfaction than those who that attended hospitals with an overall score of 0.06 in type II health centers and 0.05 in type I health centers compared to -0.01 in hospitals irrespective of age, education and social economic background (Mocumbi *et al.*,2019). A study in Nigeria most respondents were fully satisfied .81.5% were satisfied with intrapartum service. 62.5 % got satisfaction with services at the hospital. Patient expectations, facility equipment, healthcare providers attitude and education level of the clients were found to be significantly associated with the client satisfaction (Tesleem & Ifeoma,2106).

In Eastern Africa, a result of a study in Ethiopia showed insignificant relationship between education level and mothers' contentment with the service (Bitew, Ayichilunm & Yimam, 2015). The results did not match with the studies conducted previously by Akeju and Oledapo in Ogun state community, a south western semi urban community in Nigeria (Okeju, Oldapo, and Videlao, 2016). In a similar study by Bitew et al in south-western Ethiopia, 78% of women had no secondary education and they tended to be more satisfied compared to those with tertiary education (Bitew, Ayichiluhm & Yamam, 2015). Another study in Ethiopia showed that women who had no formal education at all were less satisfied compared to those with tertiary education. The level of income also played as a significant predictor of satisfaction with those that had higher income were less satisfied than women with low income. Women whose privacy was guaranteed had six times satisfaction than those who did not have their privacy maintain (Edaso & Teshome, 2019). The general contentment of mothers with institutional delivery service provided at four selected hospitals in Wolaita Zone administration in Ethiopia was high. It was recommended that healthcare management and services providers should give attention to maintain the contentment level of women. It needed minimizing waiting time, maintaining high hygiene, informing women on planning delivery and creating awareness in order to advance the satisfaction (Temamo, Abebe, & Menta 2018)

In Kenya, age of the client, educational status, income of the client and client's address away from Addis Ababa were found to be the predictors of client satisfaction. Provider's attitude and communication, as well as longer duration of stay in the ward were independent predictors of client satisfaction (Gitobu, *et al.*, 2018). The level of education of the mother was significantly associated with client's satisfaction. The level of

education of the mother was found to influence the expectations of the mother on health care services. The higher the level of education, the less likely the client will be satisfied, since they demand more information about their care. Greater satisfaction was associated with low level of education, this was associated with the fact that they are less informed of their rights, and they are willing to take any improved care as a plus to their satisfaction (Mukabana & Mukaka, 2017).

Another cross-sectional study in Kenya identified various factors that increased satisfaction of clients and those that decreased the satisfaction. The factors that lead with satisfactory rankings were; staff competence at 91.1%, staff courtesy when handling patients at 88.2% and availability of medicine during hospital stay and on discharge at 78.8% of participants. The most unsatisfactory ratings were; availability of materials and equipment each by 15.1% and visual privacy by 7.7 % participants. The least rated as unsatisfactory were; building structure, lighting and staff courtesy by 0.8%, 1.1% and 1.3% participants respectively. There was more than 90% general satisfaction on maternity services accorded to participants (Chesumei, Mutai, & Kiage, 2018). In Kenyatta National Hospital, KNH, a study found that the overall satisfaction level of respondents was 62.4% with significant association between availability of staff, facility cleanliness, availability of drugs and sharing of beds on maternal satisfaction level (Geoffrey, Kenneth, & Margaret, 2018).

2.5. The Quality of Maternity services and effect on satisfaction levels

The study in India revealed that quality of maternity services was measured based on availability of the following; sufficient ambulance services, medicine, food, qualified doctors, high level of hygiene and cleanliness, privacy, safe delivery with no

complications, good interactions between clients and service providers and cheap cost of services. expectant mothers concurred that nurses were proficient in providing maternal services. The study concluded that women have clear expectations of quality care from facilities where they go to deliver. Understanding the pregnant women expectations on service provided with respect to service providers perspective of care is critical in advancing impact of maternal outcomes (Phattachrii et al 2018, Srivastava, saxana, goi, Dwivedi and kagia, 2018).

Patient satisfaction is an important measure of healthcare quality as it offers information on the provider's success at meeting the expectations of most relevance to the client and a key determinant of patients' perspective behavioral intention (Xesfingi & Vozikis, 2016). Patient satisfaction is correlated with important outcomes, such as superior compliance, decreased utilization of medical services, less malpractice litigation and better prognosis (Parajuli & Paudel, 2019). The absence of a solid conceptual basis and consistent measurement tool for consumer satisfaction has led, over the past ten years, to a proliferation of surveys that focus exclusively on patient experience, i.e., aspects of the care experience such as waiting times, the quality of basic amenities, and communication with healthcare providers, all of which help identify tangible priorities for quality improvement (Karaca & Duma, 2019).

Some researchers have suggested that defining quality improvement from patients' perspective provides better value for their money with improved safety, accessibility, equity, and comprehensiveness of care, while from a provider's point of view, quality improvement may be more efficient, providing more effective services to a greater

number of consumers with a reasonable level of satisfaction, with the latter being enough for customer retention (Srvastava, saxana, goi, Dwivedi & kagia,.2018).

Patient satisfaction measurement provided crucial information on performance thus contributing to total quality management (Goh, Ang, Chan, He, & Vehvilainen Julkunen, 2016). In the past years, patients have started to demand their right to be served better as a result of their becoming more knowledgeable and savvy to the type of care and treatment options they may receive (Umoke & Nwimo, 2020). It was observed that patient satisfaction is affected by the attitude of health workers toward patients, ability to offer immediate attention, waiting time, ability to send information, and the tolerance by physicians to plainly explain to the patient what was wrong before giving detailed message concerning their drugs and the environment (Umoke & Nwimo, 2020).

2.6 Summary and research gaps

Considering that few studies on this subject matter has been carried out in Kenya with no records of such studies in central Kenya, this study will be a critical tool for framing healthcare policy. Past studies that have been conducted in Kenya by Gitobu (2018) and Geoffrey (2018) focused on client satisfaction in Nairobi and the Rift Valley but did not cover some of the objectives and goals of this study. The levels of satisfaction have been reported to vary from hospital to hospital. The factors affecting level of satisfaction are also reported to be varying from region to region. The current study will form a base for women satisfaction level in central Kenya. Therefore, there was need for this study to get proper recommendations and views for policy development on health in Kenya.

CHAPTER THREE: STUDY METHODOLOGY

3.1 Introduction

This section based on mode or style that was employed when conducting the study. It focused on layout or plan, target population sampling design data corrections procedure and tools.

3.2 Study variables

Introduction of free maternal policy was initiated with the aim that mothers utilize antenatal, postnatal, and maternity service. The expected outcome of utilizing this service was that maternal mortality would decline and that the quality of maternity would improve. All the stated predictors variables would have significant impact on criterion variables which in this case is effects on utilizing all maternal healthcare services.

Independent variables (predictor variables) of the study were age of the mother, number of previous deliveries, educational level of the mother, their marital status and occupation. On quality of the services, the study focused on; hospital infrastructure, availability of drugs, staff's attitude when serving the mothers during and after pregnancy, waiting time, privacy, maternal harassment, maternal abuse, cost of services, staff efficacy, and provision of optimal care services and availability of services.

The dependent variable was maternal satisfaction on free maternity services.

3.3 Research design

This study employed cross section approach. This approach was objective oriented since it explored the acceptance of material health service after the government introduced an initiative of free maternal healthcare policy. This design was employed since it can help

collect data at one point and in the shortest time possible. The clients are not subjected to recall bias and reduces chances of attrition.

3.4 Study Area

The study was conducted in Murang'a county hospital that holds 300 beds. It is a public County Referral hospital. Murang'a hospital offers the following services; rehabilitative, curative, preventive and diagnosis. Beneficiaries of these services are Kenyan population in general. Murang'a hospital facility bracketed among the four best health facilities in the region and it is located in Karuri location, Kiharu Constituency, Murang'a county. It opens seven days a week and operates 24 hrs. The hospital was chosen since it is one of the public hospitals where free maternity services policy was first rolled out in Kenya. In central Kenya, Murang'a County referral hospital was selected to implement the policy. After introduction of free maternity policy, the hospital had 0.2% increase in deliveries and 41.3% increase in utilization of antenatal care services (Njuguna *et al.*, 2017).

3.5 Study Population

The necessary data needed for this research was collected from mothers who had delivered in Murang'a county hospital, who had benefitted from the maternity services got discharged and were ready to leave hospital.

3.5.1 Inclusion criteria

All the mother who received free maternity delivery services in Murang'a County Referral Hospital

All the mothers who gave an informed consent to participate

3.5.2 Exclusion criteria

All the mothers who were critically weak or sick at the time of the study

3.6 Sampling Technique

Systematic and purposive sampling technique were employed to select expectant mothers who benefited from free maternal policy and the healthcare services respectively. The data was collected from Murang'a hospital whereby, the subjects were expectant mothers who were beneficiaries of free maternal healthcare facility.

3.7 Sample Size

Fisher method was employed to determine sample size. The formula is as follows

Where;

N =size of the sample size

Z =normal distribution z-value score being equal to 1.96

P = A function or characteristic of the population study. that is percentage of women who got maternal services from skilled nurses which happens to be at 50.2%.

d = The desired significance level which is 50.2% (liambila & Kuria 2015)

the sample size of a large population was determined as follows;

Potential respondents were chosen by means of systematic sampling. The sampling frame was 1950 mothers. Sample were picked systematically following the k^{th} patient from the admission numbers at the point of leaving the hospital. Number 3 was randomly chosen between 0 and 9 which was then used as a starting point and the k^{th} value calculated as follows.

$$K = 1950/387 = 5.07$$

Therefore

$$K = 5.$$

The respondent will be sampled at an interval of 5. To achieve the representative sample, the 5th patient was chosen from those being discharged from the hospital as per the admissions. 15 key informants from the hospital also participated in the research. These key informants were selected purposively to give more information about the services offered and to validate the data given by the mothers. The key informants included maternity wards departmental heads (antenatal care department, labour ward, post-natal ward and maternal child Health, MCH/FP) and their deputies.

3.8 Pretesting of Research tool

The questionnaire used to collect data was assessed using a tenth of a sample population to determine its relevance. It was pretested for reliability on 38 mothers who had delivered in Maragua sub-county hospital and were using free maternal health policy. This was done to ensure that the questionnaire was clear, objective and understandable to the respondents. Both the questionnaire and KII guide were pretested. After pretesting some further refinement was done. The final questionnaire had four sections: Section A; the demographic data section. Section B; Level of satisfaction section, Section C; factors affecting level of satisfaction and Section D quality of care provided to the mothers.

3.8.1 Validity

The research applied construct validity. Construct validity was achieved by subdividing the research instrument into various parts where each answered a certain hypothesis or

objective of the study. To address content validity issue, two key informants from the hospital evaluated the questionnaire to scrutinize its relevance and essence in regards to maternal health.

3.8.2 Reliability (accuracy)

Accuracy was gauged through duly completed questionnaires by randomly selecting respondents who were not included in the final research sample so as to manage respondent's biasness. The ability of related test items to generate a stable and consistency results is referred to as reliability (Cresswell, 2012). Reliability of the instrument that will be used in the current study was approximated by use of split half formula. Two halves will be obtained using odd-even split formula as shown.

$$\text{Reliability of scores on total test} = \frac{2 \times \text{reliability for } \frac{1}{2} \text{ tests}}{1 + \text{reliability for } \frac{1}{2} \text{ tests}}$$

and Cronbach's alpha coefficients was produced to test accuracy. The closer Cronbach's alpha coefficients was to 1, the higher the internal consistency accuracy/stability. Items measuring each of the three objective Cronbach's alpha coefficients of 0.78, 0.82 and 0.79 respectively. These coefficients were accepted for the study.

3.9 Data collection Techniques

Data was gathered using questionnaires, interviews and secondary data. Secondary data was collected from records on antenatal maternity, postnatal register, and review of existing document and data bases. Questionnaires were cross checked by the principal investigator before research assistant proceeded to the next interview. Respondents were identified for follow up purposes.

3.10 Data Management analyses

To analyze the data qualitative and quantitative methods were employed. Statistical package for social sciences (SPSS version 24) was used to process the quantitative data to reveal study findings. The quantitative data was first coded, sorted and then was entered into the computer. Cross tabulation was computed to determine the association between predictor and criterion variables, Chi-square was used to determine significant association, with fisher exact test being reported in case one cell had less than 5 counts. Bivariate analysis was done to identify the significant factors affecting satisfaction level of the mothers on free maternity services. Quality of care provided was finally correlated with the satisfaction level. Tables were used to interpret organized data. Qualitative data was analyzed thematically.

3.11 Logistical and ethical consideration

Kenyatta university graduate school and Kenyatta university Ethical Review committee approved the study proposal before data collection and implementation respectively (Appendix...). National commission for science, Technology and innovation and the ethics review committee permitted the study (Appendix...). All respondents signed an informed consent before participating in the study (Appendix...). Voluntary participation was used. Participation was voluntary and information obtained remained confidential. Respect for persons, confidentiality and justice was observed.

CHAPTER FOUR: RESULTS

4.1 Introduction

The chapter presents findings for all the objectives of the study. Firstly, the social and demographic characteristics of the mothers will be presented, this is followed by satisfaction level of the mothers with free maternity services. Factors contributing to satisfaction level of the mothers on free maternity will follow and the chapter will be concluded by how quality of care contributes to maternal satisfaction with free maternity services in Murang'a County. Out of the 387, only 384 were duly completed. The response rate for the current study therefore was 99.2% since the study was researcher administered.

4.2 Social and demographic characteristics of the youth

The age of the mothers was rounded up in complete years and it was found that the mothers had varied ages. Majority (47.9%, n=184) had an age between 21-30 years, 25.3% (n=97) had an age between 31-40 years, 20.1% (n=77) had an age below 20 years and 6.8% of the mothers' had an above 41 years. On religion, majority were Christian protestants (78.4%, n=301), 19.5% (n=75) were Christian Catholics and 2.1% (n=8) were Muslims. Majority of the participants reported to be having secondary level of education (47.4%, n=182), they were followed by those with college level (33.9%, n=130), and 14.1% (n=54) reported to have primary level of education with 1.6% (n=6) having university level of education and 3.1% (n=12) having no formal education. On marital status, 63.8% (n=245) were married at the time of study, 25.3% (n=97) reported to be single and 10.9% (n=42) had been divorced by the time of study. Majority of the respondents were self-employed (57.3%, n=220), 25.8% (n=99) were formally employed

and 16.9% (n=65) were unemployed. The participants who were unemployed depended on their spouses for financial support (15.9%, n=61), among those who were self-employed; some earned between 1-5 thousand per month (18.8%, n=72) and others earned between 5-10 thousand per month (39.6%, n=152) while those who were formally employed and others whose business fetched enough interest reported to earn more than ten thousand per month.

Table 4.1: Demographic characteristics of participants

Variable	Category	Frequency	Percentage
Age	<20 years	77	20.1
	21-30 years	184	47.9
	31-40 years	97	25.3
	Above 41 years	26	6.8
Marital status	Single	97	25.3
	Married	245	63.8
	Divorced	42	10.9
Level of education	No formal education	12	3.1
	Primary	54	14.1
	Secondary	182	47.4
	College	130	33.9
	University	6	1.6
Religion	Christian protestants	301	78.4
	Christian catholic	75	19.5
	Muslim	8	2.1
Occupation	Unemployed	65	16.9
	Self employed	220	57.3
	Formally employed	99	25.8
Gross income per month	Dependent	61	15.9
	1-5k	72	18.8
	5-10k	152	39.6
	Above 10k	99	25.8

4.3 Objective 1: Satisfaction level of mothers on free maternity services

The satisfaction level of the mothers was measured using a likert scale. The mothers were assessed on their satisfaction on regular assessment and interventions during waiting time. The study found out that 40.1% (n=159) of the mothers strongly agreed that they were being regularly assessed and taken care of, 43.8% (n=168) agreed that they were satisfied with regular observations during waiting time, 7.8% (n=30) were not sure, 3.9% (n=15) disagreed that they were regularly observed and 4.4% (n=17) strongly disagreed that they were monitored during waiting time.

At the reception the mothers reported to have been received well. On assessment on their level of satisfaction on reception services, the study found that 41.4% (n=159) of the mothers strongly agreed that they were satisfied with the services, 31% agreed that they were satisfied, 9.4% (36) were not sure, 8.1% (n=31) disagreed that they were received well and 10.2% (n=39) strongly disagreed that they were received well.

Confidentiality of the patient information is one of the ethical issues to be observed by health care staffs. The study sought to establish the level of satisfaction among the mothers on how confidential their information was kept. The result indicated that 50% (n=192) of the mothers strongly agreed that their information was kept confidential, 38.5% (n=148) agreed that they were satisfied with how the information was kept confidential, 4.2% (n=16) were not sure, 3.1% (n=12) disagreed that their information was kept confidential and 4.2% (n=16) strongly disagreed that their information was kept confidential.

Patient privacy is usually used to assess patient satisfaction levels in the hospitals, in the current study assessed on the level of maternal satisfaction with the privacy provided in the hospital especially during delivery. The findings revealed that 46.6% (n=179) of the mothers strongly agreed that their privacy was maintained, 40.6% (n=156) agreed that they were satisfied with the privacy provided, 4.4% (n=17) were not sure, 3.9% (n=15) disagreed that they were provided with the privacy they deserved and 4.4% (n=17) strongly disagreed that their privacy was maintained as expected.

Table 4.1: Satisfaction level of mothers

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Satisfied with the reception services	10.2%	8.1%	9.4%	31%	41.4%
There was regular observation during waiting time	4.4%	3.9%	7.8%	43.8%	40.1%
There was confidentiality of information	4.2%	3.1%	4.2%	38.5%	50%
There was privacy during procedure	4.4%	3.9%	4.4%	40.6%	46.6%
Was satisfied with pain management	5.5%	9.9%	5.5%	30.5%	48.7%
Was attended by a skilled birth attendant	4.2%	5.7%	3.6%	35.7%	50.8%
The health care worker used functional equipment	1%	11.7%	10.2%	36.2%	40.9%
Was introduced to and assisted by labor companion	0.5%	11.2%	10.9%	30.2%	47.1%
Satisfied with support and encouragement given during delivery	2.6%	12%	7.3%	25%	53.1%
Satisfied with monitoring post delivery	2.3%	15.6%	6.3%	24.5%	51.3%
Taught on correct breast attachment during breastfeeding	10.4%	4.7%	59.1%	0	25.8%
Satisfied with information provided about baby's condition	6.3%	14.1%	1%	49.7%	28.9%
Satisfied with information given on post-delivery self-care	4.7%	9.6%	12.2%	31.8%	41.7%
Satisfied with information given on maternal danger signs post delivery	4.2%	8.3%	6.3%	38.8%	32.4%
Satisfied with information given on danger signs of the baby	3.1%	9.4%	10.4%	26%	51%
Satisfied with postnatal care	1.6%	4.2%	3.1%	34.1%	57%
Satisfied with discharge process	1.6%	2.6%	4.2%	40.1%	51.6%
Satisfied with staff patient professional relationship	3.1%	9.4%	10.4%	26%	51%
Satisfied with the staff attitude	1.6%	4.2%	3.1%	34.1%	57%

Labor pains are usually managed using non-pharmacological means; the mothers expect the birth attendants to support them in managing the pains. The current study revealed that 48.7% (n=187) of the mothers strongly agreed that their labor pain was managed well, 30.5% (n=117) agreed that they were satisfied with the pain management, 5.5% (n=21) were not sure, 9.9% (n=38) disagreed that their pain was well managed and 5.5% (n=21) strongly disagreed that their pains were managed as expected.

The goal of introducing free maternity services in public hospitals was to improve skilled delivery. Therefore, the current study assessed the mothers' satisfaction on services offered by the skilled birth attendants in the hospital. The study established that 50.8% (n=195) of the mothers strongly agreed that they were satisfied with the services provided, 35.7% (n=137) agreed that they were satisfied with the services provided, 3.6% (n=14) were not sure, 5.7% (n=22) disagreed that they were satisfied with services provided and 4.2% (n=16) strongly disagreed that they were satisfied with the services provided.

Functional equipment used during delivery are crucial for safe delivery. In the current study, it was established that the equipment used were functional this was ascertained when 40.9% (n=157) of the mothers strongly agreed that equipment used was functional, 36.2% (n=139) agreed that the equipment were functional, 10.2% (n=39) were not sure, 11.7% (n=45) disagreed that the equipment used were functional and 1% (n=4) strongly disagreed that the equipment used were functional.

It is necessary that the mothers get companion to help during the process. The mothers expressed their level of satisfaction on the companion they had during labor process. The

study found that 47.1% (n=181) of the mothers strongly agreed that they were satisfied with the companion, 30.2% (n=116) agreed that they were satisfied with the companion provided, 10.9% (n=42) were not sure, 11.2% (n=43) disagreed that they were satisfied with the companion and 0.5% (n=2) strongly disagreed that they were satisfied with the help they got from the companion. The companion was expected to provide support and encouragement during labor. On assessment to establish level of satisfaction on support and encouragement provided it was found out that 49.2% (n=189) of the mothers strongly agreed that they were satisfied with the support and encouragement they received, 28.6% (n=110) agreed that they were satisfied with the support and encouragement provided, 10.7% (n=42) were not sure, 9.1% (n=35) disagreed that they were provided with the support and encouragement they deserved and 2.3% (n=9) strongly disagreed that they received the support and encouragement they deserved.

The mothers' need post-natal care monitoring to assess the maternal condition to prevent development of complications. On assessing the maternal satisfaction on services provided during postnatal period; the study indicated that 51.3% (n=197) of the mothers strongly agreed that they were satisfied with the care given, 24.5% (n=94) agreed that they were satisfied with the care given, 6.3% (n=24) were not sure, 15.6% (n=60) disagreed that they were provided with the care they deserved and 2.3% (n=9) strongly disagreed that the care provided was not the much they expected.

Breastfeeding helps in bonding and nutritional support while attachment helps in suckling. Therefore it was necessary to educate the mothers on breastfeeding and attachment. The current study established that 25.8% (n=99) of the mothers strongly

agreed that the information they received was adequate, 59.1% (n=227) agreed that they were satisfied with the information provided, 4.7% (n=18) were not sure, and 10.4% (n=40) disagreed that they were provided with the information they expected on breastfeeding and attachment.

Post-delivery, the babies are expected to adapt to extra uterine life. The nurses monitor their progress and advice and update the mothers accordingly. The current study sought to establish the level of satisfaction of the mothers on the information they were given on babies' condition. The findings indicated that 28.9% (n=111) of the mothers strongly agreed that they were updated with their baby's condition, 49.7% (n=191) agreed that they were satisfied with the updates provided, 1% (n=4) were not sure, 14.1% (n=54) disagreed that they were provided with the information they deserved and 6.3% (n=) strongly disagreed that they were not given all the necessary information they expected.

Self-care post-delivery minimizes acquisition of infection in the puerperal period. The mothers were assessed on their satisfaction with the information they were given on self-care post-delivery. The findings revealed that 41.7% (n=160) of the mothers strongly agreed that they were satisfied with the information given, 31.8% (n=122) agreed that they were satisfied with the information provided, 12.2% (n=47) were not sure, 9.6% (n=37) disagreed that they were provided with the information they deserved and 4.7% (n=18) strongly disagreed that they were given expected information.

Danger signs are key indicators of complications post-delivery; they involve maternal danger signs and danger signs for the baby. Mothers were assessed on their satisfaction with information given about danger signs. The results revealed that 42.4% (n=163) of

the mothers strongly agreed that they were satisfied with the information given, 38.8% (n=149) agreed that they were satisfied with the information provided, 6.3% (n=24) were not sure, 8.3% (n=37) disagreed that they were provided with the information they deserved and 4.2% (n=16) strongly disagreed that they were given expected information. About information about the danger signs of the baby, the results showed that 51% (n=196) of the mothers strongly agreed that they were satisfied with the information given, 26% (n=100) agreed that they were satisfied with the information provided, 10.4% (n=40) were not sure, 9.4% (n=36) disagreed that they were provided with the information they deserved and 3.1% (n=12) strongly disagreed that they were given expected information.

The mothers were also assessed on their satisfaction on the discharge process, how long it took and health education given. The results indicated that 51.6% (n=196) of the mothers strongly agreed that they were satisfied with the discharge process, 40.1% (n=154) agreed that they were satisfied with the discharge process, 4.2% (n=16) were not sure, 2.6% (n=10) disagreed that they were satisfied with the discharge process and 1.6% (n=6) strongly disagreed that they were satisfied with discharge process.

Patient and healthcare providers' relationship indicates and sometimes promotes patients level of satisfaction. In the current study, the mothers were assessed on their level of satisfaction about their professional relationship with the nurses. The results showed 51% (n=196) of the mothers strongly agreed that they were satisfied with the relationship they had with the nurses, 26% (n=100) agreed that they were satisfied with the relationship, 10.4% (n=40) were not sure, 9.4% (n=36) disagreed that they were not satisfied with the

relationship and 3.1% (n=12) strongly disagreed that they were satisfied with the information.

The attitude of the staffs was then lastly assessed and how it affected maternal satisfaction with free maternity services. The results indicated that 57% (n=219) of the mothers strongly agreed that they were satisfied with the staffs attitude, 34.1% (n=131) agreed that they were satisfied with the attitude of staffs, 3.1% (n=12) were not sure, 4.2% (n=16) disagreed that the staffs had a positive attitude and 1.6% (n=6) strongly disagreed that the attitude of the staffs was good.

An overall level of satisfaction was then calculated taking into consideration of all the above factors. The maximum score for the twenty items was 100 and the least was expected to be 20. Taking the upper quartile as the level of satisfaction, all the participants who scored above 75 were considered to have been satisfied with the services offered after introduction of free maternity services while those who scored less than 75 were considered to have been dissatisfied with the services offered. Based on these facts, 67.2% (n=258) were found to be satisfied and 32.8% (n=126) were classified as dissatisfied. Therefore, the level of satisfaction was established at 67.2 %

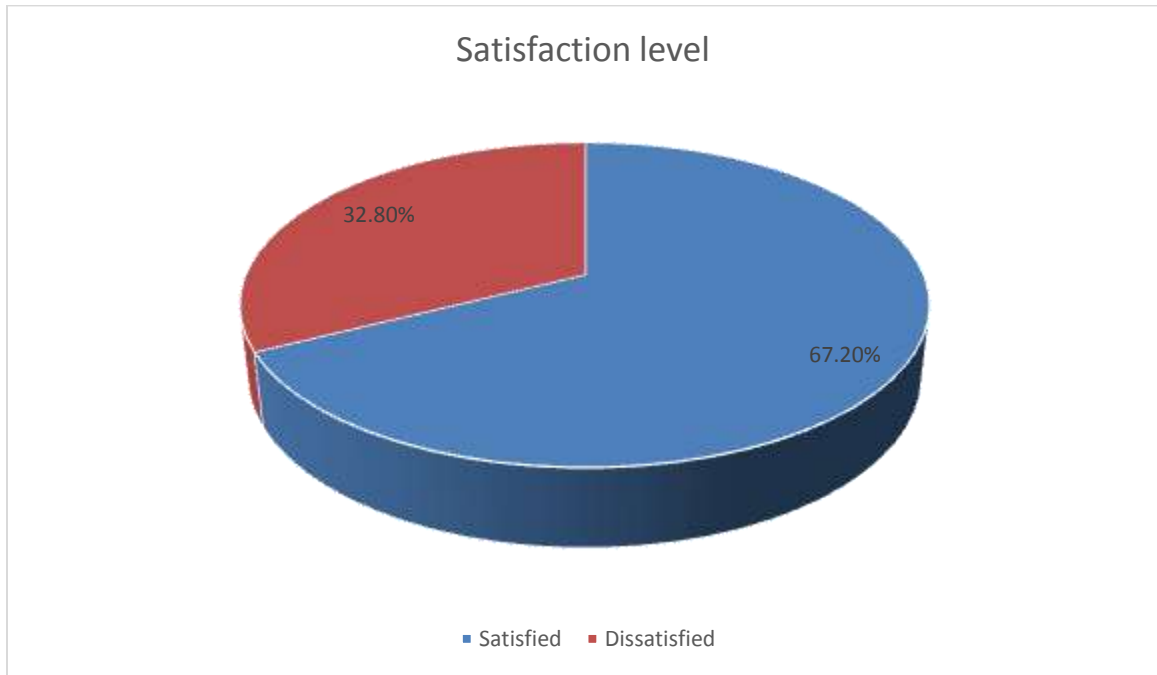


Figure 4.1: Satisfaction level of the mothers receiving free maternity services in Murang'a County Hospital

4.4 Objective 2: Factors associated with maternal level of satisfaction of free maternity services.

There are various factors that can affect maternal level of satisfaction. In the current study, the researcher focused on social demographic factors and health facility related factors that affect satisfaction level of the mothers seeking maternity services in the hospital.

4.4.1 Socio-demographic factors affecting maternal satisfaction level on free maternity services

The age of the participants was varied, with 77 of the participants being below 20 years and 26 of them being above 41 years. Majority of the respondents were aged between 21-30 years. There was a weak association between age of the respondent and maternal

satisfaction level for free maternity services. On computation, the results were not significantly associated with satisfaction of the mothers with the free maternity services ($\chi^2=4.759$, $p=0.190$).

Marital status of the respondents was categorized into three. Majority of the participants were married and a few reported to be divorced. Out of the 245 who were married, 195 of them were satisfied with the services offered. Among the 97 who were single, only 38 were satisfied with the services offered. There was a moderate association between marital status and maternal level of satisfaction. There were more chances of a married mother to be satisfied compared to those who were single. The results showed a significant association between marital status of the mother and maternal level of satisfaction at ($\chi^2=5.523$, $p=0.043$).

The mothers who participated in the study reported to have attained varied level of education. There were those who had no formal education ($n=12$), majority had secondary level of education ($n=182$) and a few had university level of education. On analysis, out of 182 participants who had secondary level of education, 121 reported to be satisfied. Among the 130 participants who had college level of education, only 41 were found to be satisfied with the free maternity services. The study also revealed that among the 6 respondents who were having university level of education, only 2 were satisfied with the services offered. These results indicate that as the level of education increases, the satisfaction level of the mothers' decreases. The association between level of education and satisfaction level of the mothers was significant at ($\chi^2=4.303$, $p=0.033$).

Among the participants, there were 301 Christian Protestants, 75 Christian Catholics and 6 Muslims. The findings indicated that out of the 301, 203 were satisfied with the services offered in the hospital. Among the Christian Catholics, 47 out of 75 participants were also satisfied with the services offered while 6 out of 8 Muslims reported to be satisfied with the services offered. Based on religion, majority of the respondents were satisfied. However, these results were not significantly associated with the level of satisfaction at ($\chi^2=4.611$, $p=0.133$).

There were majority of the participants ($n=220$) who reported to be self-employed while a few ($n=99$) reported to be formally employed. Among the formally employed, 65 were satisfied with the services while among the 220 who were self-employed, 146 of them were also satisfied with the services. Despite these findings, the association between the occupation of the participants and level of maternal satisfaction was not significant ($\chi^2=0.946$, $p=0.623$).

The parity of the mothers was also assessed, there were 236 mothers who were para1-3 and among them 162 were satisfied with the services offered. There were also 81 respondents who were having parity of above 3 and out of 81 of them, 48 were satisfied with the services. Among the primi gravid mothers, out of 67, 48 were also satisfied with the services offered in the hospital. However, the parity of the mother did not significantly determine level of maternal satisfaction with the services offered after introduction of free maternity services ($\chi^2=3.140$, $p=0.208$).

Table 4.2: Factors affecting satisfaction level for the mothers receiving free maternity care

Variable	Category	Frequency	Percentage
Patient safety available at all levels of care	Strongly disagree	12	3.1
	Disagree	36	9.4
	Neither agree nor disagree	40	10.4
	Agree	100	26.0
	Strongly agree	196	51.0
Hospital accessibility / Proximity of the hospital	More than 5 km	297	77.3
	1-5km	63	16.4
	Less than 1km	24	6.3
Good roads are there to access the hospital	Tarmacked roads	157	40.9
	Inaccessible roads	227	59.1
Services are affordable	Strongly disagree	8	2.1
	Disagree	44	11.5
	Neither agree nor disagree	63	16.4
	Agree	269	70.1
Hospital bed occupancy	Strongly disagree	13	3.4
	Disagree	44	11.5
	Neither agree nor disagree	90	23.4
	Agree	237	61.7
The hospital is clean always	Strongly disagree	174	45.3
	Disagree	30	7.8
	Neither agree nor disagree	29	7.6
	Agree	151	39.3
Each new born is put in one incubator/sharing	Strongly disagree	113	29.4
	Disagree	88	22.9
	Neither agree nor disagree	48	12.5
	Agree	135	35.2
Availability of bed and linen	Strongly disagree	11	2.9
	Disagree	29	7.6
	Neither agree nor disagree	52	13.5
	Agree	292	76.0

The mothers seeking maternity services in the hospital had varied level of monthly income. out of 61 who reported to be depending on their spouses for income, 43 were satisfied with the services offered in the hospital. There were 72 mothers who were earning 1-5k per month, out of all these, 48 of them were found to be satisfied with the maternity services. Majority of the mothers were earning between 5 and 10 thousand per month. Out of 152 mothers in that category, 102 were satisfied with the results. Ninety-nine mothers were earning more than ten thousand per month and 65 of them reported to be satisfied with the services offered. There was no significant association between the income earned per month and maternal satisfaction level ($\chi^2=0.417$, $p=0.937$).

Among the social demographic factors analyzed; maternal level of education and marital status were the only factors found to be significantly determined maternal level of satisfaction with free maternity services.

Table 4.3: Association between socio-demographic factors of the mothers and their level of satisfaction with free maternity services

Variable	Response	Satisfaction level with free maternity services			
		Satisfied	Dissatisfied	Df	P value
Marital status	Single	38	9	2	P=0.043 $\chi^2=5.523$
	Married	195	50		
	Divorced	25	17		
Level of education	No formal education	7	5	4	P=0.033* $\chi^2=4.303$
	Primary	15	39		
	Secondary	121	61		
	College	41	89		
	University	2	4		

P* Fisher exact test was reported

4.4.2 Health facility related factors affecting maternal satisfaction level on free maternity services

Accessibility of the hospital was assessed in relation to geographical location and distance to the hospital. Some mothers (6.3%, n=24) reported to have come from the nearby surrounding less than 1 kilometer away from the hospital. Others (16.4%, n=63) reported to have travelled between one kilometer to five kilometers to access the hospital and 77.3% (n=297) indicated to have travelled more than five kilometers to access the hospital. Majority of the mothers were coming from the nearby surrounding of the hospital. Some mothers (n=24) were coming from less than one kilometer away from the hospital, sixty-three of other participants were traveling for 1-5 kilometers to reach the hospital and majority (n=297) were travelling more than 5kilometer to reach the hospital. Despite the distance, out of 297 mothers who had travelled for more than 5 kilometers to access the hospital, 205 of them were found to be satisfied with the services. Out of 63 participants who travelled for 1-5 kilometers, 39 of them were satisfied with the services and out of twenty-four respondents who were coming from less than a kilometer away from the hospital, 14 of them were satisfied with the services. However, on analysis, there was no significant association between the distance to the hospital and maternal level of satisfaction ($\chi^2=2.105$, p=0.349).

The mothers felt safe when they were in the hospital and that their pregnancy and newborns were safe. This was evident when 51% (n=196) of the mothers strongly agreed that they were satisfied with the safety in the hospital, 26% (n=100) agreed that they were satisfied with the hospital safety, 10.4% (n=40) were not sure, 9.4% (n=36) disagreed that

their safety was guaranteed and 1.6% (n=6) strongly disagreed that they were safe in the hospital.

The roads to the hospital were also assessed and it was found that some roads (40.9%, n=157) were tarmac roads while the remaining 59.1% (n=227) were marram roads and were inaccessible especially during the rainy season. The nature of the roads used to access the hospital is thought to influence structural accessibility of the hospital. In the current study, 157 participants reported that the roads were tarmac while 227 participants reported that their roads were inaccessible for vehicles and had to use motorcycles to access the hospital. Among those who used tarmac roads, out of 157, 99 were found to be satisfied with the services in the hospital while among the 227 who accessed the hospital despite passing through inaccessible roads, 159 were satisfied with the services offered in the facility. On analysis, there was no significant association between structural accessibility of the roads to the hospital and the services offered in the hospital ($\chi^2=2.055$, p=0.152).

Bed occupancy was also assessed, it was expected that due to increased numbers of patients, the patients may be forced to share beds. However, on assessment it was found that the mothers were not sharing beds during the time of the study. This was evident when 61.7% (n=237) of the mothers agreed that they were each sleeping on her own bed, 23.4% (n=90) were not sure if all the mothers had their own beds, 11.5% (n=44) disagreed that the mothers were not sharing beds and 3.4% (n=13) strongly disagreed that mothers were not sharing beds and indicated that sometimes they were forced to share beds. Hospital bed occupancy was also analyzed in the current study. It was found that,

majority of the respondents agreed that despite the increase in inflow of mothers seeking maternity services; the mothers were not sharing beds. There were a few mothers (n=44) who disagreed that each mother occupied her own bed; these mothers were found to be dissatisfied with the maternity services offered since they reported to have had shared a bed post-delivery. There was a strong association between mothers sharing a bed and their satisfaction level with the services offered. On computation, there was statistically significant association between mothers sharing a bed and level of maternal satisfaction ($\chi^2=6.420$, $p=0.029$).

Post-delivery some new born are admitted to newborn unit (nursery) and are not expected to share an incubator. The research results showed that 35.2% (n=135) of the mothers agreed that their babies were not sharing an incubator, 12.5% (n=48) were not sure if all babies were not sharing the incubators, 22.9% (n=88) disagreed that each baby had his or her own incubator and indicated that some share incubators and 29.4% (n=113) strongly disagreed that each baby had his or her own incubator indicating that most babies were sharing an incubator. Post-delivery some newborns were admitted to newborn unit (nursery), among the mothers whose babies were admitted and the general view of the others; each baby was not put in his or her own incubator. The babies shared the incubators. The research findings showed that majority of the participants (n=113) strongly disagreed that each baby was in his or her own incubator. This was supported by 88 mothers who also disagreed that each baby had own incubator. Sharing of the incubators was a significant indicator that the mothers were not satisfied with the free maternity services in the hospital ($\chi^2=25.379$, $p=0.000$).

Hospital cleanliness gives a general view of the services offered in the facility, the outlook and surrounding cleanliness portray the image of the hospital. The current study found out that some wards were clean and others not. This was established when 39.3% (n=151) of the mothers agreed that the hospital was clean always, 7.6% (n=29) were not sure that the hospital was clean, 7.8% (n=30) disagreed that the hospital was clean and 45.3% (n=174) strongly disagreed that the hospital was always clean. Hospital cleanliness was also assessed in association with maternal satisfaction with free maternity services. It was found out that majority of the respondents (n=174) indicated to strongly disagree that the hospital environment was always clean to their satisfaction. Thirty respondents also disagreed that the environment was always clean with twenty-nine others not being sure if it was clean or not. These results showed that hospital environment cleanliness was strongly associated with maternal level of satisfaction ($\phi=0.409$), the results were statistically significant at ($\chi^2=64.292$, $p=0.000$).

Availability of bed and linen was also assessed. Some mothers reported to be provided with abed and linen to change very morning while others were not given the linen. The study results showed that 76% (n=292) of the mothers agreed that they were given linen to change every morning, 13.5% (n=52) were not sure that all mothers were given linen and clean hospital clothes to change, 7.6% (n=29) disagreed that they were provided with clean linen to change every morning and 2.9% (n=11) strongly disagreed that clean linen was provided every morning for changing. The mothers reported that they were given linen to change after the ones they were using got dirty. Majority of the respondents (n=292) agreed that they were given clean linen every morning to change. This increased their satisfaction level, however, there were a few mothers (n=11) who reported that their

linen was not changed on a daily basis and were dissatisfied with the services offered. In general, availability of linen and a bed was significantly associated with maternal satisfaction with services offered in the hospital after introduction of free maternity services ($\chi^2=72.855$, $p=0.000$).

Among the factors assessed; availability of bed and linen, cleanliness of the hospital, availability of incubators for each child (not sharing incubator), and bed occupancy (not sharing a bed) were found to be statistically significant in determining maternal satisfaction for maternity services after introduction of free maternity services.

Table 4.4: Association between health facility factors and level of satisfaction on free maternity services

Variable	Response	Satisfaction level with free maternity services			
		Satisfied	Dissatisfied	Df	P value
Each patient has own bed	Agree	170	67	3	P=0.029 $\chi^2=6.420$
	Not sure	56	34		
	Disagree	19	25		
	Strongly disagree	7	6		
Each baby on his or her own incubator	Agree	80	55	3	P=0.000 $\chi^2=25.379$
	Not sure	22	26		
	Disagree	64	24		
	Strongly disagree	92	21		
Cleanliness	Agree	80	71	3	P=0.000 $\chi^2=64.292$
	Not sure	12	17		
	Disagree	13	17		
	Strongly disagree	153	21		
Bed and linen were available	Agree	226	66	3	P=0.000* $\chi^2=72.855$
	Not sure	24	28		
	Disagree	2	27		
	Strongly disagree	6	5		

P* Fisher exact test was reported

4.5 Objective 3: Quality of services offered and its effect on maternal satisfaction level on free maternity services

Availability of doctors and nurses for the patients at all times indicates the quality of care provided in a health facility. In the current study, it was indicated that the doctors were always there for the help and benefit of the patients. The results supported this when 76.8% (n=295) of the participants showed to be fully satisfied with the care provided by the doctors, 12% (n=46) were satisfied, 9.6% (n=37) somewhat dissatisfied and 1.6% (n=6) of the respondents reporting to be dissatisfied. The nurses also were expected to be available for the patient throughout the continuum of labor and delivery process.

Table 4.5: Facility related factors affecting quality of care provided

Statement	Dissatisfied	Somewhat satisfied	Satisfied	Fully satisfied
Doctors were enough	1.6%	9.6%	12%	76.8%
Nurses were enough	2.3%	9.6%	10.7%	77.3%
Medication was available and administered in time	0	2.9%	16.1%	81%
Ward and toilets clean always	0.8%	8.6%	13.5%	77.1%
Physical examination done	0.3%	0.3%	24.7%	74.7%

On assessment, 77.3% (n=295) of the participants showed to be fully satisfied with the care provided by the nurses, 10.7% (n=41) were satisfied, 9.6% (n=37) somewhat dissatisfied and 2.3% (n=9) of the respondents reporting to be dissatisfied. Quality of services was measured using thirteen items. Availability of doctors for the patient from admission to post-delivery made majority of the participants (n=295) to be fully satisfied with the services offered, only six participants who were dissatisfied with availability of doctors ($\chi^2=64.736$, $p=0.000$). In the same line, majority of mother (n=297) reported to be fully satisfied with availability of nurses before, during and after delivery. Availability of

nurses throughout the delivery process was also significantly associated with increased level of satisfaction with the services offered ($\chi^2=14.791$, $p=0.000$).

On availability of drugs and timely administration, it was reported that the medication was available and was administered in time. On timely administration of drugs, the mothers evaluated how soon they received their pain-relieving medication. This was evident when the mothers were asked to indicate their satisfaction level in regards to availability of medication and timely administration. Majority of the mothers 81% (n=311) indicated that they were fully satisfied with the availability and timely administration of the drugs, 16.1% (n=62) were satisfied, and 2.9% (n=11) somewhat dissatisfied about the availability and timely administration of the drugs. Availability of medication and timely administration was reported to be prompt. The drugs were administered in time and were available. This was supported by majority of the patients (n=311), however, these results were not statistically significant in influencing level of maternal satisfaction ($\chi^2=1.280$, $p=0.527$).

The research findings indicated that the patients were explained to about the medication they were receiving and any clarification sought was addressed. This was supported by 37.5% (n=144) of the mothers who strongly agreed that they were satisfied with the explanation given, 34.9% (n=134) agreed that they were satisfied with the information given following drug administration, 2.9% (n=11) were not sure, 23.2% (n=89) disagreed that the staffs had them explanation about the medication they received and 1.6% (n=6) strongly disagreed that they were ever explained to about the medication they received. The nurses were found to be giving explanation why they gave the medication and this

increased the patients' level of satisfaction. Out of 384 participants, 144 respondents were fully satisfied with the explanations given, 134 were satisfied and 89 dissatisfied. There was found to be a statistically significant association between explaining to patients why they are given the medication and their level of satisfaction with the service ($\chi^2=22.337$, $p=0.000$).

In a hospital set up, especially after introduction of free maternity services; following increased numbers of clients, the medical supplies are expected to be scarce. However, in the current study, when availability of the medical supplies was assessed it was evident that 86.5% (n=332) of the participants showed to be fully satisfied with the availability of medical supplies, 9.1% (n=35) were satisfied, and 4.4% (n=17) somewhat dissatisfied with the availability of medical supplies. Also, the medical supplies were reported to be available when need arose. Majority of the respondents (n=332) were fully satisfied with the availability of medical supplies. However, these results were not significantly associated with level of maternal satisfaction with free maternity services ($\chi^2=0.961$, $p=0.619$).

The mothers were found to report their satisfaction of the services based on cleanliness of the wards and toilet. On assessment, the study showed that 77.1% (n=296) of the participants were fully satisfied with the cleanliness of the wards and toilet, 13.5% (n=52) were satisfied, 8.6% (n=33) somewhat dissatisfied and 0.8% (n=3) of the respondents reporting to be dissatisfied with the cleanliness of the wards and toilet. Cleanliness of the wards and the toilets was associated with increased satisfaction of the services. More than half of the participants (n=296) reported to be fully satisfied with the cleanliness of the

wards and toilets for the patients. This was supported by 52 more participants who were satisfied. There was a strong association between ward and toilet cleanliness ($\phi=0.380$). These results were significantly associated with maternal level of satisfaction ($\chi^2=55.460$, $p=0.000$).

On admission each mother reported to have been physically examined, the researcher then assessed their satisfaction with the explanation given on the need for the physical examination and the findings. The results revealed that 74.7% (n=287) of the participants showed to be fully satisfied with the information given following physical examination, 24.7% (n=95) were satisfied, 0.3% (n=1) somewhat dissatisfied and another 0.1% (n=1) of the respondents reporting to be dissatisfied with the information they were given following physical examination. The mothers reported that they were physically examined on admission. They were explained to about the physical examination beforehand and they were also given the findings of the examination. This was meant to increase their satisfaction. Majority of the mothers (n=287) reported to be fully satisfied with the examination. This was supported by 95 others who reported to be satisfied. However, on analysis the findings were not significantly associated with maternal satisfaction with free maternity services ($\chi^2=3.805$, $p=0.282$). However, when the explanation was sought by the mothers about the physical examination; the staffs were ready to explain and 88.8% (n=341) of the participants showed to be fully satisfied with the explanation given by the staffs, 10.9% (n=42) were satisfied, and 0.3% (n=1) somewhat dissatisfied with the explanation given.

Turnaround time is usually an indicator of quality care. In the current study, the researcher found out that the staffs took the shortest time possible to attend to the needs of the patients. This was evident when 39.3% (n=151) agreed that they were satisfied with the waiting time and that it was short, 7.6% (n=29) were not sure, 7.8% (n=30) disagreed that the waiting time was short and 45.3% (n=174) strongly disagreed that they attended to in time and indicated that the waiting time was long. Turnaround time for health services is used as an indicator for quality of services offered in a facility. In the current study, the researcher found out that it took a short period of time for the patients to receive emergency services. This was shown when 151 participants agreed that they were served in time, with 30 respondents disagreeing the fact that they were served in shortest time possible ($\chi^2=64.292$, $p=0.000$).

The research was informed by the participants that the staffs were compassionate and supportive during care. On assessment on the mothers' satisfaction in relation to staffs compassion and support they accorded them; it was evident that 44.5% (n=171) of the mothers strongly agreed that they were satisfied with the staffs compassion and support, 28.4% (n=109) agreed that they were satisfied with the compassion and support, 3.4% (n=13) were not sure, 16.7% (n=64) disagreed that the staffs were compassionate and supportive and 7% (n=27) strongly disagreed that the staffs were compassionate and supportive. The staffs in the facility were found to be compassionate and supportively. This was evident when the research findings indicated that 171 participants were fully satisfied, 109 were satisfied and only 107 were dissatisfied with the compassion and support accorded to them by the staffs ($\chi^2=22.955$, $p=0.000$).

Table 4.6: Quality of services offered by staffs

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Waiting time for emergency services was short	45.3%	7.8%	7.6%	39.3%	0
Staff explained why they gave education	1.6%	23.2%	2.9%	34.9%	37.5%
Staffs are compassionate and supportiful	7%	16.7%	3.4%	28.4%	44.5%
Staffs are polite and respectful	45.3%	7.8%	7.6%	9.3%	0
Staffs used protective devices like gloves when performing procedures	7%	16.7%	3.4%	28.4%	44.5%
Staffs treated clients in friendly way	65.1%	4.7%	2.1%	12.2%	15.9%

The results also showed that the staffs were treating the mothers during labor and delivery politely and respectfully. These became evident when 39.3% (n=151) of the mothers agreed that the staffs were polite to them and treated them with respect, 7.6% (n=29) were not sure that all the staffs were polite and showed respect for patients, 7.8% (n=30) disagreed, 45.3% (n=174) strongly disagreed that that the staffs were polite and treated patients with respect. In the same line, the staffs were also found to be polite and respectful. This was supported by 151 participants with 29 others not sure if the staffs were polite and respectful. Despite the support, 174 respondents disagreed and indicated that the staffs were not polite and respectful. Some staffs were arrogant. On analysis, it was found that the staffs who were polite and respectful increased maternal satisfaction level for the services offered while those few arrogant and disrespectful staffs lowered maternal satisfaction on services offered after introduction of free maternity services ($\chi^2=24.292$, $p=0.000$).

To prevent infection transmission from one patient to another or from staffs to patient and vice versa, the staffs are expected to use protective gear like gloves at all times. On assessment, the results in the current study indicated that 44.5% (n=171) of the mothers strongly agreed that the staffs were using the protective devices, 28.4% (n=109) agreed that they were satisfied with the staffs use of protective devices, 3.4% (n=13) were not sure, 16.7% (n=64) disagreed that the staffs had used protective devices as expected and 7% (n=27) strongly disagreed that the staffs ever used the protective devices at all times. In offering services, the staffs used protective devices in all procedures and this made the mothers feel safe and secure. Majority of the participants (n=171) were fully satisfied with the use of protective devices. This was also supported by 109 participants who indicated that they were in agreement that the use of protective gears was ok. In the same study, 27 participants reported to strongly disagree that they were satisfied with use of protective devices ($\chi^2=22.955$, $p=0.000$).

Some clients reported to have been treated by the staffs in a friendly way while others indicated to have been treated harshly by the staffs. On assessment, the results showed that 15.9% (n=61) of the mothers strongly agreed that they were treated in a friendly way, 12.2% (n=47) also agreed that they were treated in a friendly way, 2.1% (n=8) were not sure, 4.7% (n=18) disagreed that the staffs treating them in a friendly way and 65.1% (n=250) strongly disagreed that they were treated in a friendly way and indicated that the staffs were harsh to them. The results also showed that majority of the participants (250) strongly disagreed that the staffs treated them in a friendly way. Only 61 participants indicated to agree that the staffs were friendly to them. These results indicated that how

the participants were treated either friendly or unfriendly way was significantly associated with maternal level of satisfaction ($\chi^2=26.765$, $p=0.000$).

Table 4.7: Association between quality of care and satisfaction level with free maternity services

Variable	Response	Satisfaction level with free maternity services			
		Satisfied	Dissatisfied	Df	P value
Doctors were always available	Dissatisfied	2	4	3	P=0.029* $\chi^2=64.736$
	Somewhat dissatisfied	27	10		
	Satisfied	26	20		
	Fully satisfied	67	228		
Nurses were always available	Dissatisfied	8	1	3	P=0.000* $\chi^2=14.791$
	Somewhat dissatisfied	35	2		
	Satisfied	32	9		
	Fully satisfied	51	246		
Explanation about medication given	Strongly disagree	3	3	3	P=0.000* $\chi^2=22.337$
	Disagree	35	54		
	Not sure	9	2		
	Agree	39	95		
	Strongly agree	39	105		
Cleanliness of wards and toilets	Dissatisfied	2	1	3	P=0.000* $\chi^2=55.460$
	Somewhat dissatisfied	25	8		
	Satisfied	28	24		
	Fully satisfied	70	226		
Waiting time	Strongly disagree	21	153	3	P=0.000 $\chi^2=64.292$
	Disagree	17	13		
	Not sure	17	12		
	Agree	71	80		
Staffs were compassionate and supportive	Strongly disagree	12	15	4	P=0.000 $\chi^2=22.955$
	Disagree	33	31		
	Not sure	8	5		
	Agree	31	78		
	Strongly agree	42	129		
Staffs were polite and respectful	Strongly disagree	21	153	3	P=0.000 $\chi^2=24.292$
	Disagree	17	13		
	Not sure	17	12		
	Agree	71	80		
Use of protective gears	Strongly disagree	12	15	4	P=0.000 $\chi^2=22.955$
	Disagree	33	31		
	Not sure	8	5		
	Agree	31	78		

	Strongly agree	42	129		
Staffs treated patients in a friendly way	Strongly disagree	36	214	4	P=0.000* $\chi^2=26.765$
	Disagree	5	13		
	Not sure	6	2		
	Agree	31	16		
	Strongly agree	48	13		

P* Fisher exact test was reported

CHAPTER FIVE: SUMMARY, DISCUSSION

5.1 Introduction

This section contains summary of results, followed by discussion of individual study objectives, thirdly the conclusion and finally the study recommendations.

5.2 Summary of the study findings

The current study revealed that majority of the respondents were aged between 21 years and 30 years (47.9%, n=184), the married mothers were more than half (63.8%, n=245) and majority were having secondary level of education (47.4%, n=182). On religion of the mothers, majority were Christian protestants (78.4%, n=301), with 57.3% (n=220) reporting to be self-employed and majority were earning 5-10 thousand per month (39.6%, n=152).

On level of satisfaction of the mothers on free maternity services in the hospital was assessed using twenty items which were then computed to establish the level of satisfaction. Each item was assessed using a likert scale ranging from strongly disagree to strongly agree. The study found the level of maternal satisfaction to be high at 67.2% with 32.8% being dissatisfied with the services.

Various factors were assessed; they included socio-demographic factors and hospital related factors. On socio demographic factors affecting maternal satisfaction on free maternity services were found to be marital status and mothers' level of education. Health facility related factors included hospital cleanliness, ward and toilet cleanliness, staff providing privacy for patients, distance to hospital, bed occupancy, incubator occupancy, availability of bed and linen and if roads were tarmac roads or not. Out of all these

factors; availability of bed and linen, cleanliness of the hospital, availability of incubators for each child (not sharing incubator), and bed occupancy (not sharing a bed) were found to be statistically significant in determining maternal satisfaction for maternity services after introduction of free maternity services.

Quality of services offered was also assessed and it was found that availability of doctors and nurses to assist the patient throughout the labor process, giving explanation on reasons for medical intervention, cleanliness of ward and toilet, short waiting time for services, staffs being polite, respectful, compassionate and supportively for patients were found to influence the quality of the services offered and indirectly or directly affected maternal level of satisfaction with free maternity services in the hospital.

5.3 Discussion of the results

The results will be discussed according to the study objectives.

Objective one: level of maternal satisfaction with maternity services after introduction of free maternity services in the hospital.

After computing the maternal level of satisfaction on free maternity services was at 67.8%. This was obtained after analyzing the responses for the twenty items on likert scale. The mothers in the current study were satisfied with the quality of services offered in the hospital. These findings were in contrast with the findings of Al- Battawin & Hafiz (2017) which showed that only 3% of the mother were satisfied with maternity services. This might have been contributed by the differences in quality of care that was provided by the two hospitals; the current hospital and the Egyptian hospital where the other study was done. In Nigeria, the level of satisfaction was found to be at 98.5% as was reported

by Odetola & Fakorede, (2018) and this was thought to have been contributed by quality of services which were of high quality. These results were in agreement with those in the current study.

Respecting the women in labor and addressing their needs was found to be significant in increasing their level of satisfaction with free maternity services in another study in Nigeria (Akeju *et al.*, 2016), these results were also congruent with the results in the current study that showed that the nurses were compassionate and respectful to the patients. In Ethiopia, level of maternal satisfaction was found to be poor, this was related to poor quality of services offered (Gashaye *et al.*, 2019). However, in the current study the quality of services was high and this contributed to high level of satisfaction among the mothers.

In the current study, the mothers reported to have been admitted each to her own bed. This increased their satisfaction levels, however, in another study by Gitobu *et al.*, (2018) it was indicated that in Machakos County and Nakuru County the patients were found to have been sharing beds in the hospitals and that contributed to their low level of satisfaction which was different in the current study. The better the quality of the services, the higher the level of satisfaction. This was reported by Mukabana & Mukaka study and confirmed by the current study. In another study in Kenya, it was revealed that level of satisfaction on maternity services was high at 98.1% in private hospitals (Okumu & Oyugi, 2018), this was associated with high quality of services in private hospitals. In the current study, quality of care was high and that contributed to high level of maternal satisfaction with free maternity services.

Objective two: Factors affecting satisfaction levels of mothers utilizing free maternity services in public health facility

In the current study, the attitude of the staffs was assessed and 57% of the mothers strongly agreed that they were satisfied with the staffs' attitude towards their care. There were a few mothers who disagreed and strongly disagreed that the staffs' attitude was positively affecting them, 4.2% and 1.6% respectively. In Nepal, attitude of the staffs was found to influence the satisfaction level of mothers on free maternity services; the staffs who communicated well to the clients improved their level of satisfaction. These findings are in line with the results of the current study (Parajuli *et al.*, 2019). Another study done in Kenya, in two counties; Machakos and Nakuru counties showed that providers' attitude communication were independent predictors of client satisfaction (Gitobu *et al.*, 2018).

The results indicated that the mothers who participated in the current study had varied ages with the majority having 21 years and 30 years. However, the age was not significantly affecting the level of satisfaction of the mothers on free maternity services. In Italy, the age of the respondents was found to be increasing with level of maternal satisfaction to maternity services. This was associated with the fact increase in age was compounded with higher learning; as the mothers advanced in age, they were likely to be educated more (Tocchioni *et al.*, 2018). The current study age was not confounding to level of higher learning.

Level of education has been negatively associated with level of satisfaction. The current study showed that there were majority of the participants with secondary education.

Among these the level of satisfaction was high. However, among the participants who were having college and university level of education showed low levels of satisfaction with the services offered. This might have been associated with the fact that the more educated the mother was, the more she knew about her rights and the level of quality services she deserved. The mothers with low level of education were thought to accept any positive input in care and that increased their level of satisfaction.

The results concur with those found in Iraq that showed that satisfaction on maternal services offered by nurses was significantly associated to the factors like education level of mothers and quality of nursing services offered during labour and delivery (Atiya *et al.*,2016). The hospital provided functional equipment's to be used during delivery, this increased satisfaction on the maternal services offered. These results were in agreement with the results reported by Tesleem *et al.*,2016, which showed that respondents were contented with the health facilities. Patient expectations, facility structures/equipment and healthcare providers' attitude and the educational level of clients were found to be statistically associated with clients' satisfaction.

The current study showed that provision of drugs and medical supplies were not significantly associated with level of satisfaction for free maternity services, but when an explanation was given for the interventions, the results became significant. In another study in Kenya, the most unsatisfactory ratings were; availability of materials and equipment each by 15.1% and visual privacy by 7.7 % participants. The least rated as unsatisfactory were; building structure, lighting and staff courtesy by 0.8%, 1.1% and 1.3% participants respectively. There was more than 90% general satisfaction on

maternity services accorded to participants (Chesumei *et al.*, 2018). In Kenyatta National Hospital, a study found that the overall satisfaction level of respondents was 62.4% with significant association between availability of staff, facility cleanliness, availability of drugs and sharing of beds on maternal satisfaction level (Geoffrey *et al.*, 2018).

Objective three: Association between quality of services and maternal level of satisfaction on free maternity services

The waiting time for emergency services was considered to indicate the quality of the services offered in a hospital. In the current study, the mothers reported that the waiting time was short and this improved their level of satisfaction. However, results from Nepal were in agreement with these finding but in their case the waiting time was long and it lowered the level of satisfaction among the mothers (Sapkota *et al.*, 2018; Acharya *et al.*, 2015). Long waiting times affected mothers' level of satisfaction in Russia, among those who were given shorter intervals between checkups, more time with the health care workers, shorter time to get laboratory results and treatment were associated with increased level of satisfaction (Dauletyarova *et al.*, 2018).

Disrespect, humiliation, being abandoned when in need, physical abuse and other negative experiences that some mothers went through ensured low satisfaction as compared to those who never went through same experiences (68.5% versus 93.5%). This was reported by Mocumbi *et al* (2019) in Mozambique and the results were found to be in agreement with the results of the current study. The research findings in the current study showed that the mothers were treated with respect and were supported throughout the labor and delivery process. Even though some mothers reported to have been

mistreated during labour, the results were not significant. The current studies indicated that the doctors and nurses were available for the mothers throughout the labor process and this improved their level of satisfaction.

A study in India indicated that women prioritized quality services which includes: availability of ambulance, availability of medicine, food, safe delivery without complications, proper hygiene and cleanliness, privacy, low cost of services and client - provider interaction. Many mothers raised no expectations of care, indicating disillusionment from the existing system (Bhattarya *et al.*,2018). All priorities given fourth by women were accepted by service providers with exception of availability of doctors. The study concluded that women have expectations of quality services from hospitals they attend. Matching the service providers perspectives of care with women's expectations is critical in advancing quality of care and there by impact maternal outcome.

CHAPTER SIX: CONCLUSION AND RECOMMENDATION

6.1 Conclusion

The study made the following conclusions:

1. The level of satisfaction for the current study was at 67.2%.
2. The significant factors affecting satisfaction level of the mothers included; maternal level of education, maternal marital status, availability of bed and linen, cleanliness of the hospital, availability of incubators for each child (not sharing incubator), and bed occupancy (not sharing a bed).
3. Quality of care provided depended on availability of doctors and nurses for the mothers, clean wards and toilets, giving explanation for treatment given, provision of privacy, short waiting time, supportful, respectful and compassionate staffs.

6.2 Recommendation

6.2.1 Recommendation for policy makers

1. The policy makers to formulate policies tailored on customer friendly services. Policies that promote maternity services delivery which are respectful to individual mothers.

6.2.2 Recommendation for practice

1. The staffs to maintain and do better on services delivery to sustain the satisfaction levels which are above average
2. The staffs to ensure the patients have separate beds and babies own cots, provide privacy and maintain confidentiality

3. The hospitals to ensure health care providers are available for patients and treat them with respect and compassion to improve quality of care.

6.2.3 Recommendation for further study

The study recommends a qualitative study to explore staffs perception on quality of care following introduction of free maternity services in county referral hospitals in Kenya.

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APPENDICES

APPENDIX I: Informed Consent for Hospital Survey

Introduction and purpose for research

Good morning/ afternoon/ evening. My name is Jane Njenga

I am student of Kenyatta University. Am conducting a research on evaluation of free maternal care policy on the utilization of maternal care services in Murang'a County hospital Kenya.

Objectives of the study

This study aims at investigating the free maternal policy on the operations of maternity, antenatal and postnatal departments.

I will do the following to establish this;

I will ask questions to explore your perceptions on free maternal health care

I will do interviews with selected key informants to gather information on free maternal health.

Why i am inviting you to participate in the study

I request you to participate in the study because you are the stakeholders and your community has been selected for the study. I will include around 392 participants in this study.

What is expected from the participants of the research study

If you agree to participate you will answer or fill questionnaire with questions regarding the above topic

Risks and benefits

No known risk associated with this study. Your participation will help me to;

Understand the community perception on free maternal health care services

To correlate patient satisfaction with future use of maternity health care services.

To establish the trends and uptake in maternal health care.

To gain understanding of the relationship between free maternal healthcare utilization and decline in mortality rate.

I am aware you could be uncomfortable answering some of the questions in the questionnaire, however we do not expect any harm to come to you or your family because of this.

Right not to participate

Your participation in this research is voluntary.

Privacy, anonymity and Confidentiality

I will not require you to write your name or address or phone number on any part of the questionnaire.

The research is for academic purposes and any findings will never be traced back to you. The data and information will be stored electronically. Information may be shared with other researchers but it will not be possible to identify you personally.

Future use of data

Information collected will only be used for the purposes earlier stated. No further use. In case of any publications made from the findings of this research the community will be acknowledged

Principle of compensation

You will not pay me or my research assistant for taking part in this study. Similarly, we will not pay you money for participating in the study, however the overall impact will be significant as information related maternal care services will be available to address the identified needs.

If you agree to participate in this study please sign below.

The interview will last approximately 25 - 30 minutes

Signature..... Date

Research assistant name.....

Signature Date

Appendix II: Questionnaire

This questionnaire intends to gather information your views regarding to establish the impact of free maternal care policy on the utilization of maternal care services in Murang'a district hospital. Your participation in this study is highly welcome and your responses and statements will be handled confidentially and ethically and your identity will be concealed in the final research report.

SECTION A: GENERAL INFORMATION

(1) How old are you?

- a) Below 20 []
- b) 21- 30 []
- c) 31-40 []
- d) 41 – 50 []
- e) Above 51 []

(2) What is your marital status?

- a) Single []
- b) Married []
- c) Divorced []
- d) Widowed []

(3) What is your level of education?

- a) None []
- b) Primary []
- c) Secondary []
- d) College []

- e) University []
- (4) What is your religion?
- a) Christian protestant
 - b) Christian catholic
 - c) Muslim
- (5) What is your occupation?
- a) Unemployed []
 - b) Self-employed []
 - c) Formally employed []
- (6) What is your gross income?
- a) Dependent
 - b) 1-5k
 - c) 5-10k
 - d) Above 10k

Section B: Satisfaction level of mothers on free maternity services

This section has statements regarding satisfaction level of Maternal Care Service. Kindly respond with the response that matches your opinion. Please tick as appropriate in the boxes using a tick (√) or cross mark (x).

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Satisfied with the reception services					
There was regular observation during waiting time					
There was confidentiality of information					
There was privacy during procedure					
Was satisfied with pain management					
Was attended by a skilled birth attendant					
The health care worker used functional equipment					
Was introduced to and assisted by labor companion					
Satisfied with support and encouragement given during delivery					
Satisfied with monitoring post delivery					
Taught on correct breast attachment during breastfeeding					
Satisfied with information provided about baby's condition					
Satisfied with information given on post-delivery self-care					
Satisfied with information given on maternal danger signs post delivery					
Satisfied with information given on danger signs of the baby					
Satisfied with postnatal care					

Satisfied with discharge process					
Satisfied with staff patient professional relationship					
Satisfied with the staff attitude					

Section C: Socio-demographic factors affecting maternal satisfaction level on free maternity services

This section has statements regarding the socio-demographic factors affecting maternal satisfaction level. Kindly respond with the response that matches your opinion. Please tick as appropriate in the boxes using a tick (√) or cross mark (x).

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Patient safety available at all levels of care					
Hospital accessibility proximity of the hospital					
Good roads are there to access the hospital					
Services are affordable					
Each patient has own bed					
Each baby has own incubator					
The hospital is clean always					
Each new born is put in one incubator/ sharing					
Availability of bed and linen					

Section D: Quality of services offered and its effect on maternal satisfaction level on free maternity services

This section has statements regarding the quality of services. Kindly respond with the response that matches your opinion. Please tick as appropriate in the boxes using a tick (√) or cross mark (x).

Statement	Dissatisfied	Somewhat satisfied	Satisfied	Fully satisfied
Doctors were enough				
Nurses were enough				
Medication was available and administered in time				
Ward and toilets clean always				
Physical examination done				



Tick as appropriate

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Waiting time for emergency services was short					
Staff explained why they gave education					
Staffs are compassionate and supportiful					
Staffs are polite and respectful					
Staffs used protective devices like gloves when performing procedures					
Staffs treated clients in friendly way					
What is the level of satisfaction of mothers on free maternity services					

Appendix III: Interview Schedules for Healthcare Workers

1. How would you describe the economic status of the women seeking the free maternal care services? (probe on whether educated, high earning women prefer the service)
2. What are the maternal services being provided in the health facility under the Free maternal health care?
3. Has the number of women seeking maternal care increased? (probe on the approximate percentage in increase)
4. Has there been capacity building on staff to handle the free maternal care? How was it done?
5. Do you think the health system has enough capacity to deal with free maternal health care in the facility?
6. Are the services provided satisfactory to the patients?
7. In your view, do you think introduction of free maternal healthcare services has affected the quality of services offered?

Appendix 1V: Research Clearance Permit

CONDITIONS	
<ol style="list-style-type: none">1. The License is valid for the proposed research, research site specified period.2. Both the Licence and any rights thereunder are non-transferable.3. Upon request of the Commission, the Licensee shall submit a progress report.4. The Licensee shall report to the County Director of Education and County Governor in the area of research before commencement of the research.5. Excavation, filming and collection of specimens are subject to further permissions from relevant Government agencies.6. This Licence does not give authority to transfer research materials.7. The Licensee shall submit two (2) hard copies and upload a soft copy of their final report.8. The Commission reserves the right to modify the conditions of this Licence including its cancellation without prior notice.	 <p data-bbox="1057 506 1317 531">REPUBLIC OF KENYA</p> <hr data-bbox="1084 562 1289 569"/>  <p data-bbox="992 741 1386 804">National Commission for Science, Technology and Innovation</p> <p data-bbox="1024 825 1354 888">RESEARCH CLEARANCE PERMIT</p> <p data-bbox="1122 978 1341 1003">Serial No.A 20486</p> <p data-bbox="1019 1024 1365 1050">CONDITIONS: see back page</p>

Appendix V: Research Authorization



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,
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NAIROBI-KENYA

Ref No. **NACOSTI/P/18/82492/24536**

Date: **7th September, 2018**

Jane Wanjiru Njenga
Kenyatta University
P.O. Box 43844-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on *“Evaluation of free maternal health policy on the utilization of maternal care services in Murang’a County Hospital in Kenya,”* I am pleased to inform you that you have been authorized to undertake research in **Murang’a County** for the period ending **5th September, 2019.**

You are advised to report to **the County Commissioner, the County Director of Education and the County Director of Health Services, Murang’a County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

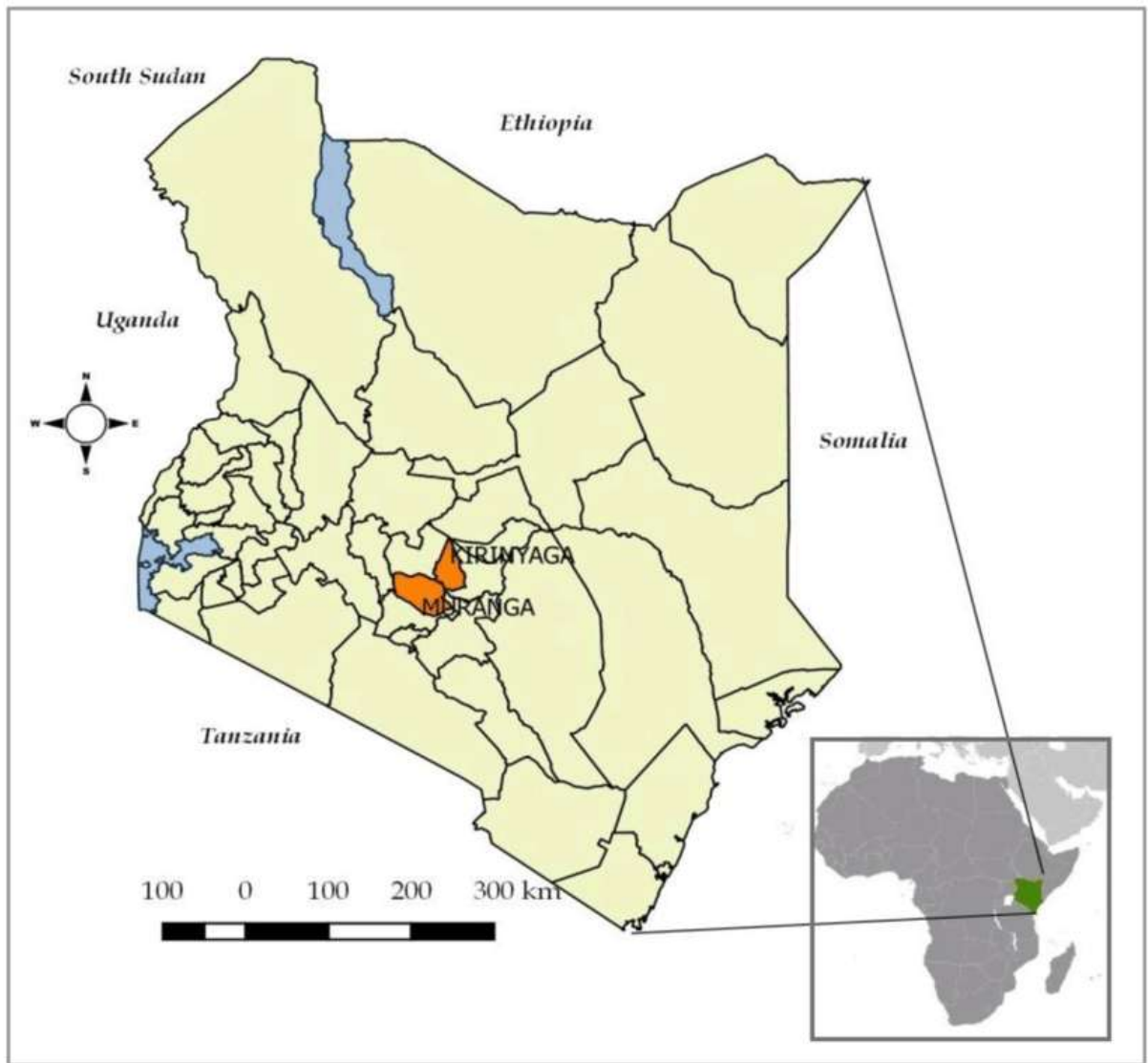

GODFREY P. KALERWA MSc., MBA, MKIM
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Murang’a County.

The County Director of Education
Murang’a County.

APPENDIX V1: MAP OF KENYA



APPENDIX V11: STUDY AREA

GRADUATE SCHOOL APPROVAL LETTER, ETHICAL APPROVAL LETTER, MAP OF THE AREA ARE LACKING AS APPENDICES