RESPECTFUL MATERNITY CARE ASSOCIATED FACTORS AND INTENT TO REUSE MATERNITY NEEDS AMONG WOMEN DELIVERING IN LONGISA HOSPITAL, KENYA: CROSS-SECTIONAL STUDY.

PRINCIPAL INVESTIGATOR:
WILTER CHERONO KOSKE
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DECLARATION

This research project was undertaken in partial fulfillment of the Masters of Medicine in Obstetrics and Gynecology from the University of Nairobi and is my original work and has not been undertaken and presented for a degree in any other University.

Signature:  **Date**: 18th August, 2023

Dr. Wilter Koske

SUPERVISORS' APPROVALS

The proposal has been submitted with the approval of the following supervisors:

Dr. Ann Kihara, MBChB, Mmed (Obs/Gyn)
Senior Lecturer, Department of Obstetrics and Gynecology, Faculty of Health Sciences, University of Nairobi. .
Consultant Obstetrician and Gynaecologist, Kenyatta National Hospital. The president of FIGO

Signature :  **Date** : 18/08/2023

Dr. Allan Ikol, MBChB, Mmed (Obs/Gyne),
Honorary Lecture Department of Obstetrics Gynecology,Faculty of Health Sciences, University of Nairobi.
Consultant Obstetrician and Gynaecologist, Kenyatta National Hospital.

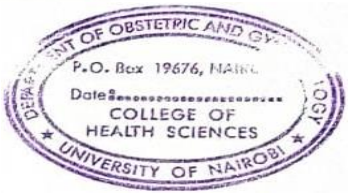
Signature :  Date: 18/08/2023

CERTIFICATE OF AUTHENTICITY

This is to certify that this proposal is the original work of Dr Wilter Cherono Koske, an M. Med student in the Department of Obstetrics and Gynecology, College of Health Sciences, University of Nairobi, under the guidance and supervision of Dr Anne Kihara and Dr Allan Ikol. This is to confirm that this research project has not been presented in the University for the award of any other degree.

Professor Eunice Cheserem, MBChB, Mmed (Obs&Gyn), Gyne/oncol
Associate Professor Department of Obstetrics and Gynecology, Faculty of Health Sciences, University of Nairobi and Consultant Obstetrician and Gynaecologist, Kenyatta National Hospital.
Chair, Department of Obstetrics and Gynecology, University of Nairobi.

Signature **Date:** 22/8/2023



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DEDICATION

I dedicate this work to all pregnant women I met in the course of my research. They deserve a positive pregnancy experience that includes respectful maternity care.

LIST OF ABBREVIATIONS AND ACRONYMS

APGAR Appearance, Pallor, Grimace, Activity, and Respiration

ANC Antenatal Clinic

D&A Disrespect and Abuse

HCP Health care providers

LCRH Longisa County Referral Hospital

MM Maternal Mortality

PCMC Person-Centered Maternity Care

PPH Post-partum haemorrhage

RMC Respectful Maternity Care

SBA Skilled Birth Attendant

SVD Spontaneous vertex delivery

SDG Sustainable Development Goal

TBA Traditional Birth Attendant

WHO World Health Organization

OPERATIONAL DEFINITIONS

Respectful maternity care during childbirth is care given to women in a manner that maintains their dignity, confidentiality and privacy. Ensures freedom from mistreatment and gives room for informed choices.

Disrespect and abuse is the violation of the rights of women to respectful care, rights to life, health, bodily integrity and freedom from discrimination**.**

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ABSTRACT

Background: An intervention to reduce maternal mortality is having women deliver under skilled birth attendants (SBA). When women are not treated with respect and dignity during pregnancy, labour and delivery, they are unlikely to utilize SBA for their future maternity needs putting them at risk for complications. According to Kenya Demographic Health Survey (KDHS) 2014, Bomet County has a high fertility rate of 4.3 and a low SBA of 52.2% compared to the national fertility rate of 3.42 and SBA attendants of 62%. Respectful maternity care is critical to the provision of quality care. We aimed to assess RMC, associated factors and women intend to reuse and recommend the hospital for future maternity needs in Longisa County Referral Hospital (LCRH).

Objective: To determine the prevalence of RMC, associated factors and women's intent to reuse or recommend the hospital for future maternity needs at LCRH, Bomet County, Kenya.

Methodology: A cross-sectional study was undertaken within the post-natal ward at LCRH between March to April 2022. A structured paper-based questionnaire was used to collect data which included data on; socio-demographics, obstetric characteristics, health system factors, RMC and women's intent to reuse and recommend the hospital for future maternity needs. Data on RMC was collected through person-centred maternity care (PCMC) exit interviews to cover three themes: dignity and respect, supportive care, autonomy and communication. The PCMC section had 30 items, each of which was graded on a four-point scale. The analysis was conducted using IBM SPSS version 26, wherein the prevalence of RMC was presented as a percentage 0f 95% confidence interval (CI). Associated factors and willingness to reuse or recommend the hospital for future maternity needs were analysed using Chi-square tests with statistical significance set at $p < 0.05$.

Results: Out of the 277 women, 235 received RMC giving a prevalence of 84.8% (95% CI 80.5-89.2). From the RMC subscale, dignity and respect had the highest score at 265(95.7%) followed by communication and autonomy 235(84.3%) and least was supportive care 217(78.3%). Neither sociodemographic, obstetric nor health system factors were associated with RMC. Ninety seven percent of the patient were willing to reuse and recommend the hospital for future maternity needs.

Conclusion and recommendation: Overall prevalence of RMC was high in LCRH and the majority of the women were willing to reuse or recommend the hospitalthough none of the factors was associated with RMC. It is important to educate and train health care providers on the importance of continuously providing respectful maternity with an increased focus on the provision of supportive care. There is a need to promote patient delivery under skilled birth attendance for themselves or recommendations of others at the health facility. A qualitative study in future would improve the understanding of the factors engaged with patient experience with respectful maternity care.

1. INTRODUCTION

1.1. Background of the Study

The World Health Organization estimates that approximately 295,000 women die each year worldwide, while over 15 million suffer long-term disability and sickness as a result of pregnancy and delivery problems. The lifetime risk of dying prematurely from pregnancy one in 5400 in developed countries compared to one in 45 in developing countries (1). By 2015, most sub-Saharan Africa (SSA) countries had failed to reduce their 1990 maternal mortality ratio by 75% (2). Under the new Sustainable Development Goals, reduction of maternal mortality is a priority with aim of having a maternal mortality ratio of less than 70 per 100000 live births globally by 2030 (3). To achieve SDG goals, global efforts have been towards quality care in addition to the provision of essential commodities and emphasis on care by a skilled birth attendant (SBA)(4). The World Health Organization (2014) defines RMC during birth as care offered to women while respecting their dignity, privacy and confidentiality. Assures against maltreatment and enables informed decision-making (2). Respectful maternity care is a basic human right for every childbearing woman but a lot of women across the world experience abusive care (5). Disrespect and abuse forms have been classified into seven groups: physical abuse, non-consented care, non- confidential care, undignified care, discrimination against patients based on their traits, abandonment and confinement in facilities (6). Using seven groups, White Ribbon Alliance used the rights-based approach to try and define RMC (5).

In SSA, evidence shows that majority of the women would prefer to deliver under a skilled birth attendant but choose not to due to previous experience of disrespect and abuse (7). Due to disrespect and abuse, women from low-income countries will prefer to deliver under traditional birth attendants due to fear of unwanted procedures. Negative effects of disrespect and abuse constitute an important barrier to the utilization of skilled care and enhancing maternal well-

being (8). In Tanzania, research indicates that 60% of pregnant women would use health facilities more if physicians exhibited respectful attitudes. Contributors to the lack of RMC were resources, infrastructure and commodities (9). An intervention to reduce maternal mortality and morbidity is the utilization of skilled birth attendants. To increase the uptake of SBA, apart from the provision of resources and infrastructure, efforts should be made to improve the quality of care provided especially components of respectful care (10).

The maternal mortality ratio in Kenya is 362/100000 live births, and some of the reasons for mortality include limited access to the utilization of competent birth attendants, lack of basic emergency obstetric treatment and lack of healthcare resources. According to WHO, majority of these deaths are preventable even in developing countries (11). Maternal deaths can be averted by 16-33% if care is supervised by skilled care workers (12,13). According to the Kenya Demographic Health survey(2014), between 2009 and 2014 the use of skilled birth attendants rose from 44% to 62% and 52% for Bomet County indicating that women preferred to deliver at home (14). About 22.2% of women do not have access to healthcare owing to providers' improper behaviour (18). Despite some women accessing hospital facilities, quality is not guaranteed therefore care is compromised, making women susceptible to mistreatment (15). Commitment to respectful care from critical stakeholders is crucial. All healthcare institutional levels should have a total commitment to ensuring that respectful maternal care should be the standard for all women who require maternal services worldwide.

Unpublished study by Odwory at Longisa County Referral Hospital showed that 63% of women attended antenatal clinics (ANC). Women with higher parity were found to have fewer ANC visits because of their previous experience and believe that they could handle their pregnancy. With this knowledge, they also did not seek delivery services. Therefore, aimed to determine the

prevalence of RMC, associated factors and intent to reuse maternity needs among women delivered in Longisa hospital.

2. LITERATURE REVIEW

2.1. Importance of Respectful Maternity Care

Respectful maternity care (RMC) is crucial in improving the outcomes of mothers and their babies(17). Respectful maternal care leads to the utilization of maternity services and improves the quality of care. Respecting the choices of women such as the position, one prefers while delivering is an important component of RMC. Maintenance of privacy and confidentiality humanizes care from healthcare practitioners and women's perspectives. Respectful maternity care ensures that the need of women seeking health is prioritized and that providers involve them in decision-making during the birthing process(18). Respectful maternity care also ensures that there are effective communication and positive attitudes between mothers and medical practitioners. The provision of pain relief and drug-free comfort during birth enhances better outcomes for both mothers and babies (19). Respectful maternity care is vital in strengthening the relationship between childbearing families and health care organizations and the intent of women seeking medical amenities during labour, delivery and the immediate postpartum period. At the institutional level, a healthcare organization can take various steps to ensure respectful maternity care. Training healthcare practitioners with the necessary skills are essential in respectful maternity care. The training ought to commence from schools of nursing, medicine, and midwifery with progressive training in clinical practice for it to be a part of the organizational work culture. Disrespectful maternity care is prevalent in healthcare institutions, and it is vital to train on better techniques for replacing discourteous treatment with beneficial and positive care (20). Commitment to respectful care from critical stakeholders is crucial. WHO framework defines the quality of health, which includes effective communication (patient needs to her rights, what to expect and what is being done to her), emotional support, and treatment with respect and dignity. These elements are part of RMC and they have been shown to lead to better maternal

and neonatal outcomes and improved health provider attitudes towards pregnant women (21). All healthcare institutional levels should have a total commitment to ensuring that respectful maternal care should be the standard for all women who require maternal services worldwide.

2.2. Components of Respectful Maternity Care

Respectful maternal treatment requires a multifaceted approach. To improve care and reduce the mistreatment of women, there should be an interpersonal relationship between women, caregivers and the health care system (20). According to Asefa, RMC is a critical component of the quality of treatment that results in a decrease in maternal morbidity and mortality. Guarantees that all women have full access to competent and motivated human resources throughout their pregnancy: “being protected from abuse and maltreatment; maintaining privacy and confidentiality; receiving dignified care; having access to information and assistance during the informed consent process; continual involvement with family and friends." However, due to limited resources, all of these are difficult to achieve in both low and medium-income countries. All healthcare stakeholders, including nurses, physicians, clinical officers, administrators, and support workers, have a part in providing respectful maternity care. A respectful maternity care culture allows all stakeholders to contribute to the ideal of dignity and respect for all persons. Even when competent care is available, women may decline to seek care at institutions where they may have been treated disrespectfully, discouraging other women from doing the same (23). Research by Bulto studied respectful maternity care and the related characteristics of women who carried their infants in a Central Ethiopian region. They found that skilled support in the course of pregnancy and during labor is a crucial intervention for mitigating maternal morbidity and mortality. Delivery registration numbers of women were used for data collection through a random sampling method. The results of a study indicated that only a proportion of 35.8% of the research population received respectful maternal care. Among the factors related to respectful

maternal care included; consent, waiting time, hospital stay duration, delivery time, incorporation in decision-making, institution type, dialogue during ANC and the number of healthcare practitioners(22).

The share of births assisted by skilled attendants in Ethiopia in 2014 was 15 percent compared to approximately 50%-53% in Sub-Saharan African nations, mainly in East of Africa (12); approximately 66 % in Kenya (NCPD). The reason for the low attendance by SBA was actual and perceived disrespect and abuse committed by healthcare workers. A study conducted in the rural Gujrat area in Pakistani showed that approximately 99.7% of women reported some kind of mistreatment during delivery. Facility-based delivery and low socio-economic status were the primary determinants of abuse and disrespect. Women may opt for other alternative places to giving birth instead of seeking assistance from medical facilities if they are likely to encounter disrespect and abuse from the healthcare providers. Pakistan ranks number two in Asia in neonatal mortality rates (23). Due to the perceived low quality of maternal care in healthcare institutions, many women opt to give birth at home with the support of a family member or a traditional birth attendant. There can also be underutilization of accessible and available resources due to mistreatment during childbirth. Verbal insults, violation of dignity and autonomy, humiliation and care abandonment are among the ill experiences women undergo in healthcare facilities during birth and subsequent baby-mother care.

2.3. Prevalence of respectful maternity care

The prevalence of RMC varies over the world, with respect and abuse being more prevalent in middle and low-income nations (14). A study conducted in Iran to evaluate the relationship between RMC and delivery experience found that RMC was prevalent in 63.42 percent of women, and higher RMC scores were related to a happy childbirth experience. Women in RMC

support groups in Brazil reported a high prevalence of RMC at 83.1 percent (19). According to research conducted in the United States, 17.3 percent of women had suffered one or more types of maltreatment (22). In Peru, there were numerous reports of disrespect and abuse, with around 97.4 percent of women reporting having experienced one or more forms of D&A(24). Similarly, a survey conducted in Pakistan revealed that 98 percent of the women had suffered at least one type of D&A. (13).

There is a low prevalence of RMC in Sub-Saharan Africa. According to a study conducted in Nigeria, 98 percent of women had experienced at least one kind of mistreatment (14), but in Mozambique, the frequency of D&A in district hospitals was 79.82 percent. According to studies conducted in Ethiopia, it was found that the prevalence of RMC ranges from 21% to 57%. (16, 29, 30). Exit interviews and community-based interviews in Tanzania revealed that the prevalence of D&A was 15% and 70%, respectively. In Kenya, the Heshima research (31) discovered a 20% frequency of mistreatment while a study conducted at Kenyatta National Hospital revealed a frequency of mistreatment of 32%. From studies, there is limited information on the prevalence of RMC in rural facilities therefore; this study will add more data on the level of RMC in rural facilities, which will influence practice and policy.

2.4. Factors associated with respectful maternity care

According to Wassihun, women of rural residents were 6 times reporting disrespect and abuse compared to those in urban areas (25). Women who delivered during the day were five times more likely to experience RMC than those who delivered at night (22) while Wassihun found no statistical difference between day and night deliveries(25). Women who had ANC follow-up were twice likely to obtain RMC than those who did not receive ANC follow-up (26). Women who delivered through the caesarian section were four times more likely to report D&A than those who delivered vaginally (24). Women who experienced a complication during birth were

twice likely to report D&A as those who did not (29). Women who had planned pregnancy were three times likelier to obtain RMC than those who had an unexpected pregnancy (30), whereas Bulto discovered that women who had an unintended pregnancy were five times likelier to receive RMC than those who had planned pregnancy. Women who received care from a male provider were 0.65 times more likely to report RMC than women who received care from a female provider (31).

Women in the middle and lower classes were 1.7 and 3.9 times more likely, respectively, to report D&A than women in higher classes. Primigravidas were 2 times more likely than multigravidas to report D&A (27). Women who were served by midwives were 0.88 times more likely to get RMC than women treated by other cadres. (31). Women who had a birth partner during labour were 0.99 times more likely to develop RMC than those who did not have a birth companion (31). Women who engaged in talk about their birthplace were 4.42 times more likely to develop RMC than those who did not. Women who stayed in the hospital for more than 13 hours were twice as likely to receive RMC as those who stayed for less than 12 hours. Women who participated in making decision regarding their care were eight times more likely to develop RMC than those who did not (16).

2.5. Women's intent to use or recommend the hospital for future maternity need

Women who have been subjected to mistreatment in healthcare institutions are more likely to alter their birthplaces during subsequent pregnancies (13). The quality of maternity care has a direct relationship with the intent of women in seeking healthcare during labour, childbirth, and the postpartum period. Wassihun conducted a study on respectful and compassionate care in facility-based birth and the intention of women for using maternity services in a region in Ethiopia. He found out that abuse and disrespect were more during institution-based childbirth

and the intent for using facility maternity services decreases if they do not receive respectful and compassionate treatment (25). Higher socioeconomic status, urban residency and post-secondary education are some of the factors leading to the use, reuse and recommendation of health facilities for delivery (28). Previous birth experience, cost of delivery, marital status, occupation and history of family deliveries(home or hospital) also determine the utilization of skilled birth attendants (7).

Advocating for skilled maternal care is a crucial intervention that can reduce maternal and neonatal mortality and morbidity by a large margin. Patient satisfaction is critical to providing high-quality care and can influence care effectiveness. Health worker attitudes and behaviour challenges constitute the primary barrier to the usage of competent labour and delivery care maternal care that is skilled and compassionate is critical to improving the experience of mothers. Women feel neglected when they are not accorded respect in healthcare facilities (29). Respectful care has extensive implications in addition to preserving the dignity of women during the birthing process (30). Disrespect during maternity care affects the well-being of others psychologically, and physiologically and decreases the quality of care substantially.

Measurement of respectful maternity care during childbirth and labour has been done using the following quantitative approaches; direct observation of labour where the investigator uses a ratio of one to one observation of women in labour through delivery or observation at the maternity ward (31). Client-exit interview surveys were done after women deliver before discharge(9,32,33) and community-based interviews which are done during the postpartum period (34). The qualitative survey includes open-ended questionnaires, in-depth interviews (23) and focused group discussion (35).

Some of the tools that have been used to measure RMC include the WHO tool which was used by Bohren in four countries including Ghana, Nigeria, Guinea, and Myanmar to measure the level of respectful maternity care. Labour observation using a ratio of 1:1 from admission to delivery and a community survey done from the time of discharge to 8 weeks post-delivery. From direct observation, 41.6% of the women had experienced physical and verbal abuse, which was rampant 30 minutes before delivery and up to 15 minutes after delivery. A majority (75%) of women did not give consent (vaginal exam, episiotomy, or c/s) and young women and women without education reported more women mistreatment. Out of 2672, 35.4% of surveyed women in the community reported physical, verbal, prejudiced and unconsented procedures. The study had several strengths; it was more objective as it was based on evidence using specific typologies to define disrespect. Furthermore, non-clinical collectors were used to collecting data to avoid bias. The weakness is that it was a human resource and time-intensive (34).

In low-and middle-income nations, (Ghana, Kenya and India) person-centred maternity care (PCMC) tool was developed by Afulani et al (36) to measure RMC. Urban Kenya had the highest PCMC of 60.2/90 while rural Ghana had the lowest 46.5/90. Of the three themes: respect and dignity, autonomy and communication and supportive care, communication and autonomy scored the lowest. The strength of this study is patient-reported their own experiences and the weakness was an underestimation of mistreatment as other negative experiences were normalized (37).

Giving voice to mothers is another tool used in the US to measure RMC. Was similar to the WHO framework tool with few modifications. On the point of stigma and discrimination, they developed Mother On Respect index (MOR) which had 14 items. For loss of autonomy had Mother Autonomous Decision-Making scale (MADM) with seven items. In addition to the

above, the health system was assessed to determine the perception of women on racism and found that it was high in Black Americans and younger women (21). For our study, we will do client exit-interview using the person-centred maternity care questionnaire as it gives insight into the level of RMC in Bomet County as compared to other counties in Kenya where the study was done.

From above studies, it shows that the prevalence of RMC is high among multigravidas, those who had ANC follow-up, higher socio-economic status, day delivery, being attended to by a male provider, urban residency and planned pregnancy were likely to get RMC. RMC was shown to be associated with a willingness to reuse the facility for future obstetric needs. The KDHS (2014) shows a fertility rate of 4.3 and SBA of 52.2%, which is low, therefore want to explore factors associated with a low SBA rate and one of them could be a lack of RMC. This study is to ascertain the prevalence of RMC, associated factors, and women's intent to reuse or recommend the hospital for future maternity needs in LCRH, Bomet County, Kenya.

2.6. Conceptual Framework

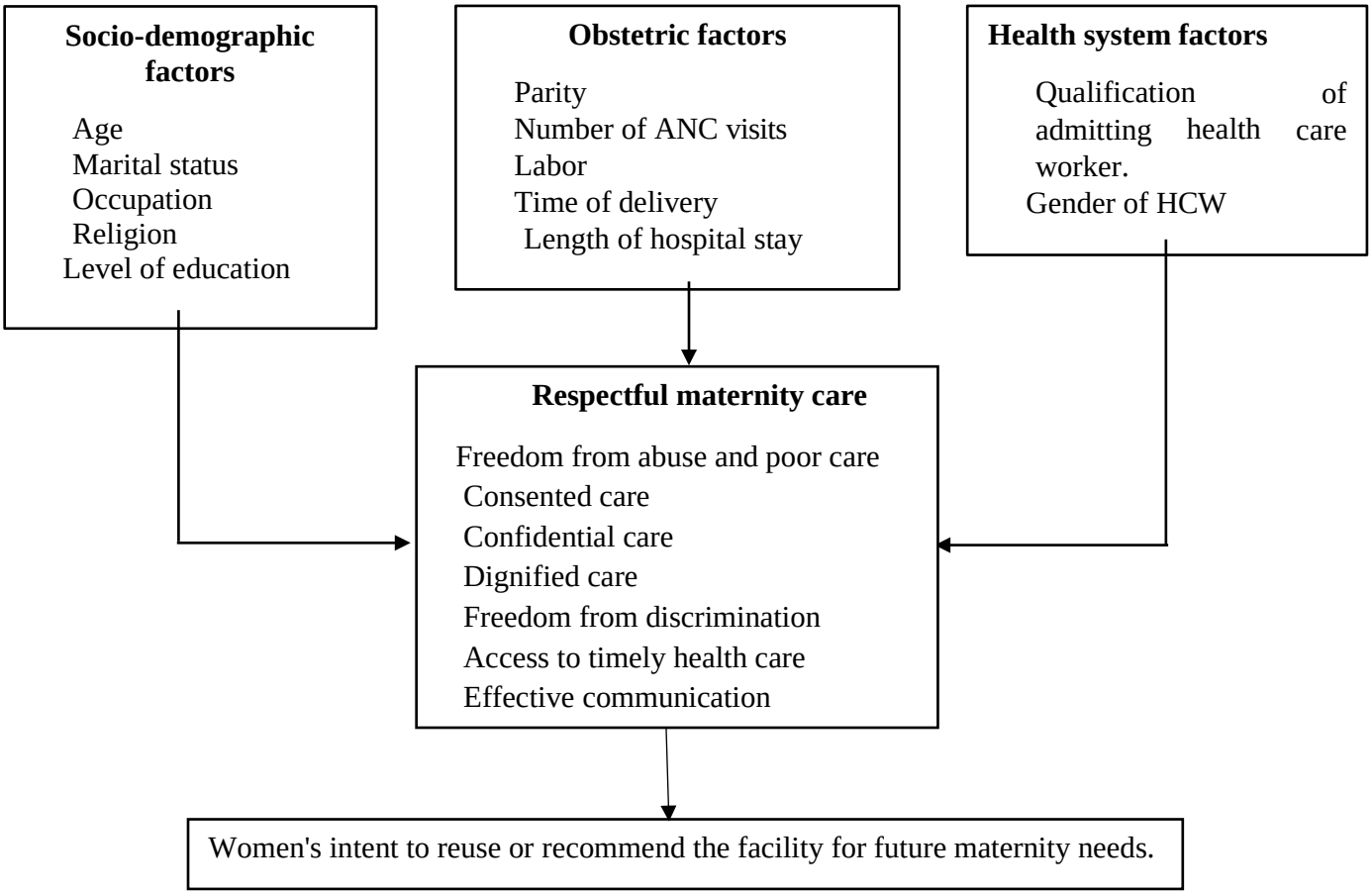

Figure 1: Conceptual Framework

Respectful maternal care is a crucial tenet in health care outcomes for mothers and infants. However, the prevalence of abuse and disrespect in maternal care is a global health concern. There is a need for governments and other stakeholders in healthcare to develop, support, initiate and sustain programs for addressing the quality of infant and maternal health services. Respectful maternal care is critical to the provision of quality care. It is a method that emphasizes positive interpersonal relationships between women and health care personnel throughout childbirth, labour, and the postpartum period. Respectful maternal care requires the fostering of positive healthcare staff behaviours and attitudes for enhancing the satisfaction of women during childbirth and related care

2.7. Justification of the study

Respectful maternity care has attracted international attention, with the World Health Organization including it in intrapartum care recommendations to enhance quality care before, during, and after birth (WHO, 2015). At the moment, there is a strong emphasis on all pregnant women having access to skilled delivery services in hospitals. The third Sustainable Development Goal aims at improving the health of mothers and newborns by lowering maternal mortality to less than 70/100000 live births by 2030, and one approach to do so is through quality treatment throughout pregnancy and delivery, which includes RMC.

Respectful maternity care is critical in influencing the use of hospital delivery services. There is evidence from research conducted in several regions of the world, including high- and low-income nations. Cross-sectional research was done in five nations (Kenya, Rwanda, Madagascar, Ethiopia, and Tanzania) and discovered that the majority of women were treated with respect, although incidences of lack of knowledge regarding their treatment, physical and verbal abuse were also documented (38). The Heshima research, conducted in Kenya between 2011 and 2014 (7), examined patients and health care professionals before and after the intervention. Interventions included advocating for women's rights and empowering health care staff to offer great care to eliminate disrespect and abuse. For the patients, disrespect and abuse decreased from 20% to 13% post-intervention, although physical abuse was seen to be widespread at night. Health professionals' perspectives on RMC, client rights, client-centred care, and supervisory views improved, while mental health and job fairness dropped when the number of pregnant women increased owing to the roll out of free maternity services in 2013. (8,18,40). Kenya's government is also working to reduce maternal morbidity and mortality by removing financial barriers, as evidenced by the implementation of a free maternal services policy in

2013(35), the distribution of the Linda Mama Card (which ensures mothers do not incur delivery costs), and the recent implementation of universal health coverage (UHC).

Despite these efforts, KDHS (2014) stated that Bomet County had an approximated population of 891,390 persons, with a fertility rate of 4.3, and a skilled birth attendance rate of 52.2 %. Skilled birth attendance in Bomet is very low therefore want to explore if lack of RMC is contributing factor hence will determine the prevalence of RMC, associated factors and women's intent to reuse or recommend the hospital for future maternity service in LCRH. The information gathered will aid in raising awareness of pregnant women's concerns in the maternity environment, as well as providing information for health professionals, administrators, and policymakers to utilize in developing and improving preventative programs and training for respectful maternity care.

2.8. Research Question

What is the prevalence of RMC, associated factors and women's intent to reuse or recommend the hospital for future maternity needs in LCRH, Kenya?

2.9. Study Objectives

2.9.1. Broad Objective

To determine the prevalence of RMC, associated factors and women's intent to reuse or recommend the hospital for future maternity needs at LCRH between March-April 2022.

2.9.2. Specific Objective

Among women delivering at LCRH between March-April 2022 to determine:

Primary objective

i. Prevalence of RMC among women delivering LCRH.

Secondary Objective

i. Factors associated with RMC among women delivering in LCRH.

ii. Women's intent to reuse or recommend the hospital for future maternity needs.

3. METHODOLOGY

3.1. Study design

This was a descriptive cross-sectional study conducted in the post-natal ward at LCRH between March-April 2022.

3.2. Study site and setting

Bomet County is located in Kenya's South Rift Valley and has 1,630 km². It is made up of five Sub-counties (Bomet East, Sotik, Chepalungu, Konoin and Bomet Central). Bomet County has a population of 891,390 residents, according to the Kenya Demographic Health Survey (2015), with a fertility rate of 4.3 and a skilled birth attendance rate of 52.2 percent. Bomet has a total of 145 health institutions include one governmental referral hospital (Longisa county referral hospital, LCRH), two faith-based hospitals, five sub-county hospitals, 23 health centers, and 114 dispensaries. The County Government of Bomet funds all public health facilities.

The hospital is located along the Kisii-Narok highway about 215kms from Nairobi, the capital city of Kenya It has a bed capacity of 150 beds and conducts an average of four hundred (400) deliveries per month. The maternity ward at LCRH is comprised of two obstetricians, 5 medical officers and 18 midwives/ nurses who provide comprehensive emergency obstetric and newborn care. The study was conducted at LCRH postnatal ward. Currently, there is no protocol or capacity building on RMC at LCRH.

3.4. Study Population

Women who delivered at LCRH were included in the research population (postnatal ward). The following criteria were used to evaluate eligibility for this study:

Inclusion criteria

1. Postpartum women who delivered at LCRH
2. Postpartum women who gave written consent

3. Postpartum women who were taken for emergency caesarean section.
4. Postpartum women who had stillbirths
5. Postpartum women with co-morbidities (hypertension, diabetes, cardiac disease)

Exclusion criteria

1. Moribund patients in the postnatal period.

3.5. Sample size determination

The sample size was determined using the Fisher's formula for estimating proportions in single populations, with the assumption that 20% of women experienced disrespect and abuse as evidenced in a Kenyan study conducted in 13 health facilities(33). The calculation was done as follows:

$$n = \frac{Z^2(1-P)}{d^2}$$

Where:

n – Minimum required sample size

Z – Standard normal for a 2-sided test at 95% confidence interval (CI) = 1.96

P – The estimated proportion of women receiving respectful maternal care= 80% (Abuya et al (33), the above proportion was chosen because the population investigated had the same sociodemographic characteristics as ours).

d – Margin of error of estimation = 5%

Substituting into the formula,

$$n = \frac{1.96^2 X\ 0.8\ (1-0.8)}{0.05^2}$$

n = 246

A minimum of 271 women will be sampled to estimate respectful care within 5% level of precision with an additional 10% non-response.

3.5. Sampling Method

Consecutive sampling was used to sample mothers in the study. Mothers were approached 8 hours after delivery of their babies and eligibility criteria were administered. Those eligible were recruited and consented with those accepting to participate being enrolled on the study. This process continued consecutively in the post-delivery wards in the hospital until the desired sample size was achieved.

3.6. Study Variables

Table 1: Study variables and their sources

Objective	**Exposure variable**	**Outcome Variables**	**Source**
1. Determine the proportion receiving RMC	The proportion of mothers who received RMC/Total sample population	**1. Experienced RMC (Yes/No)** **2. Domains for RMC** Freedom from abuse and poor care, Consented care, Confidential care, Dignified care, Freedom from discrimination, Access to timely health care **3. Other domains that contribute to RMC** Dignity and respect, Effective communication, and Emotional and social support from someone of their choice	WHO-positive pregnancy experiences/WHO-Quality of care frame for pregnant women and newborns.

2. Factors associated with RMC	**Socio-demographic characteristics**: Maternal age, Marital status, level of educational level, formal employment, ethnicity, religion **Obstetrics characteristics** Parity, Number of ANC visits, Labor, Time of delivery and Length of hospital stay. **Health system factor** Qualification of admitting HCW, provider's gender.	**Respectful maternity care** Experienced (Yes/No)	Patient file/register/questionnaire
3. Determine women's intent to reuse or recommend the hospital for future maternity service	RMC(Yes, No)	Reuse/recommend the hospital for future maternity needs. (Yes, No)	Questionnaire

3.7. Study Tools

The study utilized a structured paper-based questionnaire translated into the local languages, both Kiswahili and Kipsigis. It has three sections that capture:

1. Socio-demographic and obstetric characteristic details
2. The three themes of Person-centered maternity care (PCMC)
3. Women's intent to reuse and recommend the hospital for future maternity needs

The PCMC section had 30 items, each graded on a four-point scale. The scale consisted of three dimensions: respect and dignity, communication and autonomy, and supportive care, each of which has 6, 9, and 15 items respectively, for 30 items. Each item contains a four-point answer scale i.e. 0 ("no, never"), 1 ("yes, a few times"), 2 ("yes, most of the time"), and 3 ("yes, all the time"). The 30 items' scores were added together to get an RMC score ranging from 0 to 90 (lowest score 0 and highest 90). RMC and subscale scores were classified as 'low', or 'high' as shown in table 2 below, with a low score suggesting a lack of RMC.

Table 2: Interpretation of the RMC/Subscale scores

Interpretation	**Percentile**
Low	< 25
Medium	25 – 75
High	>75

The questionnaire on PCMC has been validated in Kenya by Afulani et al (Cronbach alpha=0.80). The validity and reliability of the PCMC scale were also evaluated in an Indian by Afulani et al, with a Cronbach's alpha value of 0.85 and a Cronbach's alpha coefficient of 0.67-0.73 for the PCMC sub-scale.

3.8. Study procedures

3.8.1. Consenting and recruitment

Once the necessary approvals were secured, a registered clinical officer research assistant was found and trained on the study and its protocols. The sample procedure was followed, and potential clients were selected using the inclusion and exclusion criteria. They were given consent and assent forms, translated into the local languages, which explained the study objectives, procedures, benefits, discomforts and risks. The forms also contained information regarding the autonomy of the participants and the confidentiality of the information gathered. Those who understood the procedures and were willing to participate were asked to sign the forms. Before signing the consent forms, the principal investigator addressed any questions regarding the study.

After receiving consent/assent, eligible clients were enlisted as study participants. Individual interviews were conducted in a private room, and questionnaires were distributed to participants to fill.

3.8.2. Data collection procedures

The data collection procedure is outlined in figure 2 below. During the entire procedure, the principal investigator was present to answer any queries that arose.

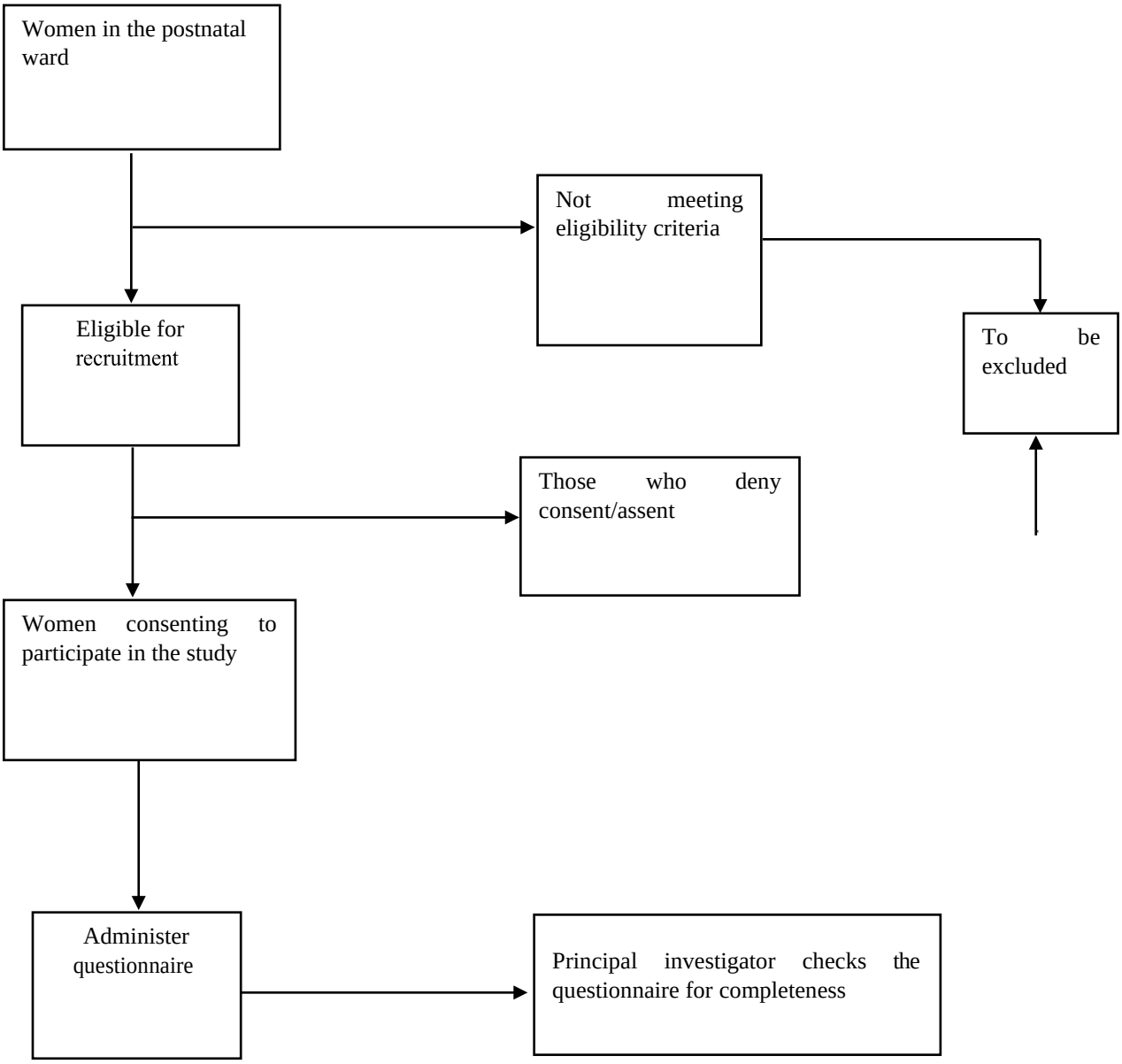

Figure 2: Flowchart outlining the data collection procedure

3.8.3. Quality control

The principal investigator trained the research assistant on patient recruitment and proper administration of questionnaires. A pilot study was carried out at Ndanai sub-county hospital to ascertain the ease of administration and comprehension of the questionnaire to the participants. In addition, this would ensure the validity and reliability of the questions in the population under study. Ndanai was chosen because it is located in the same county and serves a population with similar sociodemographic characteristics as Longisa CRH. Consecutive sampling was used to recruit participants until a sample size of 10 patients was achieved. The participants consented and the questionnaire was administered. At the end of each interview, the questionnaires were double-checked to ensure completeness and accuracy before closing the session with the patient. The reliability of the PCMC questionnaire was tested by running a reliability analysis of the data collected during the piloting of the tool. Cronbach's alpha value was calculated and a cut-off of 0.70 was used as a minimum to assess the reliability of the questionnaire.

3.9. Data management and analysis

The completed questionnaires were coded and entered into a Microsoft (MS) Excel 2016 data entry sheet that had been pre-designed. Continuous data cleansing occurred during the data entry procedure. The cleaned data set was imported into the IBM Statistical Package for Social Scientists (SPSS) version 26.0 for analysis. The data sets were backed up and securely stored on an external hard drive to protect the safety and confidentiality of patient information.

Sociodemographic and obstetric characteristics were analyzed and presented as percentages and frequencies, whereas continuous data were summarized as means with standard deviations (SD) or medians with interquartile ranges (IQR). The prevalence of RMC with 95% confidence intervals (CIs) was calculated as a proportion of women who got RMC and expressed as a percentage. The Chi-square test of associations was used to test the

sociodemographic, obstetric, and health system factors at the univariable stage. The Student's t-test was used to compare means, while the Mann-Whitney U test was used to compare medians. Additionally, reuse or willingness to recommend the hospital for future maternity services was analyzed and expressed as a percentage of the population investigated. Those that were found to be significant were subjected to multivariable analysis using logistic regression. Odds ratios and 95% confidence intervals were determined. When the p-value was less than 0.05, all tests were declared significant.

3.10. Study dissemination plan

Having completed the study, the results were first presented at the UON Department of Obstetrics and Gynecology for review. Feedback will be shared with LCRH. The recommendations from The recommendations from this feedback will be included in the final report before the work is published in a peer-reviewed journal.

3.11. Ethical consideration

1. The researchers obtained approval from the Ethics and Research Committee of Kenyatta National Hospital and the University of Nairobi (KNH/UON ERC) to carry out this investigation. Following the successful acquisition of approval from the Ethics Review Committee (ERC), the administration of Longisa County Referral Hospital was duly approached in order to get authorization.
2. Before enrollment, participants were provided with a written informed consent document that outlined the facts, processes, and protocols of the study. The text was translated Kiswahili and Kipsigis.
3. Only participants who consented were enrolled in the study.
4. Participants were informed of voluntary participation and they could opt out of the study at any time without being disadvantaged in any way.

5. Infection prevention control measures to mitigate COVID 19 exposure were instituted.

6. To ensure confidentiality, personal identifiers were omitted and participants were given unique identification codes. The questionnaires were kept under lock and key while the computerized data was protected with passwords. Access to the completed questionnaires and computerized data were restricted to the lead investigator and supervisors only.

4. RESULTS

This study targeted a minimum sample size of 271 women but the enrollment that took place between March and April 2022 recruited 277 clients. The process of enrolment is illustrated in figure 3:

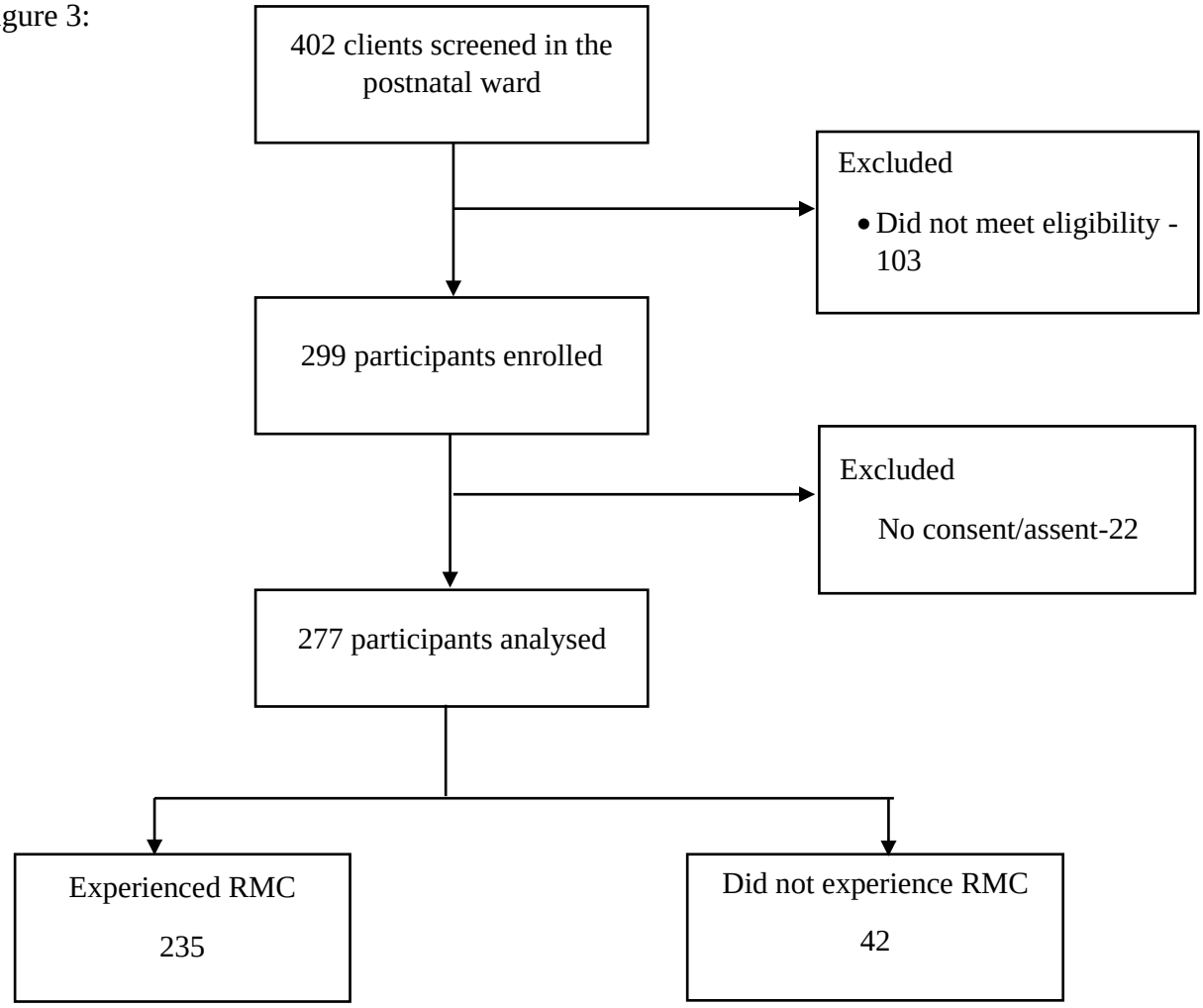

Figure 3: Enrolment of study participants

As illustrated in the flow chart above (Figure 3), the prevalence of RMC was 84.8%.

4.1. Socio-demographic, obstetric, clinical characteristics, and health system factors of women being assessed for respectful maternity care at Longisa hospital in 2022

4.1.1. Socio-demographic characteristics of women being assessed for respectful maternity care at Longisa hospital in 2022

Table 3: Sociodemographic characteristics of women being assessed for respectful maternity care at Longisa County Referral Hospital in 2022

Variable		**N=277**
		Frequency, n (%)
Age (in years)	15 – 19	52 (18.8)
	20-24	115 (41.5)
	25-29	61 (22.0)
	30-34	38 (13.7)
	35-39	9 (3.2)
	40-44	1 (0.4)
	45-49	0
	50-54	1 (0.4)
Mean age (SD) = 24.3 years (5.5)		
Marital status	Married	226 (81.6)
	Single	51 (18.8)
Level of Education	None	6 (2.2)
	Primary	133 (48.0)
	Secondary	118 (42.6)
	Tertiary	20 (7.2)
Formal employment	Yes	32 (11.6)
	No	245 (88.4)
Ethnicity	Kipsigis	268 (96.8)
	Masai	7 (2.5)
	Kisii	2 (0.7)
Religion	Christian	276 (99.6)
	Muslim	1 (0.4)

As shown in Table 3 above, the mean age of the women was 24.3 years (SD 5.5 years) ranging between 15 to 51 years and 115 (41.5%) were in the 20 to 24 years age group. The majority of 222 women, 226 (81.6%) were married, 133 (48%) and 118 (42.6%) had primary and secondary levels of education respectively. A few women. 9 (3.2%) were from other ethnic communities other than the Kipsigis who are the residents. Those in formal employment rate were 32 (11.6%).

4.1.2. Antenatal and obstetric characteristics of women being assessed for respectful maternity care at Longisa Hospital in 2022.

Table 3: Antenatal and obstetric characteristics of women being assessed for respectful maternity care at Longisa County Referral Hospital in 2022.

Variable		Frequency, n =277 (%)
Parity	1	55 (19.9)
	2	112 (40.4)
	>3	110 (39.7)
ANC	None	3 (1.1)
	< 4 times	100 (36.1)
	>4 times	174 (62.8)
Onset of labour	Spontaneous	268 (96.8)
	Induced	9 (3.2)
Mode of delivery	SVD	242 (87.4)
	Caesarean	35 (12.6)
Time of delivery	Day	160 (57.8)
	Night	117 (42.2)
Length of hospital stay	≤12 hours	74 (26.7)
	13 - 23 hours	193 (69.7)
	≥24 hours	10 (3.6)
Underlying medical ailment	Yes	9 (3.2)
	Hypertension	6 (66.7)
	Epileptic	1 (11.1)
	Cardiac disease	1 (11.1)
	Asthmatic	1 (11.1)
	None	268 (96.8)

As shown in Table 4 above, 167 (60.3%) of the women were para 1 & 2 and 174 (62.8%) had more than 4 ANC visits. Two hundred and sixty eight women (96.8%) had spontaneous labour with 242 (87.4%) being SVD and 160 (57.8%) of the deliveries happening during the day. The majority, 267 (96.4%), of the women were discharged within 24 hours after delivery.

Most of the women, 268 (96.8%), did not report any underlying medical ailments. However, among the 9 (3.2%) with underlying medical ailments, the most common medical condition was hypertension in pregnancy with 6 (66.7%) women.

4.1.3. Health system factors assessed for respectful maternity care at Longisa hospital in 2022

Table 4: Health system factors assessed for respectful maternity care at Longisa County Referral Hospital in 2022

Variable		Frequency, n (%)
Qualification of attending health care worker	Midwife/nurses	238 (85.9)
	Doctor	39 (14.1)
Provider's Gender	Male	143 (51.6)
	Female	134 (48.4)

As shown in Table 5 above, 238 (85.9%) of the women were attended to by midwives or nurses. One hundred and forty three women (51.6%) were attended to by male health care providers.

4.2. Prevalence of respectful maternity care among women attending maternity care at Longisa County Referral hospital in 2022.

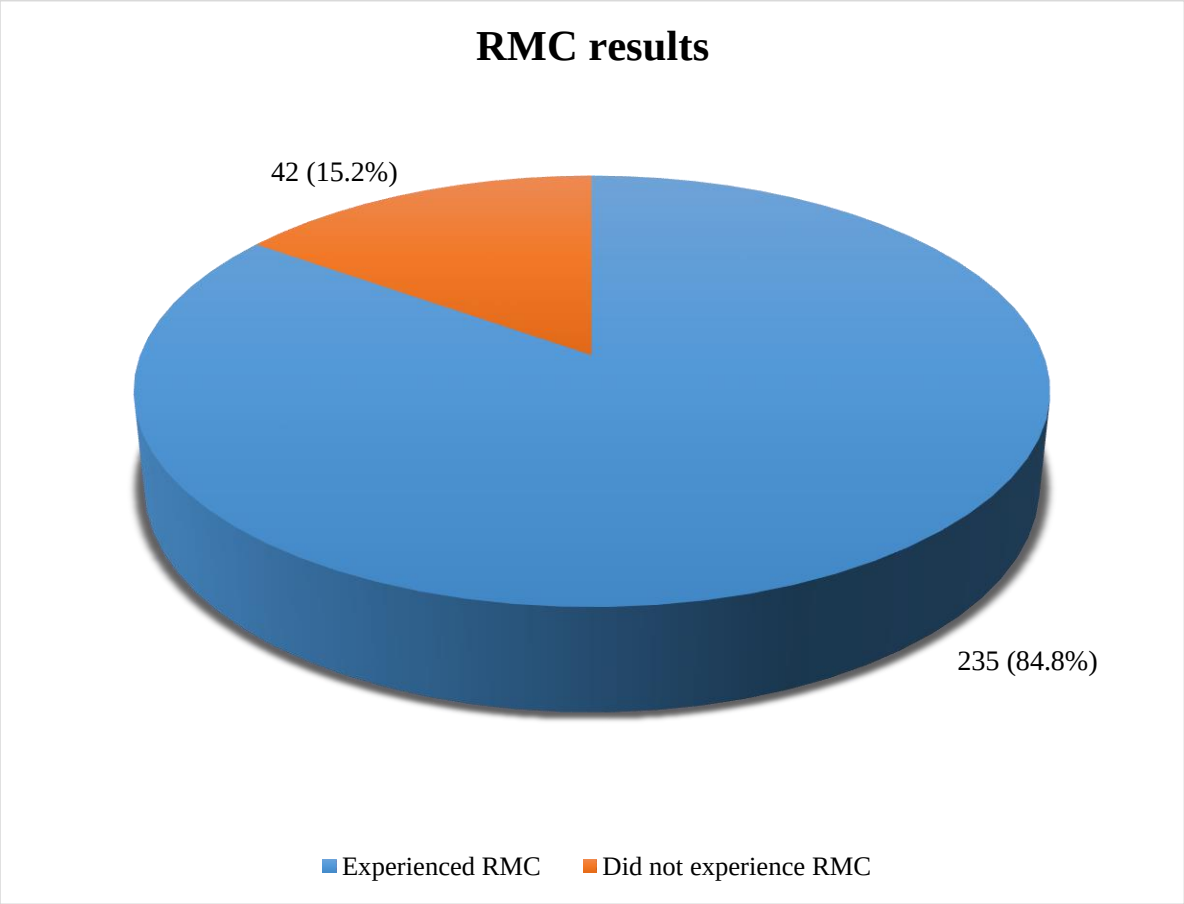

Figure 4: Overall prevalence of RMC among women delivering in Longisa County Referral Hospital.

Out of 277 women interviewed, 235 received RMC giving a prevalence of 84.8% (95% C1 80.5-89.2) as shown in the figure above.

Table 5: Prevalence of respectful maternity care and subscale divisions among women receiving maternity care at Longisa County Referral hospital in 2022

Variable		**Frequency, n (%)**
Prevalence of RMC = 235/277 (84.8%; 95% CI = 80.5 - 89.2%)		
RMC score distribution	Low (0 – 57)	42 (15.2)
	High (58 – 90)	235 (84.8)
Mean score = 60.4 points (SD 4.2)		
RMC subscales	Dignity and Respect	265 (95.7)
	Communication and Autonomy	235 (84.3)
	Supportive Care	217 (78.3)

RMC scores from the women were between 39 and 79 out of a total of 90, with a mean score of 60.4 (SD 4.2). The score was highest in the dignity and respect subscale with 265 (95.7%) of the women experiencing it. Supportive care had the lowest ratings at 217 (78.3%) as shown in table 6 above.

4.3. Factors associated with respectful maternity care received by women in the facility.

Table 6: Factors associated with respectful maternity care at Longisa hospital in 2022.

Variable	RMC experience			
	Yes*	**No***	**OR (95% CI)**	**P-value**
Age				
Mean (SD)	24.5 (5.5)	23.4 (5.3)	-	0.244
Category, n (%)				
15-24	137 (58.3)	30 (71.4)	1.0	
25-29	54 (23.0)	7 (16.7)	1.7 (0.7-4.1)	0.243
30+	44 (18.7)	5 (11.9)	1.9 (0.7-5.3)	0.201
Marital status				
Married	194 (82.6)	32 (76.2)	1.5 (0.7-3.3)	0.298
Single	41 (17.4)	10 (23.8)	1.0	
Level of education				
None	6 (2.6)	0	-	0.999
Primary	112 (47.7)	21 (50.0)	1.8 (0.6-5.4)	0.319
Secondary	102 (43.4)	16 (38.1)	2.1 (0.7-6.7)	0.195
Tertiary	15 (6.4)	5 (11.9)	1.0	
Employed				
Yes	29 (12.3)	3 (7.1)	1.8 (0.5-6.3)	0.437
No	206 (87.7)	39 (92.9)	1.0	
Parity				
1	46 (19.5)	9 (22.0)	0.5 (0.2-1.1)	0.07
2	93 (39.4)	19 (46.3)	0.7 (0.3-1.4)	0.276
>3	97 (41.3)	13 (31.7)		
ANC Visits				
None	2 (0.9)	1 (2.4)	0.3 (0-3.2)	0.302
<4 times	80 (34.0)	20 (47.6)	0.6 (0.3-1.1)	0.083
>4 times	153 (65.1)	21 (50.0)	1.0	
Onset of labour				
Spontaneous	228 (97.0)	40 (95.2)	1.6 (0.3-8.1)	0.630
Induced	7 (3.0)	2 (4.8)	1.0	
Time of delivery				
Day	136 (57.9)	24 (57.1)	1.0 (0.5-2.0)	0.930
Night	99 (42.1)	18 (42.9)	1.0	
Mode of delivery				
SVD	202 (86.0)	40 (95.2)	0.3 (0.1-1.3)	0.095
Caesarean section	33 (14.0)	2 (4.8)	1.0	
LOS				
< 12 hours	61 (26.1)	13 (31.0)	1.2 (0.2-6.2)	0.851
13-24 hours	165 (70.5)	27 (64.3)	1.5 (0.3-7.6)	0.604
> 24 hours	8 (3.4)	2 (4.8)	1.0	
HCW qualification				
Midwife/Nurse	200 (85.1)	38 (90.5)	0.6 (0.2-1.8)	0.357
Doctor	35 (14.9)	4 (9.5)	1.0	
Sex of the provider				
Male	121 (51.7)	21 (50.0)	1.1 (0.6-2.1)	0.838
Female	113 (48.3)	21 (50.0)	1.0	

**Experienced RMC, **Did not experience RMC, Length of hospital stay (LOS), Health care worker (HCW)*

This study identified that women who were above 30 years and those who had formal employment were almost 2 times more likely to get RMC compared to younger women (OR 1.9 (95% CI: 0.7-5.3) and (OR 1.8 (95% CI: 0.5-6.3) respectively. Women who had secondary education were 2 times more likely to receive RMC (OR 2.1 (95% CI: 0.7-6.7). Those who had no antenatal visits or had vaginal deliveries were 70% less likely to receive RMC compared to those who had more than 4 antenatal visits and those who had caesarian deliveries (OR 0.3 (95% CI: 0- 3.2) and (OR 0.3 (95% CI: 0.1- 1.3) respectively. The study revealed that women attended to by midwives or nurses were 40% less likely to receive RMC compared to those attended to by doctors (OR 0.6 (95% CI: 0.2- 1.8).

However, none of these associations was statistically significant as shown in table 7.

4.4. Willingness to reuse or recommend the hospital for future maternity needs

Table 8: Willingness to recommend or reuse LCRH for future maternity needs

Variable	**RMC experience**		**OR (95% CI)**	**P-value**
	Yes	**No**		
	(n = 235)	**(n = 42)**		
Could reuse and recommend the facility?				
Yes	230 (97.9)	40 (95.2)	2.3 (0.4 - 12.3)	0.287
No	5 (2.1)	2 (4.8)	1.0	

On willingness to reuse/recommend the hospital for future maternity needs, no difference was noted between those who received RMC and those who did not as shown in table 8 above.

5. DISCUSSION

This study sought to assess RMC; prevalence, associated factors and women's willingness to reuse or recommend the health facility for future obstetric needs. The population of women interviewed in this study reported a high prevalence of RMC at 84.8% which was comparable to another study done in Kenya by Abuya et al that reported that 80% of the mothers studied experienced RMC (33). Similar findings were reported by Kitwa et al in Ethiopia showing that 82.4% of the mothers had experienced RMC (38). The findings of a high prevalence of respectful maternity care (RMC) can be attributed to the impact of multicomponent intervention research focused on addressing disrespect and abuse during birthing in Kenya (Heshima study) (16,39,40). After identification of the factors that contribute to instances of disrespect and abuse, policy changes were instituted like the inclusion of RMC in the Kenyan constitution leading to the protection of women's rights during labour and delivery. Development of values, clarification, attitude transformation training (VCAT) curriculum which led to the inclusion of RMC in nursing training leading to improvement of quality of care. Kenyan guidelines on maternal health advocate for respect and dignity during pregnancy, labour, delivery and the postpartum period.

Other studies have reported lower prevalence and that could be due to the differences in settings and the populations being studied. A study in Ethiopia by Wassihun et al reported a prevalence of 57% while Bante et al study had a 38.4% (25,26). Also, a study among Iranian women demonstrated an RMC prevalence of 63.42% (41). These studies were conducted mainly in urban settings which were different from our study which was conducted in a rural hospital.

This study used RMC scores to determine whether women received RMC or not. The highest score was 79 (out of 90) while the lowest was 39 with an average score of 60.4. The average score is similar to the findings reported previously in studies in Kenya with the average RMC score ranging

between 58.2 and 60 (37,42). Also, an Ethiopian study showed an RMC mean score of 58(43). In relation to the different RMC domains, the supportive care domain scored the least while the women gave higher scores for the dignity and respect domain. This population differed from other studies which reported the lowest scores in the communication and autonomy domain (37,42).

Supportive care entails allowing women to have a companion of their choice and giving pain relief medications among other care. According to WHO guidelines on the reduction of unnecessary caesarean section and also the International Childbirth Initiative (ICI), the presence of a companion is related to an increase in the likelihood of spontaneous vaginal deliveries, positive childbirth experience, less need for analgesics and good maternal and neonatal outcome (44,45). The differences in the domain scores could be due to the patient not being allowed to have a companion of choice due to the COVID-19 protocols lowering the score of supportive care.

There is evidence from various studies that certain factors are associated with the presence or absence of RMC. The age of the woman is one of the factors that have been reported previously to be associated with RMC. For instance, a study done in Kigoma, Tanzania showed that older women were more likely to receive higher levels of RMC related to friendliness, comfort and attention compared to younger women (46). Similar findings were reported in another study in Kenya which established that younger women were likely to receive non-confidential care compared to older women (33). However, our study did not find any association between age and RMC. The non-significance was also reported in a similar study by Kruk et al who did not find age to be associated with receipt of disrespect and abuse(47). This can be attributed to an increase in RMC awareness in the community and the availability of channels of reporting and resolving incidences of disrespect and abuse.

Antenatal care attendance was also tested to check the influence on RMC. This study did not find any association between ANC visits and RMC which was contrary to a study by Bante et al where women who had ANC follow-up had 2 times the odds of receiving RMC (26). Another study in Southeast Ethiopia established that women who had no ANC follow-up were 8 times more likely to experience disrespect and abuse (48). The possible explanation for our findings is that majority of the women were familiar with the facility and also health care providers which are important in building confidence in the services provided in the facility**.**

In this study, women who had formal employment were 1.8 times more likely to experience RMC. Similar findings have been reported in a previous study done in Bahir Dar, Ethiopia, Malawi and Kenya indicating that mothers who had a low family income were more likely to experience disrespect and abuse(39,49,50). It may indicate that affluent women were able to start antenatal care earlier compared to their counterparts hence familiarity with the facility and health care providers. However, there was no association between employment and RMC in our study.

Though there were no associations between mode of delivery and RMC, women who had vaginal delivery were 70% less likely to experience RMC. This is contrary to a study by Wassihun et al who found women who had caesarian delivery were 4 times more likely to report disrespect and abuse(25). According to Bulto et al, women who gave their consent were 3 times more likely to receive RMC compared to those who did not. Involvement in decision making was associated with 8 times chances of receiving RMC (22). A possible explanation could be due to wrong providers' perceptions that women may not be cooperative if informed about procedures like episiotomies and manual removal of the placenta. For caesarian delivery, they were involved in decision-making and informed consent was sought prior to the procedure hence higher chances of receiving RMC.

Male healthcare providers attended to most of the women at LCRH, which shows that male midwives have been accepted by the women. The gender of the attending skilled birth attendant affects women's attitude toward maternity care. Midwives provide care that involves women's socio-cultural beliefs, including their beliefs on the gender of attendant midwives (51). This is similar to the findings of a study by Orpin et al who found that women have embraced male midwives as care providers and have appreciated the use of health facilities during pregnancy and delivery to reduce complications(52). However, our study did not show any association between gender or qualification of the provider and RMC. This is contrary to a study by Sheferaw et al who found women who were attended to by midwives were likely to report higher RMC compared to other cadres (32,46). Higher RMC among the midwives was thought to be due to midwife training which mainly focuses on maternal care.

The majority of the women (97%) were willing to reuse or recommend LCRH for future maternity needs. The findings are in agreement with a study in Nigeria where 91% of the women were willing to recommend the hospitalto other women (28). Another study in Benue state in Nigeria showed that although women experienced different forms of mistreatment during childbirth, their intent to utilize the same health facility later did not change (52). Okumu et al found that majority of Kenyan women were satisfied with services and were willing to recommend their birth facility in Kiambu hospitals (53). This was consistent with a high prevalence of RMC (85%) meaning the women were satisfied with the services.

5.1. Strengths of the study

The study provides a screenshot of the quality of maternity services offered at Longisa County Referral Hospital. The findings highlight the specific areas where we are performing well (dignity and respect) vis-à-vis areas that can be improved upon (supportive care- which includes allowing women to have a companion of choice and giving pain relief medication during labour and delivery) thus influencing practice and policy.

5.2. Limitations of the study

1. The findings of this study were derived from self-report and recollection methods, which are susceptible to recall bias. The interviews were conducted within the first 24 hours post-delivery and recollection bias was deemed much lower than later in the puerperium period.
2. The study was quantitative hence experiences of women during labour and delivery were not captured therefore we recommend qualitative studies in future to improve understanding of factors associated with RMC.

5.3. Conclusions and recommendations

5.3.1. Conclusion

1. According to the findings of this study, the prevalence of RMC was 85% among women who received maternity services at LCRH in 2022.
2. Neither the sociodemographic, obstetric nor health system factors were associated with RMC.
3. The majority of women (97%) were willing to reuse or recommend the hospital for future maternity needs.

5.3.2. Recommendations

1. Majority of the postpartum women in the study received RMC but the domains of supportive care had the lowest score reflecting the need for educating and training the healthcare providers on the importance of birth companions during labour and delivery
2. Community awareness on the importance of emotional support where a woman is allowed to have a companion of her choice; helps a woman go through childbirth confidently.
3. The majority of the women were willing to return to LCRH for future maternity needs, which is commendable. It shows overall satisfaction with the services offered. Women utilizing skilled birth attendants is an important step in averting maternal morbidity and mortality.

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Appendix 1:Questionnaire

7. APPENDICES

RESPECTFUL MATERNITY CARE, ASSOCIATED FACTORS AND WOMEN'S INTENT TO REUSE OR RECOMMEND FACILITY FOR FUTURE MATERNITY NEEDS IN LONGISA HOSPITAL, KENYA.

Investigator: Dr Wilter Cherono Koske

Participant No……. **Date: -……**

Part 1: Socio- demographic data

Participants Details (Maelezo yake mshiriki/kibeberta netai)		
1.	Age *(Umri /itinye kenyisisek ata)*	…….. years
2.	Marital status (*Hali ya ndoa/Katunisiet)*	. Married (*Kuolewa/Atunot)* . Single (*mmoja/ Tomo Kitunon)* . Widowed (*mjane/ Kikosirto boyot)* . Divorced/Separated (*Kuachwa/Kutengana Kikibesie/ kikiilan)*
3.	Level of education (*Kiwango cha elimu/ Kiit ano ensomanet*)	. None (*Hakuna/ Masoman)* . Primary (*Msingi/ Primari)* . Secondary (*Sekondari/sekondari)* . Tertiary (*Elimu ya Juu/kolech ananko university)*

4.	Ethnicity (*kabila/ Ibokutit aonon*)	. Kipsigis . Kisii . Masai . Others
5.	Religion (*dini/Ibo tinit anaon*)	. Christian (*mkristo/Christianindet*) . Muslim(*muislamu/Musiliamindet*) . Other (*myingine/Alak)*
6.	Employed (*Kuajiriwa/kikisirin Kasit*)	. Yes (*ndiyo/eee*) . No (*hapana/Achicha*)
7.	Parity (*uzazi/Itinye Lagok ata*)	. 1-2 (*mmoja-wawiliOeng*) . >3 (*tatu/Sire Somok)*
8.	ANC Visits (*ziara za ANC/Kiiwee kilinik konyil ata*)	. None (*hakuna/Mawee*) . < 4 times (*chini ya 4/masire angwan)* . > 4 times (*mara>4/Sire angwan*)
9.	Onset of labor (*Mwanzo wa leba/ Kiikaste ane)*	. Spontaneous(*Kwa hiari /Kinyoinegen)* . Induced (*Kushawishiwa Kikitoreton)*
10.	Time of delivery (*Wakati wa kujifungua/Kesiskisie sait ata*)	. Day (*mchana/Bet)* . Night (*usiku/Komoi*)
11.	Length of hospital stay (*Muda wa kukaa hospitalini/Koburet en sipitali)*	. < 12 hours (*chini ya masaa 12/Tom atar saisiek taman ak aeng*) . 13-24 hours (*masaa 13-24/betut agenge)* . >24 hours (*>masaa 24/Kokosir betut)*

12.	Qualification of the attending health worker (*Sifa za mhudumu wa afya anayehudhuria/ N'gon'g nekotaretin)*	. Midwife/Nurse (*Mkunga/Muuguzi Nurse)* . Clinical Officer (*Afisa wa Kliniki/Clinical officer)* . Doctor (*Daktari/Dakitari)* . Non-skilled attendant *(Mhudumu asiye na ujuzi/Masomanji kerichek)*
13.	Sex of the provider (*Jinsia ya mtoa huduma /kwendo anan murenik nekotaretin)*	. Male (*Mwanaume /Murenik*) . Female (*Mwanamke Kwondo)*

Part 2: Respectful Maternity Care/ Huduma ya Uzazi yenye Heshima

Dignity and respect subscale/utu na heshima					
	Question	**0- No,never/** Hapana, kamwe	**1 - Yes, a few times** (Ndiyo, mara chache kasarta ne kiten)	**2 - Yes, most of the time** (Ndiyo, mara nyingi/ obokora)	**3- Yes, all the time** (Ndiyo, wakati wote/ Enkila)
1.	Did the doctors, nurses, or other staff at the facility treat you with respect?(*Je, madaktari, wauguzi, au wafanyakazi wengine katika kituo hicho walikutendea kwa heshima/Konyain ak teskisto dakitariek ak nursiek)*				
2.	Did the doctors, nurses, and other staff at the facility treat you in a friendly manner? (*Je, madaktari, wauguzi, na wafanyakazi wengine katika kituo hicho walikutendea kwa urafiki?/konyain Dakitariek ak nasiek en oretab chorwandit)*				
3.	Did you feel the doctors, nurses, or other health-care providers shouted at you, scolded, insulted, threatened, or talked to you rudely? (*Je, ulihisi kwamba madaktari, wauguzi, au wahudumu wengine wa afya walikufokea, walikukaripia, walikutukana,walikutishia,au walizungumza nawe kwa jeuri?/Kibolnjin dakitariek and nasiek)*				

4.	Did you feel like you were treated roughly like pushed, beaten, slapped, pinched, physically restrained, or gagged? (*Je, ulihisi kama ulitendewa takribani kusukumwa, kupigwa, kuchapwa kofi, kubanwa, kuzuiwa kimwili, aukufungwa mdomo?/Kobirin Takitariek and nasiek*)				
5.	During examinations in the labor room, were you covered up? (*Wakati wa mitihani katika chumba cha kazi, ulifunikwa/ kikitichun kinge kokrein dakitari*)				
6.	Do you feel like your health information was or will be kept confidential at this facility? (*Je, unahisi kama taarifa zako za afya zitakuwa siri au zitawekwa kwenye kituo hiki?/Hiyoni ile ngalek chetinyenge ak kanyasiet ngongu komakiborjin chitukul)*				

Communication and Autonomy subscale/Kiwango cha mawasiliano na uhuru					
	Question	**0- No, never**	**1 - Yes, a few times** (kasartane kiten)	**2 - Yes, most of the time** (obokora)	**3- Yes, all the time** (Enkila)
7.	During your time in the health facility did the doctors, nurses, or other health-care providers introduce themselves to you when they first came to see you? (*Ukiwa katika kituo cha afya je, madaktari, wauguzi au watoa huduma wengine wa afya walijitambulisha kwako walipokuja kukuona mara ya kwanza?/kimwounge dakitariek and nasiek kingo kerit betut netai)*				

8.	Did the doctors, nurses, or other health-care providers call you by your name? (*Je, madaktari, wauguzi, au wahudumu wengine wa afya walikuita kwa jina lako?/Kikiurin ak kainet ngung)*				
9.	Did you feel like the doctors, nurses or other staff at the facility involved you in decisions about your care? (*Je, ulihisi kama madaktari, wauguzi au wafanyakazi wengine katika kituo hicho walikushirikisha katika maamuzi kuhusu utunzaji wako?/Kikiteten tilit nekiyae akobo kanyasiengung hii)*				
10.	During the delivery, do you feel like you were able to be in the position of your choice? (*Wakati wa kujifungua, unahisi kama uliweza kuwa katika nafasi uliyochagua?/kinisikiesie kikas ile imiten komie*)				
11.	Did the doctors, nurses, or other staff at the facility speak to you in a language you could understand? (*Je, madaktari, wauguzi, au wafanyakazi wengine katika kituo hicho walizungumza nawe kwa lugha ambayo unaweza kuelewa/kikiororun tukuk en oret ne hikuitosti)*				
12.	Did the doctors, nurses, or other staff at the facility ask your permission or consent before doing procedures on you? (*kikiten angot iyani keyaun kee)*				

13.	Did the doctors and nurses explain to you why they were doing examinations or procedures on you? (*Je, madaktari na wauguzi walikueleza kwa nini walikuwa wanakufanyia uchunguzi au taratibu/kikoiroruin ako kanyasiet ngugn)*				
14.	Did the doctors and nurses explain to you why they were giving you any medicine? (*Je, madaktari na wauguzi walikueleza kwa nini walikuwa wakikupa dawa yoyote/Kikourorun kerichek che kakinin)*				
15.	Did you feel you could ask the doctors, nurses, or other staff at the facility any questions you had? (*Je, ulihisi unaweza kuwauliza madaktari, wauguzi, au wafanyakazi wengine kwenye kituo maswali yoyote uliyokuwa nayo/kiteben kibaitinik at sipitali tebut aketukul)*				

Supportive Care subscale/ Kiwango cha Huduma ya Msaada					
	Question	**0 - No, never**	**1 - Yes, a few times** (kasarta ne kiten)	**2 - Yes, most of the time** (obokora)	**3-Yes, All the time** (Enkila)
16.	How did you feel about the amount of time you waited? Would you say it was (*Ulijisikiaje kuhusu muda uliosubiri? Je, unaweza kusema ilikuwa/Tiana kasarta nekikanyisie si nyouru kerichek)*				
17.	Did the doctors and nurses at the facility talk to you about how you were feeling(*Je, madaktari na wauguzi katika kituo hicho walizungumza nawe*				

	kuhusu jinsi ulivyokuwa unajisikia/Kitebenin akitariek olen kastoii borto)				
18.	Did the doctors, nurses, or other staff at the facility try to understand your anxieties(*Je, madaktari, wauguzi, au wafanyakazi wengine katika kituo hicho walijaribu kuelewa wasiwasi wako/Kiikuyen dakitariek wasiwasi ikue)*				
19.	When you needed help, did you feel the doctors, nurses, or other staff at the facility paid attention(*Ulipohitaji usaidizi, je, ulihisi kuwa madaktari, wauguzi, au wafanyakazi wengine wa kituo walikusikiliza/Kiinyoru toretet koyob dakitariek ak nasiek)*				
20.	Do you feel the doctors or nurses did everything they could to help control your pain? (*Je, unahisi kuwa madaktari au wauguzi walifanya kila waliloweza ili kudhibiti maumivu yako/iyoni ile kiyai dakitariek nekiimiche kototretin ko menyoru nywanindo neo)*				
21.	Were you allowed to have someone you wanted (outside of staff at the facility, such as family or friends) to stay with you during labor/(*Je, uliruhusiwa kuwa na mtu uliyemtaka (nje ya wafanyakazi kwenye kituo, kama vile familia au marafiki) kukaa nawe wakati wa uchungu?/Kikiyonun konyo kokerin en sibatili tilyanutik kuk*)				
22.	Were you allowed to have someone you wanted to stay with you during delivery? (*Je, uliruhusiwa kuwa na mtu uliyetaka kukaa nawe wakati wa kujifungua?)* *(kikiyonun obur ak chito ne nikechagwan obur tuan on siskisiet*)				

23.	Did you feel the doctors, nurses, or other staff at the facility took the best care of you? (*Je, ulihisi kuwa madaktari, wauguzi, au wafanyakazi wengine katika kituo hicho walikuhudumia vyema Zaidi/Kikiribin Komie ensibitali*)				
24.	Did you feel you could completely trust the doctors, nurses, or other staff at the facility with regards to your care(*Je, unahisi unaweza kuwaamini kabisa madaktari, wauguzi, au wafanyakazi wengine katika kituo hicho kuhusiana na huduma yako/Iyon takitariek and nasiek chebo sibitalinin)*				
25.	Do you think there were enough health staff in the facility to care for you?(*Je,unafikiri kulikuwa na wahudumu wa afya wa kutosha katika kituo hicho kukuhudumia/Iyoni ile yomotin kibaitinik ab sibitalini)*				
26.	Thinking about the labor and postnatal wards, did you feel the health facility was crowded? (*Ukifikiria kuhusu wodi za leba na baada ya kuzaa, ulihisi kuwa kituo cha afya kilikuwa na msongamano wa watu/Kinyitat martanity ward)*				
27.	Thinking about the wards, washrooms, and the general environment of the health facility, would you say the facility was very clean, clean, dirty, or very dirty(*Ukifikiria kuhusu wodi, vyumba vya kuogea na mazingira ya jumla ya kituo cha afya, unaweza kusema kituo kilikuwa safi sana, kisafi, kichafu au kichafu sana/Tilil sipitalini)*				

28.	Was there water in the facility? (*Je, kulikuwa na maji kwenye kituo hicho/ Miten Bek sipitali)*				
29.	Was there electricity in the facility? (*Je, kulikuwa na umeme katika kituo hicho/ Miten Sitimet)*				
30.	In general, did you feel safe in the health facility? (*Kwa ujumla, ulijisikia salama katika kituo cha afya/Kikas ile miten kalyet sipitali)*				

Part 3: Willingness to reuse or recommend the facility for future obstetric needs

Question	**Yes/ndio/eee**	**No/hapana/ajija**
Do you intend to reuse or recommend this facility for future maternity needs (*Je, unakusudia kutumia tena au kupendekeza kituo hiki kwa mahitaji ya uzazi yajayo/Imuch iboisyenanan imwoji jii koboisyen sipitali ini besyo en taa yun en ngalekab maternity)*		

Appendix 2: Consent form

Title of the study: Respectful maternity care, associated factors and women's intent to reuse or recommend the facility for future maternity needs.

Researcher: Dr. Wilter Cherono Koske

Introduction to the study: You are requested to participate in the study which is voluntary and will be conducted in postnatal ward at Longisa County Hospital.

The Purpose of the study: To determine prevalence of respectful maternity care, associated factors and women's intent to reuse or recommend the facility for future maternity needs.

Procedures: If you agree to participate in the study, your socio-demographic, obstetrics and health system factors will be taken. Questionnaire will be administered to determine if you received respectful maternity and if you will be willing to reuse or recommend the facility for future maternity needs.

Time: The study is simplified and will not consume much of your time with approximately 15 minutes required to finish the whole process.

Benefit of the study: Our findings will inform health care workers, hospital administrators and county policy makers on approaches to improve RMC among to women attending labour wards in rural facilities in Kenya and elsewhere.

Risks, stress and discomfort: To avoid discomfort the interview will be done in private room and all information will be confidential.

Cost and risk of loss of Confidentiality: There will be no additional direct cost incurred by you neither will you receive any money for participating in this study. Information that you will

provide is mainly for academic purposes and at no point in time will you be required to provide personal information unwillingly. Your data will be labeled with your unique identity and your name concealed maintaining confidentiality when taking part in the study. Furthermore, your name will not appear in any report or publication of the research and all your personal information will be handled with a high level of confidentiality.

Voluntary Participation and withdrawal: Remember, your participation is entirely voluntarily. Should you consider changing your mind midway, you have the right to do so and you shall not suffer any consequence whatsoever. In case you reach this conclusion after specimen and medical data has been collected, your inclusion into the study will not be considered and thus you will be excluded from the study entirely and collected information discarded.

Sharing of results: The results of this study may be presented during scientific and academic forums and may be published in scientific medical journals and academic papers.

In case of any issues or challenges related to this study, please contact me on 0700280294 or Dr. Kihara on 0722414468 , Dr. Allan Ikol on 0722960817 or /UON ERC Secretariat on Tel.2726300 ext. 44102, uonknherc@uonbi.ac.ke

Thank you for sparing your precious time dedicated to participating in this study exercise.

Participants consent

I confirm that the researcher has explained fully the nature of the study and the extent of activities which I will be asked to undertake. I confirm that I have had adequate opportunity to evaluate and ask questions about this study. I understand that my participation is voluntary and that I may withdraw at any time during the study, without having to give a reason. I agree to take part in this study by filling in the proforma.

Signed by participant…… Date…….

Researcher's statement

I certify that the purpose, potential benefits and possible risks associated with participating in this research have been explained to the above participant and the individual has voluntarily consented to participate.

Signature……. Date…….

7.1.1. Fomu ya idhini

Kichwa cha utafiti: Utunzaji wa heshima wa uzazi, mambo yanayohusiana na dhamira ya wanawake kutumia tena au kupendekeza kituo kwa mahitaji ya uzazi ya baadaye.

Mtafiti: Dk. Wilter Cherono Koske

Utangulizi wa utafiti: Unaombwa kushiriki katika utafiti ambao ni wa hiari na utafanywa katika wadi ya baada ya kuzaa katika Hospitali ya Kaunti ya Longisa.

Madhumuni ya utafiti: Kuamua kuenea kwa utunzaji wa uzazi kwa heshima, sababu zinazohusiana na dhamira ya wanawake kutumia tena au kupendekeza kituo kwa mahitaji ya uzazi ya baadaye.

Taratibu: Ukikubali kushiriki katika utafiti, vipengele vyako vya demografia, uzazi na mfumo wa afya vitachukuliwa. Hojaji itasimamiwa ili kubaini kama ulipokea uzazi kwa heshima na ikiwa utakuwa tayari kutumia tena au kupendekeza kituo kwa mahitaji ya uzazi ya baadaye.

Muda: Utafiti umerahisishwa na hautatumia muda wako mwingi kwa takriban dakika 15 zinazohitajika kumaliza mchakato mzima.

Manufaa ya utafiti: Matokeo yetu yatafahamisha wahudumu wa afya, wasimamizi wa hospitali na watunga sera wa kaunti kuhusu mbinu za kuboresha RMC kwa wanawake wanaohudhuria wodi za leba katika vituo vya mashambani nchini Kenya na kwingineko.

Hatari, mafadhaiko na usumbufu: Ili kuepusha usumbufu mahojiano yatafanyika katika chumba cha faragha na habari zote zitakuwa siri.

Gharama na hatari ya kupoteza usiri: Hakutakuwa na gharama ya ziada ya moja kwa moja utakayotumia wala hutapokea pesa zozote kwa kushiriki katika utafiti huu. Maelezo ambayo

utatoa ni kwa madhumuni ya kitaaluma na hakuna wakati wowote utahitajika kutoa habari za kibinafsi bila kupenda. Data yako itawekewa lebo ya utambulisho wako wa kipekee na jina lako litafichwa ili kudumisha usiri unaposhiriki katika utafiti. Zaidi ya hayo, jina lako halitaonekana katika ripoti au uchapishaji wowote wa utafiti na taarifa zako zote za kibinafsi zitashughulikiwa kwa usiri wa hali ya juu.

Ushiriki wa Hiari na kujiondoa: Kumbuka, ushiriki wako ni wa hiari kabisa. Iwapo utafikiria kubadilisha mawazo yako katikati, una haki ya kufanya hivyo na hautapata matokeo yoyote. Iwapo utafikia hitimisho hili baada ya sampuli na data ya matibabu kukusanywa, kujumuishwa kwako katika utafiti hakutazingatiwa na hivyo utatengwa kabisa na utafiti na taarifa iliyokusanywa kutupwa.

Kushiriki matokeo: Matokeo ya utafiti huu yanaweza kuwasilishwa wakati wa vikao vya kisayansi na kitaaluma na yanaweza kuchapishwa katika majarida ya matibabu ya kisayansi na karatasi za kitaaluma.

Iwapo kuna masuala yoyote au changamoto zinazohusiana na utafiti huu, tafadhali wasiliana nami kwa 0700280294 au Dkt. Kihara kwa nambari 0722414468, Dk. Allan Ikol kwa nambari 0722960817 au /UON Sekretarieti ya ERC kwa Tel.2726300 ext 44102, uonknherc@uonbi.ac.ke

Asante kwa kuhifadhi muda wako wa thamani uliojitolea kushiriki katika zoezi hili la utafiti.

Ridhaa ya washiriki

Ninathibitisha kuwa mtafiti ameeleza kikamilifu asili ya utafiti na ukubwa wa shughuli ambazo nitaombwa kufanya. Ninathibitisha kuwa nimepata fursa ya kutosha ya kutathmini na kuuliza maswali kuhusu utafiti huu. Ninaelewa kuwa ushiriki wangu ni wa hiari na kwamba ninaweza

kujiondoa wakati wowote wakati wa utafiti, bila kulazimika kutoa sababu. Ninakubali kushiriki katika utafiti huu kwa kujaza proforma.

Imetiwa saini na mshiriki……. Tarehe…….

Kauli ya mtafiti

Ninathibitisha kuwa madhumuni, manufaa yanayoweza kutokea na hatari zinazoweza kuhusishwa na kushiriki katika utafiti huu zimefafanuliwa kwa mshiriki hapo juu na mtu huyo amekubali kwa hiari kushiriki.

Sahihi……

Tarehe…….

7.1.2. Formit tab Chamchinet

Taitolitab Chikilishet: Teskitab Skiksiet en chepyosok ak kit ne imuche koyai cheyosok konyo kosigis en sipitali en kasarta ake ne mokyinge sigisiet.

Ne Chikilisie: **Dr. Wilter Cherono Koske**

Tounettab Chikilisiet: kisomin hiku agenge chetoretich en chikilisiet nikyae en Mataniti ward en longisa sipitaali

Tokingei ne chikilisiani: kimoche kenai indetab teskisto nebo cheyosok youn sigisie ak kit ne imuche koyai cheyosok konyo kosigis en sipitali en kasarta ake ne mokyinge sigisiet .

Ole kiyoito Chikilisoini: Angot iyan iiku agagenge che toreti chikilisioni kesomin ingonech ngalek chebot demographi ak chetinyegee ak tililindo. Kikonin fomit netindo tebutik che tinyege ak mmetitab chikilisioni.

Kasata: Mouen tokuk cheketeb ako matare kasarte neo nekit kotarei takikosiek taman ak muut kitok.

Kelunoik chebo chikilisioni: Kiboesin chikilisioni ketoret siptllisiek en emtab Kenya.

Kewelutik ak kaimutik: Kiteben ngalek chu en roomit neitaban asimikyor kaimutik ak kewelenutik eng ngalek chemonyolu kokas bik alak.

Gharamutik ak kongor wolutik bik chemanyoru koker: Momiten rabisiek cheketeben ako menyoru rabisiek alaktukul. Ngalek chekekonech keboisine enchikilisioni ako mokiteben ngalek chebo orit cheketebenin. Mokisire kainet negugn en wolunitik ab chikilioni akominiten chinenaye kole inye ne kokonu ngalache.

Konunetabke ak konemunetabke : Naile konenenguboke enchikisioni komokimailisishenin ako engakasta agetukul yon maimache itesta koma keitenin imuche isteke enkasata agetukul ako mokiboisien ngaleek chekokonech.

Cgetaiyetab wolunitik: Wolunitikab chikilisioni kimiche kiparatsa enikortab kibsomaik and kesir ek kitabusiek ab kibsomanik.

Yeinyoru kewelenitik alaktukul ibiru simoit eng 0700280294 anon ko Dr. Kihara en 0722414468 , Dr. Allan Ikol on 0722960817 or /UON ERC Secretariat on Tel.2726300 ext 44102, uonknherc@uonbi.ac.ke

Kongoi en kasarta ngung

Kayanengung

Ayoni ale kakiorowon akobo chilisioni akkemwoiwon kitneyolu ayai. Kanyoru kasarta ateb tebutik tukul akobo chikilisioni. Karakuye ale kakoneke akomakilasiisanan ako amuche anenge enkasarta agetukul komokunu amune sion anemge. Ayoni anyit fomitab chikilisiet.

Sikinecha……

Tarikit……

N'goloyot tab nechikilisie

Kokioro mokutik ak melekwonik ab chikiliosoni enchi agetukul ne kokonge koko ngalek chebo chikilisioni.

Sikinecha…… Tarikit…….

Appendix 3: Proposed timeline of the study

PROJECT	**Aug'2019**	**Sept. 2019 – August 2021**	**Sept. - Oct. 2021**	**November 2021**	**Dec 2021 - March 2022**	**April - May 2022**	**June 2022**
Concept note presentation							
Proposal development							
Internal marking of the proposal							
Presentation of power point to the department							
Submission of the proposal to ethics							
Datacollection & analysis							
Results presentation to the department.							

Appendix 4: Preliminary budget for the study

ITEM		**UNITS**	**UNITS COST**	**TOTAL**
Proposal development	Photocopying	2	500	1000
	Printing charges	400	10	4000
	Binding charges	3	300	900
	ERC fee	1	2000	2000
Data collection	Photocopying	1000	3	3000
	Stationary	20	20	400
	Printing	400	10	4000
	Internet		12000	12000
	Research assistant fee	3	5000	15000
Data Analysis	Statistician's fee	1	10000	10000
Dissertation write up	Stationary	20	20	400
Miscellaneous	Transport, communication and logistics		40000	40000
TOTAL				**92,700**

Appendix 5: KNH – ERC permission

UNIVERSITY OF NAIROBI
FACULTY OF HEALTH SCIENCES
P O BOX 19676 Code 00202
Telegrams: varsity
Tel:(254-020) 2726300 Ext 44355

KNH-UON ERC
Email: uonknh_erc@uonbi.ac.ke
Website: http://www.erc.uonbi.ac.ke
Facebook: https://www.facebook.com/uonknh.erc
Twitter: @UONKNH_ERC https://twitter.com/UONKNH_ERC

KENYATTA NATIONAL HOSPITAL
P O BOX 20723 Code 00202
Tel: 726300-9
Fax: 725272
Telegrams: MEDSUP, Nairobi

Ref: KNH-ERC/A/111

21st March, 2022

Dr. Walter Cherono Koske
Reg. No. H58/11210/2018
Dept. of Obstetrics and Gynecology
Faculty of Health Sciences
University of Nairobi

KENYATTA NATIONAL HOSPITAL APPROVED 21 MAR 2022 KNH/UoN-ERC P.O. Box 20723 - 00202 NAIROBI

Dear Dr. Koske,

RESEARCH PROPOSAL: RESPECTFUL MATERNITY CARE, ASSOCIATED FACTORS AND WOMEN'S INTENT TO REUSE OR RECOMMEND FACILITY FOR FUTURE MATERNITY NEEDS IN LONGISA HOSPITAL, KENYA (P951/12/2021)

This is to inform you that KNH-UoN ERC has reviewed and approved your above research proposal. Your application approval number is **P951/12/2021.** The approval period is 21st March 2022 – 20th March 2023.

This approval is subject to compliance with the following requirements;

i. Only approved documents including (informed consents, study instruments, MTA) will be used.
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by KNH-UoN ERC.
iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to KNH-UoN ERC 72 hours of notification.
iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to KNH-UoN ERC within 72 hours.
v. Clearance for export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days upon completion of the study to KNH-UoN ERC.

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

Yours sincerely,

DR. BEATRICE K.M. AMUGUNE
SECRETARY, KNH-UoN ERC

c.c. The Dean, Faculty of Health Sciences, UoN
The Senior Director, CS, KNH
The Chairperson, KNH- UoN ERC
The Assistant Director, Health Information, KNH
The Chair, Dept. of Obstetrics and Gynecology, UoN
Supervisors: Dr. Anne Kihara, Dept. of Obstetrics and Gynecology, UoN
Dr. Allan Ikol, Consultant Obstetrician, KNH

Appendix 6: NACOSTI authorization

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 641111

Date of Issue: 14/April/2022

RESEARCH LICENSE

This is to Certify that Dr.. Wilter cherono koske of University of Nairobi, has been licensed to conduct research in Bomet on the topic: RESPECTFUL MATERNITY CARE, ASSOCIATED FACTORS AND WOMEN INTENT TO REUSE OR RECOMMEND FACILITY FOR FUTURE MATERNITY NEEDS for the period ending : 14/April/2023.

License No: NACOSTI/P/22/16924

641111

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.