FACTORS INFLUENCING EXCLUSIVE BREASTFEEDING AMONG LACTATING MOTHERS ATTENDING HEALTH CLINICS IN BUSHENYI DISTRICT

By

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BMS/0077/133/DU

A RESEARCH REPORT SUBMITTED TO THE FACULTY OF CLINICAL MEDICINE AND DENTISTRY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF A BACHELOR OF MEDICINE & BACHELOR OF SURGERY OF KAMAPALA INTERNATIONAL UNIVERSITY, UGANDA

OCTOBER, 2018

DECLARATION

I KEBIRUNGI CAROLINE declare that I am the sole author of this work and it has never been submitted for the award of a degree in any university. Any material which is not my original work has been clearly referenced

Sign …… **Date 15th/11/2018**

APPROVAL

This work has been submitted to university examiners with my approval as university supervisor.

……..……..

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DEDICATION

This work is dedicated to Fr Isidore Ndagizi, Mr. and Mrs. Joel Lopez, Mr. and Mrs. Pascal Tumwesigye for the financial and moral support during my five years in medical school. For all your tireless, I would like to thank you all and pray for God's blessings upon you.

To my brothers and sisters, the Pascals, thank you all for helping me remain focused, supporting me spiritually, emotionally, economically, and for loving me.

ACKNOWLEDGEMENT

With heartfelt gratitude, I would like to thank everyone for their efforts and valuable time contributed to this work. Special thanks to all women in Bushenyi district for their cooperation and understanding during interviews, this work would not have been possible without their efforts.

Thanks also to the district staff; especially the District Health Officer for receiving and allowing me conduct this study in this district. To all the key informants and all personnel at the involved health centers, thanks so much for participating enthusiastically in this study.

Most of all, thanks to my supervisor, mentor, and friend Mr. Solomon Mbina for being insightful, tactical, flexible and professional during this study. Your enthusiasm and guidance made me reach this far; for all your efforts and time, thank you so much.

Above all, I thank God Almighty for his mercies and provision throughout my studies.

LIST OF ACRONYMS AND ABBREVIATION

ANC	Antenatal Care
BFHI	Baby Friendly Hospital initiative
CDC	Centers for Disease Control and Prevention
EBF	Exclusive Breastfeeding
FANTA	Food And Nutrition Technical Assistance
HC III	Health Center III
HC IV	Health Center IV
HIV	Human Immunodeficiency Syndrome
ILO	International Labour Organization
IYCF	Infant And Young Child Feeding
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries/
MOH	Ministry of Health
NBS	National Bureau of Statistics
NFA	National Forestry Authority
OALD	Overactive Let-Down
PMTCT	Prevention of mother to child transmission of HIV
PPD	Postpartum depression
SPSS	Statistical Package for Social Sciences
TDHS	Tanzania demographic and health surveys
UBOS	Uganda Bureau of Statistics
UIC	Uganda Insurance Commission
UN	United Nations
UNICEF	United Nations Children Fund
USAID	United States Agency for International Development
WHO	World Health Organization

OPERATIONAL DEFINITIONS

Abscess – area in the breast that feels hot and painful, and is full of fluid. It result from untreated mastitis

Attitude: is a tendency to respond negatively or positively towards a certain idea, object, person or situation. It influences an individual's choice of action and responses to challenges, incentives and rewards

Blocked duct – milk from one part of the breast does not flow well and forms a lump of thickened milk that blocks the milk duct.

Breastfeeding: is the receiving breast milk either direct from the breast or expressed. It may include exclusive, predominant or partial breastfeeding

Complementary feeding: Is a process starting when breast milk alone is no longer sufficient to meet the requirements of infants, and therefore other foods and liquids are needed along with breast milk.

Engorgement: swelling in the breast that blocks milk flow, caused by inadequate or infrequent milk removal.

Exclusive breastfeeding: is the act of giving a baby breast milk only either expressed or from mothers' breast, without addition of any other foods even water for six months continuously, with the exception of Vitamin supplements or medicine or syrups when need arises (WHO, 2008).

Knowledge: is information acquired by a person through experience or education. It is awareness or recognition gained by experience of a fact or situation.

Maternal morbidity: Any health condition attributed to and/or aggravated by pregnancy and childbirth that has a negative impact on the woman's wellbeing

Mastitis: infection in the breast that produces localized tenderness

Mixed feeding: Breast-fed infants who are also given solid foods or milk from formula

Prevalence: the proportion of a population found to have a condition (typically a disease or a risk factor). It is arrived at by comparing the number of people found to have the condition with the total number of people studied, and is usually expressed as a fraction, as a percentage or as the number of cases.

Sore nipples – breastfeeding is hurting or the nipples are cracked. The mother may have a fever, feel tired or have nausea and headache.

Infant — a person from birth to12 months of age. In this study children aged 0-6 months were considered as infants.

Breastfeeding on demand — Breastfeeding an infant whenever and as long as the infant wants to breastfeed.

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ABSTRACT

Background: Exclusive breastfeeding is recommended as the best feeding approach for new born infants due to its enormous benefits to the mother and child. The World Health Organization (WHO) and United Nations Children Fund (UNICEF) recommendation for optimal infant feeding are exclusive breastfeeding for the first six months after which complementary foods should be introduced with continuation of breastfeeding until two years or beyond.

Objectives: This study assessed the prevalence of EBF, the socio-demographic and physiological factors influencing exclusive breastfeeding among lactating mothers attending Bushenyi district health facilities in Western Uganda. The study population was drawn from lactating mothers attending health facilities in Bushenyi district. 201 mothers were sampled from the sampled health centers.

Methods: A descriptive cross-sectional study design which employed both quantitative and qualitative methods in data collection was used for this study. Simple random sampling technique was used to sample the health facilities and respondents (lactating mothers) at each facility. A Well tested and validated questionnaires and focus group guide were used to collect information. from the lactating mothers from the sampled health centers and hospital. 201 lactating mothers of children of age 6- 12 months participated in this study. Data from the survey was statistically analyzed using the Statistical Package for Social Sciences (SPSS) (version 12.0).

Results: The study showed that initiation of breastfeeding after birth was done within the first hour of birth by most of the mothers 126 (62.7%), however during the first six months after birth of their babies, majority of the mothers had fed their babies other food substances with breast milk 132 (65.7%). The socio-demographic factors which significantly influenced exclusive breastfeeding among the lactating mothers were the marital status (X^2 =17.715, p = 0.000), the level of education (X^2 = 10.680, p = 0.014) and occupation (X^2 = 14.431, p = 0.002). The physiological factors which influence exclusive breastfeeding among the lactating mothers were the mode of delivery (X^2 = 12.258, p = 0.000), the HIV status of the mothers (X^2 = 12.913, p = 0.000) and the breastfeeding disorders experienced (X^2 = 16.538, p = 0.001). Mothers who had delivered vaginally were twice more likely to practice exclusive breastfeeding (OR = 2), HIV

negative mothers were three times more likely to practice EBF compared to the HIV positive mothers, whereas mothers who had breast abscess had higher chances of practicing EBF (OR=1) compare to mothers who had other breast complications.

Conclusion: The rate of exclusive breastfeeding among lactating mothers in Bushenyi district is low; this is mainly influenced by individual, physiological factors and to a smaller extent, socio-demographic factors. Hence health facility deliveries should be promoted by the district health authorities to enhance child education after delivery.

CHAPTER ONE

INTRODUCTION

1.0 Background

Breastfeeding is an important public health strategy for reducing infant and child morbidity and mortality as well as reducing maternal morbidity and mortality (Jones, 2013; Kramer, 2012). Exclusive Breastfeeding (EBF) means an infant receives breast milk from his or her mother or expressed breast milk or a wet nurse for the first six months of life and no other solids/semisolids are given with exception of vitamins, mineral supplements or medicine (Kramer, 2012). Over the last couple of decades, there has been an increasing interest in the promotion of exclusive breastfeeding as the 'best' feeding method for newborns. This, to a large extent, has been inspired by mounting scientific evidence on the importance of exclusive breastfeeding in reducing infant morbidity and mortality. It has been estimated that EBF coverage of 90% will help to improve child survival (Jones, 2013).

Early initiation of breastfeeding facilitates emotional bonding of the mother and the newborn, and has a positive impact on the duration of exclusive breastfeeding. Early initiation of breastfeeding reduces child morbidity and mortality in the first two years of life (WHO/UNICEF, 2009; Mihretab, 2014). If all infants started breastfeeding within the first hour of birth, 22% of neonatal deaths could be saved (Lancet, 2013). This is because early human milk is rich in a variety of immune and no immune components that may accelerate intestinal maturation, resistance to infection, and epithelial recovery from infection (WHO/UNICEF, 2009 Lancet, 2013).

Exclusive breastfeeding is defined as the practice of feeding an infant with breast milk only excluding water, other liquids, breast milk substitutes and solid foods. Vitamin drops, minerals, oral rehydration solution (ORS) and medicines may be given, (World Health Organization, 2013) Current World Health Organization (WHO) and United Nations Children Fund (UNICEF) recommendation for optimal infant feeding are exclusive breastfeeding for the first six months after which complementary foods should be introduced with continuation of breastfeeding until two years or beyond (World Health Organization, 2012). Not only is human breast milk ideal for the human infant because of its nutritive and anti-infective properties, it also provides physical contact between a mother and her baby further strengthening the emotional bond between them (Jones, 2003; WHO, 2010).

Exclusive breast feeding apart from being beneficial to the baby has also been shown to have significant short and long term health benefits for the mother (Ip, 2007). It is associated with lactation amenorrhea which is an important choice for postpartum family planning. Also mothers who do not breast feed are more likely to develop postpartum depression, obesity, type 2 diabetes mellitus, breast cancer and hypertension (HortaBernado, 2007).

The proportion of babies' breastfed at birth in the UK rose by 5%, from 76% to 81% (UNICEF, 2012). The initial breastfeeding rate in 2010 was highest in England at 83% (compared with 74% in Scotland, 71% in Wales, and 64% in Northern Ireland). Exclusive breastfeeding at six weeks was 24% in England and 22% in Scotland, compared to 17% in Wales and 13% in Northern Ireland (WHO, 2012). According to the Centers for Disease Control and Prevention (2010) breast-feeding rates increased across all race and ethnic groups from 2000 to 2008 in the United States. New mothers who said they breastfed their infants for any amount of time increased from 70.3 percent to 74.6 percent; the percentage who said they breastfed for six months rose from 34.5 percent to

44.4 percent; and the percentage who said they breastfed for one year climbed from 16 percent to 23.4 percent.

WHO reported an overall prevalence of EBF of 36%, the highest rates of EBF were found in East Asia/Pacific (43%) and the lowest rates of EBF in West/Central Africa (20%) (WHO, 2011; UNICEF, 2012). Recent analysis by Cai, Wardlaw and Brown (2012) on the global prevalence of EBF across 140 countries, also reported an increase in the developing world from 33% in 1995 to 39% in 2010 among infants aged 0 – 5 months. Increases from West and Central Africa were more than twofold i.e. from 12% in 1995 to 28% in 2010. In Sub Saharan Africa where there are high rates of mother to child HIV transmission, malnutrition, infant and child mortality rates, the overall prevalence of EBF was 33% (UNICEF and WHO, 2011).

Uganda continues to struggle with a high mortality rate among children under the age of five, and diarrhoea and pneumonia are two of the top killers for this age group. Yet exclusive breastfeeding of infants and young children could save many lives (UNICEF, 2015). In Uganda, only 42 % of new-borns are breastfed in the first hour of life (Uganda Bureau of Statistics and ICF International, 2012), thus, a large proportion of new-borns miss out on the disease-protective benefits of Colostrum ("first" milk, of yellowish colour) and only 63% are breastfed up to six months (EPRC, 2012).

The number of stunted children in south-western Uganda has reached epidemic proportions, according to findings of a health research project (UBOS, 2012), a situation that can be backtracked to early infant feeding practices. The most recent study in the area of Bushenyi by Babriye (2009) showed that most (84.5%, 164/194) of the mothers had ever breastfed their infants, the rest had exclusively replacement fed since birth and among children less than six months who

were breastfeeding, 31.5% (34/108) were exclusively breastfeeding and the rest were mixed feeding.

1.1 Statement of the problem

According to World Health Organization (WHO) report, the overall prevalence of exclusive breastfeeding (EBF) stands at 36%, with the highest rates of EBF found in East Asia/Pacific (43%) and the lowest rates of EBF in West/Central Africa (20%) (WHO 2011, UNICEF 2012).In sub Saharan Africa the overall prevalence of EBF was 33% (UNICEF and WHO, 2011). However, recent analysis on the global prevalence of EBF across 140 countries shows an increase in the developing world from 33% in 1995 to 39% in 2010 among infants aged 0-5 months. (Cai, Wardlaw and Brown (2012)).

In Uganda, only six in ten Ugandan children below the age of six months are exclusively breastfed with only half the proportion of the children in South Western district exclusively breastfed (34%). It is no wonder then that the under-five and infant mortality rates stand at 128 and 79 per 1,000 live births respectively, which is very high by developing world standards. (Economic Policy Research Center, 2012).

The number of stunted children in south-western Uganda has reached epidemic proportions, according to findings of a health research project (UBOS, 2012), a situation that can be backtracked to early infant feeding practices. In a study conducted by Babriye (2009) in western Uganda showed that most (84.5%, 164/194) of the mothers had ever breastfed their infants, the rest had exclusively replacement fed since birth and among children less than six months who were breastfeeding, 31.5% (34/108) were exclusively breastfeeding and the rest were mixed feeding.

In order to achieve the EBF targets of 80% by the year 2015, the government of Uganda introduced breastfeeding initiatives and policies like the labor law on maternity leave; mobilization of male partners to support breastfeeding mothers and at the community level, peer counselors provided support for breastfeeding mothers. Despite these policies and programmes, the EBF targets still seem to far from being achieved especially in rural areas like those in Bushenyi district.

This study will seek to identify the factors that influence exclusive breastfeeding among lactating mothers hence provide information or data on exclusive breastfeeding practices in rural areas like those in Bushenyi district.

1.2 Study objectives

1.2.1 General objective

To assess the factors influencing exclusive breastfeeding among lactating mothers attending health clinics in Bushenyi district.

1.2.2 Specific Objectives

1. To determine the prevalence of exclusive breastfeeding among lactating attending health clinics in Bushenyi district.
2. To identify the Socio-Demographic factors influencing exclusive breastfeeding among lactating mothers attending health clinics in Bushenyi district.
3. To establish the Physiological factors influencing exclusive breastfeeding among lactating mothers attending health clinics in Bushenyi district.

1.3 Research questions

1. What is the prevalence of exclusive breastfeeding among lactating mothers attending health clinics in Bushenyi district?

2. What are the Socio-Demographic factors influencing exclusive breastfeeding among lactating mothers at attending health clinics in Bushenyi district?

3. What are the physiological factors influencing exclusive breastfeeding among lactating mothers at attending health clinics in Bushenyi district?

4.

1.4 Justification and significance of the study

The findings of this study are expected to inform practice and policy decisions in the development of appropriate interventions to promote exclusive breastfeeding hence improvement of child health in Bushenyi district.

More efforts are needed to promote exclusive breastfeeding among mothers in order to realize international feeding practices of the infants. Health education on breastfeeding should be improved in order to eliminate barriers to exclusive breastfeeding.

The findings can be used in designing appropriate and effective breastfeeding intervention programmes aimed at improving infant and young children feeding practices. These findings will provide insights for exclusive breastfeeding promotion programmes of mothers in Bushenyi.

The findings will contribute some extra knowledge in the study area and therefore serve as a basis for implementing child health policies. The research findings will form a basis for other researches on breastfeeding such as the plight of breastfeeding employed mothers.

1.5 Study Scope

1.5.1 Geographical scope

The study will be done in Bushenyi district. Bushenyi District is a district in Western Uganda. Bushenyi District is bordered by Rubirizi District to the northwest, Buhweju District to the

northeast, Sheema District to the east, Mitooma District to the south and Rukungiri District to the west. The District is made of 1 County (Igara), twelve sub counties of Bushenyi D, Bitooma, Ibaare, Bushenyi E, Bushenyi C, Kyabugimbi, Bushenyi A, Kyeizooba, and Ruhumuro, together with Central Division, Nyakabirizi Division and Ishaka Division., 1 Municipal Council, 4 Town Boards, 3 Wards, 64 parishes and 565 villages. The district has several health units at various levels of administrative unit from Parishes to the district. Some of these health units are government owned while others are NGO owned and others private.

The district has 12 health facilities at health center III, IV and hospital level as shown in the table below; Bushenyi HCIV, Kyabugimbi HC IV, Kabushaho HC III, Nyabubare HC III, Kyeizoba HC III, Kakanju HCIII, Bushenyi Medical Center HC III, Bitooma HC III, Kyamuhunga HC III, KIU-Teaching Hospital, Bishop Comboni Hospital and Ishaka Adventist Hospital.

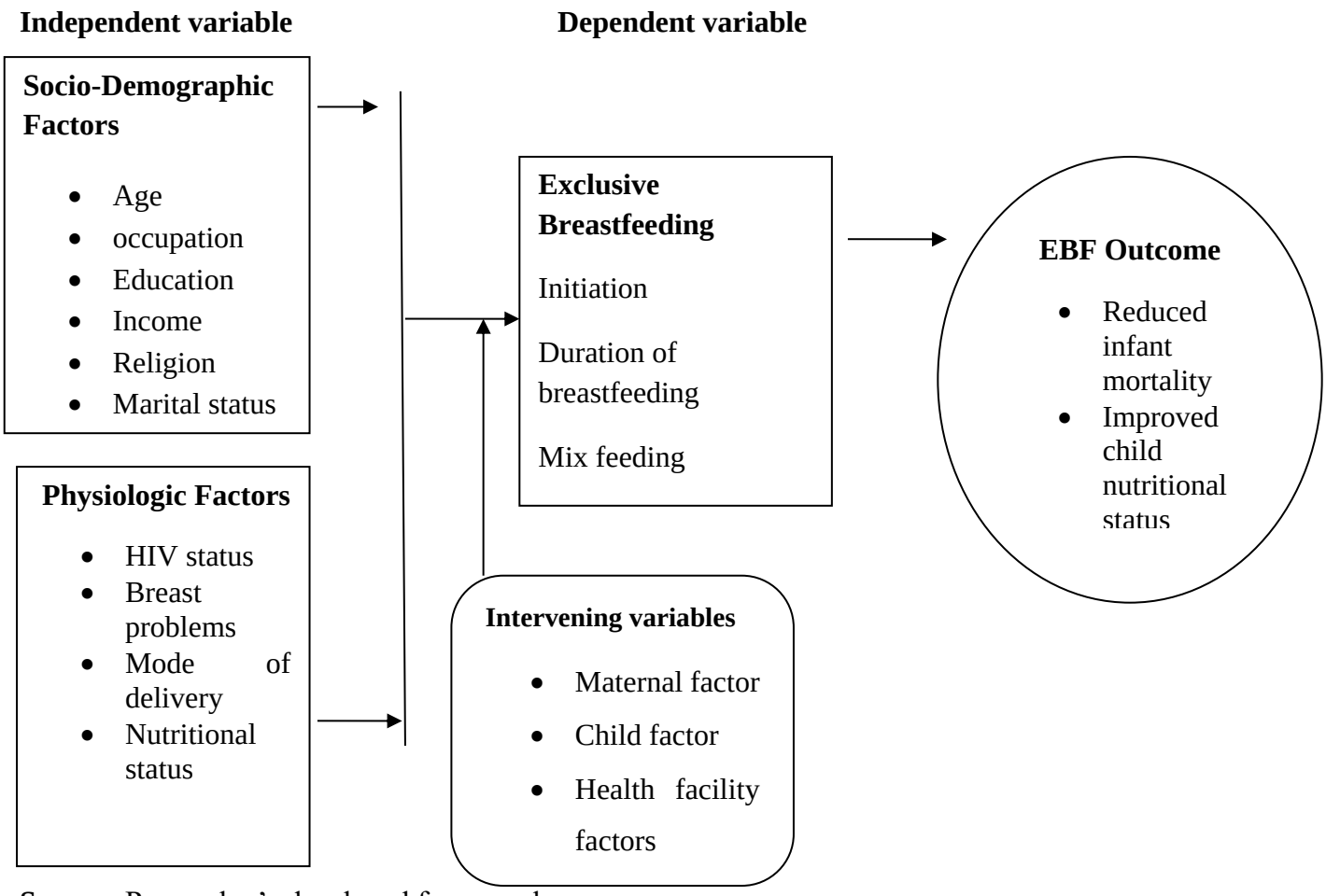
1.5.2 Content scope

The study will focus on factors influencing exclusive breastfeeding among lactating mothers attending health clinics in Bushenyi district.

1.5.3 Time Scope

The study will be conducted between February, 2018 to October, 2018.

1.8 Conceptual framework



Source: Researcher's developed framework

Explanation

The conceptual framework above is the figurative representation of the variables which forms the basis for achieving the set objectives of this study. The independent variables are: socio-demographic factors and physiological factors while the dependent variable is exclusive breastfeeding. The two independent variables influence exclusive breastfeeding. For example, an older lactating mother may breast feed her infant exclusively than a younger mother, an employed lactating mother who is so occupied with her job may soon introduce other foods to the infant hence give up on exclusive breastfeeding and so on. When mother carry out EBF, it leads to remarkable outcomes which includes; reduced infant mortality, reduced maternal morbidity and improved child nutritional status and vice versa.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter presents a review of literature related to the study according to the objectives of the study.

2.1 Prevalence of exclusive breastfeeding

Exclusive breastfeeding practices are not common in developing countries. Only approximately one third of infants less than six months are exclusively breastfed. There are however variations in different regions (UNICEF, 2006b). East Asia so far has the highest rates of exclusive breastfeeding at 43%, with Eastern and Southern Africa at 41%. The region with the lowest reported exclusive breastfeeding rate is Western and Central Africa at 20% (UNICEF, 2006b). Despite the low rates of exclusive breastfeeding in sub-Saharan Africa, the available data indicate that these rates improved between 1990 and 2004 -going from 15% to 32% (UNICEF, 2006b). This rise is attributed to the BFHI (Baby Friendly Health Initiative) practices and breastfeeding promotion and support programmes that have been well established. A study by Abrahams and Labbok (2009), examined the impact of BFHI on exclusive breastfeeding trends. Data for this study were obtained from demographic and health surveys of 72 developing countries.

Reports indicate that the overall rate of exclusive breastfeeding for children below six months in sub-Saharan Africa is 30%. The top statistic of 39% comes from Eastern and Southern Africa, followed by 28% in Northern Africa and Middle East and 21% in West and Central Africa (UNICEF, 2007). However, there is a significant limitation to the data on exclusive breastfeeding rates in children less than 6 months. The data involved were gathered using different methods in

different countries. Also, the data were collected in cross sectional studies involving children below five years of age; therefore, there is a possibility of recall bias which could cause exaggerated rates. Despite this drawback, information on the median duration of exclusive breastfeeding in many African countries can be used to show a definite trend of the duration being shorter than the recommended six months by UNICEF and WHO. This highlights the need to improve both the rates of exclusive breastfeeding and the rate of those continuing for six months.

Exclusive breastfeeding for infants less than six months old has increased in all but one developing region (UNICEF, 2009d). In the developing world as a whole, progress has been modest, from 33% around 1995 to 37% around 2008 a relative increase of about 16% (UNICEF, 2011c and UNICEF, 2009a) and currently stands at 36% (UNICEF, 2011a). South Asia, East Asia / Pacific and Eastern / Southern Africa are regions with the highest levels of exclusive breast feeding (44%, 43% and 39%) (UNICEF, 2009e and UNICEF, 2011a). The rates of exclusive breastfeeding are particularly low in West and Central Africa (23%), East Asia and Pacific (28%), Central and Eastern Europe/Common wealth of Independent States (CEE/CIS) with 29% (UNICEF, 2011b).

In China, the rates of any breastfeeding since mid-1990s in the majority of the cities and provinces are above 80% at four months but very few reached the national target of exclusive breastfeeding of 80% (Xu et al., 2009). Findings of an infant feeding survey in the UK showed that breastfeeding initiation rates were high at 76%, and at one week 45% were still exclusively breastfeeding but at six months this dropped to less than 1% (Scientific Advisory Committee on Nutrition, 2008).

In Kenya, There has been an increase in exclusive breastfeeding rates from 13% in 2003 (KNBS and ICF Macro, 2010) to 32% of children below 6 months exclusively breastfeeding and at six to eight months the prevalence is 3.6% (KNBS and ICF Macro, 2010) from 3.2% in 2003. In 2007, the Kenyan government established a comprehensive infant and young child feeding (IYCF)

programme (UNICEF, 2009a), and this together with efforts by other agencies may have contributed to the increase. The prevalence has yet to reach the WHO goal of 90% and is below the global prevalence currently at 37%. Exclusive breastfeeding rate in Kenya is among the lowest in East Africa region where prevalence is 47% (UNICEF, 2011).

In Tanzania, the baby friendly hospital initiative (BFHI) was initiated in 1992, and currently almost one fourth of maternity hospitals in the country have been declared 'baby friendly'. This implies that mothers who attend antenatal clinics in these hospitals are believed to have access to the current information on recommended infant feeding (TMOHSW & RCHSP, 2008). Nevertheless, not much is known regarding the effectiveness of BFHI in promoting exclusive breastfeeding in Tanzania.

In Tanzania the only source of nationally representative data on infant feeding for children below 5 years of age are the Tanzania demographic and health surveys (TDHS), which were carried out periodically in 1992, 1996, 2005 and 2010. These surveys questioned mothers regarding the last 24 hours of their breastfeeding practices for all their children below five years of age. The current TDHS of 2010 indicates that nearly all children were breastfed (97%) and were said to have initiated breastfeeding in the first 24 hours after delivery (NBS & ICF Macro, 2010).

The available information indicates that exclusive breastfeeding for six months is rare and minimal. Shirima et al. (2000) indicated that exclusive breastfeeding was not practiced in both rural and urban areas. Agnarsson et al (2001) indicated that in the Tabora region, 75% of children were breastfeed exclusively from birth; however, post 2 months of age only 50% were exclusively breastfed. Most infants are reported to have been given animal milk, thin maize porridge and water

by two months. Mothers said that they started early feeding because they did not have enough breast milk.

According to the current TDHS (NBS & ICF Macro, 2010), there has been an increase in the number of mothers who breastfeed their children exclusively for their first six months; the rate went from 13.5% in 2004 to 23% in 2010. The report indicates that 81% of babies below 2 months of age are exclusively breastfed, while only 23% of infants between 4-5 months are exclusively breastfed.

2.2 Physiological factors influencing Exclusive breastfeeding among women with infants 6-12 months

A few may experience "sore nipples" which is the package of challenges whereas mastitis (breast infection) is also a complication that content serious emotional and physical consequences, as an outcome resulting in anatomical changes which is a great challenge (Kelleher, 2006). On the other hand, Kelleher (2006) mentioned that other unanticipated nature of somatic implications including, increased sensations during the sucking process, leakage, latching, letdown and immobility. Among, the most commonly cited specific forms of pain and discomfort related to exclusive breastfeeding are engorgement, nipple pain, raw breasts, cracked and bleeding nipples

In Western Tanzania, Nkala and Msuya in 2010 established that women who had no problems related to breasts were more likely to exclusively breastfeed (Nkala and Msuya, 2011). Maternal characteristics vary widely within different countries.

Mode of delivery

A study conducted on influence of mode of delivery on breastfeeding initiation revealed that women who had normal vaginal delivery were 47% more likely to initiate breastfeeding than women delivered by scheduled repeat cesarean (adjusted relative risk 1.47; 95% confidence interval 1.35, 1.60). Women who ultimately delivered by cesarean section with unsuccessful trial of labor were also more likely to breastfeed than women with a scheduled repeat cesarean section (61% vs. 58.7%, respectively) (adjusted relative risk 1.17; 95% confidence interval 1.04, 1.33). (Jodi R.et al; 2013)

Studies have reported mode of delivery as one of the factors of exclusive breastfeeding. In a study by Coovadia et al, on mother to child transmission of HIV-1 infection during exclusive breastfeeding in the first 6 months of life, among other factors vaginal delivery was a predictor of exclusive breastfeeding (Coovadia, 2007). Furthermore, in a study done by Zanardo et al, to determine whether elective caesarean delivery have negative effect on breastfeeding they report that, emergency and elective caesarean deliveries are similarly associated with a decreased rate of exclusive breastfeeding compared with vaginal delivery (Zanardo, 2010). In addition, Maru and Haidaru reported in their study that mothers who delivered by caesarean section were 80% times less likely to practice exclusive breastfeeding (Maru, 2009). Various studies have been shown that mode of delivery is one among the obstetric factors for EBF (Coovadia et al., 2012)

HIV status

Disclosure of one's HIV status to sexual partners is highly emphasized for various reasons including increased opportunities for social support. Furthermore, it has been reported that HIV status disclosure to sexual partner is associated with other positive outcome including, acceptance, kindness, strengthening of relationship and decreased anxiety and depression (WHO, 2010).

Despite the benefits accompanying disclosure, still low rates have been reported among pregnant women tested in antenatal care (ANC) in Sub Saharan Africa (WHO, 2010). In a study done by Leshabari and colleagues demonstrated that HIV-positive mothers feared to disclose their HIV-positive status during breast feeding due to stigmatization; the reason being the strong cultural position that breast feeding is the only acceptable infant feeding method and the only way to fulfill ideals of being good mothers (Leshabari, 2007).

In circumstances when the husbands are not aware of the HIV status of their wives, they have been reported to impose on inappropriate infant feeding practices including mixed feeding (Maru, 2009). Moreover, nondisclosure of HIV status to partners and close members of the family like infant's grandmother lead to non-adherence to exclusive breastfeeding; this is because they have the big role to decide on how infant is to be fed, in addition; studies has been reported that women who disclose their HIV status to their spouses are less likely to practice mixed feeding (Maru, 2009).

Fear of disclosing one's HIV status to spouse comes as a result of what other women have seen to their fellows as a result of disclosure since it sometimes lead to bad outcomes like abandonment, which is closely tied to loss of economic support from partners (Maru, 2009).

Post partum complications

Women's descriptions of the physical difficulties they experience with feeding are widely described in the literature. A practicality affecting many women is the problem of getting the baby latching on properly, and then the resulting nipple cracking, bleeding and/or pain (Bailey, 2007; Flower, 2008; Harris et al, 2003; Kelleher, 2006; Manhire et al, 2007). Even women who end up being able to breastfeed successfully often experience problems early on (Bailey, 2007). Many

women experience pain and discomfort, and are surprised by the intensity and the duration of the pain. The language women use to describe this includes: *" sore as hell; ...scared of the pain; ...really intimidating" (*Kelleher, 2006).

In addition to painful breasts or nipples, physical feeding issues that are widely described by women as reasons they stop breastfeeding early on are: the baby rejecting the breast or not sucking (Redshaw & Henderson, 2012); and perceived insufficient milk supply (Bailey, 2007; Flower et al, 2008; Gatti, 2008; Heinig et al, 2009; Twamley et al, 2011). Gatti's (2008) review of the literature concluded that many women discontinue breastfeeding during the first few weeks because of perceived insufficient milk supply.

Morbidity

Maternal morbidity includes physical and psychologic conditions that result from or are aggravated by pregnancy and have an adverse effect on a woman's health. The most severe complications of pregnancy, generally referred to as severe maternal morbidity (SMM), affect more women every year. Based on recent trends, this burden has been steadily increasing (Hyattsville, 2013).

Rises in SMM are likely driven by a combination of factors, including increases in maternal age (Hyattsville, 2013), pre-pregnancy obesity, pre-existing chronic medical conditions, and cesarean delivery (Hyattsville, 2013). The consequences of the increasing MM prevalence are wide-ranging and include higher health service use, higher direct medical costs, extended hospitalization stays, and long-term rehabilitation (CDC, 2013).

Maternal morbidity complications or interventions during labor and childbirth can impact upon both breastfeeding Initiation and duration. A prolonged second stage of labour (Wiklund et al,

2009) and foetal Distress during labour (Chapman et al, 2003) are all associated with a Shorter breastfeeding duration, possibly due to delayed breast fullness and lower subsequent milk volume (Chen et al, 1998) or through increased postnatal pain from perineal trauma (Rajan, 1994). Separation of mother and infant in the moments after birth can also interfere with breastfeeding, especially if the birth was medicated. Even if the separation is short (less than 20 minutes), there Is increased risk of suckling Problems (Righard & Alade, 1990) and mothers who are separated from their infants after birth breastfeed for a shorter duration (Rojas et al. 2003).

2.3 Socio demographic factors associated with Exclusive Breastfeeding among mothers.

Marital status

In a study by Alemayehu et al. in Ethiopia in 2005 exclusive breastfeeding was associated significantly with, current marital status, and economical status (Alemayehu et al., 2009). Other maternal characteristics that have shown significant associations with exclusive breastfeeding include maternal age, higher parity and experience of breastfeeding problems. For example in a prospective cohort study in Nigeria in 2006/2007, older maternal age and higher parity were significantly associated with exclusive breastfeeding (Ukegbu et al., 2011) while on the side of women's experiences, the report showed that majority (89.2%) of them noted that use of breast milk had no disadvantages and very few mentioned that it endanger mothers life (1.7%) and (3.8%) reported inadequate milk production, others were not sure about disadvantages of breast milk, they said, they do not know (Ukegbu and Anyika ,2003)

Education

There is evidence showing that maternal characteristics such as education influence breastfeeding practices. In Tanzania according to Shirima, Gabre-Medhin and Greiner (2001) duration of

exclusive breastfeeding is mainly associated with information and knowledge about breastfeeding. Maternal level of education has also been reported to be positively associated with initiation, exclusiveness and duration of breastfeeding (AL Sahab et al., 2010; Alemayehu, Haidar and Habte, 2009). Printed materials with simple message (brochure & pictures), and mass media can also be used, as it has shown to increase knowledge and positive attitudes towards EBF elsewhere (Lutter CK.; et al 1997) (Behaviour Change Communication.; 2003)

In Kenya limited knowledge about exclusive breastfeeding, pressure from family and friends to introduce complementary foods and excessive demands on maternal time against other competing responsibilities have been shown to negatively influence the practice of exclusive breastfeeding (Ochola., 2008)

A study done in Nigeria shows that higher educational level of women and maternal age are significantly associated with EBF. The practice of EBF was better among mothers aged between 28-32 years, mothers living together with their partners and those who were less educated while younger mothers (below 22 years of age) are more likely to practice mixed feed (Uchendu, 2009). Most of the studies done in Ethiopia indicate that EBF was associated significantly with maternal educational level, current marital status, and child age. The other interesting finding was that higher maternal education level was found to be associated with lower rate of EBF in Ethiopia due to the fact that when women are better educated, the opportunity for employment is high and thus the opportunity to stay at home and practice EBF is compromised since influenced by media advertising milk substitutes (Alemayehu, 2009; Gupta, 2003).

In Addis Ababa Kirkos sub city the likelihood of practicing EBF among those who have, primary education, secondary education and diploma is higher than those who have no education by 7.07,

6.21 and 3.20 times respectively and the difference is statistically significant (Tiruzer). Similarly a study done in Bahir Dar indicates that, the practices of EBF among mothers who were unable to read and write or in primary school were 3 times higher than those who completed secondary school or higher (Gupta, 2003).

Employment

Leshabari et al in their study in Dar el Salaam reported that before infant reaches six months mothers had to leave their babies and go to work to supplement family income due to economic difficulty hence failure to practice exclusive breastfeeding (Maru, 2009).

Doherty et al report that in order to cope with family demand, at some instances mothers had to go out look for job or do household chores such as collecting water and this led to non adherence to EBF; the same is reported by Leshabari et al asserting that mothers are expected to leave their children and go to work in order to supplement family income due to life being expensive (Leshabari, 2007). Lack of funds to purchase infant formula feeds, poor hygienic conditions and risk of social repercussions were more commonly reported as reasons for mothers to opt for breastfeeding rather than exclusive replacement feeding (Thairu, 2005).

Additionally, in a study conducted in Guatemala on determinants of optimal breastfeeding it has been reported that mothers who worked outside the home are less likely to breastfeed exclusively compared to mother who do not work away from home, thus not working outside the home is important predictor of exclusive breast-feeding (Dearden, 2002).

In a study done in Kenya regarding nutrition status and feeding practices of infants born of HIV positive mothers; Ochuma et al reports that despite the knowledge that exclusive replacement

feeding can prevent infants from acquiring HIV, due to the high price of infant formula, it is difficult to practice exclusive replacement feeding since sustaining supplies is the challenge as a result of the low income to most mothers in populations hence mothers opt to breastfeed though not exclusively (Ochuma, 2005). The study further reports that, in situations where mother's household income was high, they were more likely to practice exclusive replacement feeding which is safest way to prevent infant from HIV infection (Ochuma, 2005).

There are many issues that disrupt mother's breastfeeding plan at work. Commonly cited issues are lack of workplace breastfeeding facilities, lack of family support, mother's inadequate knowledge about breastfeeding and feeling of embarrassment (Brown, 2014; Woods, 2013). Working mothers often face inflexibility in the working hours, unable to find facility for childcare at or near the workplace, lack privacy for breastfeeding, place to store breast milk (refrigerator), limited paid maternity leave and fear over job insecurity (Domenico, 2013; Ogido, 2014; , Lawrence, 2011, Armstrong, 2002).

Almost all mothers can breastfeed, as long as they have correct information and support from their family, employer, health care system and society (Horta, 2010; Armstrong, 2002). Often healthcare providers have limited knowledge and training on breastfeeding and breastfeeding support at work (Benjamin, 2014). A study described that significant number of primary healthcare providers were unable to provide mothers with the necessary information on breastfeeding. Many mothers who return to work give up breastfeeding partially or completely because they do not have appropriate time, or place to breastfeed or express and store breast milk (Rivera, 2014; Bai, 2014; Allen, 2014).

A study conducted in Mexico to assess the association between working mothers and breastfeeding using secondary data source from three national health survey (1999, 2006 & 2012), the findings

of study suggest that maternal full time employment was negatively associated with breastfeeding among mothers with a child under age one year. The study further elaborated that full time employed mothers were 20% less likely to breastfeed compared to part time employed mothers. While, full time employed mothers were 27% less likely to breastfeed compared to non-employed mothers (Rivera, 2011).

Mother's age

Different studies have found that it is difficult to practice exclusive breastfeeding unless the value of it is known to community members, specifically family members. The difficulty is reported to be worse among young or adolescent mothers who frequently depend on advice from families members to practice infant feeding, in addition, for adolescent mothers the opinions on infant feeding from families is highly valued especially in circumstances where they depend on the families for financial and emotional support (Della, 2006; Thairu, 2005). In their study, Della *et al* report that duration of exclusive breastfeeding increases as the age of the mother increases thus women with older age are more experienced and can practice exclusive breastfeeding compared to the ones with younger age (Della, 2006).

Furthermore, Thairu *et al* in their study assert that, it is difficult for adolescent mothers to decide on her own how to feed the baby by saying "When adolescent mothers express disagreement, families may insist on their own decisions or, less frequently, implement their preferred feeding practices without the mother's consent. Accommodating the family's wishes may be an adaptive coping strategy as adolescent mothers struggle with the enormous challenge of parenting in the midst of their own development" (Thairu, 2005)

In a study conducted in Sweden by Hornell *et al,* it is reported that younger women are less likely to breastfeed compared to older mothers, the fact which they attributed to lack of experience in

breastfeeding by these younger mothers while a study in Nigeria reports younger mothers being more likely to practice mixed feed unlike older mothers because of their dependency on older family members advice for child rearing (Adejuyigbe, 2008; Hornell, 2001).

Religion

The Islamic holy book, the Quran, recommends that mother's breastfeed their children for two years if possible and states that "every infant has the right to be breastfed. That if a mother is unable to breastfeed, she and the husband can decide together to have a wet nurse feed the child" (Jessica, 2007). Islam has codified the relationship between the wet nurse and the infants she nurses and also between the infants when they grow up, so that milk siblings are considered as blood siblings and cannot marry (Jessica, 2008). The Shulchan Aruch, based on the Talmud, allows breastfeeding until age two in all cases and up to age 4 (or 5 if the child is sick as long as the child has not ceased nursing for 72 hours).

The reason for this is that adults are forbidden to breastfeed although they may drink mother's milk indirectly (Ari, 2006). Islam contradicts breastfeeding. The Islamic society represses and suppresses women who are generally believed to be inferior to men. In most Islamic nations, women have to be covered from head to toe (Ari, 2006). This is a cultural barrier that hinders breastfeeding. Other religions support breastfeeding. For example, the La Leche League International was founded by Catholic mothers in support of breastfeeding.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter includes a description of the study design, study population and subjects under study and how they were selected for inclusion in this study. In addition, the instrument used to collect information is discussed as to its content, and the rationale for the content. Data collection methods and tools, data analysis procedures are presented and ethical considerations.

3.1 Study design

The study design was descriptive cross-sectional which employed both quantitative and qualitative methods in data collection. The quantitative methods under this design were used to collect data that can be numerically presented for example the prevalence of EBF while the qualitative method was used to collect non numerical data.

3.2 Study population

The study population comprised of lactating mothers of children aged 6 to 12 months and seeking health services from any of the sampled health facilities in Bushenyi district.

3.2.1 Inclusion criteria

Breastfeeding mothers whose children are aged 6 – 12 mothers and attended any of the sampled health centers and hospital and would consent will constitute the inclusion criteria.

3.2.2 Exclusion criteria

Breastfeeding mothers whose children are less than 6mothers or above 12months of age.

Breastfeeding mothers whose children are aged 6 – 12 mothers attending any of the sampled health centers and hospital and would not consent to participate in the study.

3.3 Sample size determination

The sample size was calculated using the formula Kish Leslie (1965):

$n = z^2p\ (1-p) / E^2$

Where n = Estimated minimum sample size required

P= Proportion of a characteristic in a sample (84.5% [Babriye, 2009])

Z=1.96 (for 95% Confidence Interval)

e = Margin of error set at 5%

$$n = \frac{1.96^2 \times 0.845\ (1 - 0.845)}{0.05^2}$$

n = 201 mothers

3.4 Sampling technique

Simple random sampling was used to sample the twelve health facilities at hospital, center III and center IV level. This will be done using a lottery were the names of the health facilities will be written on A6 size papers, folded and put in an opaque bag from which 6 will be picked. The names of the health facilities contained on the 6 pieces of paper picked were considered the sampled facilities.

Each of the six health centers were visited on different days for 4 consecutive weeks. Each visit lasted 4 hours. This is because each clinic has 2 different specific MCH clinic days which operated from 8 am to 2 pm in the afternoon. The responding mothers were also sampled randomly. Papers with two written choices **Yes** and **No** were placed in a container. On each visit, mothers of children aged 6 - 12 months attending MCH clinics in the sampled health sampled health centers and willing to participate, picked the papers at random. The respondents who picked the **Yes** response were included in the sample. On each day, the total number of mothers and infants were recorded.

3.5 Data collection methods

Quantitative data

This data was collected using structured interviews. The Structured interviews involved a self-administered questionnaire. The interviewers read the questions exactly as they appear on the survey questionnaires to the respondents to give her responses.

Qualitative data

Focus Group Discussion (FGD) was conducted to collect qualitative data. Three focus group discussions (FGDs) were conducted on separate days with 10 participants in each group at two of the sampled health facilities. One will be done with pregnant mothers during their Ante Natal Clinic (ANC) visits, another with mothers of infants 0 – 6 months at Mother and Child Health (MCH) clinics and lastly at labour wards. The participants will be informed of the study and then invited to participate. Written consent will be obtained from the participants. FGDs will enable exploration of factors influencing the practice of exclusive breastfeeding and will be useful in verifying information collected by the questionnaires.

Using a prepared guide (appendix), probing will be done on factors influencing the practice of exclusive breastfeeding. This assisted in identifying factors that influence infant feeding practices in the study area. The discussions will be facilitated by the principal researcher as an assistant recorded the responses.

3.6. Data collection procedure

All mothers coming to the health centers during the days of data collection were approached one by one after a group talk in the waiting area of the clinic they will be attending. Those meeting the study criteria of the study will be explained the purpose of the study verbally, and confidentiality of response will be assured. Their questions and concerns will be answered and cleared. Those willing to participate will give verbal consent.

Participants were given sufficient time to consider whether or not to participate in the study. Those who were willing gave verbal agreement "I agree to participate" to participate in the study. Interviews were conducted privately after their clinic appointments.

3.7 Quality control

3.7.1 Training of data collection team

The data collection team comprised of four research assistants who were university graduates. The study team was recruited based on the experience they had in conducting similar research. Two-day training was conducted by the principal investigator. The training focused on administration of questionnaires, interviewing techniques and translating of the questions to the local language.

3.7.2 Pre-testing of questionnaires

Pre-testing of questionnaires was conducted over a period of two days in Ishaka Division. A total of 20 households covered with each research assistant covering five households. The principal investigator and the data collection team conducted the pre-test. This will be done to impart

practical experience to the team in administering questionnaires and taking anthropometric measurements.

Any ambiguities were noted and necessary corrections done in the process of the finalization of questionnaires and procedures after pre-test. The research assistants will be retrained after the pretesting of the questionnaires for one day before actual data collection commenced.

3.7.3 Reliability and validity

Quality of data collected was ensured through close supervision of the data collection team daily by the principal researcher. Completed questionnaires was reviewed daily for inconsistent or incomplete responses and corrected before transportation to the office for data entry. Sets of data was entered onto an excel spreadsheet. Data was entered using the Statistical Products and Service Solution (SPSS version 20.0) Data entry module version 3.0 software which has an inbuilt verification ability to check for range and logistical errors.

3.8 Ethical considerations

The study was reviewed by the Institutional Research and Ethics Committee of Kampala International University, and after the ethics clearance, permission was sought from the District Health Office before undertaking the research, ethical approval was sought from various sources to ensure that the study adhere to acceptable ethical guidelines.

In addition, Informed consent was obtained from each study participant. Each respondent was informed about the purpose of the study that the findings of the study will inform policy makers

and other concerned bodies. Any inclusion in the study will be after their verbal and written consent. The right to freedom from harm and discomfort will be maintained, as participants will be not subjected to any risk of harm or injury.

CHAPTER FOUR

RESULTS

4.0 Introduction

The sampled health facilities used for this study include; Kakanju HCIII, Ruhumuro HCIII, Kyeizoba HCIII, Bitooma HCIII, Bushenyi HCIV, Kyabugimbi HCIV and St. Daniel Comboni Hospital. The results of the study are presented in order of the stated objectives below.

4.1: Socio-demographic characteristics of the lactating mothers

Variable	Category	Frequency (n = 201)	Percentage
Age	Less than 18 18-25 26-33 34-41 42-49	20 114 54 10 3	10.0 56.7 26.9 5.0 1.5
Marital status	Married Single Separated Divorced	172 19 7 3	85.6 9.5 3.5 1.5
Level of education	No formal education Primary school Secondary school Post secondary education	42 106 39 14	20.9 52.7 19.4 7.0
Occupation	Employed Self employed Peasant House wife	26 44 116 15	12.9 21.9 57.7 7.5

Majority of the mothers 114/201(56.7%) that participated in this study fell within the age bracket of 18-25 and were married 172/201(85.6%). Also, majority 106/201(52.7%) of the lactating mothers had attained primary level of education and were peasants 116/201 (57.7%). Details of these findings can be seen in the table above.

4.2 Exclusive breastfeeding practices

Variable	Category	Frequency (n = 201)	Percentage

Initiation of breastfeeding after birth	Less than 1 hour after birth	126	62.7
	1-3 hours after birth	59	29.4
	4-11 hours after birth	9	4.5
	12-23 hours after birth	3	1.5
	24 hours or more after birth	1	0.5
	Don't remember	3	1.5
During the first six months after birth of this baby, baby fed anything other than breast milk	Yes	132	65.7
	No	69	34.3
If yes, what was fed to your baby	Cow's milk	56	42.4
	Glucose (sugar) water	18	13.6
	Porridge	57	43.2
	Mashed bananas	1	0.8

Majority126/201 (62.7%) of the responding mothers had initiated breastfeeding after birth within the first hour of birth; however, during the first six months after birth of their babies, majority132/201 (65.7%) of the mothers had fed their babies with other supplements (food) than breast milk. Most 57/201 (43.3%) of the mothers who introduced other foods to the babies within the first six months, gave them porridge.

Comments made by mothers on their experience during the first six months with their children include;

"I will never allow my child to be thirsty so I will give him water some times. Although we were told not to introduce water to the babies until after 6 months, but I can imagine my child crying always and continue to remain light weighted (1st breastfeeding mother).

My child demand for breast milk is much and because my milk is insufficient, I give him water and little porridge some times because I can see him crying all the time.(2nd breastfeeding mother).

Table4.3: **Cross tabulation of the socio-demographic factors influencing exclusive breastfeeding among lactating mothers.**

		Exclusive breastfeeding				
Variable	**Category**	**Yes n = 69**	**No n = 132**	**X^2**	**Df**	**P<0.05**
Age						
	Less than 18	6(30.0%)	14(70.0%)			
	18-25	40(35.1%)	74(64.9%			
	26-33	23(42.6%)	31(57.4%)	8.627	4	0.071
	34-41	0(0.0%)	40(100.0%)			
	42-49	0(0.0%)	3(100.0%)			
Marital status						
	Married	69(40.1%)	103(59.9%)			
	Single	0(0.0%)	19(100.0%)			
	Separated	0(0.0%)	7(100.0%)	17.715	3	0.001
	Divorced	0(0.0%)	3(100.0%)			
Level of education						
	No formal education	17(40.5%)	25(59.5%)			
	Primary school	34(32.1%)	72(67.9%)			
	Secondary school	18(46.2%)	21(53.8%)	10.680	3	0.014
Post secondary education		0(0.0%)	14(100.0%)			
Occupation						
	Employed	9(34.6%)	17(65.4%)			
	Self employed	10(22.7%)	34(77.3%)			
	Peasant	50(43.1%)	66(56.9%)	14.431	3	0.002
	House wife	0(0.0%)	15(100.0%)			
Religion						
	Catholic	38(32.2%)	80(67.8%)			
	Protestant	31(44.3%)	39(55.7%)			
	Muslim	0(0.0%)	11(100.0%)			
	Others	0(0.0%)	2(100.0%)	10.110	3	0.018
Area of residence						
	Urban	13(50.0%)	13(50.0%)			

	Rural	56(32.0%)	119(68.0%)	3.253	1	0.071

The socio-demographic factors which significantly influenced exclusive breastfeeding among lactating mothers were the marital status (p = 0.000, X^2 =17.715), the level of education (p = 0.014, X^2 = 10.680), occupation (p = 0.002, X^2 = 14.431), and religion (p = 0.018, X^2 = 10.110). Exclusive breastfeeding was practiced more by mothers, who are married, who had secondary education and lower, who are peasant and Protestants.

Table 1.4: **Multivariate analysis of results for the socio-demographic factors influencing exclusive breastfeeding**.

				Confidence Interval	
Variable	**Category**	**Sig**	**AOR**	**Lower**	**Upper**
Marital status					
	Married	0.091	4.315	0.056	1.780
	Single	0.038	1.389	0.488	3.955
	Separated	0.049	0.684	0.197	2.373
	Divorced		1.000		
Level of education					
	No formal education	0.397	1.542	0.566	1.201
	Primary school	0.017	1.350	1.056	1.725
	Secondary school	0.200	0.413	0.107	1.597
Post secondary education			1.000		
Occupation					
	Employed	0.056	0.208	0.042	1.040
	Self employed	0.005	0.202	0.066	0.613
	Peasant	0.114	1.583	0.299	1.138
	House wife		1.000		
Religion					
	Catholic	0.255	1.160	0.573	8.144
	Protestant	0.592	1.174	0.653	2.109
	Muslim	0.762	0.912	0.504	1.652
	Others		1.000		

The results in the table above show that mothers who are married were four times (OR = 4) more likely to practice exclusive breastfeeding, mothers with no formal education were more likely (OR

=1.542) to practice EBF. Compared to mothers with other occupational status, peasant mothers are more likely (AOR= 1.583) to practice EBF.

4.5 Physiological factors of the mothers

Variable	Category	Frequency (n=201)	Percentage
Mode of delivery in previous pregnancy			
	Vaginal birth	180	89.6
	Caesarian section	21	10.4
If caesarian section, time of start of breast feeding your child for the first time			
	Less than 1 hour after birth	5	23.8
	1-3 hours after birth	13	61.9
	4-11 hours after birth	3	14.3
HIV status			
	Negative	179	89.1
	Positive	22	10.9
Experience any breastfeeding problems			
	Yes	78	38.8
	No	123	61.2
Breastfeeding problem			

experienced			
Engorgement		16	20.5
Sore/cracked nipples		26	33.3
Mastitis		26	33.3
Breast abscess		10	12.8

Factor	Category	Frequency	Percentage
Rate of breast milk production for the child			
Sufficient		122	60.7
	Average	70	34.8
Insufficient		9	4.5
Number of meals use had during the first six months			
One		60	29.9
Two		76	37.8
Three		43	21.4
More than three		22	10.9
Appetite during the first six months			
	High	60	29.9
Average		125	62.2
	Low	16	8.0

The result show that Majority 180/201 (89.6%) of the mothers had delivered vaginally while majority 13/21 (61.9%) of the mothers who had cesarean births took between 1 – 3 hours to start

breast feeding their children for the first time. Majority 179/201 (89.1%) of the mothers who participated in this study were HIV negative. Among mothers who experienced the breast problems, sore / cracked nipples and mastitis were the most 26/78(33.3%) frequently reported cases. Refer to the table for more details.

Majority122/201(60.7%) of the mothers rated themselves as having sufficient breast milk whereas most76/201(37.8%) of them reported that they used to have only two meals during the first six months. Majority 125/201(62.2%) of the mothers rated their appetite for food during the first six months as average.

Table 4.6: **Cross tabulation of the physiological factors influencing exclusive breastfeeding among lactating mothers**.

		Exclusive breastfeeding				
Variable	**Category**	**Yes n = 69**	**No n = 132**	**X^2**	**df**	**P value**
Mode of delivery						
	Vaginal birth	69(38.3%)	111(61.7%)			
	Caesarian section	0(0.0%)	21(100.0%)	12.258	1	0.000*
HIV status						
	Negative	69(38.5%)	110(61.5%)	12.913	1	0.000*
	Positive	0(0.0%)	22(100.0%)			
Experienced any breastfeeding problems						
	Yes	23(29.5%)	55(70.5%			
	No	46(37.4%)	77(62.6%)	1.325	1	0.250
Breastfeeding problems experience						
	Engorgement	7(43.8%)	9(56.2%)			
	Sore/cracked nipples	5(19.2%)	21(80.8%)			
	Mastitis	0(0.0%	26(100.0%)	16.538	3	0.001*
	Breast abscess	5(50.0%)	5(50.0%)			

The mode of delivery (p = 0.000, X^2 = 12.258), the HIV status of the mothers (p = 0.000, X^2 = 12.913,) and the breastfeeding problems (p = 0.001, X^2 = 16.538) influence exclusive

breastfeeding among lactating mothers attending health facilities in Bushenyi district. High EBF practice is observed among women who delivered normally, those with a negative HIV status and the women who had breast abscess.

High blood pressure (X^2 = 4.355, p = 0.037), significantly influenced exclusive breastfeeding among lactating mothers attending health facilities in Bushenyi district. Mothers who had high blood pressure never practiced EBF.

Table 4.7: Multivariate analysis of the results for the physiological factors influencing exclusive breastfeeding among lactating mothers.

			Confidence Interval	
Variable Category	**Sig**	**AOR**	**Lower**	**Upper**
Mode of delivery				
Vaginal birth	0.696	2.400	0.259	7.582
Caesarian section		1.000		
HIV/AIDS status				
Negative	0.238	3.049	1.153	0.238
Positive		1.000		
Breastfeeding problems experience				
Engorgement	0.756	0.778	0.159	3.795
Sore/cracked nipples	0.075	0.238	0.049	1.153
Mastitis	0.998	0.000	0.000	.
Breast abscess		1.000	1.000	
High blood pressure				
Yes		0.441	0.255	1.091
No		1.000		

The results in the table above show that mothers who had delivered vaginally were twice (OR = 2) more likely to practice exclusive breastfeeding, HIV/AIDS negative mothers were three times (OR = 3) more likely to practice EBF compared to the HIV/AIDS positive mothers. Compared to mothers who had other breast complications, mothers who had breast abscess had higher chances (OR = 1) of practicing EBF. The mothers who reported that they had hypertension were less (OR = 0.441) likely to breastfeed exclusively.

CHAPTER FIVE
DISCUSSIONS

5.0 Introduction

This chapter presents the discussions of the findings according to the specific objectives which were set to be achieved in this study.

5.1 The prevalence of exclusive breastfeeding among lactating mothers attending Bushenyi district health facilities.

In this study it was found that prevalence of EBF among lactating mothers with infants aged 6–12 months attending health facilities in Bushenyi district was low (34.3%) compared to the WHO recommended EBF coverage of 90 % and the national target of EBF coverage (80%) WHO / UNICEF (2003).The results of this study on the prevalence of EBF are consistent but higher than those reported in previous studies in Kilimanjaro (20.7%) and in Uganda (24%), but it was lower than the EBF prevalence shown by the Tanzania demographic health survey (TDHS) of 2010 (50%) and for developing countries (35%). The difference of EBF observed between this study and TDHS may be due to methodologies used to estimate EBF.

Breastfeeding practice among the mothers at birth on the other hand was good because (62.7%) of the women initiated breastfeeding within one hour of birth. However, compared to other studies it is lower. For example in Nairobi, a study conducted by Muchina (2007) showed that majority (74.6%) of mothers initiated breastfeeding within 0 – 1 hour. This relatively low rate of breastfeeding initiation could be due to a number of factors like culture were some people consider colostrums to be contaminated milk and therefore not good for babies or due to obstetric factors whereby some mothers could have spent more time recuperating after surgical procedures like

cesarean sections. Nevertheless, it was higher compared with national prevalence level as reported by KDHS (2008 – 09) where 58% of mothers initiated breastfeeding within one hour after birth.

The seemingly fair practice of initiating breastfeeding within 1 hour by the women was offset by early introduction of water, cow's milk and semi-solids. Between birth and one month cereal porridges and cow's milk was the main addition making predominant breastfeeding common mode of feeding. From one to third month after birth foods used for complementary feeding i.e. cow's milk, porridge and mashed bananas were introduced leading to a predominant mix feed group of children. This is almost the similar to the TDHS report 2004/05 and 2010 which showed that 33%-37% of infants below six months had receive complementary foods i.e. any solid and semisolid foods a day proceeding the interview day (NBS, 2010). This implies that some children born to women in Bushenyi district are prone to mortality since mixed feeding is responsible for frequent risk of infections like diarrhea and pneumonia, increased mortality and higher risk of HIV transmission to infants (WHO, 2009).

The national policy recommends that infants be exclusively breastfed during the first six months of life. From six months, infants should receive complementary foods with continued breastfeeding up to two years of age or beyond. Early supplementation is discouraged because it interferes with breastfeeding, yet this was found to be rampant among mothers in Bushenyi district. The findings of this study had similarities with other studies which reported the same trend. In a study conducted in Eastlands, Nairobi, by Ashene (2006), 31.8% of infants were introduced to foods/liquids at two months and below whereas 68.9% between 2 – 4 months. Muchina (2007) found that 63.4% infants aged below four months were introduced to foods/fluids.

5.3 The socio-demographic factors influencing exclusive breastfeeding among lactating mothers attending Bushenyi district health facilities

The socio-demographic factors which significantly influenced exclusive breastfeeding among lactating mothers attending Bushenyi district health facilities were the marital status, the level of education, occupation, and religion. Exclusive breastfeeding was practiced more by mothers, who were married, mothers who had secondary education and lower, peasant mothers and those who were Protestants. The findings from this study confirmed an earlier study by Alemayehuet al. in Ethiopia, who revealed that exclusive breastfeeding was associated significantly with, current marital status, and economical status (Alemayehuet al., 2009). However differ from the study by Maundu (2007) who found that marital status and education were not related with exclusive breastfeeding.

The reason as to why married women were more likely to practice exclusive breastfeeding is because being married comes with support benefits like psychosocial support and financial support from the male partner and the extended family. With the psychosocial support, a lactating is guaranteed stability, peace of mind and confidence that she can breastfeed, which increases milk flow, whereas with financial support the lactating woman can have access to most the nutritious foods necessary to meet her recommended daily allowances which can in turn stimulate milk production.

Maternal level of education has also been reported to be positively associated with initiation, exclusiveness and duration of breastfeeding (AL Sahabet al., 2010; Alemayehu, Haidar and Habte, 2009). In this study, having a low education level was associated with higher EBF practice contrary to findings by (Gupta, 2003) in Addis Ababa Kirkos sub city. This is because with higher education comes increased opportunity and chances of being employed formally and promoted to a higher

position at the work place which can hinder breastfeeding since no maternity leaves span more than 6 months. This early return to work leaves the mother with no choice but to mix feed since carrying the baby to work might by cumbersome. Similarly, in a study conducted in Guatemala on determinants of optimal breastfeeding it has been reported that mothers who worked outside the home are less likely to breastfeed exclusively compared to mother who do not work away from home, thus not working outside the home is important predictor of exclusive breast-feeding (Dearden, 2002).

There are many issues that can disrupt mother's breastfeeding plan at work. Commonly cited issues are lack of workplace breastfeeding facilities, lack of family support, mother's inadequate knowledge about breastfeeding and feeling of embarrassment (Brown, 2014; Woods, 2013). Working mothers often face inflexibility in the working hours, unable to find facility for childcare at or near the workplace, lack privacy for breastfeeding, place to store breast milk (refrigerator), limited paid maternity leave and fear over job insecurity (Domenico, 2013; Ogido, 2014; , Lawrence, 2011, Armstrong, 2002).

This explains why less educated mothers in this study were more likely to breastfeed since they are less likely to be in formal employment and as such are more flexible in their time, making it easy for them to practice exclusive breastfeeding. The same reason can hold for lactating mothers who were reportedly peasants by occupation, since they are not bound by formal maternity leaves, hence they can devout enough time to exclusively breastfeed.

As for the religion, the finding that Pentecostals were more likely to practice EBF can be explained from the biblical front whereby the Bible itself proclaims that children are the heirs to the Kingdom of God, making them eligible for the best of childcare a mother can give in this case exclusive

breastfeeding. Therefore, the Pentecostal mothers could have practice EBF more in respect to this Biblical declaration.

5.2 The physiological factors influencing exclusive breastfeeding among lactating mothers attending Bushenyi district health facilities

The results of this study show that mothers who had delivered vaginally were twice more likely to practice exclusive breastfeeding. This is in line with a study by Jodi.et al (2013), Coovadia, 2007), Zanardo (2010) and Coovadia et al (2012) who also revealed that women who had normal vaginal delivery were 47% more likely to initiate breastfeeding than women delivered by scheduled repeat cesarean (adjusted relative risk 1.47; 95% confidence interval 1.35, 1.60).

Women who underwent cesarean sections take a long time to regain consciousness depending on the anesthetic techniques used. Given that the baby naturally has to feed after birth, the situation of the mothers inevitably makes the caretakers of the baby to opt for prelacteal feeds which can continue for a considerable time thus hindering EBF practice. In addition, undergoing cesarean section procedure is usually associated with postnatal pain and in some cases postnatal depression for mothers who had initially desired SVD. The Symptoms of this may include sadness, low energy, changes in sleeping and eating patterns, and reduced desire for sex, crying episodes, anxiety, and irritability. Postpartum depression can interfere with normal maternal-infant bonding and adversely affect breastfeeding. Postpartum depression may lead mothers to be inconsistent with childcare and thus limits the chances of practicing exclusive breastfeeding.

In this study, HIV negative mothers were three times more likely to practice EBF compared to the HIV positive mothers. The study therefore is in agreement with other numerous studies. For example; In a cross-sectional study in Mbale district, Uganda, the HIV-infected women had less

favourable infant feeding practices compared to the HIV-negative ones with regards to giving prelacteal feeds, less EBF of infants under six months, and the early introduction of solids (Fadnes, 2009).

The findings of this study further showed that mothers who had breast abscess had higher chances of practicing EBF compare to mothers who had other breast complications like mastitis, engorged breasts or sore nipples.

The mothers who reported that they had hypertension were less likely to breastfeed exclusively. This is mainly due to the effects of hypertension on the body of the lactating mother which include severe headaches, severe anxiety and shortness of breath and nosebleeds all of which can hinder the pattern of breastfeeding.

CHAPTER SIX
CONCLUSION AND RECOMMENDATIONS

6.0 Introduction

This chapter presents the conclusion and recommendation of the study according to the specific objectives of the study.

6.1 Conclusion

Prevalence of exclusive breastfeeding among lactating attending health clinics in Bushenyi District.

The findings of this study showed that majority of the lactating mothers (approximately 7 out of 10) in Bushenyi district feed their babies with other food substances in addition to breast milk, as such do not practice exclusive breastfeeding. This implies that only three out of every ten lactating mothers in Bushenyi district practice exclusive breastfeeding as recommended.

Socio-Demographic factors influencing exclusive breastfeeding among lactating mothers attending health clinics in Bushenyi district.

This study findings shows that lactating mothers in Bushenyi District who are married with no formal education and are peasant are more likely to practice EBF.

Physiological factors influencing exclusive breastfeeding among lactating mothers attending health clinics in Bushenyi district.

Lactating mothers who had delivered vaginally were twice (OR = 2) more likely to practice exclusive breastfeeding. Compared to mothers who had other breast complications, mothers who

had breast abscess had higher chances of practicing EBF. The mothers who reported that they had hypertension were less likely to breastfeed exclusively.

6.2 Recommendations

Prevalence of exclusive breastfeeding among lactating attending health clinics in Bushenyi District.

i. In order to reduce the chances of mix feeding, special lactation education programs should be implemented for working mothers to enhance their knowledge on how to ensure breastfeeding even when at work.

ii. Maternal and child health issues should be promoted in health facilities and communities to involve the married couples and single mothers.

iii. Special breastfeeding enlightenment programmes should be carried out in the media to educate parents in the community on how to improve the health of their children by practicing exclusive breastfeeding.

Socio-Demographic factors influencing exclusive breastfeeding among lactating mothers attending health clinics in Bushenyi district.

i. Policy makers should implement extension of maternal leave for working mothers and introduce breastfeeding breaks or rooms for lactating mothers during working hours.

ii. Prevalence of exclusive breastfeeding among lactating attending health clinics in Bushenyi District.

i. Routine breast examination should be introduced during ante-natal and post-natal clinics in order to detect any breast issues in lactating mothers on time.

Area for further Studies

Further studies should be done on institutional and economic factors influencing EBF practices in Bushenyi district as well as impact of EBF practice on the nutritional status of infants in Bushenyi district.

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APPENDIX 1; CONSENT FORM

My name is KEBIRUNGI CAROLINE I am a student of Kampala International University currently in my last semester in the Faculty of Clinical Medicine & Dentistry. As part of the requirements for the fulfillment of the programme I am conducting a research study titled: **Factors influencing exclusive breastfeeding among lactating mothers attending health clinics in Bushenyi District**.

I hereby seek your consent to be part of this study. Your responses will be kept strictly confidential for all matters and it will only be used for the purpose of the study mentioned above. Your name will not be mentioned to protect your confidentiality.

You have a right to answer or not for questions which might be inconvenient for you. If you have any questions about the study, you may raise. For detail information you can contact the investigator through cell phone 0702107901

And I thank you in advance for your cooperation.

Consent form for study participants

I have been informed about the purpose and use of this particular research project. The information I am going to give will be used only for the purpose of this study and my identity as well as the information I will be providing will be kept confidential. After all these I understood and: 1. I agree to participate in this research voluntarily ---------- 2. I didn't agree to participate in this research ---------- Interviewer name ----------signature……..

QUESTIONNAIRE

Section I; Socio demographic information

1. How old are you?

1) 18-25
2) 26-33
3) 34-41
4) 42-49

2. What is your marital status?

1) Married
2) Single
3) Separated
4) Divorced

3. If married, what kind of relationship are you in with your husband?

1. Monogamous
2. Polygamous

4. What is your highest level of education?

1) No formal education
2) Primary school
3) Secondary school
4) Post Secondary education

5. What is your religion?

1) Catholic
2) Protestant
3) Muslim
4) Other…….

6. What is your occupation?

1) Employed
2) Self employed
3) Peasant
4) House wife

7. Type of family

1. Joint
2. Nuclear

8. Area of Residence

1. Urban
2. Rural

9. How many people are you in your household?

1. 1 – 5 people
2. 6 – 10 people
3. More than 10 people

Section 2; Exclusive breastfeeding practices

10. How soon after birth did you breastfeed your baby for the first time?

1) Less than 1 hour after birth
2) 1 – 3 hours after birth
3) 4 –11 hours after birth
4) 12 –23 hours after birth
5) 24 hours or more after birth
6) Don't know/don't remember

11. During the first six months after birth of this baby, was the baby fed anything other than breast milk?

1) Yes
2) No

12. If yes, what was fed to your baby?

1) Cow's milk
2) Glucose (sugar) water
3) Porridge
4) Mashed bananas
5) Don't know

Segment 3; Physiological factors

12. What was the mode of delivery of your previous pregnancy?

1. Vaginal Birth
2. Cesarean Section

13. HIV status

1. Negative
2. Positive

14. Did you experience any breastfeeding problems?

1. Yes
2. No

15. If yes; which ones did you experience?

1. Engorgement Painful breast (blocked duct)
2. Sore / cracked nipples
3. Mastitis
4. Breast abscess

Please indicate which of the following complications you experienced during or after child birth

	Yes	**No**
Severe bleeding		
Infections		
High blood pressure		
Fistula		
Postnatal pain		
Maternal distress		

16. How often do you fall sick in a month?

1. None of the time
2. Once
3. Twice
4. Thrice
5. More than three times a month

17. How would you rate your breast milk production for the child?

1. Sufficient
2. Average
3. Insufficient

18. How many meals did you use to have during the first six months?

1. One
2. Two
3. Three
4. More than three

19. How would you rate your appetite during the first six months?

1. High
2. Average
3. Low

END

WORK PLAN FOR THE STUDY

ACTIVITY	MONTHS FEB	MONTHS MAR	MONTHS APR	MONTHS MAY	MONTHS JUN	MONTHS JUL	MONTHS AUG	MONTHS SEP	MONTHS OCT
Proposal presentation & allocation of supervisor									
Proposal writing									
Submission of full proposal									
Approval from KIU									
Approval from the Hospital in Jinja									
Data collection									
Data entry& Analysis									
Report writing.									
Dissemination of results.									

BUDGET OF THE STUDY

Serial number	ITEM	QTY	UNIT COST	TOTAL COST (SHILLINGS)
1	Stationary (Ream of paper)	2	22,000	44,000
2	Proposal development	1	50,000	50,000
3	Development of research tools			50,000
4	Research assistants	2	10,000	100,000
6	Local transport		85,000	50,000
7	Data analysis	1	300,000	200,000
8	Typing of report	1	30,000	30,000
9	Printing and binding of report	3	70,000	70,000
10	Miscellaneous			50,000
TOTAL				544,000