KNOWLEDGE AND DETERMINANTS OF EXCLUSIVE BREASTFEEDING AMONG NURSING MOTHERS AT MBALE REGIONAL REFERRAL HOSPITAL (MRRH)

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Declaration

I Ruth Muthoni Mwangi hereby declare that this work title: is my original work, is not plagiarized, and has not been submitted to any other institution for any award.

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Approval

This Dissertation has been submitted for examination with my approval as supervisor.

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Dedication

This dissertation is dedicated to The Almighty God for his guidance and strength that has seen me through this study.

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I give glory to God for this achievement. To my beloved Husband Kalyebi Daniel, my son Musana Jason and Daughter Musana Chloe Leeya who shouldered all the burden of my postgraduate studies, to my father Eliud Mwangi, Mother Alice Wambui Mwangi, Brother George Maina Mwangi and Sister Mary Wanjiku for their continuous support and encouragement.

List of Acronyms and Abbreviations

BMS	Breast Milk Substitutes
CBO's	Community based organizations'
CHW's	Community health workers
EBF	Exclusive Breast feeding
MRRH	Mbale Regional and Referral Hospital
NCD's	Non-Communicable diseases
NGO's	Non-Governmental organization
SSA	Sub- Saharan Africa
UNICEF	United Nations Children Fund
WHO	World Health Organization
UN	United Nations
MOH	Ministry of Health

Operational Definition of terms

Exclusive Breast Feeding: Exclusively Breast Feeding (EBF) encompasses feeding of babies with purely breast milk directly or expressed without any additional liquids or solids apart from multivitamins drops or syrups and or medicine for the first 6 months of their life

Knowledge of Exclusive Breast Feeding: Clearly exhibiting an understanding of the practice that qualifies that a baby has only been taking purely the mother's milk for the first 6 months of life in addition to multivitamin drops or medicine when needed.

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Abstract

Introduction: Exclusive breast-feeding contributes significantly to child survival and development, but many mothers in Africa do not exclusively breastfeed their infants. The study aims to identify the knowledge and determinants of Exclusive Breastfeeding among the nursing mothers in Mbale regional and Referral Hospital.

Methods: A mixed methods approach was used to collect Data. Respondents included 385 Nursing mothers and 5 health practitioners. Participants were nursing mothers who attended Young Child Clinic and they were selected using simple random sampling. SPSS was used to analyze the data; chi-square test was performed to check for association between factors and outcome variables before performing logistic regression. Bivariate & Multivariable logistic regression were performed to identify factors independently associated with exclusive breastfeeding. Strength of association was measured using odds ratio, and 95% confidence interval.

Results: The study gathered that the prevalence rate of EBF in Mbale Regional referral Hospital was low at 45 percent attributed to the knowledge encompassed by the mothers that accessed ANC, PNC services. The study established that majority (85.5 %) of the mothers had information about EBF and there was a significant relationship between maternal socio-demographic factors and EBF in which Beta value (Beta = 0.27, $p < 0.001$); and obstetric factors (Beta = 0.438, $p < 0.001$) and child related factors (Beta = 7.3, $p < 0.001$). Majority of the mothers received EBF information from ANC and PNC sessions (54.5), medical staff (26.5) friends and family (15.3) and lastly social media (3.6) although the practice was still wanting.

Conclusions: This research paper has navigated the intricacies of sustainable areas to focus on to ensure Exclusively breastfeeding, shedding the pivotal role of health workers both offering Information, Education and support system as well as care and treatment of women pre and post Natal Period.

Recommendations: Strengthening efforts in providing comprehensive ANC and PNC packages, to ensure that mothers get to benefit from the health education sessions offered as well as better obstetric care pre and post Natal ensuring wellness enough to breastfeed. Relentless advocating for baby friendly spaces and facilities to enable working mothers leverage on opportunities to breastfeed at work during healthy breaks.

CHAPTER ONE
INTRODUCTION

1.1 Background to the Study

Exclusively Breast Feeding (EBF) is stated as the feeding of babies with only breast milk directly or expressed without any additional liquids or solids apart from multivitamins drops or syrups and or medicine for the first 6 months of their life (Nabunya, Mubeez, & Awor, 2020) and thereafter continued breastfeeding with introduction to appropriate complimentary feeds up to 2 years and beyond (Hamze, Mao, & Reifsnider, 2019). In 2012 the World Health Assembly endorsed a comprehensive maternal, infant and young child nutrition implementation plan with six specific global nutrition targets, one of which was to increase the rate of EBF in the first 6 months to at least 50 % by 2025.

The Global Prevalence Rate of EBF is estimated at below 40 percent (Nteziyaremye et al, 2021, yet there's role of breastfeeding in ensuring a healthy childhood cannot be underestimated (Edward, 2012; Kinshella et al, 2021). It is a human right for both mother and child to give and receive exclusive breastfeeding until 6 months then continue breastfeeding while initiating complementary feeding for 2 years and beyond hence this should not be violated by inexperienced medical professionals and formula milk supplement companies (WHO, 2022).

In developing countries EBF is critical mainly because of the poverty levels and many families cannot afford alternative or supplementary nutrition for their children, it, therefore, saves household resources (Kinshella et al, 2021). EBF is an important vehicle for attaining the millennium development goal (MDG) of reducing the under-5 mortality rates by two-thirds (WHO, 2022). Only 18 out of 49 countries are on track toward meeting the WHO Global Nutrition Target 2025 on improving maternal, infant, and young child nutrition by 50 percent (Kinshella et al, 2021). However national-level analysis found that most countries in Sub-Saharan Africa will not meet the WHO global nutrition target of 50 percent EBF prevalence by 2025 (WHO & UNICEF, 2014; Kinshella et al, 2021).

In Sub Saharan Africa the prevalence rate of EBF was at 33 percent by 2021, this is a slightly lower expectation to the 50 percent expected thresh hold. It has been affirmed that 55 to 75 percent of infant deaths under 5 years of age is attributed to inappropriate breastfeeding practices (Kinshella et al, 2021).

In Uganda, over 90 percent of children are breastfed as postulated in the studies conducted in Eastern Uganda. The prevalence of exclusively breastfed infants dwindles as they grow as postulated in the statistics stated below; 83 percent of infants between 0-1 months are exclusively breastfed, 69 percent of infants between 2 to 3 months are exclusively breastfed and 43 percent of infants between 4-5 months are exclusively breastfed; EBF prevalence rates decline with the growth of infants between 0 to 5 months (Nabunya, Mubeez, & Awor, 2020). The EBF prevalence rate in Uganda is 42.6 percent (Nteziyaremye et al, 2021).

Several other factors associated with EBF have been commonly observed by various studies in Uganda including income level, education level, wealth and employment, and work breastfeeding policy (Nabunya, Mubeez, & Awor, 2020). Despite the low levels of prevalence of EBF in Uganda in general, EBF remains an important public health initiative to reduce the infant mortality rate (Nteziyaremye et al, 2021), yet the knowledge and determinants have not been emphasized in most studies in Uganda. It is clear that EBF improves sensory and cognitive development, protects the infant from infectious and chronic diseases and necessitates quick recovery of ill infants. Breastfeeding helps in the well-being of mothers and reduces the health risks of cancers and it is safe for the environment (Adan, Japheth, & Phidelis, 2020). Areas in Africa with low EBF prevalence have high cases of non-communicable diseases and high infant mortality rates (Natalia et al, 2019).

1.3 Problem Statement

The United Nations Children's Education Fund (UNICEF, 2021) reports that globally 40% of infants aged six (6) months and younger are exclusively breastfed. Of this estimate, only 23 countries across the globe have achieved the UNICEF and WHO recommendation of EBF for 60% of infants six (6) months. Several factors have been found to be associated with infant feeding practices. These include income, education, wealth and employment (Malhotra 2013). For example, Work has been found to hinder EBF as mothers stop breastfeeding soon after returning to work especially when the environment at work is not conducive for continued breastfeeding. The lack of EBF has in turn been associated with increasing child malnutrition (Stewart 2008)]. In Uganda 36% of Ugandan children below 6 months are not breastfed exclusively despite its active promotion (Nambuya, 2020). In Manafwa district 42% of the children below six months were not exclusively breast fed (Wataka, 2021) The implication of these findings is that it is possible that many mothers do not practice EBF as a result of inadequate knowledge about its health importance. Therefore, in this study the

researcher will ascertain how Knowledge and other determinants are associated to Exclusive Breastfeeding among Nursing Mothers at Mbale Regional Referral Hospital.

1.3 Research Questions

1.3.1. What is the maternal knowledge on EBF among nursing mothers with infants 6-12 months old attending the Young Child Clinic Mbale Regional Referral Hospital?

1.3.2 What are the factors that determine Exclusive Breast Feeding among nursing mothers with infants 6-12 months old attending the Young Child Clinic Mbale Regional Referral Hospital?

1.3.3. What are the challenges associated with Exclusive Breast Feeding among nursing mothers with infants 6-12 months old attending the Young Child Clinic Mbale Regional Referral Hospital?

1.4 Objectives of the Study

1.4.1 General Objective

The study aimed to determine the knowledge and determinants of exclusive breastfeeding among nursing mothers with babies aged 6-12 months old attending the Young Child Clinic at Mbale Regional Referral Hospital.

1.4.2 Specific Objectives

The following objectives were used in carrying out the study.

1) To assess the maternal knowledge on Exclusive Breast feeding among nursing mothers with infants 6-12 months old attending the Young Child Clinic Mbale Regional Referral Hospital.
2) To identify the factors associated with Exclusive Breast Feeding among nursing mothers with infants 6-12 months old attending Young Child Clinic in Mbale Regional Referral Hospital.
3) To explore the facilitators and challenges associated with Exclusive Breast Feeding among nursing mothers in Mbale Regional Referral Hospital.

1.5 Justification of the Study

With the increasing level of high infant mortality rates, there is a need to strengthen the role of medical facilities and skilled medical professionals in ensuring effective EBF among breastfeeding mothers in MRRH.

This study will explore the challenges and propose solutions to meet the existing challenges that will in turn play a significant part in increasing the bar and level of knowledge of EBF in MRRH. Thus, there is a need to provide up-to-date statistics that are crucial in guiding the future of EBF in Mbale and Uganda as a whole.

There is limited literature available on EBF, especially in Eastern Uganda and specifically in Mbale district that focus on both the role of mothers and medical professionals/facilities in enhancing EBF among breastfeeding mothers.

There is also a need to educate and inform nursing mothers, health professionals, policymakers, and fellow scholars in this field regarding the prevalence, benefits, and overcoming challenges related to EBF in Mbale, Uganda.

1.6 Significance of the Study

EBF is significant to breastfeeding mothers' and children's health, thus this study will provide significant information that will help key stakeholders including breastfeeding mothers, policymakers, community leaders, and health professionals in strengthening their commitment to supporting the practice of EBF in Mbale Regional and referral Hospital. With the utilization of the findings of this study, other districts in Uganda will have a point of reference to emulate when making EBF decisions. Legislators will also use the study outcomes to develop policies to augment effective EBF and adopt effectively and enhanced EBF healthcare administration mechanisms. In addition, the findings of this study will add to the existing body of knowledge and theory concerning EBF in urban medical facilities.

1.7 Theoretical Framework

The Theory of Planned Behaviour (TPB) is a valuable framework for studying the research topic "Knowledge and Determinants of Exclusive Breastfeeding". This theory posits that behaviour is determined by intention, which is influenced by attitudes, subjective norms, and perceived behavioural control (Sutton, 1998). Meta-analyses have shown that the TPB can

explain a significant portion of the variance in both intention and behaviour, making it a robust model for understanding and predicting behaviour related to exclusive breastfeeding (Sutton, 1998).

TPB has been extended to examine exclusive breastfeeding intentions among pregnant nulliparous women, demonstrating its adaptability and relevance across different demographics (Yazdanpanah et al., 2022). By incorporating constructs such as attitudes, subjective norms, and perceived behavioural control, the TPB provides a comprehensive framework for understanding the psychosocial factors that influence the initiation and continuation of exclusive breastfeeding (Lau et al., 2018).

In conclusion, the Theory of Planned Behaviour offers a systematic and comprehensive approach to the study of knowledge and determinants of exclusive breastfeeding. By considering factors such as attitudes, subjective norms, and perceived behavioural control, researchers can gain insight into the psychosocial determinants that influence exclusive breastfeeding behaviour and develop targeted interventions to encourage and support breastfeeding practices.

1.7 Conceptual Framework of Knowledge and Determinants of Exclusive Breastfeeding among Nursing Mothers at Mbale Regional Referral Hospital.

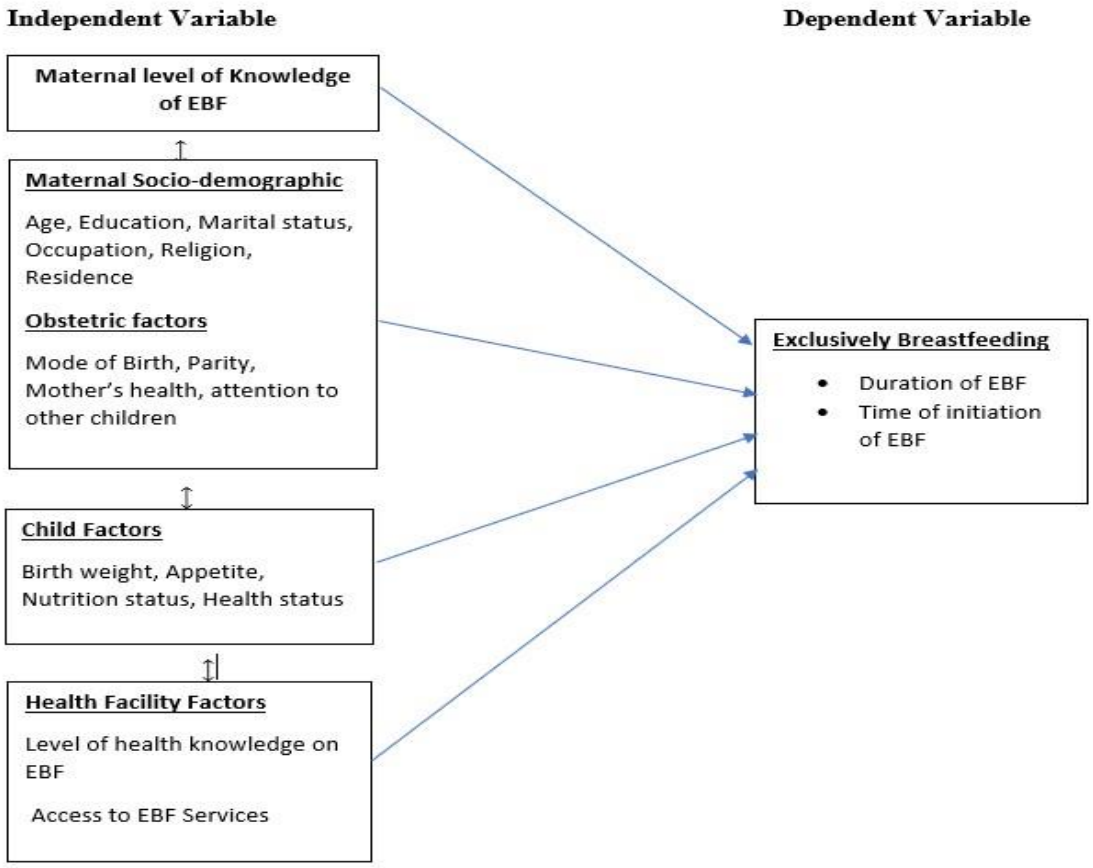

Figure 1: The conceptual framework explores the relationship between variables in the study to determine the knowledge and determinants of EBF among nursing mothers at MRRH.

Parents decisions on how to feed their newborns is influenced by multiple factors and studies show that EBF practice is associated with various factors (Cascone D, et al, 2019). This study has categorized the various factors influencing EBF among mothers breastfeeding children between 6-12 months in terms of; socio-demographic, maternal level of knowledge, Obstetric factors, child factors and health facility factors (Independent variable) with exclusive breastfeeding being the dependent variable that is determined by duration of EBF and time for initiation of breastfeeding post-delivery.

CHAPTER TWO
LITERATURE REVIEW

2.0 Introduction

Exclusive breastfeeding (EBF) for 6 months is considered a major public health intervention to reduce the escalating child mortality of neonates and infants in low and middle-income countries. In most East Africa countries, exclusive breastfeeding has not met the recommendation of WHO/UNICEF that a baby should be fed only breast milk for the first 6 months. The review of related literature for this study has been guided by purpose the study which is to investigate the determinants of EBF feeding practices among mothers breastfeeding children aged between 6-12 months.

2.1 The Knowledge of Exclusive Breast Feeding Among Nursing Mothers

Empirical evidence establishes that for EBF to be effective, education, information, and communication geared towards behavior change is key to influencing the attitude and knowledge of EBF for both health professionals and mothers (Jiayou et al, 2021). A study in rural Kenya on EBF among first-time mothers revealed that good knowledge and positive attitude toward EBF have been predicted by longer feeding hours, increased support or high-level support from the community and medical professionals, and confidence among mothers to focus on EBF (Alison, T. et al, 2020). Thus, the need to explore the phenomenon under study in Mbale, Uganda.

A systematic review by Dukuzumuremyi et. al (2020) on the knowledge, attitude, and practice of EBF among mothers in East Africa resolute that mothers in East Africa had inadequate information about EBF in terms of the prominence of EBF, the extent of EBF, and the significance of colostrum to the child. A percentage of 47.9 acknowledged the importance of colostrum and 49.2 percent knew the duration of EBF to be 6 months. The study also recognized that low levels of EBF were associated with limited access to antenatal and postpartum breastfeeding counseling, wrong perceptions, limited knowledge, and wrong attitude regarding EBF (Dukuzumuremyi et al, 2020). However, the study did not focus on the role of healthcare facilities and professionals in influencing knowledge and perception of EBF among nursing mothers and healthcare professionals.

A community-based cross-sectional study targeting 428 mothers of children aged 0 to 5 months in the informal Kampala by Nabunya et al (2020) observed that mothers of children

under 6 months had limited knowledge regarding EBF and the benefits of BF, this was associated with failure of mothers to attend antenatal counseling on breastfeeding and poor government policy on maternity leave in the informal sector which affected EBF practices. The study determined that 40.5 percent of the mothers supplemented fluids including warm water and 35.5 supplemented glucose solutions and as the infants grew the levels of EBF dropped drastically for infants aged 0 to 6 months (Nabunya, Mubeez, & Awor, 2020). However, the study did not explore the role of health professionals and facilities yet acknowledged the negative perception and limited knowledge associated with work-related environments, laws, and policies in the informal sector employment.

In 2021, a descriptive cross-sectional study was conducted to assess the prevalence and factors prompting EBF among 201 breastfeeding mothers with babies aged 0 to 24 months attending Bushenyi District health facilities. The study gathered that the prevalence rate of EBF in Bushenyi District was low at 34.3 percent mainly because of inadequate information and awareness regarding EBF. Thus, a majority of the mothers introduced cow's milk, porridge, mashed banana, and formula milk from the 1st to 6th month or more (Habiba, 2020). The study however did not explore the knowledge and determinants of EBF, therefore presenting the requisite for this study to establish the same in Mbale District.

Another descriptive cross-sectional study carried out in Mogadishu to ascertain the prevalence of EBF among 448 nursing mothers by Adan et al (2020) determined that only 30 percent of the women practiced EBF and the knowledge of EBF determined that only 51.1 percent had a decent knowledge and listed 3 benefits of EBF (Adan, Japheth, & Phidelis, 2020). The study equally explored the health benefits of EBF to both mother-baby relationships and determined that the prevalence of EBF was very low at 29.7 percent in Waberi District in Mogadishu Somali. The study explored the socio-economic demographic influences such as age, level of education, parity, occupation status, nuptial status, and income level in Somalia that played a superior part in influencing nursing mothers to practice and initiate mixed feeding instead of strictly practicing EBF. Thus, there is a need for this study to explore the current state, knowledge, and determinants in Mbale specifically MRRH.

A cross-sectional study that was carried out on prevalence, attitudes, knowledge, and aspects linked with EBF among 385 mothers of infants below 12 months in Bangladesh proved that positive attitudes good knowledge, and socio-demographic aspects were momentous in improving EBF practices among mothers. The level of EBF in Bangladesh was influenced by

geographical factors, the standard of living and education of the mother, the mode of delivery, the gender of the child, cultural practices, and guidance given by medical professionals (Hasan et al, 2021). These findings provide valuable insights into the Knowledge of EBF, however, further study is needed to address several limitations and extend our understanding in this area in Mbale, Uganda.

A systematic review of barriers to EBF in SSA established that Lack of knowledge of EBF is considered to be one of the biggest challenges and most common barriers to achieving effective EBF in Sub-Sahara Africa (Izechukwu, Eleje, & Obinna, 2021). The study established that maternal-infant factors have the most significant impact on the practice of EBF in SSA. Mothers have supposedly ascribed to breast milk inadequacy which deters effective EBF. Thus, the necessity to find the obstacles regarding the scope of this study in the Ugandan context.

2.2 The Determinants of Exclusive Breast Feeding among Nursing Mothers

In East Africa, a systematic review was carried out to determine the knowledge, attitudes, and practice of EBF among mothers and it established an EBF prevalence of 42 percent. The study kept track of the level of EBF on a positive attitude and knowledge of EBF. Selectively, socioeconomic factors such as cultural beliefs, education, and access to medical healthcare of the mother are prominent influencers towards EBF among mothers (Dukuzumuremyi et al, 2020). There is a need to determine how the factors such as access to medical health care professionals influence the choice and decision of the nursing mother concerning EBF practice.

In Bangladesh, a study on the prevalence of EBF by Hasan et al (2021) gathered that socioeconomic and demographic factors such as age, gender of the child, standard of living, education, and occupation of the mother, mode of delivery, culture and religious practices influenced the attitude and perception of breastfeeding mothers on the initiation of EBF. The study reported low prevalence rates of EBF were associated with place and mode of birth. While assessing Mothers who delivered at home viz a viz mothers that had a medical institute delivery practice of EBF was founded that the prior option did not practice effective EBF. There is a need to establish the dynamics in Mbale Uganda and how they affect they would influence a mother’s decision to initiate EBF.

Current studies have established a link between the prevalence rates of EBF among nursing mothers in Uganda to socioeconomic factors. A mixed method cross-sectional study in Manafwa District in Eastern Uganda established that EBF prevalence was greatly influenced by the education level of mothers and employment status. The study focused on infants of 0 to 6 months and examined socio-economic and demographic determinants such as employment, education, mother's age, infant's age, family size, sex of the child and religion, HIV status of the mother, number of antenatal clinic visits (Nteziyaremye et al, 2021). In that regard, there are gaps to be investigated in the determinants that are associated with EBF among nursing mothers of infants aged 6 months and above in Mbale District.

A similar study that was conducted by Habiba (2020) on the prevalence and factors influencing EBF among nursing mothers attending health facilities in Bushenyi District indicated that the basic influencers under socio-economic factors are such as the child's sex, age, weight, desire for food, education level, and income level, and religion of the mother, and religion. The study was rationalized based on the age of the infant, weight, and desire to eat specifically thereby shifting the focus to the child and how they played a part in the initiation of EBF. There is, therefore, a need to establish a ground of mother/child determinants/indicators in the initiation of EBF in Mbale.

In assessing the prevalence of EBF, a descriptive cross-sectional study earmarked the socio-demographic and psychological factors associated with EBF among 201 lactating mothers with infants aged 6 to 12 months attending Bushenyi District health facilities. It was observed that the majority of the mothers practiced mixed feeding. The low levels of EBF were as well related to the level of education, occupation of the mother, mode of delivery, HIV status of the mother and breastfeeding disorders among lactating mothers (Caroline, 2018). However, the study did not explore how the socio-psychological factors influenced the level of EBF among breastfeeding mothers in the lactation initiation within the first hour of birth in a bid of EBF, this necessitates the gaps to explore the phenomenon under study in Mbale, Uganda.

A cross-sectional study exploring the determinants of EBF in Kenya, Wajir County Hospital among mothers of infants aged 0 to 6 months determined that despite the knowledge of EBF among mothers the practice of EBF was handled poorly, majorly because of cultural norms and beliefs. The mothers had directly been influenced by mothers-in-law and traditional birth attendants. The study also noted that socioeconomic (education level of mothers and standard

of living) and rigid religious nutrition-related beliefs majorly Islam hindered the effectiveness of EBF (Mohamed, Sophie, & Victor, 2020).

A study carried out in Kinshasa on EBF among 162 mothers with infants aged 0 to 6 months reported that mostly social norms rather than political and economic were the predominant causes of low EBF rates. The study established that socio-norms and beliefs were unsupportive and mothers practiced mixed feeding most especially integration of water alongside breastfeeding. The study established that the main barrier to EBF was the belief that mothers had to please friends and family to fear and protection of their perceived social status from mockery and name-calling for practicing EBF (Francine, Anastasia, & Dieudonne, 2019). There is a need to conduct in-depth research in the Mbale regional referral Hospital to establish the case of mothers in Mbale about the initiation and practice of EBF.

A joint study conducted by WHO and UNICEF encompassing 140 countries on the perception and practice of EBF, argued the potential of health professionals and policymakers in enhancing and supporting EBF noting that their influence contributed to the increased rates of EBF in developing countries (WHO, 2022). The phenomenon under study in Mbale and the contribution towards the initiation and practice of EBF has not yet been established in Mbale hence probes the need to explore.

A scope review study on the knowledge of health professionals on BF indicated the health benefits of EBF but agreed on the standard length of EBF recommended by WHO was not aligned with the knowledge of health professionals regarding BF and EBF. The study focused on conflicting medical professionals on weaning. A total of 43,579 health professionals were involved in establishing the knowledge of BF and EBF, the source of information, and the benefits of BF in general (Duarte, L et al, 2022). It was evident that health professionals' knowledge of BF was not aligned with the recommendations of WHO which were associated with a lack of specific training in BF and thus there is a need to establish the facts and trends in Mbale Regional Referral Hospital.

A study cluster longitudinal study in 16 villages in Kiandutu slums in Thika, Kenya on the effectiveness of community health workers (CHWs) in improving early initiation and EBF rates in a low resource setting among pregnant women attending maternal clinics established that CHWs have the potential in promoting EBF yet they lack support by government and community in promoting EBF. They influenced breastfeeding confidence and dietary

practices for mothers and developed a link between CHWs and health centers. The study observed that the CHWs visited expectant mothers at home (twice) and after delivery (every month for 6 months) and advised them on EBF (Dorothy, Prisca, & Elizabeth, 2020). The role of health professionals cannot be undermined in this study to augment EBF among breastfeeding mothers especially in the area under study to establish different health professional practices to heighten EBF practice.

A study that was carried out by Mohamed et al (2020) on the determinants of EBF in Kenya among nursing mothers attending Wajir County Hospital established the need for strengthening community health strategies and educating health professionals on EBF to combat complex religious beliefs, influence from traditional birth assistants working together with the community to enhance EBF and influence cultural beliefs on BF and mother dietary practices. The study established that the level of initiation and practice of EBF amongst practitioners in the county was limited. The Ugandan scenario begs to be investigated in this regard and how it influences the imitation and practice of EBF in the Mbale District.

Obstetric factors and EBF

Planned pregnancy and vaginal delivery were found as factors that had an effect on the initiation time of BF. Planned pregnancy and vaginal delivery were found as significant factors for early BF in the logistic regression analysis. Early BF was significantly higher in the vaginal delivery group than in the caesarean one (Yilmaz et.al 2017). Another study emphasized how EBF increased among mothers who had vaginal deliveries than their counterparts. Among the other factors that negatively influence the achievement of maternal goals are caesarean section as a type of delivery. This practice is already recognized by several authors as a praxis capable of having a negative impact on the initiation and maintenance of BF (Salas et.al 2020)

The empirical literature suggests that giving birth through cesarean section (CS) is a substantial barrier to the practice of EBF. A systematic review notes that with CS the rate of initiation of breastfeeding is lower compared to vaginal birth which interns delay initiation of breastfeeding, hinders skin-to-skin contact with the mother from the onset of delivery, and separation of mother-to-child for medical reasons depending on the age of the child on cesarean section delivery (WHO, 2022).

In addition, CS is associated with postpartum fatigue, pain, and other complications that affect breastfeeding behaviors contributing to EBF challenges among nursing mothers. This challenge may cause stress and trauma, depression, and frustration which intern leads to low production of breast milk (World Health Organization, 2016; WHO, 2022). A cross-sectional and observation study noted that with CS birth breastfeeding challenges were prevalent which impedes EBF practices mainly because of the trauma and the associated challenges of CS birth especially when the child was born preterm (Kavle et al, 2017).

2.3 The Challenges Associated with EBF among Nursing Mothers in MRRH

Empirical Studies in SSA have indicated that poor education on EBF during antenatal and prenatal clinics is a challenge that is associated with knowledge and benefits of EBF among nursing mothers. Healthcare amenities have an obligation of providing ample information and maternal services (Izechukwu, Eleje, & Obinna, 2021).

A study that was carried out in the United States of America indicated that separating mothers from their babies during birth in the hospital affected negatively the initiation of BF and EBF. The study indicated that poorly trained professionals advise the mothers on EBF based on their knowledge and little or no information based on evidence-based knowledge or peer-reviewed breastfeeding fact (United States Breastfeeding Committee, 2018). There is a need to establish the facts and trends on EBF in Mbale Regional Referral Hospital.

A systematic review on barriers and facilitators for early EBF in SSA explored that health facilities in SSA barriers to postnatal breastfeeding support were related to poor health facility infrastructure coupled with overcrowding, insufficient equipment, small and overcrowded maternity wards reported in Somalia, lack of privacy for women to breastfeed was reported in Ghana, poor policy dissemination for mothers related to HIV was reported in South Africa. Health facilities management challenges relating to EBF included poor leadership and commitment to enhancing EBF, and low staffing was equally reported in Southern and East Africa. In Nigeria and West African countries, it was established that health workers' misconceptions relating to feeding options for HIV/AIDS positive mothers yet non-medical staff would give nursing mothers pre-lacteal feeds. The study observed a lack of knowledge and misconceptions about EBF among health workers leading to inconsistencies concerning the initiation and practice of EBF and the utilization of formula milk (Kinshella et al, 2021). The study however, fixated more on the challenge surrounding

healthcare amenities in SSA. There is therefore a prerequisite to establish the Ugandan scenario, specifically in Mbale District.

A cross-sectional study that was carried out among 364 mothers attending Masaka Hospital in Kigali Rwanda to establish knowledge, attitude, and practice of EBF established that 84 percent of the mothers had good knowledge of EBF and its benefits. From the study result, it was observed that the knowledge of EBF and its benefits was relatively high following vigorous efforts by the government to educate nursing mothers on the advantages of EBF (Jiayou et al, 2021). The study though did not emphasize the knowledge of EBF thus the need to establish the gap in the Uganda scenario.

2.4 Summary of Literature Review

For six months, exclusive breastfeeding (EBF) is regarded as a significant public health intervention aimed at curbing the rising infant and neonatal mortality rates in low- and middle-income nations. The WHO/UNICEF recommendation that a baby should be fed only breast milk for the first six months of life has not been fully met by exclusive breastfeeding in the majority of East African countries. But a lot of the research that has already been done has not investigated how knowledge affects EBF in nursing mothers and medical professionals. Furthermore, they acknowledged the unfavorable perception but did not investigate the role of healthcare facilities and professionals. In this study, the researcher will ascertain the level of knowledge that nursing mothers have about EBF and investigate the difficulties that arise when implementing it at Mbale.

CHAPTER THREE
METHODOLOGY

3.0 Introduction

This chapter discusses the methodology of the study, it describes the research design, the population and sample size, the sampling design, the instruments and the process of data collection and finally the chapter concludes by describing the statistical procedures that were used to analyze the data so as to achieve the objectives of the study.

3.1 Research Design

A hospital based cross-sectional analytical mixed methods design was carried out to investigate the determinants Knowledge and determinants of EBF practice. Semi-structured questionnaires that consisted of multiple closed and open-ended questions were administered to the mothers and key informant interviews were conducted among health workers in the maternity section of Mbale regional referral hospital.

3.2 Study Area

The study was carried out at the government-owned and funded Mbale Regional Referral Hospital that began as a health center in 1924 and has expanded to become a regional referral hospital (MOH) with 450 beds. It is situated in Mbale City's center, 250 kilometers to the east of Kampala. Over 4.6 million people live in the 16 districts of Busia, Tororo, Butaleja, Pallisa, Budaka, Mbale, Bududa, Sironko, Manafwa, Namisindwa, Butebo, Kapchorwa, Kibuku, Bukwo, Kween, and Bulambuli, which are served by the hospital.

3.3 Target Population

The study targeted mothers 18-45 years of age with children between 6 months to 12 months of age. The study therefore required mothers to recall their breastfeeding experiences in the first six months of a child’s life. The period till 1 year was chosen because by that time it is easier for mothers to recall the events of feeding their children.

3.3.1 Inclusion Criteria

Mothers with infants aged 6 to 12 months who presented to the health Centre for growth monitoring and other services supplementation without any acute or chronic illness were eligible to participate in the study.

3.3.2 Exclusion Criteria

Mothers whose children were sick and in critical condition were excluded

3.4 Population and Sampling Technique

The study population included 385 nursing mothers aged 18-45 years with infants of age 6 to`12 months attending Mbale Regional Referral Hospital. A simple random sampling procedure was followed in selecting the respondents (the mothers). I approached both the midwives and staff working in the post-natal clinics, and had a briefing on the nature of the study to get a more focused view on days to target and the flow of activities in the clinics to ascertain the number feasible to collect data at each clinic session. On particular clinic days mothers were registered in the PNC registers and as they received health Education elements of the study were highlighted and mothers were taken through the consent form when they showed interest in participating in the study. The simple random sampling which involved selecting respondents from the study population by chance, and a lottery technique was used where yes and no were written on small papers, folded, and mixed through a small box. Then the mothers picked one at a time and those who picked were selected to participate in the study and were asked to sign the consent form prior to the questionnaire being administered.

For Qualitative data, health workers were purposefully selected to participate in Key informant Interviews. With the prior knowledge on the need to get an in-depth insight from specialists in the subject matter, I used my judgement to hand pick the eligible participants that fit the profile.

3.5 Sample Size

To determine the sample size for the nursing mothers the study employed Cochran's formula which is considered appropriate for large populations. P= 0.5 with a 95% confidence level and at least 5 % - plus or minus precision. The 95-confidence level gives a Z value of 1.96;

$$n = \frac{Z^2 Pq}{e^2}$$

$$n = ((1.96)^2 (0.5)(0.5)) / (0.05)^2 = 385$$

n = population size

Critical Value (95%) Confidence level (Z) = 1.96

The margin of error (e) = 0.05

Sample Proportion (p) = 0.5

Therefore, a random sample of 385 nursing mothers was used in the study to determine the objectives under study Where.

3.6 Data Collection methods

Both quantitative and qualitative data was collected between August and September 2023. An Electronic offline semi-structured questionnaire was administered to the 385-lactating mother by the author and two trained research assistants. There were both closed and open-ended questions and respondents selected answers that best described their situation and also permitted them to provide greater depth of response and express personal opinions about the subject as the researchers noted down.

Key informant interviews (KIIs) were held with the 5 purposefully selected health workers to explore their views about exclusive breast-feeding and the policies around breast-feeding as well as their experiences in educating mothers about breast-feeding. The KIIs were guided by a pre-designed interview schedule and were conducted by only the author.

3.7 Pre-Testing of the Instrument

A pilot test was conducted to eliminate biases in framing research questions and data instruments. The test enabled the researcher identify the limitation and errors of the data collection instrument and revisions were made.

3.8 Data Collection Tools

The study used semi-structured mobile phones powered electronic offline questionnaires and Key informant Interview guide (KII) to collect data. The research questionnaire applied the scaling technique composed of a 5-point opinion scale (Likert scale format) where 5 represents a strong disagreement and 1 represents a strong agreement to facilitate qualitative assessment and minimize bias. The structured questionnaire probed well-thought-out responses that guaranteed anonymity. The study equally used interview guides to obtain professional information from health professionals.

3.9 Data Processing and Analysis

3.9.1 Quantitative data

Quantitative data was entered, coded and analyzed using IBM SPSS version 26. Descriptive statistics were computed to determine the prevalence of EBF. Frequencies and percentages were utilized to analyze categorical variables. Prior to doing logistic regression, the chi-square test was used to determine whether factors and outcome variables were related. To identify associated factors, a bivariate logistic regression was performed for each independent variable with EBF. To find variables that were independently associated with the outcome variable, multivariable logistic regression was carried out using variable selection techniques based on backward likelihood ratios. Using the odds ratio and 95% confidence interval, the strength of the association was determined. P-values less than 0.05 were regarded as statistically significant. A statistical fit was performed on the model.

3.9.2 Qualitative data

In-depth interviews were held in a hospital setting where 5 participants were interviewed. 3 of the professionals in maternal and Child health were Mothers and they provided rich data for the study. I recorded all interviews were audio-recorded and they were transcribed verbatim in their entirety by a data analyst. I collected data on enablers and barriers of EBF. Each Interview took 15 -20 minutes. Data was collated and patterns were identified to form themes. Repetitive patterns were coded. I used a deductive and inductive thematic approach for data analysis and the following steps were taken during data analysis;

Familiarizing: This was the first step in data analysis. I familiarized with the data by listening to the audios from time to time, transcribing the audios and reading through the text several times.

Coding and Interpretation; the next step was coding and initial interpretation of the data. The researcher used already existing codes and added more newer ones. After going through the text, all the data identified by the codes was collected together into groups.

Generating Themes; the third step looked at the codes created, identifying the patterns among them, and coming up with themes. The codes that didn't appear a lot and seem vague were discarded. The researcher aimed at creating themes that can potentially tell everything important about the data in regard to the aim of the study.

Three major themes were generated; knowledge about exclusive breastfeeding, importance of exclusive breastfeeding, consequences of none exclusive breastfeeding, the enablers and the barriers of exclusive breastfeeding. Themes and subthemes were constructed to further understand this phenomenon I read the transcriptions independently several times to grasp the meaning of each text as a whole. NVivo 14 software was used to organize the qualitative data by naming essential phrases and paragraphs, which captured examples of the patterns related to the meaning of challenges of EBF.

3.10 Reliability and validity of qualitative data

According to Lincoln and Guba (1980), the researcher relied on the trustworthiness of the participants to collect data that was considered reliable since this was data that was collected from mothers who had lived the experience of breast feeding.

The data was triangulated with the quantitative data during analysis to arrive at study conclusions.

3.11 Data Management

Hard copies of collected questionnaires and consent forms were safely kept under key and lock in my archives. During data entry and analysis, the data clerks used laptops that were password protected

3.12 Quality Control

Sufficient training of research was undertaken to help assistants understand and use the tool. The tool was then pretested to ascertain the quality of the questionnaire and rule out biases. Double data entry was done separately to ensure quality data entry and the candidate regularly reviewing the filled questionnaire to ensure that they are fully and completely foiled

CHAPTER FOUR

PRESENTATION AND INTERPRETATION OF FINDINGS

4.0 Introduction

In this chapter the researcher presents the key results of the study that have been presented according to the study objectives, whereby this chapter presents and interprets the study findings accordingly. Frequency tables with computed mean values and graphical illustrations especially for the quantifiable findings have been developed. The first section presents data for socio-demographic characteristics of the respondents.

4.1: Socio-demographic Characteristics of the Respondents

The study sought to establish respondent characteristics.

Table 4.1: Socio-demographic Characteristics of the Respondents

Socio-demographics		**Frequency (N=385)**	**Percentage**
Age (years)	18-23	116	30.1
	24-30	129	33.5
	31-37	105	27.3
	38 and above	35	9.1
Highest education level	Primary	56	14.5
	Secondary	84	21.8
	Tertiary	134	34.3
	Degree	103	28.1
	Post graduate degree	7	1.3
Marital status	Single	74	19.2
	Married	242	62.9
	Domestic partner	69	17.9
Occupation	Formal	137	35.6
	Informal/self-employed	162	42.1
	Unemployed	86	22.3
Religion	Christian	285	75.0
	Muslim	94	24.4
	Others	6	1.6
Residence	Urban	139	36.1
	Rural	246	63.9

Source: Primary Data 2023

Majority of the of the respondents (Nursing mothers with babies 6-12 months) were 24 to 30 years, 18 to 23 years (30.1%), 31 to 37 (27.3%) years while 9.1% were 38+. On the highest

level of education attained at postgraduate level was 1.3%, followed by a degree 14.5%, then tertiary education at 34.5%, secondary level at 21.8% and primary at 14.5%. 42. On Marital status, married respondents were 62.9%, 19.2% single and 17.9% were domestic partners. Christians constituted the majority of the respondents (74.0%), followed by Muslims at 24.4% then others at 1.6%. Majority of the nursing mothers (35%) were employed, while 22.5% were not employed, with the least (1%) being self-employed. By place of residence, 63.1% were residing in rural settings, while 36.1% were residing in urban settings.

4.2 Knowledge on Exclusive Breast feeding among nursing mothers with infants 6-12 months old attending the Young Child Clinic MRRH

The study sought to establish nursing mothers' knowledge regarding EBF. In the first place the responses were solicited to establish whether breastfeeding mothers were aware of the different breast-feeding practices.

Table 4.2: Breastfeeding Mothers' Awareness of EBF Practices

Response	Frequency	Percentage
Yes	329	85.5
No	56	14.5
Total	385	100

Source: Primary Data 2023

Results in table 4.2 show that majority of the mothers (85.5%) were aware of EBF practices with a few (14.5%) that barely heard about on EBF practices.

4.2.1 Breastfeeding Mothers' knowledge on sources of information on Exclusive Breastfeeding

The study further sought to establish the places where nursing mothers acquired EBF inforamtion and the following were named.

Table 4.3: Sources of information on EBF

Response	Frequency	Percentage
Antenatal and postnatal clinics	210	54.5
MRRH medical staff	102	26.5
Friends and family	59	15.3
Social media and other media outlets	14	3.6
Total	385	100

Source: Primary Data 2023

Table 4.3 shows that majority of the nursing mothers (54.5%) received information on EBF from antenatal and postnatal clinics, followed by 26.5% that received it from professional medical officers at MRRH while 15.3% got it from family and friends, and the least had received information on EBF from social and other media outlets. Related views were expressed by the medical staff interviewed whereby majority of them stated that EBF was one of the key aspects that has been included in the day to day health talks by medical staff at antenatal clinics.

The qualitative findings confirmed the importance of ANC and PNC sessions as key sources of EBF information. This is possible because mothers have become more aware about the importance of attending these sessions as shared by one of the KII's

> *"We are trying to pass on messages on exclusive breastfeeding through the media and when the mothers come during antenatal, we give them talks about breastfeeding and when they deliver in postnatal, we give them information, when they bring babies for immunization"* **KII 1**

It's documented that many mothers attend more than 3 ANC sessions and this enables them to get the EBF information frequently as discussed by another KII

> *"Now days most mothers town would at least do more than 3 antenatal visits ideally and at least on all those visits there is some message going on about the need for exclusive breastfeeding so majority have some knowledge about it"* KII **5**

Another finding validates the role of PNC as a source of EBF information especially in the public health facilities, the health workers actively engage postpartum mothers in health education as one of the KII shared

> *"According to the policies we have from our government in hospitals when we are discharging mothers after delivery, this information is given to them, if it is not given, it is supposed to be given to them and even us the healthcare providers who interface with these nursing mothers we make an effort to ensure that mother have this information"* KII 2

In addition, other efforts out of the health facilities are being explored to offer health education among mothers as one of the health workers shared,

"there are some initiatives like when you go for out reaches for immunization, we talk about advantages of breastfeeding ad sometimes they give us radio programs so as we talk about health themes for child growth, breastfeeding is among" KII 1

4.2.2 Breastfeeding Mothers' knowledge on Benefits of Exclusive Breast-Feeding Practices

Table 4.4: Benefits of Exclusive Breastfeeding

Benefit	Frequency	Percentage
Reduced risk of early childhood sicknesses	193	50.1
Promotes good brain development	62	16.1
Quick child growth	58	15.1
Reduced risk for maternal breast cancer	33	8.6
Low risk of HIV infection	39	10.1
Total	385	100

Source: Primary Data 2023

Results on the benefits of EBF show that majority (50.1%) knew it as helpful in reducing early childhood disease, these were followed by 16.1% that mentioned promotion of good child brain development, then 15.1% mentioned quick child growth, while 10.1% mentioned low risk of HIV infection if the mother was having HIV, and the least responses were on EBF being helpful in reducing the risk of maternal breast cancer.

In order to ensure that all mothers access the necessary information on exclusive breastfeeding, more efforts are made to reach out to all mothers who might not be accessing maternal health services in health facilities. One of the participants noted that;

"there are some initiatives like when you go for out reaches for immunization, we talk about advantages of breastfeeding ad sometimes they give us radio programs so as we talk about health themes for child growth breastfeeding is among" Part 1

Another participant added that;

"we give them health education and we allow them to ask questions when they feel but then we as health workers any time you get in touch with a mother, you need to do your best" Part 5

Table 4.5: Exclusive breastfeeding Practices among Mothers'

Response	Frequency	Percentage
Yes	175	45
No	310	55
Total	385	100

4.3: Factors associated with Exclusive Breast Feeding among nursing mothers with infants aged 6-12 months attending Young Child Clinic in Mbale Regional Referral Hospital

4.3.1: Socio-demographic Factors Influencing EBF among Nursing Mothers in MRRH

The study also investigated the influence of mother related factors on EBF among mothers breastfeeding children aged between 6-12 months. These included maternal; age, employment status, level of education, marital status and religious affiliation.

Table 4.6: Mother-related Socio-demographic Factors Influencing EBF among Nursing Mothers in MRRH

Response		**Total (%)**	**Exclusive breastfeeding**	
			Yes (%)	No (%)
Maternal age (years)	20 years and below	116 (30.1)	13(11.2)	103(88.8)
	21-30	129 (33.5)	27(21.0)	102(79.0)
	31-40	105 (27.3)	16(15.2)	89(84.8)
	41 and above	35 (9.1)	2(5.7)	33(94.3)
Employment status	Formal	137 (35.6)	12(8.8)	125(9.2)
	Informal	162 (42.1)	14(8.6)	137(84.6)
	Unemployed	86 (22.3)	12(13.9)	74(86.0)
Level of education	Primary	56 (14.5)	4(7.1)	52(92.9)
	Secondary	84 (21.8)	9(10.7)	75(89.3)
	Tertiary	134 (34.3)	24(17.9)	110(82.1)
	Degree	103 (28.1)	18(17.4)	85(82.5)
	Post graduate degree	8(2.1)	00	8(100)
Marital status	Single	74(19.2)	8(10.8)	66(89.2)
	Married	242(62.9)	56(23.1)	186(76.9)
	Domestic partner	69(17.9)	6(8.7)	63(91.3)
Religion	Christian	285(75.0)	48(16.8)	149(52.3)
	Muslim	94(24.4)	11(11.7)	83(88.3)
	Others	6(1.6)	00	6(100)

Source: Primary Data 2023

Responses on maternal age show that nursing mothers aged 21-30 years had the highest percentage of mothers that were exclusively breastfeeding their children (21%), next in

ranking were mothers in the age bracket of 31-40 years (15.2%), then 20 years and below were 11.2% and the least in ranking were mother that were aged 41 years and above (5.7%). Related responses were given by majority of the medical staff who reported higher levels of exclusive breastfeeding among middle aged mothers, with lower rates among the teen age mothers and older nursing mothers.

Results on mothers' employment status show that unemployed mothers recorded the highest levels as regards EBF (13.9%), followed by the employed (8.8%) with those in the informal sector having the least percentage (8.6%). Medical staff also reported that employed mothers especially those working with government did not have enough time with their infants because they have a maternity leave of maximum of three months and are always busy balancing work and home chores. They also reported that unemployed mothers also had enough time for attending to the needs of the infant unlike mothers in the informal sector whereby they are employed on daily basis or are self-employed and have no official leave to cater for the needs of the newborn child. As one of the Key informants stated,

> "M*others working for businessmen are not allowed to have maternity leave, when they ask, they automatically get be fired, so women leave the child at home to feed on other foods and only breastfeed when off duty"*

However, contrary findings from the qualitative data showed that unemployed mothers also faced the challenge of much work at home that made it hard to exclusively breastfeed their infants. As another Key informant commented,

> *"The unemployed woman is busy all the time; she has to dig, fetch water, firewood and ensure that everything in the home is fine, this encroaches on breastfeeding time"*

Findings on the influence of maternal educational level on the practice of EBF revealed that the highest percentage of those that were exclusively breastfeeding (17.9%) had reached tertiary level of education, followed by 17.4% of degree level, while 10.7% had stopped secondary level and the least (7.1%) primary level. KII responses indicated that fairly educated mothers could easily comprehend the concept of EBF as compared to those with limited education.

It was also established that majority of the nursing mothers that were exclusively breastfeeding (23.1%) were married, followed by 10.8% that were single and 8.7% that were living with a domestic partner. KII responses revealed that married women tend to be more

psychologically and economically stable, and have higher chances of partner support as compared to others that usually have the burden of raising the children single handedly.

Findings on the influence of religion on the practice of EBF reveal that majority of the nursing mothers (47.7%) that were exclusively breastfeeding belonged to the Christian faith, while 40.4% were Muslims and 16.7% of mothers were from other religions. KIIs revealed that Christians were more receptive to reproductive and child health information than other religions.

4.3.2 Multivariate regression for Maternal Socio-demographic factors and EBF among nursing Mothers at MRRH

To show the variance in EBF that would be caused by socio-demographic factors, a regression analysis was run and the results were as can be seen below.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.667[a]	.415	.353	.169.9210

ANOVA[a]

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	647.677	3	49.226	381.506	.000[b]
Residual	83.677	106	.129		
Total	731.354	109			

a. Dependent Variable: Exclusive breast feeding

b. Predictors: (Constant), Maternal age, maternal employment status

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	20.631	9.537		2.192	.41
Maternal age	.274	.366	.433	1.839	.089
Maternal employment status	.247	.362	.425	2.731	.076
Exclusive breast feeding	.143	.042	.153	3.432	.001

a. Dependent Variable: Exclusive breast feeding

Model1 in the table above shows the regression analysis of two (maternal socio-demographic factors and exclusive breast feeding) variables in which Beta value (Beta = 0.27, $p < 0.001$) of these two variables interpreted, if one unit increase in maternal socio-demographic factors then 0.27 unit increase in exclusive breast feeding. Adjusted R square (0.41) explained the significant variation between maternal socio-economic factors and exclusive breast feeding was 35.3% and t value ($t = 1.8$, $p < 0.001$) which shows a significant relationship between these two variables in model summary, because t value (1.8) was greater than t tabular standard value. The coefficient of determination .035 implies that maternal socio-demographic factors determine EBF by 35.3%. This is a positive relationship. Therefore, it can be concluded that maternal socio-demographic factors cause a significant influence in the nursing mothers' EBF practices at MRRH.

4.3.3: Obstetric Factors Influencing EBF among Nursing Mothers in MRRH

Furthermore, the researcher sought to explore whether obstetric factors had any influence on nursing mothers' practicing of EBF and in the table below are among the obstetric factors investigated upon in the study.

Table 4.7: Obstetric Factors Influencing EBF among Nursing Mothers in MRRH

Response		Total (%)	Exclusive breastfeeding	
			Yes (%)	No (%)
Parity	One	50(13)	10(20)	40(80)
	Two	227(59)	30(13.2)	197(86.8)
	Three and more	108(28)	6(5.5)	102(94.4)
Twin pregnancy	Yes	54(14.0)	2(3.7)	52(96.3)
	No	331(86)	72(21.8)	259(78.2)
Previous caesarean section	Yes	89(23.1)	11(12.4)	78(87.6)
	No	296(76.9)	71(24.0)	225(76.0)
Breastfed previous children	Yes	369(95.8)	87(23.6)	282(76.4)
	No	16(4.2)	1(6.3)	15(93.7)
Family support	Yes	239(22.1)	52(21.8)	187(78.2)
	No	146(37.9)	16(10.9)	130(89.1)
Professional support	Yes	132(34.3)	30(22.7)	102(77.2)
	No	253(65.7)	15(5.9)	238(94.1)
Attended antenatal prenatal education	Yes	339(88.1)	85(25.1)	254(74.9)
	No	46(11.9)	5(10.9)	44(95.7)
Had complications during pregnancy	Yes	101(26.2)	11(11.9)	90(89.1)
	No	284(73.8)	67(22.8)	218(76.8)

Source: Primary Data 2023

Findings from table 4.7 above show that nursing mothers with one child were the most involved in EBF (20%), followed by those with two children (13.2%), with the least in practicing EBF being nursing mothers with more than two children (5.5%).

While findings also revealed that mothers that had a twin pregnancy registered low levels of EBF (3.7&), while higher levels were recorded among mothers that did not have a twin pregnancy (21.8%).

Yet findings on the influence of caesarean section on EBF showed that a higher percentage was recorded among mothers that never experienced a caesarean section (24.0%), with a low percentage among mothers that had undergone a caesarean section (12.4%).

As regards the history of breastfeeding, majority of the mothers that practiced EBF (23.6%) had breastfed their previous children as compared to those that had not breastfed their children in the past (6.3%).

4.3.3.1: Regression Statistics for obstetric factors and EBF among nursing Mothers at MRRH

The study further sought to establish the variance in EBF that would be caused by obstetric factors, hence a regression analysis was done as can be seen in the following results.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.667[a (518)]	.415 (526)	.353 (361)	.154,.9210

ANOVA[a]

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	549.677	4	4.7231	372.404	.000[b]
Residual	74.671	205	.107		
Total	624.348	208			

a. Dependent Variable: Exclusive breast feeding

b. Predictors: (Constant), number of children, Twin Pregnancy, attended antenatal

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	20.631	7.522		2.187	.41
Number of children	.264	.352	.433	2.737	.089
Twin pregnancy	.238	.348	.425	2.753	.096
Attended antenatal	279	.446	.458		
Exclusive breast feeding	.151	.056	.164	3.422	.001

a. Dependent Variable: Exclusive breast feeding

Model1 shows in the above table of regression analysis of two (Obstetric factors and exclusive breast feeding) variables in which Beta value (Beta = 0.438, $p < 0.001$) of these two variables interpreted, if one unit increase in obstetric factors then 0.438 unit increase in exclusive breast feeding. Adjusted R square (0.526) explained the significant variation between obstetric factors and exclusive breast feeding was 43.8% and t value ($t = 2.7$, $p < 0.001$) which shows a significant relationship between these two variables in model summary, because t value (2.7) was greater than t tabular standard value. The coefficient of determination .0526 implies that obstetric factors determine EBF by 52.6%. This is a significant positive relationship. Therefore, it can be concluded that obstetric factors cause a significant influence in the nursing mothers' EBF practices at MRRH.

4.3.4 Child-related Factors Influencing EBF among Nursing Mothers in MRRH

The study endeavored to explore child related factors that influenced the effectiveness of EBF among nursing mothers at MRRH.

Table 4.8: Child-related Factors Influencing EBF among Nursing Mothers in MRRH

		Frequency	Percentage
Age of Newborn	0-1 Months	336	87.3
	2-5 Months	31	8.1
	6-12 Months	16	4.2
	3-24 Months	2	0.5
Birth Weight of the Newborn	1.1-2.5 kg	16	4.2
	2.6- 3.8 kg	366	95.0
	3.9 & Above	3	0.8
Admission for Malnutrition	Yes	7	1.8
	No	378	98.2
Disease Contracted between 0-12 Months	Malaria	8	2.1
	Bacterial & Viral infection	28	7.3
	Respiratory Diseases	6	1.6
	Anemia	2	0.5
	None	340	88.3
Sickness affected Breastfeeding	Strongly Disagree	0	0
	Disagree	0	0
	Neutral	2	0.5
	Agree	1	0..3
	Strongly Agree	382	99.2
Newborn' Appetite between 0-12 Months	Very Low	1	0.3
	Low	6	1.6
	Neutral	1	0.3
	Slightly High	4	1.1
	Very High	373	96.7

Source: Primary Data 2023

Findings on the weight of the newborn at birth the shows that 95.0% were born with 2.6-3.8 kg, 4.2% were born with 1.1-2.5 kg and 0.8% were born with 3.9 kg and above. 1.8% of the infants had previously been admitted for malnutrition related incidences while 98.2% were not. Yet on other diseases that affected them, 7.3% were previously admitted for bacterial and viral infection, 2.1% malaria, 1.6% respiratory tract infections and 0.5% had experienced anemia related diseases. On the effects of child related sickness on EBF 99.2% of the respondents strongly agreed, 0.3% agreed and 0.5% remained neutral. On the appetite of newborns, 96.7% reported that it was very high, 1.6% reported low, 1.1% reported-slightly high, while 0.3% reported very low and neutral respectively.

4.3.4.1: Regression Analysis for Child-related factors and EBF among nursing Mothers at MRRH

To show much of the variance in EBF would be caused by Child-related factors, a regression analysis was run as shown below:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.925[a]	.856	.852	.43175

a. Predictors: (Constant), Age, diseases contracted and appetite

The coefficient of determination .085 implies that child factors determine effectiveness of EBF by 8.5%. This is a positive relationship.

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.916	.127		7.211	.000
	Age of new born	.700	.138	.734	5.070	.000
	Diseases contracted between 0-12 months	-.409	.133	-.466	-3.072	.003
	Appetite of infant	.608	.057	.692	10.747	.000

a. Dependent Variable: Exclusive breastfeeding

Model1 shows in the above table of regression analysis of two (child related factors and Exclusive breastfeeding) variables in which Beta value (Beta = 7.3, $p < 0.001$) of these two variables interpreted, if one unit increase in Child-related factors then 0.91 unit increase the EBF. Adjusted R square (0.85) explained the significant variation between Child-related factors and EBF that was 9.1% and t value ($t = 7.2$, $p < 0.001$) which shows a significant relationship between these two variables in model summary, because t value (1.8) was greater than t tabular standard value. The coefficient of determination .092 implies that child-related factors determine the EBF effectiveness by 9.2%.

4.4.0: Challenges associated with Exclusive Breast Feeding among nursing mothers in MRRH

The study sought to explore any challenges faced in the practice of EBF among the nursing mothers in the study area.

4.4.1 Facilitators and Challenges in Accessing EBF Information

Responses were sought to identify any challenges experienced in practicing EBF.

Table 4.9: Challenges in Accessing EBF Information

Response	Frequency	Percentage
Lack of Interest	9	2.3
Poor Communication Channels	25	6.5
Limited time to attend Clinics	96	24.9
Limited Resources	255	66.2
Total	385	100

Source: Primary Data 2023

Table 4.9 reveals that 66.2% pointed out that limited resources hindered access to EBF information, 24.9% of the mothers had limited time to attend both postnatal and antenatal, 6.5% noted that poor communication channels affected the access of EBF information and 2.3% pointed out that lack of interest by mothers to look for information also contributed to the challenges of accessing EBF information.

Table 4.10: Challenges associated with Exclusive Breast Feeding among nursing mothers in MRRH

Challenge	Frequency	Percentage (%)
Low breast milk production	242	85.2
Infections	89	23.1
Negative cultural beliefs	51	12.2
Inadequate knowledge about exclusive breastfeeding	35	9.1
Inadequate family support	112	29.1
Rigid work/learning schedules	276	71.7
Maternal stress	61	15.8

Source: Primary Data 2023

Majority of the respondents (85.2%) reported low breast milk production, followed by 71.5% that reported rigid work and learning schedules, while 29.1% mentioned inadequate family support, then 23,1% mentioned infections, 15.8% mentioned maternal stress, 12.2% reported

negative cultural beliefs, the least mentioning inadequate information about exclusive breastfeeding.

4.4.2 Facilitating Factors of Exclusive Breastfeeding

4.4.2.1 Knowledge on EBF

The qualitative findings also explored the facilitators and barriers of EBF and these include the knowledge of benefits of EBF, Mothers with a clear understanding of exclusive breastfeeding and its benefits for are more likely to develop a positive attitude towards exclusive breastfeeding hence practicing it

"the mothers pick up after you explain to them the advantages of breastfeeding to the baby, to herself, you find that the mother will take on breastfeeding very well" KII 1

Another participant noted that;

"...when you talk to them, they find out the advantages you find that their minds are tuned and at the end of the day they practice exclusive breastfeeding" KII 4

A similar view was shared by another participant

"...some of them might be ignorant about why they should breastfeed exclusively but if you teach them that it does that it is both helpful to them more so that it's a family planning method, they will always take it up" KII 5

4.4.2.2 Role of health workers in promoting EBF

Health workers play an important role in motivating and influencing nursing mothers to exclusively breastfeed, they have all the needed technicality and information to influence women to breastfeed exclusively, it is important that health workers provide the needed information and motivation for the mothers to exclusively breastfeed their children

"there are those lessons we normally give them before the antenatal services begin, we give them health education and we allow them to ask questions when they feel but then we as health workers any time you get in touch with a mother" KII 5

Another participant added that;

"during pregnancy so that when they eventually deliver, they are mentally prepared, then in delivery and in postnatal, we also keep talking to them about

the advantages of breastfeeding and even the peers also come in when they see their colleagues breastfeeding, they also breastfeed" KII 1

4.4.2.3 Support for nursing mothers to practice excusive breastfeeding;

Occasionally, some mothers need to be supported to carry out breastfeeding through helping them solve the challenges hindering exclusive breastfeeding through providing the information they need and practically supporting them

"we make an effort to ensure that mother have this information like I for one when a mother comes before me, I will tell her the benefits of breastfeeding and I will even go ahead to show her how do you breastfeed" KII 2

Another participant added that health workers need to ensure that the help mothers solve issues that hinder exclusive breastfeeding

"we as health workers any time you get in touch with a mother, you need to do your best to ask whether they have any challenges when breastfeeding, even if they say they don't have we try to give the health education to them because it helps them to open up" KII 5

There are a number of challenges that were identified by the Key informants in the qualitative study, for example the messages being mainly in English leaves out mothers who don't speak the language

"There is still that gap because when you look at most of our messages, are in English so you find that mothers who are speaking the local languages might not pick the message" KII 1

Participants also noted that although efforts are being made to reach out to all pregnant and nursing mothers, those who don't come to seek maternal health services in health facilities miss out on this information

"There is also another category currently the number of mothers deliver in hospitals are about 70% so the other percentage don't come to hospital so if they don't do yet the messages are mainly given in the hospital so they won't get it" KII 11

Participants also noted that there a few mothers who prefer not exclusively breastfeed due to personal reasons and beliefs even when they know the full benefits of exclusive breastfeeding. A participant noted that;

> "*there these young mothers who don't want to breastfeed because of personal reasons, they will tell if we breastfeed, we shall grow old, our breast will sag"* Part 4

Some mothers will also give up on exclusive breastfeeding because of other health related issues and lack of support. One of the participants reported that;

> *"mothers who don't take on exclusive breastfeeding are those ones who are depressed; postnatal depression and those ones really need support and then those with more than one baby, those also need support because as she is breastfeeding one, the other one is crying so she gets stressed"* Part 1

Although most health workers do their best to support mothers' practice exclusive breastfeeding, they are sometimes limited by different challenges within the health system. Participants informed that health workers are always few compared to the overwhelming numbers of patients they have to attend to

> "*we don't have all enough health workers to support all women effectively in fact some information giving sessions are missed because the midwives are not enough since sometimes the numbers are overwhelming yet some of these services require a one on one with clients"* KII 3

The environment is also a huge factor in encouraging breastfeeding. Participants noted that the current setup of the healthcare system might not encourage breastfeeding especially in the hospitals.

> *"I don't think the atmosphere is enabling for the mothers to comfortably breastfeed …just open and the wards are really crowded that some mothers are after delivery, they stay on verandas and for me that's not an enabling environment to breastfeed"* Part 2

Another participant added that

> *"It is not 100% because you know some mothers are really shy, they are breastfeeding yet our wards are very crowded so you find that those who are shy fear to breastfeed in public and as a result the baby may not feed well"* Part 1

Mothers face several maternal factors that hinder them from exclusively breastfeeding and these require a lot of support from health workers to overcome them.
Among these maternal factors include the lack of enough breast milk which is a result of several factors. One of the participants noted that the psychological state of a mother is very important for the production of breast milk

> *"The psychological state of mother affects breastfeeding because breast milk can also be psychological it comes from the mother's psychological stat so is a mother is not psychologically upright, then it will be hard for her to produce breast milk and then she will have challenges breastfeeding" KII 1*
>
> Another participant added that*;*
>
> *"Then there are mothers who are stressed and they don't have breast milk"* KII 2

The mode of delivery was also looked at as a potential influence to exclusive delivery; Participants informed that mothers who have had difficult deliveries or caesarean deliveries might face challenges to breastfed exclusively due to the pain from the wound

> *"Some types of delivery like when a mother hard a difficult delivery like maybe she had some stiches down, or maybe she had a caesarean, some of these mothers may find it hard to attach the baby because whenever they try, they feel the pain"* KII 1

Another participant noted that the mode of delivery might not be an issue if a mother is motivated to breastfeed exclusively since there are many ways a mother can breastfeed even after caesarean section

> *"I don't think it affects much because they are different positions of breastfeeding a child, you can lie down and breastfeeding when he is closer to you instead of carrying which might affect your wound, so I think it might not affect breastfeeding"* KII 5

The lack of male involvement or spouse support was also raised as an issue that can influence exclusive breastfeeding

> *"There are mothers who don't have support from their spouses, they have marital or social stress and because of that breast milk is not coming"* KII 4

Another challenge that hinders exclusive breastfeeding in some mother I that challenge of swollen nipples which are also painful

> *"I have heard mothers who get sores of the nipple but many of these it's because they don't know how to attach the baby onto the breast so I take them through the whole process of positioning and attaching"* KII 2

4.4.2.4 Socioeconomic challenges;

Exclusive breastfeeding is hindered by the social economic activities that mothers are engaged in, many of those who would want to breastfeed their babies are hindered by the fact that they have to go back to work very soon. A participant noted that;

> *"There also other concerns like going back to work earlier than normal and there are no places for breastfeeding so this this interrupts their plans of exclusive breastfeeding"* KII 3

Another participant added that;

> *"Many of them have to go back to work early, 3 months is not enough for the mother after giving birth, they need like 6 months breastfeeding becomes a challenge since not many of them believe in expressed milk"* KII 2

Although health workers advise that there is an option of expressing milk for mothers who can't breastfeed because of work or away from their babies', this act is not so much appreciated within the Ugandan setting

> *"So, I advise them that they could express the milk and store it so that when you not around that milk can be used but I think because of culture, they are really against it"* KII 4

CHAPTER FIVE

SUMMARY AND DISCUSSIONS OF FINDINGS

5.1 introduction

This chapter presents a summary and discussion of findings of the study that have been presented according to the study objectives.

5.1.1 Summary of the study findings

The study investigated the Knowledge and determinants of exclusive breastfeeding among Nursing Mothers at Mbale Regional Referral Hospital. The key results in this study are that the majority of the nursing mothers had awareness of exclusive breastfeeding practices, and most of them received information on EBF during the ANC and PNC visits, followed by their friends and family and lastly social media.

5.1.2 Awareness and Knowledge on Exclusive Breast feeding among nursing mothers with infants 6-12 months old attending the Young Child Clinic MRRH

It was established that majority of the mothers were aware of EBF with a few that barely had knowledge on EBF and majority of them received information on EBF from antenatal and postnatal clinics, followed by professional medical officers at MRRH, family and friends, and the least had received information on EBF from social and other media outlets. This signifies that health facilities like clinics and MRRH were very instrumental in promoting EBF hence an avenue that startegically be used for enhancing the uptake of EBF. This result is similar to what was documented in a study by (Dukuzumuremyi et al, 2020) who recognized that low levels of EBF were associated with limited access to antenatal and postpartum breastfeeding counseling. The same finding was corroborated by a community-based cross-sectional study targeting 428 mothers of children aged 0 to 5 months in the informal Kampala by Nabunya et al (2020) observed that mothers of children under 6 months had limited knowledge regarding EBF and the benefits of EBF, this was associated with failure of mothers to attend antenatal counseling on breastfeeding and poor government policy on maternity leave in the informal sector which affected EBF practices. Therefore, this implies that a lot of efforts to increase knowledge on EBF among mothers should be encouraged during their ANC and PNC visits. Regarding the benefits of EBF majority knew that EBF is helpful in reducing early childhood disease, followed by those that mentioned promotion of good child brain development, then quick child growth, low risk of HIV infection, and reducing the risk of maternal breast cancer.

Most medical staff interviewed also indicated that they had been giving related information of the benefits of EBF to the mother and child. These findings are also in harmony with what Gobebo G. (2021) stated that EBF had sustainable long-term health benefits to both to both the infant and the mother in that it reduces neonatal mortality, risk of obesity, and reduces the risk of breast and ovarian cancer. Therefore, it can be stated that EBF has a wide range of benefits to the mother and child in terms of enhancing their quality of life as it is less costly and best for their safety.

5.2 Determinants of Exclusive Breast Feeding among nursing mothers

5.2.1 Maternal related Factors and EBF

Results on the influence of mother related factors on EBF among mothers breastfeeding children aged between 6-12 months revealed that; that nursing mothers aged 21-30 years had the highest percentage of mothers that were exclusively breastfeeding their children shown by 27(21.0%), then those in the age bracket of 31-40 years 16(15.2%), then 20 years and below 13(11.2%), with the least being aged 41 years and above 2(5.7%). Results on maternal employment status show that unemployed mothers recorded the highest levels as regards EBF as compared to those in informal sector, and the formally employed. These findings indicate that the mothers' employment status has a considerable influence on the practice of EBF as formally employed mothers have access to enough maternity leave that is granted under the labor policy, while mothers in the informal sector are rarely given opportunity to have maternity leave, and on the other side, mothers that are unemployed have also been seen as having higher chances of practicing EBF because they usually have enough time for attending to the new born. The highest percentage of those that were exclusively breastfeeding had reached tertiary level of education, then those of Post graduate level, then first degree level, while a few stopped at secondary level and the least primary level. Majority of the nursing mothers that were exclusively breastfeeding were married, followed by the single, then those living with a domestic partner. The highest percentage of the nursing mothers that were exclusively breastfeeding were Christians, a few being Muslims and the least were from other religions. These findings are similar to what was discovered in a study in Bangladesh, a study on the prevalence of EBF by Hasan et al (2021) gathered that socioeconomic and demographic factors such as age, gender of the child, standard of living, education, and occupation of the mother, mode of delivery, culture and religious practices influenced the attitude and perception of breastfeeding mothers on the initiation of EBF.

Other studies have found similar results on the relationship between maternal factors and exclusive breastfeeding, for instance a mixed method cross-sectional study in Manafwa District in Eastern Uganda established that EBF prevalence was greatly influenced by the education level of mothers and employment status. The study focused on infants of 0 to 6 months and examined socio-economic and demographic determinants such as employment, education, mother's age, infant's age, family size, sex of the child and religion, HIV status of the mother, number of antenatal clinic visits (Nteziyaremye et al, 2021). There fore this implies that the individual characterisitcs of mothers can greatly have an influence on their pactice of exclusive breastfeeding.

These results contrasts with what was discovered by Mekebo et al, (2022) whereby the highest percentage of EBF practice had been observed among infants whose mothers had attended primary education, followed by those whose mothers had attained secondary education. This result implies that the socio-demographic characteristics of mothers determine the mothers' interest of practicing EBF although they work together for instance the level of education can also be influenced by the nature of the job a mother has to be consistent in practicing EBF. This finding is corroborated with a few other study findings, for instance the study by Nabunya et al (2020) showed that working women in privileged positions had liberty to adjust their work schedules, have extended breaks and longer leave days stood higher chances of breastfeeding their infants as compared to their juniors. Related findings were observed in qualitative studies in USA and India where lack of flexibility in work scheduling, insufficient leave days and demanding work schedules were major challenges being faced by low cadre nursing mothers to exclusively breastfeed their children (WHO, 2019).

5.2.2 Obstetric Factors and EBF

Nursing mothers with one child were the most involved in EBF, followed by those with two children, while the ones with more than two children were the least in practicing EBF. Mothers that had a twin pregnancy registered low levels of EBF with higher levels recorded among mothers that did not have a twin pregnancy. Yet a higher percentage was recorded among mothers that never experienced a caesarean section, with a low percentage among mothers that had undergone a caesarean section. Majority of the mothers that practiced EBF had had breastfed their previous children as compared to those that had never breastfed their children. Regarding family support, majority of the mothers that practiced EBF were having

family support with those that had inadequate family support registering low percentages. Nursing mothers that had professional support exhibited higher percentages of EBF as compared to those that never had professional support. Mothers that attended antenatal prenatal education registered higher percentages in EBF as compared to those that never attended. Highest percentage was recorded among nursing mothers that never experienced any complications during pregnancy, with low percentages among those that had complications.

5.2.3 Child-related Factors and EBF

Findings on the weight of the newborn at birth the shows that majority were born with 2.6-3.8 kg, next were those born with 1.1-2.5 kg and the least were born with 3.9 kg and above. The biggest number of the children had never been admitted for malnutrition related incidences. However, a few of them had previously been admitted bacterial and viral infection, few were for malaria, respiratory tract infections and anemia related diseases. On the effects of child related sickness on EBF majority of the respondents strongly agreed, with very few that agreed or were neutral. On the appetite of newborns, majority reported that it was very high, then low, slightly high, and very low respectively.

5.3 Challenges associated with Exclusive Breast Feeding among nursing mothers in MRRH

Majority of the respondents reported low breast milk production, followed by those that reported rigid work and learning schedules, then inadequate family support, infections, maternal stress, negative cultural beliefs, the least mentioning inadequate information about exclusive breastfeeding. Related findings were got from the majority of the medical staff mentioned challenges of ignorance, poor partner support, poverty and mothers having the stress of either unwanted pregnancy or rejection by the significant people in their lives like partners and parents.

In terms of family support, majority of the mothers that practiced EBF (22.1%) were having family support unlike those that never had family support (10.9%). Medical staff that were interviewed expressed that mothers that had good family support were more adherent to what the medical practitioners prescribe as opposed to those that lacked adequate family and partner support. The study conducted by Victora CG et al. (2016) yielded similar results, suggesting that having a partner who supports breastfeeding could play a significant role in deciding whether or not to breastfeed, as the partner serves as the mother's primary source of

support during the feeding process. They go on to say that this might be a reflection of the powerful influence which can sometimes even surpass that of the medical staff—that close relatives can have on a mother's decision to breastfeed or not.

Both the qualitative and quantitative results demonstrated the important role played by health workers as promoters of EBF. It was noted that nursing mothers that had professional support exhibited higher percentages of EBF (22.7%) as compared to those that never had professional support (5.9%). Mothers that attended antenatal prenatal education registered higher percentages in EBF (25.1%) as compared to those that never attended (10.9%). These results are consistent with the findings of Reddy S, Health TA-JPC, (2016), which showed that the majority of pregnant women have access to maternal education centers and that the value of these classes is undeniable. Research indicates that receiving education from midwives from the very first prenatal visit may help mothers initiate and continue breastfeeding. It was found that advice from health workers was cited by several mothers as a reason they decided to exclusively breastfeed their babies. In a similar vein, Milka Wanjohi, P. G., et al. (2017) noted that women's decision to breastfeed is positively impacted by the provision of breastfeeding information in maternal education. These results are in line with those of studies like Nabunya Phoebe (2020), which discovered higher rates of formula feeding among mothers who did not participate in prenatal education. Some studies also suggest that attending prenatal education can help to encourage breastfeeding (WHO, 2018). A higher EBF percentage (22.8%) was recorded among nursing mothers that never experienced any complications during pregnancy, with those that had complications recording low levels of EBF (11.9%). These findings are in agreement with the findings from the study by Manyeh AK, et al (2020) that established that women with conditions during pregnancy such as hypertension or diabetes are less likely to breastfeed than those who do not suffer these conditions.

Related findings from the qualitative segment explored the challenges health workers and mothers experience while practicing EBF and these include ignorance, poor partner support, poverty and mothers having the stress of either unwanted pregnancy or rejection by the significant people in their lives like partners and parents. These findings are related to reports by medical practitioners who stated that low breast milk production is as a result of medical and nonmedical conditions like lack of suckling time, delaying feeds, breast abnormalities like swollen nipples. Similar results were also observed in the UDHS (2019) report, which

showed that the majority of mothers who gave birth at home with TBA assistance said they were under pressure to give their infants pre-lacteal feeds like water, honey, cow or goat milk, sugar, and glucose as early as the first day following delivery. Furthermore, pre-lacteals were introduced with significant influence from grandmothers and mothers-in-law. Related findings were got in UDHS (2019) report as regards negative cultural influences where majority of mothers that were assisted by TBAs were given inappropriate information based on cultural influences. Similarly, in the qualitative findings a number of mothers have not yet accepted the practice of expressing milk because of its negative cultural connotations. And therefore, many mothers are forced to wean their babies when they resume work.

CHAPTER SIX
CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusion

In this chapter the researcher presents the conclusions and recommendations of the study that have been arranged according to the study objectives.

It was established in this study that majority of the mothers had awareness of EBF, with majority of them getting this information from antenatal and postnatal clinics, followed by professional medical officers, family and friends, and from social and other media outlets. EBF was known as being helpful in reducing early childhood disease, promotion of good child brain development, quick child growth, low risk of HIV infection, and in reducing the risk of maternal breast cancer. However, limited resources, limited time to attend both postnatal and antenatal, poor communication channels and lack of interest by mothers to look for information were the challenges experienced in accessing EBF information.

Majority of the mothers that practiced EBF were aged 21-30 years followed by those aged between 31-40 years, then 20 years and below and the least in ranking were mother that were aged 41 years and above. This result implies that the age of a mother is important in enabling one to practice EBF as shown that the younger and older mothers were the least in practicing EBF.

Unemployed mothers recorded the highest levels as regards EBF. Regarding the influence of maternal educational level on the practice of EBF, the highest percentage of those that were exclusively breastfeeding had reached tertiary level of education. Majority of the nursing mothers that were exclusively breastfeeding were married, while majority of the nursing mothers that were exclusively breastfeeding belonged to the Christian faith.

Nursing mothers with one child were the most involved in EBF, the same with mothers that did not have a twin pregnancy or never experienced a caesarean during child birth, had breastfed their previous children, family support, those that had professional support, and mothers that never experienced any complications during pregnancy.

Majority of the children under study were born with 2.6-3.8 kg, few had previously been admitted for malnutrition related incidences but experienced other health challenges such as bacterial and viral infection, malaria, respiratory tract infections and anemia related diseases.

Majority of the respondents agreed that child health conditions were greatly related to EBF; whereby those that had been on EBF had higher chances of quality of life.

Low breast milk production was the most common challenge faced in EBF, followed by rigid work and learning schedules, inadequate family support, infections, maternal stress, negative cultural beliefs, inadequate information about exclusive breastfeeding. Others were ignorance, poor partner support, poverty and mothers having the stress of either unwanted pregnancy or rejection by the significant people in their lives like partners and parents.

6.2: Recommendations

According to the study findings and conclusions, the following recommendations have been suggested.

The District Health Office

- Advocating for enabling and friendly breastfeeding environments for working mothers in the district
- Specific age focused EBF communication interventions to motivate the younger and older mothers about the benefits of breastfeeding their children a
- The DHO's needs to strengthen efforts in providing comprehensive ANC and PNC packages, to ensure that mothers get to benefit from the health education sessions offered
- Increase community sensitization against myths and misconceptions about EBF to ensure that these don't act as barriers for mothers practicing EBF
- Promote access to information on EBF in the community to ensure that no mother is left as a result of not knowing the benefits of breastfeeding their babies
- Promote enhanced family/community support for nursing mothers, and equipping TBAs and community health workers with basic EBF information

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APPENDICES

APPENDIX I: INTRODUCTORY LETTER

APPENDIX II: CONSENT FORM TOPIC. KNOWLEDGE AND DETERMINANTS OF EXCLUSIVELY BREAST FEEDING AMONG NURSING MOTHERS IN MBALE REGIONAL REFFERAL HOSPITALA HOSPITAL BASED STUDY

INFORMED CONSENT FORM

Title of Research: Knowledge and Determinants of Exclusive Breast Feeding Among Nursing Mothers at Mbale Regional Referral Hospital.

Principle Investigator: Ruth Muthoni Mwangi. Mobile Contact +256 770757407,
Affiliated to Uganda Christian University, Department of Public Health P.O Box 4, Mukono, Uganda.

1. Introduction and Purpose of the Study

The main objective of the study is to determine the knowledge determinants of EBF among nursing mothers aged 18 to 45 years. It equally determines the barriers to EBF. The information you give us will be confidential and only used for purposes of this study. In the process of report writing, your name will never be used and so everything you tell us will remain anonymous. We shall ask questions about Exclusive Breast Feeding among Nursing Mothers at Mbale Regional Referral Hospital. If you do not want to respond to a particular question, you can simply say so, and we will not insist.

2. Description of the Research

The study employs cross-sectional survey research to explore the relationship between the variables under study. It employs both qualitative and quantitative research methods. It involves 385 nursing mothers attending Mbale Regional Referral Hospital of infants 6 to 12 months. It also involves 5 medical professionals at Mbale Regional Referral Hospital.

3. Subject Participation

Participants will be nursing mothers at Mbale Regional Referral Hospital. Key informant interviews will include medical professionals and consultants with knowledge of exclusive breastfeeding, breastfeeding, and children-pediatrician.

4. Potential Risks and Discomforts

The investigator anticipates bureaucracy in the government hospital to obtain records and information regarding EBF among nursing mothers but the investigator will ensure timely ethical approvals in relevant offices to obtain consent from MRRH. The investigator equally anticipates the nursing mothers/ respondents may be busy and unable to fill out the mobile-powered electronic questionnaires on their own therefore the investigator will ensure and solicit help from locally based research assistants to fill up the questionnaires and interpret the questions in locally understandable language in case of a language barrier.

5. Potential Benefits

This study will provide significant information that will help key stakeholders including breastfeeding mothers, Mbale Regional Referral Hospital, and health professionals in strengthening the level of EBF in Uganda and Mbale specifically.

Through the findings of this study, other Districts in Uganda will have a point of reference when making EBF decisions. Policymakers will also use the study results to develop policies to enhance effective EBF and adopt efficient and better EBF healthcare management mechanisms.

6. Confidentiality

All the information provided will be regarded as private and confidential and will only be used for this study. The data collection and reporting process will protect the integrity and privacy of the respondents. No respondent will be coaxed or bribed to provide any information and respondents under the age of 18 will require prior consent from guardian or parent responsible. Every participant will be expected to sign a written study informed consent form before participating, as this ensures voluntarism and acceptability to participate in the study.

7. Authorization

By signing this form, you will be authorizing us to use the information from this research to enhance our understanding of knowledge, attitude, and determinants of EBF and achieve better practices of EBF in Mbale District.

8. Participation

Your decision to participate in this study is completely voluntary. If you decide not to participate in this study, it will not affect your work

9. Withdrawal from the Study and/or Withdrawal of Authorization

As a participant in this study, you can withdraw at any point if you choose not to continue.

10. Reimbursements

Participants will not receive any reimbursements.

11. Whom to contact in case of ethical-related concerns?

This study was approved by Uganda Christian University Research Ethics Committee (UCU-REC) and cleared by Uganda National Council for Science and Technology (UNCST), In case of any Ethical related concerns or inquiries, you can contact UCU-REC chairperson; Prof. Peter Waiswa on 0772 405 357, pwaiswa@musph.ac.ug or UCU-REC Secretariat, Mr. Osborn Ahimbisibwe on 0775737627 or oahimbisibwe@ucu.ac.ug.

I voluntarily agree to participate in this research program; to tick appropriately

Yes ☐ No. ☐

I understand that I will be given a copy of this signed Consent Form

Name of Participant (optional) …… .

Signature: …… Date: ……

Name of Researcher: …….

Signature: …… Date: ……

APPENDIX III: QUESTIONNAIRE Study Title: knowledge and determinants of exclusively breast feeding among nursing mothers in Mbale regional referral hospital a hospital-based study

The purpose of this study questionnaire is to gather information to determine the knowledge and determinants of exclusive breast feeding among nursing mothers at Mbale Regional Referral Hospital. All the information provided will be regarded as private and confidential.

Section One: Social Demographic Information

What is your Age? (*Please tick where appropriate*)

18-27 [ ]
28-37 [ ]
38- 45 [ ]

Highest level of education (*Please Tick where appropriate*)?

Primary Certificate [ ]
Secondary Certificate [ ]
University Degree [ ]
Graduate/Masters /PHD [ ]
Others (*Please Specify*)
……

What is your Occupation? (*Tick where appropriate*)

Formal Employment [ ]
Informal Employment [ ]
Unemployed [ ]
Self-employed [ ]
Others (*Please Specify*)
……

What is your marital status (*Please Tick where appropriate*)

Single [ ]
Married [ ]
Divorced/Separated [ ]

Others (Please Specify)

……..

What is your Religion? (*Please Tick where appropriate*)

Christian [ ]

Muslim [ ]

Hindu [ ]

Others (Please Specify)

……

What is your location?

Urban [ ]

Rural [ ]

c) Peri-urban (Please Specify)

……

What is the mode of Birth of your current child (*Please Tick where appropriate*).

Unassisted Virginal Birth [ ]

Assisted Virginal Birth [ ]

Cesarean Section Birth Full-term [ ]

Cesarean Section Birth Pre-term [ ]

Number of Children (Please Tick where appropriate).

1 [ ]

2 [ ]

3 [ ]

4 and more [ ]

Section Two: Determinants of Exclusive Breastfeeding (*Please Tick where appropriate*)

1. How would you rate how the following Variables influence your EBF practice?

Where: 5- Very Low Extent 4- Low Extent 3- Moderate Extent

2-Great Effective 1- Very Great Extent

Variables	**Very Great Extent**	**Great Extent**	**Moderate Extent**	**Low Extent**	**Very Low Extent**
Promotion of EBF through posters, booklets, brochures and public notices (IEC)					
Educating women in antenatal and postnatal clinics on EBF.					
Involving stakeholders at community level in enriching the values and attitude changing programmes on EBF.					
Access to quality EBF information and services at MRRH.					

a) Maternal factor

Does your personal health affect Exclusive Breast feeding?

Yes [ ]

No [ ]

If yes, please explain

……

……

Does the attention of other children affect your breastfeeding pattern?

Yes [ ]

No [ ]

How soon did you breastfeed immediately after birth?

0 -1 hour [ ]

2-3 hours [ ]

Within 24 hours [ ]

36hours and more [ ]

During the first 6 months was the baby given any other food or fluid other than breast milk and why?

Yes [ ]

No [ ]

If no, please explain the source of the milk?

a) Mother's Breast Milk [ ]

b) Donated Breast Milk [ ]

c) Formula Milk [ ]

d) Cow's Milk [ ]

Please explain why?

…….

Did you experience any breastfeeding challenges?

Yes [ ]

No [ ]

If yes, Please specify.

a. Engorgement painful breast (Blocked duct) [ ]
b. Sore and cracked nipples [ ]
c. Mastitis [ ]
d. Breast Abscess [ ]
e. Others (Please Specify)

……

……

b). Child Factor

What was the child's birth weight?

a. 500h – 1kg [ ]
b. 1kg – 1.5kg [ ]
c. 1.5kg – 2.5kg [ ]
d. 2.5kg – 3.5kg [ ]
e. 3.5kg-5.5kg [ ]

Has the child been admitted in the first 6 months for malnutrition?

Yes [ ]

No [ ]

Which other diseases has your child been diagnosed of in the first 6 months and how did it affect breastfeeding?

a. Malaria [ ]
b. Bacterial and Viral diseases [ ]
c. Respiratory [ ]
d. Anaemia [ ]
e. Others (Please specify

……

……

How was your baby's appetite between 0 to 6 months?

a. Very High [ ]
b. High [ ]
c. Moderate [ ]
d. Low [ ]
e. Very Low [ ]

Section Three: Maternal Knowledge

Are you aware of Exclusive Breast Feeding (EBF) duration?

a. Yes [ ]
b. No [ ]

If yes, what is it?

a. 0 - 3 months [ ]
b. 6 months [ ]
c. 0 -12 months [ ]
d. Don't Know [ ]

How did you learn about Exclusive Breastfeeding

a. Antenatal and postnatal clinics [ ]
b. Friends and Family [ ]
c. Hospital medical professionals [ ]

d. Social media and other media outlets [ ]

Are you aware of the benefits of EBF?

a) Yes [ ]

b) No [ ]

If yes, please name at least 4 benefits to the mother and baby?

……

……

……

……

Are you aware when the baby should start complementary food?

Yes [ ]

No [ ]

If yes, when any why?

a. 0 – 1 month
b. 1 - 2 months
c. 3 - 5 months
d. 6-12 months

Please explain why you introduced at the specific age above?

……

……

……

What other food given to the baby besides breast milk below 6 months?

a. Clean water [ ]
b. Formula milk /Animal milk [ ]
c. Porridge [ ]
d. Mashed food (Irish, sweet potatoes)
e. Others (please specify) ……

When should the baby be breastfed?

a. Every 2-3 hours [ ]
b. When the baby wants (on demand) [ ]
c. When the baby cries [ ]
d. When the mother wants and feels at ease [ ]

How do the following factors influence maternal knowledge and practice of EBF?

Where: 5- Very Low Extent 4- Low Extent 3- Moderate Extent

2-Great Effective 1- Very Great Extent

Factors	**Very Great Extent**	**Great Extent**	**Moderate Extent**	**Low Extent**	**Very Low Extent**
Work-life imbalance.					
Poor attitude on EBF among mothers.					
Social cultural beliefs and practices.					
Level of community infrastructure development and network to promote EBF for mothers with breastfeeding challenges like low breast milk.					

What are the challenges you experienced in accessing EBF information?

a. Lack of interest [ ]
b. Poor channels of communication by the professional stakeholders [ ]
c. Limited time to attend regular clinics [ ]
d. Lack of resources at access EBF information [ ]
e. Poor hospital infrastructure development on EBF [ ]
f. Others (Please Specify)

……

……

THE END

Thank You for your Participation

Interview Guides (Medical Professional on EBF)

a. How important is EBF among nursing mothers and why?
b. What are the indicators of effective EBF among nursing mothers and children?
c. Do nursing and expecting mothers have access to EBF information at the appropriate time?
d. How does maternal factors (health, mode of delivery, appetite etc.) and child factor (weight, appetite, sex etc.) influence EBF?
e. What is the attitude of nursing mothers towards EBF?
f. What are the challenges associated to EBF among nursing mothers?
g. What strategies have been put in place to combat the challenges of EBF among nursing mothers at MRRH?
h. Does Mbale Regional Referral Hospital have appropriate measures, resources and atmosphere to ensure effective EBF?

POST VIVA COMPLIANCE FORM

Knowledge and Determinants of Exclusive Breastfeeding among Nursing Mothers at Mbale Regional Referral Hospital (MRRH)

21st May,2024

Name of Candidate: Ruth Muthoni Mwangi

Registration Number: RJ21M07/006

Comments by External Examiner

Comment	Action	Indicator
Operation definition of terms I. Exclusive breast feeding II. Knowledge of exclusive breast feeding	Included the operation definition of terms	Page 2
B There are many topographical and grammatical errors throughout the dissertation that should be corrected	Revised the document	Throughout the document
The candidate should state the study design for the qualitative component.	Stated the design	Page 15
The theoretical frame work should be included in the dissertation	Included theory of planned behaviour	Page 4
The candidate should extensively revise the methods Section. A detailed description of the study procedure, (how did the participant identify potential participants, who approached potential	Revisited the sections mentioned	Page 16

participants, educate them about the study, assessed them for eligibility and consent them and enrolled them into the study)		
Data management (how the hard copies of the collected questionnaires and consent forms were kept, if the data was entered in a program	Clearly stated	Page 19
Quality control	ensured	Page 19
The Data analysis for the quantitative component should be described in detail.	Done	Page 18

Comments By internal Examiners

Determination of Prevalence of EBF	Done	Page 33

Please sign and put a date

Students Signature **Supervisors signature**

21st, May 2024 21st, May 22, 2024