FACTORS AFFECTING EXCLUSIVE BREASTFEEDING AMONG NURSING MOTHERS IN NJOMBE REGION, TANZANIA

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FACTORS AFFECTING EXCLUSIVE BREASTFEEDING AMONG NURSING MOTHERS IN NJOMBE REGION, TANZANIA

By

Jonathan Beda Haule

A Dissertation Submitted in (Partial) Fulfillment of the Requirements for the Degree of Master of Public Health

Muhimbili University of Health and Allied Sciences
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CERTIFICATION

The undersigned certify that they have read and hereby recommend for acceptance by of Muhimbili University of Health and Allied Sciences a dissertation entitled; **‘‘Factors affecting exclusive breastfeeding among nursing mothers in Njombe region, Tanzania’’,** in (partial) fulfillment of the requirements for the degree of Master of public health of the Muhimbili University of Health and Allied Sciences.

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Dr. Gladys Reuben Mahiti

(Supervisor)

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Date

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Ms. Rebecca Edward Rabach

(Co-Supervisor)

_____

Date

DECLARATION AND COPYRIGHT

I, **Jonathan Beda Haule,** declare that this **dissertation** is my own original work and that it has not been presented and will not be presented to any other University for a similar or any other degree award.

Signature..... **Date**……...

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DEDICATION

I dedicate this dissertation to my adopted mother (Enala Nyivambe), who has always been my guiding light and continuous support throughout my academic journey. Her love, encouragement, and sacrifices have made it possible for me to pursue my dreams and reach this significant milestone in my life.

I further dedicate this dissertation to my wife, Jackline Malekela, who has encouraged and supported me throughout my academic journey. Her constant confidence in my skills, encouragement, and constant support have been crucial in determining my success.

ABSTRACT

Background: Exclusive breastfeeding (EBF) is important for infant development, but in Tanzania, the national prevalence is only 64%. In the Njombe region, it's slightly higher at 70%, yet the region also has a high stunting rate of 53.6%. Despite efforts to promote EBF in Njombe, it hasn't reached the recommended coverage of 90% set by the WHO standards. Aim: This study aimed to address this gap by examining the factors influencing exclusive breastfeeding practices among nursing mothers in the Njombe region.

Methodology: A mixed-method study included 398 nursing mothers with infants aged 6-12 months from six randomly selected facilities, the study used both qualitative and quantitative approaches. Structured questionnaires gathered socio-demographic information and factors affecting exclusive breastfeeding, while qualitative data were collected from Focus Group Discussions (FGDs) and In-depth Interviews with nursing mothers' spouses. Quantitative data analysis used SPSS version 26, computing summary statistics and applying the Chi-square test to measure associations. Qualitative data were analyzed through thematic analysis, identifying themes, and using Atlas Ti to organize quotes.

Results: In the study, most nursing mothers (56.5%) were aged 25-35, with a majority (59.8%) being married and 59.5% having completed primary education. Qualitative insights indicated that traditional medicine, misunderstanding a baby's cry, and cultural practices impacted exclusive breastfeeding (EBF). Most mothers used traditional remedies before six months, often due to perceived hunger or growth concerns. Beliefs about breast changes and cultural views on crying influenced the early introduction of solid foods. Quantitative analysis revealed a link between professional support and higher EBF rates. Mothers who received counseling had significantly higher EBF rates (81.6%) compared to those without support (72.9%).

Conclusion: This study highlights the interaction of family dynamics, healthcare guidance, and cultural influences on exclusive breastfeeding practices in the Njombe Region. It highlights the need for comprehensive interventions to address cultural beliefs, enhance healthcare provider education, and promote family involvement. Addressing these factors can lead to sustained improvements in exclusive breastfeeding, benefiting both mothers and infants in the region.

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LIST OF ABBREVIATION

ANC	Antenatal care
BFHI	Baby Friendly Hospital initiative
CHWs	Community health workers
EBF	Exclusive breastfeeding
HIV	Human immunodeficiency virus
HSP	Healthcare service provider
IQ	Intelligence quotient
IRB	Institution Review Board
IYCF	Infant Young Child Feeding
KII	Key informant interview
PMTCT	Prevention of mother-to-child transmission
PNC	Postnatal care
RCHs	Reproductive child health
SBCC	Social Behavioural Change Communication
SDG’s	Sustainable Development Goals
WBW	World breastfeeding Week
WHO	World Health Organization

DEFINITION OF KEY TERMS

Breastfeeding: is the natural process by which a mother uses the milk produced by her mammary glands to nourish her infant or young kid. This process offers vital nutrients, antibodies, and other health-promoting materials that support the baby's general development and well-being (1).

Breast milk: It is the natural nourishment produced by women for babies, providing all the essential energy and nutrients required for the first six months of infant life (2).

Exclusive breastfeeding: Exclusive breastfeeding is the practice of feeding infants only breast milk without introducing any other food or drink, except for oral rehydration solution (ORS), medicines, vitamins, and minerals, as recommended for the advised duration (3).

Enzymes: Refers to proteins or substances produced by living organisms that serve as biological catalysts, speeding up chemical reactions within the human body.

Infants: Refers to children in the first year of life, typically ranging from birth to one year old.

Infectious disease: Refers to illness brought on by pathogenic microorganisms, such as bacteria, viruses, fungi, parasites, or other infectious agents, is referred to as an infectious disease. By interfering with regular bodily processes, these microbes have the ability to enter the body, grow, and cause disease (4).

Malnutrition: refers to imbalances of vital nutrients, deficits or excesses in nutritional intake, or inadequate nutrient utilization It includes both excess and under nutrition(5)

Nursing mother: Refers to mother/woman who is breastfeeding.

Postpartum hemorrhage: Refers to the blood loss of woman after giving birth.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

The global ambition to achieve the Sustainable Development Goals (SDGs) outlined by the United Nations, underscores the importance of enhancing health services to promote healthy lifestyles and well-being for everyone (9). A crucial component in realizing the SDGs is the promotion of exclusive breastfeeding (EBF) during the first six months of an infant's life, acknowledged as the most effective strategy for ensuring infant survival (6).

Exclusive breastfeeding (EBF) is recommended for infants as it provides the necessary nourishment during the first six months of life (7). Breast milk is the ideal natural source of nutrients for infants, offering benefits such as boosting hormone production for mothers, aiding in uterine contractions, and preventing postpartum haemorrhage (8). Additionally, breast milk is easily digestible, contains essential digestive enzymes, and supports optimal growth and development in infants. Research shows that infants exclusively breastfed for six months have a higher intelligence quotient (IQ), reduced risk of obesity, and enhanced immunity against childhood illnesses (9). Furthermore, breastfeeding promotes sensory and cognitive development, protects against illnesses, and hastens the healing process after an illness. Beyond its health benefits, breastfeeding also acts as a natural form of contraception, reduces the risk of certain cancers for mothers especially breast and ovarian cancer, and fosters strong mother-child bonds (10).

In 2014, an estimated 5.2 million children under the age of five died globally, with a significant number of these deaths attributed to preventable and treatable conditions (11). Despite extensive research on exclusive breastfeeding (EBF), this practice remains underutilized in underdeveloped nations, which is far higher than the worldwide expectation of 90%. Currently, only approximately 55.8% of infants worldwide receive exclusive breast milk, with even lower rates in sub-Saharan Africa at 24.9% (12). While there has been an upward trend in EBF rates over the past two decades, achieving global UNICEF goal of 100% coverage remains a considerable challenge (13).

In Tanzania, there has been progress in increasing the percentage of infants exclusively breastfed, with rates rising from 23% in 1992 to 59% in 2015/16. This improvement can be attributed to the implementation of various dietary and healthcare interventions for expectant mothers and newborns since 1974. Despite these advances, further research is needed as more than 30% of Tanzanian infants are not exclusively breastfed, placing them at risk of infectious diseases and malnutrition (7). The Tanzanian government has pledged its commitment to improving exclusive breastfeeding (EBF) practices by endorsing various international initiatives. These efforts, aimed at preventing mother-to-child HIV transmission (PMTCT), include the implementation of the Baby-Friendly Hospital Initiative (BFHI), the Infant and Young Child Feeding Policy (IYCF), and breastfeeding recommendations. Despite these measures, studies indicate that EBF rates in many countries, including Tanzania, still fall short of the ideal 100%. In Tanzania, EBF was practiced by 58% of mothers in 2016.

Notably, the Njombe region has made significant improvements in EBF, with nearly 70% of newborns exclusively breastfed, a substantial increase from 41.1% in 2014 to 70% in 2018 (5). While this progress is commendable, the region has yet to reach the World Health Organization's (WHO) recommended rate of 90% EBF coverage, despite surpassing the national average of 64% for infants under six months. Although there has been considerable awareness and education on EBF, thanks to programs supported by USAID and UNICEF, such as the promotion of IYCF and EBF in the Njombe region, the practice still falls short of meeting the WHO standards. (14). Despite the noted achievement of high EBF rates in the Njombe region, it is essential to recognize that there may still exist challenges or barriers that limit the attainment of optimal breastfeeding practices, as recommended by the World Health Organization (WHO). By conducting this study in Njombe, we aimed to unmask the complex of these opportunities, challenges, and barriers, which may not be readily apparent when solely examining the overall high rates of EBF. This research aimed to explore into the region-specific determinants in Njombe that contribute to the high rates of exclusive breastfeeding (EBF). These factors encompass various aspects, including but not limited to the support systems, cultural practices, and community engagement prevalent in the region.

1.2 Statement of the Problem

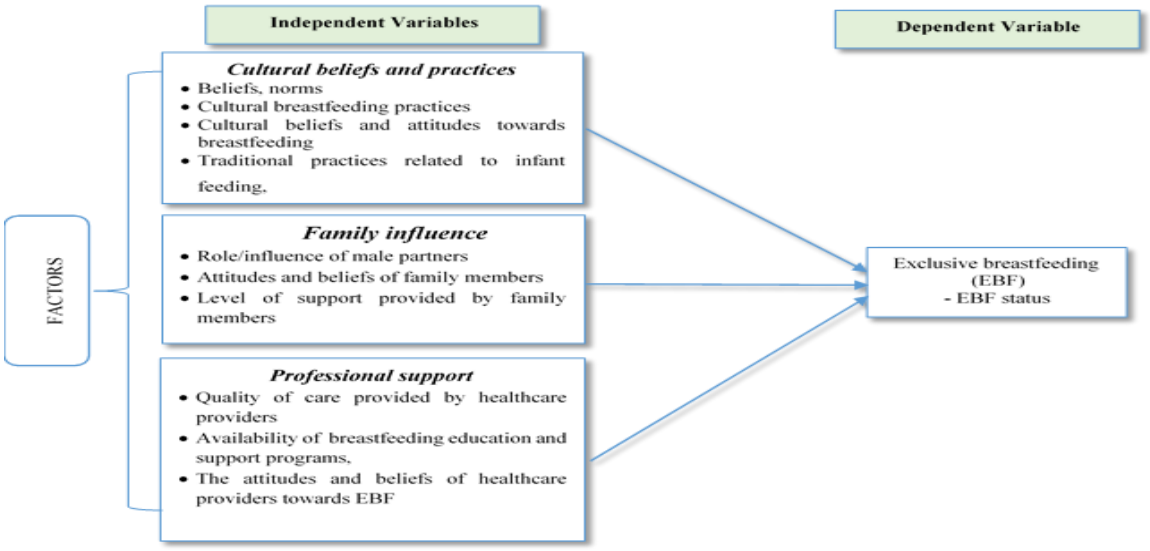
Exclusive breastfeeding (EBF) plays a crucial role in infant development, yet in Tanzania, the national prevalence stands at only 64%(15),(16). The Njombe region shows a slightly higher prevalence of EBF at 70%, but also faces a significant challenge with stunting rates at 53.6%, one of the highest in the country (17). Despite ongoing efforts to promote EBF in Njombe through various programs, the practice has not yet met the national or World Health Organization (WHO) recommendations of 90% coverage(14). Several factors influence EBF practices, including maternal age, education, employment status, residency, cultural and religious beliefs, living arrangements, antenatal care practices, mode of delivery, and professional assistance during childbirth (18).

Despite of the initiatives made by the Tanzanian Government to promote EBF practices through the compliance to the international requirements and the national health policy but still there is a lot to be done particularly at the grass roots levels. At the national level the practice is showed to be improving but there is no adequate knowledge about cultural practices, the role of male and other family members and the influence of professional support by the health providers at the grass roots even though there are various institution health frameworks created to deal with the EBF impractical. It is crucial to recognize that despite the significance of exclusive breastfeeding (EBF) for infant health and development, there is limited research on the specific factors influencing EBF practices in Tanzania(14). While studies have explored various factors such as socio-economic, demographic, and maternal influences, there is a gap in understanding the impact of cultural attitudes and behaviours on EBF practices among healthcare professionals, male partners, and other family members (14)**.** Studying a region with high exclusive breastfeeding (EBF) rates provided valuable insights and lessons for other areas. By conducting this study, the study uncovered hidden opportunities that may not be apparent otherwise. Other regions can learn from these experiences to address gaps in breastfeeding support effectively. This study utilized both qualitative and quantitative research methods to explore the cultural beliefs and practices, surrounding exclusive breastfeeding (EBF), as well as the influence of male and other family members on EBF practices, and the role of healthcare providers in supporting

EBF. By combining these approaches, the study can provide a comprehensive understanding of the factors influencing EBF in the Njombe region of Tanzania.

1.3 Conceptual framework

The conceptual framework below presented explores the varied factors influencing exclusive breastfeeding (EBF) practices among nursing mothers. This conceptual frame is adopted and modified from Social ecological model (SEM) by Bronfenbrenner of 1977 (19). Cultural beliefs and practices, consisting of attitudes towards breastfeeding and traditional infant feeding methods, significantly influence the adoption of EBF. Family dynamics, particularly the role and support of male partners and other family members, play a crucial role in influencing a mother's decision and ability to practice EBF. Additionally, professional support, including the quality of healthcare, educational programs, and healthcare providers' attitudes toward EBF, are critical determinants. The attainment of these independent variables reflects on the dependent variable - the status of EBF among nursing mothers. Understanding the complex relationship of cultural, family, and professional factors is essential for developing effective strategies to encourage and support exclusive breastfeeding practices.



Source: Adopted and modified from Bronfenbrenner's (1977) Social Ecological

Figure 1. Conceptual Framework Explaining the Factors influencing Exclusive Breastfeeding (Adopted and Modified from Bronfenbrenner's (1977) Social Ecological Systems Model)

1.4 Rationale of the study

Promoting exclusive breastfeeding is crucial for improving child nutrition and survival, aligning with the Sustainable Development Goal (SDG) number 3, which focuses on ensuring healthy lives and promoting well-being for everyone. To support this goal, the World Health Organization (WHO) and UNICEF recommend that all facilities providing maternal services and newborn care should have written policies addressing breastfeeding that are routine disseminated to staff.

Tanzania has implemented various policies and programs to promote exclusive breastfeeding, including education on exclusive breastfeeding, complementary food education, and community worker home visits. These initiatives are essential for raising awareness, providing support, and encouraging the practice of exclusive breastfeeding among mothers in Tanzania.

Furthermore, this study's alignment with the Tanzanian Development Vision 2025 underscores the country's commitment to achieving high-quality livelihoods for all its citizens. The vision includes strategies to ensure access to quality primary healthcare for all, access to quality reproductive health services for individuals of all appropriate ages, and a significant reduction in infant and maternal mortality rates.

Furthermore, this study holds the key to unlocking significant improvements in exclusive breastfeeding (EBF) practices in Njombe. Its findings will directly inform government and stakeholder interventions by pinpointing existing gaps and barriers. Thus, armed with accurate regional EBF prevalence data and practical recommendations, policymakers and healthcare implementers can prioritize resources and refine health system practices. In addition, the study's impact extends beyond policy, raising public awareness and paving the way for future research that pushes the boundaries of EBF understanding.

1.5 Research Questions

1.5.1 Research Questions of the Study

What are the factors affecting exclusive breast feeding among nursing mothers in Njombe Region?

1.5.2 Specific Research Questions

i. What are the cultural and healthcare factors that influence exclusive breastfeeding (EBF) practice among nursing mothers in the Njombe region of Tanzania?
ii. How do cultural beliefs and practices influence exclusive breastfeeding practices during the first six months after childbirth?
iii. What is the level of professional support provided by health providers in promoting awareness on Exclusive Breastfeeding (EBF) among nursing mothers during the initial six (6) months after childbirth?
iv. How do males and other family members influence exclusive breastfeeding practices among nursing mothers in the first six months after birth?

1.6 Research Objectives

1.6.1 Broad Research Objective

To determine factors affecting exclusive breast feeding among nursing mothers in Njombe Region

1.6.2 Specific Research Objectives

i. To identify cultural, and healthcare factors that influence exclusive breastfeeding (EBF) practice among nursing mothers in the Njombe region of Tanzania.
ii. To investigate the impact of cultural beliefs and practices on exclusive breastfeeding practise during the first six months after childbirth.
iii. To assess the level of professional support provided by health providers in promoting awareness on Exclusive Breastfeeding (EBF) among nursing mothers during the initial six (6) months after childbirth.
iv. To examine the influence of males and other family members on exclusive breastfeeding practices among nursing mothers in the first six (6) months after birth.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Overview

This chapter presents the previous studies about the factors affecting exclusive breastfeeding among nursing mothers. The chapter begins with establishing the conceptual framework and concludes with an empirical literature review aligned with the defined objectives.

2.2 Theoretical review

Various theories and models are associated with diverse research studies. In this study, the theory of planned behaviour (TPB) and Interactive theory is employed to understand health behaviours within a broader context.

The theory of planned behaviour (TPB) is an effective theoretical framework to predict behaviour change and has been also used in predicting breastfeeding behaviour (20). The TPB assumes a rational approach for engaging in various behaviours and has been used extensively for explaining health behaviour. However, most studies have tested the effectiveness of TPB constructs in predicting how people perform actions for their own benefit rather than performing behaviours that are beneficial to others, such as breastfeeding infants. The extended Theory of Planned Behaviour had a good predictive ability in explaining exclusive breastfeeding intention and behaviour. The women's intention to practice exclusive breastfeeding may be improved by improving their perceived behavioural control and attitude. Providing correct postpartum support and skills to handle breastfeeding difficulties after delivery will improve their exclusive breastfeeding behaviour (21). Thus, the theory of planned behavior will be a guide in identifying predictors of exclusive breastfeeding intention and behavior among women.

Moreover, this study will be guided by the King’s Conceptual Systems to develop the Interactive Theory of Breastfeeding. Fundamental purposes of the Interactive Theory of Breastfeeding are to describe and explain this phenomenon by analysing the factors that lead to and affect the breastfeeding process. When the theory describes the consequences of breastfeeding, it provides elements that can contribute to predicting the results and the

dynamic interactivity of breastfeeding, and also contribute to prescribing actions to ensure that the different benefits of breastfeeding are achieved. Concepts of the interactive theory of breastfeeding: Based on the analysis of the concept of breastfeeding, the following theoretical concepts were proposed: mother-child dynamic interaction; woman's biological conditions; child's biological conditions; woman's perception; child's perception; woman's body image; space for breastfeeding; mother's role; organizational systems for the protection, promotion and support of breastfeeding; family and social authority; woman's decision making; stress; and time of breastfeeding (22).

In addition, in this study, the Socio-Ecological Model (SEM) is employed to understand health behaviours within a wider context. The SEM emphasizes the several levels of influences affecting individuals' behaviours, consisting intrapersonal, interpersonal, organizational, community, and societal factors (19).The Social-Ecological Model (SEM) serves as a comprehensive framework for understanding exclusive breastfeeding (EBF) by considering various influencing factors across different levels (23). At the intrapersonal level, it emphasizes educating mothers about the benefits of EBF and addressing individual beliefs and barriers. Interpersonally, it highlights the role of family support, especially from male partners and relatives, in encouraging and facilitating EBF practices. Organizationally, it underscores the importance of healthcare provider training and supportive policies within healthcare settings. At the community and societal levels, the SEM emphasizes creating breastfeeding-friendly environments by addressing cultural beliefs, societal attitudes, and advocating for policies supporting breastfeeding mothers. This holistic approach enables interventions targeting multiple levels of influence to promote and support EBF among nursing mothers effectively (3,19,23).

Therefore, both theories and Model (Theory of planned behavior, interactive theory and Social Ecological Model) seem to match well with the study objectives since they produce the reasons as nursing women sometimes fail to practice exclusive breastfeeding.

2.3 Empirical review

Multiple studies have explored similar topics, within different contexts. The insights provided from these studies have been crucial in shaping the present study, particularly in highlighting factors affecting Exclusive breastfeeding among nursing mothers. Therefore, this section examines the relevant research conducted in connection to the present study.

2.3.1 The influence of cultural beliefs and practices on Exclusive Breast feeding

The evolution of societal expectations and cultural norms has influenced the practice of exclusive breastfeeding (EBF) in various communities, including African civilizations. While historically EBF was unrestricted and widely accepted, contemporary challenges have emerged for mothers who choose to exclusively breastfeed. In some cultures, there is now an expectation for women to cover their breasts with a blanket while nursing in public, reflecting changing attitudes towards breastfeeding practices. Many women find support for exclusive breastfeeding through familial traditions, with some continuing the practice started by their own mothers. However, entrenched cultural beliefs and historical practices can also impact mothers' decisions on how to feed their infants (24).

The study findings of Myanmar, where lactating mothers expressed concerns that exclusive breastfeeding could affect their appearance, leading them to consider formula feeding and taking measures to suppress breast milk production. Misconceptions about the adequacy of breast milk and the belief that early introduction of food and other liquids is necessary due to perceived hunger cues in infants further complicate efforts to promote exclusive breastfeeding (25).

The findings from the study conducted in United Kingdom indicate that the practice of exclusive breastfeeding (EBF) tends to increase with the age of the mother, but it decreases among mothers aged 40 years and above. Older mothers may have more experience with breastfeeding, but they could also be occupied with household responsibilities, including caring for other children. Additionally, older mothers who give birth at age 40 or above, especially in urban areas, may be employed in formal sectors where maternity leave is limited to a maximum of 84 days in Tanzania. On the other hand, younger mothers may have less experience with breastfeeding compared to older mothers (26,27)

Various factors influence the decision to introduce complementary foods early, including the belief that a mother's breast milk may be insufficient for a child's growth, the perception of the child being thirsty, and cultural practices such as administering herbal medications. In some communities, there is a prevalent idea that breast milk alone is inadequate, leading to the early introduction of porridge or other foods.

Furthermore, the study in Tanzania revealed a positive association between EBF practices and the sex of the child, with mothers of female children being nearly five times more likely to practice exclusive breastfeeding compared to mothers of male children (14). This finding highlights the influence of child sex on breastfeeding practices and suggests that there may be gender-related factors affecting EBF behaviors among mothers in Tanzania.

2.4 Availability of professional support and support programs on Exclusive Breast feeding

The literature highlights the importance of creating a supportive environment for exclusive breastfeeding to improve breastfeeding rates and child health outcomes. While most babies worldwide receive breast milk at some point in their lives, there are significant differences in breastfeeding practices between low-middle- and high-income countries. In low and middle-income nations, only 4% of infants are never breastfed, compared to 21% in high-income countries (7).

Healthcare facilities and providers play a crucial role in promoting exclusive breastfeeding, as they are trusted sources of information for mothers (28). Despite high levels of awareness about exclusive breastfeeding among mothers, there is often a gap between knowledge and practice. In countries like Ghana, where knowledge of exclusive breastfeeding is high but the practice is low, it is clear that simply having knowledge about exclusive breastfeeding does not necessarily translate into exclusive breastfeeding practices (13).

Studies in various African countries have shown that mothers with lower levels of education are less likely to practice exclusive breastfeeding (29–31). Mothers without formal education may have limited knowledge about the benefits of exclusive breastfeeding and other infant feeding practices, which can impact their ability to exclusively breastfeed their infants (14).

2.5 The role/influence of male partners on Exclusive Breast-feeding practices

According to the study conducted in Rural Zimbabwe on enhancing men's participation, promoting EBF awareness, and enhancing the village health worker program shows a significant influence on breast feeding practices (32). Societal norms play a significant role in influencing health behaviours, including breastfeeding practices (33). Factors such as family dynamics, cultural differences, lack of traditional elder support for breastfeeding practices, and associations between feeding methods and socioeconomic status can impact a woman's decision to breastfeed exclusively. Additionally, changes in women's economic roles within their families can also influence breastfeeding practices(34).

In industrialized nations, various sociodemographic factors have been associated with exclusive breastfeeding practices, including social class, education level, mother's age, parental support, work status, parity, place of birth, smoking during pregnancy, and the presence of Baby-Friendly Hospital Initiative (BFHI) programs (32). Similarly, in developing nations, sociodemographic aspects such as mother's age, education, employment status, place of residence, religious and cultural beliefs, prenatal care practices, home delivery, and professional support during delivery can influence breastfeeding practices (18). Interventions that target these factors, such as increasing awareness, providing support, and addressing cultural beliefs, can help create an enabling environment for mothers to practice exclusive breastfeeding successfully.

Study conducted Fortaleza-Ceará-Brazil have indicated that a woman's educational level can have a direct impact on her success in breastfeeding (35). Women with higher levels of education may be more likely to access information and resources that support breastfeeding practices. Additionally, financial stability can play a role in a woman's ability to breastfeed successfully, as women in better financial conditions may experience less stress and fatigue, which can positively impact their breastfeeding experience. Interestingly, regardless of the quality of housing, studies have shown that a significant portion of salaries is often spent on food and entertainment rather than basic needs. This implies that a large population spends more money on wants rather than needs(35).

The literature highlights various determinants at different levels that can influence breastfeeding practices. At the individual level, factors such as the mother's age, marital status, educational level, birth order, baby's gender, and date of birth can impact breastfeeding decisions and practices. Household-level variables, including the size of the household, age and education level of the spouse, and number of other spouses, can also play a role in breastfeeding practices. Community-level characteristics, such as the availability of health facilities and services, and the place of residence (rural or urban), can also affect breastfeeding practices (36)

Family relationships and support play a crucial role in influencing a woman's breastfeeding behaviour and overall breastfeeding experience (37). Healthy and supportive family relationships at home can positively impact a mother's physical and emotional well-being, her breastfeeding experience, and her relationships with her child (37). Qualitative data has identified several key themes related to breastfeeding, including mothers' qualities (such as physical and emotional welfare, experience, and relationships), mothers' knowledge, attitudes, and practices towards nursing, and the role of families, communities, and infant cues in breastfeeding practices (38). Studies have shown that the strength of a couple's connection is associated with paternal support for the mother and child, which can contribute to a positive breastfeeding experience. Mothers who receive support from their husbands and possibly other family members tend to feel happier and more at ease during pregnancy and childbirth, which can positively impact their breastfeeding journey (37).

2.6 A gap of knowledge

It has been observed from the literature review that, a lot has been written on the practice of EBF in different areas of the world in both developed and least developed countries, Tanzania being among of them. Additionally, empirical examination of research has shown that cultural beliefs and systems within individuals, families, professionals, and society as a whole play a significant role in influencing mothers' decisions regarding infant feeding practices, particularly exclusive breastfeeding (EBF). Understanding how cultural influences, the role of family, and interactions with healthcare professionals impact mothers' breastfeeding habits is crucial for promoting successful breastfeeding practices.

Therefore, the aim of this study is to examine the impact of cultural beliefs, professional support, and family influences affect the practice of exclusive breastfeeding.

CHAPTER THREE

3.0 MATERIAL AND METHODOLOGY

3.1 Study Area

The study was conducted in the Ludewa District Council of the Njombe Region in Tanzania. Njombe is one of the 31 regions in Tanzania and has a total area of 24,994 square kilometers. The region is located between latitude 08^0 50' and 10^0 30' South of the equator and between longitude 33^0 45' and 35^0 45' East of Greenwich (39). Njombe Region is divided into four districts: Njombe, Wanging'ombe, Makete, and Ludewa. According to the population and housing census report, Njombe had a total population of 889,946 in 2022, with 420,533 males and 469,413 females (40). In terms of healthcare infrastructure, the region has a distribution of 271 dispensaries, 44 health centers, and 22 hospitals (16).

Rural setting of Njombe region was chosen because it has low EBF rates compared to WHO recommendations also the region with high stunting (16). Thus, its available health facilities, where mothers attend pre-natal clinics, provided necessary data access. Additionally, only 65% of women in Njombe receive skilled antenatal care, making it the region with the lowest access (16). This research aims to shed light on EBF practices in rural areas and identify the root causes of its low prevalence. Ludewa district, randomly selected within Njombe, represents the region's 151,361 inhabitants in this crucial examination of EBF practices (40).

3.2 Study Design

A mixed method study design was conducted where data was collected quantitatively and qualitatively to collect information regarding cultural beliefs and practices, professional support from healthcare providers, and the impact of males and other family members on exclusive breastfeeding practices.

The study utilized both qualitative and quantitative approaches to examine cultural beliefs and practices, the level of professional support from healthcare providers, and the influence of male and other family members on exclusive breastfeeding. This design allowed the researcher to determine the prevalence of exclusive breastfeeding within the study population at a particular specific of time.

3.3 Study population

The study population comprised of mothers with infants aged 6-12 months for questionnaire and Focus group discussion (FGD), husbands for in-depth interview (IDIs), and Health workers for Key informant interview (KIIs)).

3.3.1 Inclusion criteria

The study included population with below criteria.

- Nursing mothers with children aged 6-12 months who provided informed consent were included in the study.
- Male partners or spouses of nursing mothers with children aged 6-12 months, who agreed to participate, were visited at their households, and included in the study for in-depth interviews.
- Facility Reproductive and Child Health (RCH) personnel in charge who were present at the facilities during the data collection period were interviewed for key informant interviews.

3.3.2 Exclusion criteria

Below were the exclusion criteria of the study.

- Nursing mothers who were very sick and unable to communicate in the language used in data collection, and there were no translators available to assist them.
- Male/spouse of nursing mothers who are very sick and unable to communicate in the language used in data collection, and there were no translators available to assist them.

3.4 Sampling Technique and Sample Size

3.4.1 Sample Size Estimation for Quantitative

Nursing mothers with 6-12 months children included in the study were 398. The sample was estimated using below formula.

$$Sample\ size\ (n)\ = \frac{Z^2 p(1-p)}{e^2}$$

Whereby

Z= standard normal deviate corresponding to the significance level. (=1.96 for 95% confidence level)

P= 64%, estimated prevalence of exclusive breast feeding practise of country (16).

e= margin of error (5%)

Then,

$$Sample\ size\ (n)\ = \frac{(1.96)^2 \times 0.64(1-0.64)}{(0.05)^2}$$

$$n = 355$$

Adjusting by 10% non-response rates, the sample size for this study was 395.

3.4.2 Sample size Estimation for Qualitative

In terms of healthcare infrastructure, the region has a distribution of 271 dispensaries, 44 health centers, and 22 hospitals (16). The estimated sample size for the qualitative part of the study included key stakeholders involved in the nutrition and healthcare domain. The sample consisted of 7 Key informants (1 Regional Reproductive and Child Health officer, 1 District Nutrition Officer, 1 District Reproductive and Child Health Coordinator, and 4 Facility In charges). These individuals have extensive knowledge and experience in the field of nutrition and child health, making them valuable sources of information for the qualitative aspects of the study. Their diverse perspectives and expertise contributed to a comprehensive understanding of EBF practices. The study also included 5 Focus Group Discussions (FGDs) with nursing mother (with children 6-12 months) and 9 Male In-depth Interviews (spouse of nursing mothers with children 6 – 12 months) who will be random visited at household.

3.5 Study Sampling Procedure

A multistage sampling procedure was utilized to choose research participants for the investigation. Initially, Ludewa District Council was randomly chosen. In the second stage, six healthcare facilities from the district were randomly selected. In the third stage, the necessary number of study participants was proportionally allocated to each health facility based on the monthly average of mothers with infants aged 6 to 12 months attending

postnatal care services. The postnatal care registry at each selected health facility was then used to select study participants through a systematic random sampling method.

For the qualitative part of the study, purposive sampling was employed to select research participants. Key informants such as community health workers, service providers at health facilities, and maternal and child health officers were chosen based on their expertise and understanding of exclusive breastfeeding practices. Furthermore, mothers with children aged 6 to 12 months who were receiving postpartum care at the selected health facilities were purposefully sampled to participate in Focus Group Discussions (FGDs). In-depth interviews (IDIs) were conducted with the spouses or male partners of mothers with children aged 6 to 12 months to explore their support for and influence on exclusive breastfeeding. Qualitative participants were selected based on their willingness to participate in the study and their knowledge of exclusive breastfeeding techniques. The sample size for the qualitative component was determined using data saturation, which signifies the point at which participants are no longer providing new information.

3.6 Variables of the Study

The study aimed to determine factors affecting exclusive breastfeeding and evaluate the impact of various independent variables on exclusive breastfeeding practices among mothers with infants aged 6-12 months.

3.6.1 Dependent variable

The dependent variable in this study is exclusive breastfeeding practise, which is defined as the practice of feeding an infant with breast milk only, without any additional food or liquids, except for medicines and vitamins, for the first six months of life.

3.6.2 Independent variables

The independent variables of the study include cultural attitudes and practices, professional support, and the influence of male and other family members on exclusive breastfeeding practices.

3.7 Data Collection Methods and Tools

For the quantitative component of the study, numerical data was collected using a structured questionnaire. The questionnaire comprised closed-ended questions designed to gather information on socio-demographic characteristics, cultural attitudes and practices, professional support, male and other family member influence on exclusive breastfeeding, and exclusive breastfeeding practices. Prior to being administered to eligible participants, the questionnaire was pretested to ensure its validity and reliability.

For the qualitative component of the study, data was collected through in-depth interviews, Focus Group Discussions, and Key Informant interviews. These interviews were carried out with a purposive sample of key stakeholders such as health professionals, mothers with infants aged 6-12 months, and male or spouses of nursing mothers with infants aged 6-12 months. A semi-structured interview guide was utilized during the interviews to gather detailed information on the participants' experiences, knowledge, perceptions, attitudes, and cultural attitudes and practices related to exclusive breastfeeding, as well as insights on professional support and the influence of male and other family members on exclusive breastfeeding practices.

3.8 Pre-testing of tools

Before data collection, tools were pre-tested to 3 volunteering nursing women and 1 Health Care worker identified with the assistance from health workers. This was done to evaluate the effectiveness and appropriateness of their research tools. By piloting these tools with a small sample of participants, helped to identify potential, ambiguities, or biases of instruments, allowing making necessary adjustments and refinements.

3.9 Data validity and reliability

To ensure the validity and reliability of the study's data collection methods, several strategies were employed. Firstly, the structured questionnaire for the quantitative component underwent rigorous pre-testing with a small sample of participants. This pre-testing phase allowed for the identification of potential ambiguities or biases in the questionnaire, leading to necessary adjustments and refinements to enhance its effectiveness and appropriateness.

To further enhance validity, the study utilized closed-ended questions in the questionnaire. Closed-ended questions reduce the likelihood of ambiguous responses and ensure that data collected is directly relevant to the research objectives, thus increasing the validity of the findings.

Moreover, efforts were made to ensure reliability in data collection. Data collectors were trained thoroughly on the administration of the questionnaire to standardize the process and minimize variations in data collection. Additionally, the use of electronic data collection methods like Kobo Collect facilitated accurate and consistent data entry, reducing the chances of errors, and enhancing the reliability of the collected data. Overall, the combination of pre-testing, use of closed-ended questions, standardized training for data collectors, and electronic data collection methods contributed to minimizing threats to validity and reliability in the data collection process.

3.10 Data trustworthiness for qualitative

In qualitative research, trustworthiness is essential for ensuring the validity and reliability of the findings. Guba and Lincoln (1989) proposed four criteria under constructivist paradigm to assess trustworthiness: credibility, transferability, dependability, and conformability (41).

Credibility: In this study, credibility was established through various means whereby participants were provided with detailed information about the study, and individuals with experience and involvement in exclusive breastfeeding were selected for interviews. Interviews were recorded, and notes were taken during observations to ensure comprehensive data collection. Triangulation was employed by comparing data obtained from in-depth interviews with information gathered through observations to validate the responses.

Transferability: In this study, efforts were made to enhance transferability by providing a detailed description of the study context. Purposive sampling was used to include participants with rich information and experiences related to exclusive breastfeeding. The use of in-depth interviews, observation techniques, and the duration of interview sessions

were all considered to increase the likelihood of transferring the findings to other programs of similar context.

Dependability: This was enhanced by providing a comprehensive description of the methodology used in the study. This detailed methodology outlines what was planned and executed during the research process, enabling other researchers to replicate the study in the future.

Conformability: In this study, efforts were made to minimize researcher bias of the findings. Triangulation was employed by comparing and cross-referencing the information collected through direct observation with the data shared by participants during interviews. This approach helps to ensure that the findings are grounded in multiple data sources, reducing the influence of individual researcher perspectives.

3.11 Data Management and Analysis

3.11.1 Data management

To ensure data accuracy, completeness, and confidentiality the study used secured electronic data collection method (Kobo Collect). Data was entered and they were double-checked for accuracy, and any missing or inconsistent information was resolved immediately through communication with data collectors.

3.11.2 Quantitative Data Analysis

Quantitative data was exported from Kobo Collect to Excel were cleaned and sorted then entered into SPSS version 26 were manually (IBM SPSS version 26). Study analysed the data by using statistical methods such as descriptive statistics to summarize the demographic information of the respondents and their breastfeeding practices and assess the awareness levels of mothers. In addition, the study used inferential statistics (chi-square tests) to determine the association between healthcare factors, and exclusive breastfeeding (EBF), where EBF practise used as dependent variable. The level of significance was set at 5% and the findings were presented in tables, figures, and text, with appropriate explanations and interpretations.

3.11.3 Qualitative Data Analysis

The qualitative data were analysed using thematic analysis as guided by Braun and Clarke in 2006 and Quotes were organized Atlas.ti version 7. The thematic analysis involved systematic data preparation, familiarization, coding, and theme development to extract key insights from Focus Group Discussions with nursing mothers, in-depth interviews with male spouses, and key informant interviews with health professionals. Simultaneously, Atlas. ti version 7 facilitated efficient data import, coding and retrieval. The integration of these methods ensured a comprehensive understanding of the factors affecting exclusive breastfeeding practices, enabling us to provide insights and evidence-based recommendations for promoting maternal and child health in the region.

Furthermore, Table 1 indicating how qualitative data were analysed to arrive at the themes.

Table 1. Sample of Qualitative Analysis

Objective	Main theme	Sub-theme	Quote
To identify and analyse cultural and healthcare factors that influence exclusive breastfeeding (EBF) practice among nursing mothers in the Njombe region of Tanzania.	Cultural and Traditional Influences on Exclusive Breastfeeding Practices	Traditional Remedies	*Some community members believe that giving traditional remedies to infants can alleviate hunger, which may contribute to the early introduction of complementary foods (KII -5- Ludewa Dc- August 2023).*
		Misinterpretation of Crying	*There are many challenges, as sometimes the breast milk may not seem sufficient, and the baby might cry, leading the mother to consider introducing other foods. (IDI Luilo 002– Spouse of lactating August 2023).*
		Cultural Norms and Beliefs	*Perhaps if you live with parents, especially elders, they might advise you based on cultural practices, even on giving traditional remedies to babies which is perceived to help in child growth (FGD Mawengi 005 - (Nursing Mother) August 2023*

Summary of variable and type of analysis

Variable	Analysis Methodology
Demographic characteristics of participants	Quantitively analysed where frequence and promotion were computed from collected data
Cultural factors influencing EBF practice	Qualitative analysis of focus group discussions, key informant interviews, and in-depth interviews to identify themes related to cultural factors influencing exclusive breastfeeding practices among nursing mothers.
Traditional Remedies' Influence on Early Infant Feeding Practices	Qualitative analysis of participant quotes and interviews to understand the use of traditional remedies and their impact on the introduction of complementary foods.
Perceptions of Breast and Physical Changes Impacting Infant Feeding	Qualitative analysis of participant quotes and interviews to explore cultural beliefs about breastfeeding and physical changes.
Cultural Interpretations of Infant Crying	Qualitative analysis of participant quotes and interviews to examine cultural interpretations of infant crying as hunger and its influence on complementary food introduction.
Impact of Breastfeeding Education by Healthcare Providers	Qualitative analysis of interviews and focus group discussions to evaluate the role of healthcare providers in educating mothers about exclusive breastfeeding.
Involving Fathers in Exclusive Breastfeeding	Qualitative analysis of interviews and discussions to explore challenges and opportunities in engaging fathers in exclusive breastfeeding practices.
Role of Healthcare Provider Training	Qualitative analysis of interviews to assess the importance of healthcare provider training in promoting exclusive breastfeeding.
Health care factors affecting exclusive breastfeeding practise	Quantitative analysis was done to measure association of health factors and exclusive breastfeeding (chi square and P value was computes)

Impact of Healthcare Provider Recommendations	Qualitative analysis of interviews to examine the influence of healthcare provider recommendations on breastfeeding practices.
Limited Male Engagement on Exclusive Feeding	Qualitative analysis of interviews and participant quotes to discuss challenges in engaging fathers in exclusive breastfeeding practices.
Lack of Support and Resources in Promoting Exclusive Breastfeeding	Qualitative analysis of interviews to identify obstacles faced by nursing mothers in exclusive breastfeeding due to lack of support and resources.
Partner Influence in Exclusive Breastfeeding	Qualitative analysis of interviews to examine the influence of partners' support or lack thereof on exclusive breastfeeding practices.
Family Support in Exclusive Breastfeeding	Qualitative analysis of interviews and participant quotes to explore the role of extended family members in supporting nursing mothers and promoting exclusive breastfeeding.

3.12 Ethical issues and consideration

It is commendable that ethical considerations were prioritized throughout the research process. Obtaining ethical clearances from the Institutional Review Board (IRB) Ref No. DA.282/298/01.C/1787 at Muhimbili University of Health and Allied Sciences and written approvals from authorities at the regional and district levels demonstrate a commitment to conducting the study ethically. Respecting the rights to privacy and confidentiality of research participants is crucial, and it is reassuring to know that no personal information was collected and that data was kept confidential and used only for the intended purposes. Obtaining informed consent from all participants before the study began is a fundamental ethical practice that ensures voluntary participation. Furthermore, taking precautions to avoid any potential hazards to participants and addressing any negative impacts that may arise during the study reflects a responsible and ethical approach to research.

3.13 Limitation of the study

The following were the limitations of this study and their mitigation measures for this study on examine the factors affecting the exclusive breastfeeding among mothers with children aged 6-12 months; -

1. Sampling bias: The study included mothers who attend postnatal clinic, which introduced selection bias. To mitigate this, the researcher used diversifying recruitment channels beyond household visits and community settings ten (10) nursing mothers were purposefully selected from each chosen facility through household visits and engagement within other community settings. This approach aimed to enhance the diversity and inclusivity of the study's participant pool, capturing a more comprehensive spectrum of perspectives and experiences among mothers within the community(42).

2. Social desirability bias: This may lead mothers to over report their exclusive breastfeeding practices as a result of social pressure or perceived expectations. To mitigate this, a comprehensive approach involved triangulation of data collection methods, focus groups, and observation of mother EBF practise. (43).

3. Recall bias: Mothers experienced difficulty in recalling their exclusive breastfeeding practices. To address this challenge, the researcher implemented a structured questionnaire that emphasized specific events and utilized prompts to assist mothers in remembering key details (44).

4. Limited generalizability: This study is limited to the specific context and population of the Njombe Region. To address this limitation, the researcher incorporated a discussion of the constraints and provided recommendations for future research in diverse settings and populations to enhance the generalizability of the findings (45).

CHAPTER FOUR

4.0 RESULTS

4.1 Overview

This chapter provides a comprehensive analysis of the study's outcomes with respect to each specific objective. The findings include descriptive statistics for numerical data, including proportions/percentages, and inferential statistics to measure association of dependent and independent variable. The results are presented through textual descriptions, visual representations in the form of figures, and organized tabular formats.

4.2 Demographic characteristics of nursing mothers in Njombe Region

The study comprised 398 nursing mothers from different health facilities, representing various ethnic backgrounds and socio-economic statuses. The majority of nursing mothers (56.5%) fell within the 25-35 age group, while 59.5% had completed primary education. In terms of occupation, the nursing mothers exhibited significant diversity, with 62.8% identifying as farmers or peasants. Additionally, a large group of the study participants (Nursing mothers), 238 individuals (59.8%), were married.

Regarding the number of children among the nursing mothers, the majority (60.3%) reported having 1-2 children, and 66.4% of mothers had normal deliveries in their last deliveries. It was noted that majority of the mothers in the study, specifically 99.2%, opted for childbirth in a healthcare facility (as shown in Table 1).

Table 2. Socio-demographic characteristics of the respondents (N = 398)

Variable	Frequency	Percent
Mother age		
Below 18	11	2.8
18-24	113	28.4
25-35	225	56.5
Above 35	49	12.3
Mother education level		
No formal education (Didn't study)	18	4.6
Primary education	237	59.5
Secondary Education	119	29.9
High school Education (form six)	6	1.5
Higher Education (College and University)	18	4.5
Mother occupation		
Self-employed / Entrepreneur	104	26.1
Employed	17	4.3
Farmer /Peasant	250	62.8
Jobless (No formal activity)	27	6.8
Marital status		
Unmarried (Single)	104	26.1
Married	238	59.8
Divorced	8	2.0
Cohabiting	48	12.1
Widowed	0	0
Number of children (Parity)		
1-2	240	60.3
3-4	135	33.9
Above 5	23	5.8
Delivery Method		
Normal	265	66.6
Caesarean Section	133	33.4
Place of delivery		
Health facility	395	99.2
Tradition Birth Attendants (TBAs)	0	0
Home	3	0.8

4.3 Demographic characteristics of infants in Njombe Region

The demographics of infants is essential as they provide important information about the circumstances of exclusive breastfeeding among nursing mothers. These study findings discovered that out of the 398 nursing mothers interviewed, 201 had male infants, which is 50.50% of the total, while 197 had female children, which is 49.50% of the total. Within the study, 109 children were 6 months old, representing 27.39% of the total population. Also, 289 children were aged between 7 to 12 months, accounting for 72.61% of the group. Furthermore, majority (96.48%) of the children in a sample had been breastfed at some point in their lives, indicating the widespread practice of breastfeeding among the nursing mothers studied. Nevertheless, it is noted that 3.27% of infants had never experienced breastfeeding due to circumstances such as maternal death or medical advice.

Table 2. Demographic characteristics of Infants

Variable	Frequency	Percent
Sex of the infant		
Male	201	50.50
Female	197	49.50
Age of the infant (months)		
6 Months	109	27.39
7-12 Months	289	72.61
Infant ever breast feed?		
Yes	384	96.48
No	13	3.27
I don’t Know	1	0.25

4.4 Prevalence of Exclusive breastfeeding among nursing mothers in Njombe region.

Study findings revealed that among the nursing mothers included in the study in Njombe region, 305 (79.43%) reported their infants had not been fed anything (Practised Exclusive breastfeeding) apart from breast milk before the age of 6 months. This majority of nursing mothers adhered to the exclusive breastfeeding guidelines, highlighting the commitment of mothers to providing their infants with the best possible nutrition during this critical phase of life. On the other hand, 79 (20.57%) of the infants in study had received something other than breast milk before reaching the age of 6 months. Porridge and water reported most

common alternative, chosen for children reported fed before six months counting for 53.6% and 30.95% respectively where other reported option was juice cow milk , traditional remedies and formula milk.

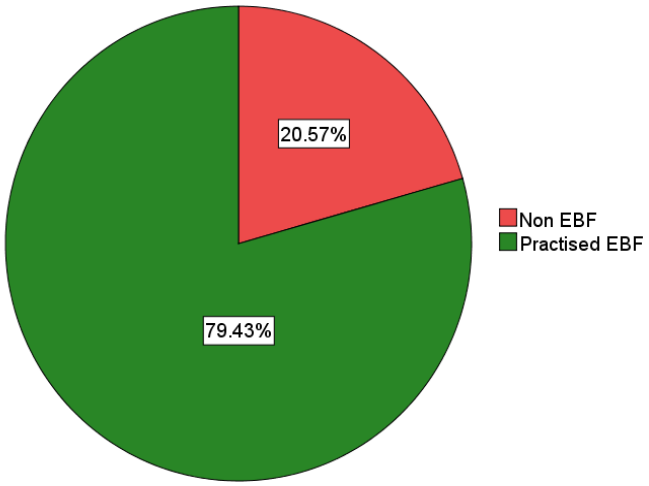


Figure 2. Exclusive breastfeeding practice among nursing mothers in Njombe region

4.5 Qualitative Findings

4.5.1 Emerged Themes

The study identified several themes and sub-themes that highlight the relationship of variables influencing exclusive breastfeeding practise. The key findings for each of the themes and sub-themes covered from KIIs, FGDs, and IDIs are summarized in Table 3 below. Below table shed light on the cultural, healthcare, male involvement and healthcare system factors that affect nursing mothers' exclusive breastfeeding practices in the Njombe Region.

Table 3. Emerged themes.

Theme	Sub-theme
Cultural and Traditional Influences on Exclusive Breastfeeding Practices	Traditional Remedies
	Misinterpretation of Crying
	Cultural Norms and Beliefs
Healthcare Provider Support and Education on Exclusive Breastfeeding Practices	Dedicated Breastfeeding Education
	Involvement of Fathers
	Impact of Health Provider Recommendations
Male Involvement and Family Dynamics on Exclusive Breastfeeding Practices	Limited Male Engagement
	Partner Influence
	Family Support
Healthcare System Factors on Exclusive Breastfeeding Practices	Professional Training

4.5 Relationship between Understanding the optimal duration of exclusive breastfeeding and Exclusive breastfeeding among nursing Mothers in the Njombe Region

The study findings revealed that 306 (76.9) percent of nursing mothers demonstrated a clear understanding of the recommended time for exclusive breastfeeding, which spans a full 6 months as per Figure 4. From Table 4, the research results suggest a significant association between a mother's understanding of the recommended period for exclusive breastfeeding and her adherence to exclusive breastfeeding practices. The chi-square test results are highly significant (Chi-square = 24.006, $p < 0.001$).

From the findings indicated in Table 4, the most significant factor associated with exclusive breastfeeding practices among nursing mothers is their understanding of the recommended duration for exclusive breastfeeding. Other demographic factors such as age, education level,

occupation, marital status, number of children, delivery method, place of delivery, and sex of the child do not appear to have a strong influence on exclusive breastfeeding practices in this study.

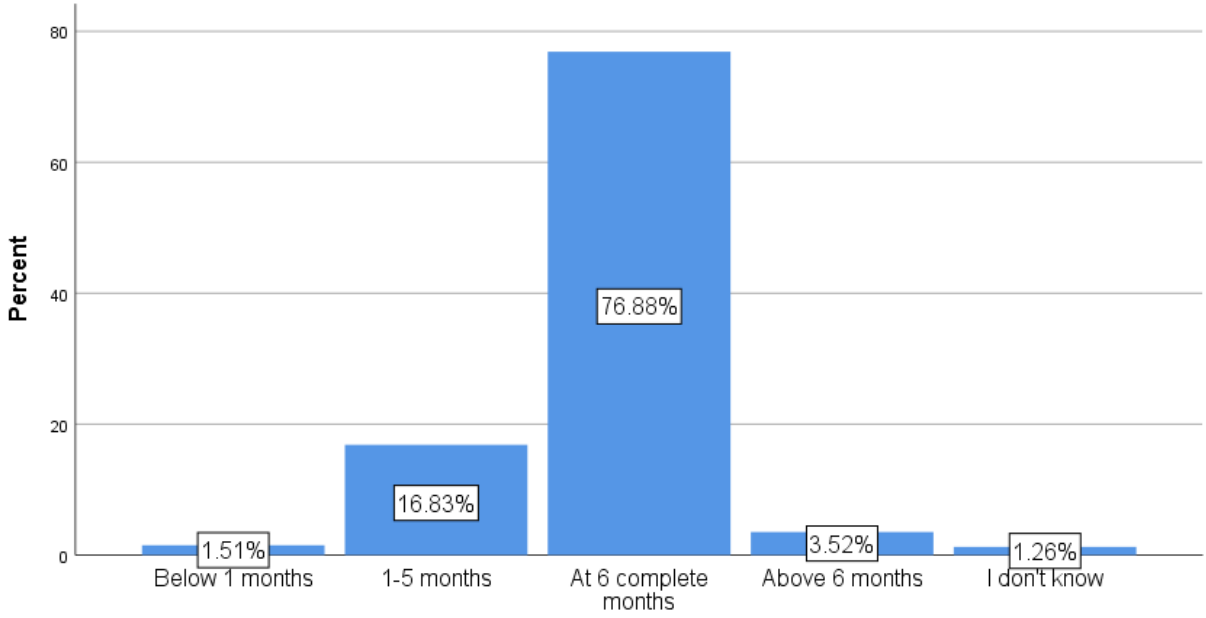


Figure 3. Participant's response on recommended time for Exclusive breast-feeding

Table 4. Breast feeding duration, Demographic Characteristics and Exclusive Breastfeeding: A Comparative Analysis (N = 398)

Variable	Practised EBF n (%)	Not practised EBF n (%)	Chi-square	P-value
Recommended time for EBF				
Below 1 months	2 (50.0)	2 (50.0)		
1-5 months	35 (59.3)	24(40.7)		
At 6 complete months	251 (83.1)	51 (16.9		
Above 6 months	14 (100.0)	0 (0.0)		
I don't know	3 (60.0)	2 (40.0)	24.006	<0.001
Age group of Nursing mother				
Below 18	9 (81.8)	2 (18.2)		
18-24	83 (75.5)	27 (24.5)		
25-35	182 (83.1)	37 (16.9)		
Above 35	31 (70.5)	13 (29.5)	5.082	0.166

Variable	Practised EBF n (%)	Not practised EBF n (%)	Chi-square	P-value
Education level of nursing mother				
No formal education (Didn't study)	15 (88.2)	2 (11.8)		
Primary education	184 (80.3)	45 (19.7)		
Secondary Education	86 (75.4)	28 (24.6)		
High school Education (form six)	4 (66.7)	2 (33.3)		
Higher Education (College and University)	16 (88.9)	2 (11.1)	3.620	0.460
Occupation of Nursing mother				
Self-employed / Entrepreneur	76 (75.2)	25 (24.8)		
Employed	12 (75.0)	4 (25.0)		
Farmer /Peasant	197 (81.4)	45 (18.6)		
Jobless (No formal activity)	20 (80.0)	5 (20.0)	1.856	0.603
Marital status				
Unmarried (Single)	74 (74.7)	25 (25.3)		
Married	188 (81.0)	44 (19.0)		
Divorced	6 (75.0)	2 (25.0)		
Cohabiting	37 (82.2)	8 (17.8)		
Widowed	0 (0.0)	0 (0.0)	2.005	0.571
Number of children of nursing mother (Parity)				
1-2	182 (78.8)	49 (21.2)		
3-4	108 (83.1)	22 (16.9)		
Above 5	15 (65.2)	8 (34.8)	3.960	0.138
Delivery Method (Of the last child)				
Normal	207 (79.9)	52 (20.1)		
Caesarean Section	98 (78.4)	27 (21.6)	0.120	0.729
Place of delivery (Of the last child)				
Health facility	302 (79.3)	79 (20.7)		
Tradition Birth Attendants (TBAs)	0 (0)	0(0)		
Home	3 (100.0)	0 (0.0)	0.783	0.376
Sex of child				
Male	146 (76.0)	46 (24.0)		
Female	159 (82.8)	33 (17.2)	2.693	0.129

4.6 Cultural factors

4.6.1 Cultural factors influencing exclusive breastfeeding (EBF) practice among nursing mothers and their relationship with EBF practice.

Qualitative findings highlighted the significance of cultural rituals, Misinterpretation of Crying, and Cultural Norms and Beliefs influence on EBF practices. The analysis of responses from focus groups discussion Key informant interview and In-depth interviews revealed a theme related to cultural and traditional and its influence on exclusive breastfeeding practices among nursing mothers in Njombe Region. These cultural factors include the use of traditional remedies, the misinterpretation of a baby's cry as hunger, and adherence to cultural norms and beliefs regarding early food introduction. The following themes that provide insights on Cultural factors influencing exclusive breastfeeding (EBF) practice among nursing mothers and their relationship with EBF practice.

4.6.2 Traditional Remedies' Influence on Early Infant Feeding Practices

Participants highlighted the common use of traditional remedies before six month of child age and its effect on exclusive breastfeeding practices. Participants emphasized the widespread use of traditional remedies (medicine) for infants before six months of age, attributing it to addressing perceived hunger and supporting a child's growth. This practise positively contributes to the early introduction of complementary foods. As expressed in the below qualitative interviews quotes:

> *Some community members believe that giving traditional remedies to infants can alleviate hunger, which may contribute to the early introduction of complementary foods* (*KII -6- Ludewa Dc- August 2023).*

> *Many suggest giving children remedies like traditional medicine for convulsions ‘Swahili word - dawa ya dege dege' or 'dawa ya moto”which contribute to introduction of complementary feeding before six months* (*KII -5- Ludewa Dc- August, 2023).*

Furthermore, the reliance on traditional remedies to address infant illnesses plays an important role in shaping the premature introduction of complementary feeding practices. Participants in the qualitative interviews highlighted a strong reliant toward using these

traditional remedies to alleviate various health issues experienced by infants. Specifically, there's a strong belief among community members that traditional remedies are effective in treating illnesses commonly experienced by infants. For instance, participants reported remedies like 'dawa ya dege dege' or 'dawa ya moto,' intended to address conditions such as convulsions, are considered beneficial and are frequently administered to infants. Similarly, interview with Health professional Quoted saying:

> *In our community, when it comes to childcare, addressing occasional illnesses, children are often given traditional remedies* (*KII -3- Ludewa Dc- August 2023).*

This was supported by female response from FGD who quoted saying.

> *Perhaps if you live with parents, especially elders, they might advise you based on cultural practices, even on giving traditional medicine to babies which is perceived to help in child growth (FGD Mawengi 005 - (Nursing Mother) August 2023)*

The cultural dependence on these remedies for treating infant illnesses creates a connection between perceived hunger in the child and the introduction of complementary foods.

4.6.3 Perceptions of Breast and physical Changes Impacting Infant Feeding

In Qualitative findings participants mentioned a incorrect thinking that extended breastfeeding could lead to changes in a mother's breasts. Consequently, to avoid these perceived changes, some individuals use methods like taping or using pepper (chili) on the nipple that disrupt or discourage breastfeeding, leading to the premature introduction of complementary foods before six months to the infants.

This cultural belief not only influences the perception of breastfeeding's impact on physical appearance but also serves as a catalyst for changing feeding practices. It contributes to the introduction of complementary foods before the recommended duration of exclusive breastfeeding, which affecting the adherence to established guidelines for infant feeding practices.

> *One thing I have heard is the belief that if a mother breastfeeds for six months, it spoils her breasts, so some people put tape or chili on the nipple to prevent the child from breastfeeding* (*KII -4- Ludewa Dc- August, 2023).*

4.6.4 Cultural Interpretations of Infant Crying, Influences on Premature Introduction of Complementary Foods to Infants

Perceptions of Child's Hunger and Premature Introduction of Complementary Foods, Cultural interpretations of a child's crying as hunger emerged as a significant factor contributing to the premature introduction of complementary foods. Participants, especially nursing mothers, expressed beliefs and practices that link an infant's crying to immediate feeding, even before the recommended age for introducing solids food. Below quotes from qualitative interviews, reveal these findings as stated below.

> *I've heard that even if a child is around four or five months old, you can give them a little bit of food if they're crying. (IDI Luana 001 - (Spouse of lactating) August 2023)*

These findings were in line with male responses (Spouse of Nursing mothers) during interview one male participants said

> *There are many challenges, as sometimes the breast milk may not seem sufficient, and the baby might cry, leading the mother to consider introducing other foods.* (*IDI Luilo 002– Spouse of lactating August 2023).*

4.6.5 Discarding Colostrum regarding as impure milk.

The study findings highlighted Cultural beliefs and practices regarding discarding colostrum and its impact on exclusive breastfeeding practise. When mothers perceive colostrum as impure or harmful and consequently discard it, they may be less likely to initiate breastfeeding early or continue exclusively breastfeeding their infants. Additionally, participants reported cultural beliefs that devalue colostrum may contribute to early supplementation with formula or other fluids. If mothers believe that colostrum is insufficient or unsuitable for their infants, they may introduce complementary feeding earlier than recommended, disrupting the exclusive breastfeeding practise, and potentially affecting long-term breastfeeding success.

> *"Some individuals believe that the initial milk is impure and discard it, while it is a crucial and highly valuable substance produced mothers ensuring a healthy start for*

newborns, aiding their growth, immunity, and overall well-being, but some mothers discard it and introduce other liquids ***(KII -6- Ludewa Dc- August 2023).***

4.7 Health care factor and Level of professional support provided by health providers influencing EBF practice among mothers during the initial six (6) months after childbirth.

From the study findings, the quantitative results indicated that mothers who received support or counseling on managing challenges related to exclusive breastfeeding demonstrated a significantly higher EBF rate (81.6%) compared to those who did not receive such support (72.9%), indicating the crucial role of guidance and assistance in fostering EBF practices (chi-square = 3.320, p = 0.068). Similarly, nutrition-related counseling during antenatal care (ANC) visits emerged as a key factor, with mothers who received such counseling reported higher EBF rate (81.3%) compared to those who did not (69.8%) (chi-square = 7.895, p = 0.019).

The significance of healthcare factors and professional support was further highlighted by maternal perceptions. Mothers who agreed or strongly agreed that professional support from healthcare providers is crucial for exclusive breastfeeding had reported higher EBF rates (73.9% and 88.1%, respectively) compared to those who disagreed or strongly disagreed (chi-square = 18.765, p < 0.001). Moreover, the accessibility to health facilities played a crucial role, with mothers living less than 1KM from a facility demonstrating an 87.5% EBF rate, compared to 69.9% for those living 1–5 KM away and an impressive 95.5% for those residing more than 5 KM away (chi-square = 23.552, p < 0.001). The availability of skilled health professions also emerged as a critical factor, as mothers who rated the availability as "Very Good" reported higher EBF rate (92.3%) compared to those who rated it as "Good" (68.9%) (chi-square = 26.921, p < 0.001).

Table 5. Health care Support Impact on Exclusive Breastfeeding: A Comparative Analysis (N = 398)

Variable	Practised EBF n (%)	Not practised EBF n (%)	Chi-square	P-value
Have you received any support or counselling on how to manage any challenges with exclusive breastfeeding?				
Yes	235 (81.6)	53 (18.4)		
No	70 (72.9)	26 (27.1)	3.320	0.068
Were you given any nutrition-related counselling such as breastfeeding, complementary feeding, diet, or other nutrition-related advice during ANC visits?				
Yes	273 (81.3)	63 (18.8		
No	30 (69.8)	13 (30.2)		
I don't know	2 (40)	3 (60.0)	7.895	0.019
Your level of agreement or disagreement with the statement "professional support from healthcare providers is an important factor in my decision to exclusively breastfeed my infant" depends on your personal understanding.				
Agree	139 (73.9)	49 (26.1)		
Strongly Agree	148 (88.1)	20 (11.9)		
Disagree	14 (58.3)	10 (41.7)		
Strongly Disagree	4 (100)	0(0.0)	18.765	<0.001
How far is it to the nearest health facility?				
Less than 1KM	126 (87.5)	18 (12.5)		
1 – 5 KM	157 (69.9)	59 (30.1)		
More than 5 KM	42 (95.5)	2 (4.5)	23.552	<0.001
How would you rate the availability of skilled health care providers during your postnatal				
Good	135 (68.9)	61 (31.1)		
Very Good	131 (92.3)	11 (7.7)		
Neutral	5 (71.4)	2 (28.6)	26.921	<0.001
Did you receive any counselling or support during your postnatal care?				
Yes	273 (78.7)	74 (21.3)		
No	32 (86.5)	5 (13.5)	1.249	0.249
Did you seek assistance from a health care provider during your postpartum period?				
Yes	166 (81.0)	39 (19.0)		
No	107 (75.4)	35 (24.6)	1.581	0.209

The Qualitative findings revealed that healthcare factors, including dedicated education (Healthcare Provider Support), the involvement of fathers in Antenatal care (ANC) clinic and Postnatal Care (PNC), professional training, impactful recommendations, and supportive policies, play an important role in influencing exclusive breastfeeding practices among mothers in Njombe during the initial six months.

4.7.1 The Impact of Breastfeeding Education by Healthcare Providers

Regarding breast feeding education (Healthcare Provider Support), the qualitative findings revealed that dedicated breastfeeding education during clinic days significantly influences mothers' understanding and practice of exclusive breastfeeding. Generally, participants acknowledged the importance of healthcare providers in imparting knowledge about proper breastfeeding practices. During In-depth interview with Male participants, one participants said;-

> *When we attended the first prenatal clinic, they emphasize the importance of exclusive breastfeeding* – (*IDI Luilo 001– Spouse of lactating August 2023).*

This was supported by female responses during Focus group discussion participants quoted saying

> *Every time we come to the clinic, health experts advise us on breastfeeding matters. I remember even during pregnancy, each clinic visit involved guidance on various health aspects such as diseases and nutritional matters. Therefore, after giving birth, I thought it was best to follow the advice to exclusively breastfeed. – (FGD Luana 004- (Nursing Mother) August, 2023)*

Another nursing mother Quoted saying:-

> *Health professionals provide us with education every clinic day, and they advise us not to give children food before six months. –(FGD Luana 004- (Nursing Mother) August, 2023)*

Also this findings was in line with responses for key informant interview (Health care professional) highlighting reproductive and child health clinics as major platform used in

educating nursing mother and some participants mentioned use of churches (Religious leaders) as per below quotes.

> *We also provide breastfeeding education during clinic days to enlighten mothers on breastfeeding matters -*(*KII -1- Ludewa Dc- August, 2023).*

> *For mothers facing challenging circumstances, especially those who are breastfeeding, we conduct home visits through community-level healthcare workers* – (*KII -1- Ludewa Dc- August 2023).*

> *We engage religious leaders to offer education within their congregations and village leaders to provide community education on breastfeeding through village meetings* –(*KII -4- Ludewa Dc- August, 2023).*

4.7.2 Involving Fathers in Exclusive Breastfeeding, Challenges and Opportunities in Healthcare Settings

The active involvement of fathers during the first antenatal visit was highlighted as essential in successful EBF practice. Healthcare providers further highlighted the encouragement given to men to participate in clinic sessions. These joint educational sessions aim to provide fathers with comprehensive knowledge and a deeper understanding of exclusive breastfeeding. By actively involving men in these educational sessions, health professionals aim to enhance their awareness, support, and involvement in promoting and practicing exclusive breastfeeding. This highlights how health care provider engage fathers in successful practice of EBF practice. Below are Quotes supporting the findings.

> *Fathers play a crucial role when they are actively involved, especially during the first antenatal visit. Their understanding of exclusive breastfeeding is essential for the family -* (*KII -7- Ludewa Dc- August 2023).*

> *We also encourage men to participate in clinics to receive joint education and a better understanding.* – (*KII -2- Ludewa Dc- August, 2023).*

On other hand, Key informant interview pointed that despite of engagement of fathers in ANC and PNC their participation in still low. This was supported by below quote from Key informant interview, participant quoted saying.

> *During an entire week at the clinic, it is uncommon to witness more than one male accompanying his wife, and in certain instances, a span of a month can pass without observing a single male presence at clinic. Am not sure at home if they support their spouses (KII -2- Ludewa Dc- August, 2023).*

Another participant added that.

> *As nutrition officers, I visit clinics to monitor the progress of children, but we rarely see fathers present – (KII -3- Ludewa Dc- August, 2023).*

4.7.3 Role of Healthcare Provider Training in Exclusive Breastfeeding Promotion

The level of professional training and expertise among healthcare providers emerged as a sub theme. Participants highlighted the importance of having well-trained professionals in promoting exclusive breastfeeding. Findings highlights agreement among participants, including male partners and health professionals, regarding the important role of healthcare providers' professionalism and training. Well-trained professionals are seen as better equipped to offer comprehensive support and guidance to mothers in the practice of exclusive breastfeeding. Participants expressed concerns about some healthcare providers being relatively new to the field or lacking comprehensive practical knowledge about exclusive breastfeeding. This lack of knowledge among some professionals poses a challenge when it comes to effectively educating and guiding mothers on exclusive breastfeeding practices. Below are some Quotes from Qualitative interviews supporting the findings.

> *The major challenge is in understanding EBF because many of the workers are new, and the facilities are new. So, even if you ask them to provide education on EBF, they might not fully understand, they often lack understanding. -* (*KII -6- Ludewa Dc- August, 2023).*

4.7.4 Impact of Healthcare Provider Recommendations and Policy Influence on Exclusive Breastfeeding Practices

Participants discussed the significant influence of healthcare provider recommendations on mothers' breastfeeding practices and decision-making. Mothers expressed a high level of

trust in the guidance and advice provided by healthcare professionals. Their recommendations held key weight in shaping and influencing the breastfeeding practices adopted by mothers, indicating the crucial role of healthcare providers. This was supported below Quote.

> *The recommendations and advice provided by healthcare providers have a impact on our breastfeeding practices. We trust their guidance. – (FGD Luana 004 (Nursing Mother) August 2023)*

In addition, healthcare policies and regulations were mentioned as factors that influence the promotion and support of exclusive breastfeeding. Respondents acknowledged the critical role played by healthcare policies in creating a good environment to promote breastfeeding. Participants discussed the need for supportive policies.

> *Policies and regulations in healthcare play a crucial role in supporting exclusive breastfeeding. Supportive policies can create an environment conducive to breastfeeding practices. - (IDI Mundindi 001 – Spouse of lactating August 2023).*

4.8 Role of males and other family members and their influence in promoting exclusive breastfeeding practices among nursing mothers in the first six (6) months after birth

This section explores the complex relationships that exist within families and how they may affect nursing mothers' exclusive breastfeeding practices in the first six months after giving birth. Qualitative findings highlight how families, and the roles of male and others family members affect exclusive breastfeeding during the first six months after birth. Qualitative findings highlight challenges such as limited male engagement, driven by agricultural activities or traditional beliefs. Also, the study revealed lack of enough support or resources, mainly focusing on how partners can influence introduction of complementary food. The importance of family support, like from mothers, mothers-in-law, and partners, emerged as key theme. Below are themes emerged explaining how family influences exclusive breastfeeding for new moms.

4.8.1 Limited male engagement on Exclusive feeding

Qualitative findings revealed that male involvement and family dynamics have a influence on exclusive breastfeeding practices. Despite the importance of male support, the study noted challenges in engaging fathers (Limited Male Engagement) in exclusive breastfeeding practise. The study found that Male involvement remains limited due to agricultural work commitments. The responses revealed a detailed relationship between male participation, agricultural work commitments, and partner support for breastfeeding mothers. While some fathers showed interest in attending clinics and supporting breastfeeding, challenges related to agricultural engagements often hindered their participation. Below are quotes supporting findings.

> *Honestly, I'm not well-informed about breastfeeding practices because I'm usually busy with my own activities. I don't know much about the benefits of breastfeeding, and I've only recently become aware as the child has started eating solid foods* – (*IDI Mawengi 0001– Spouse of lactating August 2023).*

Other male participants added that; -

> *I'm usually busy with my own activities, and my mother is the one who is usually with my wife, so she might be the one giving her advice* – (*IDI Mawengi 0001 – Spouse of lactating August 2023).*

In addition, the study identified traditional beliefs and societal norms that contribute to the reluctance of many men not to fully participate supporting EBF which include Traditional Perceptions of Gender Roles; traditional beliefs pose a significant challenge for men in accepting their responsibility in supporting exclusive breastfeeding. Societal Expectations and Male Involvement during Childbirth; The perception that certain tasks are designated for men or women influences their level of engagement; stigma associated with active male participation; The fear of societal judgment and the stigma associated with active involvement in household chores during the post-childbirth period hinder some men from supporting their wives in exclusive breastfeeding. These findings were supported by below Quotes from participants.

Hahaha, I think traditional beliefs still make it tough for many men to fully embrace their role in supporting exclusive breastfeeding. Many men see it as women's work and don't consider it their responsibility – (IDI Luana 002 – Spouse of lactating August 2023).

This can be a bit challenging because if you are too involved with your wife and help her a lot with household chores, some people might think your wife has cast a spell on you – (*IDI Mundindi 001– Spouse of lactating August 2023).*

4.8.2 Lack of Support and resource in promoting exclusive breast feeding

Some nursing highlighted the lack of adequate resources and support from family members as obstacles to practicing exclusive breastfeeding, participants emphasized that inadequate support from partners can lead to the early introduction of complementary foods and insufficient breast milk production. Young mothers living independently often struggle to maintain exclusive breastfeeding due to limited access to necessary resources. Below are supporting quotes from participants.

Many young women in the Ludewa area have become mothers but live on their own, lacking the necessary resources like food to produce sufficient breast milk. – (*KII - 3- Ludewa Dc- August, 2023).*

4.8.3 Partner influence in Exclusive Breastfeeding

Regarding partner influence on EBF practise, the study found that most of Partners (Spouse of nursing mothers) influence introduction of complementary food before six months. Some key informants (health professional) reported facing challenges on EBF when partners insist on early food introduction or provide inadequate support.

Wives often face the challenge that their husbands may insist on introducing food early or provide inadequate support, impacting breastfeeding practices – (*KII -4- Ludewa Dc- August, 2023).*

Also, from few Participants expressed examples where husbands played a key role in encouraging and actively engaging with their wives to ensure the exclusive breastfeeding of their infants. Husbands reported to emphasizing the importance of exclusive breastfeeding

until the infant reaches six months, discouraging the introduction of other foods before that period.

> *I frequently encourage my wife because a baby cannot express when they are hungry. Therefore, I remind her, and when I do that, I feel good because the child has to breastfeed to get their rightful nourishment –* (*IDI Luana 001– Spouse of lactating August 2023).*
>
> *My husband emphasizes that the baby must breastfeed exclusively until he reaches six months before introducing any other food – (FGD Mawengi 005- (Nursing Mother) August 2023).*

4.8.4 Family support in Exclusive breastfeeding

Regarding family support, it was generally reported that extended family support is considered important, positively influencing the ability to exclusively breastfeed. The overall theme in the findings is that family support primarily involves assistance to nursing mothers, allowing them the necessary time for breastfeeding. The primary sources of support identified were the mothers, mothers-in-law, and, to a lesser extent, husbands.

In a Focus Group Discussion (FGD), a mother-in-law's role in supporting a nursing mother recovering from a caesarean section was highlighted.

> *When I gave birth, my mother-in-law came to help take care of me. She assisted with many household chores because I had a caesarean section. She stayed for two months until I recovered –(FGD Ludewa 001- Nursing Mother August, 2023)*

The influence of experienced family members, particularly mothers, in providing guidance on breastfeeding practices emerged in the discussions. This support was reported as important in ensuring the successful adherence to exclusive breastfeeding for the entire six months. The practical support provided by their mothers, including helping with household chores, allowed the nursing mothers to rest and focus on breastfeeding. In another FGD, a participant mentioned.

> *My mother, being experienced in parenting, frequently advises me on breastfeeding. This has been helpful, ensuring my child exclusively breastfeeds for the entire six months. – (FGD Luana 004- (Nursing Mother) August 2023*
> *Most of the support I get is from my mother. Every time I give birth, she comes to help with household chores, and that helps me rest, and the baby can breastfeed well. –(FGD Mlangali 002- (Nursing Mother) August, 2023)*

Furthermore, the involvement of husbands or partners in daily chores and caregiving tasks was also reported by participants. Husbands played an active role in supporting nursing mothers, especially during the postpartum period. This included assisting with household chores, caring for the baby, and even actively seeking out food to increase milk supply, contributing to improved breastfeeding experiences for the mothers. For instance, in an In-Depth Interview (IDI), a husband mentioned.

> *I assist with daily chores like washing the baby's clothes and various tasks such as gathering firewood, fetching water, and other family chores. This is because my wife underwent a caesarean section during childbirth, so I give time her for breast feeding and healing – (IDI Mlangali –1– Spouse of lactating August 2023).*

Also on Focus group discussion one nursing mother stated

> *I remember when I gave birth, my husband helped me find foods that would help increase my milk supply, such as pumpkin seeds. It helped a lot; the milk flow increased, and the baby was breastfeeding well. – (FGD Luilo 003-(Nursing Mother) August, 2023)*

Additionally, other family members, such as aunts, were highlighted as valuable sources of support for nursing mothers in Exclusive breast feeding. Their assistance with household tasks allowed the mothers to dedicate time to breastfeeding, thereby contributing significantly to the continuity and success of exclusive breastfeeding practices.

> *When I gave birth, my aunt came to help take care of me. This helped me get a good time to breastfeed the baby because she was doing most of the chores. – (FGD Luilo 003- (Nursing Mother) August, 2023)*

4.8.5 Interaction of Cultural, Healthcare, and Family Factors in Exclusive Breastfeeding Practices

The findings from various sources highlighted the interconnected nature of cultural, healthcare, and family factors in shaping exclusive breastfeeding (EBF) practices among nursing mothers in Njombe Region. Cultural beliefs, such as the use of traditional remedies and the misinterpretation of infant crying, contribute to the premature introduction of complementary foods. These beliefs are deeply embedded in the community and influence mothers' decisions regarding infant feeding. On the healthcare front, the role of healthcare providers in offering dedicated education, counseling, and support is crucial in promoting EBF. The qualitative data emphasize how healthcare professionals' guidance during clinic visits and the involvement of fathers in antenatal and postnatal care significantly impact mothers' understanding and practice of EBF.

Additionally, family dynamics play a key role in sustaining exclusive breastfeeding practices. Partners, extended family members, and societal norms influence mothers' decisions and experiences with breastfeeding. Support from partners, particularly in terms of household chores and encouragement, contributes positively to successful EBF.

CHAPTER FIVE

5.0 DISCUSSION OF THE STUDY RESULTS

5.1 Respondents' profile

Based on the findings, from 398 nursing mothers, the majority of nursing mothers (56.5%) fell within 25-35 of age group, 59.5% had completed primary education. Along with this, 62.8% were reported to be farmers or peasants. Additionally, 238 individuals (59.8%) were married. Regarding the number of children among the nursing mothers, the majority (60.3%) reported having 1-2 children, and 66.4% of mothers had normal deliveries in their last deliveries. It was noted that majority of participants, specifically 99.2%, opted for childbirth in a healthcare facility. Generally, the respondents possessed qualities that could help researcher to achieve the study objectives.

5.2 Prevalence of Exclusive breastfeeding among nursing mothers in Njombe region.

Study findings found that among the nursing mother included in the study in Njombe region, majority of mothers reported reported their children had not been fed anything (Practised Exclusive breastfeeding) apart from breast milk before the age of 6 months. Similar results were reported by a study conducted in Iringa and Njombe regions, with a prevalence of 79.5% for exclusive breastfeeding. (46). The results of this study, indicating a prevalence of exclusive breastfeeding at 79.43%, surpass the national average of 64.3% (16). Moreover, compared to the 2018 Tanzania Nutrition Survey, and 2022 Tanzania Demographic and Health Survey and Malaria Indicator Survey (TDHS-MIS), the exclusive breastfeeding practice remains higher in Njombe region (70%) (5,16). Also, the reported EBF prevalence remains higher than reported figures in Kigoma (58%), Masasi (10%), Muheza (24.1%), and Ghana (64%), but lower than the reported rates in Ethiopia (85%) and Nigeria (82%) (2,47–51). However, the EBF rate reported in this study was lower when compared to 71.4% EBF rate among children in the first 6month reported in Uganda (52). These differences emphasize the regional variation in exclusive breastfeeding practices in the broader context of national and international comparisons, including the changes in exclusive breastfeeding patterns over time.

The increased prevalence noted in Njombe compared to previous study could be attributed with nutrition initiatives that advocate for optimal infant and young child feeding. Various development partners, including UNICEF, have implemented these initiatives in Njombe. Additionally, governments and other stakeholders have been actively involved in promoting exclusive breastfeeding practices through nutrition programs, such as the use of the Social Behavioural Change Communication (SBCC) Kit.

5.3 Cultural and Traditional Influence on Exclusive Breastfeeding Practices

The study identifies cultural influences contributing to these challenges, such as the community's practice of administering traditional remedies (traditional medicine), the misinterpretation of a baby's cry as hunger, discarding colostrum, and the early introduction of complementary foods before the recommended six months. Qualitative insights explored into significance of misinterpretations of infant cues, and adherence to cultural norms and beliefs in shaping EBF practices. Traditional remedies, like 'Known as *dawa ya dege dege* in Swahili' for convulsions, emerge as a common practice, contributing to the premature introduction of complementary feeding. This practice is also commonly reported in Zimbabwe, where Zimbabwean tradition influence the administration of traditional medicine to infants in an attempt to prevent death resulting from the condition that leads to the closure of the fontanel in babies, primarily due to severe dehydration, a condition known as "nhova" in the local vernacular (32).

Also, the study findings indicate mothers are discarding colostrum regarding as impure milk. These findings are in line with existing studies, including studies conducted in India which revealed that Opinions concerning colostrum differ within various communities, with numerous mothers opting to dispose of it, as they believe that it may be dirty or harmful to their child's well-being (1). Similar findings conducted in Saudi Arabia revealed comparable findings, where mothers described colostrum as unclean due to its colour, perceiving it to be different from regular milk (53). Also, Other findings indicated that in certain low- and middle-income countries (LMICs), women tend to dispose the colostrum, despite its richness in antibodies, perceiving it as impure or unclean milk (54). Furthermore, a study conducted in Northwest Nigeria reported similar findings, indicating that a significant number of

mothers discarded colostrum due to the belief that it is unclean and can potentially transmit diseases to the baby (55).

Besides this, the findings on the introduction of complementary feeding before six months due misinterpretation of child crying, as reported by participants in this study, align with research conducted in Muheza (Tanga Tanzania). The study reported that complementary feeding was introduced to children in response to their crying. In addition, Community beliefs influenced EBF in this setting. There were procedures done to the baby once he/she is born and people strongly believing mother's milk alone is not enough for growth without giving porridge. The common reasons for early initiation of complementary food were inadequate breast milk, and mothers' perception that the child was thirsty, these reasons given by women were observed in different settings as noted by other researchers in Tabora Tanzania, Malawi, Zambia, Nigeria and India. Along with this, another study conducted in Zimbabwe reported that the most common reasons for this were lack of sufficient breast milk (27.4%), personal preference (24.6%) and tradition (14.9%). Other reasons identified during the FGDs include being a working mother and the presence of chronic diseases, such as cancer. Also in Bangladesh, the study found that the perception of insufficient breast milk, the child's thirst and cultural reasons were the most common reasons put forward to explain non-adherence to EBF (14). The study in Saudi Arabia highlighted that mother, perceiving insufficient breast milk indicated by the baby's crying and dissatisfaction, opted to provide supplementary feeds like sugary water and herbal drinks (53). Similar patterns were noted in Zimbabwe, where infants were introduced to porridge before six months due to the belief that breast milk alone was inadequate, leading to frequent crying (32). These findings resonate with a study in Nigeria, which identified concerns about the perceived insufficiency of exclusively breastfeeding, resulting in the belief that infants cried due to dissatisfaction with breast milk alone (56).

Beliefs that exclusive breastfeeding for six months could lead to physical changes in a mother's breasts or a child's resistance to solid foods also play a role was reported by study participants. Similar results were documented in a study conducted in Saudi Arabia, where mothers expressed their desire to breastfeed but had concerns related to weight gain and changes in breast and body appearance (53). The study conducted in Kenya, reported that

greater majority (87.7%) of mothers indicated that they were aware of the benefits of EBF. While almost three-quarters (70.6%) indicated that there were economic benefits associated with EBF, only 38.9% said that EBF has environmental benefits. Majority (98.0%) felt that there was no downside (disadvantage) to EBF. In addition, most of them (90.5%) indicated that there were either cultural or traditional beliefs in their communities that are in support of EBF (48).

5.4 Influence of Healthcare Factors and Professional Support on EBF

The quantitative analysis demonstrated a clear association between professional support and EBF rates. Mothers who received support or counselling on managing exclusive breastfeeding challenges reported higher EBF rate (81.6%) compared to those without such support (72.9%). Additionally, nutrition-related counselling during antenatal care (ANC) emerged as a substantial factor, with a notable difference in EBF rates between those who received counselling (81.3%) and those who did not (69.8%). This finding is in line with study conducted in Indonesia which reported mothers who have more ANC visits (Five visits) more likely to practice EBF compared to mothers who only had one - four visits (57). These findings were also revealed by a study conducted in Northwest Nigeria, whereby a significant proportion of the mothers (97.1%) had information on exclusive breastfeeding from health facilities followed by media (1.8%) and the minority (1.1%) had it from health workers served as the primary source of information on optimal infant feeding during their routine clinic visits (55). Also, the study conducted in Kenya found that mothers in both rural and urban areas were fairly knowledgeable about exclusive breast feeding in the first six months of life. They displayed a good attitude towards EBF, with almost all of them (98.0%) indicating that EBF had no disadvantages. More than two thirds of them agreed that EBF had both economic and social benefits and is even encouraged by cultural traditions in the areas where they lived. While, knowledge and attitude indicators were high, just under two-thirds (63.7%) of mothers in this study indicated that they strictly adhered to the practice of EBF (48)

Qualitative findings provided slight perspectives on healthcare factors influencing EBF practices. Dedicated education during clinic days emerged as a key influencer, with participants acknowledging the role of healthcare providers in imparting knowledge about

proper breastfeeding techniques. These initiatives are consistent with WHO guideline in “Ten steps to successful breastfeeding. The study conducted in Indonesia concluded that counselling and education were more effective in promoting the practice of Exclusive Breastfeeding (EBF) (57). Challenges related to the understanding of EBF among healthcare providers were also raised, emphasizing the importance of professional training. The WHO emphasizes the importance of offering counselling on Infant and Young Child Feeding (IYCF) by qualified healthcare professionals to empower women with the practical knowledge and confidence necessary for successful breastfeeding (58).

This finding is similar conducted in Kenya which revealed that the support of health workers is the most dominant variable influencing EBF in this area, mother with support from health care worker have higher EBF practise which emphasizes the impact of health worker support on mothers' decisions and ability to exclusively breastfeed their infants (59). As recommended by UNICEF Breastfeeding mothers should be provided with practical assistance from health officer to facilitate the initiation and sustained continuation of breastfeeding while effectively addressing common breastfeeding challenges (60).

Additionally, another study revealed that most of the respondents (96.2%) had good knowledge of exclusive breastfeeding based on the WHO 6-month recommendation for exclusive breastfeeding. The finding of this study is slightly high compared to a study carried out by WHO found that the majority 91.2% of the nursing mothers had a good knowledge of breastfeeding. This high percentage could be that this study was conducted in a health facility where most of the respondents had received health education on EBF, and the present awareness of EBF now could be higher than when the study was carried out (60).

5.5 Males and Family Members influence in Exclusive breastfeeding.

The study reveals a significant impact of a supportive network, including family, friends, spouses, or community members, on EBF rates. Regular discussions about the desire to exclusively breastfeed were also linked to higher EBF practice, emphasizing the importance of communication within the support network. The active involvement of fathers during antenatal visits was highlighted as essential, with their understanding being deemed crucial for family support. Similar findings reported in a study conducted in rural Zimbabwe

reported mother with male partner support is associated with the adoption of exclusive breastfeeding where participants highlighted the influential role of family members, particularly male partners, in shaping their breastfeeding practices (61). Furthermore, study conducted in Northwest Ethiopia highlighted that more than three fourth of the participants who practice exclusive breastfeeding were supported by their partner at home also the remaining participants participants were influenced by their family members to give complementary feeding than EBF up to 6 months highlighting family dynamics in influencing Exclusive breastfeeding (62).

Additionally, similar study conducted in Zimbabwe revealed the influence of family members, particularly the mother-in-law, in key decisions related to breastfeeding practices. Qualitative findings the active involvement and encouragement of male family members, especially spouses, were associated with EBF practices. When male family members actively supported baby care tasks related to EBF, nursing mother reported practicing EBF compared to when they did not participate at all. Similar findings were reported in a Saudi Arabian study, emphasizing the impact of the father's viewpoints and other significant individuals on the mother's breastfeeding experience (53). In Zimbabwe, husbands expressed the insistence that infants should be given porridge before reaching six months of age, revealing contrasting perspectives (32,63). Qualitative insights underscored challenges in engaging fathers, with agricultural work commitments identified as a major obstacle. Cultural and traditional beliefs played a significant role in shaping male perceptions of their responsibilities in supporting EBF. Societal expectations, stigma, and perceptions of gender roles emerged as barriers to active male participation. The study conducted in Italy revealed that within a cultural context, there is a gender-specific division of roles between men and women (64).

Furthermore, the study conducted in Waterloo Hamiliton region reported that mothers' breastfeeding intentions were positively correlated with fathers' breastfeeding duration preferences. This correlation highlights the interconnected nature of parental roles in influencing breastfeeding practices (65). Extended family support, particularly from mothers, grandmothers, and mothers-in-law, was considered vital. Practical assistance in household chores and guidance on breastfeeding practices positively influenced nursing

mothers' ability to exclusively breastfeed. These findings align with a study conducted in Italy, which reported that grandmothers play a crucial role in child nutrition as household advisors and caregivers (64). This underscores the importance of context-specific interventions and an understanding of the complexities of male family members' attitudes and their impact on breastfeeding practices.

CHAPTER SIX

6.0 CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

The discussion emphasizes how family dynamics, guidance from healthcare providers, and cultural influences influence exclusive breastfeeding patterns among nursing mothers in the Njombe Region. The factors that have been discovered highlight the demand for comprehensive interventions that address cultural beliefs, improve healthcare practitioner education, and encourage all-inclusive family involvement. Understanding and addressing these factors can result in long-lasting changes in exclusive breastfeeding practices, which will benefit mothers and infants in the region generally. While this study provides valuable insights into the current EBF practise in the region, future studies could explore the specific roles of gender dynamics in influencing exclusive breastfeeding practise, examining how societal expectations and gender norms impact EBF Practise.

6.2 Recommendations

Below are the recommendations for improving exclusive breastfeeding among nursing mother Ludewa District Council, Njombe region.

i. Developing Tailored Educational Programs: Create educational programs specifically designed for male family members. These programs should highlight the benefits of exclusive breastfeeding and outline the supportive roles that men can play. Collaborate with stakeholders such as the Ministry of Health to craft messages that resonate with men, emphasizing the direct impact of their support on the health and well-being of both the child and the mother. Utilize workshops, seminars, and information sessions that incorporate real-life experiences to engage men effectively.
ii. Facilitating Open Family Communication: Establish platforms or forums within families to encourage open communication regarding breastfeeding decisions. Address misconceptions or concerns by providing accurate information and fostering discussions that dispel common myths. These forums should create a supportive environment where individuals feel comfortable expressing their views and receiving

fact-based knowledge to address societal misconceptions or cultural beliefs that may hinder exclusive breastfeeding.

iii. Implementing community-based support networks that involve both males and females to create a supportive environment for nursing mothers. Men and women should participate in these networks, which should be inclusive. Creating social gatherings or support groups where new mothers are made to feel at home and encouraged can make a significant impact in how well they nurse. Men can participate in this by sharing their experiences, offering practical guidance, and highlighting the value of exclusive breastfeeding in the community.

iv. Engaging Influential Community Members: Collaborate with respected community leaders, both male and female, who support exclusive breastfeeding. Utilize their influence to positively influence attitudes and actions within the community. Encourage these individuals to share success stories and actively engage with families, serving as role models to normalize exclusive breastfeeding and garner broader community support.

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APPENDICES

Appendix 1: Respondents Consent Form (English Version)

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES
DIRECTORATE OF RESEARCH AND PUBLICATIONS

Introduction

Greetings: My name is **…….** Student from Muhimbili University of Health and Allied Science Pursuing Master of public health, Dar es Salaam. Currently, I undertake a study to determine Factors affecting exclusive breastfeeding among nursing mothers in Njombe Region. I request to participate in this study as a stakeholder and a resident from the study area. We believe you have knowledge and experience that is important in this study.

The interview questions could take up to 30 minutes of your time.

Purpose of the study; The purpose of this study is to collect information on factors affecting exclusive breastfeeding among nursing mothers in Njombe Region

Confidentiality: Anything you say will be confidential and will not be shared with anyone other than researcher, No personal identifying information will be collected, and the names of participants will not be disclosed in any publication or report. If I ask you any question you do not want to answer, just let me know and I will go on to the next question or you can stop the interview at any time.

Benefits; There are no direct benefits of being enrolled in the study; however, the results of the study will help to provide understanding factors affecting exclusive breastfeeding to nursing mother and advice or provide recommendation government in EBF intervention.

Risks; No any risk foreseen in this study, but at any moment, if the question makes you feel uncomfortable do not want to answer, just let me know and I will go on to the next question or you can stop the interview at any time**.**

Compensation & Reimbursement

There will be no compensation of time spent during the interview; however, your participation is highly appreciated.

Withdrawal

Your participation in this study is voluntary. You may choose not to participate or, if you agree to participate, you can withdraw your participation at any time without penalty or loss of benefits to which you are otherwise entitled. You do not have to answer any questions that you do not feel comfortable answering, and you may stop the interview at any point during the interview

Whom to contact

If you have any question about this study, please do not hesitate to contact

JONATHAN HAULE, The principal investigator, Muhimbili University, P.O.BOX 65001 Dar es Salaam. Phone number 0765914714

Director of Research and Publications/Chairman of the MUHAS Research and Publications Committee, P.O.BOX 65001.

DR. GADYS MAHITI, The Supervisor of this study, MUHAS, P.O.BOX 65001.Dar es Salaam. Phone number **0713531412** or REBECCA RABACH Phone number **0762942734**.

SIGNATURE; I …… (Full name of a prospective participant) acknowledge that I have read or have had the purpose of all questions satisfactorily explained to me in a language I understand. I fully understand the contents and any potential implications as well as my right to change my mind (i.e. withdraw from the study) even after I have signed this form. I provide my consent to have my information documented/recorded.

I voluntarily agree to be part of this research.

Participant's Signature: ……..…...

OR

Thumb Print…… Date: ……

Appendix 2: Respondents Consent Form (Swahili Version)

RIDHAA YA KUSHIRIKI

CHUO KIKUU CHA AFYA NA SAYANSI SHIRIKISHI MUHIMBILI - KURUGENZI YA UTAFITI NA MACHAPISHO

Utangulizi

Salamu: Jina langu ni …… Mwanafunzi wa Chuo Kikuu cha Muhimbili wa Sayansi na Afya ninayesomea shahada ya uzamili wa Afya ya Jamii, Dar es Salaam. Kwa sasa, ninafanya utafiti wa kuangalia sababu/changamoto za kunyonyesha maziwa ya mama pekee kwa kipindi cha miezi 0-6 kwa akina mama wanaonyonyesha katika Mkoa wa Njombe. Napenda kukualika kushiriki katika utafiti huu kama mdau na mkazi kutoka eneo la utafiti. Naamini kwamba una maarifa na uzoefu muhimu katika utafiti huu.

Maswali ya mahojiano yanaweza kuchukua hadi dakika 30 ya muda wako.

Lengo la utafiti: Lengo la utafiti huu ni kukusanya habari kuhusu sababu/changamoto za kunyonyesha maziwa ya mama pekee kwa kipindi cha miezi 0-6 kwa akina mama wanaonyonyesha katika Mkoa wa Njombe.

Usiri: Kila kitu utakachosema kitabaki kuwa siri na hakitashirikishwa na mtu yeyote zaidi ya mtafiti. Hakutakuwa na taarifa zozote zinazohusiana na utambulisho wako binafsi zitakazokusanywa, na majina ya washiriki hayatafichuliwa katika ripoti au taarifa yoyote. Iwapo nitakuuliza swali lolote ambalo hutaki kulijibu, tafadhali nijulishe na nitapita kwenye swali linalofuata au unaweza kuacha mahojiano wakati wowote.

Manufaa: Hakuna manufaa ya moja kwa moja ya kushiriki katika utafiti; hata hivyo, matokeo ya utafiti yatasaidia kutoa ufahamu wa sababu/changamoto za kunyonyesha kwa maziwa ya mama pekee Katika kipindi cha miezi 6 ya mwanzo kwa akina mama na kutoa ushauri au mapendekezo kwa serikali kuhusu suala la kunyonyesha kwa maziwa ya mama pekee.

Hatari: Hakuna hatari yoyote iliyo onekana katika utafiti huu, lakini iwapo swali lolote linakufanya uhisi au usijisikie vizuri kulijibu, tafadhali niambie na nitaenda kwenye swali linalofuata au unaweza kuacha mahojiano wakati wowote.

Malipo na marejesho: Hakutakuwa na malipo kwa wakati uliotumika wakati wa mahojiano; Walakini, ushiriki wako ni muhimu sana.

Kujiondoa: Ushiriki wako katika utafiti huu ni wa hiari. Unaweza kuchagua kutokushiriki au, ikiwa unakubali kushiriki, unaweza kujiondoa wakati wowote bila adhabu au kupoteza faida unazostahili. Hauitajiki kujibu maswali yoyote ambayo hujisikii vizuri kuyajibu, na unaweza kusitisha mahojiano wakati wowote wakati wa mahojiano.

Nani wa kuwasiliana naye: Ikiwa una swali lolote kuhusu utafiti huu, tafadhali usisite kuwasiliana na:

JONATHAN HAULE, Mtafiti Mkuu, Chuo Kikuu cha Muhimbili, Sanduku la Posta 65001 Dar es Salaam. Namba ya simu 0765914714

Mkurugenzi wa Utafiti na Machapisho / Mwenyekiti wa Kamati ya Utafiti na Machapisho ya MUHAS, Sanduku la Posta 65001.DR. GADYS REUBEN MAHITI, Msimamizi wa utafiti huu, MUHAS, Sanduku la Posta 65001, Dar es Salaam. Namba ya simu 0713531412 au REBECCA RABACH Namba ya simu 0762942734.

SAHIHI: Mimi…… (Jina kamili la mshiriki) nakubali kwamba nimeisoma au nimeelezewa kusudi la maswali yote kwa kuridhisha katika lugha ninayoelewa. Naelewa kabisa maudhui na athari zozote za uwezekano pamoja na haki yangu ya kubadilisha maamuzi yangu (yaani, kujiondoa katika utafiti) hata baada ya kusaini fomu hii. Ninatoa ridhaa yangu kurekodi taarifa zangu.

Nakubali kwa hiari kuwa sehemu ya utafiti huu.

Sahihi ya Mshiriki: ……AU

Alama ya vidole…… Tarehe: ……

Appendix 3: Data Collection Tool - Questionnaire (English Version)

FACTORS AFFECTING EXCLUSIVE BREASTFEEDING AMONG NURSING MOTHERS IN NJOMBE REGION SOUTHERN HIGHLAND TANZANIA

QUESTIONNAIRE – TARGETING MOTHERS WITH BABIES 6-12 MONTHS IN NJOMBE REGION (ENGLISH VERSION)

Instructions:

Please transcribe the respondent's answer exactly as it was given. There are several blank spaces where you will need to provide your response by either filling in a number or giving a brief explanation.

1. Date of interview ___/__/ 2023
2. Questionnaire no. _____

Section 1: Demographic Information

Geographical location Information	
Region:	District:
Ward:	Village / Street
Name of health facility	
Demographic Information	
1. What is your age?	1= below 18 2=18-24 3=25-35 4= Above 35
2. What is your highest level of education?	1= No education (Didn't study) 2= Primary school education 3= Secondary school (form 4) 4= High school (form 6) 5= Higher education
3. What is your occupation?	1= self-employed / entrepreneur 2= employed 3= farmer /peasant 4= jobless
4. What is your marital status?	1= Unmarried 2= Married 3= divorced 4= cohabiting
Child Information	
5. How many children do you have?	1=1-2 2=3-4 3=Above 5
6. What is the age of your youngest child? (Confirm it in the RCH clinic card)	1=6 months 2=7 – 12 Months
7. Sex of your child	1=Male 2=Female
8. What is the method of delivery for that child?	1. Normal 2. Caesarean section
9. What is the place of delivery for that child?	1= Health facility 2=TBAs 3=Home 4=Other (Specify).....

Section 2: Exclusive breastfeeding

10.	Hasyour child everbeenbreastfed?	1 Yes2=No96=Don't know
11.	Before the age of 6 months, was the child fed anything apart from breast milk?	1=Yes 2=No3=I don't know
12.	If yes 11 above, what was the baby fed?	1=Water 2=Juice 3=Soda 4=Cow's milk 5=Formula milk 6= porridge 7=other
13.	If no Whatwere the reasonsfornotbreastfeedingthischild? If no 11 above	1=Death of the mother2=Medical advice3=Other,explain
14.	Does your child have any health problem that makes it difficult for him/her to breastfeed	1=Yes 2=No
15.	If yes what problem (Specify	
16.	In the first three days after delivery, was your child given anything to drink other than breast milk?	1=Yes 2=No
17.	If yes What was the child given?	1=Water 2=Honey 3=Glucose water 4=Tea 5=Lactose 6=Other. Specify
18.	What was the reason for feeding the above mentioned	1=Cultural practice 2=Medical advice 3=Other. (Specify)
19.	What is the recommended time for exclusive breastfeeding?	1=Below 1 months 2=1-5 months 3 = At 6 complete months 4= Above 6 months 5 = I don't know

Section 3: Health care factors and Professional support by health providers' influence on exclusive breastfeeding practices

CODE	Interview question	Responses
20.	Have you received any information on the health benefits of exclusive breastfeeding for both the mother and child?	1=Yes 2=No
21.	Have you received any support or counselling on how to manage any challenges with exclusive breastfeeding?	1=Yes 2=No
22.	If you received any support, from whom did you receive the support?	1= Community Health Worker 2= Health facility 3= Family/community
23.	Were you given any nutrition-relatedcounselingsuchasbreastfeeding,complementaryfeeding,diet, or othernutrition-relatedadviceduringANCvisits?	1=Yes 2=No 96=Don't remember
24.	Whattypesofcounselingwere you given? Multiple	1=Breastfeeding practices 2=Infantscomplementaryfeeding 3=Mother's nutrition 4=Others.Specify
25.	Your level of agreement or disagreement with the statement "professional support from healthcare providers is an important factor in my decision to exclusively breastfeed my infant" depends on your personal understanding.	1=Strongly agree 2=Agree 3=Disagree 4=Strongly Disagree
26.	Have you ever sought out different healthcare professionals' advice or perspectives on the exclusive breastfeeding practice?	1=Yes 2=No

27.	If yes, how did that influence your choice of exclusive breastfeeding?	
28.	Have you observed any variations in the standard or frequency of professional support for exclusive breastfeeding based on the healthcare practitioner or environment (for example, a hospital vs. community clinic)?	1=Yes 2=No
29.	How far is it to the nearest healthfacility?	1= Less than 1 KM 2= 1-5 KM3-=More than 5 KM
30.	Did you receive any counselling or support during your postnatal care?	1=Yes 2=No
31.	How would you rate the availability of skilled lactation consultants during your postnatal care?	1=Very Poor 2= Poor 3= Neutral 4=Good 5=Very Good
32.	Did you seek assistance from a lactation consultant during your postpartum period?	1=Yes 2=No

Appendix 4: Data Collection Tool Questionnaire (Swahili version)

SABABU ZINAZOATHIRI/SHAWISHI UNYONYESHAJI WA MAZIWA YA MAMA PEKEE KWA KINAMAMA WANAONYONYESHA MKOA WA NJOMBE NYANDA ZA JUU KUSINI-TANZANIA

DODOSO LA MOHOJIANO - KWA AKINAMAMA WENYE WATOTO WA MIEZI 6-12 KATIKA MKOA WA NJOMBE

Maelekezo:

Tafadhali andika jibu la swali kulingana na majibu yatakayo tolewa na mhojiwa. Kunasehemu za wazi chache ambazo utajibia kwa kuandika namba au kuweka maelezo mafupi ya jibu litakalo tolewa.

1. Tarehe ya mahojiano ___/__/ 20232. Dodoso no. _____

SHEMU YA 1A. TAARIFA ZA ENEO NA TAARIFA BINAFSI	
Mkoa:	Wilaya:
Kata:	Kijiji/Mtaa
Jina la kituo cha afya	
SEHEMU YA 1B. TAARIFA ZA TAKWIMU ZA IDADI YA WATU, KAMA VILE UMRI, JINSIA, NA HALI YA MAISHA	
1. Kundi la Umri?	1= Chini 182=18-24 3=25-354= Zaidi 35
2. Je, kiwango chako cha juu cha elimu ni kipi??	1 = Hakuwa na elimu (Hakusoma) 2 = Elimu ya Msingi 3 = Elimu ya Sekondari (Kidato cha Nne) 4 = Elimu ya Juu ya Sekondari (Kidato cha Sita) 5 = Elimu ya Juu
3. Unafanya kazi gani?	1= Mjasiriamali / Nimejiajiri 2= Mfanyakazi wa ajira 3= Mkulima / Mkulima mdogo 4= sina ajira
4. Hali ya ndoa?	1= Hajaolewa / Hajaoa 2= Ameolewa / Ameoa 3= Ametalakiana / Ametengana 4= Anaishi na mwenzi bila ndoa
Taarifa za Mtoto	
5. Una watoto wangapi? {Namba}	1=1-22=3-43=Zaidi ya 5
6. Mtoto wako ana umri gani? (Angalia kadi ya kliniki)	1=Miezi 62=Miezi 7 – 12
7. Jinsi ya mtoto wako mdogo	1=Kiume 2=kike
8. Je ulijifungulia kwa njia gani mtoto huyu?	1. Njia ya kawaida 2. Njia ya upasuaji
9. Je ulijifungulia wapi mtoto huyu?	1=Kituo cha afya

	2=Kwa mkunga wa jadi 3=Nyumbani 4= Kwingine (Taja).....

SEHEMU YA 2: UNYONYESHAJI WA MAZIWA YA MAMA PEKEE

Namba	Maswali	Majibu
10.	Je, mtoto wako amewahi kunyonya?	1 =Ndio 2=Hapana 3=Sijui
11.	Kabla ya kufikisha miezi 6, mtoto alipewa kitu kingine chochote zaidi ya maziwa ya mama?	1=Ndio 2=Hapana3=Sijui
12.	Ikiwa ndio, mtoto alipewa nini?	1=maji 2=Juisi 3=Soda 4=maziwa ya ng'ombe 5=maziwa ya dukani 6= uji 7=kingine (Taja)
13.	Ikiwa hapana, ni kwa nini haukumnyonyesha mtoto huyu?	1=Kifo cha mama 2=Ushauri wa kiafya 3=Kinginecho, taja)
14.	Je, mtoto wako ana tatizo lolote la kiafya ambalo linamfanya kuwa vigumu kumnyonyesha?	1=Ndiyo 2=Hapana.
15.	Ikiwa ndiyo, tatizo ni lipi? (Tafadhali eleza)	
16.	Katika siku tatu za mwanzo baada ya kujifungua, mtoto alipewa kitu chochote cha kunywa zaidi ya maziwa ya mama?	1=Ndiyo 2=Hapana
17.	Mtoto alipewa nini?	1=Maji 2=Asali 3=Maji yenye glukosi 4=Cha 5=Laktozi 6=Kinginecho (Tafadhali eleza)
18.	Ni kwa nini mtoto alilishwa kitu kama kilivyotajwa hapo juu?	1=Desturi ya kitamaduni 2=Ushauri wa kiafya 3=Kinginecho (Tafadhali eleza)
19.	Je inashauriwa mtoto anyonyeshwe maziwa ya mama pekee bila hata maji kwa mda gani?	1=Chini ya mwezi 1 2=Miezi 1-5 3. Akikamilisha miezi 6 4. Zaidi ya miezi 6 5. Sijui

SEHEMU YA 4: MCHANGO NA USAIDIZI WA KITAALAMU WA WATOA HUDUMA ZA AFYA KWENYE UNYONYESHAJI WA MAZIWA YA MAMA PEKEE

Namba	Maswali	Majibu
20.	Je, umepokea habari yoyote kuhusu faida za kiafya za kunyonyesha maziwa ya mama pekee kwa mtoto na mama?	1=Ndiyo 2=Hapana
21.	Je, umewahipokea msaada au ushauri wowote juu ya jinsi ya kushughulikia changamoto zozote za kunyonyesha kwa maziwa ya mama pekee?	1=Ndiyo 2=Hapana
22.	Ikiwa ulipata msaada wowote, Je msaada huo ulipata msaada huo?	1= Mhudumu wa afya ngazi ya jamii 2= Kituo cha Afya 3=Kwenye familia/Jamii
23.	Je, ulipata ushauri wowote wa lishe kama vile kuhusu kunyonyesha, kulisha mtoto vyakula vya nyongeza, lishe, au ushauri mwingine	1=Ndiyo 2=Hapana

	wowote wa Lishe wakati wa kliniki ya uzazi na afya ya mtoto kabla ya kujifungua?	3=Sijui
24.	Aina gani za ushauri ulipewa? Jibu yote yanayohusika	1= Kunyonyesha maziwa ya mama 2= Lishe mbadala ya watoto wachanga (Zaida ya miezi 6) 3= Lishe ya mama 4= Mingine (Taja)
25.	Kiwango chako cha kukubaliana au kutokukubaliana na kauli "msaada wa kitaalam kutoka kwa watoa huduma za afya ni sababu muhimu katika uamuzi wangu wa kunyonyesha mtoto wangu maziwa ya mama pekee" kinategemea ufahamu wako binafsi.	1 = Ninakubaliana sana 2 = Ninkubaliana 3 = Sikubaliana 4 = Sikubaliana kabisa
26.	Je, umewahi kutafuta ushauri au mitazamo tofauti kutoka kwa wataalamu wa afya kuhusu kunyonyesha maziwa ya mama pekee?	1=Ndiyo 2=Hapana
27.	Kama ndiyo, hiyo iliathiri vipi uchaguzi wako wa kunyonyesha maziwa ya mama pekee?	
28.	Je, umeona tofauti zozote katika ubora au marudio ya usaidizi/ushauri wa kitaalamu wa kunyonyesha maziwa ya mama pekee kulingana na daktari au mazingira (kwa mfano, hospitali dhidi ya kliniki ya jamii)?	1=Ndiyo 2=Hapana
29.	Ni mbali kiasi gani na kituo cha afya kilicho karibu zaidi?	1=Chini ya KM 1, 2=KM 1-5, 3=Zaidi ya KM 5.
30.	Je, ulipata ushauri au msaada wowote wakati wa huduma yako ya baada ya kujifungua?	1=Ndio 2=Hapana
31.	Je, unaonaje upatikanaji wa washauri waliofundishwa kuhusu kunyonyesha wakati wa huduma yako ya baada ya kujifungua?	1=Mbaya sana 2= Mbaya 3=Wastani 4=Mzuri 5=Mzuri sana
32.	Je, ulitafuta msaada kutoka kwa mshauri wa kunyonyesha wakati wa kipindi chako cha baada ya kujifungua?	1=Ndio 2=Hapana

Appendix 5: Focus Group Discussion Guiding Question (English Version)

FACTORS AFFECTING EXCLUSIVE BREASTFEEDING AMONG NURSING MOTHERS IN NJOMBE REGION SOUTHERN HIGHLAND TANZANIA

7.0 GUIDING QUESTIONS FOR FOCUS GROUP DISCUSSION WITH MOTHERS OF CHILDREN 0-12 MONTHS (ENGLISH VERSION)

1. What are some of the reasons why you chose to breastfeed your baby exclusively for period of 0-6 Month?
2. What are some of the challenges you have faced when trying to practice exclusive breastfeeding?
3. What support have you received from your family or community to practice exclusive breastfeeding?
4. How do cultural and social factors influence your decision to exclusively breastfeed your baby during first Six month of your baby?
5. What kind of information or resources do you need to support your exclusive breastfeeding practices for your baby during first Six month of your baby?
6. What role do healthcare workers or community health workers (CHWs) play in supporting your exclusive breastfeeding practices during first Six month of your baby?
7. What are some of the common myths or misconceptions you have heard about exclusive breastfeeding during first Six month of your baby?
8. How do you balance the demands of exclusive breastfeeding with other responsibilities such as work or household chores?
9. What recommendations do you have to improve exclusive breastfeeding practices in your community?
10. How can the health system better support mothers like you to successfully practice exclusive breastfeeding

Appendix 6: Focus Group Discussion Guiding Question (Swahili Version)

SABABU ZINAZOATHIRI/SHAWISHI UNYONYESHAJI WA MAZIWA YA MAMA PEKEE KWA KINAMAMA WANAONYONYESHA MKOA WA NJOMBE NYANDA ZA JUU KUSINI-TANZANIA

1. Ni sababu zipi zilizokusukuma kuamua kumnyonyesha au kuto kumynonyesha mtoto wako maziwa ya mama pekee katika kipindi cha miezi 0-6?
2. Ni changamoto zipi umekumbana nazo ulipo kuwa unamyonyesha mtoto wako kwa maziwa ya mama pekee katika kipindi cha miezi 0-6?
3. Je, ulipata usaidizi gani kutoka kwa familia au jamii yako ili kumwezesha mtoto wako kunyonya maziwa ya mama pekee katika kipindi cha miezi 0-6?
4. Je, ni namna gani Imani za kitamaduni na kijamii zinavyoathiri uamuzi wako wa kumnyonyesha mtoto wako kwa maziwa ya mama pekee katika kipindi cha miezi 0-6?
5. Je, Unahitaji aina gani ya taarifa au rasilimali ili kukuwezesha kumnyonyesha mtoto wako kwa maziwa ya mama pekee katika kipindi cha miezi 0-6?
6. Watoa huduma wa afya au wafanyakazi wa afya wa jamii wanajukumu gani katika kuunga mkono uamuzi wako wa kumnyonyesha mtoto wako maziwa ya mama pekee katika kipindi cha miezi 0-6?
7. Ni imani potofu gani umewahi kusikia kuhusu kunyonyesha mtoto maziwa ya mama pekee katika kipindi cha miezi 0-6?
8. Unawezaje kumudu kunyonyesha maziwa ya mama pekee mtoto katika kipindi cha miezi 0-6 na majukumu mengine kama kazi au majukumu ya kaya?
9. Unapendekeza nini ili kuimarisha mazoea ya kunyonyesha maziwa ya mama pekee katika kipindi cha miezi 0-6 ya mtoto katika jamii yako?
10. Jinsi gani mfumo wa afya unaweza kuwasaidia kina mama kama wewe kuweza kumnyonyesha mtoto kwa maziwa ya mama pekee kwa mafanikio zaidi?

Appendix 7: Key Informants' Interviews (Health Care Providers/Health Facilities) – English Version

8.0 GUIDING QUESTIONS FOR KEY INFROMANT INTERVIEW WITH THE HEAD OF HEALTH FACILITIES / MCH DEPARTMENT/RNUO OR DNO IN THE NJOMBE REGION (ENGLISH VERSION)

1. In your opinion, what are the main challenges to exclusive breastfeeding among nursing mothers in this region?
2. What information, resources, or support do nursing mothers need to successfully practice exclusive breastfeeding?
3. How do social and cultural factors affect nursing mothers' decisions to practice exclusive breastfeeding?
4. What are the common misconceptions or myths about exclusive breastfeeding that you have observed among nursing mothers in this region?
5. What strategies have you seen or used to promote exclusive breastfeeding among nursing mothers in this region?
6. How do healthcare workers like yourself support nursing mothers to practice exclusive breastfeeding?
7. What are the main barriers that healthcare workers face in promoting exclusive breastfeeding?
8. How do healthcare workers collaborate with other stakeholders such as community members, religious leaders, or traditional healers to promote exclusive breastfeeding?
9. How do you think the health system can better support exclusive breastfeeding practices among nursing mothers?
10. Do you believe that spouses provide support for their partners to exclusively breastfeed for the recommended six-month period, including attending clinic appointments together
11. What recommendations do you have to improve exclusive breastfeeding rates among nursing mothers in this region?

Appendix 8: Key Informants' Interviews (Health Care Providers/Health Facilities) – Swahili Version

9.0 MAHOJIANO YA KINA NA WAKUU WA VITUO VYA AFYA, MAAFISA LISHE NA WAKUU WA VITENGO VYA MAMA NA MTOTO - MASWALI YA KUONGOZA MAHOJIANO KATIKA MKOA WA NJOMBE.

1. Kwa maoni yako, ni changamoto gani kuu za kuwanyonyesha watoto maziwa ya mama pekee Katika kipindi cha miezi 0-6 kwa akina mama wanaonyonyesha?
2. Ni taarifa, rasilimali, au msaada gani ambao akina mama wanaonyonyesha wanahitaji ili kuweza kufanikiwa katika kuwanyonyesha watoto kwa maziwa ya mama pekee katika kipindi cha miezi 0-6?
3. Ni jinsi gani mambo ya kijamii na kitamaduni yanavyoathiri maamuzi ya akina mama wanaonyonyesha katika kufanya uamuzi wa kuwanyonyesha watoto kwa maziwa ya mama pekee katika kipindi cha miezi 0-6?
4. Ni dhana potofu au imani gani zinazohusu kuwanyonyesha watoto kwa maziwa ya mama pekee ambazo umewahi kuziona miongoni mwa akina mama wanaonyonyesha katika eneo hili?
5. Ni mikakati gani umewahi kushuhudia au kutumia katika kuhamasisha akina mama wanaonyonyesha kuwanyonyesha watoto kwa maziwa ya mama pekee katika eneo hili Katika kipindi cha miezi 0-6?
6. Je ni namna gani wafanyakazi wa afya kama wewe wanavyowasaidia akina mama wanaonyonyesha katika kufanikisha uwezo wao wa kuwanyonyesha watoto kwa maziwa ya mama pekee Katika kipindi cha miezi 0-6?
7. Ni vikwazo gani vikuu ambavyo wafanyakazi wa afya wanakabiliana navyo katika kukuza na adhma ya kunyonyesha watoto kwa maziwa ya mama pekee Katika kipindi cha miezi 0-6?
8. Ni namna gani wafanyakazi wa afya wanashirikiana na wadau wengine kama wanajamii, viongozi wa kidini, au waganga wa jadi ili kuhamasisha kina mama katika kuwanyonyesha watoto kwa maziwa ya mama pekee katika kipindi cha miezi 0-6?

9. Ni jinsi gani mfumo wa afya unaweza kusaidia kuwanyonyesha watoto maziwa ya mama pekee miongoni mwa akina mama wanaonyonyesha katika kipindi cha miezi 0-6?
10. Je, unafikiri wenza huwasaidia wenzi wao kuwanyonyesha watoto kwa muda wa miezi sita kama ilivyoshauriwa, ikiwa ni pamoja na kwenda pamoja kwenye kliniki?
11. Ungependa kupendekeza nini ili kuboresha uwezo wa kuwanyonyesha watoto maziwa ya mama pekee miongoni mwa akina mama wanaonyonyesha?

Appendix 9: In-Depth Interviews (Male or Spouse Of Mother With Children 6-12 Months)- English Version

FACTORS AFFECTING EXCLUSIVE BREASTFEEDING AMONG NURSING MOTHERS IN NJOMBE REGION SOUTHERN HIGHLAND TANZANIA

10.0 GUIDING QUESTIONS FOR IN-DEPTH INTERVIEW WITH MALE OR SPOUSE OF NURSING MOTHER WITH CHILDREN 6-12 MONTHS IN THE NJOMBE REGION (SWAHILI VERSION)

1. How knowledgeable are you about the advantages of exclusive breastfeeding for infants?

2. How do you feel about encouraging your partner to exclusively breastfeed?

3. Have you and your spouse ever discussed exclusive breastfeeding? If so, what resulted from the discussion?

4. What difficulties have you seen your partner encounter during exclusive breastfeeding?

5. What can you do to help your spouse overcome some of the difficulties she has during breastfeeding?

6. How do you perceive fathers' contributions to supporting exclusive breastfeeding?

7. How can spouses ensure that their partners exclusively breastfeed for the advised six months?

8. Have you ever attended a session or campaign on breastfeeding? If not, do you believe going to one would be beneficial for you?

9. What are the common cultural believes/practise or myths that affect exclusive breastfeeding that you have observed among nursing mothers in this region?

Appendix 10: In-Depth Interview Guiding Question (Swahili Version)

11.0 MAHOJIANO YA KINA NA WANAUME AU WENZA WA KINA MAMA WANAO NYONYESHA WENYE WATOTO WA UMRI WA MIEZ 6-12 - MASWALI YA KUONGOZA MAHOJIANO YA KINA NA MWANAUME AU WENZA WA KINAMAMA WANAONYONYESHA WENYE WATOTO WENYE UMRI WA MIEZI 6-12 KATIKA MKOA WA NJOMBE

1. Je, una uelewa kiasi gani kuhusu faida za kunyonyesha Maziwa ya mama pekee kwa watoto wa miezi 0-6?
2. Unajisikiaje kuhusu kumhamasisha mwenzi wako kunyonyesha mtoto maziwa ya mama pekee Katika kipindi cha miezi 0 - 6?
3. Je, wewe na mwenzi wako mmewahi kujadili kuhusu kunyonyesha mtoto maziwa ya mama pekee Katika kipindi cha miezi 0-6? Ikiwa ndio, matokeo ya mazungumzo yalikuwaje?
4. Ni changamoto gani ambazo umemwona mwenzi wako akikabiliana nazo wakati wa kunyonyesha maziwa ya mama pekee pindi mtoto akiwa na umri wa miezi 0-6?
5. Unaweza kufanya nini ili kumsaidia mwenzi wako kushinda baadhi ya changamoto anazopata wakati wa kunyonyesha mtoto maziwa ya mama pekee Katika kipindi cha miezi 0-6?
6. Unawaonaje mchango wa wazazi wanaume kuchangia katika kuunga mkono kunyonyesha mtoto (0-6) maziwa ya mama pekee?
7. Ni namna gani wapenzi wanaweza kuhakikisha kwamba wenzao wananyonyesha maziwa ya pekee kwa miezi sita iliyopendekezwa?
8. Je, umewahi kuhudhuria tamasha au kampeni juu ya kunyonyesha maziwa ya mama pekee kwa kipindi ch ameizi 0-6? Ikiwa sivyo, je, unadhani kwamba kuhudhuria kungekuwa na manufaa kwako?
9. Ni jinsi gani mambo ya kijamii na kitamaduni yanavyoathiri maamuzi ya akina mama wanaonyonyesha katika kufanya uamuzi wa kuwanyonyesha watoto kwa maziwa ya mama pekee katika kipindi cha miezi 0-6?

Appendix 11: Introduction Letter to the Authorities

UNITED REPUBLIC OF TANZANIA
MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES
OFFICE OF THE DIRECTOR – POSTGRADUATE STUDIES

In reply quote;

Ref. No. Ref. No. HD/MUH/T.443/2021 24th July, 2023

The Regional Administrative Secretary,
P.O. Box 668,
NJOMBE

Re: INTRODUCTION LETTER

The bearer of this letter is Jonathan B. Haule, with Reg. No. HD/MUH/T.443/2021 a student at Muhimbili University of Health and Allied Sciences (MUHAS) pursuing MPH-Distance Learning.

As part of his studies he intends to do a study titled: "**Factors Affecting Exclusive Breastfeeding Among Nursing Mothers in Njombe Region Southern Highland Tanzania."**

The research has been approved by the Chairman of University Senate.

Kindly provide him the necessary assistance to facilitate the conduct of his research.

We thank you for your cooperation.

Mr. Seba Mohamed
For: DIRECTOR, POSTGRADUATE STUDIES

cc: Jonathan B. Haule

9 United Nations Road; Upanga West; P.O. Box 65001, Dar Es Salaam: Tel. G/Line: +255-22-2150302/6; Ext. 1015; Direct Line:+255-22-2151378;Telefax:+255-22-2150465;E-mail:dpgs@muhas.ac.tz;Web:https://www.muhas.ac.tz

Appendix 12. Introduction Letter from Njombe Regional office

JAMHURI YA MUUNGANO WA TANZANIA
OFISI YA RAIS
TAWALA ZA MIKOA NA SERIKALI ZA MITAA

Simu Na : (026) 2782912
2782913
Nukushi : (026) 2782914
Barua pepe: rc@njombe.go.tz
ras@njombe.go.tz
ras.njombe@tamisemi.go.tz
Tovuti : www.njombe.go.tz

Ofisi ya Mkuu wa Mkoa,
1 Barabara ya Bomani,
S.L.P. 668,
59101 NJOMBE.

Unapojibu tafadhali taja:-
Kumb.Na. AB.301/326/01J/265

26 Julai, 2023

Mkurugenzi Mtendaji,
Halmashauri ya Wilaya,
S. L. P. 19,
LUDEWA.

Kuh: **UTAMBULISHO**

Tafadhali husika na somo la hapo juu.

2. Kwa barua hii namtambulisha kwako **Bw. Jonathan B. Haule** ambaye ni mwanafunzi kutoka Chuo Kikuu cha afya na sayansi shiriki kwa ajili ya kufanya utafiti wa andiko lake lenye somo **"FACTORS AFFECTING EXCLUSIVE BREASTFEEDING AMONG NURSING MOTHERS IN NJOMBE REGION SOUTHERN HIGHLAND TANZANIA"** na utafiti huo utafanyika katika Halmashauri yako.

3. Tafadhali naomba umpokee na kumpa ushirikiano ili aweze kufanya utafiti kwenye eneo lako kuanzia 01 Agosti,2023 hadi 30 Disemba, 2023.

4. Natanguliza shukrani kwa ushirikiano wako.

Dkt. Juma Mfanga
Kny: **KATIBU TAWALA MKOA**

Nakala: Bw. Jonathan B. Haule

Appendix 13: Introduction Letter from Njombe Regional office

JAMHURI YA MUUNGANO WA TANZANIA
OFISI YA RAIS
TAWALA ZA MIKOA NA SERIKALI ZA MITAA
HALMASHAURI YA WILAYA YA LUDEWA

Unapojibutafadhali taja:
Kumb. Na. LDC/DMO/S.10/244/84 31/07/2023

KWA YEYOTE ANAYEHUSIKA,

YAH: JONATHAN B. HAULE

Aliyetajwa hapo juu ni mwanafunzi wa Chuo cha Afya na Sayansi Shiriki kwa ajili ya utafiti wa andiko lake lenye somo **"FACTORS AFFECTING EXCLUSIVE BREASTFEEDING AMONG NURSING MOTHERS IN NJOMBE REGION SOUTHERN HIGHLAND TANZANIA"**

Ili kukamilisha kazi hiyo anafanya utafiti wa matokeo ya huduma za kutembelea vituo vya kutolea huduma ya Afya, ambapo atapita baadhi ya Zahanati na vituo vya Afya katika Wilaya yetu ya Ludewa.

Tunaomba mpatieni ushirikiano pale anapoomba taarifa kwa ajili ya kazi yake ya utafiti.

Ahsante,

COUNCIL MEDICAL OFFICER OF HEALTH (CMoH) LUDEWA DC

Emmanuel Mushi
Mkuu wa Divisheni ya Afya,
Ustawi wa Jamii na Lishe
LUDEWA.

Nakala: Mkurugenzi Mtendaji (W),
S.L.P. 19,
LUDEWA – Aione kwenye Jalada

Barua zote zitumwe kupitia anuani ifuatayo:-
Ofisi ya Mkurugenzi Mtendaji (W), Halmashauri ya Wilaya ya Ludewa, 3 Barabara ya Bomani, S. L. P 19, **59401 NJOMBE**,
Simu +255 26 2790120, Nukushi + 255 26 2790128, Baruapepe; ded@ludewadc.go.tz, Tovutiwww.ludewadc.go.tz

Appendix 14: Ethical Clearance from MUHAS

UNITED REPUBLIC OF TANZANIA

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES

OFFICE OF THE DIRECTOR – RESEARCH, PUBLICATIONS AND INNOVATION

Ref. No.DA.282/298/01.C/1787 Date: 07/07/2023

MUHAS-REC-07-2023-1787
JONATHAN B. HAULE
SHOOL OF PUBLIC HEALTH AND SOCIAL SCIENCES
MUHAS

RE: APPROVAL FOR ETHICAL CLEARANCE FOR A STUDY TITLED: FACTORS AFFECTING EXCLUSIVE BREASTFEEDING AMONG NURSING MOTHERS IN NJOMBE REGION SOUTHERN HIGHLAND TANZANIA

Reference is made to the above heading,

I am pleased to inform you that the Chairperson has on behalf of the University Senate, approved ethical clearance of the above-mentioned study, on recommendations of the Senate Research and Publications Committee meeting accordance with MUHAS research policy and Tanzania regulations governing human and animal subjects research.

APPROVAL DATE: 07/07/2023
EXPIRATION DATE OF APPROVAL: 07/07/2024

STUDY DESCRIPTION:
Purpose:
The purpose of this cross-sectional study is to determine factors affecting exclusive breastfeeding among nursing mothers.

The approved protocol and procedures for this study is attached and stamped with this letter, and can be found in the link provided:
https://irb.muhas.ac.tz/storage/Certificates/Certificate%20-%2014782.pdf and in the MUHAS archives.

The PI is required to:

1. Submit bi-annual progress reports and final report upon completion of the study.
2. Report to the IRB any unanticipated problem involving risks to subjects or others including adverse events where applicable.
3. Apply for renewal of approval of ethical clearance one (1) month prior its expiration if the study is not completed at the end of this ethical approval. You may not continue with any research activity beyond the expiration date without the approval of the IRB. Failure to receive approval for continuation before the expiration date will result in automatic termination of the approval for this study on the expiration date.
4. Obtain IRB amendment (s) approval for any changes to any aspect of this study before they can be implemented.
5. Data security is ultimately the responsibility of the investigator.
6. Apply for and obtain data transfer agreement (DTA) from NIMR if data will be transferred to a foreign country.
7. Apply for and obtain material transfer agreement (MTA) from NIMR, if research materials (samples) will be shipped to a foreign country,
8. Any researcher, who contravenes or fail to comply with these conditions, shall be guilty of an offence and shall be liable on conviction to a fine as per NIMR Act No. 23 of 1979, PART III section 10 (2)
9. The PI is required to ensure that the findings of the study are disseminated to relevant stake holders.
10. PI is required to be versed with necessary laws and regulatory policies that govern research in Tanzania. Some guidance is available on our website https://drp.muhas.ac.tz/.

Dr. Nahya Salim Masoud,
Chairperson, MUHAS Research and Ethics Committee

