

**PREVALENCE OF HOME DELIVERIES AND ASSOCIATED FACTORS
AMONG WOMEN OF REPRODUCTIVE AGE IN RURAL AREAS OF
MARSABIT COUNTY, KENYA**

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**A THESIS SUBMITTED IN PARTIAL FULFILLMENT FOR THE DEGREE
OF MASTER OF SCIENCE IN HEALTH SYSTEMS MANAGEMENT OF
KENYA METHODIST UNIVERSITY**

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DECLARATION.

This thesis is my original work and has not been presented for a degree or any other award at any other University.

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Methodist University, on that behalf.

DEDICATION

I dedicate this thesis to my dear Mum and all the women of Marsabit County.

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ABSTRACT

This study examined the prevalence and factors influencing the preference for home deliveries in rural Marsabit County, focusing on cultural practices, healthcare facility-related factors, socioeconomic conditions, and awareness of government health initiatives. A descriptive cross-sectional mixed-methods design was employed, with 402 women participating in quantitative surveys and additional qualitative data gathered from 10 interviews and two focus group discussions. After data cleaning, 396 valid responses were analyzed. The analysis revealed that the point prevalence of home deliveries among women of reproductive age was 64.65% ($n = 256$). Furthermore, 291 (94.17%) of these home deliveries were attended by traditional birth attendants (TBAs), highlighting their significant role. Cultural beliefs and family influence substantially shaped delivery choices, with family cultural influence reducing the likelihood of a facility delivery ($OR = 0.47$, $p = 0.009$). Health-facility-related factors were also significant determinants. Long waiting times ($OR = 1.58$, $p = 0.002$) and respectful treatment by staff ($OR = 1.86$, $p = 0.011$) significantly influenced healthcare utilization. Socio-economic conditions, including higher education levels ($OR = 1.854$, $p < 0.001$) and stable employment ($OR = 2.776$, $p = 0.007$), were strongly associated with an increased likelihood of facility-based deliveries. Awareness of government initiatives, such as the Linda Mama program, was low, with 210 (53.03%) of respondents unaware of these programs, which contributed to the preference for home deliveries. Qualitative insights supported these findings, emphasizing deeply rooted cultural norms, mistrust in government healthcare services, and financial constraints as key barriers. Significant variables in the multivariate analysis included religion, number of home deliveries, family's cultural beliefs, cultural practices discouraging facility delivery, traditional ceremonies, unavailability of essential medications, sufficient health workers, long waiting times, and access to information. The study concluded that an integrated approach addressing cultural, socioeconomic, and healthcare access barriers is crucial for promoting safer delivery practices. Recommendations include improving healthcare infrastructure, integrating TBAs into the formal healthcare system, providing targeted financial support, and enhancing communication strategies to build trust in government health programs.

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ABBREVIATIONS AND ACRONYMS

ANC	Antenatal Care
CI	Confidence Interval
FGD	Focus Group Discussion
HSM	Health Systems Management
KDHS	Kenya Demographic and Health Survey
KNBS	Kenya National Bureau of Statistics
LMICs	Low and Middle-Income Countries
MCH	Maternal and Child Health
MDGs	Millennium Development Goals
MMR	Maternal Mortality Rate
MOH	Ministry of Health
NACOSTI	National Commission for Science, Technology and Innovation
NCPD	National Council for Population and Development
OR	Odds Ratio
SDGs	Sustainable Development Goals
SPSS	Statistical Package for the Social Sciences
TBA	Traditional Birth Attendant
WHO	World Health Organization

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Maternal and child health is a critical determinant of socioeconomic development and a top priority on the global health agenda (World Health Organization [WHO], 2018). Although most pregnancies are uncomplicated, maternal morbidity and mortality remain problematically high worldwide. This concern is central to international frameworks like the Sustainable Development Goals (SDGs) and Kenya's Vision 2030. Specifically, SDG 3 aims to reduce the global maternal mortality ratio (MMR) to less than 70 per 100,000 live births and ensure universal access to sexual and reproductive healthcare services. Promoting skilled birth attendance and facility-based delivery is imperative for achieving these targets and securing the health of women and children (United Nations [UN], 2015). Home births, defined as deliveries occurring outside healthcare facilities without skilled attendance, are associated with increased risks of complications for both mothers and infants, making the promotion of facility-based care a key public health objective. The persistence of home deliveries, particularly in regions with high MMR, directly challenges the achievement of these global and national commitments to health equity and safety.

Globally, significant disparities in maternal health outcomes persist, illustrating a clear divide between developed and developing nations. In 2013, the MMR in developing regions was 14 times higher than in developed regions, with Sub-Saharan Africa bearing the heaviest burden at 510 deaths per 100,000 live births. While the global MMR decreased by 45% between 1990 and 2013, over half of the estimated 830 daily maternal deaths occur in sub-Saharan Africa, highlighting profound and persistent health inequities (WHO, 2015). This gap is largely driven by limited access to prenatal care and skilled birth attendance in resource-poor settings (Ahmed et al., 2018). The substantial difference between the MMR of industrialized countries (16) and that of developing nations (240) underscores the vast need for improved healthcare infrastructure and services in the global south, with Sub-Saharan Africa requiring the most urgent and targeted interventions to avert preventable deaths.

Within Kenya, maternal mortality remains a severe challenge that undermines national development. The country's 2014 MMR was 495 maternal deaths per 100,000 live

births, with nearly half of these deaths occurring during delivery. The 2010 Kenyan constitution recognizes access to reproductive and emergency medical care as a fundamental human right, and reducing maternal mortality was a key target of both the Millennium Development Goals and Kenya Vision 2030. However, deep-rooted health system barriers—such as long distances to facilities, unaffordable services, and limited operating hours—impede access to timely care. Furthermore, powerful sociocultural factors significantly influence maternal care-seeking behaviors, often leading to a preference for home births assisted by traditional attendants instead of skilled health personnel (National Council for Population and Development [NCPD], 2015). These complications of pregnancy and childbirth remain leading causes of death and disability among Kenyan women.

Marsabit County exemplifies Kenya's most acute maternal health crises, representing a context where global and national challenges converge with extreme local severity. The county accounted for 98.7% of maternal deaths reported in a 2014 national assessment, a figure that underscores its outlier status. Its vast, remote, and predominantly rural geography exacerbates pre-existing health system weaknesses, including critical shortages of healthcare workers and infrastructure. Consequently, home deliveries are exceptionally common, with only 44.4% of births occurring in health facilities as of 2017 (Kenya Demographic and Health Survey [KDHS], 2022). This context of extreme marginalization and chronically weak health service delivery creates a unique environment where the factors influencing delivery choices are likely complex and deeply embedded in the local culture and logistical realities, demanding specific investigation.

1.2 Statement of the Problem

The persistent high incidence of home deliveries in rural Marsabit County, Kenya, constitutes a pressing public health concern. Despite concerted government efforts to promote institutional deliveries through policies like free maternity services and the Linda Mama program, a significant proportion of women continue to opt for home deliveries, often facilitated by traditional birth attendants (Njuki et al., 2023; Mulinge, 2017). This trend is alarming given that Marsabit County's maternal mortality ratio (MMR) of 1,127 per 100,000 live births is over three times the national average of 362 (WHO, 2019; KDHS, 2022). Most maternal and neonatal deaths in such contexts arise from deliveries outside health facilities without skilled attendance (Njuguna et al.,

2017). The county's health system faces severe constraints, with only one doctor per 63,825 people and one nurse per 1,868 (Policy Strategy and Health Plan, 2016). While facility delivery rates have improved from 29.2% in 2013 to 44.4% in 2017, they remain critically low (KDHS, 2022; Ministry of Health, 2018). The continued preference for home delivery indicates that profound social, cultural, economic, and health system barriers are not being adequately addressed by current interventions. Therefore, this study seeks to comprehensively investigate the prevalence and multifaceted factors—including cultural practices, healthcare access, socioeconomic conditions, and awareness of government initiatives—that influence the preference for home deliveries in Marsabit County. The findings are pivotal for designing targeted, effective policies to improve maternal and neonatal health outcomes in this marginalized region.

1.3 Purpose of the Study

The purpose of this study was to investigate the prevalence of and the multifaceted factors that underlie the phenomenon of home deliveries in the rural regions of Marsabit County, Kenya.

1.4 Study Objectives

1.4.1 Broad objective

To determine the prevalence of and Factors Influencing preference for Home Deliveries in Rural Areas of Marsabit County

1.4.2 Specific Objectives

1. To determine the prevalence of home deliveries among women of reproductive age in rural Marsabit County.
2. To examine the influence of cultural practices on the choice of home deliveries in Marsabit County.
3. To determine the effect of health-facility-related factors on the choice of home deliveries in Marsabit County.
4. To assess the influence of socio-economic factors on the choice of home deliveries in Marsabit County.
5. To evaluate the influence of knowledge of government initiatives on the choice of home deliveries in Marsabit County.

1.5 Research Questions

1. What is the prevalence of home deliveries among women of reproductive age in rural Marsabit County?
2. What cultural practices and beliefs are prevalent in rural Marsabit County that impact the decision to have a home delivery?
3. What are the key health-facility related factors, such as distance to healthcare facilities and facility infrastructure, affecting the choice of home deliveries?
4. What socio-economic factors, including income levels and health insurance coverage, are associated with a higher likelihood of home deliveries in rural Marsabit County?
5. What is the influence of knowledge of government initiatives on the choice of home deliveries in Marsabit County?

1.6 Justification of the Study

This study addresses the critical public health challenge of home deliveries in Marsabit County, where maternal mortality rates remain alarmingly high despite national efforts to promote facility-based births. The county's maternal mortality ratio of 1,127 per 100,000 live births dramatically exceeds the national average of 362, highlighting a severe health disparity that demands immediate investigation (WHO, 2019; KDHS, 2022). This persistent crisis underscores the failure of existing interventions to adequately address the complex, context-specific barriers that prevent women from accessing skilled delivery care. Understanding why women continue to choose home deliveries despite known risks is essential for developing effective, targeted strategies to reduce preventable maternal deaths in this marginalized region. The findings of this research will provide crucial evidence to bridge this knowledge gap and inform more responsive maternal health policies.

The significance of this investigation extends beyond documenting the prevalence of home deliveries to analyzing the interconnected factors that sustain this practice. Previous research has identified various contributors, including geographical isolation, financial constraints, inadequate health infrastructure, and deeply rooted cultural traditions (Njuki et al., 2015; Njuguna et al., 2017). However, a comprehensive analysis of how these factors interact within Marsabit's unique socio-cultural context remains

lacking. This study fills this void by systematically examining the demographic, cultural, and health system determinants that influence delivery choices. The resulting evidence will enable policymakers to design interventions that are both culturally appropriate and strategically targeted, ultimately contributing to improved maternal and neonatal health outcomes in this underserved population.

1.7 Limitations of the Study

This study, while endeavoring to shed light on the factors influencing preference for home deliveries in rural areas of Marsabit County, was not without its limitations. The cross-sectional design employed restricted the establishment of causality and failed to capture temporal changes. Additionally, the study's focus on Marsabit County limited the generalizability of findings to broader Kenyan contexts. Furthermore, potential recall bias in self-reported data and challenges related to data accessibility, completeness, and accuracy affected the robustness of the analysis. Despite these limitations, this research endeavored to provide valuable quantitative insights into a pressing public health issue, acknowledging the necessity of considering these constraints in the interpretation of its findings.

To address the challenges inherent in this study, several scientific approaches were employed to enhance its credibility. Firstly, to mitigate the limitation of the cross-sectional design and potential recall bias, a mixed-methods approach was considered. This involved complementing the quantitative data collection with qualitative interviews or focus group discussions, allowing for a more comprehensive exploration of the sociocultural factors influencing home deliveries. Qualitative data provided nuanced insights into the lived experiences and decision-making processes of women in rural Marsabit County, offering a deeper understanding of their choices.

Secondly, to enhance the generalizability of findings beyond Marsabit County, a stratified random sampling technique was employed. This approach ensured that participants were selected from various sub-regions within the county, reflecting its diversity. Additionally, the study compared its results with existing literature on home deliveries in other Kenyan counties, enabling broader insights into regional variations. Furthermore, rigorous data validation and verification processes were considered to improve data accuracy and completeness, ensuring the reliability of findings. Robust statistical analyses and peer review further bolstered the credibility of the study,

promoting confidence in the research outcomes. Data collection utilized generally accepted study indicators used in similar studies in Kenya and beyond. These scientific approaches collectively addressed the study's limitations and contributed to the overall credibility of the research.

1.8 Delimitation of the Study

As a cross-sectional mixed-methods study exploring maternal health choices in Marsabit County, Kenya, this research faced limitations, including potential recall bias, restrictions on determining causality, and limited generalizability outside the specific study context. However, several strategies were employed to mitigate these challenges. Rigorous qualitative data collection through in-depth interviews and focus groups complemented the quantitative findings, offering deeper insights into the sociocultural factors influencing women's delivery choices. Strategic sampling techniques, such as stratified random sampling across diverse sub-regions of Marsabit County, bolstered generalizability and representativeness. Comparing results to similar studies in other Kenyan counties elucidated broader regional variations and patterns. Additionally, validated data collection tools and analytical methods improved accuracy and reliability, while data triangulation across multiple sources further strengthened robustness. Peer review and transparency in documenting study procedures promoted research quality. While acknowledging inherent constraints, this study leveraged a mixed-methods approach, strategic sampling and data collection protocols, and rigorous comparative analyses to extract meaningful insights into maternal health-seeking behaviors in underserved rural Kenyan communities. Addressing challenges through these deliberate methodological choices and transparency in reporting limitations strengthened the overall credibility and utility of the findings.

1.9 Significance of the Study

Pregnancy and childbirth complications are leading contributors to maternal mortality and morbidity globally, with disproportionate risks in low- and middle-income countries (World Health Organization, 2019). This study aimed to determine the prevalence of and factors influencing home childbirths in Marsabit County, Kenya. Information on home birthing practices and motivations was needed to guide context-appropriate interventions promoting skilled facility-based deliveries and the uptake of existing maternal health services. Quantifying and characterizing home deliveries in

Marsabit County provided locally specific data to address the substantially higher maternal mortality compared to national estimates (National Council for Population and Development, 2015). The study findings may also inform maternal health provision strategies in demographically similar high-risk regions of Kenya. Ultimately, generating evidence-based insights on maternal care-seeking behaviors and access barriers can enable targeted solutions to reduce preventable pregnancy- and childbirth-related deaths and disabilities in this marginalized population. Women worldwide may benefit from this research, as it identifies the factors influencing the frequency of home births. The results could be utilized by the County Government of Marsabit to determine the prevalence of women giving birth at home. Additionally, the findings from this study will be valuable to policymaking organizations like the Ministry of Health, who may use them to craft policies that ensure safer births in the future. Finally, the study's results will help fill the knowledge gap regarding the causes of home births in Kenya.

1.10 Assumptions of the Study

This study assumed that participation rates would be adequate and timely among the target population, with respondents expected to engage honestly and to the best of their abilities in all data collection procedures. It was also assumed that the composition and parameters of the study population would remain sufficiently stable throughout the timeframe so that findings would maintain relevance and generalizability. Furthermore, all research instruments and protocols implemented were assumed to be appropriately designed and validated to optimize response rates and data quality needed to achieve the intended study objectives.

1.11 Operational Definition of Terms

Prevalence of home deliveries: Prevalence refers to the proportion or percentage of a specific condition or event within a population. In the context of this study, "prevalence of home deliveries" refers to the percentage of women in rural Marsabit County who give birth at home without the assistance of skilled healthcare professionals, within a specified period, such as the past year.

Cultural practices and beliefs: Cultural practices and beliefs encompass customs, rituals, traditions, and values that are characteristic of a particular group or community. In this study, "cultural practices and beliefs" pertain to the specific customs, traditions,

and belief systems prevalent in rural Marsabit County that influence the choice of home deliveries. This includes practices related to childbirth, traditional birth attendants, and cultural norms regarding delivery locations.

Health-facility related factors: Health-facility related factors encompass various aspects of healthcare facilities, including accessibility, quality of care, infrastructure, and availability of skilled healthcare professionals. In the context of this research, "health-facility related factors" denote the specific attributes and conditions of healthcare facilities in rural Marsabit County that impact a woman's decision to deliver at home. This includes factors such as distance to the nearest healthcare facility, facility infrastructure, hours of operation, and the availability of trained healthcare personnel.

Socio-economic factors: Socio-economic factors refer to the social and economic conditions that influence individuals' access to resources, including income, education, and employment. In this study, "socio-economic factors" encompass the economic status, educational level, employment status, and access to health insurance among women in rural Marsabit County.

These factors are examined in relation to their influence on the choice of home deliveries.

Awareness of the Linda Mama Initiative: Awareness refers to the knowledge or consciousness of a specific program, policy, or initiative among a target population. "Awareness of the Linda Mama Initiative" in this research denotes the extent to which women in rural Marsabit County are informed about the Linda Mama Initiative, a government healthcare program aimed at providing free maternity services. This includes knowledge of its objectives, benefits, availability and how this awareness influences maternal delivery choices.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter contains an overview of studies and status of maternal health care, challenges facing proper implementation and key actions taken on the same from different perspectives. The chapter also gives a brief review of the theoretical framework, a conceptual framework and the relationship between independent variables and the dependent variable.

2.2 Prevalence of Home Delivery

The prevalence of home delivery presents a stark geographic disparity, reflecting profound global inequities in healthcare access and socioeconomic development. Globally, the practice remains significant in low and middle-income countries, with a comprehensive meta-analysis of 880,345 women across 67 nations establishing a pooled prevalence of 28% (Hernández-Vásquez et al., 2021). This statistic signifies that nearly one in three births worldwide occurs outside a formal health facility, immediately highlighting a substantial public health challenge. The concentration of these home births is not uniform, however, and is heavily skewed toward the world's most resource-constrained regions. This global overview sets the stage for understanding the broader context of maternal healthcare utilization, demonstrating that while facility-based delivery is a global norm in developed nations, a significant portion of the world's childbearing population remains without access to or chooses not to utilize skilled birth attendance, necessitating a deeper investigation into the regional hotspots where this phenomenon is most acute and detrimental to maternal and neonatal outcomes.

Zooming into the regional context, Sub-Saharan Africa consistently emerges as the epicenter of home deliveries, with recent large-scale demographic and health surveys providing robust and consistent evidence. Continental analyses reveal a home delivery prevalence ranging from 23.67% among 493,396 women across 22 countries (Tekeba et al., 2025) to as high as 30% among 180,551 women across 23 countries (Zegeye et al., 2023). This confirms that the region bears a disproportionately high burden. A more

focused review of the East African community, encompassing 126,107 women across 11 countries, found a similar prevalence of 23.68% . Crucially, these studies uncover dramatic country-level variations within the region, with rates oscillating from a low of 2.8% in Mozambique to an alarming 72.5% in Ethiopia. This vast heterogeneity underscores that while regional data is valuable for identifying broad patterns, national and sub-national contexts are critical units of analysis, as unique political, cultural, and health system factors drive local realities and necessitate targeted, rather than blanket, interventions to address the issue effectively Yayeh et al.,2025).

Within the national context of Kenya, the narrative shifts to one of documented progress juxtaposed with persistent, deeply entrenched disparities. National data indicates a commendable rise in facility-based deliveries from 43% in 2003 to 73% in 2014, reflecting concerted government efforts and policy shifts . However, this national average serves as a misleading veneer, concealing the reality in rural and marginalized regions where healthcare access remains a formidable challenge. Studies in various Kenyan counties consistently report figures that starkly contrast with the national trend. For instance, a cross-sectional study in Bungoma County found that 71% of women delivered at home, citing critical barriers such as a lack of transport, associated costs, and perceived negative staff attitudes at health facilities (Echoka et al., 2014). This demonstrates that the success of national-level policies is uneven, and significant populations are being left behind, perpetuating a cycle of high-risk births and poor maternal outcomes in specific geographic and socioeconomic pockets.

This funnel of evidence culminates in the local context of Marsabit County, which exemplifies a critical outlier where home delivery is not an exception but the prevailing norm. Evidence positions Marsabit as having one of the highest documented rates in Kenya, with a retrospective case review finding only 29.2% of deliveries occurring in healthcare facilities, implying a home delivery prevalence of approximately 70% (Njuguna et al., 2017). While marginal progress was noted with skilled birth attendance rising to 44% in 2017 (Ministry of Health [MoH], 2018), this still indicates that the majority of women in Marsabit deliver at home. The drivers are multifaceted and severe, including the county's vast remoteness, a critical lack of access to emergency obstetric care, a pronounced preference for traditional birth attendants, and cultural practices such as female seclusion

(Jalango et al., 2017; Nduba et al., 2018). The persistence of this high prevalence against the backdrop of national improvement solidifies Marsabit as a priority area for research and intervention, highlighting that the factors sustaining home delivery here are particularly potent and resilient to standard policy approaches.

2.3 Socio-Demographic Factors Associated with Home Deliveries

The decision to deliver at home is profoundly influenced by a woman's sociodemographic profile, with global research consistently identifying key predictors that create a clear risk profile. Low maternal education stands as one of the most robust determinants, as women with no or minimal formal education often possess limited health literacy and are less aware of the potential dangers associated with childbirth, thereby diminishing their perceived need for skilled attendance (Gabrysch & Campbell, 2009). Furthermore, parity plays a critical role; women with higher numbers of children (multiparity) are significantly more likely to opt for home births, a trend attributed to a sense of confidence and diminished risk perception based on previous uneventful deliveries (Mwaliko et al., 2014). Additional factors such as younger maternal age and unmarried status have also been associated with increased odds of home delivery in various global and sub-Saharan African contexts, often linked to socioeconomic vulnerability and lower autonomy (Kabakyenga et al., 2011; Gabrysch & Campbell, 2009). These factors establish a foundational understanding of the individual-level characteristics that predispose women to home delivery across diverse settings.

The influence of sociodemographic factors is clearly reaffirmed within the national context of Kenya, demonstrating that these global patterns are replicated at a country-specific level. Studies conducted in various rural regions of Kenya corroborate the international evidence, confirming that younger maternal age, being unmarried, higher parity, and lower educational attainment are all significantly associated with an increased likelihood of home delivery (Ochako et al., 2011; Obare et al., 2013). This consistency indicates that the sociodemographic gradients influencing maternal health-seeking behavior are pervasive and not easily erased by broad national policies. For instance, a woman's level of education continues to be a powerful predictor of her delivery location choice, transcending specific ethnic or regional boundaries within the country. This national replication of global trends

underscores the need for public health interventions that are sensitive to these demographic realities, targeting resources and messaging toward the most vulnerable subgroups as defined by these consistent and measurable characteristics.

In the specific local context of Marsabit County, the standard sociodemographic factors are not only present but are also intensified and deeply interwoven with a unique sociocultural and religious fabric. Research confirms that the same profiles—younger, multiparous women with low education levels—are disproportionately represented in home birth statistics within the county (MoH, 2018). However, in this pastoralist and predominantly Muslim community, the factor of religion and cultural identity ascends to a position of paramount importance. Studies highlight that religious beliefs and powerful cultural norms, such as traditions of female seclusion and a preference for birth attendants of the same gender and faith, can actively discourage or prohibit facility-based delivery (Jalango et al., 2017; Nduba et al., 2018). This suggests that in Marsabit, sociodemographic variables do not operate in a vacuum; instead, they intersect with a powerful cultural and religious system that can override other considerations, making the local expression of these factors distinct and more potent than in other parts of Kenya.

The convergence of evidence from global to local levels confirms that sociodemographic factors are fundamental drivers of home delivery, yet a critical research gap remains in understanding their complex interplay within a specific high-prevalence setting like Marsabit County. While existing studies often list these factors—such as education, parity, and religion—they frequently treat them as isolated variables. There is a pressing need for contemporary research that employs multivariate analysis to disentangle these predictors and quantify their relative influence. The crucial, unanswered question is not merely which factors are present, but how they interact; for instance, how does a woman's low education compound the influence of her religious beliefs, or does high parity outweigh the effect of a moderately improved education? Understanding these intricate intersections is essential for moving beyond a one-size-fits-all approach and developing precisely targeted interventions that address the specific combinations of sociodemographic risk most prevalent among women in Marsabit County.

2.4 Cultural Practices and Home Deliveries

2.4.1 Cultural Norms Related to Childbirth

Across cultures globally, traditions and belief systems related to pregnancy and childbirth exert strong influences over maternal healthcare behaviors and decisions. A growing body of research has investigated how cultural norms and traditional practices influence women's choice of delivery location, particularly in rural and developing contexts (Shimpuku et al., 2018; Sialubanje et al., 2017). In many traditional societies, home is viewed as the culturally appropriate and safe space for giving birth, often facilitated by female relatives, traditional birth attendants, or traditional healers (Shimpuku et al., 2018; Sipsma et al., 2013). Qualitative research in Zambia by Sialubanje et al. (2017) revealed home was seen as enabling women to maintain privacy during labor while adhering to cultural confinement rituals post-birth. Traditions of seclusion, modesty, and restriction of mobility for pregnant and postpartum women also discouraged facility deliveries (Jalango et al., 2017; Nduba et al., 2018).

The central role of family members and community networks in providing practical, emotional, and spiritual support predisposes many women towards home deliveries (Shiferaw et al., 2013; Ngomane & Mulaudzi, 2012). In many cultures, relatives hold authority over decision-making regarding place of delivery (Kabakyenga et al., 2011)

Research in rural Tanzania found husbands and mothers-in-law often insisted on home births to avoid costs or modify traditional birth practices at facilities (Mselle et al., 2019). Fear of family disapproval can thus compel home deliveries.

Strong cultural reliance on traditional birth attendants further promotes home births. A systematic review by Bohren et al. (2014) highlighted how traditional birth attendants were seen as culturally competent and respectful, compared to perceptions of inadequate or demeaning care at facilities. Trust in traditional methods also reduced perceptions of risk associated with home births (Shiferaw et al., 2013; Worku et al., 2013). Traditional practices applied during home births like use of herbs and ritual care acts provide psychological reassurance for women (Ngomane & Mulaudzi, 2012; Shimpuku et al., 2018).

In many cultures, spiritual beliefs and rituals surround childbirth, often tied to home delivery preferences. A study in rural Kenya found women viewed pregnancy as a test by God, making facility interventions seem inappropriate (Okemwa et al., 2020). Spiritual rituals and ceremonies conducted before, during, and after delivery also necessitate home births (Okemwa et al., 2020; Worku et al., 2013).

While home births are culturally valued, evidence indicates many women actually prefer facility deliveries for perceived safety, but are compelled by norms to deliver at home (Bohren et al., 2014). As Sialubanje et al. (2017) observed in Zambia, traditions were not always static or unanimously agreed upon. Some women covertly sought skilled delivery care despite familial disapproval.

2.4.2 Traditional Birth Attendants' Role in Childbirth

Globally, traditional birth attendants (TBAs) have played an important role in providing maternal and child healthcare, especially in rural and remote communities where access to facilities is limited. However, their role has evolved over the past few decades. Previously, TBAs attended the majority of births in low-income contexts, but there has been a policy shift toward skilled facility-based care (Adegoke et al., 2012). Still, TBAs continue to play a significant role in many regions including subSaharan Africa. For example, in Nigeria nearly 60% of rural women deliver with a TBA.

In Kenya, national policies advocate for skilled birth attendance, yet over 20% of deliveries are still overseen by TBAs (Duba et al., 2021). Their services are especially utilized in pastoralist communities where geographic, financial and sociocultural barriers persist in accessing formal maternal care (Kaprom et al., 2024). For instance, a study in Turkana County found 70% of women preferred TBAs due to difficulties reaching health facilities (Echoka et al., 2013). TBAs are also integrated into the cultural birthing practices of many pastoralist tribes. Their skills, expertise, and adherence to traditional customs continue to be valued (Kiprono et al., 2020). However, concerns exist regarding unsafe practices by untrained TBAs contributing to maternal and newborn risks.

To improve outcomes, there have been initiatives to build stronger partnerships between TBAs and the formal health system through training, referrals, and integration. A program in West Pokot County enhanced TBA skills in clean deliveries, recognizing danger signs,

and prompter referrals, leading to significant improvements in utilization of skilled birth attendance (Chege & Okumu, 2017). Such collaborative approaches to optimize TBAs' role while reinforcing links with healthcare facilities may have merit, especially in enhancing respectful, culturally appropriate care for pastoralist women. More research is needed to evaluate effective integration of TBAs to improve maternal and newborn health in marginalized communities.

2.4.3 Influence of Community Elders and Leaders on Delivery Choices

Community power structures, particularly elders and local leaders, are decisive influences on maternal health choices in many African societies. As custodians of culture, elders often actively promote home births to ensure adherence to traditional birthing rituals and maintain social order (Gitonga, 2017; Kiprono et al., 2020). Their authority is significant; studies in Ghana and Nigeria found that elder directives could strongly dissuade facility use, with women facing social sanctions for non-compliance (Moyer et al., 2013; Sunday-Adeoye et al., 2018). This demonstrates how health decisions are deeply embedded in a community's social fabric and power dynamics.

In Kenya, local chiefs and opinion leaders wield similar influence. Their personal beliefs about childbirth can directly impact health facility utilization in their areas of jurisdiction (Mwaniki et al., 2018). In Marsabit County, prominent clan elders and chiefs are known to encourage home deliveries in line with long-standing cultural precedents, presenting a formidable barrier to the uptake of skilled birth attendance services (Jaldesa et al., 2018). This creates a situation where even if healthcare services are physically available, social resistance from influential leaders can render them inaccessible.

Addressing this requires directly engaging these leaders as partners for change. Evidence from Kenya shows that training chiefs as safe motherhood promoters can dramatically shift community norms and increase facility deliveries (Chege & Okumu, 2017). Community dialogues that bring elders, leaders, and health workers together have also proven effective in pastoralist communities (Tolhurst et al., 2012). For Marsabit, this indicates that bypassing these key influencers is ineffective; instead, interventions must strategically involve them to transform social norms and build collective support for safer delivery practices.

2.5 Influence of Health Facility Factors on Home Deliveries

Globally, the physical and perceived quality of healthcare infrastructure is a primary determinant of delivery location. Research consistently demonstrates that barriers such as long distances, high costs, and poor service quality push women towards home births. A cross-sectional study in rural Kenya found that 54% of mothers cited lack of proximity to a facility as their main reason for home delivery (Moindi et al., 2015). Similarly, a study in Nepal demonstrated that institutional delivery was significantly more likely for women who lived near a hospital (aOR: 2.15), while inadequate physical infrastructure was associated with a drastic reduction (aOR: 0.14) (Shah et al., 2015). Beyond proximity, the perceived experience of care is critical. In Ethiopia, a cross-sectional survey revealed that 21% of respondents reported impolite staff and 61.6% were dissatisfied with waiting times, highlighting how operational shortcomings deter utilization (Delibo et al., 2020). These factors collectively create an environment where home delivery is perceived as more convenient and less stressful than navigating challenging health systems.

The critical role of service quality and respectful care is further emphasized in research across multiple continents. Disrespectful treatment and a lack of privacy at health facilities are significant deterrents. A Nigerian study reported that 56% of women believed their privacy was breached by medical staff during care (Okeshola & Sadiq, 2013). Furthermore, inadequate patient education during antenatal visits fails to build trust; a study found that 50% of women felt health talk duration was insufficient, and only 10% recalled learning about the dangers of home delivery (Sinkamba, 2019). This is compounded by health system inefficiencies, as noted in an Indian study where 41.3% of women using postnatal services were dissatisfied with long waiting times (Bagchi et al., 2020). These findings indicate that even when physical access is achieved, negative interpersonal experiences and inefficient services can undermine confidence in facility-based care and reinforce the preference for home-based alternatives.

Within Kenya, these global and regional facility-level barriers are acutely present and well-documented. Geographic inaccessibility remains a paramount challenge, particularly in rural areas. A study by Okemwa et al. (2020) quantified this, finding that each additional kilometer to a health facility increased the likelihood of home delivery by 26%. This is

exacerbated by a lack of reliable and affordable transportation (Echoka et al., 2014). Concurrently, health system limitations within facilities, including staffing shortages and inadequate supplies, result in a poor quality of care that actively discourages use. Women report fear of neglect or mistreatment by overworked personnel, making home births feel safer and more supportive (Bazant et al., 2009; Otiso et al., 2018). These factors create a dual burden of being both hard to reach and unsatisfactory to use.

In Marsabit County, the convergence of these facility-related factors reaches its peak, explaining its exceptionally high home delivery rates. The vast distances and nomadic lifestyle of the population pose an almost insurmountable geographic barrier, with a survey indicating over 70% of households travel five or more kilometers to reach care (MoH, 2018). Qualitative studies reveal that even when women reach facilities, they encounter critical limitations in infrastructure, such as a lack of beds, unreliable electricity, and space constraints that violate cultural privacy norms (Jalango et al., 2017; Nduba et al., 2018). Finally, a critical shortage of skilled birth attendants who can manage complications instills a fear of poor outcomes, eroding trust in the formal health system's technical competence. Therefore, addressing home delivery in Marsabit requires a multi-pronged strategy that simultaneously tackles physical access, infrastructure quality, and the human resource crisis.

2.6 Influence of Socio-Economic Factors on Home Deliveries

Socioeconomic status, measured through household wealth and maternal education, is a foundational determinant of maternal health-seeking behavior on a global scale. A substantial body of evidence links poverty and low educational attainment to increased rates of home delivery. Economically, the direct and indirect costs associated with facility-based delivery—including transport, service fees, and supplies—present a prohibitive barrier for impoverished households. A systematic review by Gabrysch and Campbell (2009) established that household poverty is a strong predictor of home births across diverse low-income settings. Qualitative research in Tanzania elucidates that families with limited resources are forced to ration them, often prioritizing immediate needs like food over healthcare expenses (Mselle et al., 2019). This economic reality directly constrains women's choices, making cost-free home delivery the only feasible option.

The influence of maternal education is equally powerful and consistently documented worldwide. Women with minimal formal schooling often lack comprehensive health knowledge, an understanding of childbirth risks, and the autonomy to make independent health decisions. This predisposes them to opt for home births, which are the community norm. Studies in Ethiopia and Tanzania confirm that lower educational attainment correlates strongly with a reduced likelihood of skilled birth attendance (Worku et al., 2013). This pattern is reinforced at the continental level; a systematic review by Say and Raine (2007) found that a woman's wealth quintile and education level were among the strongest predictors of delivery location across multiple African countries. These factors create a socioeconomic gradient in maternal health outcomes that is pervasive across the developing world.

In the Kenyan national context, demographic and health surveys consistently mirror these global and continental trends. There is a stark disparity in service utilization based on wealth and education. National data indicates that women in the lowest wealth quintile have nearly six times higher odds of a home delivery compared to those in the highest quintile (KNBS et al., 2015). Similarly, women with only a primary education or less are significantly more likely to deliver at home than their counterparts with secondary or higher education (Okemwa et al., 2020; Otiso et al., 2018). This demonstrates that despite national policies promoting free maternity care, underlying socioeconomic inequalities continue to drive significant disparities in who can access and benefit from these services, perpetuating a cycle of disadvantage.

The compounding effect of poverty and low education is most severe in marginalized regions like Marsabit County, resulting in some of the nation's lowest facility delivery rates. The remote, nomadic communities face extreme resource constraints, where the ability to absorb even indirect costs like transportation or lost income during a facility stay is minimal (Nduba et al., 2018). Concurrently, limited access to formal education contributes to low health literacy and delays in seeking care, even when complications arise (Jalango et al., 2017). In this context, socioeconomic factors are not just predictors but are fundamental conditions of life that deeply entrench the practice of home delivery. Therefore, interventions aimed at increasing skilled birth attendance in Marsabit must

integrate financial support mechanisms and targeted female education initiatives to address these root causes of inequity.

2.7 Awareness of Government Initiatives

Awareness of maternal health programs and policies is a pivotal factor influencing utilization of skilled delivery care globally. A growing body of research has examined how awareness of fee exemption policies influences women's choices of delivery location in developing contexts. On a global scale, lack of awareness regarding maternal health programs and reduced or free services has been identified as a significant barrier to skilled delivery care (Kruk et al., 2014; Witter et al., 2019). A systematic review by Dzakpasu et al. (2014) found fee exemption policies alone failed to raise facility births without complementary awareness raising. Targeted information campaigns are essential to disseminate program details to women and families (Kruk et al., 2014).

In Kenya, the government introduced the Linda Mama program in 2013 to provide free maternity services at public health facilities with the aim of increasing skilled attendance at birth (Ministry of Health, 2018). Initial evaluations showed low awareness and uptake, indicating the need for improved public information campaigns (Wanjau et al., 2013). After nationwide promotional activities through media and community health volunteers, over 90% of women had heard about the program by 2018 (Kimani et al., 2020). Several studies have examined the influence of Linda Mama awareness on facility delivery rates. In Bungoma County, Malonza et al. (2017) found awareness of the program was significantly associated with giving birth in a health facility rather than at home. However, qualitative data revealed persisting knowledge gaps regarding program eligibility criteria and scope of free services covered.

Similar trends were observed in surveys of women in rural Makueni and Nairobi counties, where awareness of the Linda Mama initiative was correlated with higher likelihood of facility-based delivery, but comprehensive understanding remained inadequate (Omolo et al., 2018; Wanjiru et al., 2018). Targeted community-based education was recommended to address knowledge gaps. Regarding Marsabit County, limited research exists on awareness of the Linda Mama program. A healthcare access survey indicated approximately 37% of women had heard about the free maternity policy, with lower

awareness among nomadic communities. Qualitative studies emphasize lack of information regarding the program's benefits as a key barrier to facility deliveries in the region (Jalango et al., 2017; Nduba et al., 2018). Overall, while Kenya has implemented nationwide promotional activities, gaps persist in awareness of the Linda Mama initiative, particularly among remote and marginalized populations. This contributes to underutilization of skilled delivery care. Enhanced, targeted efforts to raise awareness through community health volunteers and media are essential to realize the full benefits of the program in increasing facility-based births and reducing maternal mortality.

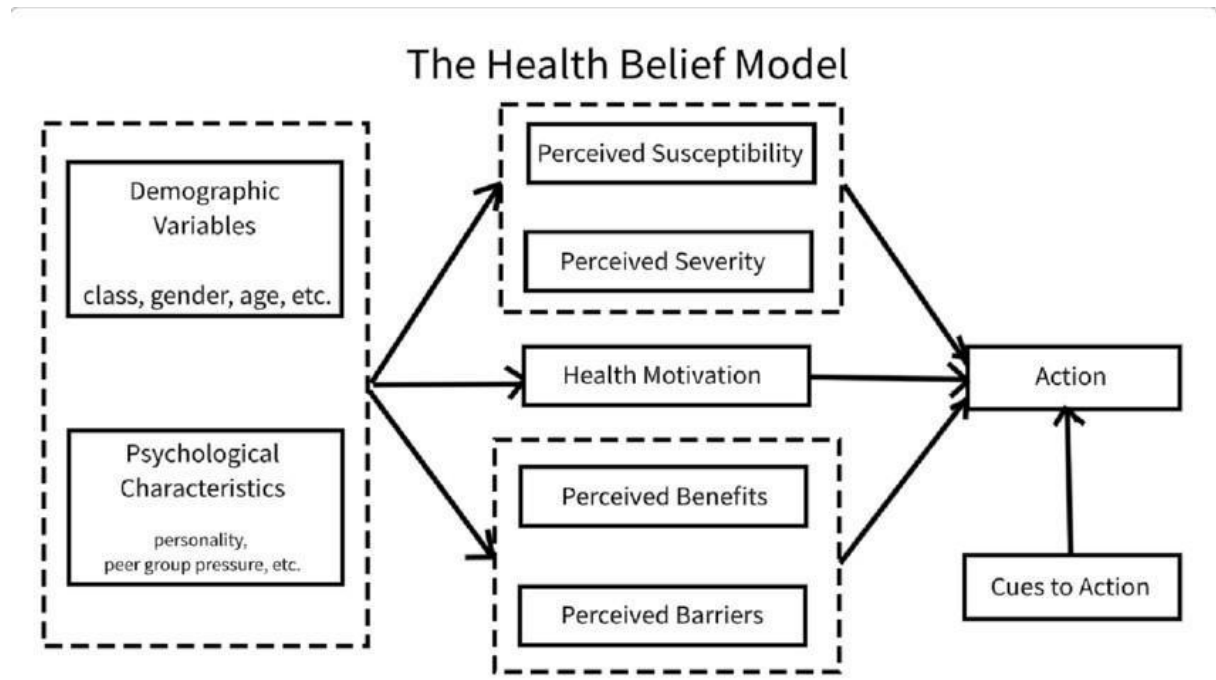
2.8 Theoretical Framework

This study is anchored in the Health Belief Model (HBM) as its core theoretical framework. The HBM provides a structured lens for understanding health-seeking behaviors by positing that individuals' actions are determined by their perceptions of a health threat and the corresponding course of action. This model is particularly apt for investigating the choice between home and facility delivery, as this decision fundamentally involves a woman's assessment of the threats associated with childbirth and the perceived value of the available medical intervention.

Within this framework, the study variables are conceptually mapped to the core constructs of the HBM. The decision to deliver at a health facility is the recommended health behavior. The perceived severity is the risk of maternal or neonatal complications, and perceived susceptibility is a woman's belief in her personal vulnerability to these complications. The perceived benefits are the advantages of skilled attendance and emergency care at a facility, while the perceived barriers encompass the independent variables of this study: Cultural Practices and Beliefs, Socio-Economic Factors, and Health Facility-Related Factors, which represent the tangible and psychological obstacles to facility use. Furthermore, cues to action are operationalized as the Awareness of Government Initiatives, such as the Linda Mama program, which are designed to trigger and enable the desired behavior. By integrating these variables into the HBM, this research moves beyond a theoretical review to apply a predictive model that explains how perceptions, shaped by cultural, economic, and systemic contexts, culminate in the dependent variable—the choice of delivery location.

Figure 2.1

The Health Belief Model



2.9 Conceptual Framework

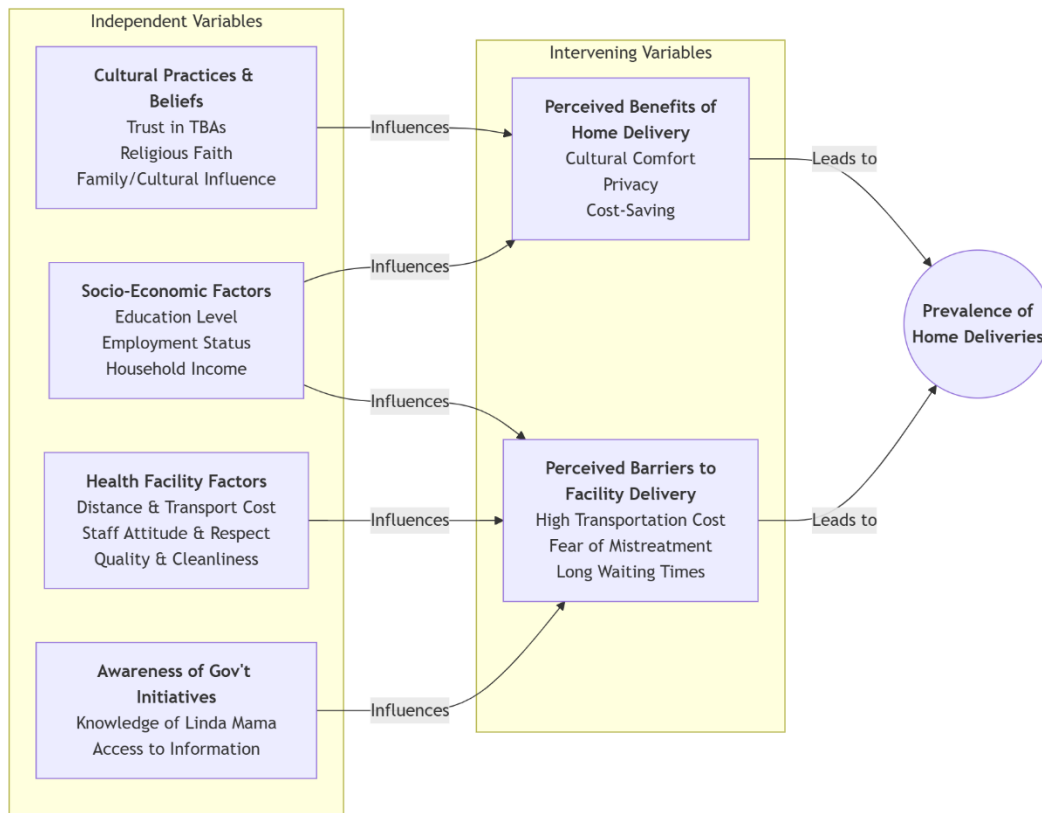
This study is guided by a conceptual framework that explains the determinants of home delivery prevalence through a sequence of variables, as depicted in Figure 2. The model begins with four independent variable categories that constitute the primary factors under investigation. These are Cultural Practices and Beliefs, Socio-Economic Factors, Health Facility-Related Factors, and Awareness of Government Initiatives. These exogenous variables encompass specific indicators such as trust in Traditional Birth Attendants, household income levels, geographical distance to health facilities, and knowledge of maternal health programs.

The framework posits that these independent variables exert their influence on the dependent variable—the Prevalence of Home Deliveries—through two critical intervening mechanisms. The first is the Perceived Benefits of Home Delivery, which is shaped by cultural and socio-economic factors. The second is the Perceived Barriers to Facility

Delivery, which is amplified by structural health system challenges and a lack of awareness of supportive initiatives. The central proposition of this model is that the independent variables work by strengthening the perceived advantages of home births or by heightening the perceived obstacles to facility-based care. The culmination of this evaluative process is the individual's decision on delivery location, thereby determining the overall prevalence rate in the community.

Figure 2.2

Conceptual Framework



CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter delves into the comprehensive methodology employed in the pursuit of understanding the multifaceted factors influencing home deliveries in the rural landscapes of Marsabit County, Kenya. An astute research design, systematic data collection procedures, and robust analytical techniques are the cornerstones of any meaningful research endeavor. This chapter expounds upon the research design, sampling techniques, data collection instruments, and analytical strategies that guide this study. The fusion of quantitative and qualitative approaches is elucidated, offering a holistic perspective on the phenomena under investigation. The quest to unravel the complexities surrounding home deliveries requires a methodological framework that captures the quantitative trends and the nuanced narratives of the women experiencing this critical aspect of reproductive healthcare. This chapter serves as a blueprint for the systematic inquiry into the intricate web of factors influencing home deliveries in Marsabit County.

3.2 Research Design

This study employed a descriptive cross-sectional mixed-method research design, integrating both quantitative and qualitative approaches, to comprehensively investigate the factors influencing preference of home deliveries in rural Marsabit County, Kenya. The quantitative phase involved structured questionnaires administered to a sample of women of reproductive age, enabling the assessment of prevalence rates and quantitative relationships among variables, including cultural practices, socio-economic factors, healthcare facility-related factors, and awareness of government initiatives. In contrast, the qualitative phase utilized in-depth interviews and focus group discussions to capture nuanced insights into the experiences and perceptions of women who had undergone home deliveries, shedding light on the cultural, social, and contextual dimensions of this phenomenon. The integration of quantitative and qualitative findings provided a holistic understanding of the complex factors at play in maternal delivery choices, contributing to more informed policy recommendations and interventions in maternal healthcare. Given

that the quantitative arm was the primary aspect, supported by the qualitative design for additional explanations, this study design is best described as explanatory sequential.

3.3 Study Site

The study was conducted in Marsabit County, a vast and remote region in northern Kenya characterized by an arid and semi-arid landscape. According to the 2019 national census, the county spans 70,961.2 square kilometers and had a population of 459,785, resulting in a low population density of approximately 6 persons per square kilometer (KNBS, 2019). The county's health infrastructure is critically under-resourced, with a severe shortage of healthcare workers; the doctor-to-population ratio stands at approximately 1:63,825, and the nurse-to-population ratio at 1:1,868 (Marsabit County CIDP, 2018-2022). Maternal health services are particularly strained, with few facilities equipped to provide comprehensive emergency obstetric care. Geographical access remains a primary barrier, as over 70% of households reside more than five kilometers from the nearest health facility, a distance often compounded by a lack of affordable transportation (MoH, 2018). The study focused on the rural sub-counties of Saku and North Horr to investigate maternal health decisions in communities most affected by these systemic and geographical constraints (Appendix 5).

3.4 Target population

The target population for this study consisted of women of reproductive age (WRA)—defined as those between 15 and 49 years—who were residents of the selected rural sub-counties in Marsabit County. This demographic represents the primary decision-makers regarding childbirth location and is disproportionately impacted by the documented gaps in the local health system. To gain a multi-faceted understanding of the factors influencing delivery choices, the study also engaged key informants who play pivotal roles in the maternal health landscape. These included community health workers, who serve as a bridge between the formal health system and the community; traditional birth attendants, who remain a trusted source of delivery care in areas with limited skilled attendance; and cultural elders, who are influential in shaping community norms and practices related to childbirth. This comprehensive approach ensured that the research captured both the lived

experiences of women and the contextual insights of key stakeholders, providing a holistic view of the determinants of home delivery in this underserved region.

3.5. Sampling Size Determination

The sample size was determined using the Yamane (1967) formula for calculating proportions. As below:

$$n = \frac{N}{1 + N(e)^2}$$

Where n is the sample size, N is the population size, and e is the level of precision (0.05). The number of women who delivered in the last half of 2023 in the study area is 5088, according to the records at the public health department in Marsabit county. Therefore, the sample size was calculated as follows:

$$\begin{aligned} N &= 5088 / (1 + 5088(0.05)^2) \\ &= 371 \end{aligned}$$

This sample was be adjusted upwards by 10% to factor in the possibility for non-response. Thus, the exact study sample was 408. For the qualitative arm of this study, a sample size of 10 key informants was selected based on best practices proposed in literature (Staller, 2021). Boddy (2016) propose that a sample size of 10-15 is where saturation occurs for most qualitative researches. Thus, a sample of 10 was considered fitting for the study.

3.6 Sampling Procedure

This study employed a three-stage stratified random sampling approach. In the first stage, Marsabit County was divided into four sub-counties, serving as primary strata based on the populations of each sub-county. However, this study focused only on Saku and North Horr sub-counties. In the second stage, the sample was further stratified within these sub counties based on their relative populations. Finally, simple random sampling was conducted within each sub-county stratum to select individual participants. This approach ensured that the sample was both representative of the entire rural Marsabit County and reflective of the unique characteristics within each sub-county, enhancing the study's

generalizability and enabling meaningful regional comparisons. Purposive sampling was used to select the key informants for the qualitative arm of this study (Table 1).

Table 3.1

Distribution of the sample size among the locations of the selected sub counties.

Sub County	Locations	No. of women given birth in the last 6 months or pregnant	Sample size
North Horr N=257	Gas	893	893/3165 x 257=73
	Qorqa	230	230/3165 x 257=19
	Elbeso	489	489/3165 x 257=40
	North Horr	1232	1232/3165 x 257=100
	Malabot	321	321/3165 x 257=25
	TOTAL	3165	257
Saku N=151	Sangate	598	598/1923 x 151=48
	Karare	362	362/1923 x 151=30
	Marsabit Central	923	923/1923 x 151=73
	TOTAL	1923	151

3.7 Inclusion and Exclusion Criteria

3.7.1 Inclusion Criteria

1. All Women aged 18 to 49 years, as this age range reflects the standard reproductive age group and ensures relevance to maternal health research.
2. Women who have delivered a live birth within the last six months to focus on recent delivery experiences, minimizing recall bias and aligning with the study's aim to assess contemporary maternal health conditions.

3. Women residing in the selected study areas (North Horr and Saku sub-counties, Marsabit County) to ensure data specificity and applicability to the target region.
4. Women who provide informed consent to participate in the study to maintain ethical research practices by securing voluntary participation from all respondents.

3.7.2 Exclusion Criteria

1. Women with severe cognitive impairments, preventing meaningful participation, to ensure data quality by including only individuals who can understand and respond effectively to study questions.

3.8 Instrumentation

The main data collection instruments for this study comprised structured questionnaires for the quantitative arm (Appendix 2). The questionnaires for the quantitative phase were designed to gather specific numeric data, encompassing demographic details, cultural practices, socio-economic factors, healthcare facility-related information, and awareness of government initiatives. The questionnaire data employed mobile data capture technology to ease data collection and entry.

On the other hand, a semi-structured interview guide was used for the qualitative arm (Appendix 3). A structured guide was also used for the FGD (Appendix 4). The interview guides for the qualitative phase focused on eliciting in-depth narratives and insights from participants regarding their experiences and perceptions related to home deliveries, cultural influences, socio-economic dynamics, healthcare accessibility, and the impact of government initiatives. These instruments were meticulously crafted to ensure that both arms of the study effectively captured the diverse factors and dimensions shaping maternal delivery choices in rural Marsabit County.

3.9 Methods/Procedures of Data collection

3.9.1 Quantitative Data Collection

In the quantitative arm of this study, data were collected through structured questionnaires administered to WRA in rural Marsabit County. These questionnaires were carefully designed to elicit specific information related to factors influencing home deliveries. The questionnaires were transformed into an online data collection tool using Kobo Toolbox to

be administered by trained research assistants using mobile phones or tablets. Community Health Workers (CHWs) were selected as research assistants to administer the questionnaires. The quantitative approach allowed for the systematic collection of numerical data, enabling the assessment of prevalence rates, relationships among variables, and the statistical analysis required to address the research objectives. All these were conducted in August 2024.

A team of research assistants, primarily comprised of Community Health Workers (CHWs), was rigorously trained to ensure the quality and consistency of data collection. The training focused on the ethical principles of research, including obtaining informed consent and ensuring participant confidentiality and privacy. They were thoroughly familiarized with the structured questionnaire and practiced using the Kobo Toolbox mobile data collection platform to minimize technical errors. Furthermore, the training equipped them with standardized techniques for approaching participants, asking questions neutrally without leading respondents, and accurately recording both quantitative and qualitative responses in the field. This preparation was essential for maintaining data integrity and reliability throughout the study.

3.9.2 Qualitative Data Collection

In the qualitative arm of the study, data were gathered through in-depth interviews with a subset of participants who had firsthand experience with home deliveries. These interviews and focus group discussions (FGDs) provided a platform for participants to share their experiences, perceptions, and narratives related to the cultural, social, and contextual factors influencing their choice of delivery location. The qualitative data collection was guided by open-ended questions, facilitating rich and context-specific insights into the multifaceted determinants of home deliveries. All these were conducted in August 2024.

3.10 Operationalization of Study Variables

The operationalization of variables in this study involved using a combination of categorical responses for demographic indicators and a 1-3 scale (1 = No, 2 = Not sure, 3 = Yes) for assessing the influence of cultural practices, health-facility-related factors, and awareness of government initiatives. This structured approach allowed for a clear, quantifiable measurement of the variables, facilitating both descriptive and inferential

statistical analyses. This operationalization was crucial in identifying significant predictors and understanding the interplay between cultural, socio-economic, and health-related factors in maternal healthcare decisions. Table 2 below gives an outline of how each variable was operationalized.

Table 3.1*Operationalization of Study Variables*

Variable	Type	Indicator	Operationalization	Type of Data
Home Deliveries	Dependent	Prevalence of maternal home deliveries	Percentage of women who delivered at home, measured through direct questioning	Discrete
Cultural Practices and Beliefs	Independent	Influence of cultural beliefs on childbirth choices	1–3 scale (1 = No, 2 = Not sure, 3 = Yes) to determine the influence of cultural beliefs on delivery choices	Discrete
Health Facility Related Factors	Independent	Perception of healthcare facility quality	1–3 scale (1 = No, 2 = Not sure, 3 = Yes) to assess factors such as long waiting times, adequacy of medical equipment, and respectfulness of staff	Discrete
Socio-Economic Factors	Independent	Demographic indicators (education level, employment status, household income)	Categorical responses under demographics section, indicating education level, employment status, and income level	Discrete
Awareness of Government Initiatives	Independent	Awareness and understanding of government healthcare programs	1–3 scale (1 = No, 2 = Not sure, 3 = Yes) to gauge awareness and understanding of programs like Linda Mama and Beyond Zero	Discrete

3.11 Methods of Data Analysis.**3.11.1 Quantitative Data Analysis**

Continuous data collected, such as age, were categorized into relevant categories based on similar previous publications. The quantitative data collected through structured questionnaires were subjected to rigorous analysis. Descriptive statistics, including frequencies, percentages, and means, were utilized to summarize the demographic

characteristics of the study participants. Inferential statistical techniques, such as regression analysis, were employed to examine relationships between the dependent and independent variables. Specifically, logistic regression models were used to assess how cultural practices, socio-economic factors, healthcare facility-related factors, and awareness of government initiatives influenced preference for home deliveries. This method was selected because the dependent variable, place of delivery, is dichotomous in nature (i.e., coded as 1 = home delivery and 0 = facility delivery), making logistic regression the most appropriate model for estimating the probability of an outcome that takes one of two values.

Binary logistic regression is especially suited for assessing relationships between a binary outcome and a combination of categorical and continuous predictor variables. In this study, it allowed for the computation of odds ratios (OR) to quantify the strength and direction of associations between the dependent variable (place of delivery) and key independent variables, which were grouped into four thematic categories: Cultural beliefs and practices, Health-facility-related factors (e.g., provider respect, waiting time, trust in skills, safety, equipment, cleanliness, transport cost), Socio-economic characteristics (e.g., marital status, education level, employment status, and religion), and Knowledge of government maternal health initiatives (e.g., awareness of programs, updates, and services). The logistic regression model produces coefficients (B), standard errors (S.E.), Wald statistics, p-values, and odds ratios. Odds ratios greater than 1 indicate increased odds of home delivery associated with the predictor, while odds ratios less than 1 indicate decreased odds. Statistical significance was assessed at the 95% confidence level ($p < 0.05$).

The analysis results are presented in according to the specific objective of the study. This structured approach allows for a clear interpretation of the relative contribution of each predictor to the likelihood of home delivery. The interpretation of these results is guided not only by statistical significance but also by theoretical understanding and contextual relevance drawn from existing empirical literature.

3.11.2 Qualitative Data Analysis

The qualitative data obtained through in-depth interviews and focus group discussions underwent thematic analysis. Open-ended responses and narratives were transcribed and systematically coded to identify recurring themes, patterns, and emergent categories. These

themes were then organized and synthesized to construct a coherent narrative of the qualitative findings. The qualitative analysis sought to elucidate the intricate cultural, social, and contextual factors influencing home deliveries, providing depth and context to complement the quantitative results. Triangulation of quantitative and qualitative findings was undertaken to enrich the overall understanding of the factors at play in maternal delivery choices in rural Marsabit County, Kenya. NVIVO software was used for this analysis in combination with manual coding.

3.12 Ethical Considerations

This research sought ethical approvals from both the Kenya Methodist University (KeMU) Institutional Ethics Review Committee (KeMU/ISERC/HSM/16/2024) (Appendix 7), Marsabit County Department of Health (Appendix 8), and a research permit from the National Commission for Science, Technology, and Innovation (NACOSTI) in Kenya (NACOSTI/P/24/38866) (Appendix 9). The study protocol, including the research objectives, methodology, and ethical considerations, was submitted for review and approval by these institutions prior to commencing data collection. By adhering to rigorous ethical standards, this research aimed to contribute valuable insights into the factors influencing home deliveries in rural areas of Marsabit County. The findings were intended to inform evidence-based interventions aimed at improving maternal health outcomes and reducing maternal mortality in the region.

In conducting this research, ethical principles were paramount to ensure the rights and well-being of participants were respected. Prior to participation in the study, all adult participants were provided with detailed information about the purpose, procedures, risks, and benefits of the research. They were given the opportunity to ask questions and express any concerns before providing written consent (Appendix 1). All personal information collected from participants was treated with strict confidentiality. Participants were assigned unique identifiers to anonymize their data in any reports or publications resulting from the study. Only authorized researchers had access to the raw data, and measures were in place to ensure data security.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the findings of the study, which aimed to explore the factors influencing home deliveries in rural areas of Marsabit County. The chapter is structured to address the study's specific objectives through both quantitative and qualitative analyses. It begins with an examination of the influence of cultural practices on the choice of home deliveries, followed by an assessment of health-facility related factors, including the quality of care, geographical accessibility, and fear of hospitals. The chapter then explores the impact of socio-economic factors, such as education level and financial constraints, on delivery choices. Finally, it evaluates the awareness and effectiveness of government initiatives aimed at promoting health facility deliveries. Each section provides detailed findings, including significant statistical results and thematic insights from interviews and focus group discussions. The statistical analyses are presented in tables whereas the thematic analysis of the interview and Focused Group Discussion Transcripts are presented in Appendix 5.

4.2 Response Rate

The quantitative arm of the study successfully targeted 408 participants and attained a total of 402 participants completing the questionnaires, resulting in a 98.52% response rate. This high level of participation is a significant strength, ensuring the data collected is both representative and comprehensive. After data cleaning, 6 participants who had no children were dropped from the analysis, reducing the final sample size to 396. These participants were excluded because it was impossible to validate if they had ever delivered, or if they had delivered and lost their children. The use of an electronic questionnaire, administered via Kobo Toolbox, was instrumental in ensuring efficient data collection. Kobo Toolbox proved particularly effective in the remote, rural settings of the study due to its ability to function well in low-bandwidth environments. For the qualitative arm of the study, a total of 10 interviews were conducted, along with 2 focused group discussions, each consisting of 6 participants. This combination of quantitative and qualitative data strengthens the overall findings of the research.

4.3 Reliability Statistics from Pre-Test

A pre-test involving 48 participants was conducted to assess the reliability of the questionnaire designed to evaluate factors influencing preferences for home deliveries. The internal consistency of the items was analyzed using Cronbach's Alpha in SPSS. The Cronbach's Alpha increased to 0.855, which is considered high and acceptable (Table 3).

Table 4.1

Questionnaire Reliability Statistics

Variable/Objective	Number of Items	Overall Cronbach Alpha	Interpretation
Overall Reliability Value	36	0.855	High/Acceptable
Cultural Practices and Beliefs	13	0.855	High/Acceptable
Health Facility Related Factors	17	0.876	High/Acceptable
Awareness of Government Initiatives	6	0.878	High/Acceptable

4.4 Geographical Distribution of Participants

In addition to collecting survey responses, the Kobo Toolbox platform was also utilized to capture geo-points for each participant. This geospatial data was subsequently used to create a detailed map of the study area, illustrating the geographical distribution of the participants. The mapping exercise provided valuable insights into the spatial patterns of health service utilization and the accessibility of healthcare facilities in the region. This approach not only enriched the data analysis but also provided a powerful tool for planning and implementing targeted healthcare interventions in the area. The map showing participants distributions is indicated in appendix 5.

4.5 Demographics of Study Participants

The demographic characteristics of the respondents revealed that the majority were aged between 30-39 years, with 158 (41.58%), followed by those aged 20-29 years, comprising 144 (37.89%). A smaller proportion fell into the 40-49 and 10-19 age brackets, accounting for 74 (18.69%) and 20 (5.26%), respectively. Regarding marital status, the vast majority were married, representing 335 (84.60%) of the respondents. In terms of education, most

respondents had no formal education, with 200 (50.00%), while 100 (25.00%) had completed primary education, 70 (17.50%) had secondary education, and only 30 (7.50%) had attained college-level education. Occupationally, 300 (75.00%) were unemployed, 50 (12.50%) were self-employed, and 50 (12.50%) were salaried employees. For religious affiliation, the majority were Muslims, 250 (62.50%), followed by Catholics, 100 (25.00%), Traditionalists, 30 (7.50%), and Protestants, 20 (5.00%). In terms of household monthly income, most respondents earned less than KSh 10,000, with 320 (80.00%) falling within this bracket, while 80 (20.00%) reported earnings between KSh 11,000-20,000 (Table 4).

Table 2.2

Summary of Socio-Demographic Variables

Variable	Particulars	Frequency	Percentage (%)
Marital Status	Married	335	84.6
	Widowed	33	8.33
	Divorced	19	4.8
	Single	9	2.27
Highest Education Level	None	291	73.48
	Primary	72	18.18
	Secondary	20	5.05
	College	13	3.28
Occupational Status	Unemployed	349	88.13
	Self Employed	44	11.11
	Salaried Employed	3	0.76
Religion	Muslim	160	40.4
	Catholic	122	30.81
	Other Religion	110	27.78
	Protestant	4	1.01
Household Monthly Income	<10,000	376	94.95

	11,000–20,000	20	5.05
Total		396	100

The analysis revealed that all respondents, 396 (100%), had children. Among these respondents, a significant proportion, 195 (49.24%), reported having between 1 to 3 children. Additionally, a notable number, 172 (43.43%), had 4 to 6 children, indicating a fairly large family size for many in the group. A smaller subset of respondents, 28 (7.07%), had 7 to 9 children, demonstrating a decrease in frequency as the number of children increases. Only one respondent (0.25%) reported having 10 or more children, making this a very rare occurrence within the sample. The data suggests that while most respondents had between 1 to 6 children, larger family sizes were less common. The total number of respondents in the study remained consistent at 396, accounting for 100% of the survey population, providing a comprehensive view of the distribution of family sizes within the group (Table 5). These findings highlight that while small to moderately sized families are typical, larger family sizes are uncommon.

Table 4.3

Number of Children per Respondent

Variable	Particulars	Frequency	Percentage
Number of Children	1-3	195	49.24
	4-6	172	43.43
	7-9	28	7.07
	10+	1	0.25
Total		396	100.00

4.6 Prevalence of Home Delivery

The data indicated that the point prevalence of home deliveries among women of reproductive age in rural Marsabit County was 64.65% ($n = 256$, 95% *CI* [59.81%, 69.49%]). The *CI* for this estimate indicates that the true prevalence in the population likely falls within this range. These findings highlight that nearly two-thirds of the respondents

opted for home deliveries during the study period. Such a high prevalence underscores the need for targeted interventions to address factors influencing the preference for home deliveries over facility-based childbirth (Table 6). When asked about the number of home deliveries, the largest proportion of respondents, 189

(55.26%), had experienced 1-3 home deliveries, followed by 110 (32.16%) who had 4-6. However, 87 (21.97%) reported to have had no home delivery. Most respondents 291(94.17%) also reported being attended by a traditional birth attendant (TBA) during their deliveries, highlighting the role of TBAs in home childbirth. Additionally, the majority of respondents believed that delivering in a healthcare facility reduced the risk of complications, reinforcing the perceived safety of institutional deliveries over home births (Table 6). This data provides insight into the prevailing childbirth practices in the community, as well as the attitudes toward healthcare facility deliveries. Interesting, the respondents seemed aware that delivering in a healthcare facility reduces the risk of complications. This shows that there is a disconnect between knowledge and practice.

Table 4.4

Birth Attendant Utilization

Variable	Particulars	Frequency Percentage	
		Frequency	Percentage
Place of Last Delivery	Home	256	64.65
	Health Facility	140	35.35
Number of Home Deliveries if you have Ever Delivered at Home	0	87	21.97
	1-3	189	55.26
	4-6	110	32.16
	7-9	10	2.92
TBA Attendance	Yes	291	94.17
	No	18	4.62
Delivering in a healthcare facility reduces the risk of complications	Yes	323	81.57
	No	73	18.43

Note: The "Number of Home Deliveries" and "TBA Attendance" statistics refer to respondents who have ever delivered at home, regardless of their most recent delivery location. Therefore, while some respondents may have delivered at a healthcare facility recently, these figures reflect their overall history of home

deliveries. Additionally, the "TBA Attendance" variable specifically applies to those who have experienced home deliveries and indicates whether a traditional birth attendant assisted during those births. This means most women have had at least one home delivery in their childbirth history and that most have also been served by a TBA at least once in the past. The percentages for "TBA Attendance" are calculated only for the women who had at least a history of home delivery.

The high prevalence of home deliveries confirmed in this study solidifies Marsabit County's status as a critical outlier within Kenya's maternal health landscape. This finding is consistent with the broader narrative established in the literature, which identifies Sub-Saharan Africa as the epicenter of home births, with rates significantly higher than the global average for low and middle-income countries (Hernández-Vásquez et al., 2021; Zegeye et al., 2023). While Kenya has made commendable progress at the national level, this success has not permeated remote pastoralist regions, where the convergence of geographic isolation, cultural practices, and a chronically weak health system perpetuates high rates of home childbirth (Njuguna et al., 2017).

The near-universal attendance by Traditional Birth Attendants (TBAs) observed in this study is a cornerstone of this phenomenon. This aligns with extensive literature documenting the trusted role of TBAs in pastoralist communities, where they are not merely a substitute for absent healthcare but are valued as culturally competent custodians of traditional birthing practices (Bohren et al., 2014; Jalango et al., 2017). As noted in similar contexts, such as rural Turkana County, the preference for TBAs persists despite national policies promoting skilled attendance, underscoring a deep-seated cultural legitimacy that formal health systems often fail to achieve (Okoth et al., 2018).

Perhaps the most telling finding is the stark disconnect between women's knowledge of the benefits of facility-based care and their actual delivery choices. This paradox underscores a critical limitation of awareness-raising campaigns alone. It demonstrates that the decision to deliver at home is not a simple information deficit but a complex calculation where powerful structural and cultural barriers—such as prohibitive transportation costs, geographical inaccessibility, and a preference for culturally-prescribed privacy—outweigh the perceived benefits of institutional care (Echoka et al., 2014; Gabrysch & Campbell, 2009). This pattern, where knowledge fails to translate into practice, is a recurrent theme

in marginalized communities across the region, as seen in studies from Ethiopia, where similar barriers prevail despite awareness efforts (Teressa et al., 2024).

The persistently high rate of home delivery in Marsabit is a symptom of multifaceted system failures. It reflects a context where the global push for facility-based births clashes with the local realities of geographic marginalization, economic constraint, and a resilient cultural ecosystem centered on TBAs. Addressing this requires moving beyond generic health education to implement targeted, multi-pronged strategies that directly tackle these entrenched geographic, economic, and cultural barriers.

4.7 Influence of Cultural Practices on the Choice of Home Deliveries

As shown in Table 7, the study revealed that opinions on cultural beliefs were divided. About half, 206 (52.02%), agreed that their cultural beliefs always influenced their decision for home childbirth, while 174 (43.94%) disagreed. Similarly, 173 (43.69%) acknowledged that their husband's cultural beliefs played a role in this decision, while

211 (53.28%) disagreed. Less than half 72 (43.43%) agreed that their family's cultural beliefs impacted their delivery choice, 186 (46.97%) indicated that their community prioritized home deliveries, 170 (42.93%) believed that cultural practices in their community discouraged women from seeking healthcare facility deliveries (Table 7). These findings highlight a clear divide in this community where although they all seem to know the advantages of health facility delivery they do not seem to agree that cultural factors play a big role in the final decision.

Table 4.5

Summary Statistics on Cultural Practices and Beliefs

Question	No	Not Sure	Yes
	n(%)	n(%)	n(%)
Do your cultural beliefs always influence your decision for home childbirth?	174 (43.94)	16 (4.04)	206 (52.02)
Do your husband's cultural beliefs always influence your decision for home childbirth?	211 (53.28)	12 (3.03)	173 (43.69)

Do your family's cultural beliefs have a direct influence on your choice of place of delivery?	209 (52.78)	15 (3.79)	172 (43.43)
Do community norms always prioritize home deliveries over hospital deliveries in your community?	181 (45.71)	29 (7.32%)	186 (46.97%)
Do cultural practices often discourage pregnant women from seeking healthcare facility deliveries in your community?	198 (50.00)	28 (7.07)	170 (42.93)
Are traditional cultural ceremonies associated with childbirth reinforce the preference for home deliveries?	160 (40.40)	19 (4.80)	217 (54.80)
Does your religious faith directly influence your decision for a place of delivery?	260 (65.66)	15 (3.79)	121 (30.56)
Do your religious beliefs encourage you to follow traditional practices during childbirth?	251 (63.38)	11 (2.78)	134 (33.84)
Do elders in your community always believe that home deliveries are more culturally appropriate than hospital deliveries?	200 (50.51)	26 (6.57)	170 (42.93)
Do elders in your community always believe that home deliveries are safer for women compared to hospital deliveries?	215 (54.29)	25 (6.31)	156 (39.39)
Do elders in your community always believe that home deliveries are less stressful for women compared to hospital deliveries?	206 (52.02)	30 (7.58)	160 (40.40)
Do you always believe that traditional birth attendants (TBAs) possess valuable knowledge and skills that make them preferable for childbirth assistance compared to healthcare facilities?	217 (54.80)	30 (7.58)	149 (37.63)
Are TBAs often considered more trustworthy and reliable than healthcare professionals for childbirth assistance in your community?	195 (49.24)	22 (5.56)	179 (45.20)
Are TBAs respected in your community for their role in childbirth?	60 (15.15)	9 (2.27)	327 (82.58)

Further, the qualitative analysis revealed a wide array of themes on the influence of cultural practices and beliefs on the choice of place of delivery. These were grouped into three main themes as cultural norms and beliefs, trust in traditional birth attendants, and cultural

practice of privacy. These were discussed in detail both in the interviews as well as focused group discussions as follows (Appendix 6). Cultural norms and beliefs play a pivotal role in shaping the decisions of many women in Marsabit County to opt for home deliveries. The deep-rooted belief that childbirth should occur within the family home, surrounded by familiar people and objects, was frequently mentioned by participants. For instance, one participant noted, "... *We believe that childbirth should happen at home, where the mother is surrounded by her family and familiar things*" (Participant 1). This sentiment was echoed by others who emphasized that: "*In our community, delivering at home is considered the right thing to do. It's how our mothers and grandmothers did it...*" (Participant 8).

Additionally, cultural practices dictate that childbirth should be kept private, away from the prying eyes of strangers, to protect the mother and baby from potential harm. A participant explained, "...*It's believed that if too many people know about it, it could bring bad luck or a bad omen to the mother and baby...*" (Participant #1). These cultural norms deeply influence the decision-making process, making home deliveries a preferred choice over hospital births, which are perceived as public and impersonal.

The trust placed in TBAs is another significant factor contributing to the preference for home deliveries. TBAs are highly respected within the community, not only for their skills and experience but also for their deep understanding of cultural practices surrounding childbirth. "... *Traditional birth attendants are highly respected in our community. They know how to conduct the birth in a way that aligns with our beliefs...*" (Participant #2). This trust is rooted in the belief that TBAs can provide culturally appropriate care that respects the traditions and customs of the community, which is often seen as lacking in hospital settings. As one participant stated, "...*They know our customs and what's important to us which makes us feel more comfortable delivering at home rather than in a hospital where the staff might not understand or respect our traditions...*" (Participant #5).

The preference for TBAs over medical professionals in hospitals reflects the community's desire for culturally congruent care that aligns with their values and practices. Privacy in childbirth is a deeply held cultural practice that significantly influences the decision to deliver at home. The belief that childbirth should be a private event, shielded from the eyes of outsiders, was a common theme among the participants. "...*The actual delivery is kept*

secret, and it's believed that this protects the family from any bad luck or evil spirits..." (Participant #1). This need for privacy is not just about physical seclusion but also about maintaining cultural integrity and protecting the spiritual well-being of the mother and child. As one participant explained, "...*Childbirth is done in secrecy; even the closest neighbors shouldn't know when a woman is in labor...*" (FGD1). Detailed coding and categorization of qualitative data are available in Appendix 6.

The preference for home deliveries allows for these cultural practices of privacy to be maintained, whereas hospital deliveries are often perceived as intrusive and disrespectful of these important cultural norms. This cultural emphasis on privacy further entrenches the preference for home deliveries in Marsabit County. The study revealed that cultural practices significantly influence the preference for home deliveries in rural Marsabit County. The findings indicated that women often choose to give birth at home due to the strong cultural attachment to TBAs, who are perceived as more aligned with the community's cultural and spiritual beliefs. The privacy associated with home deliveries, where women can adhere to cultural rituals and customs, further strengthens this preference. The role of family members, particularly elder women, is also crucial, as they often encourage adherence to traditional practices, viewing home births as safer and more appropriate according to cultural norms. This cultural inclination towards home deliveries remains prevalent despite the availability of modern healthcare facilities.

The profound influence of cultural practices on the choice of home delivery, as revealed in this study, is powerfully consistent with a growing body of contemporary literature focusing on marginalized and pastoralist communities in Kenya and the wider region. The findings from Marsabit County are not an anomaly but rather a reflection of deeply embedded socio-cultural systems that continue to govern maternal health behaviors, even in the face of national efforts to promote facility-based care.

The central role of Traditional Birth Attendants (TBAs) and the weight of community norms uncovered in this study are strongly echoed in recent research. For instance, the high trust and respect for TBAs align with findings from Jalango et al. (2017) and Nduba et al. (2018) in Marsabit itself, who documented that TBAs are preferred for their adherence to cultural customs, such as practices of female seclusion, and their shared gender and faith

with the women they serve. This preference is reinforced by community power structures; as found in this study, the influence of elders and local leaders is a decisive factor, a phenomenon also observed by Gitonga (2017) and Kiprono et al. (2020), who note that elders act as custodians of culture, often actively promoting home births to maintain social order and traditional birthing rituals.

This study's findings, however, add a critical layer of nuance to the existing discourse. While broader studies, such as those by Gabrysch and Campbell (2009), posit that increased education and awareness can shift preferences toward facility delivery, the persistent strength of cultural practices in Marsabit suggests a more complex reality. Here, cultural identity and conformity to community expectations can outweigh individual knowledge of biomedical benefits. This aligns with qualitative insights from Okemwa et al. (2020) in rural Kenya, where pregnancy was sometimes viewed as a spiritual test, making medical interventions seem culturally inappropriate. This indicates that in contexts with strong traditional fabrics, cultural beliefs are not merely barriers to be overcome but are core components of a community's worldview that must be authentically engaged.

The implications of these findings are profound for policy and intervention. They unequivocally demonstrate that a one-size-fits-all approach to maternal health is ineffective in contexts like Marsabit. The evidence suggests that successful strategies must be co-designed with the community. Promising models exist, such as the initiative in West Pokot County described by Chege and Okumu (2017), where training chiefs as safe motherhood champions led to a dramatic shift in community norms and increased facility deliveries. Similarly, building formal partnerships with TBAs through training and referral systems, as proposed by Byrne and Morgan (2011), can transform them from competitors into liaisons for the formal health sector, ensuring that women receive culturally congruent care while being linked to life-saving emergency services.

Ultimately, sustainable change requires moving beyond viewing culture as a barrier and instead recognizing it as the foundational context for all intervention. Public health campaigns must be delivered through trusted local voices and framed in a way that resonates with community values, promoting skilled birth attendance as a way to protect

and honor cultural traditions and ensure the health of future generations, rather than as a rejection of them.

4.8 Health-Facility Related Factors and the Choice of Home Deliveries

Regarding waiting times, 203 (51.26%) reported experiencing long waits at the healthcare facility, and 190 (47.98%) did not. Most respondents, 297 (75.00%), trusted the skills and knowledge of healthcare providers, and 303 (76.52%) felt that facility staff exhibited respect and empathy towards pregnant women. However, 194 (48.99%) believed that pregnant women lacked adequate access to health education programs. In terms of medical equipment, 247 (62.37%) felt that facilities were adequately equipped, while 197 (49.75%) encountered situations where essential medications were unavailable. Furthermore, 290 (73.23%) felt safe and secure when visiting the facility, but 248 (62.63%) believed there were insufficient health workers. Cost was a significant consideration for 228 (57.58%) of respondents when deciding to deliver at a healthcare facility (Table 8). These findings highlight both positive perceptions and areas for improvement in maternal healthcare services.

Table 4.6

Summary Statistics on Health-Facility Factors

Question	No	Not Sure	Yes
	n(%)	n(%)	n(%)
Have you experienced long waiting times when visiting the healthcare facility?	190 (47.98)	3 (0.76)	203 (51.26)
Do you trust the skills and knowledge of the healthcare providers at the facility?	77 (19.44)	22 (5.56)	297 (75.0)
Do pregnant women in your community have adequate access to health education programs that prepare them for childbirth?	194 (48.99)	29 (7.32)	173 (43.69)
Do health facility staff exhibit respect and empathy towards pregnant women?	53 (13.38)	40 (10.1)	303 (76.52)
Do you think that the healthcare facility has adequate and necessary medical equipment for safe delivery?	104 (26.26)	49 (12.37)	243 (61.36)

Have you encountered situations where essential medications were not available at the healthcare facility?	179 (45.2)	24 (6.06)	193 (48.74)
Do you feel safe and secure when you visit the healthcare facility for maternal care?	67 (16.92)	44 (11.11)	285 (71.97)
Do you think you have a sufficient number of health workers in your health facility to deal with maternity and delivery?	244 (61.62)	31 (7.83)	121 (30.56)
Does the comfort and cleanliness of the hospital always play a role in your choice of a home birth?	156 (39.39)	28 (7.07)	212 (53.54)
Do healthcare facilities have adequate privacy for pregnant women seeking maternal care?	92 (23.23)	50 (12.63)	254 (64.14)
Do you feel that the healthcare facility is located too far from your home?	229 (57.83)	6 (1.52)	161 (40.66)
Do pregnant women in your community often face long wait times at healthcare facilities before receiving assistance?	127 (32.07)	23 (5.81)	246 (62.12)
Have you ever faced difficulties in reaching the healthcare facility due to transportation costs?	156 (39.39)	7 (1.77)	233 (58.84)
Is the cost of healthcare services always a consideration for pregnant women when deciding to deliver in health facilities?	152 (38.38)	20 (5.05)	224 (56.57)

Further, the analysis of the interviews and focus group discussions identified three key themes. First, fear and mistrust of hospitals emerged as critical factors influencing the decision to opt for home deliveries. Additionally, geographical inaccessibility and perceived quality of care at healthcare facilities further reinforced the preference for home-based childbirth. These are discussed as follows (Appendix 6).

A significant theme that emerged from the discussions was the deep-seated fear and mistrust of hospitals, which was a major deterrent for many women in choosing hospital deliveries. Participants expressed concerns that hospitals might not respect their cultural and spiritual practices during childbirth, which led to a preference for home deliveries. As one participant noted, *"There's a fear that in the hospital, the spiritual and cultural aspects of childbirth will be ignored or disrespected"* (P2). This fear was compounded by the apprehension surrounding medical procedures, particularly cesarean sections. Another participant shared, *"Some people say if you go to hospital, they might do C-section without*

telling you, and we don't want that. It's scary" (P3). The fear of cesarean sections was echoed in the focus group discussions as well, with participants stating, *"There's a lot of fear about going to the hospital, especially because of the possibility of a C-section, which we don't really understand"* (FGD2). This mistrust was further reinforced by concerns about mistreatment by hospital staff, with one participant mentioning, *"There's a fear of being mistreated by the staff, especially by the nurses"* (P9). These fears highlight the need for culturally sensitive care and better communication between healthcare providers and the community.

The inaccessibility of healthcare facilities due to poor infrastructure and long distances was another critical factor that influenced the decision to deliver at home. Many participants reported that the nearest health facilities were located far from their homes, and the roads were often in poor condition, particularly during the rainy season. *"The roads are bad, especially when it rains, and there aren't many vehicles available,"* one participant explained (P3). This sentiment was shared by others who pointed out that *"The distance and the poor road conditions make it nearly impossible to get to the hospital, especially during the rainy season"* (P2). The challenge of accessing healthcare facilities was further exacerbated by the high cost of transport, with participants noting that *"Transport is another major issue. There are very few vehicles available and they're expensive to hire"* (FGD5). Even when transport was available, it was often not suitable for a woman in labor, as motorbikes, the most common form of transport, were not safe for transporting pregnant women. This issue was succinctly summarized by a participant who said, *"Even when transport is available it's often not suitable for a woman in labor"* (FGD6). The geographical barriers to accessing healthcare facilities underscored the preference for home deliveries, as they were seen as a safer and more practical option given the local infrastructure challenges.

The perceived quality of care at healthcare facilities also played a significant role in influencing the decision to opt for home deliveries. Many participants expressed dissatisfaction with the care provided at hospitals, citing issues such as shortages of trained healthcare workers, essential medicines, and medical equipment. *"Hospitals don't have enough medicines or staff, so women feel it's not worth going there,"* one participant stated (P10). This perception was reinforced by reports of long waiting times and overworked

staff, which made women feel neglected and under-cared for. As one participant put it, *"The care you receive is not always good. There is not enough healthcare workers"* (P3). The focus group discussions further highlighted these concerns, with participants stating, *"Even if you make it to the hospital, the care isn't always good. The staff are overworked and don't have the time to give you the attention you need"* (FGD2). These concerns about the quality of care led many women to conclude that home deliveries, assisted by trusted traditional birth attendants, were a safer and more reliable option. The lack of essential drugs and equipment at healthcare facilities was also a recurring issue, with participants noting that it was common to *"...go to a hospital and find that they don't have the necessary medicine or tools to treat even minor complications"* (FGD5). This perceived inadequacy of healthcare services further fueled the preference for home deliveries in Marsabit County. Detailed coding and categorization of qualitative data are available in Appendix 6.

The decision to deliver at home in Marsabit County is profoundly shaped by a confluence of formidable health-system barriers that make facility-based care appear inaccessible, undesirable, or even risky. This study's findings paint a picture of a health system whose structural and qualitative deficiencies actively push women towards home births, reinforcing the critical role of supply-side factors in maternal health-seeking behavior.

The formidable geographical and financial barriers identified are a hallmark of rural healthcare in Kenya, but they are particularly acute in the vast, arid terrain of Marsabit. The challenge of distance, quantified in other Kenyan studies where each additional kilometer to a facility increased the odds of a home delivery by 26% (Okemwa et al., 2020), is severely compounded by a near-total lack of reliable and affordable transport. This creates a "first-mile" problem that is often insurmountable for a woman in labor, a finding consistently reported in assessments of the county's health system (Ministry of Health, 2018). This aligns with broader African literature, where physical inaccessibility remains a primary driver of home deliveries (Gabrysch & Campbell, 2009).

However, this study reveals that even when women overcome geographical hurdles, they are often met with a second layer of barriers at the facility door: a perceived and often real deficit in the quality and experience of care. The fear of disrespectful or neglectful treatment by healthcare providers, a powerful deterrent uncovered in this research, is a

widely documented phenomenon. Studies in Nigeria and Ethiopia have similarly highlighted how impolite staff and long waiting times erode trust in the formal health system (Okeshola & Sadiq, 2013; Delibo et al., 2020). In the specific context of Marsabit, qualitative work by Jalango et al. (2017) and Nduba et al. (2018) details how infrastructure limitations, such as a lack of privacy and space constraints, directly violate cultural norms and deter facility use. Furthermore, the critical shortages of skilled birth attendants and essential medical supplies, as noted in the county's own health plan. Policy Strategy and Health Plan of 2016, instill a rational fear that the facility may be ill-equipped to manage complications, making the assisted home birth seem a safer, more predictable option.

The significance of this study lies in its illustration of how these factors—geographical, financial, and qualitative—are not isolated but interact synergistically within Marsabit's unique context. The nomadic lifestyle of a significant portion of the population intensifies the challenge of fixed health facilities, while the chronic under-resourcing of these facilities validates community skepticism. This creates a vicious cycle: the logistical difficulty of reaching a facility lowers the threshold for abandoning the effort at the first sign of a negative perception or past experience of poor care.

Consequently, addressing this complex web of barriers requires a systemic, multi-pronged strategy. Simply building more clinics without addressing the quality of care within them will be insufficient. Interventions must simultaneously: (1) Mitigate Geographic Barriers through innovative solutions beyond static clinics, such as strengthening community-based transport schemes and establishing maternity waiting homes, as successfully piloted in other remote regions, (2) Radically Improve the Quality of Care through investments that focus not only on physical infrastructure and medical supplies but, crucially, on the human element. Implementing rigorous training in Respectful Maternity Care (RMC) for all staff is essential to rebuild community trust (Bohren et al., 2014), and finally (3) Engage the Community. Actively involving community leaders and using community health workers to demystify facility services and gather feedback can help bridge the trust gap and reshape negative perceptions.

4.9 Socio-economic Factors and Home Deliveries

Understanding the socio-demographic characteristics of women of reproductive age is crucial in identifying the underlying factors influencing maternal health outcomes, including the choice of delivery location. In many rural settings, such as Marsabit County, Kenya, home deliveries remain prevalent despite national and global efforts to promote skilled birth attendance. This section presents an interpretation of the socio-demographic findings from the study and discusses their influence on home delivery practices, supported by recent empirical literature. The sample comprised mostly married individuals ($n = 335$, 84.6%), with the majority having no formal education (291, 73.48%) and being unemployed (349, 88.13%); religious affiliation was predominantly Muslim (160, 40.4%), and most households earned less than 10,000 KSh monthly (376, 94.95%) (Table 4).

The analysis of socio-demographic characteristics among women of reproductive age in Marsabit County reveals critical insights into the prevalence of home deliveries in the region. These findings highlight the multifaceted nature of maternal health-seeking behaviors and underscore the influence of education, employment, income, marital status, and religion on delivery choices. A striking finding from the study is that the majority of women (73.48%) had no formal education. This low level of educational attainment is a key factor influencing the high prevalence of home deliveries. Empirical evidence from similar rural settings in Kenya and Sub-Saharan Africa has demonstrated that maternal education is positively associated with the utilization of skilled birth attendance and health facility deliveries. For instance, Kitui et al. (2023) found that women with secondary or higher education were significantly more likely to give birth in health facilities compared to those with only primary education or none at all. Education enhances awareness of maternal health risks and empowers women to make informed decisions regarding their care.

Employment status further compounds this situation, with 88.13% of the women in the study being unemployed. Economic status has a direct influence on access to maternal health services. Women without a source of income may find it difficult to afford transportation, medical fees, and other costs related to facility-based deliveries. A study by Tura et al. (2021) in rural Ethiopia revealed that women with some form of employment

were more likely to utilize skilled birth attendance compared to those who were economically dependent. Marital status also emerged as an important factor, with 84.6% of the respondents being married. While marriage can provide social support and shared decision-making, it may also limit autonomy, especially in patriarchal communities where husbands are the primary decision-makers. This dynamic can influence whether a woman is allowed or supported to seek facility-based care. According to Tesha et al. (2023), spousal involvement and support positively influence facility delivery, especially when men are engaged in antenatal and delivery planning.

Religion is another significant influence, with 40.4% of the women identifying as Muslim and 30.81% as Catholic. Religious beliefs can shape attitudes toward modern healthcare. In some cases, conservative interpretations of religious doctrine may discourage women from seeking medical care from male providers or may favor traditional birth attendants. Studies such as that by Abdi et al. (2022) emphasize the need for culturally sensitive health education that engages religious leaders to influence positive maternal health-seeking behaviors.

Household income levels in Marsabit County were overwhelmingly low, with 94.95% of households earning less than KES 10,000 per month. Poverty is a substantial barrier to accessing healthcare, especially when indirect costs such as transport, food, and lodging for accompanying relatives are considered. Evidence from GiveDirectly's cash transfer program in rural Kenya suggests that improved household income correlates with better access to healthcare and other basic needs (Haushofer et al., 2020). Similar financial interventions could be tailored to support pregnant women in rural Marsabit.

Although not directly captured in the current dataset, geographical barriers are a well-documented challenge in Marsabit County. The vast terrain and poor infrastructure mean that many women must travel long distances to reach health facilities. A study by Wambugu et al. (2024) in Marsabit showed that distance to health facilities significantly predicted home delivery, with women living more than 15 kilometers away being less likely to use maternal health services.

In conclusion, the high prevalence of home deliveries among women in Marsabit County is driven by interrelated socio-demographic factors. Low levels of education, high

unemployment, poverty, cultural and religious influences, and geographic inaccessibility all contribute to the preference or necessity of delivering at home. Addressing these challenges requires an integrated approach that includes educational empowerment, economic support programs, community engagement, and health system strengthening. Only through such a holistic strategy can improvements in maternal and neonatal outcomes be achieved in this underserved region.

These results further corroborate those from qualitative data where participants consistently highlighted the prohibitive costs associated with hospital deliveries, particularly transportation expenses. For many families, the cost of hiring a vehicle to reach the nearest healthcare facility was simply unaffordable, leading them to choose home deliveries as a more economical option. For instance, one participant mentioned, *"Transport costs to the hospital are high, and even though the services are supposed to be free, there are still things you have to pay for"* (P4). This sentiment was echoed by others who stated, *"When times are tough, it's hard to afford anything extra, like the cost of going to a hospital"* (P10), and *"Many families can't afford the cost of transport to the hospital, so they choose to deliver at home instead"* (P7). These financial barriers were particularly acute in large families or those with unstable incomes, further entrenching the preference for home deliveries.

Education emerged as a crucial factor in determining the choice of delivery location. Participants noted that women with higher levels of education were more likely to opt for hospital deliveries, as they were more aware of the risks associated with childbirth and the benefits of medical care. As one participant stated, *"Women who have gone to school are more likely to choose a hospital delivery because they understand the risks involved with childbirth"* (P4). Similarly, another participant observed, *"Those who have gone to school know more about the risks of childbirth and are more likely to go to the hospital to deliver"* (FGD3). This trend highlights the role of education in shaping health-seeking behaviors and the importance of increasing educational opportunities for women in these communities to encourage safer delivery practices.

The lack of stable employment also played a significant role in influencing home delivery decisions. Participants pointed out that those with regular jobs or steady incomes could

afford the associated costs of hospital deliveries, while those without employment found it difficult to access such care. *"Those with regular jobs or a steady income can afford the costs associated with a hospital delivery,"* explained one participant (P5). This disparity in access was further emphasized in the focus group discussions, where participants noted that *"Without a steady income, it's difficult to afford the costs associated with a hospital delivery, so home delivery is the only option for many"* (FGD3). The economic vulnerability of these communities, exacerbated by irregular employment, thus emerged as a critical barrier to accessing formal healthcare services for childbirth.

The study highlighted several socio-economic factors that significantly influence the decision to choose home deliveries in Marsabit County. Education level emerged as a critical determinant, with women who have lower levels of education more likely to opt for home births. Employment status and financial constraints also play a crucial role, as women from households with unstable income or unemployment are less able to afford the costs associated with hospital deliveries, even when services are subsidized.

The lack of health insurance coverage further exacerbates this situation, making it difficult for economically disadvantaged women to access skilled care during childbirth.

These findings are consistent with existing literature on the socio-economic determinants of healthcare choices, which consistently shows that lower education levels and financial constraints are significant barriers to accessing institutional delivery services (Gabrysch & Campbell, 2009; Mrisho et al., 2009; Say & Raine, 2007). For instance, studies by Gabrysch and Campbell (2009) have found that women with lower education levels are more likely to give birth at home due to a lack of awareness about the risks of home deliveries and the benefits of skilled care. Similarly, financial barriers, including the costs of transportation and healthcare, have been well-documented as major determinants of home delivery in rural settings (Nduba et al., 2018). This study adds to the existing knowledge by illustrating how these factors intersect in the specific socio-economic context of Marsabit County, where poverty and lack of education are prevalent and have a profound impact on maternal health decisions (Nduba et al., 2018).

The broader socio-economic context in Marsabit County significantly influences women's delivery choices, as financial instability and low educational attainment limit their access

to healthcare services (Jalango et al., 2017; Nduba et al., 2018). The high levels of poverty in the region mean that many women cannot afford the indirect costs of hospital deliveries, such as transportation, which often leads to a preference for home births (Nduba et al., 2018). Additionally, the low levels of education contribute to a lack of awareness about the dangers of home deliveries and the importance of skilled birth attendance, further entrenching the reliance on traditional practices (Gabrysch & Campbell, 2009; Nduba et al., 2018). These socio-economic barriers create a cycle of poor maternal health outcomes that are difficult to break without targeted interventions.

To alleviate these financial barriers and improve access to healthcare services for economically disadvantaged populations in Marsabit County, several strategies could be implemented. First, expanding health insurance coverage to include more women from low-income households could significantly reduce the financial burden associated with hospital deliveries. Additionally, implementing community-based financial support programs, such as transport vouchers or conditional cash transfers, could help address the indirect costs that prevent women from accessing skilled care. Education campaigns that target women and their families, focusing on the benefits of hospital deliveries and the risks associated with home births, could also help shift perceptions and encourage greater utilization of healthcare services (Jalango et al., 2017)

4.10 Knowledge of Government Initiatives

The analysis of awareness and access to government initiatives and information on maternal healthcare revealed important findings. A majority, 210 (53.03%), were unaware of government initiatives providing free or subsidized maternal healthcare services, while 162 (40.91%) were aware. Similarly, 223 (56.31%) did not know about programs aimed at improving healthcare facilities for childbirth, compared to 144 (36.36%) who were informed. Regarding government campaigns promoting hospital deliveries, 205 (51.77%) were uninformed, while 159 (40.15%) had knowledge of these efforts. Access to reliable information about maternal healthcare services was available to 173 (43.69%) of respondents, though 196 (49.49%) lacked such access. Nearly half, 182 (45.96%), found it easy to access information about the benefits of delivering in a healthcare facility, while 186 (46.97%) found it difficult. Lastly, only 161 (40.66%) reported receiving regular

updates from healthcare providers on available maternal health services, while 228 (56.72%) did not (Table 9). These findings highlight significant gaps in awareness and access to critical maternal health information.

Table 4.7

Summary Statistics on Knowledge of Government Initiatives

Question	No	Not Sure	Yes
	N(%)	N(%)	N(%)
Are you aware of any government initiatives that provide free or subsidized maternal healthcare services?	210 (53.03)	24 (6.06)	162 (40.91)
Do you know about any government programs aimed at improving the quality of healthcare facilities for childbirth in your community?	223 (56.31)	29 (7.32)	144 (36.36)
Are you informed about government campaigns or educational programs that promote hospital deliveries over home births?	205 (51.77)	32 (8.08)	159 (40.15)
Do you have access to reliable information about maternal healthcare services in your community?	196 (49.49)	27 (6.82)	173 (43.69)
Is it easy for you to find information about the benefits of delivering in a healthcare facility?	186 (46.97)	28 (7.07)	182 (45.96)
Do you receive regular updates from healthcare providers about available maternal health services and programs?	225 (56.82)	13 (3.28)	158 (39.9)

Awareness of government initiatives such as Linda Mama and Beyond Zero emerged as a critical factor in influencing healthcare decisions, particularly in the context of childbirth, but understanding and access to these programs were limited among participants. Skepticism and confusion about these government programs further hindered their effective utilization, with doubts about the reliability and transparency of the services provided leading to a lack of trust. Additionally, inconsistent support from government programs was a significant issue, as many initiatives started strong but then faded away,

leaving the community to revert to traditional practices and reinforcing the preference for home deliveries. Detailed coding and categorization of qualitative data are available in Appendix 6.

Awareness of government programs such as Linda Mama and Beyond Zero emerged as a critical factor in influencing healthcare decisions, particularly in the context of childbirth. However, the level of understanding and access to these programs appeared limited among the participants. Many had heard of these initiatives but were unsure about how to utilize the services offered. For example, one participant noted, "*I've heard about the Linda Mama program, but I'm not really sure how it works*" (P6). This lack of clarity was a recurring theme, as another participant mentioned, "*We've heard about government programs like Linda Mama, but we're not sure how to access the services they provide*" (FGD4). The gap in understanding these initiatives often left women in rural areas without the necessary information to make informed decisions about their healthcare, thus reinforcing the preference for home deliveries. Similarly, the Beyond Zero campaign, though recognized, was not well understood, with one participant stating, "*I've heard about the Beyond Zero campaign, but I don't see those clinics around much anymore*" (P1).

A significant barrier to the effective utilization of government healthcare initiatives was the widespread skepticism and confusion surrounding these programs. Participants expressed doubts about the reliability and transparency of the services provided, questioning whether the programs were truly free or if there were hidden costs involved. One participant remarked, "*There's skepticism about whether the services are truly free or if there are hidden costs*" (P6). This sentiment was echoed in the focus group discussions, where participants voiced concerns about the authenticity of these programs: "*There's a lot of doubt about whether these government programs really work or if they're just promises*" (FGD4). The confusion over how these initiatives operated and what they actually offered led to a lack of trust, preventing many women from fully engaging with these services. As another participant put it, "*I'm not sure how the government programs work, and there's some doubt about whether they really provide the help they promise*" (P5). This skepticism was compounded by inconsistent communication and a perceived lack of transparency, making it difficult for the community to rely on these programs.

Participants also highlighted the inconsistency in government support as a major issue affecting their decision to seek hospital deliveries. Many of the programs initiated by the government started with strong visibility and support but gradually lost momentum, leaving the community without reliable healthcare options. As one participant described, *"The program started strong but then faded away, and now we're back to where we started"* (P7). This inconsistency in support was a common concern, with participants noting that when these programs were no longer visible or funded, the community had to revert to traditional practices. *"The government programs seem to come and go, and when they're gone, we're left on our own again,"* one participant stated (P7). This lack of sustained support eroded the community's trust in government initiatives, further discouraging the use of healthcare facilities for childbirth. The focus group discussions reinforced this theme, with participants expressing frustration over the temporary nature of these programs: *"These programs seem to come and go, and when they're gone, we're left to fend for ourselves again"* (FGD4). This inconsistency led to a diminished reliance on these initiatives and reinforced the community's preference for home deliveries, where they felt more in control and supported by traditional networks.

The study found that awareness and understanding of government healthcare initiatives, such as the Linda Mama program and Beyond Zero campaign, are limited among women in Marsabit County. Many women were either unaware of these programs or had a superficial understanding of the benefits they offer, which contributed to the continued preference for home deliveries. According to published research, despite efforts to promote these initiatives, the uptake of services provided through government programs remains low, particularly in remote areas where communication about these services is often inadequate. The study also revealed a general mistrust in the effectiveness of government healthcare initiatives, with some women doubting whether the services promised would actually be available or beneficial when needed.

These findings are consistent with existing research on the challenges faced by government programs like Linda Mama and Beyond Zero in reaching rural and marginalized populations. For instance, studies by Kimani et al. (2020) and Wanjau et al. (2013) have shown that while these initiatives have the potential to improve maternal health outcomes, their effectiveness is often hampered by low levels of awareness and mistrust among the

target populations. The findings of this study reinforce the idea that simply introducing healthcare initiatives is not enough; ensuring that women are fully informed and confident in these programs is crucial for their success. The study's emphasis on the limited impact of these initiatives in Marsabit County highlights the ongoing challenges in effectively communicating and implementing government healthcare programs in remote areas.

The limited impact of these government initiatives in Marsabit County can be attributed to several factors, including poor communication, logistical challenges, and cultural barriers. The lack of awareness about these programs is often due to inadequate dissemination of information, particularly in remote areas where access to mass media and health education is limited. Furthermore, mistrust in government services, fueled by past experiences of inadequate care or unfulfilled promises, leads many women to continue relying on traditional birth practices rather than engaging with government healthcare services. This mistrust is compounded by cultural norms that favor home deliveries and the use of traditional birth attendants, further reducing the perceived relevance and reliability of government programs.

To improve the effectiveness of government healthcare initiatives in Marsabit County, it is essential to enhance communication strategies and build trust within the community. One approach could be to increase the use of community health workers and local leaders in disseminating information about programs like Linda Mama, ensuring that messages are culturally appropriate and delivered in local languages. Additionally, involving traditional birth attendants in these programs could help bridge the gap between modern healthcare services and traditional practices, fostering greater acceptance and trust. Strengthening monitoring and feedback mechanisms to ensure that services are reliably delivered as promised can also help rebuild confidence in government initiatives and encourage more women to utilize these services.

4.11 Logistic Regression Analysis

The primary objective of this study was to examine the prevalence of home deliveries and the factors associated with their occurrence among women of reproductive age in rural areas of Marsabit County, Kenya. To achieve this, binary logistic regression analysis was employed. This statistical technique was selected because the dependent variable—place

of delivery—is binary in nature, coded as either *home delivery* or *health facility delivery*. Logistic regression is particularly suitable when the outcome variable is categorical and dichotomous, and the aim is to predict the probability of an event occurring based on one or more independent variables.

Binary logistic regression allows for the estimation of odds ratios, which quantify the strength and direction of the association between predictor variables and the likelihood of home delivery. It is also robust in handling a mix of categorical and continuous predictors, including health-facility-related characteristics, socio-economic variables, and knowledge of maternal health initiatives. By adjusting for multiple predictors simultaneously, logistic regression accounts for potential confounding and helps isolate the unique contribution of each factor to the decision-making process around childbirth location.

The analysis was conducted in four thematic blocks corresponding to the study objectives: cultural practices and beliefs, health-facility-related factors, socio-economic characteristics, and knowledge of government maternal health programs. The regression coefficients (B), standard errors (S.E.), Wald statistics, p-values, and odds ratios (OR) are presented to aid in the interpretation of each factor’s effect. Statistical significance was assessed at the 95% confidence level ($p < 0.05$).

4.11.1: Influence of Cultural Practices and Beliefs on Home Delivery in Marsabit County

Table 10 presents the results of a binary logistic regression analysis examining the influence of cultural beliefs and practices on the choice of home delivery among women in Marsabit County. The analysis highlights key cultural factors significantly associated with the likelihood of home delivery, as indicated by odds ratios and p-values.

Table 4.8

Influence of Cultural Practices and Beliefs on Home Delivery in Marsabit County

Variable Group	Specific Variable	Category / Option	B	S.E.	Wald	df	p-value	Odds Ratio
Cultural Practices	Cultural Beliefs	Not Followed (RC)	—	—	—	—	—	1.000
		Followed	0.594	0.164	13.161	1	0.000	1.810
	Husbands Beliefs	Not Followed (RC)	—	—	—	—	—	1.000
		Followed	0.470	0.147	10.196	1	0.001	1.600

Cultural Beliefs	Family Cultural Practices	Not Followed (RC)	—	—	—	—	—	1.000
		Followed	0.492	0.148	11.103	1	0.001	1.635
	Community Norms	Don't Prioritize Home Delivery Over Hospital Delivery (RC)	—	—	—	—	—	1.000
		Prioritize Home Delivery Over Hospital Delivery	0.433	0.151	8.183	1	0.004	1.542
	Cultural Practices	Don't discourage delivery in Health Facility (RC)	—	—	—	—	—	1.000
		Discourage delivery in Health Facility	- 1.501	0.518	8.403	1	0.004	0.223
	Cultural Ceremonies	Don't reinforce Home Delivery (RC)	—	—	—	—	—	1.000
		Reinforce Home Delivery	1.532	0.434	12.467	1	0.000	4.628
	Religious Faith	Don't dictate the place of delivery (RC)	—	—	—	—	—	—
		Dictate the place of delivery	- 1.259	0.534	5.563	1	0.018	0.284
	Religious Beliefs	Don't Encourage Traditional Practices during Birth (RC)	—	—	—	—	—	1.000
		Encourage Traditional Practices during Birth	0.235	0.135	3.031	1	0.042	1.265
	Community Leaders Beliefs	Don't Favor Home Delivery (RC)	—	—	—	—	—	1.000
		Favor Home Delivery	0.237	0.144	2.700	1	0.010	1.267
	Safety and Stress	Not Safe (RC)	—	—	—	—	—	1.000
		Safe	- 0.164	0.478	0.117	1	0.732	0.849
	Stress	Stressful (RC)	—	—	—	—	—	1.000
		Less Stressful	- 0.274	0.415	0.437	1	0.508	0.760
TBA's	TBA's Knowledge	Not knowledgeable (RC)	—	—	—	—	—	1.000
		Knowledgeable	- 0.387	0.388	0.997	1	0.318	0.679
	TBA Trust and Reliability	Less Trusted than Health Facilities (RC)	—	—	—	—	—	1.000
		More Trusted than Health Facilities	0.593	0.369	2.574	1	0.109	1.809
	TBA's Respect	Not Respected (RC)	—	—	—	—	—	1.000
		Respected	1.337	0.389	11.811	1	0.001	3.808

Note: RC = Reference Category (baseline group)

The persistence of home deliveries in Marsabit County reflects the embeddedness of cultural practices and beliefs in maternal health decision-making. Findings from this study, grounded in logistic regression analysis, demonstrate a statistically significant association between adherence to cultural norms and the likelihood of home delivery. Specifically, women who followed cultural beliefs were 1.81 times more likely to deliver at home compared to those who did not, underscoring the salience of cultural frameworks in shaping health behaviors. This is consonant with the theoretical propositions of the Health

Belief Model which postulates that individual health actions are influenced not only by perceived risks and benefits but also by sociocultural conditioning.

Empirical support for these findings can be drawn from Kitui et al. (2021), who examined maternal care utilization among pastoralist communities in northern Kenya and found that cultural identity and traditional birth practices often supersede biomedical advice. These practices are often considered sacred and are tightly interwoven with rites of passage and gendered expectations surrounding childbirth.

The influence of male partners emerged as a statistically significant determinant of home delivery. Women whose husbands adhered to traditional beliefs were 1.6 times more likely to deliver at home. This corroborates recent empirical evidence by Nyanchoka et al. (2020), who emphasized the patriarchal control over reproductive decision-making in rural Kenya. Within such cultural systems, the husband's approval is often a prerequisite for healthcare access, and where traditionalism is upheld, biomedical childbirth is sometimes viewed with suspicion.

Family cultural practices further increased the likelihood of home delivery (OR = 1.635), suggesting the perpetuation of intergenerational norms. Mbugua and Karonjo (2022) reported similar dynamics in rural Central Kenya, where elderly female relatives exert significant influence over maternal health decisions. Such kinship hierarchies not only shape perceptions of risk and appropriateness of facility deliveries but also regulate conformity to collective cultural codes.

Moreover, community norms that prioritized home delivery were associated with a 1.542-fold increase in the likelihood of non-institutional births. These findings align with Ali et al. (2019), who identified normative pressure within Somali-speaking communities in northern Kenya as a primary barrier to facility utilization. In such tightly knit social ecologies, deviation from communal norms is perceived as cultural deviance, often attracting social sanctions.

Notably, where community norms explicitly discouraged delivery in health facilities, the odds of facility use decreased dramatically (OR = 0.223). This reinforces arguments advanced by Adan et al. (2020), who found that culturally ingrained fears—such as the belief that medicalized births contravene ancestral customs—deterred women from

accessing formal maternity care. These findings point to a critical tension between cultural continuity and maternal health outcomes.

The impact of cultural ceremonies on delivery choices was particularly pronounced. When cultural rituals reinforced home delivery, women were over four times more likely to deliver outside a health facility (OR = 4.628). This corroborates Tegegne et al. (2023), who noted that certain ceremonies—such as naming, seclusion, and placenta disposal rites—are incompatible with institutional births, thereby reinforcing home-based deliveries as culturally superior and morally desirable.

Religious doctrines were also found to significantly affect maternal behavior. Where religious faith dictated the place of delivery, the odds of facility-based birth were significantly lower (OR = 0.284). This finding is echoed in Wanyama et al. (2021), who documented that in some evangelical and Islamic communities in Kenya, facility delivery is sometimes framed as a sign of weak faith or external influence, thereby undermining public health efforts. Further, the study revealed that when religious beliefs encouraged traditional birthing practices, the odds of home delivery rose modestly (OR = 1.265). This lends empirical weight to the sociological theory of religious conservatism in health, which suggests that theological beliefs can directly mediate health behaviors by prescribing or proscribing certain medical interventions.

Community leaders who endorsed home delivery practices contributed to increased odds of non-institutional births (OR = 1.267). As observed by Gichane et al. (2020), local opinion leaders serve as cultural gatekeepers. Their attitudes often shape communal risk perception and behavioral norms, thereby influencing maternal health-seeking behavior either positively or negatively. Interestingly, subjective perceptions of safety (OR = 0.849) and stress associated with delivery (OR = 0.760) were not statistically significant, indicating that cultural and social determinants may override individual perceptions of biomedical risk. This underscores the limitations of purely individualistic models of behavior change in explaining maternal health outcomes in collectivist societies.

Finally, the role of Traditional Birth Attendants (TBAs) remains central. While perceived knowledge and trust did not significantly predict home delivery, the respect accorded to TBAs within the community was a strong predictor (OR = 3.808). This is consistent with

Kaprom et al. (2024) who argued that TBAs continue to enjoy socio-cultural legitimacy as custodians of indigenous knowledge. Despite policy shifts toward skilled birth attendance, the enduring influence of TBAs speaks to the need for more integrative maternal health policies that incorporate culturally sanctioned intermediaries.

In sum, the data from Marsabit County provide compelling evidence that maternal health-seeking behavior is inextricably tied to socio-cultural, religious, and familial dynamics. The findings challenge the assumption that increasing health facility access alone will reduce home deliveries. Instead, a multifaceted, culturally sensitive strategy—one that engages male partners, religious leaders, TBAs, and community elders—is imperative to achieving sustainable improvements in maternal health outcomes in marginalized regions.

4.11.2: Influence of health-facility-related factors on the choice of home deliveries in Marsabit County.

This section presents the logistic regression analysis results assessing the influence of health facility-related factors on the likelihood of home deliveries among women of reproductive age in rural Marsabit County. The variables examined include aspects of service quality such as provider respect, trust in skills, facility cleanliness, privacy, safety, and accessibility in terms of distance, waiting time, equipment, staffing, and affordability. This analysis was guided by the hypothesis that structural and experiential attributes of health facilities significantly influence maternal decisions regarding place of delivery. The results are presented in Table 11.

Table 4.9

Influence of health-facility-related factors on the choice of home deliveries in Marsabit County.

Variable	Category	B	S.E.	Wald	df	p-value	Odds Ratio
Health Providers	Not Respectful (RC)	—	—	—	—	—	1.000
	Respectful	-0.615	0.145	17.909	1	0.000	0.541
Waiting Time	No Long Queues (RC)	—	—	—	—	—	1.000
	Long Queues	-0.744	0.175	18.006	1	0.000	0.475
Information	Not Clear and Sufficient (RC)	—	—	—	—	—	1.000
	Clear and Sufficient	0.542	0.232	5.439	1	0.020	1.720
Trust on Skill and Knowledge	Not Trusted (RC)	—	—	—	—	—	1.000
	Trusted	1.264	0.323	15.276	1	0.000	3.538
Health Access	Inadequate (RC)	—	—	—	—	—	1.000
	Adequate	-0.420	0.348	1.454	1	0.228	0.657
Health Facility Staff (1)	Don't Respect Pregnant Women (RC)	—	—	—	—	—	1.000
	Respect Pregnant Women	1.001	0.450	4.948	1	0.026	2.721
Medical Equipment	Inadequate (RC)	—	—	—	—	—	1.000
	Adequate	-0.727	0.388	3.503	1	0.051	0.484
Essential Medication	Available (RC)	—	—	—	—	—	1.000
	Not Available	-0.535	0.165	10.456	1	0.001	0.586
Health Facility Safety	Not Safe and Secure (RC)	—	—	—	—	—	1.000
	Safe and Secure	-1.361	0.251	29.485	1	0.000	0.256
Health Workers	Not Sufficient (RC)	—	—	—	—	—	1.000
	Sufficient	-0.797	0.213	14.010	1	0.000	0.451
Comfort and Cleanliness	Not Comfortable and Clean (RC)	—	—	—	—	—	1.000
	Comfortable and Clean	0.985	0.400	6.053	1	0.014	2.678
Privacy	Adequate (RC)	—	—	—	—	—	1.000
	Inadequate	-1.088	0.423	6.612	1	0.010	0.337
Facility Distance	Near (RC)	—	—	—	—	—	1.000
	Too Far	0.025	0.280	0.008	1	0.929	1.025
Waiting Time	Short (RC)	—	—	—	—	—	1.000
	Long	-0.425	0.141	9.081	1	0.003	0.654
Transportation Costs	Affordable (RC)	—	—	—	—	—	1.000
	Unaffordable	-1.032	0.161	40.865	1	0.000	0.356
Healthcare Cost	Not Considered (RC)	—	—	—	—	—	1.000
	Considered	0.144	0.179	0.647	1	0.421	1.155

Note: RC = Reference Category (baseline group)

The results in Table 11 show that Health-facility-related factors significantly influenced women's decisions regarding the place of delivery. Respectful treatment by healthcare providers was strongly associated with a reduced likelihood of home deliveries (OR = 0.541, $p < 0.001$). Similarly, women who encountered shorter waiting times and no long queues were less inclined to deliver at home (OR = 0.475, $p < 0.001$). These findings are

consistent with Bohren et al. (2014), who established that respectful maternity care and provider responsiveness significantly increase health facility utilization during childbirth.

Trust in the competency of healthcare staff was a critical positive predictor of facility-based deliveries (OR = 3.538, $p < 0.001$), while facility cleanliness, comfort, and staff respect were also significantly associated with institutional delivery preferences (OR = 2.678, $p = 0.014$; OR = 2.721, $p = 0.026$). Additionally, women who perceived the health facilities as safe (OR = 0.256, $p < 0.001$), adequately staffed (OR = 0.451, $p < 0.001$), and well-equipped with medical supplies and essential drugs (OR = 0.484, $p = 0.051$; OR = 0.586, $p = 0.001$) were less likely to opt for home delivery.

In contrast, affordability of transport was a major barrier; women who perceived transport as unaffordable were significantly more likely to deliver at home (OR = 0.356, $p < 0.001$). This supports the findings of Gichane et al. (2022), who emphasized transport-related challenges as a critical determinant of maternal health service utilization in remote Kenyan counties. Interestingly, neither the overall distance to facilities nor perceived healthcare costs significantly predicted home delivery ($p = 0.929$ and $p = 0.421$ respectively), suggesting that indirect access barriers may be more critical than proximity alone.

4.11.3: The influence of socio-economic factors on the choice of home deliveries in Marsabit County

This section illustrates the effect of selected socio-economic characteristics on the choice of home deliveries. The variables include marital status, highest education level attained, employment status, and religious affiliation. The section evaluates how demographic and economic positions of women may shape access to and utilization of skilled birth attendance. Understanding these socio-economic dimensions is essential in informing targeted interventions for marginalized populations in rural Kenya. The results are presented in Table 12.

Table 4.10:

The influence of socio-economic factors on the choice of home deliveries in Marsabit County

	B	S.E.	Wald	df	p-value	Odds Ratio
Marital Status						
Single(RC)						1.000
Married	-0.554	0.125	19.482	1	0.000	0.575
Widowed	-0.080	0.400	0.040	1	0.842	0.923
Divorced	1.030	0.521	3.906	1	0.048	2.800
Highest Education Level						
College(RC)						1.000
Secondary	0.847	0.488	3.015	1	0.082	2.333
Primary	0.361	0.272	1.766	1	0.184	1.435
None	-0.731	0.139	27.806	1	0.000	0.481
Occupation						
Salaried Employed						1.000
Self Employed	0.172	0.339	0.257	1	0.613	1.188
Unemployed	-0.481	0.121	15.749	1	0.000	0.618
Religion						
Others(RC)						1.000
Muslim	0.168	0.175	0.921	1	0.337	1.183
Catholic	0.233	0.207	1.268	1	0.260	1.262

The results show that Socio-economic variables also significantly influenced delivery location choices. Married women were less likely to deliver at home (OR = 0.575, $p < 0.001$), while divorced women were more inclined toward home births (OR = 2.800, $p = 0.048$). Education emerged as a key determinant; women without formal education were significantly more likely to opt for home delivery (OR = 0.481, $p < 0.001$), a finding supported by Nyongesa et al. (2018), who linked higher education with increased access and responsiveness to antenatal and skilled birth services. Employment status further

influenced outcomes. Unemployed women were more likely to deliver at home (OR = 0.618, $p < 0.001$), suggesting that financial empowerment enhances maternal health choices. However, religious affiliation did not yield statistically significant influence, highlighting that socio-economic and service-related barriers may override religious considerations in this context.

4.11.4: The influence of knowledge of government initiatives on the choice of home deliveries in Marsabit County

This section presents findings on the association between knowledge of government maternal health initiatives and the place of delivery. The variables include awareness of government sponsored programs, educational and health services, and the receipt of health-related updates. The aim of this analysis is to determine whether information and sensitization campaigns have translated into increased uptake of facility-based deliveries in Marsabit County. The results of analysis are presented in Table 13.

Table 4.11

The Influence of Knowledge of Government Initiatives on the Choice of Home Deliveries in Marsabit County

Government Initiative	Category	B	S.E.	Wald	df	p-value	Odds Ratio
Government Initiatives	Not Aware (RC)	—	—	—	—	—	1.000
	Aware	0.074	0.381	0.038	1	0.845	1.077
Government Programs	Not Aware (RC)	—	—	—	—	—	1.000
	Aware	-0.876	0.511	2.936	1	0.087	0.417
Educational Programs	Not Aware (RC)	—	—	—	—	—	1.000
	Aware	-0.422	0.337	1.568	1	0.211	0.656
Maternal Health Care Services	Not Aware (RC)	—	—	—	—	—	1.000
	Aware	-0.027	0.373	0.005	1	0.941	0.973
Benefits	Not Aware (RC)	—	—	—	—	—	1.000
	Aware	-0.111	0.260	0.183	1	0.669	0.895
Updates	Never Received (RC)	—	—	—	—	—	1.000
	Received	1.029	0.453	5.154	1	0.023	2.799

Note: RC = Reference Category (baseline)

Knowledge and awareness of government maternal health initiatives had mixed effects.

While general awareness of such initiatives did not significantly impact delivery location ($p = 0.845$), knowledge of specific government programs significantly reduced the likelihood of home deliveries ($OR = 0.417$, $p = 0.007$). Additionally, women who received regular updates on maternal health were significantly more likely to choose institutional delivery ($OR = 2.799$, $p = 0.023$). These findings emphasize the importance of targeted health education and communication strategies, as echoed by KEMRI (2021), which identified community-specific messaging as a key enabler of facility delivery uptake. In summary, the decision to deliver at home in rural Marsabit is shaped by an interplay of health system factors, socio-economic status, and awareness of maternal health initiatives. Interventions aiming to reduce home deliveries should prioritize the enhancement of respectful maternity care, accessibility and affordability of services (particularly transport), and the dissemination of targeted health information. In addition, improving maternal education and economic empowerment are crucial in driving demand for skilled birth attendance. Multisectoral collaboration—integrating health, education, infrastructure, and community engagement—is essential to ensure safe and equitable delivery outcomes in marginalized regions such as Marsabit County.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This chapter aims to synthesize the key findings of the study, draw meaningful conclusions, and provide actionable recommendations based on the research conducted. This chapter serves as a comprehensive summary of how the identified factors—cultural practices, health facility-related barriers, socio-economic conditions, and awareness of government initiatives—interact to influence the preference for home deliveries in Marsabit County. By revisiting the study’s objectives, which were to explore these factors and their impact on maternal health decisions, this chapter ties together the research outcomes, offering insights and practical guidance for improving maternal healthcare in rural and marginalized communities.

5.2 Summary of Findings

The study revealed a high prevalence of home deliveries in Marsabit County, with 64.65% of the respondents opting for home births. This finding, supported by a 95% confidence interval (CI) of 59.81% to 69.49%, indicates that nearly two-thirds of women in the region chose home deliveries despite the known benefits of healthcare facility-based childbirth. A significant proportion of respondents had experienced between 1 and 3 home deliveries (55.26%), with most births attended by Traditional Birth Attendants (TBAs). The regression analysis further emphasized that cultural, geographical, and financial barriers contributed to this high rate, showing that knowledge of the benefits of institutional deliveries was often outweighed by these persistent factors.

Cultural practices were found to have a significant influence on the choice of home deliveries. Over half of the respondents (52.02%) reported that their cultural beliefs always influenced their decision for home childbirth. The logistic regression analysis confirmed that adherence to cultural norms, including the preference for privacy and trust in TBAs, increased the likelihood of home delivery (OR = 1.81). The study also found that community norms, which often prioritized home deliveries, and male partners' adherence to traditional beliefs, significantly affected delivery choices. These findings align with the

Health Belief Model, where cultural frameworks heavily influence maternal health behaviors. Despite recognizing the risks of home deliveries, many women adhered to cultural expectations, thus reinforcing the reliance on home births.

Health-facility-related factors such as respect, waiting times, trust in healthcare providers, and facility accessibility were significantly associated with the likelihood of choosing home deliveries. The regression analysis showed that women who experienced respectful treatment from healthcare providers were less likely to deliver at home (OR = 0.541), while those who encountered long waiting times or had concerns about the quality of care were more likely to opt for home births. The presence of adequate medical equipment and medications also influenced this decision, with those reporting deficiencies in these areas being more inclined to choose home deliveries (OR = 0.484). These findings highlight the critical role of facility based experiences in shaping maternal health decisions and underscore the need to improve health service delivery in rural areas.

Socio-economic factors, including education, employment, marital status, and income, played a crucial role in the decision to deliver at home. Women with no formal education (73.48%) were significantly more likely to opt for home deliveries (OR = 0.481). Similarly, unemployed women (88.13%) faced economic barriers to facility deliveries, which led them to choose home births instead. The logistic regression analysis revealed that married women were less likely to deliver at home (OR = 0.575), while divorced women had a higher likelihood of home deliveries (OR = 2.800). These socio-economic factors, compounded by poverty and low educational attainment, limited access to healthcare facilities, further entrenching the preference for home deliveries. Interventions to improve education and economic conditions are necessary to address these challenges.

Knowledge of government health initiatives such as the Linda Mama and Beyond Zero programs was found to have a limited impact on delivery location choices. The study revealed that many women (53.03%) were unaware of these programs, while 56.31% lacked knowledge about government efforts to improve healthcare facilities. Logistic regression analysis showed that awareness of these programs did not significantly influence delivery location (OR = 1.077), but women who received regular updates on maternal health were more likely to choose facility-based deliveries (OR = 2.799). This suggests

that while the government programs have the potential to improve healthcare utilization, inadequate communication and trust in these programs hinder their effectiveness, further reinforcing the preference for home deliveries. Enhanced awareness campaigns are needed to increase engagement with these initiatives.

Table 5.1

Summary of Findings Per Objective

Objective	Main Quantitative Findings	Main Qualitative Findings
Prevalence of Home Deliveries	64.65% of women had home deliveries (95% CI: 59.81%–69.49%). 55.26% of women experienced 1–3 home deliveries. 94.17% of home deliveries were attended by Traditional Birth Attendants (TBAs).	Home deliveries were commonly preferred due to cultural beliefs regarding privacy and trust in TBAs. Some women recognized the safety of facility-based deliveries but continued with home births due to deep-rooted cultural practices.
Influence of Cultural Practices	52.02% of respondents said cultural beliefs always influenced home childbirth decisions. 43.69% reported their husband's cultural beliefs influenced their delivery choices. 46.97% said community norms prioritize home deliveries.	Cultural norms, such as the preference for privacy and tradition, strongly influenced home deliveries. Trust in TBAs and the belief that hospital deliveries disrespected cultural practices were critical in deciding delivery locations.
Health Facility-Related Factors	Women who trusted healthcare providers were 3.5 times more likely to deliver at a health facility. Long waiting times, lack of medical supplies, and geographical inaccessibility were significant barriers to facility delivery.	Fear and mistrust of hospitals due to concerns over cultural sensitivity and mistreatment were major deterrents. Geographical inaccessibility, high transportation costs, and perceived low quality of care reinforced preference for home deliveries.
Socio-Economic Factors	Women without formal education (73.48%) were more likely to deliver at home (OR = 0.481). 88.13% were unemployed, and 94.95% earned less than KSh 10,000. Divorced women were 2.8 times more likely to deliver at home.	Low education levels, unemployment, and poverty significantly limited access to health facility deliveries. Economic barriers, particularly transport and medical fees, led many women to choose home births.
Knowledge of Government Initiatives	53.03% of women were unaware of government initiatives providing subsidized maternal care. 56.31% lacked knowledge of programs aimed at improving healthcare facilities. 40.66% reported receiving regular updates from healthcare providers.	Limited awareness and understanding of government programs like Linda Mama and Beyond Zero. Skepticism about effectiveness and transparency led to a lack of trust in government-provided maternal services.

5.3 Conclusions

5.3.1 Prevalence of Home Deliveries

Home delivery remains the norm in Marsabit County, with nearly two-thirds (64.65%) of women giving birth at home. This high prevalence is not due to a lack of awareness—as most women know facilities are safer—but is a direct result of the collective failure to address the overwhelming cultural, logistical, and financial barriers that make home birth the only viable choice.

5.3.2 Influence of Cultural Practices

Cultural traditions are a primary driver of home deliveries, not a peripheral factor. The deep-seated preference for privacy, the authority of male partners and elders in decision-making, and the profound trust in Traditional Birth Attendants (TBAs) as culturally competent providers systematically outweigh the perceived benefits of facility-based care. Therefore, any intervention that does not authentically integrate these cultural structures is destined to fail.

5.3.3 Health Facility-Related Factors

Women are actively discouraged from using health facilities due to well-founded concerns about poor quality of care. Key deterrents include disrespectful treatment by staff, critical shortages of skilled personnel and essential medicines, and long waiting times. For many women, the journey to a distant facility culminates in an experience that feels riskier and less supportive than a home birth attended by a trusted TBA.

5.3.4 Socio-Economic Factors

Poverty and low education directly limit women's choices. The inability to afford transport costs, combined with low health literacy resulting from limited formal education, makes home delivery a default necessity rather than a preferred choice. Empowering women economically and educationally is a prerequisite for increasing demand for skilled birth attendance.

5.3.5 Knowledge of Government Initiatives

Government programs like Linda Mama have failed to penetrate Marsabit rural communities effectively. Widespread unawareness and deep skepticism about these

initiatives mean they are currently an underutilized resource. Their potential will only be realized through hyper-local, trust-based communication strategies delivered by community health workers and local leaders, not through national-level campaigns.

5.4 Recommendations

5.4.1 For the County Government of Marsabit (Department of Health and Transport)

To directly reduce the prevalence of home deliveries, the County Government must lead a multi-sectoral effort.

- **Action 1: Implement a Community Transport and Maternity Waiting Home System.** Partner with community groups to establish a reliable, subsidized ambulance network (using 4x4 vehicles) for obstetric emergencies. Simultaneously, scale up simple, culturally appropriate Maternity Waiting Homes near sub-county hospitals where women from remote areas can stay during their final weeks of pregnancy.
- **Action 2: Launch a "Champion Facilities" Program.** Select a health center in each sub-county for rapid quality improvement. This includes ensuring 24/7 water and electricity, a dedicated and stocked maternity ward, and mandatory training for all staff on Respectful Maternity Care (RMC). Success here will create demonstrable proof of concept to build trust.

5.4.2 For the Ministry of Health (County and National Levels) and Development Partners

To integrate cultural practices into the health system, a formal partnership model is required.

- **Action 1: Formalize the Role of Traditional Birth Attendants (TBAs).** Instead of marginalizing TBAs, the County Health Department should recruit and train them as "**Community Birth Companions & Liaisons.**" Their new role would be to provide antenatal support, promote health facility delivery, assist with transport arrangements, and provide immediate postnatal care, all while being linked to a specific health facility for supervision and referral.

- **Action 2: Establish a "Council of Elders for Safe Motherhood."** The County Government should convene a formal council of influential religious and clan leaders. This council would co-design and endorse public health messages, help resolve community misconceptions, and champion the "Champion Facilities" as places that respect local culture.

5.4.3 For the County Department of Health and Facility Management

To address health facility-related factors, a direct focus on quality and dignity is non-negotiable.

- **Action 1: Mandate Respectful Maternity Care (RMC) and Customer Service Training.** All maternity staff must undergo certified RMC training. Patient feedback mechanisms (e.g., simple suggestion boxes and community scorecards) should be implemented to hold staff accountable for respectful treatment.
- **Action 2: Decentralize Essential Drug and Supply Procurement.** To solve stock-outs, empower facility-level managers with a dedicated quarterly budget for procuring essential maternity drugs and supplies from pre-approved vendors, bypassing lengthy central procurement delays.

5.4.4 For the County Government (Departments of Health, Education, and Finance) and NGOs

To mitigate socio-economic barriers, targeted, practical financial support is needed.

- **Action 1: Implement a "Safe Birth Voucher" Program.** Partner with NGOs to provide identified pregnant women with vouchers that cover a) a return trip to a health facility via the community transport system and b) a delivery kit. This directly tackles the primary cost barriers.
- **Action 2: Integrate Maternal Health into Adult Education.** The County Department of Education should incorporate modules on maternal health, danger signs, and financial planning for families into existing adult literacy programs, targeting both women and their partners.

5.4.5 For the County Health Promotion Unit and Community Health Workers (CHWs)

To improve awareness of government initiatives, communication must be hyper-local and trust-based.

- **Action 1: Deploy a "Linda Mama/Jamii Mobilization" Campaign using CHWs.** Train and equip every CHW with a simple, pictorial flipbook in the local language that clearly explains the Linda Mama/Jamii program: what is free, which facilities are enrolled, and what documents are needed. CHWs should register eligible women during home visits.
- **Action 2: Produce and Broadcast Local Testimonial Spotlights.** Work with local radio stations to produce short segments featuring respected community members and "satisfied customers" who successfully used the Linda Mama program, explaining the process and benefits in a relatable way.

5.4.6 For Academic Institutions and Research Partners

Future research must move from describing the problem to evaluating solutions.

- **Primary Research Priority: Conduct an implementation science study** to evaluate the feasibility, acceptability, and preliminary impact of the proposed "Community Birth Companions & Liaisons" program and the "Safe Birth Voucher" scheme in Marsabit County. This will provide the evidence needed for scaling.
- **Secondary Priority: Undertake a longitudinal study** to track the journey of a cohort of pregnant women through the health system, using mixed methods to understand the precise points where the decision for home delivery is made and where the system fails them. This will identify more granular intervention points.

5.5 Contributions to Literature

This study significantly advances the understanding of maternal health behaviors in rural and marginalized contexts, with a particular focus on Marsabit County. By examining the interplay between cultural practices, socio-economic factors, and health-facility-related barriers, the research provides a nuanced perspective on why home deliveries remain prevalent in these settings. The study sheds light on the critical role that traditional birth

attendants and cultural norms play in shaping maternal health decisions, offering valuable insights into the complexities of health-seeking behaviors in rural communities. This work contributes to the broader discourse on maternal health by emphasizing the importance of considering cultural and socio-economic contexts in the development of health interventions, particularly in areas where modern healthcare services are underutilized.

The study also makes theoretical contributions, particularly in relation to the Health Belief Model, by demonstrating how perceived barriers, benefits, and cultural beliefs influence maternal health behaviors in rural settings. It highlights the need to expand existing theoretical frameworks to better account for the cultural and systemic factors that affect health-seeking behaviors in marginalized populations. Practically, the findings of this study can inform the development of more effective maternal health interventions and policies that are culturally sensitive and contextually appropriate. By addressing the specific needs and challenges identified in Marsabit County, policymakers and healthcare providers can design strategies that promote safer childbirth practices while respecting local traditions. Furthermore, this research lays a solid foundation for future studies, encouraging further exploration into the factors influencing maternal health in similar rural and marginalized contexts. The insights gained from this study can guide future research efforts, particularly in understanding the long-term impacts of integrating traditional practices with modern healthcare services and in identifying best practices for improving maternal health outcomes in diverse cultural settings.

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APPENDICES

Appendix 1: Participant Information and Consent Form

Title of Study: Factors Influencing Home Deliveries in Rural Areas of Marsabit County

Principal Investigator: Isako Sori

Institution: Kenya Methodist University

Contact Information: Phone Number, Email Address **Introduction:**

You are invited to participate in a research study aiming to investigate the factors influencing home deliveries in rural areas of Marsabit County. This study is conducted to better understand the cultural, socioeconomic, and healthcare-related factors contributing to the choice of home deliveries, with the ultimate goal of improving maternal health outcomes in the region.

Purpose of the Study:

The purpose of this research is to identify the factors influencing the decision to opt for home deliveries in Marsabit County. By understanding these factors, we hope to develop interventions and policies that can promote safer childbirth practices and improve maternal health services in the region.

Study Procedures:

If you agree to participate in this study, you will be asked to:

1. Participate in a one-on-one interview or focus group discussion, depending on your preference.
2. Answer questions about your experiences, beliefs, and decision-making process regarding maternal healthcare and deliveries.
3. The interview or focus group discussion will last approximately 30 minutes, and will be audio-recorded for accuracy in data analysis.

Risks and Benefits:

There are minimal risks associated with participating in this study, such as potential discomfort or emotional stress when discussing personal experiences related to maternal health. However, every effort will be made to ensure your comfort and well-being throughout the interview or discussion. The benefits of participating include contributing valuable insights to maternal healthcare research and potentially influencing future interventions to improve maternal health services in Marsabit County.

Confidentiality:

Your participation in this study will be kept strictly confidential. All data collected will be anonymized and stored securely. Only authorized members of the research team will have access to the data, and your personal information will not be disclosed to anyone outside of the research team without your explicit consent.

Voluntary Participation and Withdrawal:

Participation in this study is entirely voluntary. You have the right to refuse to participate or to withdraw from the study at any time, for any reason, without facing any consequences.

Your decision to participate or not will not affect your current or future access to healthcare services in any way.

Contact Information:

If you have any questions or concerns about the study, please feel free to contact the principal investigator:

Isako Sori Sake 0715826099 isakosori@gmail.com

If you have any concerns about your rights as a research participant, you may also contact the Institutional Review Board at Kenya Methodist University.

Prof. Wanja Tenambergen

Email: wtenambergen@riarauniversity.ac.ke / 0726678020

Dr. Caroline Kawila

Email: caroline.kawila@kemu.ac.ke / 0721612745 **Statement of Consent:**

By signing below, you confirm that you have read and understood the information provided in this form and that you voluntarily agree to participate in the study.

Participant's Signature: _____ Date: _____

Researcher's Signature: _____ Date: _____

Appendix 2: Study Questionnaire

This questionnaire aims to assess your perspectives on different factors that may influence maternal healthcare services utilization. Please tick as appropriate in the required spaces. The questionnaire will take you 30 minutes to complete.

Section A: Demographic Information

1. What is your age? ____
2. What is your marital status
 - a. Single ()
 - b. Married ()
 - c. Widowed ()
 - d. Divorced ()
3. Do you have children? Yes () No ()
4. If yes, how many children do you have? _____
5. What is your education level?
 - a) University ()
 - b) College ()
 - c) Secondary ()
 - d) Primary ()
 - e) None ()
6. What is your current occupational status?
 - a. Unemployed ()
 - b. Salaried employed ()
 - c. Self-employed ()
 - d. Student
7. What is your religion?
 - a. Muslim ()
 - b. Catholics ()
 - c. Protestant ()
 - d. Others (specify).....
8. What is your household monthly income?
 - a) <10,000
 - b) 11000-20000
 - c) 21000-30000
 - d) >31000

Section B: Place of Delivery

9. Where was your last delivery: Home () Health Facility ()
If you answer "home" proceed to Q8, if "Health facility proceed" Go to Q11.
10. If 'Home' in (Q9) above, how many home deliveries have you had? _____
11. If you delivered at home, did a traditional birth attendant assist you? Yes () No ()
12. Do you believe that delivering in a healthcare facility reduces the risk of complications compared to home delivery?

Section C: Cultural Practices and Beliefs

13. Please tick against each of the statements as appropriate.

S/N	Statement	Yes	No	Not Sure
a.	Do your cultural beliefs always influence your decision for home childbirth?			
b.	Do your husband's cultural beliefs always influence your decision for home childbirth?			
c.	Do your family's cultural beliefs have a direct influence on your choice of place of delivery?			
d.	Do community norms always prioritize home deliveries over hospital deliveries in your community?			
e.	Do cultural practices often discourage pregnant women from seeking healthcare facility deliveries in your community?			
f.	Are traditional cultural ceremonies associated with childbirth reinforce the preference for home deliveries?			
g.	Does your religious faith directly influence your decision for a place of delivery?			
h.	Do your religious beliefs encourage you to follow traditional practices during childbirth?			
i.	Do elders in your community always believe that home deliveries are more culturally appropriate than hospital deliveries?			
j.	Do elders in your community always believe that home deliveries are safer for women compared to hospital deliveries?			
k.	Do elders in your community always believe that home deliveries are less stressful for women compared to hospital deliveries?			
l.	Do you always believe that traditional birth attendants (TBAs) possess valuable knowledge and skills that make them preferable for childbirth assistance compared to healthcare facilities?			
m.	Are TBAs often considered more trustworthy and reliable than healthcare professionals for childbirth assistance in your community?			
n.	Are TBAs respected in your community for their role in childbirth?			

Section D: Health-Facility Related Factors

13. Please tick against each of the statements as appropriate.

S/N	Statement	Yes	No	Not Sure
a.	Do you believe that the healthcare providers at the facility are respectful and understanding of your cultural practices?			
b.	Have you experienced long waiting times when visiting the healthcare facility?			
c.	Have you received clear and sufficient information from healthcare providers about your delivery options?			
d.	Do you trust the skills and knowledge of the healthcare providers at the facility?			
e.	Do pregnant women in your community have adequate access to health education programs that prepare them for childbirth?			
f.	Do health facility staff exhibit respect and empathy towards pregnant women?			
g.	Do you think that the healthcare facility has adequate and necessary medical equipment for safe delivery?			
h.	Have you encountered situations where essential medications were not available at the healthcare facility?			
i.	Do you feel safe and secure when you visit the healthcare facility for maternal care?			
j.	Do you think you have sufficient number of health workers in your health facility to deal with maternity and delivery?			
k.	Does the comfort and cleanliness of the hospital always play a role in your choice of a home birth?			
l.	Do healthcare facilities have adequate privacy for pregnant women seeking maternal care?			
m.	Do you feel that the healthcare facility is located too far from your home?			
n.	Do pregnant women in your community often face long wait times at healthcare facilities before receiving assistance?			
o.	Have you ever faced difficulties in reaching the healthcare facility due to transportation costs?			
p.	Is the cost of healthcare services always a consideration for pregnant women when deciding to deliver in health facilities?			

Section E: Awareness of the Government Initiatives

14. Please tick against each of the statements as appropriate.

S/N	Statement	Yes	No	Not Sure
a.	Are you aware of any government initiatives that provide free or subsidized maternal healthcare services?			
b.	Do you know about any government programs aimed at improving the quality of healthcare facilities for childbirth in your community?			
c.	Are you informed about government campaigns or educational programs that promote hospital deliveries over home births?			
d.	Do you have access to reliable information about maternal healthcare services in your community?			
e.	Is it easy for you to find information about the benefits of delivering in a healthcare facility?			
f.	Do you receive regular updates from healthcare providers about available maternal health services and programs?			

Appendix 3: Interview Guide

For Selected Mothers, Elders, and Traditional Birth Attendants, Community Health Volunteers, Administrators like Area Chief

Section 1: Home Delivery Experience

1. Please share your experience with home deliveries. Can you describe the circumstances leading to your decision to deliver at home?
2. What cultural practices or beliefs influenced your choice to have a home delivery?
3. Were there any specific socio-economic factors that played a role in your decision to deliver at home?
4. Could you describe any challenges or barriers you faced during the home delivery process?

Section 2: Healthcare Facility-Related Factors

5. Did you have access to a healthcare facility for childbirth, and if so, what factors influenced your decision not to use it?
6. Can you share your perception of the quality of healthcare services available at local facilities, if applicable?
7. Were there any concerns or fears related to healthcare facilities that influenced your choice?

Section 3: Awareness of the Government Initiatives

8. Are you aware of the government initiatives made to facilitate hospital deliveries, and if so, what do you know about them?
9. How have these initiatives played a role in your decision-making regarding maternal healthcare?
10. Can you provide insights into the impact of such initiatives on maternal healthcare choices within your community?

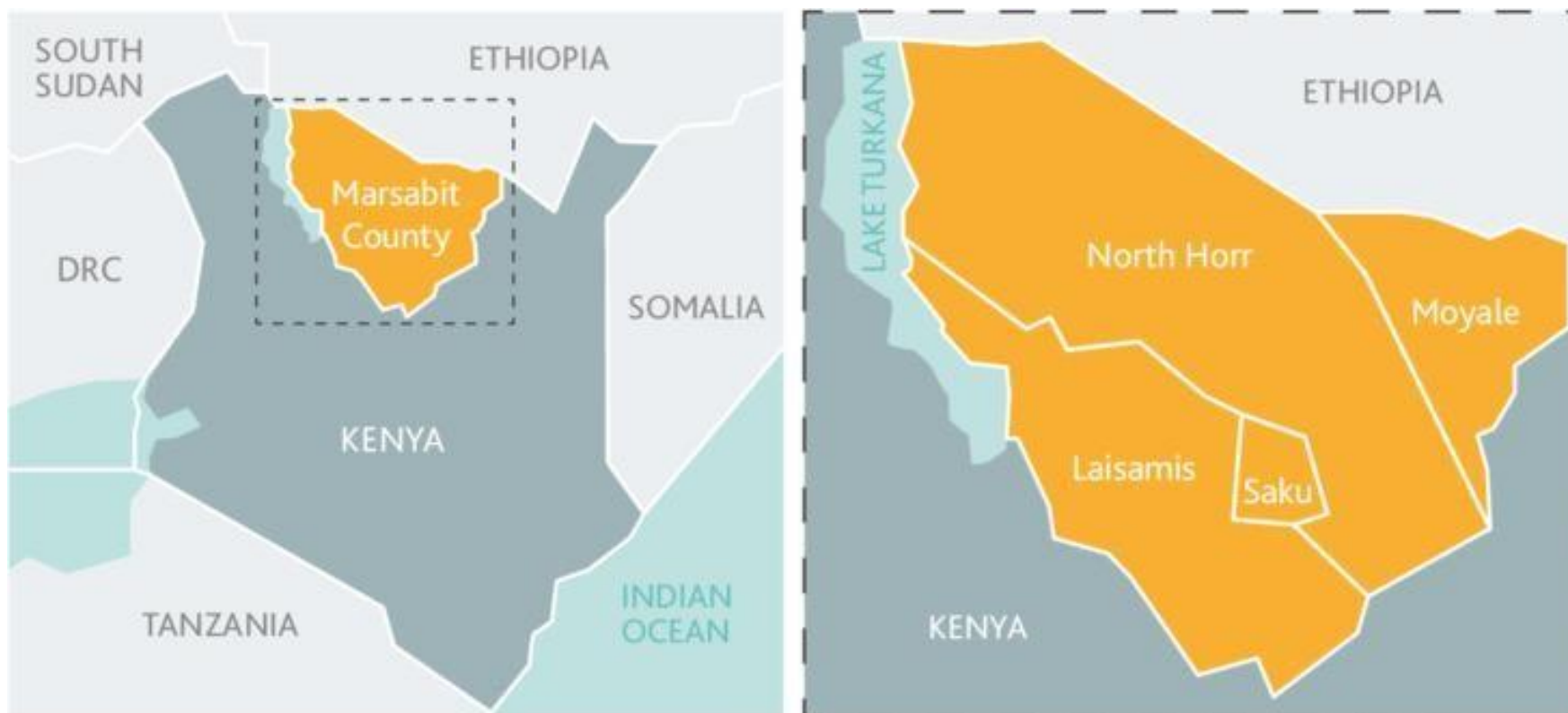
Section 4: Recommendations and Closing

11. Based on your experiences, what recommendations do you have for improving maternal healthcare services in your community?
12. Is there anything else you would like to share regarding home deliveries or maternal healthcare in Marsabit County?

Appendix 4: Focus Group Discussion Guide

1. How do cultural practices and beliefs in your community influence the choice of home deliveries?
2. What health-facility related factors (such as quality of care, accessibility, and staff attitudes) affect the decision to opt for home deliveries in Marsabit County?
3. How do socio-economic factors (such as financial status, education level, and employment) impact the choice of home deliveries in your community?
4. How aware are you of government initiatives aimed at promoting health facility deliveries, and how does this knowledge influence your decision on where to deliver your baby?

Appendix 5: Map of Study Area and Geographical Distribution of Study Participants





Appendix 6: Coding and Categorization Table for Interviews and FGDs

Participant Code	Open Code	Quote	Theme/Sub-Theme	Category
P4	Economic Constraints	"Transport costs to the hospital are high, and even though the services are supposed to be free, there are still things you have to pay for."	Financial barriers	To assess the influence of socio-economic factors on the choice of home deliveries
P4	Education Level	"Women who have gone to school are more likely to choose a hospital delivery."	Impact of education level	
P5	Lack of Employment	"Those with regular jobs or a steady income can afford the costs associated with a hospital delivery."	Employment status and healthcare access	
P10	Economic Constraints	"When times are tough, it's hard to afford anything extra, like the cost of going to a hospital."	Financial barriers	
P7	Economic Constraints	"Many families can't afford the cost of transport to the hospital, so they choose to deliver at home instead."	Financial barriers	
P4	Economic Constraints	"The cost of going to a hospital, including transport, can be too high, especially for large families with limited income."	Financial barriers	
P5	Education Level	"Women who have had the opportunity to go to school are more aware of the risks associated with childbirth and the benefits of hospital deliveries."	Impact of education level	
P3	Economic Constraints	"Transport is expensive, and with our limited income, it's easier to stay at home and deliver there."	Financial barriers	
P4	Education Level	"Those who are educated are more likely to choose a hospital delivery because they understand the risks involved with childbirth."	Impact of education level	
FGD3	Economic Constraints	"Many of us can't afford the cost of transport to the hospital, so we stay at home and deliver there instead."	Financial barriers	
FGD3	Education Level	"Those who have gone to school know more about the risks of childbirth and are more likely to go to the hospital to deliver."	Impact of education level	
FGD3	Lack of Employment	"Without a steady income, it's difficult to afford the costs associated with a hospital delivery, so home delivery is the only option for many."	Employment status and healthcare access	
FGD7	Economic Constraints	"The cost of transport to the hospital is too high for many families, so they choose to deliver at home instead."	Financial barriers	
FGD8	Education Level	"Those who have been to school are more likely to go to the hospital because they understand the risks of childbirth."	Impact of education level	
FGD8	Lack of Employment	"Without a steady income, it's difficult to afford the costs of a hospital delivery, so many women deliver at home."	Employment status and healthcare access	
FGD5	Economic Constraints	"Transport costs are too high for many families, so they stay at home to deliver instead of going to the hospital."	Financial barriers	
P1	Economic Barriers	"The cost of going to a hospital, including transport, can be too high, especially for large families with limited income."	Financial barriers	

P4	Economic Challenges	"Even though maternal healthcare services are supposed to be free under government initiatives like Linda Mama, the associated costs are still a burden."	Financial barriers	To determine the effect of health-facility related factors on the choice of home deliveries
FGD10	Lack of Access to Education	"The reality is that education is a challenge for many in our community. Schools are far, and some families don't prioritize education."	Education and awareness barriers	
P1	Economic Barriers	"The cost of going to a hospital, including transport, can be too high, especially for large families with limited income."	Financial barriers	
FGD1	Economic Constraints	"Affordability is a major issue, especially the cost of transportation. The cost of getting to the hospital is more than what we can afford."	Financial barriers	
FGD4	Socio-economic Barriers	"Financial status is a major factor. Most people in our community are pastoralists, and our income is not stable."	Financial barriers	
P2	Fear of Hospitals	"There's a fear that in the hospital, the spiritual and cultural aspects of childbirth will be ignored or disrespected."	Fear and mistrust of hospitals	
P3	Accessibility to Healthcare	"The roads are bad, especially when it rains, and there aren't many vehicles available."	Geographical inaccessibility	
P3	Quality of Care	"The care you receive is not always good. There aren't enough healthcare workers."	Perceived quality of care	
P9	Fear of Hospitals	"There's a fear of being mistreated by the staff, especially by the nurses."	Fear and mistrust of hospitals	
P9	Accessibility to Healthcare	"The hospital is very far, and transport is expensive."	Geographical inaccessibility	
P10	Quality of Care	"Hospitals don't have enough medicines or staff, so women feel it's not worth going there."	Perceived quality of care	
P3	Quality of Care	"Even when you get to the hospital, the care isn't always good. Sometimes, they don't have the necessary equipment."	Perceived quality of care	
P4	Accessibility to Healthcare	"The roads are terrible, especially when it rains, making it almost impossible to get to the hospital."	Geographical inaccessibility	
P9	Accessibility to Healthcare	"The distance and the poor road conditions make it very difficult to consider hospital deliveries as a viable option."	Geographical inaccessibility	
P10	Quality of Care	"There aren't enough healthcare workers, and the staff that are there seem overworked and not very interested in helping."	Perceived quality of care	
P3	Fear of Hospitals	"There's a fear that in the hospital, the spiritual and cultural aspects of childbirth will be ignored or disrespected."	Fear and mistrust of hospitals	
P9	Quality of Care	"The hospital staff are overworked and don't have time to give you the attention you need, so it's better to deliver at home."	Perceived quality of care	
P1	Fear of Hospitals	"There's a fear that if you go to the hospital, you might end up having a C-section, which is not well understood or accepted here."	Fear and mistrust of hospitals	
P2	Accessibility to Healthcare	"The distance and the poor road conditions make it nearly impossible to get to the hospital, especially during the rainy season."	Geographical inaccessibility	
FGD2	Fear of Hospitals	"There's a lot of fear about going to the hospital, especially because of the possibility of a C-section, which we don't really understand."	Fear and mistrust of hospitals	
FGD2	Accessibility to Healthcare	"Getting to the hospital is a challenge because the roads are bad, and transport is expensive."	Geographical inaccessibility	

FGD2	Quality of Care	"Even if you make it to the hospital, the care isn't always good. The staff are overworked and don't have the time to give you the attention you need."	Perceived quality of care	
FGD6	Fear of Hospitals	"Many women are afraid to go to the hospital because they don't trust the staff or because they're afraid of being forced into a C-section."	Fear and mistrust of hospitals	
FGD6	Accessibility to Healthcare	"The hospital is too far, and the roads are bad, so it's easier and safer to stay at home and deliver there."	Geographical inaccessibility	
FGD7	Quality of Care	"There's not enough staff at the hospital, and they don't always have the medicines or equipment that are needed for a safe delivery."	Perceived quality of care	
FGD3	Fear of Hospital Procedures	"Some women believe that if they go to the hospital, they'll be forced to have a C-section."	Fear and mistrust of hospitals	
FGD4	Accessibility	"The hospital is too far, and the roads are in poor condition, so it's easier to deliver at home."	Geographical inaccessibility	
FGD7	Quality of Care	"There aren't enough staff at the hospital, and they don't always have the medicines or equipment that are needed for a safe delivery."	Perceived quality of care	
P2	Accessibility	"The roads are bad, especially during the rainy season when they become almost impossible to use."	Geographical inaccessibility	
P3	Quality of Care	"Sometimes they don't have medicine, and the workers are few, so you wait long."	Perceived quality of care	
P2	Accessibility Issues	"I live in a remote area, and the nearest health facility is very far away. The roads are bad, especially during the rainy season when they become almost impossible to use."	Geographical inaccessibility	
P3	Fear of Hospitals	"Some people say if you go to hospital, they might do C-section without telling you, and we don't want that. It's scary."	Fear and mistrust of hospitals	
P4	Quality of Healthcare	"There are shortages of trained healthcare workers, essential medicines, and medical equipment. Women who do manage to reach a hospital may find that the level of care doesn't meet their expectations or needs."	Perceived quality of care	
FGD1	Quality of Healthcare	"The quality of care is not good. The facilities often don't have enough staff, and there are frequent stock-outs of drugs."	Perceived quality of care	
FGD3	Healthcare Accessibility	"Many of us live in remote areas far from the nearest health facility. The roads are bad, and during the rainy season they're almost impossible to use."	Geographical inaccessibility	
FGD5	Healthcare Accessibility	"Transport is another major issue. There are very few vehicles available and they're expensive to hire."	Geographical inaccessibility	
FGD5	Quality of Care	"There's also a problem with the availability of essential drugs and equipment. It's common to go to a hospital and find that they don't have the necessary medicine or tools to treat even minor complications."	Perceived quality of care	
FGD6	Accessibility Challenges	"Even when transport is available it's often not suitable for a woman in labor. Motorbikes are common here but they're not safe for transporting a pregnant woman."	Geographical inaccessibility	
P6	Awareness of	"I've heard about the Linda Mama program, but	Awareness	To evaluate

	Government Initiatives	I'm not really sure how it works."	and understanding of government initiatives	the influence of knowledge of government initiatives on the choice of home deliveries
P6	Skepticism of Government Programs	"It's not always clear how to get that help."	Skepticism and confusion about government programs	
P7	Inconsistent Government Support	"The program started strong but then faded away, and now we're back to where we started."	Inconsistent support from government programs	
P1	Awareness of Government Initiatives	"I've heard about the Beyond Zero campaign, but I don't see those clinics around much anymore."	Awareness and understanding of government initiatives	
P6	Skepticism of Government Programs	"There's skepticism about whether the services are truly free or if there are hidden costs."	Skepticism and confusion about government programs	
P6	Skepticism of Government Programs	"Some women have used the Linda Mama program, but others, like myself, are not sure how it works or what exactly is available."	Skepticism and confusion about government programs	
P7	Inconsistent Government Support	"The government programs seem to come and go, and when they're gone, we're left on our own again."	Inconsistent support from government programs	
P5	Skepticism of Government Programs	"I'm not sure how the government programs work, and there's some doubt about whether they really provide the help they promise."	Skepticism and confusion about government programs	
FGD4	Awareness of Government Initiatives	"We've heard about government programs like Linda Mama, but we're not sure how to access the services they provide."	Awareness and understanding of government initiatives	
FGD4	Skepticism of Government Programs	"There's a lot of doubt about whether these government programs really work or if they're just promises."	Skepticism and confusion about government programs	
FGD4	Inconsistent Government Support	"These programs seem to come and go, and when they're gone, we're left to fend for ourselves again."	Inconsistent support from government programs	
FGD9	Awareness of Government Initiatives	"We've heard about Linda Mama and Beyond Zero, but we're not sure how to access the services they offer."	Awareness and understanding of government initiatives	

FGD8	Awareness of Government Initiatives	"We've heard about government programs like Linda Mama, but many of us don't know how to access the services they offer."	Awareness and understanding of government initiatives	
FGD9	Skepticism about Government Programs	"There's a lot of skepticism about whether these government programs really work or if they're just empty promises."	Skepticism and confusion about government programs	
P4	Awareness of Government Initiatives	"Beyond Zero initiated by the First Lady of Kenya focuses on reducing maternal and child mortality by bringing healthcare services closer to communities."	Awareness and understanding of government initiatives	
P6	Inconsistent Government Support	"The program's visibility waned, and funding became inconsistent; the community's reliance on it diminished."	Inconsistent support from government programs	
P1	Lack of Information	"There's a big gap in understanding government initiatives. Many of us don't know what's available, and there's a lot of confusion about what services are free and what we need to pay for."	Lack of awareness about government initiatives	
FGD3	Awareness of Government Initiatives	"Some of us have heard about the Linda Mama initiative where traditional birth attendants are linked to health facilities."	Awareness and understanding of government initiatives	
FGD7	Awareness of Government Initiatives	"There's a big gap in understanding government initiatives. Many of us don't know what's available and there's a lot of confusion about what services are free and what we need to pay for."	Lack of awareness about government initiatives	
P1	Cultural Beliefs	"We believe that childbirth should happen at home, where the mother is surrounded by her family and familiar things."	Influence of cultural practices on home deliveries	To examine the influence of cultural practices on the choice of home deliveries
P1	Privacy in Childbirth	"The actual delivery is kept secret, and it's believed that this protects the family from any bad luck or evil spirits."	Cultural practice of privacy	
P2	Trust in Traditional Birth Attendants	"Traditional birth attendants are highly respected in our community."	Trust in traditional birth attendants	
P8	Cultural Beliefs	"In our community, childbirth is something that should happen at home, with family around."	Cultural norms and beliefs	
P8	Trust in Traditional Birth Attendants	"We trust the traditional birth attendants because they understand our ways."	Trust in traditional birth attendants	
P2	Cultural Beliefs	"There's a belief that childbirth should be a private event, kept within the family."	Cultural norms and beliefs	

P5	Trust in Traditional Birth Attendants	"We trust the traditional birth attendants because they know how to handle childbirth in a way that respects our cultural beliefs."	Trust in traditional birth attendants
P8	Privacy in Childbirth	"The actual delivery is kept private, and it's believed that this protects the family from any bad luck."	Cultural practice of privacy
P1	Cultural Beliefs	"There's a belief that childbirth should be done quietly at home to avoid any bad omens."	Cultural norms and beliefs
P2	Trust in Traditional Birth Attendants	"We prefer traditional birth attendants because they know our customs and how to handle childbirth in a way that aligns with our beliefs."	Trust in traditional birth attendants
P8	Cultural Beliefs	"In our community, delivering at home is considered the right thing to do. It's how our mothers and grandmothers did it."	Cultural norms and beliefs
P10	Trust in Traditional Birth Attendants	"Traditional birth attendants are seen as more trustworthy because they understand our cultural practices and can perform the necessary rituals."	Trust in traditional birth attendants
FGD1	Cultural Beliefs	"In our culture, childbirth is something that should be done at home, away from the eyes of strangers."	Cultural norms and beliefs
FGD1	Privacy in Childbirth	"It's important to keep the delivery private, even from neighbors, to avoid bad omens."	Cultural practice of privacy
FGD1	Trust in Traditional Birth Attendants	"We trust the traditional birth attendants because they know our ways and can perform the necessary rituals during childbirth."	Trust in traditional birth attendants
FGD5	Cultural Beliefs	"Our cultural practices are very important, and we believe that childbirth should happen at home, where it can be done according to our traditions."	Cultural norms and beliefs
FGD5	Privacy in Childbirth	"Childbirth is a private matter, and it's important to keep it within the family to protect the mother and baby from harm."	Cultural practice of privacy
FGD6	Trust in Traditional Birth Attendants	"We have a lot of trust in our traditional birth attendants because they know how to handle childbirth in a way that respects our cultural practices."	Trust in traditional birth attendants
FGD1	Cultural Privacy	"Childbirth is done in secrecy; even the closest neighbors shouldn't know when a woman is in labor."	Cultural norms and beliefs
FGD2	Cultural Beliefs	"There's a deep-rooted belief that childbirth should be private, surrounded by family."	Cultural norms and beliefs
FGD6	Trust in Traditional Birth Attendants	"We trust the traditional birth attendants because they know our customs and how to conduct childbirth in a way that aligns with our beliefs."	Trust in traditional birth attendants
P1	Cultural Secrecy	"It's believed that if too many people know about it, it could bring bad luck or a bad omen to the mother and baby."	Cultural norms and beliefs
P2	Trust in Traditional Birth Attendants	"There's a deep trust in them because they're part of our community and have been helping women give birth for generations."	Trust in traditional birth attendants

P5	Cultural Tradition	"There's a belief that when a woman delivers at home, she is surrounded by familiar things and people, which helps protect her and the baby."	Cultural norms and beliefs
FGD11	Gender Dynamics	"Many women are not comfortable being attended to by male health workers, which is often the case in hospitals."	Gender dynamics and comfort
FGD12	Perceived Superiority of Traditional Methods	"The traditional methods are seen as safer and more in tune with our way of life. The hospital is seen as a place where you go only if something is seriously wrong."	Preference for traditional methods
P5	Trust in Traditional Birth Attendants	"They know our customs and what's important to us which makes us feel more comfortable delivering at home rather than in a hospital where the staff might not understand or respect our traditions."	Trust in traditional birth attendants
P2	Trust in Traditional Birth Attendants	"Traditional birth attendants are highly respected in our community. They know how to conduct the birth in a way that aligns with our beliefs."	Trust in traditional birth attendants
P3	Cultural Beliefs	"In our place, we believe childbirth should happen at home with family. If you go to hospital, it's like everyone knowing your business and that's not good."	Cultural norms and beliefs
P4	Cultural Barriers	"The acceptance of modern healthcare options is impacted by these cultural practices. Many women feel that the medical environment is too clinical and impersonal."	Cultural norms and beliefs
FGD2	Cultural Beliefs	"There's a deep-rooted belief that the presence of too many people or the involvement of strangers could negatively affect the outcome of the birth."	Cultural norms and beliefs
FGD2	Trust in Traditional Birth Attendants	"There's a strong trust in traditional birth attendants. They are seen as more than just healthcare providers; they're keepers of our cultural knowledge."	Trust in traditional birth attendants
FGD4	Cultural Beliefs	"It's believed that if too many people know or if the process is too public it could bring bad luck or a bad omen to the mother and baby."	Cultural norms and beliefs
FGD6	Cultural Barriers	"There's also a general lack of trust in the hospital system. Many of us believe that the traditional methods are safer and more in tune with our way of life."	Cultural norms and beliefs

Appendix 7: Ethical Approval



KENYA METHODIST UNIVERSITY

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

FAX: 254-64-30162
EMAIL: info@kemu.ac.ke

Our Ref: KeMU/ISERC/HSM/16/2024

July 12, 2024

ISAKO SORI SAKI
HSM-3-1814-1/2022

Dear Isako,

SUBJECT: FACTORS INFLUENCING PREFERENCE FOR HOME DELIVERIES IN RURAL AREAS OF MARSABIT COUNTY

This is to inform you that Kenya Methodist University Institutional Scientific Ethics and Review Committee has reviewed and approved your research proposal. Your application approval number is KeMU/ISERC/HSM/16/2024. The approval period is 12th July, 2024 – 12th July, 2025.

This approval is subject to compliance with the following requirements:-

- I. Only approved documents including (informed consents, study instruments, MTA) will be used.
- II. All changes including (amendments, deviations, and violations) are submitted for review and approval by Kenya Methodist University Institutional Scientific Ethics and Review Committee.
- III. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to KeMU ISERC within 72 hours of notification.
- IV. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to KeMU ISERC within 72 hours.
- V. Clearance for export of biological specimens must be obtained from relevant institutions.

- VI. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- VII. Submission of an executive summary report within 90 days upon completion of the study to KeMU ISERC.

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

Yours sincerely,



MR. HERBERT KIBEBE
CHAIR (ISERC)

Appendix 8: County Approval



REPUBLIC OF KENYA
COUNTY GOVERNMENT OF MARSABIT
DEPARTMENT OF HEALTH
COUNTY CHIEF OFFICER HEALTH SERVICES



REF: CGM/DHS/ADM/ (29) VOL.II (21)

25th July 2024

TO: WHOM IT MAY CONCERN,

Dear Sir/Madam,

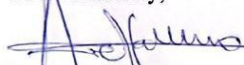
RE: PERMISSION FOR DATA COLLECTION- ISAKO SORI SAKE:

On behalf of Health Department, I am writing to formally indicate our awareness of the research data collection by ISAKO SORI SAKE, a student at Kenya Methodist University Reg. Number HSM-3-1814-1/2022 Undertaking Masters of Science Health System Management.

We are happy to know that ISAKO intends to conduct his research on 'FACTORS INFLUENCING PREFERENCE FOR HOME DELIVERIES IN RURAL AREAS OF MARSABIT COUNTY'. The outcome of this research shall be of a great support and resource for the County Government of Marsabit.

Please accord him all the necessary support.

Yours Sincerely,


Dr. Arero Halkano
County Chief Officer
Medical Services
County Government of Marsabit

COUNTY GOVERNMENT OF MARSABIT
CHIEF OFFICER MEDICAL SERVICE
P.O. BOX 384-60500, MARSABIT
Date... 25/7/2024 ...

Appendix 9: NACOSTI License

 REPUBLIC OF KENYA	 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
Ref No: 226024	Date of Issue: 20/August/2024
RESEARCH LICENSE	
This is to Certify that Mr. ISAKO SORI SAKI of Kenya Methodist University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Marsabit on the topic: FACTORS INFLUENCING PREFERENCE FOR HOME DELIVERIES IN RURAL AREAS OF MARSABIT COUNTY for the period ending : 20/August/2025.	
License No: NACOSTI/P/24/38866	
Applicant Identification Number 226024	 Director General NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
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