

**ASSESSING FACTORS INFLUENCING EXCLUSIVE
BREASTFEEDING AMONG HIV POSITIVE MOTHERS
ATTENDING MATERNAL CHILD HEALTH
CLINIC AT KAMPALA INTERNATIONAL
UNIVERSITY TEACHING HOSPITAL**

BY

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Declaration

I, APIO MIRRIAM OKELLO, hereby declare that this research report is my original work, and the study has never been done at any university or institution of higher learning for any academic award.

Sign..........Date.....11.12.2014.....

Approval

This is to certify that this research report has been prepared under my supervision and has never been submitted anywhere for any other academic purpose and is now ready for submission at Kampala International university.

Sign.  Date 12th Dec 2014

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List of Acronyms

AFASS.....	Affordable, Feasible, Acceptable, Sustainable,
ANC.....	Antenatal Care
ART.....	Active Retroviral Therapy
ARVs.....	Antiretrovirals
BFHI.....	Breastfeeding Health Initiative
DHO.....	District Health Officer
EBF.....	Exclusive Breastfeeding
ERF.....	Exclusive Replacement Feeding
HIV.....	Human Immunodeficiency Virus
IMCI.....	Integrated Management Of Childhood Illnesses
KIUTH.....	Kampala International University Teaching Hospital
MTC.....	Mother To Child
MTCT.....	Mother To Child Transmission
NGOs.....	Non-Governmental Organizations
PMTCT.....	Prevention Of Mother To Child Transmission
PNC.....	Postnatal Care
RF.....	Replacement Feeding
UNICEF.....	United Nations Integrated Children's Emergency Fund
UN.....	United Nations
WHO.....	World Health Organization

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ABSTRACT

Despite the benefits which results from its practice, EBF rates remain low throughout the world. Globally it is estimated that the rate of exclusive breast feeding is 35%. Different regions in the world have reported increase of EBF, for instance from 22 % in 1996 to 30% in 2006. In Sub-Saharan Africa, East Asia/Pacific including China 27 % in 1996 to 32 % in 2006 and in Latin America and the Caribbean excluding Brazil and Mexico 30 - 45 %, despite the reported increase of EBF, the rates are still low.

A descriptive and cross-sectional survey using quantitative and qualitative data collection method were used.

The study found out that 2/3rd of the mothers practice exclusive breast feeding. Health workers' advice was the most influential factor on EBF, followed by other factors like cultural beliefs, the least was family members' influence. Fear of infecting the baby is the main hindrance of EBF followed by availability of pre lacteals, the least was occupation of the mother

The study concluded that health workers' advices, cultural believe and family members were the main factors influencing EBF.

The researcher recommends that the hospital should continue with education of HIV positive mothers on EBF and actively involve the spouse in supporting their wives to exclusively breastfeed

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter will introduce the reader to the basic information about the subject under study, the study area, the study objectives, justifications scopes, and describe briefly the concepts about EBF.

1.1 Background information

Breastfeeding plays a major role in nutrition, health and development for both HIV infected and non HIV infected infants due to the fact that human milk is the ideal nourishment for infant's survival, growth and development. When the infants are exclusively breastfed for the first 6 months of their lives, their immune system is stimulated and this goes hand in hand with protecting them from diseases like diarrhea and acute respiratory infections, which are considered to be the two major causes of infant morbidity and mortality in developing countries of which Uganda is among. When breastfeeding is practiced exclusively, it is associated with lower risk of HIV transmission than mixed feeding.

Exclusive breast feeding (EBF) is defined as giving the baby no other food or drink, not even water apart from breast milk (including expressed breast milk), with the exception of drops or syrups consisting of vitamins, mineral supplements or prescribed medicines. When it is practiced for the first 6 months of an infant's life, it's a beneficial intervention in saving children's lives.

Despite the benefits which results from its practice, EBF rates remain low throughout the world. Globally it is estimated that the rate of exclusive breast feeding is 35%. Different regions in the world have reported increase of EBF, for instance from 22 % in 1996 to 30% in 2006. In Sub-Saharan Africa, East Asia/Pacific including China 27 % in 1996 to 32 % in 2006 and in Latin America and the Caribbean excluding Brazil and Mexico 30 - 45 %, despite the reported increase of EBF, the rates are still low.

However, according to Uganda Demographic and Health Survey 2010, only 50 % of infants are exclusively breastfed less than 6 months based on 24 hours recall with a median duration of 3.1

months regardless of their HIV status. This rate suggests some improvement from the previous Uganda Demographic and Health Survey of 2005 which indicated that only 41% were exclusively breastfed, still the rates are low with the observed variations within and between regions for instance Jinja hospital reports EBF rate of 19% according to HIMS data records 2012.

In other areas of Uganda, peer support has been tried as a tool to increase exclusive breast feeding rates but still a wider approach was recommended to avoid mothers being solely responsible for her feeding choice and feeding capability regardless of her HIV status .Women face new challenges during puerperium and ongoing community based support as well as resources to sustain Exclusive infant feeding practices (International Breast feeding Journal Volume (5) 2010).

More extensive and comprehensive approach of infant feeding counseling that embraces all stakeholders, with emphasis to significant others should be put in place in order to increase breastfeeding rates (URI: <http://hdl.handle.net/123456789/600> March 2013).

This study therefore, determined factors influencing exclusive breast feeding among HIV positive mothers of infants aged 6-12 months old attending maternal child health clinic at KIUTH.

1.2 Problem statement

Vertical transmission of HIV from mother to child is higher among the mixed fed infants than exclusively breast fed infants (WHO report 2010). Many studies have indicated that exclusive breast feeding (EBF) reduces death by about 13-15% in low and middle income countries (International breastfeeding journal vol. 5, 2010).

Many factors have been reported to influence EBF, among which includes; socio-cultural norms, beliefs, knowledge, family and social pressures to mix feeds and giving of infants herbal medicine from over the counter for protection just after delivery, are some of the factors reported.

The current international and national guideline encourages known HIV positive mothers to exclusively breastfeed while the infant receives prophylaxis for the first 6 months of life.

Continuation of breastfeeding up to 2 years and beyond is done when the infant is tested HIV negative. But if the infant is tested positive, breastfeeding is done up to 12 months of age and is stopped gradually ensuring that complementary feeding is introduced at 6 months under both circumstances (WHO Guidelines Volume (88) 2010).

Despite all the efforts to promote EBF, its uptake has remained low amongst HIV positive breast feeding mothers. This has prompted the researcher to assess factors that could be influencing EBF by mothers attending MCH clinic, KIUTH.

1.3 Objectives

1.3.1 Broad Objective

To determine factors that influence exclusive breastfeeding practices among HIV positive mothers of infants aged 6-12 months old attending maternal child health clinic at KIUTH.

1.3.2 Specific Objectives

- To determine the proportion of HIV positive mothers who have exclusively breastfed their infants for the first 6 months of their lives.
- To identify factors associated with exclusive breastfeeding during the first 6 months of infants' lives among HIV positive mothers.
- To explore barriers that hinder exclusive breastfeeding during the first 6 months of infants' lives among HIV positive mothers.

1.4 Research Questions

In regard to the problem that needs to be researched on, the researcher has developed three main research questions that need to be answered at the end of this research;

- What is the proportion of the HIV positive mothers who practiced exclusive breastfeeding of infants' in the first 6 months of life?
- What are the factors that are associated with exclusive breastfeeding in the first 6 months of life?

- What are the barriers for practicing exclusive breastfeeding of infant during the first 6 months of life in HIV positive mothers?

1.5 Significance/justification of the study

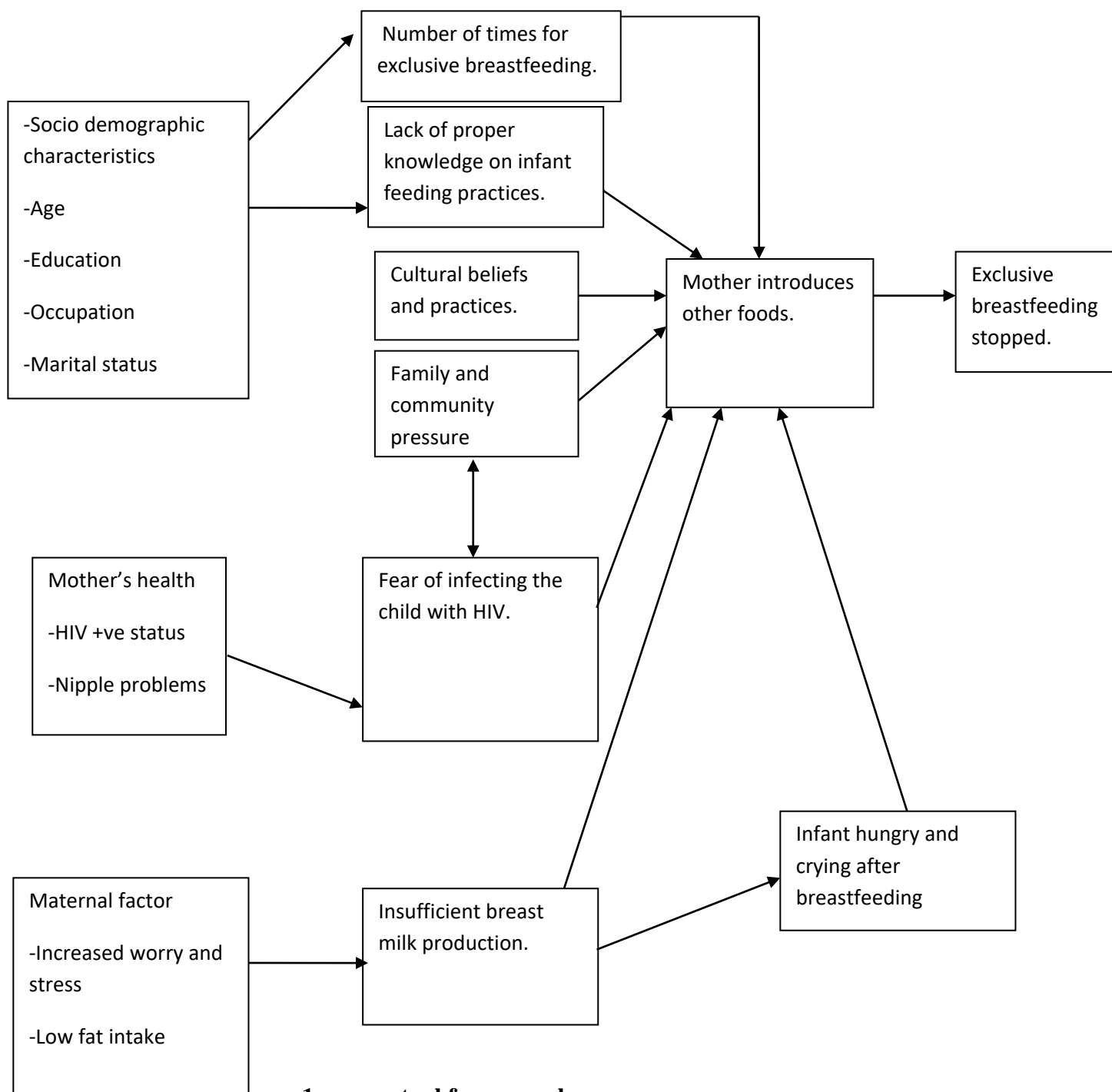
Most studies done in this area were focused on exclusive breastfeeding practices and did not explore the factors that may lead to such practices. The few studies which looked at factors influencing EBF were done mostly in rural settings which comprises of extended families as opposed to the town culture, example, Bushenyi, whose population has a tendency of nuclear families and is more individualistic in nature.

In this regard less has been documented regarding factors that result to low rates of exclusive breastfeeding among HIV positive mothers at KIUTH. Thus, this study intend to add more knowledge on the observed gap in this area by assessing factors affecting EBF practices among HIV positive mothers. The findings of this study are expected to improve practices and policy decisions in the development of appropriate interventions to promote exclusive breastfeeding, hence improvement of child health in Bushenyi district.

1.6 Conceptual framework

Various factors have been found to facilitate or hinder adherence to EBF. Working mothers are usually given maternity leave of three months such that at the end of three months, they are to resume work. This automatically necessitates introduction of other foods to the baby during their absence. And also the mothers who happen to have breast problems like engorgement, mastitis, cracked or sore nipples will not manage to breast feed even if her previous choice was to practice EBF. On the other hand, significant others (husband/spouse, mother in law, sister in law, grandmothers, friends and community members) also have a great role to play in infant feeding especially in regards to infant feeding choices. Lack of funds can lead to the mothers' inability to afford sufficient food supply, which in turn leads to low breast milk production.

This insufficient milk supply also leads to under nourishment to the baby; hence malnutrition as the mother will be forced to start early weaning because of less milk production. Knowledge deficit and cosmetic purposes as opposed to EBF and its importance can also lead to non EBF practices. The association between EBF and these factors are shown below in figure 1.



xiv) **Figure 1; conceptual frame work**

CHAPTER TWO

LITERATURE REVIEW

1.0 Introduction

This chapter provide the useful insight for interpretation of findings. Diverse literatures relevant to the study have been reviewed for this purpose; factors like socio- demographic (age, occupation, marital status, educational level and parity).

Breastfeeding is the expected way to feed the baby, but even with the existing knowledge among mothers, exclusive breastfeeding is generally perceived as impossible. Greater culture-sensitivity in programs promoting safer infant feeding in general and in HIV positive context in particular is generally needed, and male involvement is imperative ([http:// clinicaltrials.gov](http://clinicaltrials.gov) NCT00397150 2010). Studies in Mbale in Eastern Uganda in 2010 suggest a growing awareness of the importance of partner HIV testing, disclosure during pregnancy and involvement of spouses in the PMTCT programs. But to date the areas of maternal and child care in general including PMTCT in particular, have been characterized by limited inclusion of men in many African settings including Uganda(International Breastfeeding Journal Volume (5) 2010).

HIV positive women are usually counseled in infant feeding options alone and are left with the challenge of choosing the best or the most appropriate infant feeding alternatives. The choice the mother will make is often based on a newly conveyed HIV positive message of either exclusive replacement feed or exclusively breastfeed the baby. The problem is even if she has perceived the one to choose, she does not always control the conditions necessary for adherence to the option chosen. The discrepancies between how women are informed to feed their infants in ANC and what is socially preferred in their communities represent a major challenge (International Breastfeeding Journal Volume (5) 2010).

The feeding alternatives of ERF and EBF both apply in the context of MTCT but promotion of EBF for the 1st 6 months of life span is widely documented as an effective strategy for both short and long term health benefits for all children (WH0 Guide line Volume (88) 2010). As part of the IMCI and BFHI, EBF has been promoted for more than 10 years now. These initiatives were based on comprehensive research documenting the benefits of EBF on infant mortality and

morbidity reduction (WHO Guideline Volume (88) 2010). But even with the current knowledge about the benefits of EBF, its promotion has not been systematically and intensively implemented where infant mortality is yet high. Therefore, a wider approach would be fundamental to avoid the mother being solely responsible for feeding choice and capability regardless of her HIV status (International Breastfeeding Journal Volume (5) 2010).

The study done in Mbale which was earlier on mentioned further explored the norms and social environment for infant feeding practices and revealed experiences from mothers that “Exclusive breastfeeding was time consuming and difficult to practice especially for mothers who also have other commitments in household chores including field work” exclaimed one participant.

The study further revealed that recommendation about EBF for the 1st 6 months was known to women but was poorly internalized,” I want to know why they refuse us to give other feeds during the 1st 6 months”, asked Munyankole woman (participant). All these illustrated how women had learnt the public health message, but had not fully understood it (International Breastfeeding Journal Volume (5) 2010).

Women’s need for knowledge could reflect difficulties and weakness on the system level. Few studies within the PMTCT context also reports misinterpretation and lack of knowledge among health workers as prevalent. The study continued to reveal that understanding the complexities of achieving EBF has been missing or not fully addressed at program level, mixed feeding pattern as the ruling infant feeding has been described for long in many different Sub- Saharan African countries including Uganda(International Breastfeeding Journal Volume (5) 2010).

WHO HIV and infant feeding guidelines stressed on promotion of EBF because, its benefits have been seen both on HIV free survival and mortality reduction as a whole. But despite the benefits realized, EBF has remained low worldwide (WHO Guidelines Volume (88) 2010). Infant feeding recommendation addresses AFASS not only in ERF but also extend to EBF, though it was regarded extremely difficult to combine with domestic chores and was seen as obstacle to pursuing income generating activities.

1.1 Factors Influencing EBF

In order to improve the overall adherence to EBF among mothers in the general population, the following issues need to be addressed;

EBF should be made normative in all communities irrespective of HIV status and knowledge about the link between EBF and motherhood being unrepeatable, cannot be known without an appreciation of what constitutes motherhood (WHO Guidelines Volume (88) 2010).

According to UNICEF evaluation report 2009, about eleven (11) hospitals in Uganda including KIUTH were considered baby friendly, but limited resources compromised the full services required for baby friendly status. Further more studies so far done in Bushenyi rural facilities revealed cultural, practical and personal explanations as reasons for lack of EBF practices even if larger programs like BFHI, IMCI and PMTCT are in place. Peer support or expansion of community health workers, regulations regarding maternal leave media and implementation of the code of marketing, women's and children's status among others affects EBF strategies on ground (URI: <http://hdl.handle.net/123456789/600> March 2013).

A study was done in 2007 at Gulu and Lacor hospitals among 200 HIV positive mothers of infants aged 0-12 months attending PMTCT program to determine feeding practices and factors influencing these practices (RF, EBF and MF). Of the 3 practices, EBF was (11.5%) and the age specific between 0-3 months was (36.6%) and 4-6 months was (9.5%).The study revealed that factors that influenced EBF was infant male sex and mother's marital status.

The study also noted that majority of HIV-infected mothers opted for replacement feeding because of their HIV positive status and fear of MTCT through breast milk. It further revealed that mothers should be encouraged and supported to disclose their status to their spouses to enhance infant feeding choices especially EBF (School of Health Sciences Collection 2007). Another study was done by Tyllesker and Thorkild in 2011 on EBF promotion by peer counselors in Sub- Saharan Africa including Uganda and the result revealed that low intensity breastfeeding peer counseling is achievable and can be used to effectively increase EBF prevalence in many Sub- Saharan settings.(URI:[http:// handle.net/10570/609](http://handle.net/10570/609)).

Another study was also done at War Memorial hospital in Kwazulu, Natal-South Africa to determine factors that influence choice of breastfeeding versus formula feeding of infants to

enable focus in promotion of EBF. The result revealed that mothers who chose to breastfeed were significantly older than those who opted for replacement feeding, reasons being that they made their infant feeding decisions earlier than those who selected replacement feeding.(Journal of Interdisciplinary Health Sciences Volume(15 No 1) 2010).

A wider community and political involvement was also recommended to strengthen the rights for women to practice their chosen infant feeding (EBF). Involvement of spouses in infant feeding training was perceived imperative for increased acceptance of the recommended infant feeding practices particularly EBF (URI: <http://hdl.handle.net/123456789/600> March 2013).

There was a marked socioeconomic gradient in breastfeeding. Women with higher family incomes, those who had or whose partners had higher education levels, and women who had or whose partners had professional or executive occupations were more likely than their counterparts to breastfeed. After adjustment for many potential confounders, maternal and paternal education remained positively associated with breastfeeding, while income and occupation were no longer significant. Compared with other racial or ethnic groups, foreign-born Latina women were the most likely to breastfeed. (Katherine E Heck)

EBF practices to infants from birth to 6 months of age are declining as their age increase despite the associated benefits. Thus more extensive and comprehensive approach of infant feeding counseling that embraces all stakeholders; with emphasis to significant others should be put in place in order to increase EBF rates (URI: <http://hdl.handle.net/123456789/600> March 2013).Exclusive breastfeeding carries significant health benefits for infants and young children as well as an essential child survival intervention. EBF for the 1st 6 months is associated with 3-4 times lower risk of HIV transmission as compared to mixed feeding (UN guidelines on HIV and Infant feeding 2010). It is noted that mixed feeding in the 1st 6 months carries greater risks of transmission because the fluid and the foods given to the baby alongside breast milk can damage the delicate and permeable wall of the small intestine thus permitting easy transmission of the virus. Mixed feeding also poses some risk of contamination and diarrhea as artificial feeding diminishes the chances of child survival (UN et al 2010).

Exclusive breastfeeding rates among children <6 months of age is 2/3 of the developing countries with increased trend between 1998-2008, and are still quite low at 33% in Sub-Saharan Africa, Uganda inclusive (UNICEF and Infant feeding guidelines 2010). Thus HIV transmission through breastfeeding can be significantly reduced if HIV positive women breastfeed exclusively for the 1st 6 months rather than practicing mixed feeding. Public Health programs of protection, promotion and support for breastfeeding can have major benefits for HIV positive women and their children as well as the entire population in general (UNICEF et al 2010). With the provision of ARVs, "Breastfeeding is made dramatically safer" and the "balance of risk" between breastfeeding and replacement feeding is fundamentally changed (UN et al 2010).

An additional benefit of the new guideline also states that mother's health is also protected for a greater portion of HIV mothers, Service providers, National Authorities and the International Development Partners as well (UN et al 2010). A systemic review reported that the risk of transmission can be reduced to 1-2% when ARVs are provided (Seigfried et al 2011).

Breastfeeding mothers of infants and young children who are known to be HIV infected should be strongly encouraged to continue breastfeeding so that the infant receives the full nutritional and lifelong benefits breast milk offers (UN et al 2010). The guideline further highlighted the opportunity for investing in effective infant and young child counseling, and communication interventions that will improve IYCF practices by both HIV infected and non- infected mothers. UNICEF is supporting countries to design and implement comprehensive and effective infant and young child feeding policies and strategies based the principles out lined in the (Program guideline on Infant and Young child feeding 2011). UNICEF also contributed to the better integration of HIV and nutrition services, generation of programmatic knowledge including experiences in documentations, implementations and formative researches done on various issues behind different trends in EBF rates in HIV affected countries including Uganda (UN Updated Frame work For Priority Action June 2012).

With new recommendations, it is postulated that an HIV positive woman who takes ARV's and mix-feed may still have a higher rate of transmission than a mother who exclusively breastfeed and takes ARV's. Thus emphasis should be taken on discouraging practicing mixed feeding of

infants in the first 6 months of age. Evidence has been reported that ARV interventions to either the HIV positive mother or HIV exposed infant can significantly reduce the risk of postnatal transmission of HIV through breastfeeding.

Demographic variables influencing breastfeeding duration include race, age, marital status, level of education, socioeconomic status, and HIV status. The authors cite articles that support the positive association between breastfeeding duration and maternal age, maternal education, higher socioeconomic status, and being married (Thulier & Mercer, 2009). The reader should keep in mind that not all cultures share the same influences on breastfeeding as non-western countries. For example, in contrast to the western influence of maternal education, research in a non-western country has shown an inverse relationship between maternal education and breastfeeding (Sharief, Margolis, & Townsend, 2001). Additionally, WIC status is specific to the US and immigrant status influences breastfeeding behaviors (Hawkins, Lamb, Cole, & Law, 2008). As such, the international and transcultural application of the findings of this review might be limited to North America on specific identified variables.

Thulier and Mercer present evidence that maternal employment outside the home decreases breastfeeding duration and exclusive breastfeeding rates. The authors also demonstrate that support and education by health care professionals as well as paternal support for breastfeeding are significantly influencing factors in breastfeeding. They do not cite, however, evidence for the influence of female family members on breastfeeding behavior, a strong factor in many cultures and countries including among immigrant women in the US.

1.2 Barriers in practicing EBF

Despite emerging evidences that HIV positive mothers should exclusively breastfeed to minimize their babies health prospects, South African health workers still face a battle to change attitudes and habits, reports Langi Langa (Department of Pediatrics at Durban University of Technology 2010). “Breastfeeding may be natural but is not always simple”, says Professor Anne Cout Soundis of Department of Pediatrics and child Health at the University of Kwazulu Natal Durban. If the mother is HIV positive more uncertainty is added “Some counselors themselves are confused about the correct practices regarding HIV and feeding practices”, says Theima Raka Counselor in ANC at Maternity Hospital in Cape Town S. Africa 2010. The study

further revealed that “some health workers think it is not important to breastfeed if you can afford formula feed”, says Lynda Glynn a breastfeeding consultant at Morobray Maternity Hospital in Cape Town. She further said “Some health workers think breastfeeding is a waste of time and an inconvenience”, yet the risks of not breastfeeding often go unnoticed.

Thus most children born to HIV positive mothers and raised on formula feeds do not die of AIDS but of undernourishment, diarrhea, pneumonia and other causes not related to HIV. The greatest decline in EBF is rooted in countries where formula milk is distributed free of charge for instance S.Africa, says Penny Reimers, Department of Nursing at Durban University of Technology 2010. Infant formula was distributed by national, local authorities and non-governmental organizations (NGOs) to prevent the transmission of HIV from MTC, an initiative which inevitably undermined breastfeeding. An unforeseen consequence of the campaign was that even mothers who were not HIV positive turned to formula feeds, Reimers further said.

Another reason for the switch off was a belief that formula milk was superior to breast milk, a perception that CoutSadis believes derived from” strong and dishonest marketing campaigns that make unfounded claims that formula milk contains special ingredients that improves baby’s health”. Mothers are not told the truth that” breast milk is infinitely better for the infants and that the formula milk can be dangerous, and is not always a sterile product and is easily contaminated”, said Cout Soundis. “We need to make sure that people who interact with mothers are giving out the correct information”, says Sigasana. But even without formula producer marketing campaigns, the changing roles of women in South Africa society was also cited as one of the predisposing factors to non- adherence to EBF, Cout Soundis further quoted.

“Going back to work” was also one of the reasons identified for stopping breastfeeding. But even for mothers who do not have to juggle paid jobs while caring for their babies, switch to formula milk simply because it is thought to be convenient. Said, Louise Goosen, a breastfeeding consultant, Mow bray Mat Hospital Cape Town 2010. “However, we need to encourage and educate mothers on the ease and the importance of expressing their breast milk for babies while at work so that the baby still gets the best nutrition”, Goosen further exclaimed.

Institutions/ Companies/ Industries are further encouraged to initiate breastfeeding centers/ rooms where working mothers can practice the ongoing EBF strategy while at work.” Many

working women struggle to fit into their routines” says Pato Banzi an administrator at the magistrate’s court in Wynberg, Cape town. She further said when she had her 2nd son, she was granted 4 months labor leave, but then she struggled when time came to return to work. “I was lucky that I lived close to where I worked so I could drive home to feed him and rush back to work” she says. Later she switched to expressing the milk and preserve in bottles, but had to go into the company boardroom to do it privately. Deidre Zimri an operation manager for a transport company did her expressing in the waiting room when no one was using it. Both Banzi and Zimri felt that 4 months’ maternity leave was not enough. Campaigns like BFHI and World Breastfeeding awareness week is already being implemented yearly in August but more programs are yet needed to boost the breastfeeding uptake and sustainability, Says Goosen, 2010. Breastfeeding advocacy was also cited as one of the strategies to update mother’s influence on decision to breastfeed, Says Sigasana S. Africa 2010. Promotion of EBF has the potential to prevent 8% of child mortality, or save 37 million disability adjusted life years every year (WHO Guideline on infant feeding among HIV mothers 2008).

Infant feeding practices were found associated with both mother’s education and socio-economic wealth. Higher educational level and being socio- economically better were associated with more beneficial feeding practices (WHO et al 2008). The child survival strategy promotes family- oriented and community based services and has set targets for 2008-2015 for EBF, continued breastfeeding from 6-12 months, timely complementary feeding and supplementary feeding for severely malnourished children (Situation analysis for IYCF 2008).

A study which was done in Kabarole district, Western Uganda in 2009 also noted breastfeeding as an important part of health education during ANC visits, and further emphasizes on EBF for mothers who choose to breastfeed. The researchers (Dr.Matovu A. and Dr. Kirunda B.) further noted that lactating mothers are supposed to be given consistent and accurate messages concerning appropriate infant feeding from health care personnel, family members at home, peer supporters and community members (Journal of Interdisciplinary for Health Science 2010). With the high prevalence of HIV infection in this community, it’s important that women of child bearing age receive all the necessary information about EBF and dangers of mixed feeding. It further commended more research to explain the extent of such counseling and support to promote EBF and the impact of these services from health care personnel including nurses

(Journal et al 2010). The study further revealed that in order to improve adherence to EBF, there is need to involve the fathers in infant feeding education and also target the less educated mothers for more intense infant feeding counseling using appropriate methods with emphasis on benefits of EBF, how to produce enough milk and to encourage mothers to attend ANC and PNC regularly. The study noted the input of both fathers and health workers as being extremely influential in adherence to EBF practices (Journal et al 2010).

1.3 Perception of Mothers

A qualitative study from Ghana in 2009 revealed “Perception of lack of breast milk, performing postnatal birth activities like bathing, mother and baby need rest after birth, and baby not crying for milk” as reasons to delay to initiation of breastfeeding. These findings are inconsistent with the result of the study done in Mbale in 2010 as quoted “Some people believe that an elder has to give the baby the name before breastfeeding by putting his fingers in the water, then deep it in the baby’s mouth before feeding” (Namanyonyi woman).

Another participant further said, “If the husband suckled the breasts of the mother, the baby she gives birth to is not supposed to breastfeed or else the baby dies”(Bufumbo woman). The study further revealed that male involvement in Reproductive Health programs in general including EBF was associated with the health system neglect of men, because according to the study, most men had strong feelings about the importance of breastfeeding for the survival of their children. And thus non- breastfeeding decision was reported as a potential threat to men as parents and could cause severe sanctions. Elimination of barriers could potentially reduce the proportion of women initiating lactation later than recommended in settings like Ghana and Uganda to enhance early EBF practices. (International et al 2010).The risk of HIV infection has to be compared with the risk of morbidity and mortality due to not breastfeeding. Generally, babies who do not breastfeed are 14 times more likely to die of diarrhea or respiratory infections than babies who are EBF in the 1st 6 months (Lancet Nutrition Series 2008).The recommendations in the 2010 guidelines were based on evidence of positive outcomes for HIV- free survival through the provision of ARVs to breastfeeding HIV- exposed infants. Thus, the focus is now firmly ensuring HIV- free survival and not just preventing transmission. Breastfeeding carries significant health benefits for infants and young children, and is thus an essential child survival intervention.

1.4 Socio- Cultural Factors

EBF practices to infants from birth to 6 months of age is appropriate but HIV positive mothers still face multiple challenges as they strive to practice EBF ([ihi-eprint.org/1662/June 2013](http://ihi-eprint.org/1662/June%202013)). Another dilemma faced by HIV positive mothers is whether to breastfeed their infants in keeping with cultural norms (www.ncbi.nlm.nih.gov/pubmed/20034337 2012). In Tanzania studies revealed that the use of pre-lacteal is a norm in both rural and urban settings with a belief that it claims the crying baby said Florence Jairus 2012.

In Ethiopia it is also reported that apart from close family members, influences like husband and neighbors imposition have also been reported to put pressure on mothers to practice mixed feeding where mothers reported increasing pressure from family members to introduce other feeds and most importantly is the fear of being unveiled as HIV positive as reasons for non-adherence to EBF. A study was done in Kibera, Nairobi-Kenya among 400 HIV positive mothers of infants aged 0-24 months between January- March, and of the 400 mothers, 220(55%) had practiced EBF which varied from 1-6 months. The explanation was “HIV positive mothers wary of EBF up to 6 months, which is the key recommended infant feeding practice for fear of HIV transmission” (www.rin.news.org/report/91988/Kenya 2010). Infant feeding counseling was found to be important in influencing infant feeding practices. Timing and frequency were also noted to be equally significant. An HIV infected mother Cynthia Mkhiza was fortunate to get drugs that reduce the viral load, so when health workers advises HIV positive mothers to practice EBF, some respondent said, Basson (www.voanews.com/.../413214.htm/ 2010).

A qualitative study done in Malawi in 2012 on EBF patterns among HIV positive mothers as well as factors that motivate or hinder women to practice EBF, one participant said “They call our children Nevirapine babies”. Further study revealed that mothers had high knowledge on HIV transmission and EBF but with little knowledge on basic facts about breast feeding (www.ncbi.nlm.nih.gov/pubmed/21495616 2012). The study further noted that breastfeeding does not only provide babies with nutrients, and need for optional development but also gives babies the antibiotics they need to protect them against some of the common illnesses.

Low risk for HIV- exposed infants will enhance mother’s understanding and practices of EBF as some respondents perceived it as a method of preventing mother to child transmission of HIV virus (www.ncbi.nlm.nih.gov/pubmed/18700349 2009). Other findings revealed that early EBF

reduces the risk of postnatal HIV-I transmission and does increase chances to HIV-free survival ([www. nutrition.highwire.org/.../351.full](http://www.nutrition.highwire.org/.../351.full) 2010).

A Study was done at Rakai district Uganda in 2008 on 182 HIV-exposed infants at 1 month, 6 months and 12 months postpartum. And as per the report mothers were given infant-feeding counseling and were later allowed to make informed choices of either to formula feed or to breast feed. Eligible mothers and infants were given ART prophylaxis therapy to prevent MTCT. EBF was practiced by only 25% at 1month postpartum. By 1 year IMR was between 11-29% among formula-fed as compared to 1-9% among breast-fed infants. Thus, formula feeding was found associated with higher risk of mortality than breastfeeding in rural population. Therefore, formula feeding should be discouraged in similar African settings, said (Jose M of Institute of clinical Effectiveness and Health Policy 2008).

Improving practices for all would significantly reduce the risk of under nutrition, illness, death and also help countries to achieve international development goals (UN Guideline Updated Framework for Priority Action 2012). Health providers were therefore urged to continue promoting, protecting and supporting EBF for all mothers including HIV positive mothers unless replacement feeding is AFASS.

CHAPTER THREE

METHODOLOGY

3.0 Introduction.

This chapter dealt with describing the methods used in the study.

3.1 Study Area.

KIUTH is a private hospital in partnership with the government of Uganda. It was opened on the 1st.Nov.2004 H.E Yoweri Kaguta Museveni, the president of the Republic of Uganda.

The hospital is situated on about 70 acres of land in Ishaka-Igara County about 76km (47mi) by road west of Mbarara. Ishaka is located on co-ordinates 00°34.53'S, 30°22.48'E in Uganda, Bushenyi district; which is mountainous at an elevation of 5,120f (1,560m); with a current population of 871,259 over a geographical area of 5,396km².

KIUTH has a total bed capacity of 12000 with services offered comprising Comprehensive Inpatient and Outpatient services, both general and private, which includes 24hours Emergency care; General Medicine and Surgery, Pediatrics, Obstetrics and Gynecology.

3.2 Study Population.

The study population was comprising of HIV positive mothers who are 18 years and above or have older infants aged 6-12 months at the time of the study at KIUTH.

3.3.0 Inclusion and exclusion

3.3.1 Inclusion criteria

All HIV positive mothers having infants aged 6-12 months

3.3.2 Exclusive criteria

HIV positive mothers with very sick infants

3.4 Study Design.

The study was a descriptive and cross-sectional survey using quantitative and qualitative data collection methods.

3.5 Sampling Technique

Purposive sampling technique was used to get the participants as per the inclusive criteria.

3.5.1 Quantitative Methods

Questionnaires with open ended questions was used by the researcher and the research assistant.

3.5.2 Qualitative Method

A Semi- structured or group discussion interview guide questions was used to explore infant feeding practices. In-depth interview questions were in the local language (Runyakitara) and English as a national language by the principle investigator. All HIV positive mothers with infants aged 6-12 months who were eligible to participate in the study were informed about the aims of the study. The interviews were conducted until saturation or points of redundancy of information were reached (When no new information would be generated from the interviews).

The qualitative data helped in getting information which facilitated provision of broader view, and also it facilitated the interpretation of the quantitative data.

The quantitative and qualitative data was analyzed separately and then used in the presentation and interpretation of the results.

3.6 Sample Size Determination.

The sample size was determined using the formula by Kish and Lesley (1965) shown below:

$$\text{Sample size: } (n) = \frac{K}{\frac{I + K}{\text{Population}}}$$

$$\text{Where } K = \frac{Z^2 PQ}{d^2} \quad (K \text{ being Constant}).$$

$Z = 1.96$ (The normal standard deviation at 95% Confidence Interval).

$P = 50$ (Where P is the estimated prevalence rate of the problem under study).

$Q = 100 - P = 50$ (The difference between the estimated prevalence and is likely to be the true prevalence rate).

d = an error (acceptable).

By substitution it becomes 100.

3.7 Sample Method.

The researcher used random selection method where by 30 HIV positive mothers having infants aged 6-12 months, 30 HIV positive mothers with very sick children and sick HIV positive mothers who had brought their children to the clinic. The researcher used two pieces of paper labeled “yes” to those who were interviewed and “No” for those who were not interviewed.

3.8 Data Collection tools.

The researcher used a standardized questionnaire to conduct face to face interviews to all HIV positive mothers of infants aged 6-12 months.

A focus group discussion was used to guide the discussion with HIV positive mothers of very sick children and sick HIV positive mothers who had brought their children to the clinic.

3.9 Variables.

3.9.1 Dependent Variable.

Exclusive breastfeeding is the dependent variable and a measure of proportion of mothers who breastfeed their infants exclusively for the first 6 months of life. Mothers of infants aged 6-12 months are asked various questions to determine if they are exclusively breastfeeding their infants or not.

3.9.2 Independent Variables.

The independent variables in this study include socio demographic characteristics like age, educational level, marital status, parity and occupational status. Other variables also include the knowledge of mothers on exclusive breastfeeding, beliefs, perception, and social cultural influence in infant feeding, disclosure of HIV status, place of birth and mode of delivery.

3.10 Data management and Quality Control.

Data quality was ensured by training research assistants and proper supervision. Pretesting of questionnaires and translation of the instructions was done. Data was coded and checked/ edited to avoid errors. Safe Storage of collected data and backups was ensured to avoid data loss.

3.11 Data Processing and Analysis.

The questionnaires was checked for accuracy, consistence and completeness every day after they are ready. Answers of open ended questions was also edited and coded. Thereafter, the data was entered into the Computer for analysis Using SPSS version 21.

3.12 Ethical Consideration.

An introduction letter to the District Health Officer (D.H.O) was obtained from Kampala international University-Western campus, faculty of clinical medicine and dentistry. The letter was used to get permission from the Director of KIUTH to do the study. Consent was obtained from the respondents after thorough explanation of the study and confirm confidentiality, and anonymity was accorded during the interview.

3.13 Study Limitations:

- Lack of co-operation from the respondents.
- Inadequate time given for data collection.
- Insufficient fund for facilitation.
- Few respondents.

CHAPTER FOUR

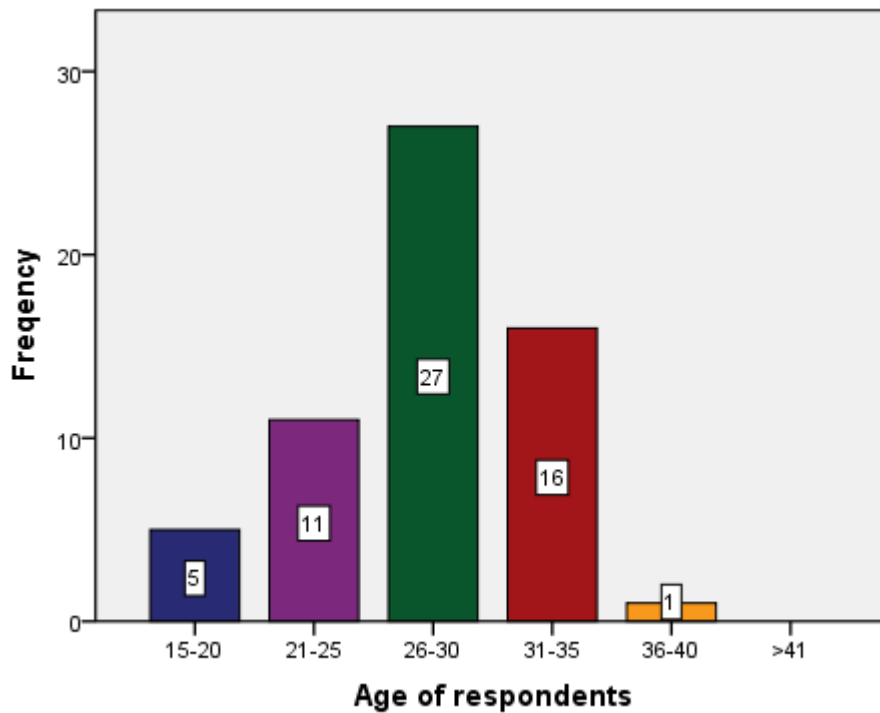
STUDY FINDING

4.0 Introduction.

This chapter presents the findings and results of the study according to the specific objectives of the study. Study findings and results are presented in form of graphs, tables, and pie charts with descriptive statements after every presentation.

4.1 Study findings.

Figure 1; Distribution of respondents by age.



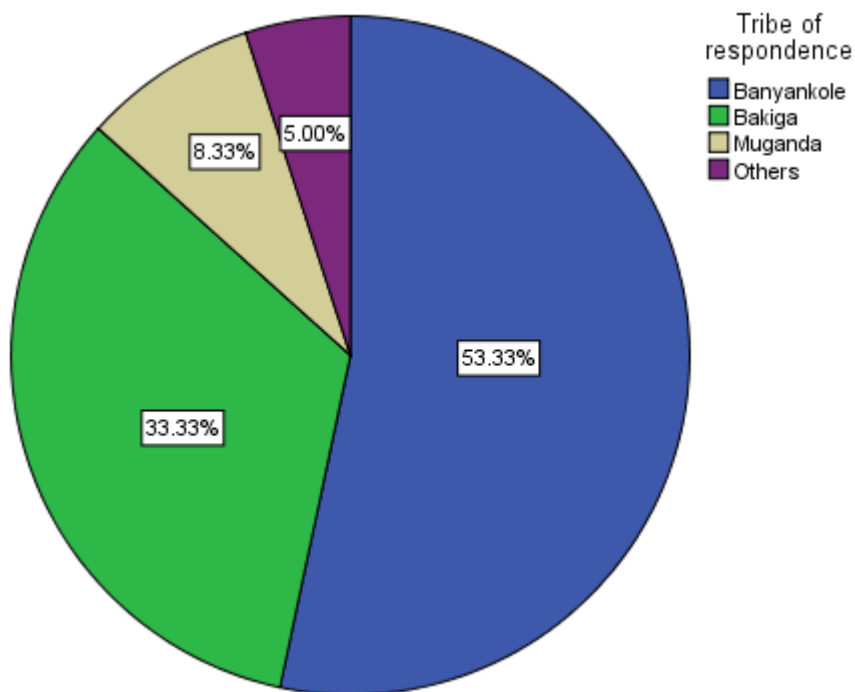
The above figure shows that majority of the respondents were between the age group of 26-30 (27 mothers), followed by 31-35 (16 mothers), above 41 years had no respondents.

Table 1; Distribution of respondents by religion.

Religion	Frequency	Percent
Protestants	21	35.0%
Catholics	17	28.3%
Muslims	16	26.7%
Others	6	10.0%
Total	60	100.0%

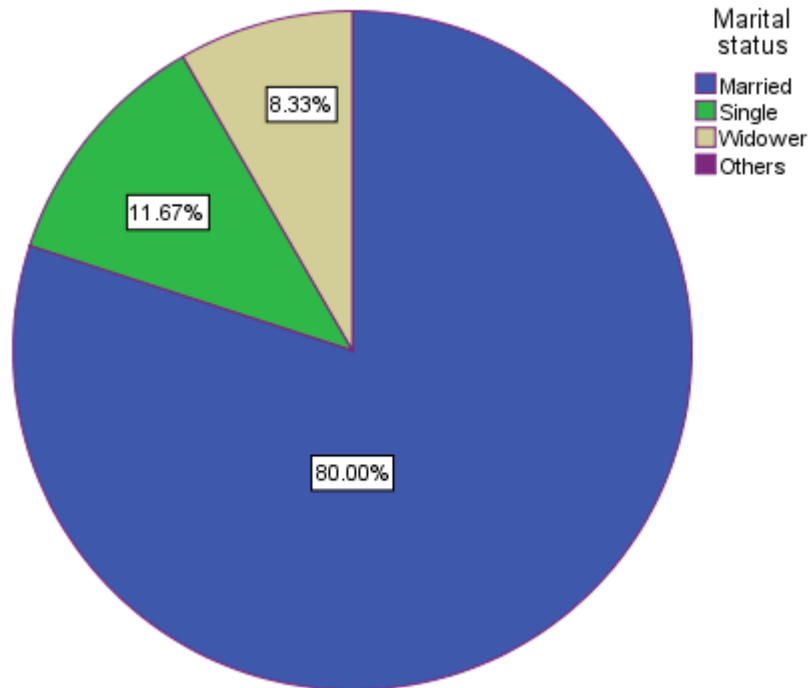
The above table shows that most respondents were protestants (35%) followed by Catholics (28.3%), others (Pentecostals) had the least number (10%).

Figure 2; Distribution of respondents by tribe.



The above figure shows that majority of the respondents were Banyankole (53.33%), followed by Bakiga (33.33%), the least were other tribes (5%).

Figure 3; Distribution of respondents by marital status



The figure above showed that majority of the respondents are married 80% followed by singles 11.67% and the least was the widowers 8.33%.

Table 2; Distribution of respondents by level of education and occupation.

		Level of education respondents			
		No formal education	Primary	Secondary	Tertiary
		Count	Count	Count	Count
Occupation of respondents	Housewife	8	8	1	0
	Self employed	4	5	11	11
	Civil servant	0	0	0	11
	Others (student)	0	0	1	0

The above cross custom table showed that majority of the respondents reached tertiary level 22 mothers, and they are self employed 31 mothers, No formal education was the least represented 12 mothers with students being the least occupation- 1 mother.

Table 3; Distribution of respondents spouse education level and occupation.

		level of education of husband			
		No formal education	Primary	Secondary	Tertiary
		Count	Count	Count	Count
Occupation of husband	Self employed	0	3	15	6
	Civil servant	0	0	1	12
	Peasant farmer	9	1	0	0
	Others	0	0	0	2
	(student)				

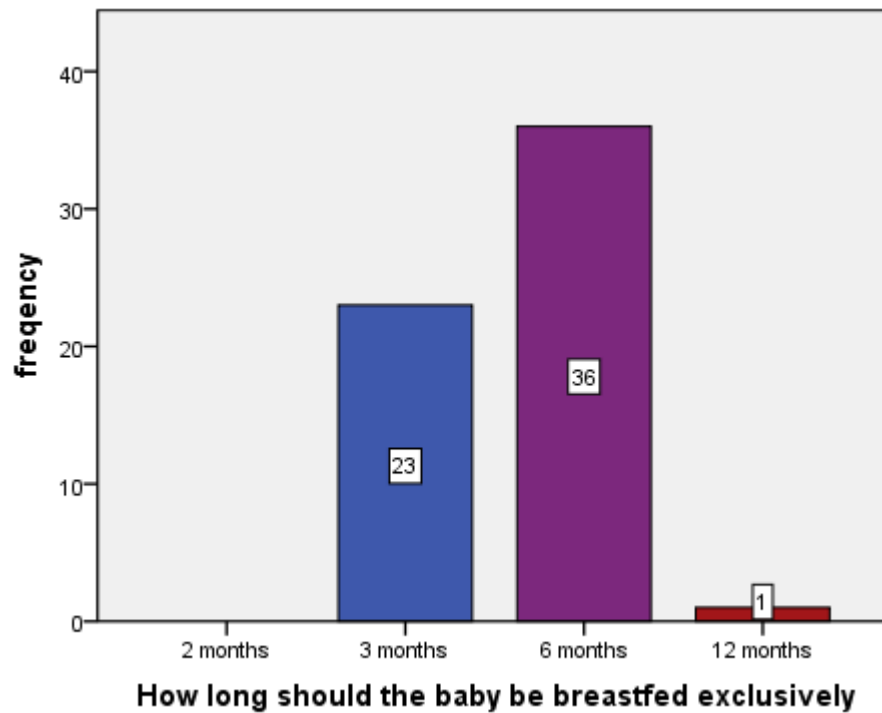
The above custom table showed that majority of the respondents husbands reached tertiary level 20 men and they are self employed (24) men, primary level was the least represented (4) men with students being the least occupation 2 men.

Table 4; Distribution of respondents by awareness of EBF and duration they spent EBF.

		have you ever heard about exclusive breastfeeding	
		Yes	No
		Count	Count
how long did you	3 months	18	1
breastfeed without	6months	38	1
introduction of other	12months	1	0
feeds	Others	1	0

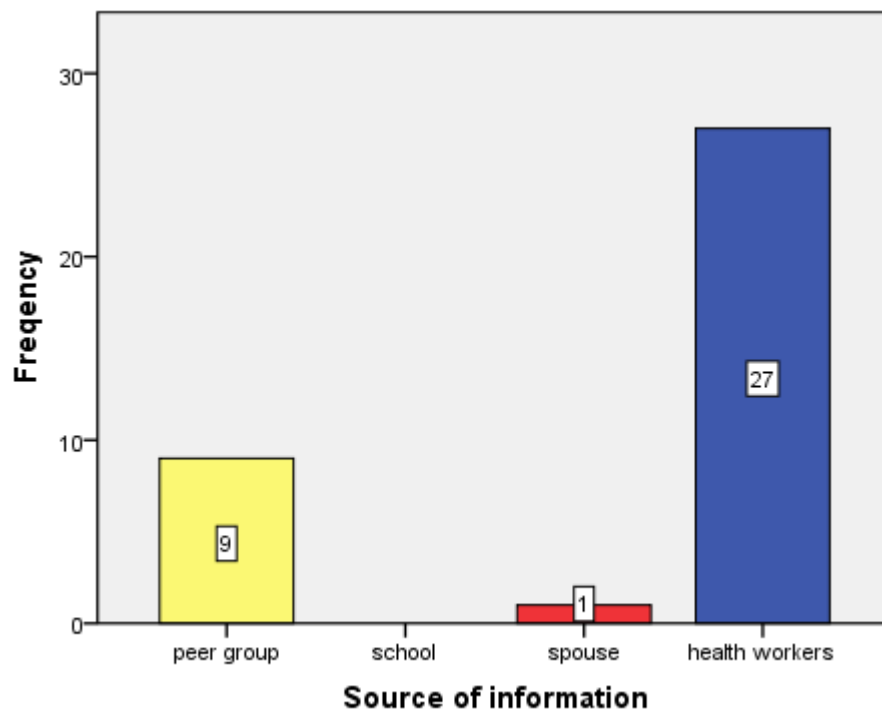
The above custom table showed that 58 mothers heard about exclusive breastfeeding of which 38 practice EBF and 20 did not practice it. 2 mothers did not hear about EBF.

Figure 4 Distribution of respondents by knowledge



The above figure showed that majority of the mothers knows the duration of exclusive breast feeding (36), the minority (24) mothers do not know.

Figure 5; Distribution of respondents by source of information on EBF



The above figure showed that majority (27) of the respondents heard about exclusive breastfeeding from health workers, followed by peer group (9) and the least was spouse (1).

Table 5; Distribution of respondents by factors influencing EBF.

	Responses		Percent of Cases
	N	Percent	
health worker	53	37.1%	88.3%
adequate breast milk	34	23.8%	56.7%
family members	10	7.0%	16.7%
Others (cultural beliefs)	46	32.2%	76.7%
Total	143	100.0%	238.3%

The above table showed that health workers advise was the most influential factor on EBF (53 mothers), followed by other factors like cultural believe (46) were every mother is expected to breastfeed and the least was family members influence (10).

Table 6; Distribution of respondents by factors hindering EBF.

Factors hindering EBF	Responses		Percent of Cases
	N	Percent	
availability of pre lacteals	44	32.11%	73.33%
fear of infecting the baby	50	36.50%	83.33%
nipple problem	26	18.98%	43.33%
Occupation	17	12.41%	28.33%
Total		100.0%	228.3%

The above table showed that fear of infecting the baby (50) is the main hindrance of EBF followed by availability of pre lacteals (44), the least was occupation of the mother (17).

CHAPTER FIVE

DISCUSSION, RECOMMENDATION, CONCLUSION

5.0 Introduction

In this chapter the reader is introduced to the discussion of the study findings, conclusion after the study and recommendations made by the researcher.

5.1.0 Discussion

5.1.1 Demographic Characteristics

The study found out that majority of the respondents was between the age group of 26-30, followed by 31-35. This age groups lie within the reproductive age group of Ugandans hence the study captured the right group.

This finding concurs with health science journal mothers who chose to breastfeed were significantly older than those who opted for replacement feeding, because they make their infant feeding decisions earlier than those who selected replacement feeding.

The study showed majority of the respondents were Protestants with most of them being Banyankole and Bakiga. This is because KIU-TH is located in bushenyi district which is inhabited by Banyankole and Bakiga

The study showed that majority of the respondents are married, reached tertiary level and were self employed mothers. The spouse to the married mothers also majority reached tertiary level with most of them being self employed. The results are consistent with, the Katherine E Heck study that showed that there was a marked socioeconomic gradient in breastfeeding. Women with higher family incomes, those who had or whose partners had higher education levels, and women who had or whose partners had professional or executive occupations were more likely than their counterparts to breastfeed. After adjustment for many potential confounders, maternal and paternal education remained positively associated with breastfeeding, while income and occupation were no longer significant.

5.1.2 Proportion of mothers who exclusively breastfeed

The study found out that 58 mothers heard about exclusive breastfeeding of which Only 38 practiced it. This is approximately 2/3 of the study population. The study is in line with UNICEF report that Exclusive breastfeeding rates among children <6 months of age is 2/3 of the developing countries with increased trend between 1998-2008, and are still quite low at 33% in Sub-Saharan Africa, Uganda inclusive. However the study was done only in one hospital and being private hospital, most people who receive treatment from KIU are a small group of the community since the community fear they may be charged highly for services offered mothers also have a right to make a choice whether to EBF or not and how the message was delivered to the mother also plays a big role.

International breastfeeding journal also stated that HIV positive women are usually counseled in infant feeding options alone and are left with the challenge of choosing the best or the most appropriate infant feeding alternatives. The choice the mother will make is often based on a newly conveyed HIV positive message of either exclusive replacement feed or exclusively breastfeed the baby. The problem is even if she has perceived the one to choose, she does not always control the conditions necessary for adherence to the option chosen. The discrepancies between how women are informed to feed their infants in ANC and what is socially preferred in their communities represent a major challenge.

5 .1.3 Knowledge on EBF

The study showed that majority of the mothers knows the duration of exclusive breast feeding this is because almost all HIV positive mothers who deliver from the hospital are taught the different ways to prevent mother to child transmission of HIV and EBF is one of the ways

The study found out that majority of the respondents heard about exclusive breastfeeding from health workers, followed by peer group and the least was spouse this is because HIV positive mothers deliver from the hospital in order to access PMTCT services

5.1.4 Factors that influenced EBF

The study showed that health workers advice was the most influential factor on EBF, followed by other factors like cultural believe the least was family members influence. This is true because

after delivery of an HIV positive mother as a health worker you have to counselling the mother on EBF

The study concurs with Thulier and Mercer findings which demonstrated that support and education by health care professionals as well as paternal support for breastfeeding are significantly influencing factors in breastfeeding. UNICEF also documented that Peer support or expansion of community health workers, regulations regarding maternal leave media and implementation of the code of marketing, women's and children's status among others positively influences EBF. Another similar study published by pubmed found out that In most African culture a women if suppose to exclusively breast feed the baby for 6 months hence cultural believe positively influences EBF.

5.1.5 Factors that hindered EBF

The study found out that fear of infecting the baby is the main hindrance of EBF followed by availiability of pre lacteals; the least was occupation of the mother. This findings is applicable to the local communities because they fear taking care of and infected child

This is concurrent with a study by School of Health Sciences which noted that majority of HIV-infected mothers opted for replacement feeding because of their HIV positive status and fear of MTCT through breast milk. Similar study by Louise disclosed that one of the reasons identified for stopping breastfeeding was mothers occupation were working class mother have little time for their children hence they switch to formula milk simply because it is thought to be convenient. A similar study by Thulier and Mercer present evidence that maternal employment outside the home decreases breastfeeding duration and exclusive breastfeeding rates.

A study in Tanzania revealed that the use of pre-lacteal and its abundance is another hinder to EBF.

5.2. Recommendation.

1. The hospital should continue with education of HIV positive mothers on EBF.
2. Spouse should be actively cooperated in supporting their wives to exclusively breastfeed

5.3. Conclusion.

1. 2/3rd of the mothers practice exclusive breast feeding
2. Health workers' advice was the most influential factor on EBF, followed by other factors like cultural beliefs, the least was family members' influence.
3. Fear of infecting the baby was the main hindrance to EBF followed by availability of pre lacteals, the least was occupation of the mother.

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APPENDICES:

Appendix 1: Questionnaire

Introduction:

Factors Influencing Exclusive Breastfeeding among HIV Positive Mothers of Infants Aged 6-12 months in KIUTH.

Identification Data:

Date:

Serial No:

Interviewer:

INTRODUCTION:

I am a student of Kampala International University, Western Campus carrying out research on Factors Influencing Exclusive Breastfeeding among HIV Positive Mothers of Infants Aged 6-12 months at KIUTH. Thus, I have some questions I would like to ask you. The information you will give is very important and will be kept with maximum confidentiality. That is why the name is not included on the questionnaire. Therefore, feel free in answering the question if you agree to participate.

SECTION A: SOCIO- DEMOGRAPHIC CHARACTERISTICS

1. **Age: (years)**

2. **Religion:**

(1) Protestant

(2) Catholic

- (3) Muslim
- (4) Others Specify

3. **Tribes:**

- (1) Munyankole
- (2) Mukiga
- (3) Muganda
- (4) Others Specify

4. **Level of Education:**

- (0) No formal education
- (1) Primary
- (2) Secondary
- (3) Tertiary

5. **Marital Status:**

- (1) Married
- (2) Single
- (3) Widowed
- (4) Others Specify

6. **Occupation:**

- (1) House wife
- (2) Self employed
- (3) Civil Servant
- (4) Others Specify

7. **If married occupation of Husband:**

- (1) Self employed
- (2) Civil Servant

- (3) Peasant farmer
- (4) Others Specify

8. **Level of Education of Husband:**

- (0) No formal education
- (1) Primary
- (2) Secondary
- (3) Tertiary

SECTION B: KNOWLEDGE OF CLIENTS ON EXCLUSIVE BREASTFEEDING.

9. Have you ever heard about Exclusive breastfeeding?
- (1). Yes
 - (2). No

10. If yes, how long should the baby be breastfed exclusively?
- (0) 2 months
 - (1) 3 months
 - (2) 6 months
 - (3) 12 months

11. Where did you get the information from?
- (1) Family member.
 - (2) Hospital.
 - (3) Neighbor.
 - (4) Traditional birth attendant.

12. How long did you exclusive breastfeed without introducing other feeds
- 1. Yes
 - 2. No

13 If yes what is the factor influencing exclusive breastfeeding

1. Health worker advice

2. Adequate breast milk

3. Family members

4. Others

14 If no what is the hindering factor

1. Mothers occupation

2. Nipple problem

3. Fear of infecting the baby

4. Availability of pre-lacteals

5. others

15. When is an HIV positive mother supposed to stop breastfeeding?

(1) At 3 months.

(2) At 6 months.

(3) At 12 months.

(4) At 24 months.

Others, specify

GROUP DISCUSSION GUIDE

Have you ever heard about Exclusive breastfeeding?

Where did you hear it from? Explain.....

Thank you very much for your co-operation.

Appendix ii work plan

Time Activity	Oct 2014	Nov 2014
Proposal writing	X	
Approval		X
Data collection		X
Analysis & discussion		X
Draft report		X
Submission of final report		X

Appendix iii Research Budget

Item	Quantity needed	Cost per unit	Total cost in UGX
Flash disk	1	25000	25000
Transport	1 person(translator)	15000	15000
Meals	4 personsx10 days	3000	120000
Data analysis	2personsx5days	5000	50000
Typing & printing	80 pages	1000	80000
Photocopying	420pages	100	42000
Binding	4 copies	2000	8000
Miscellaneous	10%	-	34000
Total			374000

Appendix IV Consent form

I am a student of Kampala International University, Western Campus carrying out research on Factors Influencing Exclusive Breastfeeding among HIV Positive Mothers of Infants Aged 6-12 months at KIUTH. Thus, I have some questions I would like to ask you. The information you will give is very important and will be kept with maximum confidentiality. That is why the name is not included on the questionnaire. Therefore, feel free in answering the question if you agree to participate.

Appendix v map of Bushenyi district





KAMPALA
INTERNATIONAL
UNIVERSITY

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E-mail: admin@kiu.ac.ug * Website: <http://www.kiu.ac.ug>

OFFICE OF THE DEAN,
FACULTY OF CLINICAL MEDICINE & DENTISTRY

20/11/2014

TO WHOM IT MAY CONCERN

RE: APIO MIRRIAM OKELLO (BMS/0256/113/DU)

The above named is a student of fourth year at Kampala International University pursuing a Bachelor of Medicine, Bachelor of Surgery (MBChB) programme.

She wishes to conduct her research project in your hospital.

Topic: Assessing factors influencing exclusive breastfeeding among HIV positive mothers attending maternal child health clinic at KIU-TH.

Any assistance given will be appreciated.

S.O. Akib
Dr. Akib Surat
Asso. Dean, FCM & D



*To Antenatal Unit,
Please allow student
to conduct research.*



"Exploring the Heights"