ASSESSMENT OF EXCLUSIVE BREASTFEEDING PRACTICE AND ASSOCIATED FACTORS AMONG LACTATING MOTHERS IN WABERI LOCATION, GARISSA COUNTY

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DECLARATION

I affirm that the work you see here is original to my writing and has never been published elsewhere..

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I want to thank my wife for everything, my children, and my supervisor who has helped me through the entire thesis development.

ABSTRACT

During the first six months after birth, an infant should be exclusively breastfed, without any other liquids or solids, including water, except for vitamins, minerals, medication drops, or syrups. Globally, only 50% of newborns begin breastfeeding within the first hour of life. In the least developed countries, just 41% and 39% of infants under six months are exclusively breastfed, falling short of the 2030 global target. EBF practices there are not up to par. This study's main objective was to evaluate exclusive breastfeeding practices and related factors. The Waberi location in Garissa County in the North Eastern province was the site of the study. Garissa County with a sample size of 145 respondents which was generated by the use of the Fischers et al Formula. A two-stage cluster and purposive sampling technique ensured all management levels were well-represented as respondents in the study. Quantitative data was collected using a semi-structured questionnaire, while qualitative data was gathered through key informant interviews with the aid of a key informant guide. Following data collection, the researcher performed data cleaning and coding. Quantitative data analysis was conducted using SPSS version 27.0, while qualitative data analysis was supported by content analysis. Descriptive statistics, including percentages and frequencies, along with inferential statistics such as chi-square tests and binary logistic regression, were used to assess associations between dependent and independent variables, with statistical significance set at $p<0.05$. Ethical clearance was obtained from Mount Kenya University's ethics and review committee, and permission was secured from the National Commission for Science, Technology, and Innovation (NACOSTI) to begin data collection. Participant confidentiality was strictly maintained, and participation was voluntary. From this research, the prevalence of exclusive breastfeeding was low(43.5%) which is a public health concern. In the maternal factor associated with exclusive breastfeeding practices, having a smaller family size(OR=2.5,95 C.I, 0.107-1.407), lactating mothers who sought ANC attendance(OR=2.3,95 C.I, 0.181-1.046), and having a secondary level of education(OR=3.5,95 C.I, 0.267-3.601), increased the odds of practicing exclusive breastfeeding. In examining socio-cultural factors related to exclusive breastfeeding, the presence of social support(OR=2.8,95 C.I, 0. 166-0.768) increased the likelihood of exclusive breastfeeding, while harmful cultural practices(OR=3.2,95 C.I, 1.456-6.860) decreased it. Additionally, among socioeconomic factors, employment(OR=5.6,95 C.I, 0.078-0.407) was linked to higher odds of practicing exclusive breastfeeding. The Ministry of Health and other relevant stakeholders should implement health education and promotion programs to advocate for exclusive breastfeeding among pregnant and lactating mothers, helping them gain sufficient knowledge of its benefits.

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ABBREVIATIONS AND ACRONYMS

AFASS	Accessible Feasible Sufficient And Sustainable
EBF	Exclusive Breastfeeding
PMTCT	Prevention Of Mother-To-Child Transmission
KEMRI	Kenya Medical Research Institute
MCH	Maternal and Child Health
MOH	Ministry of Health
MoPHS	Ministry of Public Health and Sanitation
KNBS	Kenya National Bureau Statistics
UN	United Nations
UNICEF	United Nations Children's Fund
WHO	World Health Organization

Operational Definitions of Terms

Ante-natal Care- is the care you get from health professionals during your pregnancy.

Cesarean Section- the surgical delivery of a child via an abdominal and uterine incision performed by the woman who gives birth.

Cultural Beliefs are beliefs that are learned and shared across groups of people.

Exclusive Breastfeeding- is the custom of a baby only consuming milk that comes to the mother, a wet nurse, or breast milk that has been conveyed.

Gravidity - is the process by which a baby only eats milk from her breast that is transmitted, a wet nurse, or milk that comes to the mom.

Maternal Knowledge- Recognizing of kid's growth processes, growth norms, and achievements by the parent.

Parity - the total number of pregnancies with a pregnancy age of 24 weeks or longer that she provided birth to, whether the baby had been alive or stillborn.

Primiparous having a first-time pregnancy. Getting only a single child.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This section provides the study background, problem statement, study limitations, and delimitations, significance and justification of the study, and operation description of terms, assumptions, and scope of the investigation.

1.1 Background of the Research

For the first six weeks after birth, a baby is only allowed to consume milk from breasts. (UNICEF & WHO, 2019). According to the World Health Organization (WHO), nursing should begin as soon as possible after birth, ideally within an hour. A kid should also receive only breast milk for the first 6 months of life and ought to keep getting it until they are two years old and older (WHO, 2019; Bell & Cond, 2017). The World Health Assembly set a global nutrition target to achieve at least 50% EBF prevalence by 2025(Ahmed et al., 2024). As of recent assessments, the global rate stands at 48%, just 2% shy of this goal. Despite overall progress, disparities persist. For instance, only three African countries—Guinea-Bissau, Rwanda, and São Tomé and Príncipe—are on track to meet the 50% EBF target by 2025(Ahmed et al., 2024).

Over fifty percent of infants around the world start nursing within the initial hour of confinement. In nations that are emerging, only 41% and 39% of infants younger than 6 months are wholly breastfed, falling considerably short of the worldwide mark of 70% set for 2030 (UNICEF, 2018). By the age of twelve months, rates of breastfeeding fall to 45%, even though more than 2/3rd of mothers keep breast-feeding their kids for at least a single year (UNICEF, 2018). Only 37% of infants worldwide and 39% of those in the

least developed nations receive breastfeeding exclusively for a minimum of six months (WHO, 2018).

According to Bhattacharjee et al. (2017), only 37% of African infants under the age of six months received only mammary milk in 2017. Following estimates, if all newborns were breastfed for the first two years of life, it would prevent the deaths of over 820,000 kids under the age of five each year. The future wellness of a child depends on breastfeeding, which also lowers costs for hospitals, families, and authorities (WHO, 2020). According to Victora et al. (2017), the WHO set global targets of at least 50% exclusively nursing in the first six-month period by 2025 and at most 70% by 2030. The United Nations Children's Fund estimated progress in monitoring, finding 44% of the children in Africa being EBF in 2021, with differences across the regions of Africa: North Africa (32%), Southern Africa (33%), West Africa (35%), East Africa (59%), and Central Africa (44%)(Sarfo et al., 2024).

In sub-Saharan Africa, 35% of infants more youthful compared to six months were wholly breastfed in 2017 (Asare et al., 2018). Only 39% of infants under the age of six months of age in countries that are emerging, such as Africa, are exclusively breastfed, and only 58% of 20- to 23-month-olds gain from the ongoing breastfeeding practice, as reported by Olufunlayo et al. (2019). In SSA and South Asia, over ten million kids under the age of five pass away every year, according to Ahmed et al. (2018). Poor breastfeeding practices are to blame for the majority of these fatalities, which occur (41%) in S.S.Africa and (34%) in South Asia (Walters et al., 2019). Insufficient breastfeeding techniques in combination with a high prevalence of disease are an important cause of death in infants as well as young kids (Aguayo, 2017). The prevalence of exclusive breastfeeding in children aged 0-5 months in sub-Saharan Africa was 50.8% (95% CI 50.1%-51.5%).

Burundi and Zambia recorded the highest prevalences, at 84.3% and 72.8%, respectively(Wako et al., 2022).

In Madagascar, Ratovoson et al. (2020) discovered that 1 in 10 infants and one out of six kids die before five years. In South Africa, 10% of infants ages 0 to 3 months and 2% of infants ages 4 to 6 months received breastfeeding exclusively (Chakona, 2020). 56% of infants in East and Southern Africa are exclusively breastfed. In the areas of the Middle East and North Africa, it is 33%, while it is 33% in West and Central Africa (UNICEF, 2018). It was reported in a systematic review covering studies from Ethiopia, Rwanda, Kenya, Uganda, Tanzania, and South Sudan that about 55.9% of the mothers practiced EBF for the first six months. The same review found that 72.9% of the mothers started to breastfeed within one hour of delivery and 79.5% gave their newborns colostrum, while 31.6% provided pre lacteal feeds(Dukuzumuremyi et al., 2020).

EBF measurements there are subpar. According to the Kenya Demographic Health Survey, only 32% of infants under the age of six months of age are exclusively breastfed. (KDHS, 2014) report, indicating that most mothers do not exclusively breastfeed their babies. In Nairobi, the median time spent exclusively breastfeeding is 0.5 months, equated to 0.6 period of months in KDHS (2010), according to KDHS (2014). According to a study done in the Makueni District's Kathonzweni Division, 50.6% of infants were receiving additional nutrition at the age of three months, indicating poor exclusively breastfed performance (Galgallo, 2017). In the study conducted in Wajir County, findings indicated that 55% of mothers who had infants aged 0-6 months practiced EBF. It was mainly influenced by maternal education, place of delivery, and breastfeeding knowledge(Jamaa et al., 2018). However, according to a recent investigation conducted in Kenya, 45% of babies aged 4-5 months and 61% of babies under 6 months received only breast milk (Talbert et al., 2020). However, these percentages remain below the 90%

WHO-recommended rate and the 80% Kenyan government target (Gewa & Chepkemboi, 2016; WHO, 2020).

1.2 Problem Statement

The WHO and UNICEF recommend exclusive breastfeeding (EBF) for the first six months of life (WHO, 2017a). During this period, infants should only receive breast milk, including expressed milk or that provided by a wet nurse, except for oral rehydration solutions, and vitamin, mineral, and medication drops or syrups (WHO, 2017b). The World Health Assembly (WHA) aims to increase the global rate of exclusive breastfeeding to 50% by 2025 (WHO, 2014). Exclusive breastfeeding is among the most effective strategies available to policymakers for improving public health and economic outcomes (Victora et al., 2016).

By 2016/2017, Kenya's Ministry of Health hopes to increase the country's mortality rate by 3% annually, or 56%(GOK, 2020). Promoting exclusive breastfeeding is a key nutrition intervention included in the Kenya National Nutrition Action Plan 2012-2017 (GOK, 2020). Currently, Infant and Young Child Feeding (IYCF) counseling is offered to mothers and caregivers of children under five, particularly those at risk of malnutrition, during growth monitoring and promotion at government health facilities. The "Community Health Strategy" has expanded the duties of Community Health Volunteers (CHVs) to include counseling on IYCF. The Baby Friendly Community Initiative and Mother-to-Mother Support Groups are two additional community-based initiatives(GOK, 2020).

Globally, only 38% of infants are exclusively breastfed (WHO, 2016). In East Africa, exclusive breastfeeding (EBF) rates are notably high, with over 50% of infants aged 0 to 5 months being exclusively breastfed in Rwanda (84.9%), Burundi (69.3%), Uganda

(63.2%), Kenya (61.4%), and Tanzania (50%) (WHO, 2016)Although Kenya has seen an increase in EBF rates to 61.4% from 32% (KNBS, 2019), it still ranks second lowest among East African countries. The EBF rate in the study area of Garissa County, Kenya, is 30%, well below the national average and the WHO target of 90% (Wanjohi et al., 2021). Data from the Kenya Demographic and Health Survey (KDHS) show that EBF rates rose from 32% in 2008 to 61% in 2014. In 2022, KDHS found them at 60%, suggesting a deceleration. This could signal a possible overshoot in hitting the country's set EBF target at 70% by 2030(KDHS, 2022).

The low rate of exclusive breastfeeding among moms who lactate in the Waberi area of Garissa County is the issue that this study aims to address. The practice of sole breastfeeding, which is essential to lowering infant death and morbidity rates, is still uncommon in many counties, including Garissa County. Insufficient amounts of exclusive breastfeeding are a factor in the considerable infant fatality and morbidity rates in the Waberi area. This study sought to address the low proportion of lactating mothers in the Waberi area of Garissa County who exclusively breastfeed.

1.3 Research objectives

1.3.1 General objective

This research's main goal was to assess exclusive breastfeeding practice and associated factors among lactating mothers in Waberi Location, Garissa County.

1.3.2 Specific Objectives

Specific objectives of the research guiding this study were: -

1. To determine the prevalence of exclusive breastfeeding among lactating mothers in the Waberi location, Garissa County.

2. To determine the maternal factors that influence exclusive breastfeeding among lactating mothers in the Waberi location, Garissa County.
3. To determine the sociocultural factors that influence exclusive breastfeeding among lactating mothers in the Waberi location, Garissa County.
4. To determine the social economic factors influencing exclusive breastfeeding among lactating mothers in the Waberi location, Garissa County.

1.4 Research Questions

The study research questions included;

1. To determine the prevalence of exclusive breastfeeding among lactating mothers in the Waberi location, Garissa County.
2. What are the maternal factors that influence exclusive breastfeeding among lactating mothers in the Waberi location, Garissa County?
3. What are the sociocultural factors influencing exclusive breastfeeding among lactating mothers in the Waberi location, Garissa County?
4. What are the economic factors influencing exclusive breastfeeding among lactating mothers in the Waberi location, Garissa County?

1.5 Study Significance

This investigation potential is what makes it noteworthy to contribute to the improvement of infant health and well-being in the Waberi location, Garissa County. Exclusive breastfeeding is a critical factor in reducing infant morbidity and mortality rates, yet its practice remains low throughout much of the world, including Garissa County. In the Waberi location, the low practice of exclusive breastfeeding is contributing to high infant morbidity and mortality rates. Therefore, In the manners that follow, the results of this study will be noteworthy: do not number below; Provide information on the prevalence

of exclusively breastfeeding among lactating mothers in Waberi location, Garissa County. This information was useful in understanding the extent of the problem and in designing interventions to promote exclusive breastfeeding, Determine the elements that affect mothers' habits of only breastfeeding in the Waberi location, Garissa County. This information was critical in designing effective interventions to promote exclusive breastfeeding and address the factors that hinder the practice, Increasing our understanding of Kenya's exclusive breastfeeding practices. The findings of the present research advanced the existing body of knowledge, on breastfeeding customs, which was useful in developing policies and guidelines aimed at promoting exclusive breastfeeding in Kenya and finally Informing the creation of strategies to support nursing exclusively among lactating mothers in Garissa County. The outcomes of this investigation aided the creation of interventions to support exclusive breastfeeding, enhancing infant well-being and health locally.

1.6 Study Justification

Despite efforts by the régime of Kenya to ensure lactating mothers practice exclusive breastfeeding, Garissa County has been left behind as only 45% of the lactating mothers reported practicing exclusive breastfeeding and this was influenced by harmful cultural practices and poor social support from family members and available healthcare facilities. This study comes in a period where Garissa County is experiencing a drought crisis and infants are highly affected as mothers are not in the capacity to exercise exclusive breastfeeding when they can. This investigation adhered to the national standards for maternal, child, and young child nourishment alongside the recommendations for securing community efforts for baby-friendly environments. Additionally, by supporting exclusive breastfeeding for children under six, this study supported the Sustainable Development Goal Number, which calls for a sense of well-being and health.

1.7 Study Scope

The purpose of the investigation was to ascertain the frequency of exclusive nursing and to pinpoint the factors that impact the practice of breastfeeding among lactating mothers in the Waberi location, Garissa County. The study targeted lactating mothers who will be residents of the Waberu location, in Garissa County. The study aimed at utilizing one month for data collection while the study itself took one year to be completed. Furthermore, the study only focused on study respondents residing in the Waberi location of Garissa County. The study utilized literature focusing on factors influencing exclusive breastfeeding among lactating mothers.

1.8 Limitations of the Study

Several limitations were encountered in this study:

1. **Recall Bias –** The study relied on self-reported data from lactating mothers, which may have been affected by recall bias. Some mothers might not accurately remember the duration and exclusivity of their breastfeeding practices.
2. **Social Desirability Bias** – Participants may have over-reported exclusive breastfeeding practices to align with social expectations. To minimize this, the questionnaires were designed with clear and simple language to encourage honest responses.
3. **Language Barriers –** The study was conducted in English and Swahili, which may not be the primary languages of all participants. This could have affected the accuracy and quality of the responses.
4. **Limited Generalizability –** The research focused on lactating mothers in Waberi, Garissa County. Therefore, the findings may not be applicable to other regions within Garissa County or Kenya as a whole.

5. **Time and Resource Constraints –** The study was conducted within a limited timeframe and with restricted resources, which may have affected the depth and scope of data collection.

1.9 Study Delimitation

This study was delimited social-economic, maternal, and social-cultural factors influencing breastfeeding exclusively for lactating mothers in the Wamberi location in the Garissa sub-county. This study was also delimited to lactating mothers and only 124 study respondents were deemed eligible for this study.

1.10 Assumption of the Research

1. On the day of data collection, the study presupposes that the study subjects would be available.
2. The study assumes the study respondents would give honest opinions and would participate In the study without demanding any incentives.

CHAPTER TWO

REVIEW OF THE LITERATURE

2.0 Introduction

The empirical literature on breastfeeding practice, demographic characteristics, and breastfeeding knowledge were reviewed in this section. The review is governed by the study objectives. The research reviewed was summarized, and the gaps in the body of knowledge that have been found were also pointed out. The theoretical and conceptual frameworks of the study, as well as a critical review of the literature, were also included in this chapter.

2.1 Exclusive breastfeeding practice

The procedures to be followed when nursing a baby are exclusively breastfeeding practices (Beckerman et al., 2020). With very few exceptions, milk from humans is the best option for all babies, such as impulsive and ill babies (Zhu & Dingess, 2019). The initial 6 months of a baby's life should be expended wholly breastfed, according to the suggested breastfeeding practice. Yet, different women adopt a variety of practices—not just breastfeeding—for a variety of reasons (Beckerman et al., 2020). The greatest way to provide babies with the nourishment they need for optimal development and growth is to breastfeed. For the initial 6 months of life, newborns should only be breastfed to attain the best possible developmental outcomes and health (Makwela et al., 2024).

Exclusive breastfeeding for the first six months of a baby's life enhances their immune system, safeguards against severe respiratory infections and diarrhea two leading causes of infant mortality in developing countries, and improves their response to vaccinations (Makwela et al., 2024). According to Igbo et al. (2017), optimal nursing reduces the risk of death and significantly enhances kids' long-term well-being. Best methods of breastfeeding lower hospitalization rates for kids with otitis media, infections of the

respiratory tract, and diarrhea. The majority of the calories needed to support growth through the first 6 months are gained by wholly breastfed young children (Perez-Escamilla et al., 2019). By spacing out births, nursing enables the mother to recover before becoming pregnant again(Armdie et al., 2024).

EBF practice is linked to some socioeconomic, demographic, obstetric, and healthcare factors related to both mom and baby, including the mother's marital status, age at conception, age at first birth, educational attainment, desire for pregnancy, and occupation (Tsegaw et al., 2021). Previous studies conducted in different countries have shown that these factors include the mom's age, place of delivery, and mode of delivery. Parity, family size, smoking, professional nursing counseling, infant feeding counseling, starting to breastfeed, and mothers' awareness of EBF are additional factors that affect the practice of EBF (Dede & Bras, 2020).

2.2 Maternal Factors Influence the Practice of Exclusive Breastfeeding

Past research has linked residential areas to adherence to EBF among mothers who are breastfeeding. This was consistent with research by Mekebo et al. (2022) on the factors affecting the utilization of breastfeeding alone among kids under 6 months old in Ethiopia, which exposed that residence had a significant influence on EBF usage. The outcome is comparable to earlier Cambodian studies (Um et al., 2020). This may be because urban women spend the majority of their time working for pay outside of their residences, either in either permanent or interim jobs, which forces them to devote some or a significant amount of time apart from their kids. The results of an Indonesian study by Laksono et al. (2021), however, established that women living in town areas had been more probable to participate in EBF than those living in country areas. This observation conflicts with the previous finding.

According to a study by Dona et al. (2020), individuals from earlier Aseko and Loma districts were coming from rural areas, which may have influenced their decision to practice EBF given a lack of knowledge, resources, and additional related challenges. This might be clarified by the circumstance that supreme of the subjects of the investigation in South Sudan, Ambo Town, and the Dembecha District were not informed about EPNC services while giving birth at home. The likelihood of using EBF was therefore low.

Due to varying knowledge, it has been demonstrated that the education level of the mother affects the use of EBF among lactating mothers. This was corroborated by research conducted in Ethiopia by Mekebo et al. (2022), which revealed a noteworthy association between education for mothers and the utilization of EBF. The use of EBF improves with higher levels of the mother's learning; moms with higher levels of learning were far more inclined to use EBF on their infants than moms with no or little schooling. This outcome is in line with the findings of the studies conducted in the Azezo district by Awoke & Mulatu in 2021, which showed that EBF practice was positively impacted by education for mothers.

A different investigation by Laksono et al. (2021) in Ethiopia and Indonesia established that higher-educated moms were more inclined to engage in exclusively breastfeeding. Mothers with a greater amount of education may be additionally conscious of the significance of EBF, which could be a cause. Additionally, the ones with higher education levels may have more job options and earn more money compared to those with less schooling. Additionally, women with higher levels of education can work in professions that allow for schedule flexibility and greater levels of autonomy, like those of an instructor.

Contrarily, Syahri et al., (2024) discovered a reverse correlation in developing nations where there was a significant adoption of breastfeeding exclusively among women with low incomes and low educational status, making it difficult for these individuals to afford infant formula. This improved persistent exclusive breastfeeding demonstrated that the vast majority of breastfeeding moms had some kind of college schooling, but this was not related to the utilization of EBF.

Exclusive breastfeeding practices have been associated with the mother's age. A study in rural Kenya found that younger mothers were less likely to practice exclusive breastfeeding (Talbert et al., 2020). Conversely, research by Mohamed et al. (2020) revealed that older mothers in North-Eastern Kenya were more likely to exclusively breastfeed. However, a study in Nairobi by Mututho et al. (2017) indicated that younger mothers tended to be more committed to exclusive breastfeeding. Conferring to Debes et al. (2017), the likelihood of exclusive breastfeeding increased as a mother's age exceeded 20. This might be clarified through the claim made by Black et al. that moms gain expertise in child administration as they get older and that younger moms will introduce early additional feedings to sustain the breast's size and elegance.

Since a shared income can result from a union or having a spouse, marital status affects the start of breastfeeding as well as its length. In contrast to those in connections where both parents work, single people only have a single income to cover their rent and other expenses. Another advantage to having a companion was the improved support it provided for nursing and time management. In contrast to single mothers, rates of breastfeeding were positively impacted by supportive partners. Furthermore, especially if they are working females, single mothers are in reduced danger of initiating and sustaining breastfeeding. In comparison to single females, mothers who have partners

might be able to take a longer break from work without facing financial hardship (Dagher et al., 2018).

Additional investigations have connected nursing habits and marital status. In a 2017 study by Adugna et al. on mothers who are lactating in Ethiopia, marriage status was linked to exclusive nursing practices. Additionally, in Nairobi, the mother's relationship with her spouse was one of the reported predictors of the early adoption of complementary meals (Mututho et al., 2017).

Nursing practices have additionally been linked to gravidity and parity. The total number of pregnancies, regardless of how they turn out, is what is referred to as gravidity. The overall amount of pregnancies carried past the point of viability, on the other hand, is known as parity (Hughes, 2018). Multiparous moms had been more inclined to engage in exclusively nursing in a study by Reed et al. (2020). Similarly to this, a study carried out in Saudi Arabia by Armdie et al., (2024) demonstrated that primiparous mothers tend to start introducing their infants to supplementary feeds. These studies (Reed et al., 2020) also show a connection between multigravida women and exclusively nursing.

Nursing self-efficacy, nursing outcome anticipation, social and cultural variables, and early commencement of breastfeeding have all been shown to affect or predict EBF among primiparous mothers. Multiparity has been scientifically linked to longer exclusive nursing, according to multiple research studies (Syahri et al., 2024).

In comparison to moms who did not undergo ANC visits at all, moms who attended an ANC visit during their most current conception were more probable to practice EBF. (Mekebo et al., 2022) This outcome is in line with earlier research findings in India by Nishimura et al., (2019). This may be the case because moms might be urged to exclusively feed their babies by medical professionals during their ANC visits if they are made aware of the method and its advantages (Makebo et al., 2022).

Numerous studies have linked EBF among nursing mothers and family size. Mekebo et al.'s study from 2022 revealed that household size was significantly correlated in the use of EBF. Women with bigger households were far less inclined than moms with smaller families to use EBF alongside their infants. This result is consistent with an earlier investigation carried out in India by Panigrahi & Sharma (2019), which found that breastfeeding moms from large households were more probable to have a poor socioeconomic background and were less inclined to stick to EBF.

Women of families in larger groups of people might be busier caring for the members of their households than moms of families with lesser relative sizes, which may cause them to neglect to nurse their infants. The conclusion of a research steered in Ghana by Manyeh et al., however, which found that moms with bigger households were more probable to engage in nursing exclusively than those with fewer household sizes, is in contradiction to this statement (Mekebo et al., 2022).

According to a study by Mekebo et al. (2022), the mode of delivery was an essential component in the practice of EBF. Compared to vaginal birthing mothers, cesarean moms were more unlikely to engage in EBF. This outcome is in line with those of earlier investigations carried out in Saudi Arabia(Alissa & Alshareef, 2024), Ethiopia (Hawassa, and Bahir Dar City), and the United States (Adugna et al., 2017). A probable defense might be that mothers who undergo cesarean sections, which may cause some discomfort, may be less inclined to practice exclusively breastfeeding than mothers who give birth through the vagina(Alissa & Alshareef, 2024). Women who gave birth naturally are twice as probable to breastfeed exclusively than women who went through a caesarian delivery. According to Søegaard et al., (2024), mothers typically go on feeding their newborns the pre-lacteal feeds they began with after they were born via cesarean birth. This was in accordance with research by Inano et al. Cesarean deliveries were discovered to have an

unfavorable connection with EBF six months after surgery. After three months have passed, they could have been able to maintain EBF, and knowing that they had a Caesarean delivery is not detrimental to EBF, according to the study results, which indicated that a cesarean delivery disrupts nursing in the initial few weeks after birth (Søegaard et al., 2024).

2.3. Socio-cultural factors on the practice of exclusive breastfeeding

When an employer supports the nursing mother, it is easier to continue nursing while working. Employer encouragement includes setting up lactation rooms in which nursing female employees feel secure enough to pour out breast milk. It additionally includes giving mothers sufficient break times to ensure they can finish conveying their milk without feeling rushed (Dinour & Szaro, 2017). Flexible work schedules are beneficial to the application of EBF for four to 6 months. When babies are full, mothers depart the house so they can spend more time with their offspring. This increases mothers' willingness to return to the workforce, which enhances workplace happiness and efficiency (Talbert et al., 2020).

Mothers who work participated in an investigation in Sri Lanka, but moms were not given paid parenthood leave. Since the majority of moms chose to work to help their dependents, exclusive breastfeeding was not as common (Ratnayake & Rowel, 2018). The amount of backing that working women receive from their employers is not well documented in the Waberi location (Talbert et al., 2020).

According to our research on parental support, the father's involvement in parenting is detrimentally correlated with ongoing EBF(Laksono et al., 2021). Following a study by Murad et al. (2021), support from family and friends was a crucial facilitator for continuing breastfeeding, especially during the first 40 days after delivery. Similar results in Iraqi women have been noted in Lebanon and Australia. Partners who are men support

nursing by promoting colostrum feeding, nursing on demand, and aiding in parenting, according to quantitative research conducted in Iraq and Kuwait. Yet, Murad et al. (2021) found in their research that some mothers were given contradictory advice, such as advising against formula but in favor of alternative drinks. While encouraging nursing and opposing artificial nourishment, it has also been reported that Emirati grandparents urge the addition of traditional fluids during the initial six months of gestation. According to earlier research, nursing upkeep for a minimum of 12 months was related to the maternal grandmother, spouse nursing support, and the length of exclusive breastfeeding (Hossain & Mihrshahi, 2024).

The importance of close family members (such as the spouse, grandparents, and closest friends) in supporting nursing was found to have a positive impact on infants' ability to nurse exclusively for up to six months. Being in touch with close family members before the baby's birth is extremely important as a nourishing factor. It has been proven that the spouse's assistance will lengthen breastfeeding. Additionally, it has been shown that moms who received their spouse's support while nursing their child did so on average for 1.69 months longer than other women (Abdulahi et al., 2021).

It has been demonstrated that exclusive breastfeeding is influenced by societal attitudes toward colostrum. Conferring to a research investigation steered by Mututho et al. (2017), mothers gave pre-lacteal foods to kids because they believed that new milk begins to be generated on day three and that colostrum was detrimental to the baby. According to Kimani-Murage et al. (2018), a common misconception that influences the length of uninterrupted breastfeeding is that providing the baby with water, and sugar can safeguard the baby from digestive problems.

In an investigation by Trafford et al. (2020), moms gave their children solid food before it was time because they thought that their milk was insufficient and argued about the

babies' constant weeping. Many research investigations conducted in South Africa and other African countries have demonstrated an association between not enough breastmilk and a rise in the incidence of mixed feeding during the initial years of a teenager's life. The issue of the baby's early exposure to substances along with other liquids is made worse by the household's pressure to feed the infant other foods (Trafford et al., 2020).

According to the moms in the present research, moms in different countries also use homemade remedies as drugs to alleviate infantile colic and ward off evil spirits (Matare et al., 2019). The conventional method mixtures are added before the end of the six-month EBF time frame, tampering with EBF. Many African populations are seen to use indigenous herbal remedies (Jama et al., 2017). Due to differences in physiology, immature metabolic processes enzyme systems overall, and dose for infants of each individual's weight, ingesting conventional medicines has adverse impacts and is toxic. The use of conventional medicines while engaging in EBF was suggested to moms by their own mothers, grandparents, relatives, and companions (Matare et al., 2019).

These standards, opinions, and systems are typically guardians by the BF mom's mother, mother-in-law, and grandparents. Mothers frequently feel pressured to comply with the rules of their culture, which makes the usage of EBF challenging. Similar practices were mentioned in other studies (Ejie et al., 2021). The advice of HCWs based on scientific evidence regarding EBF practices is in conflict with adhering to social standards and conventional wisdom (Ejie et al., 2021).

We discovered that mothers' entry of EBF was interfered with when it was thought of as a personal practice (Int. J. Environ. Res. Public Health, 2023). In this study, some mothers connected BF to breasts that were sagging and losing weight, which they saw as indicators of an unappealing appearance. The reported concern about one's appearance corresponds with findings from additional studies (Bigman et al., 2020). Mothers' worries

about sagging breasts affected the start of BF. While troubles with body image cause BF mothers to stop their EBF early. Previous research investigations have reported that body image issues and shorter BF length have an impact.

According to investigations conducted in African nations like Kenya and Ghana, teenage mothers are constantly worried about how EBF will affect their physical characteristics and worry that they won't look adequate for men. The majority of moms in the present research were concerned that their changing body images might cause them to lose their partners. According to the writing, newlywed mothers are interested in looking as though little had transpired in their lives with their companions and peers, so they want to steer clear of physical characteristics like slumping breasts, female breast leakages, and female breast milk-stained clothing. This issue is very concerning, particularly in a nation in which young wives make up a significant portion of mothers, and EBF is crucial to enhancing the longevity of children (Wainaina et al., 2018).

2.4 Economic Factors Influence the Practice of EBF

According to a study by Abegunde et al. (2021), socioeconomically less fortunate households who have a low monthly income are generally disadvantaged by the unequal distribution of EBF. While women in the most prosperous families were further inclined to exclusively nurse the child compared to those in the lesser financial status (poorer) households, women in socioeconomically impoverished families were less inclined to practice exclusively breastfeeding than their equivalents in terms of socioeconomic privileged households. This was related to the mother's ability to pay for a sufficient and nourishing diet so that she could produce enough milk for the child.

Leshi et al. (2018) demonstrated that mothers sometimes had to leave the house to look for work or perform household duties like collecting water to meet the financial demands of the household. This resulted in non-adherence for EBF. Oche et al. (2017) stated

similar results, claiming that moms are anticipated to depart from their kids and work to add to the family income because life is costly as well. However, Abdulla et al., (2022) found the opposite, demonstrating that low income for families encouraged EBF. He claimed that moms were more likely to choose breastfeeding over restricted substitute feeding when they were short on money to buy infant formula diets, living in unsanitary conditions, or running a possibility of social repercussions (Abdulla et al., 2022).

Infant feeding preferences are influenced by the job or line of work of mothers. In accordance with research by Zewdie et al. (2022), mothers with employment who worked full-time had a lower prevalence of EBF than without employment mothers who stayed at home. The results are steady with research done at Injibara in Ethiopia (Chekol et al., 2017). The key distinction may be that working mothers may not have as much time as employed mothers to breastfeed their infants throughout working hours. Since moms who are without employment typically work with flexible schedules as opposed to mothers who have jobs, this may help explain why mothers who are employed stick to EBF practices less frequently than those without a job mother (Chekol et al., 2017).

Based on a study by Zewdie (2022) done in Ethiopia, mothers who are independent contractors are two times more probable than mothers who hold a formal job to engage in EBF. This result is constant with research steered in Sub-Saharan Africa. A possible cause is that mothers who worked for other people had less time to spend with their infants. Additionally, lacking a secure nursing area at work, managers who are less accepting of nursing breaks, the distance between the place of employment and the household, long workdays, and the absence or short duration of leave for pregnancy may all contribute to the decline in EBF practice among employed moms (Sabin et al., 2017). According to this finding, working mothers should receive adequate support. allowing

suitable leave for pregnancy and providing breastfeeding facilities at work, among other things(Inano et al., 2021).

According to a research investigation into the factors that influence optimal breastfeeding conducted in Guatemala by Bland et al. (2017), postpartum women with high duties were more likely to devote the majority of their time to their job and are less inclined to nurse exclusively than women with lower workloads. According to a study by Lesh et al. (2017), moms who had higher workloads were forced to spend the majority of their time working and departing the babies for extended periods of time, making it problematic for them to nurse only their infants before they reached the age of six months old.

According to Jebena & Tenagashaw (2022), motherly achievement theory supports Mercer's observations that throughout the first phases of "assurance, connection, and groundwork" throughout being pregnant, the mother learns about giving birth, makes an emotional adaptation, and gets ready for the demands of her new role. Similar to this finding, Bahl et al. (2017) asserted that working mothers' exclusively breastfeeding rates were significantly influenced by their workload.

2.5 Theoretical Framework

The Health Belief Model (HBM), developed in the 1950s by social psychologists Hochbaum, Rosenstock, and Kegels, explains health behaviors by focusing on individual beliefs(Rosenstock, 1974). It helps understand factors influencing exclusive breastfeeding (EBF) among infants aged 0-6 months. Perceived susceptibility affects mothers' decisions, as some may not recognize the risk of infections and malnutrition from mixed feeding. Perceived severity influences adherence to EBF, as some underestimate the dangers of early supplementation, such as diarrhea and stunted growth. Perceived benefits encourage EBF when mothers understand its role in immunity and development. However, perceived barriers hinder EBF, including work challenges,

cultural norms promoting early supplementation, lack of family support, and concerns about milk supply. Cues to action, such as health education, peer encouragement, and breastfeeding-friendly policies, help motivate mothers to sustain EBF. Self-efficacy, or confidence in the ability to exclusively breastfeed, is strengthened by healthcare support, counseling, and community interventions. Applying HBM to EBF promotion involves education to dispel myths, community engagement to influence family support, workplace policies to accommodate breastfeeding mothers, and peer counseling to build confidence. Addressing these factors can enhance EBF rates, leading to better infant health outcomes.

2.6 Conceptual Framework

The conceptual framework outlined the relationships between research variables, as described by Kothari (2019). This framework comprises principles and general ideas derived from various research areas to structure the presentation of findings. It serves as a crucial tool for researchers to create awareness and develop an understanding of the conditions under investigation. A clearly articulated conceptual framework helps researchers interpret results by illustrating potential connections among study variables. It acts as a guide for testing, reviewing, and refining the study's findings (Kothari, 2019). In this study, the conceptual framework depicted the relationships between factors influencing lactating mothers' practice of exclusive breastfeeding in the Waberi area, Garissa County. Independent variables included demographic factors (age and family size), socio-cultural factors (child sex preference and education), economic factors (income and occupation), and maternal factors (marital status and antenatal care), with the dependent variable being exclusive breastfeeding.

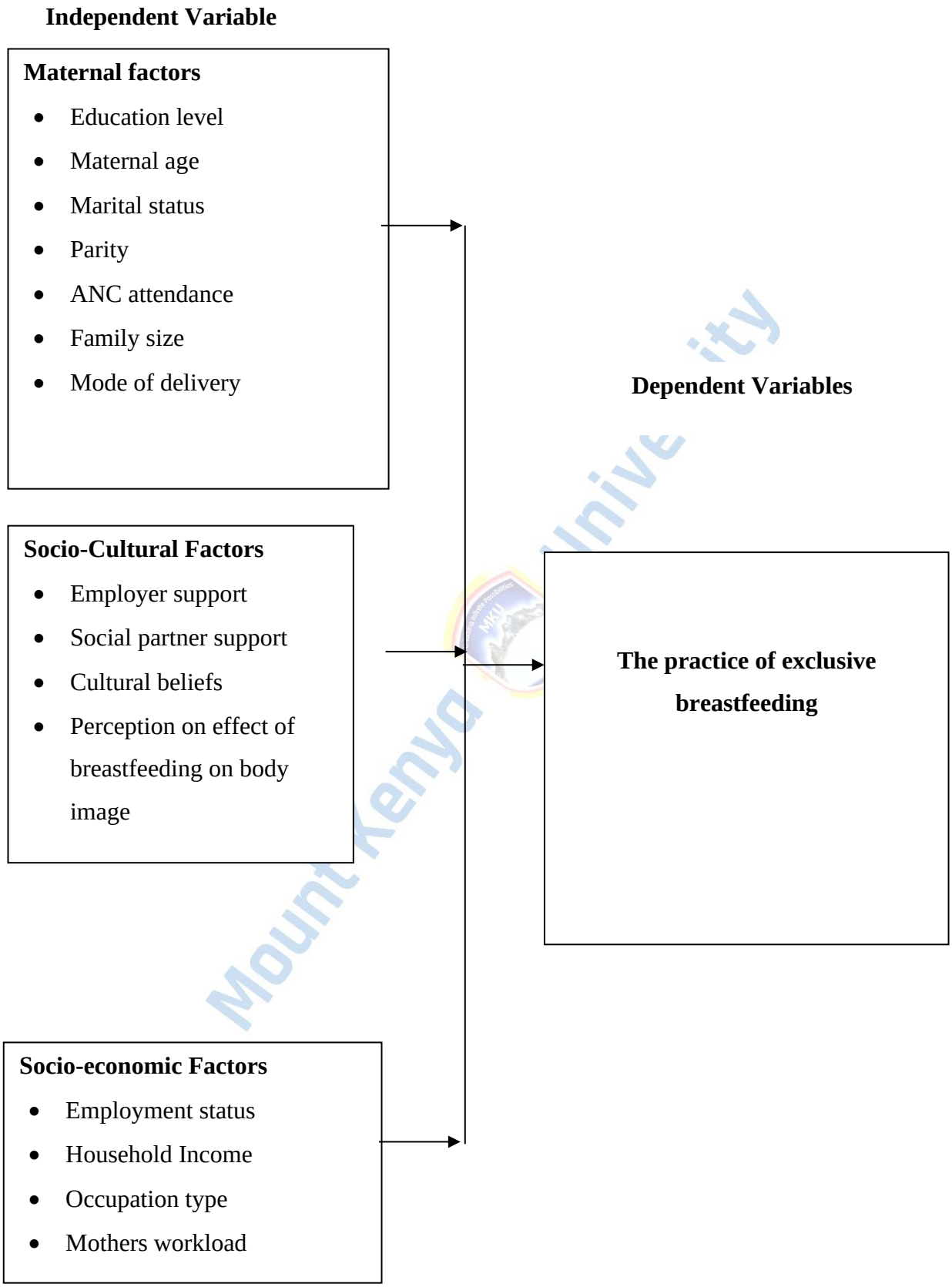

Figure 1: Conceptual Framework

CHAPTER THREE:

RESEARCH METHODOLOGY

3.1 Introduction

This section covers data collection techniques, the layout of the study, the region of the research, the study populace, the analysis unit, the estimation of the sample size method, the sampling approach, the statistical evaluation technique, and ethical issues. This chapter also explains the instruments used to collect and manage data. A strategy for data scrutiny, the statistical techniques employed, and a demonstration of the findings are also provided.

3.2 Study Design

This study used an analytical cross-sectional approach to identify the variables affecting nursing mothers' use exclusively for breastfeeding in the Waberi location, Garissa County. This design will be preferred since the researcher wanted to find out the situation in its current form. This study design was suitable because it is relatively inexpensive and takes up little time to collect data, and several outcomes and risk factors could be assessed at one point in time. This approach is further justified by the researcher's existing familiarity with the phenomenon under investigation, coupled with a desire to gain deeper insights into the relationships between study variables. Additionally, the research design aims to offer a clear and accurate representation of the variables examined in the study, thereby addressing the research questions effectively (Alok & Mishra, 2017).

3.3 Study Site

The Waberi location in Garissa County in the North Eastern province was the site of the study. According to projections from the 2019 census, the overall population of Garissa County, which spans a sizable geographic area, is projected to be 480,146 (KNBS, 2019). Garissa County lies on the following Latitude of 0.4528 and longitude of 39.6460. The

main economic activity in this country is herding. According to UNICEF more than 18% of the total population of children under five years in the county are acutely malnourished. Also, exclusive breastfeeding is not highly practiced in the community. This area was considered because of its high prevalence of malnutrition especially in young children.

3.4 Study Variables

3.4.1 Dependent Variable

Breastfeeding exclusively was the dependent variable in the research. Exclusive breastfeeding (EBF) is the practice of feeding an infant only breast milk, without any additional food, water, or other liquids, except for medically prescribed vitamins, minerals, or oral rehydration solutions, for the first six months of life.

3.4.2 Independent Variable

The variables that were independent for this study entailed the following parameters;

1. In social economic factors, the following variables will be examined; employment status, household income, occupation type, and mother's workload.
2. Regarding maternal factors, the following parameters will be examined, education level, maternal age, marital status, parity status, ANC attendance mode of delivery, place of delivery, family size, and knowledge of EBF.
3. Concerning social-cultural factors, the following parameters will be examined, employer support, cultural beliefs, perception of the effect of breastfeeding on body image, and social partner support.

3.5 Study Population

According to Mugenda & Mugenda (2013), a group of individuals is a collection of all people, things, or events that share certain traits and fit a particular description. All

lactating mothers after delivery with infants aged six months or younger at the Waberi location in Garrisa County were included in the population being studied.

3.6 Target Population

The target population of this study was lactating mothers with infants aged six months below and who were residents of the Waberi location, Garrisa County.

3.7 Criteria for Inclusion And Exclusion

3.7.1 Inclusion Criteria

- Breastfeeding mothers who have been staying in the location for six months
- Moms with babies aged 0-6 months who were residents of the Waberi location and who consented to participate in the study.

3.7.2 Exclusion Criteria

- Mother who never initiated breastfeeding or have completely stopped, as their experiences may not align with the study focus.
- Lactating mothers who were critically ill and mentally disturbed were excluded from this investigation.

3.8 Sample Size Calculation

Fischer's exact formula was employed to determine the exact number of study partakers that were included in this study. The Waberi location approximately has 265 lactating women. Single proportion formula working with 29.9% from a study by(Masaba et al., 2021)was used.

The Fischer exact formula was utilized to approximate the size of the sample

$n=z^2pq/d^2$

n= The desired size of the sample

z= The standard normal deviation was established at 1.96 which agrees to a 95% confidence interval

p= Refers to the fraction of the target populace

q=1-p(0.81)

d=The degree of accurateness which was fixed at 5%(0.05)

Therefore $n=1.96^2\times0.299\times0.701/0.05^2 = 322$

Since the study populace is less than 10000, the reducing technique was employed

nf=n/(1+n-1/N)

nf= ideal size of the sample if the populace is <10000

n= Size of the sample

N= population

nf= 322/(1+321/265)= 145

The anticipated size of the sample for this research was 145 study partakers.

3.9 Sampling Technique

Garissa County was purposively selected as the study area due to its highly poor exclusive breastfeeding practices. Exclusive breastfeeding remains key and vital in the first six months of an infant however counties in arid and semi-arid regions the practice of breastfeeding has been noted to be poor despite various interventions being put in place. A purposive sampling technique was used to choose the Garissa Township constituency due to the absence of existing studies or records on exclusive breastfeeding and its associated factors. A two-stage cluster sampling method was then applied to select

research participants. Initially, Garissa County, divided into four locations (Waberi, Galbet, Iftin, and Township), served as clusters for the study. Simple random sampling was employed to select Waberi Ward. In the second stage, households with lactating mothers were identified, and a simple random sampling method was used to choose eligible study respondents.

3.10 Data Collection Tools

Data for this study was collected using a semi-structured questionnaire designed to capture key factors influencing exclusive breastfeeding (EBF) among mothers with infants aged 0-6 months. The questionnaire was divided into four sections, each addressing specific aspects relevant to EBF practices. Section A focused on obtaining data related to exclusive breastfeeding practices. Section B collected data on socioeconomic factors that may influence EBF, such as maternal education level, household income, employment status, and access to healthcare services. These factors were analyzed to determine their impact on breastfeeding decisions. Section C gathered information on sociocultural factors, including traditional beliefs, family influences, peer support, and community perceptions regarding breastfeeding. Section D focused on maternal factors, such as maternal age, breastfeeding knowledge, self-efficacy, health status, and prior breastfeeding experience. The semi-structured format allowed for both quantitative and qualitative data collection, ensuring a comprehensive understanding of the determinants influencing exclusive breastfeeding practices. For qualitative data, interviews were conducted using a key informant guide and recorded with an audio recorder. Key informants, selected purposively, included community health extension workers and community health volunteers.

3.11 Pretesting of the Tool

A pre-test was conducted prior to the main research to evaluate the validity and reliability of specific survey questions, the overall survey, and the response scales (Bailley, 2011). This pre-test was carried out two weeks before the main study in a neighboring location of Bula-Iftin with similar characteristics. A sample of 12 caregivers, representing 10% of the 124 participants, was used for this pre-test. The researcher examined the clarity of the questions, the time required to administer the questionnaire, the presence of redundant questions, verbosity, and question sensitivity. This process helped in validating the questionnaire.

3.12 Data Collection Procedure

After completing the pilot test, any identified weaknesses and inconsistencies in the study questionnaire and interview guide were addressed before the main data collection began. An introductory letter from Mount Kenya University, seeking approval for data collection, was delivered to the area chief. Secondary information was also gathered using a collection sheet during the study period. Research assistants were then appointed to visit the Waberi location in Garissa County, where they identified potential respondents, explained the study's objectives, and emphasized the importance of their participation. Respondents were assembled daily, informed about the research's purpose, and asked to provide informed consent. The research assistants helped the respondents complete the questionnaires. Any questionnaires with missing sections were returned to the respondents for completion. Once all questionnaires were fully completed, they were collected and returned to the researcher for data analysis.

3.13 Validity and Reliability

3.13 .1 Validity

Refers to the accuracy of the data collection tools. In this investigation tools for data gathering were subjected to scrutiny by a medical doctor who was a specialist in matters related to mothers and child health. In addition university, supervisors reviewed the data collection tools to ensure they captured all the required information.

3.13.2 Reliability

Refers to the degree of uniformity of the data collection tools after they have been subjected to the same study respondents within a specified period. Spss version 26 was employed to conduct reliability where Cronbach alpha coefficient was conducted to determine the degree of internal consistency. The literature review accepts an internal consistency of 0.7. The reliability of the data collection was 0.89 indicating the data collection tools were fit for data collection.

Reliability Statistics

Objectives	Cronbach's Alpha[a]	N of Items
EBF practice	.9	3
Maternal factors	.88	7
Cultural factors	.89	6
Social economic factors	.89	5

3.14 Data Analysis

Following data collection, the researcher conducted data cleaning and coding. Quantitative data analysis was performed using SPSS version 26.0, while qualitative data analysis was supported by content analysis. The study results were presented using tables, graphs, and narrative descriptions for qualitative statistics. Descriptive statistics were

shown through dispersion measures, including tables, percentages, central tendency measures, and frequencies. For inferential analysis, a chi-square test for independence was used to determine the relationship between independent and dependent variables, with statistical significance set at $p<0.05$. Variables with significant associations in bivariate analysis were included in a binary logistic regression model to control for confounding effects.

Objective	**Type of data**	**Method of analysis**
EBF practices	Quantitative data	✓ Frequencies and percentages
Maternal factors	Quantitative data	✓ Frequencies and percentages ✓ Chi-square test ✓ Multivariate logistic regression
	Qualitative data	✓ Thematic analysis
Cultural factors	Quantitative data	✓ Frequencies and percentages ✓ Chi-square test ✓ Multivariate logistic regression
	Qualitative data	✓ Thematic analysis
Social economic factors	Quantitative data	✓ Frequencies and percentages ✓ Chi-square test ✓ Multivariate logistic regression
	Qualitative data	✓ Thematic analysis

3.15 Ethical Considerations

An introduction letter from Mount Kenya University was used by the researcher. The National Commission for Science, Technology, and Innovation (NACOSTI) was contacted for approval before data collection could begin. Additionally, consent from all pertinent county offices was requested to conduct the study in Garissa County. Permission

letters to collect data from the respondents were sought from the area chief. Informed consent was also obtained from the respondents by filling out the informed consent forms after the objectives and methodologies were read to them. The individual participants were assured that every part of the information was kept confidential. Participants were not addressed by name and questionnaires were kept under lock and key when not in use. Research findings were disseminated to the concerned parties to enhance exclusive breastfeeding among breastfeeding mothers of children aged 0-6 months.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.0 Introduction

This section provides the response rate of the research, both descriptive and inferential statistics of social cultural, maternal, and health system factors associated with exclusive breastfeeding practices. This section also provides descriptive statistics on exclusive breastfeeding practices.

4.1 Response Rate

This study administered 145 questionnaires to the eligible study respondents. The response rate of this study was (86%) indicating that 124 of the study questionnaires were considered fit for the analysis of data.

4.2 Descriptive statistics on maternal factors associated with exclusive breastfeeding

Table 1 below provides descriptive statistics on maternal factors associated with exclusive breastfeeding practices. Concerning the age of the study partakers in this case, who were lactating mothers, more than half(51.6%) of the study respondents were aged below 24 years and this could be linked to their prime reproductive age, while more than a quarter(39.5%) of the study respondents were aged 25-34 years, Only a few(8.9%) of the study respondents were aged above 35 years. Regarding the level of education, close to half(42.7%) of the study respondents had a primary level of education this was linked to the presence of free primary education in the nation, only a few(10.5%) of the study respondents reported to have never been to school while more than a quarter (36.3%) of the study respondents reported having attained a secondary level of education, lastly only a few of the study participants had attained vocational (5.6%) and tertiary(4.8%)level of education respectively. Concerning marital status, the majority(68.5%) of the study respondents were married while close to a quarter(22.6%) were single. Only a few(8.9%)

of the study partakers reported being separated. Concerning antenatal clinic attendance, more than half(56.5%) of the study respondents reported having sought ANC-related services while close to half(43.5%) of the study respondents reported having never sought ANC-related services, this could be linked to poor advocacy programs, and cultural barriers which prevent adequate seeking of antenatal care services.

Concerning frequency of ANC attendance more than half(57.1%) of the study respondents had adequate ANC attendance while close to half(42.9%) of the study respondents had inadequate ANC attendance this could be linked to poor awareness of the benefits linked to ANC services. Regarding mode of delivery, more than half(66.9%)of the study respondents reported having a normal delivery while close to a quarter(33.1%) of the study respondents had a caesarian mode of delivery. Regarding the size of the family, close to half(41.1%) of the study respondents had a family size of three to five members while only a few of the study(16.9%) respondents had a family size of more than five members. Lastly concerning parity status, more than half(59.7%) of the study respondents were multipara while more than a quarter(40.3%) of the study respondents were primipara.

Table 1: Descriptive Statistics on Maternal Factor

Independent Variables	Categories	Frequency	Valid Percentage
Parity Status	primipara	50	40.3
	multipara	74	59.7
Age of Partaker	<24 years	64	51.6
	25-34 years	49	39.5
	>35 years	11	8.9
Education level	Never been to school	13	10.5
	primary	53	42.7
	secondary	45	36.3
	vocational	7	5.6
	Tertiary	6	4.8
Family Size	0-2	52	41.9
	03-May	51	41.1
	More than five	21	16.9
Mode of Delivery	vaginal	83	66.9
	cesarean	41	33.1
Marital Status	single	28	22.6
	married	85	68.5
	separated	11	8.9
ANC Attendance	yes	70	56.5
	no	54	43.5
Frequency of ANC Attendance	adequate	40	57.1
	inadequate	30	42.9

4.3 Prevalence of Exclusive Breastfeeding Practices

As shown in Figure 2 below, 43.5% of respondents reported practicing exclusive breastfeeding from birth, while 56.5% did not. These results are concerning, given that efforts to achieve 100% exclusive breastfeeding have not fully succeeded in this region, indicating a need for more effective and collaborative measures to promote exclusive breastfeeding. These findings are similar to a study conducted in Kenya (Mohamed et al., 2020), but contrast with two studies in Ethiopia, which reported higher rates of exclusive breastfeeding (Habtewold et al., 2019; Nemera & Merga, 2021). The discrepancies in

exclusive breastfeeding rates may be attributed to differences in sampling methods and regional variations in the studies.

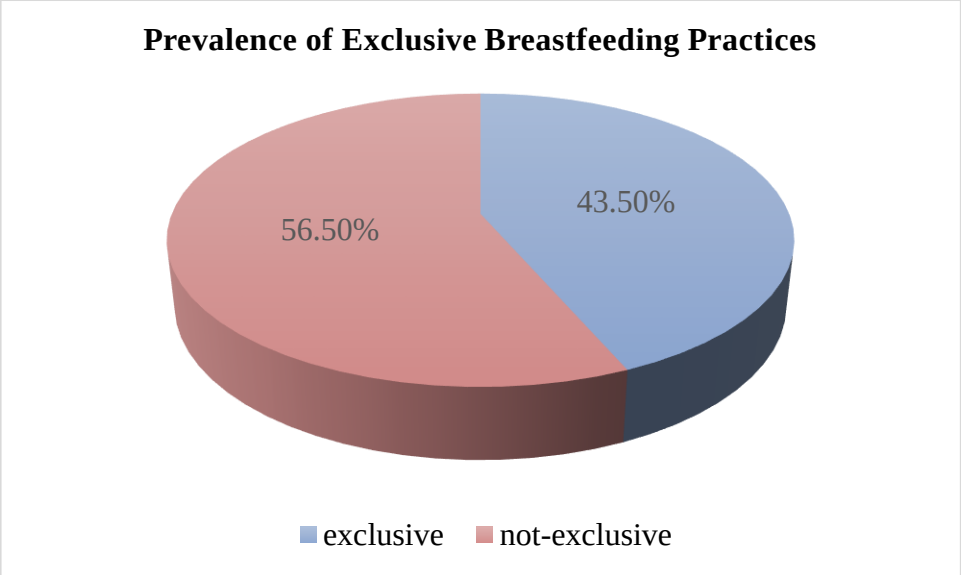

Figure 2: Prevalence of Exclusive Breastfeeding Practices

4.4 Time Taken to Intiate Exclusive Breastfeeding

As indicated in Figure 3, Concerning the time taken to initiate exclusive breastfeeding, more than half(61.3%) of the study respondents reported initiating breastfeeding immediately after birth, while only a few(23.4%) of the study respondents reported initiating breastfeeding within an hour while a section(15.3%) of the study respondents reported initiating breastfeeding 2-3 hours after birth.

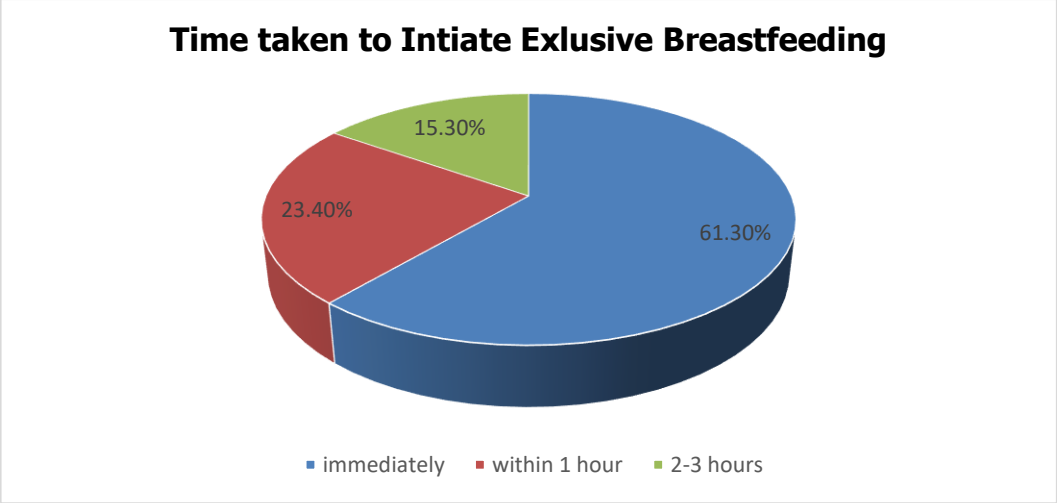

Figure 3: Time taken to Intiate Exclusive Breastfeeding

4.5 Maternal factors influencing exclusive Breastfeeding

4.5.1 Association between maternal factors and exclusive breastfeeding

As shown in Table 2 below, nearly half (41%) of respondents who practiced exclusive breastfeeding from birth had a normal delivery, whereas over half (51.2%) of those who did not practice exclusive breastfeeding had a cesarean section. Studies indicate that cesarean sections can delay the onset of normal breast milk production, which may hinder exclusive breastfeeding, particularly in the absence of adequate medical and social support. However, the bivariate analysis revealed no significant statistical association between the mode of delivery and the practice of exclusive breastfeeding (X2=0.682, df=1, p=0.409).

This study's findings were concurrent with two other studies done in Kenya and Tanzania(Dede & Bras, 2020; Talbert et al., 2020). In contrast, a study conducted in Uganda found that lactating mothers who had a normal delivery were more likely to practice exclusive breastfeeding compared to those who had a cesarean section (Nabunya, et al., 2020).

As shown in Table 2 below, over half (60.4%) of respondents practicing exclusive breastfeeding had only primary education, whereas all (100%) of those with tertiary education did not practice exclusive breastfeeding. This might be due to the increased responsibilities associated with higher education levels, leading to a preference for mixed or formula feeding. The chi-square test for independence revealed a significant association between education level and exclusive breastfeeding (X2=16.616, df=4, p=0.001).

As indicated in Table 2 below, concerning the marital status of the study respondents, close to half(42.9%) of the study respondents who reported practicing exclusive breastfeeding were single while the majority(60%) of the study partakers who reported not practicing exclusive breastfeeding were married and this could be linked to increased responsibilities which reduced the odds of breastfeeding their infants. The chi-square test for independence showed no significant association between marital status and exclusive breastfeeding (X2=4.25, df=2, p=0.12).

This result aligns with a study in Ghana, which also found no relationship between marital status and exclusive breastfeeding (Manyeh et al., 2020). However, it contrasts with a study in Ethiopia, where married lactating mothers were more likely to practice exclusive breastfeeding compared to their unmarried counterparts, attributed to better social support from family members (Muluneh, 2023).

As shown in Table 2 below, regarding antenatal care (ANC) attendance, over half of the respondents practicing exclusive breastfeeding had attended ANC services, indicating greater awareness of breastfeeding benefits. In contrast, most respondents who did not practice exclusive breastfeeding had not sought ANC care. The chi-square test for independence revealed a significant association between ANC attendance and exclusive breastfeeding (X2=7.538, df=1, p=0.006).

As shown in Table 2 below, regarding age, more than half of the respondents practicing exclusive breastfeeding were under 24 years old, possibly due to being in their prime reproductive years. Conversely, most respondents who did not practice exclusive breastfeeding were aged 35 years or older. The chi-square test for independence revealed a statistically significant association between age and exclusive breastfeeding ($X2=10.824$, $df=2$, $p=0.004$).

As shown in Table 2 below, regarding parity status, more than half of the respondents practicing exclusive breastfeeding were multiparous, while most of those not practicing exclusive breastfeeding were primiparous. First-time mothers may be less likely to practice exclusive breastfeeding due to a lack of experience and concerns about the adequacy of breast milk, leading them to choose mixed feeding. The chi-square test for independence revealed a statistically significant association between parity status and exclusive breastfeeding ($X2=6.256$, $df=1$, $p=0.01$).

As shown in Table 2 below, regarding family size, over half (61.5%) of respondents practicing exclusive breastfeeding had a small family of fewer than two members, whereas the majority (70.6%) of those not practicing exclusive breastfeeding had a family size of 3-5 members. This could be due to the increased responsibilities in larger families, reducing the time available for exclusive breastfeeding. The chi-square test for independence revealed a statistically significant association between family size and exclusive breastfeeding ($X2=11.883$, $df=2$, $p=0.003$).

Table 2:Association Between Maternal Factors and Exclusive Breastfeeding

Independent Variables	Categories	Dependent Variable (Exclusive Breastfeeding)		Statistical Significance
		Yes(N=54)	No(N=70)	
Parity Status	primipara	15(30%)	35(70%)	X^2=6.256 df=1
	multipara	39(52.7%)	35(47.3%)	p=0.01
Age of Partaker	<24 years	37(57.8%)	27(42.2%)	X^2=10.824
	25-34 years	14(28.6%)	35(71.4%)	df=2
	>35 years	3(27.3%)	8(72.7)	p=0.004
Education level	Never been to school	7(53.8%)	6(46.2%)	X^2=16.616
	primary	32(60.4%)	21(39.6%)	df=4
	secondary	12(26.7%)	33(73.3%)	p*=0.001
	vocational	3(42.9%)	4(57.1%)	
	Tertiary	0(0%)	6(100%)	
Family Size	0-2	32(61.5%)	20(38.5%)	X^2=11.883
	3-5	15(29.4%)	36(70.6%)	df=2
	More than five	7(33.3%)	14(66.7%)	p=0.003
Mode of Delivery	vaginal	34(41%)	49(59%)	X^2=0.682 df=1
	cesarean	20(48.8%)	21(51.2%)	p=0.409
Marital Status	single	12(42.9%)	16(57.1%)	X^2=4.25
	married	34(40%)	51(60%)	df=2
	separated	8(72.7%)	3(27.3%)	p*=0.12
ANC Attendance	yes	38(54.3%)	32(45.7%)	X^2=7.538 df=1
	no	16(29.6%)	38(70.4%)	p=0.006

4.5.2 Binary logistic regression on maternal factors

As provided in Table 3 below, education level was an independent factor influencing exclusive breastfeeding (p=0.03). Additionally, lactating mothers with secondary education were 3.5 times more likely to practice exclusive breastfeeding compared to those with tertiary education. This may be because less educated mothers are more aware

of breastfeeding benefits, whereas highly educated mothers may face additional responsibilities that hinder their ability to practice exclusive breastfeeding despite their knowledge of its advantages.

These findings were not in harmony with the qualitative result where one of the key informants in the key informant interviews noted that:

> "*I don't think the level of education has a role in whether a mother practices exclusive breastfeeding or not. You find any pregnant who seeks antenatal care services from the nearest health facility receives a lot of health education and promotion forums where they are educated on the need for exclusive breastfeeding*. "(Key informant 1, clinical officer).

These findings were in agreement with another study done in Ethiopia where lactating mothers with low levels of education were more likely to practice exclusive breastfeeding as compared to their fellow counterparts(Mekebo et al., 2022). This contrasts with a study in Malawi, where lactating mothers with higher education levels were more likely to practice exclusive breastfeeding compared to those with lower education levels (Salim & Stones, 2020).

As provided in Table 3 below, ANC attendance as an independent factor for exclusive breastfeeding (p=0.02). Additionally, lactating mothers who attended ANC services were 2.3 times more likely to practice exclusive breastfeeding compared to those who did not. These findings were in harmony with the qualitative result where one of the key informants in the key informant interviews noted that:

> "*I would say there is a reason why we insist these mothers should attend ANC services since they get a lot of information on the need for practicing exclusive breastfeeding. We as the medical personnel educate this mother in every visit they pay to the facility. So those mothers who attend* ANC clinics are more

likely to practice exclusive breastfeeding as compared to their fellow counterparts"(Key informant 1, nurse).

These findings were in agreement with two other studies done in Kenya and Ethiopia where seeking ANC services was found to increase the odds of utilizing exclusive breastfeeding(Jebena & Tenagashaw, 2022; Mohamed et al., 2020). This could be linked to increased awareness of the benefits associated with breastfeeding from health education and promotion forums provided in the health facilities. However, this was contrary to another study conducted in Lesotho which found no association between ANC attendance and exclusive breastfeeding(Olorunfemi & Dudley, 2018).

As provided in Table 3 below, age was not an independent factor for exclusive breastfeeding (p=0.37).

These findings align with a study in Ethiopia, which also found no association between age and exclusive breastfeeding (Awoke & Mulatu, 2021). However, they contrast with a study in Rwanda, where younger lactating mothers were more likely to practice exclusive breastfeeding compared to their older counterparts (Gato et al., 2022). Similarly, another Ethiopian study reported that younger age increased the likelihood of exclusive breastfeeding, attributed to younger mothers being more attentive to infant feeding practices (Muluneh, 2023).

As provided in Table 3 below family size was an independent factor influencing exclusive breastfeeding (p=0.02). Respondents with smaller families (0-2 members) were 2.5 times more likely to practice exclusive breastfeeding compared to those with larger families. This may be due to smaller families having more time available, facilitating the practice of exclusive breastfeeding.

These findings were in harmony with the qualitative result where one of the key informants in the key informant interviews noted that;

"*I would say lactating mothers who have a smaller family size are more likely to practice exclusive breastfeeding as compared to those who have a bigger family size, this is linked to the fact that mothers who have smaller family sizes have ample time to take care of their new child as compared to those mothers who have a big family. Family planning is key when deciding whether a mother practices exclusive breastfeeding*"(Key informant 1, nurse).

These findings were in harmony with two other studies conducted in Nigeria where having a smaller family size was found to increase the odds of practicing exclusive breastfeeding(Olasinde et al., 2021). Another study conducted in Brazil reported no association between exclusive breastfeeding and family size(Buccini et al., 2018).

As provided in Table 3 below parity status was not an independent predictor of exclusive breastfeeding (p=0.10). These results are consistent with a study in Ghana (Manyeh et al., 2020). In contrast, a study in Nigeria found that multiparous mothers were more likely to exclusively breastfeed compared to their counterparts, potentially due to increased awareness and experience with breastfeeding (Akadri & Odelola, 2020).

Table 3:Binary logistic regression analysis of Maternal Factors

Variables	B	S.E	Wald	Df	Sig	OR	95% C.I	
							Lower	Upper
Family size			4.183	2	0.001			
0-2	-0.946	0.657	2.075	1	0.03	2.5	0.107	1.407
3-5	-0.02	0.664	0.001	1	0.975	0.98	0.267	3.601
Educational level			10.058	4	0.039			
Never been to school	0.578	0.511	1.276	1	0.259	1.782	0.654	4.852
primary	0.86	0.793	1.175	1	0.278	2.36	0.499	11.183
secondary	-0.894	0.625	2.045	1	0.003	3.5	0.718	8.332
vocational	1.388	0.437	10.109	1	0.153	4.008	1.703	9.433
Age			1.964	2	0.374			
<24 years	-0.581	0.833	0.485	1	0.486	0.56	0.109	2.866
25-34 years	0.07	0.853	0.007	1	0.935	1.073	0.201	5.712
Parity status	0.746	0.463	2.602	1	0.107	2.109	0.852	5.223
Sort ANC services	-0.833	0.448	3.462	1	0.013	2.3	0.181	1.046

4.6 Social-cultural factors influencing exclusive breastfeeding

4.6.1 Descriptive Statistics on Social-Cultural Factors

Table 4 below provides detailed descriptive statistics on social and cultural factors influencing exclusive breastfeeding practices. As indicated in Table three below, more than half(54%) of the study respondents reported the absence of harmful cultural beliefs while close to half(46%) of the study respondents reported the presence of harmful cultural beliefs associated with exclusive breastfeeding practices. Concerning the presence of employers' support during the 1st six months of exclusive breastfeeding, more than a quarter(35.5%) of the study respondents reported the presence of employee support

while close to three quarters (64.5%) of the study respondents reported absence of employers support during the 1st six months of breastfeeding. Concerning whether exclusive breastfeeding affects lactating mother's body image, more than a quarter(34.7%) of the study partakers reported breasting affecting their body image while more than half(65.3%) of the study respondents that breastfeeding didn't have any negative effect on their body image. Concerning the presence of social support from a family member and other concerned stakeholders during the breastfeeding period, half(50%) of the study respondents reported the presence of social support while half(50%) of the study respondents reported the absence of social support during the 1st six months of breastfeeding. Concerning the restriction of lactating mothers from engaging in certain social activities, the majority(70.2%) of the study partakers reported the absence of such restrictions while close to a quarter(29.8%) of the study respondents reported being restricted from engaging in certain social activities since they were breastfeeding.

Table 4: Descriptive Statistics on Social-Cultural Factors

Independent Variables	Categories	Frequency	Valid Percentage
Harmful Social activities	yes	37	29.8
	no	87	70.2
Social support	yes	62	50
	no	62	50
Perception of body image	yes	43	34.7
	no	81	65.3
Cultural belief	yes	57	46
	no	67	54
Employer support	yes	44	35.5
	no	80	64.5

4.6.2 Association Between Social-cultural Factors and Exclusive Breastfeeding

As shown in Table 5 below, regarding social support, over half (54.8%) of respondents practicing exclusive breastfeeding reported having social support, while nearly three-quarters (67.7%) of those not practicing exclusive breastfeeding reported a lack of social support. Family encouragement and support from other stakeholders play a crucial role in sustaining exclusive breastfeeding among lactating mothers. The chi-square test for independence demonstrated a statistically significant association between social support and exclusive breastfeeding ($X2=6.43$, $df=1$, $p=0.01$).

As indicated in Table 5 below, concerning the presence of employee support among the study participants, more than half(54.5%) of the study partakers who reported practicing exclusive breastfeeding reported the presence of employer support. Employers have a key role in ensuring a lactating mother has adequate time to breastfeed her infant and as a result, they are policies set aside by the national government to ensure lactating mothers are receiving adequate support from their employers. More than half(62.5%) of the study partakers who reported not practicing exclusive breastfeeding reported the absence of employer support factors which most likely discouraged these mothers from practicing

exclusive breastfeeding. When the bivariate analysis was done, there was no statistically significant association between the presence of employers' support and practicing exclusive breastfeeding(X^2=3.355, df=1, p=0.06) as a result this variable was not imported to multivariate analysis.

Study findings were contrary to two other studies in Nigeria and Zimbabwe where the absence of employer support was found to reduce the odds of exclusive breastfeeding(Amer & Kateeb, 2023; Mundagowa et al., 2019). While another study conducted in Ethiopia reported that the presence of employer support among lactating mothers increased the odds of practicing exclusive breastfeeding(Zewdie et al., 2022).

As shown in Table 5 below, regarding body image perceptions, nearly half (48.8%) of the respondents practicing exclusive breastfeeding reported that breastfeeding negatively impacted their body image. Conversely, more than half (51.2%) of those who felt breastfeeding negatively affected their body image were not practicing exclusive breastfeeding. Body image concerns can influence breastfeeding decisions, as some women may avoid breastfeeding due to fears of changes to breast appearance. The bivariate analysis revealed no statistically significant association between body image perception and exclusive breastfeeding (X2=0.749, df=1, p=0.387).

The study results differed from findings in East Africa, where negative perceptions about breastfeeding's impact on body image were associated with a threefold decrease in the likelihood of exclusive breastfeeding (Dukuzumuremyi et al., 2020). However, these results align with a study conducted in South Africa, which found no significant association between body image perceptions and exclusive breastfeeding (Jassat et al., 2021).

As indicated in Table 5 below, concerning the presence of harmful cultural beliefs among the study participants, the majority(70.2%) of the study respondents who reported not

practicing exclusive breastfeeding reported the presence of harmful cultural practices that hindered lactating mothers from exclusively breastfeeding their infants, for instance in some cultures breastmilk should be given to the father of the child instead of the child a factor that results in mothers practicing mixed feeding. Close to a quarter(29.8%) of the study respondents who reported the presence of harmful cultural beliefs were practicing exclusive breastfeeding. When the bivariate analysis was done, there was a statistically significant association between harmful cultural beliefs and practicing exclusive breastfeeding(X^2=8.08, df=1,p=0.004).

As indicated in Table 5 below, concerning the presence of harmful cultural beliefs among the study participants' restriction from engaging in social activities, more than half(56.8%)of the study partakers who not practicing exclusive breastfeeding reported the presence of restriction from engaging in social activities while close to half(43.7%) of the study partakers who reported practicing exclusive breastfeeding reported absence of restriction in engaging in social activities. When the chi-square test for independence was done, there was no statistically significant association between restriction from engaging in social activities and practicing exclusive breastfeeding(X^2=0.002,df=1,p=0.964). As a result restriction from engaging in social activities was not an independent factor for practicing exclusive breastfeeding

These findings were concurrent with another study done in Vietnam(Nguyen et al., 2021). However, another study done in Uganda restricting mothers from engaging in social activities was found to be a factor hindering exclusive breastfeeding among lactating mothers(Nandagire et al., 2019).

Table 5: Association Between Social-cultural Factors and Exclusive Breastfeeding

Independent Variables	Categories	Dependent Variable (Exclusive Breastfeeding)		Statistical Significance (Chi-square Test)
		Yes(N=54)	No(N=70)	
Harmful Social activities	yes	16(43.2%)	21(56.8%)	X^2=0.002
	no	38(43.7%)	49(56.3%)	df=1
				p=0.964
Social support	yes	34(54.8%)	28(45.2%)	X^2=6.43
	no	20(32.3%)	42(67.7%)	df=1
				p=0.01
Perception of body image	yes	21(48.8%)	22(51.2%)	X^2=0.749
	no	33(40.7%)	48(59.3%)	df=1
				p=0.387
Harmful Cultural beliefs	yes	17(29.8%)	40(70.2%)	X^2=8.08
	no	37(55.2%)	30(44.8%)	df=1
				p=0.004
Employer support	yes	24(54.5%)	20(45.5%)	X^2=3.355
	no	30(37.5%)	50(62.5%)	df=1
				p=0.06

4.6.3 Binary logistic regression on social-cultural factors

As provided in Table 6, social support as an independent factor influencing exclusive breastfeeding (p=0.008). Respondents receiving adequate social support were 2.8 times more likely to practice exclusive breastfeeding compared to those without support. Social support helps ensure that lactating mothers are informed and motivated about the benefits of breastfeeding for both their infants and their own health.

These findings were in harmony with the qualitative result where one of the key informants in the key informant interviews noted that:

> "*The role of social support from the community, health facilities, and immediate family members cannot be ignored when it comes to promoting exclusive breastfeeding. Breastfeeding is not an easy task as you will find the*

majority of these mothers have other roles to partake in and as a result, a lot of effort and support is needed to ensure lactating mothers conduct exclusive breastfeeding with minimal distress"(Key informant 1, clinical officer).

Study findings were concurrent with two other studies in Kenya and Garbon where the provision of social support among lactating mothers was found to enhance exclusive breastfeeding(Jebena & Tenagashaw, 2022; Mohamed et al., 2020). However, these results were not in harmony with another study conducted in Zambia where social support was not associated with practicing exclusive breastfeeding(Mwiza et al., 2023).

As provided in Table 6, the presence of harmful cultural practices was found to be an independent factor in practicing exclusive breastfeeding. Moreover, when the multivariate analysis was done, the presence of harmful cultural practices reduced the odds of exclusive breastfeeding by 3.2.

These findings were in harmony with the qualitative result where one of the key informants in the key informant interviews noted that:

"*The harmful cultural practice remains the biggest barrier for lactating mothers in practicing exclusive breastfeeding and I feel a collaborative effort should be enrolled to curb this problem. We might be doing our part and putting in more effort but as long as these cultural practices continue to exist, our efforts will always be ruined*"(Key informant 1, clinical officer).

These findings were concurrent with two other studies done in Kenya and Nigeria where the presence of harmful cultural beliefs reduces the odds of exclusive breastfeeding(Kibiru et al., 2022; Sokan-Adeaga et al., 2022). However, another study

done in Ethiopia found no association between exclusive breastfeeding and harmful cultural practices(Yimer et al., 2021).

Table 6:Binary logistic regression Analysis of Social Cultural Factors

Variables	B	S.E	Wald	Df	Sig	OR	95% C.I	
							Lower	Upper
Social support	-1.030	.391	6.936	1	.008	.357	.166	.768
						Ref		
Cultural beliefs	1.151	.395	8.474	1	.004	3.161	1.456	6.860
						Ref		

4.7 Social economic factors influencing exclusive breast feeding

4.7.1 Descriptive Statistics on Social-Economic Factors

Table 7 below provides descriptive statistics on social economic factors associated with exclusive breastfeeding practices. Concerning level of income, more than half(64.5%) of the study respondents were earning below the poverty line meaning their source of livelihood was inadequate to sustain their daily livelihood. More than a quarter(35.5%) of the study respondents were earning above the poverty line. Concerning the employment status of lactating mothers, more than half(62.1%) of the study respondents reported being employed while more than a quarter(37.9%) of the study respondents reported being employed. Regarding the workload of the lactating mothers, more than a quarter(37.9%) of the study participants reported having a low workload while more than half(62.1%) of the study partakers reported having a higher workload. lastly concerning the type of occupations being carried out by the study respondents close to half of the study respondents were livestock keepers while only a few participated in beekeeping (21%), farming (18.5%), and formal employment (21.1%).

Table 7: Descriptive Statistics on Social-Economic Factors

Independent Variables	Categories	Frequency	Valid Percentage
Employment status	yes	47	37.9
	no	77	62.1
Mothers-workload	Heavy workload	77	62.1
	Low workload	47	37.9
Income level	Below poverty line	80	64.5
	Above poverty line	44	35.5
Type of occupation	Beekeeping	26	21
	Livestock keeping	60	48.4
	farming	23	18.5
	Formal-employment	13	21.1

4.7.2 Association Between Social Economic Factors and Exclusive Breastfeeding

As shown in Table 8, concerning income levels among the study participants, over half (63.7%) of those not practicing exclusive breastfeeding had incomes below the poverty line, indicating that these mothers spent much of their time securing basic needs. Conversely, more than half (56.8%) of those practicing exclusive breastfeeding earned above the poverty line. Bivariate analysis revealed a statistically significant association between income level and exclusive breastfeeding (X2=4.885, df=1, p=0.02).

As indicated in Table 8 below, concerning employment status among the study respondents, close to three-quarters (68.1%) of the employed study respondents were practicing exclusive breastfeeding and this could be linked with adequate social support by the employer to enhance compliance to breastfeeding policies in the country, while the majority(71.4%) of the unemployed study respondents were not practicing exclusive breastfeeding. When the bivariate analysis was done there was a statistically significant association between employment status and practicing exclusive breastfeeding (X^2=3.355, df=1, p=0.000).

As indicated in Table 8 below, concerning mothers-workload among the study respondents. Half(50.6%) of the study respondents who reported practicing exclusive breastfeeding reported having a heavy workload while close to half(49.4%) of the study partakers who were not exclusively breastfeeding reported having a heavy workload. When the bivariate analysis was done there was a statistically significant association between mothers' workload and practicing exclusive breastfeeding ($X^2=4.167$, $df=1$, $p=0.04$).

As shown in Table 8 below, regarding the type of occupation among the study participants, nearly half (47.8%) of those practicing exclusive breastfeeding were farmers, whereas more than half (53.3%) of those not practicing exclusive breastfeeding were livestock keepers. The bivariate analysis revealed no statistically significant association between occupation type and exclusive breastfeeding ($X^2=2.195$, df=1, p=0.533). These results align with findings from studies conducted in Ethiopia and Malawi, where occupation type was similarly not associated with exclusive breastfeeding (Ayalew, 2020; Salim & Stones, 2020).

Table 8: Association Between Social Economic Factors and Exclusive Breastfeeding

Independent Variables	Categories	Dependent Variable (Exclusive Breastfeeding)		Statistical Significance
		Yes(N=54)	No(N=70)	
Employment status	yes	32(68.1%)	15(31.9%)	X^2=3.355
	no	22(28.6%)	55(71.4%)	df=1
				p=0.000
Mothers-workload	Heavy workload	39(50.6%)	38(49.4%)	X^2=4.167
	Low workload	15(31.9%)	32(68.1%)	df=1
				p=0.04
Income level	Below poverty line	29(36.3%)	51(63.7%)	X^2=4.885
				df=1
	Above poverty line	25(56.8%)	19(43.2%)	p=0.02
Type of occupation	Beek keeping	8(30.8%)	18(69.2%)	X^2=2.195
	Livestock keeping	28(46.7%)	32(53.3%)	df=1
				p=0.533
	farming	11(47.8%)	12(52.2%)	
	Formal-employment	7(46.7%)	8(53.3%)	

4.7.3 Binary logistic regression on social-economic factors

As seen in Table 9 below, income level was not an independent predictor of exclusive breastfeeding (P=0.16).

These findings were not in harmony with the qualitative result where one of the key informants in the key informant interviews noted that:

> "*I would say the level of income has a key role in deciding whether a lactating mother will practice exclusive breastfeeding or not. When a lactating mother has enough income she is likely to afford better health services and provide for herself nutritious meals which are essential when breastfeeding, so I would say income level has a key role in deciding*

whether a lactating mother practices exclusive breastfeeding"(Key informant 2, nurse).

These results align with a study conducted in Uganda, which found a link between income level and exclusive breastfeeding (Nabunya et al., 2020). In contrast, a study in Ethiopia reported that lactating mothers with incomes below the recommended daily amount were less likely to practice exclusive breastfeeding compared to those with stable incomes (Nemera & Merga, 2021).

As provided in Table 9, employment status was found to be an independent factor for exclusive breastfeeding(p=0.000). Furthermore, employed study respondents were 5.6 times more likely to practice exclusive breastfeeding as compared to their fellow counterparts who were unemployed. The possible explanation for this was linked to the presence of social support by the employers and friendly breastfeeding policies which advocated for adequate provision of support to lactating others.

These findings were not in harmony with the qualitative result where one of the key informants in the key informant interviews noted that:

"*I would say unemployed mothers are likely to practice exclusive breastfeeding as compared to their fellow counterparts. This is because they spend the majority of their time with their children as compared to the employed mothers who are likely to find an alternative method of feeding*"(Key informant 1, clinical officer).

These findings were consistent with two other studies done in Nigeria and Ethiopia(Mekebo et al., 2022; Olasinde et al., 2021). However, another study done in DR Congo revealed that unemployed mothers were more likely to exclusively breastfeed as

compared to employed lactating mothers and this was associated with these mothers having ample time to breastfeed their children(Dhakal et al., 2017).

As provided in Table 9, mother's workload was not an independent factor for exclusive breastfeeding(P=0.06).

These findings were consistent with another study in Ghana where mothers' workload was not associated with exclusive breastfeeding(Adokiya et al., 2023). However, in another study done in Tanzania, mothers with a heavy workload were less likely to practice exclusive breastfeeding due to increased workload hence minimal time to breastfeed their infants(Jahanpour et al., 2022)s.

Table 9:Multivariate Analysis of Social Economic Factors

Variables	B	S.E	Wald	Df	Sig	OR	95% C.I	
							Lower	Upper
Income level	.592	.424	1.955	1	.162	1.808	.788	4.147
						Ref		
Workload	-.829	.441	3.528	1	.060	.436	.184	1.037
						Ref		
Employment status	-1.724	.421	16.772	1	.000	.178	.078	.407
						Ref		

CHAPTER FIVE

SUMMARY CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This section of the research provides a summary of the research findings, a conclusion of the research, recommendations from the study, and recommendations for further research.

5.1 Summary

The study revealed a troublingly low rate of exclusive breastfeeding at 43.5%, falling significantly short of the national goal. This deficit underscores the critical need for coordinated initiatives to improve exclusive breastfeeding practices in the region.

Maternal factors significantly related to exclusive breastfeeding included the mother's age, parity, education level, family size, and antenatal clinic attendance. These factors showed a positive correlation with exclusive breastfeeding in bivariate analysis, indicating that older age, higher education, smaller family size, and regular antenatal visits contribute to better breastfeeding practices. Conversely, marital status and mode of delivery did not exhibit a significant association with exclusive breastfeeding.

In terms of socio-cultural factors, both social support and supportive cultural practices were significantly linked to higher rates of exclusive breastfeeding. Positive support from family and community, along with favorable cultural norms, were associated with increased exclusive breastfeeding. However, factors such as body image perceptions, lack of employer support, and limitations on social activities for breastfeeding mothers did not significantly influence breastfeeding practices.

For socio-economic factors, employment status, maternal workload, and income level were significantly associated with exclusive breastfeeding. Employed mothers, those

with manageable workloads, and those with higher incomes were more likely to engage in exclusive breastfeeding. The type of occupation, however, did not show a significant association.

All significant variables from the bivariate analysis were included in a binary logistic regression model for detailed multivariate analysis. This analysis aims to further elucidate the relationships among these factors and guide targeted strategies to improve exclusive breastfeeding rates in the region.

5.2 Conclusion

The study found that the prevalence of exclusive breastfeeding was 43.5%, significantly below the national target, which highlights a critical public health issue and emphasizes the need for collaborative efforts to enhance breastfeeding rates in the area.

Maternal factors linked to exclusive breastfeeding included the mother's age, parity status, education level, family size, and antenatal clinic attendance, all of which were significantly associated with exclusive breastfeeding according to the bivariate analysis. In contrast, marital status and mode of delivery did not show a significant association with exclusive breastfeeding in this analysis.

Regarding socio-cultural factors, both social support and supportive cultural practices were significantly associated with higher rates of exclusive breastfeeding. However, negative body image perceptions, lack of employer support, and limitations on social activities for breastfeeding mothers did not significantly affect exclusive breastfeeding rates.

In terms of socio-economic factors, employment status, the mother’s workload, and income level were significantly associated with increased rates of exclusive

breastfeeding, while the type of occupation did not show a significant association. All variables with significant associations in the bivariate analysis were included in a binary logistic regression for detailed multivariate analysis. This approach aims to further elucidate the factors influencing exclusive breastfeeding practices and inform targeted interventions.

5.3 Recommendation

5.3.1 Recommendations from this Study

1. The Ministry of Health and the county government of Garissa should roll out health education and promotion programs advocating for pregnant mothers to attend ANC clinics. This will enable them to gather adequate knowledge of the benefits of exclusive breastfeeding.
2. The Ministry of Health and the county government of Garissa should advocate for lactating mothers to comply and attend maternal and child health clinics where they will learn the benefits of exclusive breastfeeding.
3. The Ministry of Health and other concerned stakeholders should work closely with community members to eradicate harmful cultural practices influencing exclusive breastfeeding.
4. The Ministry of Health and other concerned stakeholders should work closely with community members to ensure lactating mothers receive adequate social support to ensure they can execute exclusive breastfeeding.

5.3.2 Recommendation for Further Study

1. The study recommends this study be conducted in another ASAL county to compare the practice of exclusive breastfeeding this will aid in coming up with sufficient measures aim to promote adequate exclusive breastfeeding practices.

5.3.2 Recommendations for policy

Relevant stakeholders should establish breastfeeding support groups and train community health workers (CHWs) to educate mothers, families, and caregivers on the benefits of EBF and proper breastfeeding techniques.

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APPENDICES

Appendix I: Consent

Dear respondent,

Introduction and purpose of the study

Adan Mohamud is how I go by. At Mount Kenya University, I am pursuing a master's degree. This survey is part of a research project designed to determine whether lactating mothers in the Waberi area of Garissa County practice solely on breastfeeding.

Please help by filling out the attached survey. The data will be treated with the highest level of privacy and used solely for this investigation.

Participation and Withdrawal from the study

Participation in the study is entirely voluntary, and participants are free to end their participation at any time without facing any consequences.

Confidentiality and anonymity

The data you offer will only be utilized for the study's intended purpose, and confidentiality will be upheld. Your anonymity will also be guaranteed because your name won't be needed on any forms or used when the final report is published. Only the personnel associated with this study will be granted access to all the research data, which will be reserved below the padlock and key.

Benefits

The results of the research won't directly benefit anyone, but they will help change policies and raise awareness of the value of sole breastfeeding.

Potential risk and discomfort

Some questions asked may be too personal or may make you uncomfortable.In such a case, you may choose not to respond to questions asked, you may also pull out from the interview at any time. The interview will take about 20-30 minutes of your time.

Contact information

You can contact Harrison Chege Njoroge at +254727322142 or via email at adeshyare01@gmail.com or my supervisors through +254720823497 or Mount Kenya University Institutional of Ethics and Review Committee at research@mku.ac.ke.

Voluntary Involvement

It is optional to take part in this research project. Participation refusal carries no penalty. You are still free to quite the research at any time with no repercussions.

Thanks in advance for your cooperation.

Adan Mohamud

Knowing the aforementioned details and that participation in the research project is optional, anonymity and privacy are assured. I hereby consent to taking part in the research investigation..

Participants signature…… date…….

Interviewers signature……date…….

Your kind co-operation will be highly appreciated.

Appendix II: Questionnaire

Introduction

This survey aims to identify the variables affecting lactating mothers' decisions to breastfeed only in the Waberi area of Garissa County. We kindly ask you to answer these inquiries as truthfully and accurately as you can. The answers to these queries will be kept private. Engagement is entirely voluntary, and your absence won't be used toward you.

The questionnaire is divided into 3 sections. Section 1 Maternal factors, section 2 Socioeconomic factors and section 3 Socio-cultural factors

INSTRUCTIONS: -

Never include your name on this form.

Respond to all the inquiries

Section 1: Demographic characteristic of the respondents

1. Where do you reside?
    a) Rural
    b) Urban
    c) Peri-urban

2. What level of education have you attained?
    a) None
    b) Primary school
    c) Secondary school
    d) College/university

3. What is your age in years

    a) Below 18 years

    b) 18-25 years

    c) 26-33 years

    d) 33 years and above

4. Do you currently have a spouse?

    a) Married

    b) Single

    c) Widowed

    d) Divorced/separated

5. How many times have you given birth before?

    a) None

    b) Once

    c) Twice

    d) Three times and above.

6. Did you be present at ANC clinic while you were pregnant?

    a) Yes

    b) No

6b. If yes, how many visits did you make?

    a) 2 appointments and less

    b) 3 appointments

    c) 4 calls

    d) 5 appointments and above

7. How many are you in your family?
    a) Less than 3 fellows
    b) 3-4 fellows
    c) 5-6 fellows
    d) 7 members and above
8. What was the mode of birth of your baby?
    a) Normal birth
    b) Caesarian section
9. Where did you deliver your baby?
    a) Clinic
    b) At home
    c) Assisted by TBA
    d) Self-delivery
    e) Other, specify…….
10. What does "exclusively breastfeeding" mean to you??.....

    ……

11. What are the benefits of exclusive breastfeeding that you know?.....

    ……

    ……

Section 2. Socio economic factors influencing exclusive breastfeeding of HEI

12. What is the state of your employment??
    a) None
    b) Formal employment
    c) Casual work
    d) Business

12b. Does employment status affect you from breastfeeding exclusively?

13. What is your average family monthly income in ksh?

a) 20000 and below

b) 20001-30000

c) 30001-40000

d) 40001 and above

(13b. Does your monthly income affect you from breastfeeding exclusively?

a) Yes

b) No

14. What is the nature of your work?

a) Far distance from home

b) Near home area

c) Involves night shifts

d) Other, specify……

14b. Does nature of your work affect you from breastfeeding exclusively?

a) Yes

b) No

15. Do you have increased work load at your work place?

a) Yes

b) No

15b. If yes, does it affect you from breastfeeding exclusively?

a) Yes

b) No

Section 3: Cultural factors that influence exclusive breastfeeding

16. Do you receive support on exclusive breastfeeding from your employer?

a) Yes

b) No

c) At times

16b.If yes, what kind of support do you get?.....

……..

17. Do you receive support on exclusive breastfeeding from spouse or relatives?

d) Yes

e) No

f) At times

17b. If yes, what kind of support do you receive? Choose those that apply.

a) Having a child helper

b) Provision of financial support

c) Encouragement from partner/relative on exclusive breastfeeding

d) Other, specify…….

18. Are their cultural beliefs in your community that affect exclusive breastfeeding?

a) Yes

b) No

18b. If yes, which ones? Choose all those that apply.

a) Breast milk alone is not sufficient

b) Breast milk cause abdominal colic to the bay

c) It doesn't have adequate nutrients

d) Complimentary feeds clean infants' stomach

e) Breastfeeding make breasts sag and un admirable.

19. What are the common beliefs in your community on breastfeeding? Choose those that apply.

a) Breast milk alone can't satisfy baby

b) Baby is born angry and requires food

c) Breastfeeding in public can harm baby

d) Maternal cramps can be passed to baby and become sick

20. Have you ever experienced any stigma or discrimination because of breastfeeding?

a) Yes

b) No

20b. If yes explain how. Choose that which apply

a) Breast loses shape because of breastfeeding

b) Breast milk is not adequate

c) Its regarded as a practice for HIV positive women

d) Some women are unable to produce adequate milk

21. Do you use traditional herbal medicine on your baby?

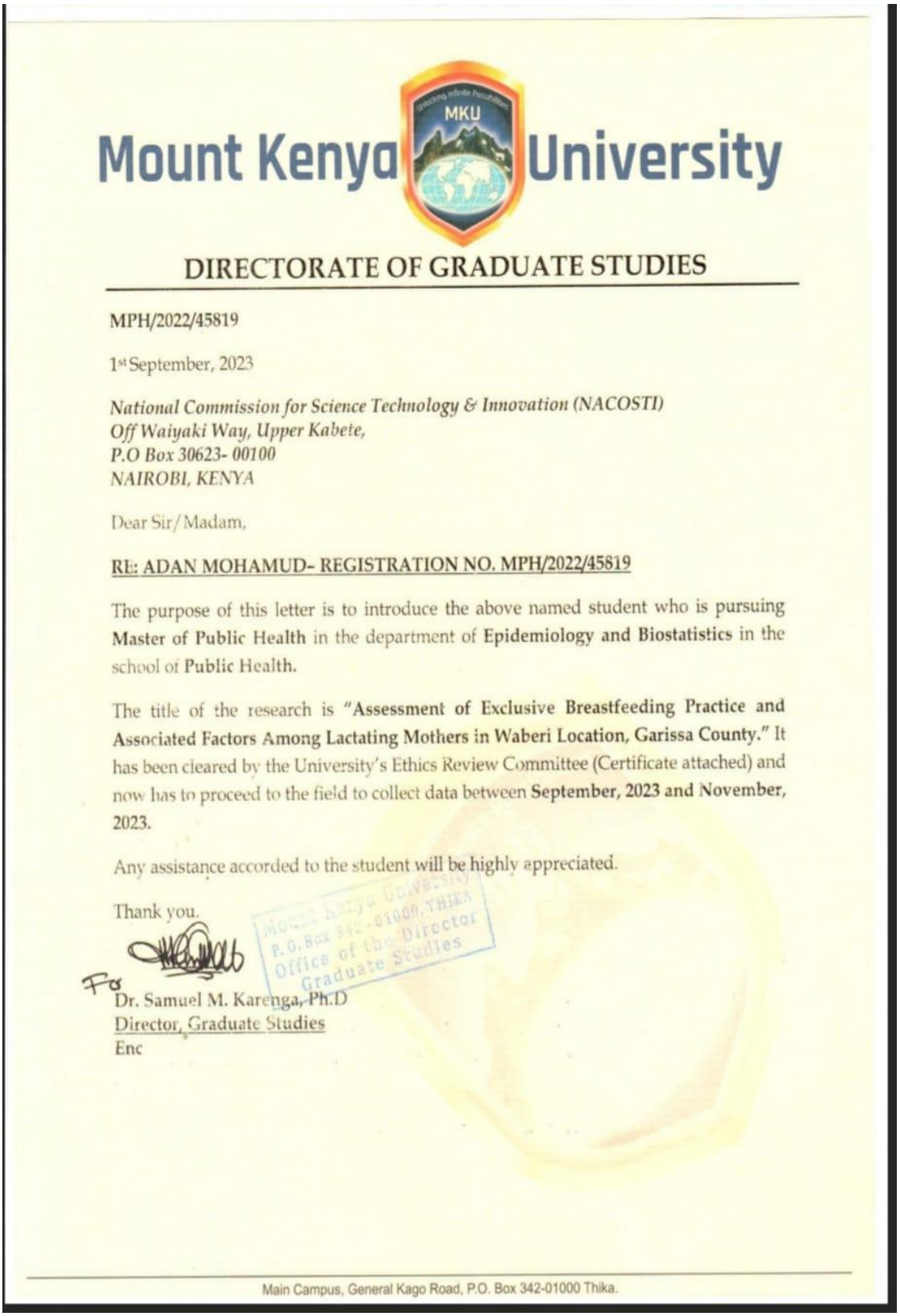
a) Yes

b) No

21b. If yes, for what reason?.....

……

Appendix III: Introductory Letter



Mount Kenya University

DIRECTORATE OF GRADUATE STUDIES

MPH/2022/45819

1st September, 2023

National Commission for Science Technology & Innovation (NACOSTI)
Off Waiyaki Way, Upper Kabete,
P.O Box 30623- 00100
NAIROBI, KENYA

Dear Sir/Madam,

RE: ADAN MOHAMUD- REGISTRATION NO. MPH/2022/45819

The purpose of this letter is to introduce the above named student who is pursuing **Master of Public Health** in the department of **Epidemiology and Biostatistics** in the school of **Public Health.**

The title of the research is **"Assessment of Exclusive Breastfeeding Practice and Associated Factors Among Lactating Mothers in Waberi Location, Garissa County."** It has been cleared by the University's Ethics Review Committee (Certificate attached) and now has to proceed to the field to collect data between **September, 2023 and November, 2023.**

Any assistance accorded to the student will be highly appreciated.

Thank you.

Mount Kenya University P.O. Box 342-01000, THIKA Office of the Director Graduate Studies

Fo

Dr. Samuel M. Karenga, Ph.D
Director, Graduate Studies
Enc

Main Campus, General Kago Road, P.O. Box 342-01000 Thika.

Appendix IV: ERC Approval

Mount Kenya University

REF: **MKU/ISERC/3087**
TO: **ADAN MOHAMUD**

Date: 01 September 2023

REG: **MPH/2022/45819**

Dear Sir/Madam,

RE: ASSESSMENT OF EXCLUSIVE BREASTFEEDING PRACTICE AND ASSOCIATED FACTORS AMONG LACTATING MOTHERS IN WABERI LOCATION, GARISSA COUNTY

This is to inform you that **Mount Kenya University** has reviewed and approved your above research proposal. Your application approval number is **2131.** The approval period is **01/09/2023 - 31/08/2024.**

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 **Mount Kenya University**
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 **Mount Kenya University** within 72 hours of notification
iv. Any changes, anticipated or otherwise that may increase the risks or affect the safety or welfare of study participants and others or affect the integrity of the research must be reported to **Mount Kenya University** 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 **Mount Kenya University**

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

The Chairman
Mount Kenya University
Ethics Review Committee
P.O. Box 342 - 0100, Thika

Yours sincerely,

Dr. Alfred Owino, PhD
Chairman, Mount Kenya University ISERC

Main Campus, General Kago Road, P.O. Box 342-01000 Thika.
Tel: 020-2878 000, Cell: +254 709 153 000

Appendix V: NACOSTI Approval

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **659959**

Date of Issue: **27/September/2023**

RESEARCH LICENSE

This is to Certify that Mr.. Adan MOHAMED of Mount Kenya University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Garissa on the topic: ASSESSMENT OF EXCLUSIVE BREASTFEEDING PRACTICE AND ASSOCIATED FACTORS AMONG LACTATING MOTHERS IN WABERI LOCATION, GARISSA COUNTY for the period ending : 27/September/2024.

License No: **NACOSTI/P/23/29574**

659959

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

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

See overleaf for conditions

Appendix VI: Data Collection Approval

REPUBLIC OF KENYA

MINISTRY OF INTERIOR AND COORDINATION OF NATION GOVERNMENT

Ref/27474808/003 05 October 2023

ADAN MOHAMUD MOHAMED,

STUDENT, MOUNT KENYA UNIVERSITY,

0727332142.

Dear Sir

RE: Authorization to Conduct Research

I am writing to officially permit you to conduct research within my area of jurisdiction. After carefully reviewing your research proposal and considering its potential benefits, I am pleased to provide you with the necessary authorization to proceed with your study.

I appreciate the thoroughness of your proposal and your commitment to conducting the research with professionalism and adherence to ethical standards. Your dedication to compliance with relevant policies and regulations is commendable and ensures that the research will be carried out responsibly.

I trust that you will coordinate closely with my team and any relevant stakeholders to minimize disruption to our operations during the course of your research. Should you require any assistance or have any questions or concerns, please do not hesitate to reach out to me or my office.

I wish you every success with your research endeavor and look forward to seeing the valuable insights that it produces.

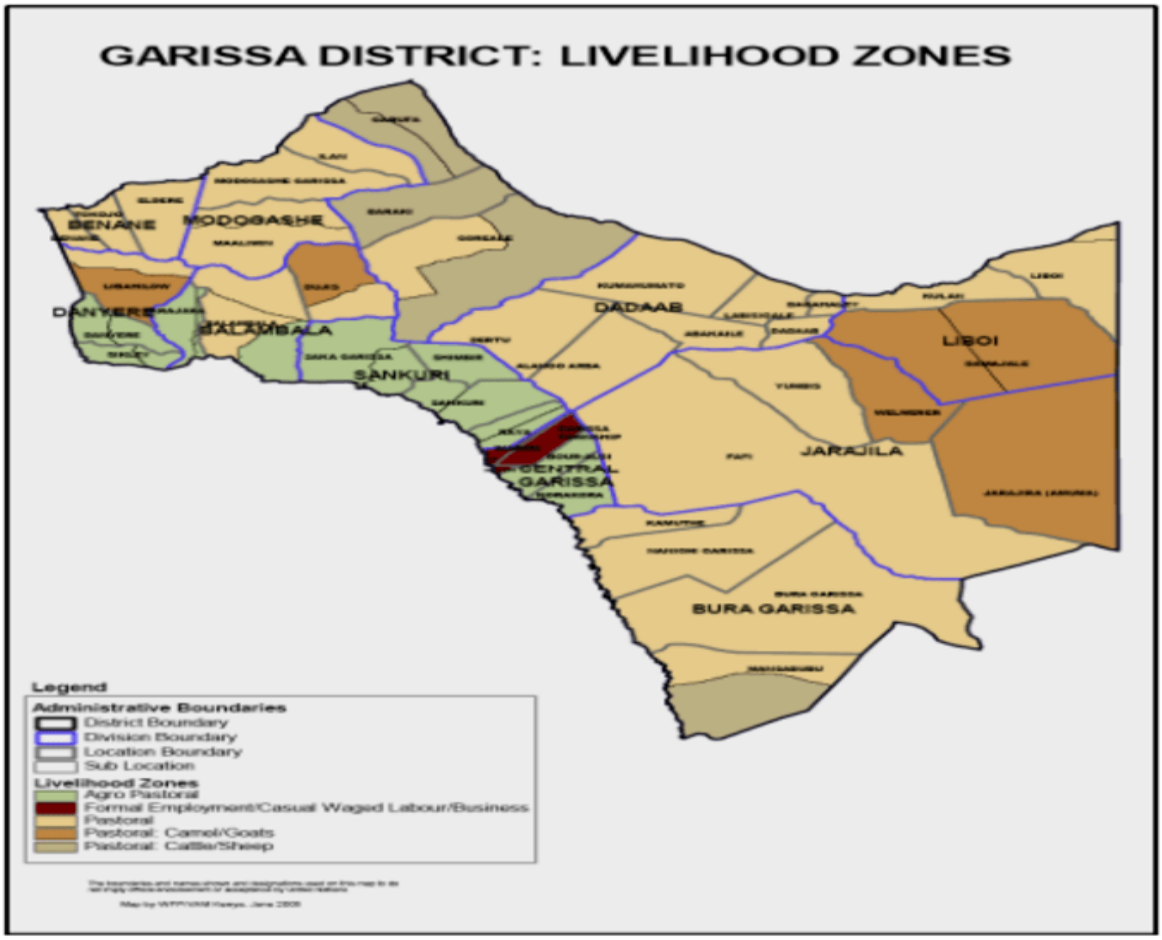
Sincerely,

Abdi Warsame

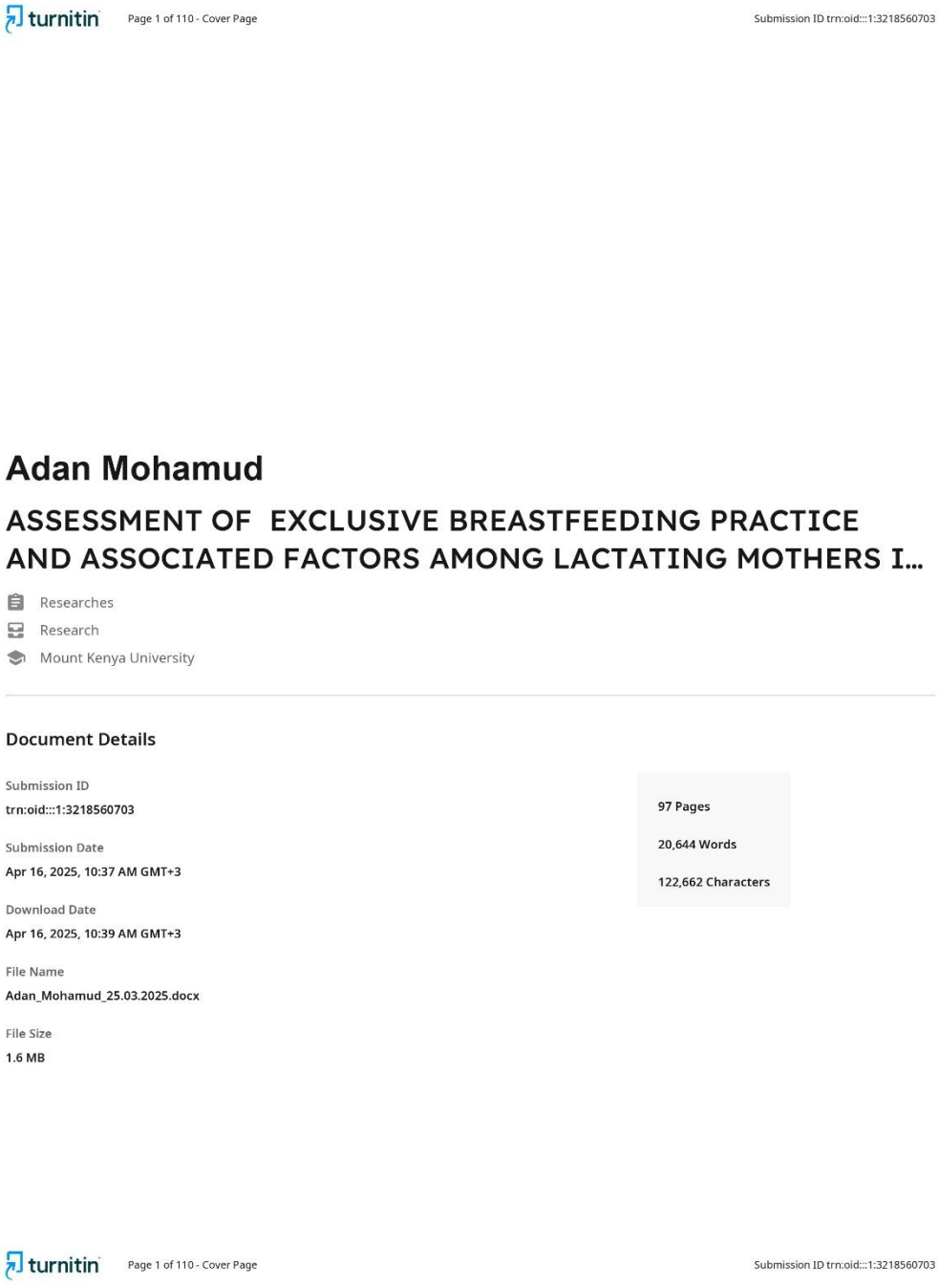
Assistant Chief

Waberi Location

Appendix VII: Map of The Study Area



Appendix VIII: Similarity Index



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  Matches that are still very similar to source material
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  Matches that have quotation marks, but no in-text citation
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  Matches with in-text citation present, but no quotation marks

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12% Publications
5% Submitted works (Student Papers)

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0 Integrity Flags for Review

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