BREASTFEEDING PRACTICES AND DETERMINANTS OF EXCLUSIVE BREASTFEEDING AMONG MOTHERS ATTENDING HEALTH FACILITIES IN AMURIA DISTRICT, UGANDA

SUBMITTED

BY

MARY AGUTI

BMS/0076/133/DU

A RESEARCH REPORT SUBMITTED TO THE FACULTY OF CLINICAL MEDICINE AND DENTISTRY IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF BACHELOR OF MEDICINE AND BACHELOR OF SURGERY AT KAMPALA INTERNATIONAL UNIVERSITY WESTERN CAMPUS.

MAY, 2019

DECLARATION

I **MARY AGUTI** declare that I am the sole author of this work and it has never at any time been submitted for the award of a degree of any other qualification in any university. Any material which is not my original work has been clearly referenced.

Sign…… **Date**……

APPROVAL

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

……..……..

Mr. Solomon A. Mbina

Department of public health

School of Allied Health Sciences

Kampala International University-Western Campus

DEDICATION

This research report is dedicated to my beloved daughter queen, Kezia .A.A and unborn siblings, to my niences and nephews, all my family members especially my parents Mr. and Mrs. Opolot, Your financial support and sacrifice is never in vain.

I also dedicate this work to all breast feeding mothers, children are a gift from God nurture them well.

ACKNOWLEDGEMENT

First and foremost the Almighty God the Alpha and omega in whose palm my name is inscribed; thus far you have brought me and will lead me on.

My dear loving parents Mr and Mrs Opolot, my dearest daughter Kezia, my brothers, sisters, nieces and nephews for the unfolding and wholistic love, support, encouragement that kept the fire in me burning.

My supervisor Mr Mbina. A. Solomon who provided insight and expertise thank you for sharing your pearls of wisdom that has been instrumental through every step of this piece of work I'm forever grateful be blessed. My truest of friends especially Marshall ,my discussion group mates who held each other's hand, prayed, worked, wished us the very best throughout the years of studies to the end I love you all. And to my classmates, mentors and everyone else who contributed to this success thank you, God bless you all.

LIST OF ACRONYMS

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

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

Cleft lip: Birth defects that occur when a baby's lip or mouth do not form properly during pregnancy.

Cleft Palate: A congenital split in the roof of the mouth. This disorder can result in feeding problems.

Cerebral Palsy: is a disorder of movement, muscle tone or posture that is caused by damage that occurs to the immature, developing brain most often before birth.

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).

Infant — a person from birth to 12 months of age. In this study children aged 0-6 months were considered as infants.

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.

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ABSTRACT

Background: Breast milk contains all the nutrients required by infants in the first 6 months of life for good health and development. Breastfeeding therefore, is an important public health strategy for reducing maternal, infant and child morbidity and mortality (Jones, 2013; Kramer, 2012). Good breastfeeding practices especially exclusive breastfeeding can prevent under five deaths in developing countries (WHO and UNICEF. (2013)).

Objectives: The objectives of the study were to determine the prevalence of breastfeeding practices and the determinants exclusive breastfeeding among mothers attending health facilities in Amuria.

Methods: The study design was descriptive cross-sectional. Quantitative and qualitative methods were used to collect the data of this study. The study health facilities and the participants were selected by simple random sampling technique. Seven health facilities were sampled while 370 lactating mothers of children of age 0- 24 months were sampled from these health facilities as participants of study.

Results: The prevalence of EBF among the lactating mothers attending health facilities in Amuria district was 37.30% and initiation of breastfeeding within one hour of birth among the mothers was found to be 47.57%. Mothers who rated their milk production for the child as average have meal frequency during the first six months was three time daily, with high appetite during the first six months and mothers who delivered in a health facility had the higher likelihood of practicing exclusive breastfeeding. The child's gender, birth weight and appetite significantly influenced the exclusive breastfeeding practices of lactating mothers.

Conclusion/Recommendation: Mothers in Amuria district practice mixed feeding which implies that some children are prone to mortality since mixed feeding is responsible for frequent risk of infections like diarrhea and pneumonia. Breastfeeding counseling during antenatal care should be centered on solving problems associated with breastfeeding.

CHAPTER ONE
INTRODUCTION

1.0 Background

Breastfeeding is an important public health strategy for reducing maternal, infant and child morbidity and mortality (Jones, 2013; Kramer, 2012). The normal way of providing young infants with nutrients they need for healthy growth and development is through breastfeeding and virtually all mothers can breastfeed, provided they have accurate information, and the support of their family, the health care system and society.

The World Health Organization (WHO) therefore recommends optimal breastfeeding which includes immediate initiation of breastfeeding, exclusive breastfeeding for six months and continued breastfeeding for at least two years with optimal complementary feeding from six months (WHO; 2003; UNICEF, 2013).

Recent evidence indicates that breastfeeding could save over eight hundred thousand children's lives and about two hundred mothers' lives annually (Victoria C.G, et al, 2016). Despite the benefits and efforts to promote breastfeeding, EBF is sub optimally practiced in many developing countries. Only 35 % of the infants are exclusively breastfed worldwide (Cai, X., Wardlaw, T., & Brown, D. W. 2012).

In sub Saharan Africa which has high rates of infants and child mortality only 33 % of infants are exclusively breastfed (Cai, X., Wardlaw, T., & Brown, D. W. 2012)

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). In response to the persistent decline in the rate of breast feeding globally, the World Health Organization and UNICEF had launched several programmes like the baby friendly hospital initiative and the International Code of Marketing of Breast Milk substitutes in order to protect, promote and support breastfeeding (Fairbank et al, 2000; UNICEF, 2013).

Several factors such as socioeconomic, socio demographic, cultural and so on have been found to be associated with breastfeeding practices especially EBF, in developed countries (Mgongo, M., Mosha, M. V, et al 2013; Nkala, T. E., & Msuya, S. E. 2011). However, how these factors influence breastfeeding practices especially in Uganda differ from one setting to the other.

1.2 Statement of the problem

The World Health Organization (WHO) has revealed that only about 36 percent of infants worldwide were exclusively breastfed over the period of 2007-2014 (WHO, 2016). It is estimated that over 7 million children under the age of five die each year in sub-Saharan Africa and this has been attributed to poor feeding practices. Exclusive breastfeeding promotion has been identified as one of the interventions with the highest life-saving potential globally, and if all children were optimally breastfed, this could potentially save 13% of child deaths worldwide (Chola et al., 2011).

Despite efforts to promote and facilitate effective practice of optimal breastfeeding such as development and operationalization of several national policies and guidelines to provide information and guidance on IYCF, counseling and support available in many health centers there is still a low practice of optimal breastfeeding (UNICEF 2016).

In Uganda, malnutrition remains a serious health problem affecting infants and children contributing significantly to both infant and child mortality and morbidity, this has been attributed to low levels of breast feeding practices (UBOS, 2012). There is also lack of information on breastfeeding practices in Uganda especially in rural area such as Amuria.

This study therefore seeks to establish the breastfeeding practices and determinants of exclusive breastfeeding among mothers attending health facilities in Amuria district, Uganda.

1.3 General objective

To assess the breastfeeding practices and determinants of exclusive breastfeeding among mothers attending health facilities in Amuria district, Uganda.

1.4 Specific Objectives

1. To determine the level of breastfeeding practices among mothers attending health facilities in Amuria district.
2. To identify the maternal factors influencing exclusive breastfeeding practices among mothers attending health facilities in Amuria district.
3. To assess the child factors influencing exclusive breastfeeding practices among mothers attending healthy facilities in Amuria district.

1.5 Research questions

1. What is the level of breastfeeding practices among mothers attending health facilities in Amuria district?
2. What are the maternal factors influencing exclusive breastfeeding practices among mothers attending health facilities in Amuria district?
3. What are the Child factors influencing exclusive breastfeeding practices among mothers attending healthy facilities in Amuria district.

1.6 Study Scope

1.6.1 Content scope

The study focused on breastfeeding practices and determinants of exclusive breastfeeding among mothers attending health facilities in Amuria district, Uganda.

1.6.2 Geographical scope

The study was conducted in Amuria district. Amuria district is one of the local Governments under the Uganda Government decentralization policy, it is approximately 37 kilometers by road North of Soroti District and it is one of the largest towns in the Sub region. It is boardered by Otuke District to the North, Napak and Kapelebyong District to the Northeast, Katakwi District to the East, Soroti District to the South, Kaberemaido District to the Southeast and Alebtong District to the west. There thirty (30) health centers (HC) in Amuria district, two HCIV, thirteen HCIIIs and fifteen HCII's

1.6.3 Time scope

This study was conducted between August, 2018 and April, 2019.

1.7 Significance of the study

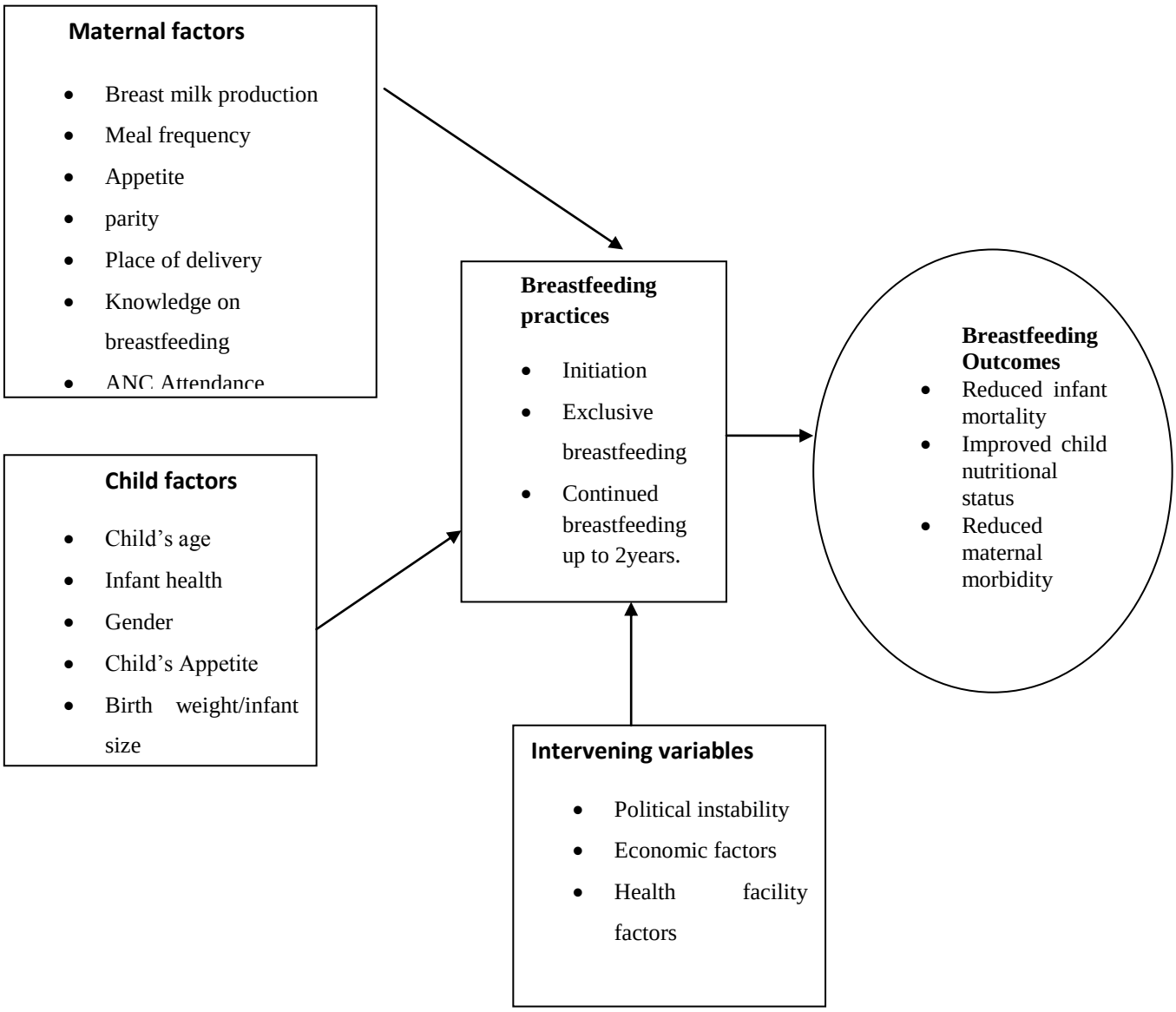
Like other district and rural communities, Amuria is faced with the challenge of proper nutrition and data of breastfeeding practices and the determinants which influence these practices. Therefore findings of this study is expected to:

1. Provide information about the level of breastfeeding practices among mothers' in Amuria District.

2. Suggest useful information to the Government, Ministry of Health and other organizations working in child survival programme to design interventions, appropriate foundation programs to improve and promote the practice of optimal breastfeeding in the area and other regions.
3. Inform the mothers of the region about their breastfeeding practices hence helping to promote mother and child health.
4. Provide useful data for research for further research on breastfeeding practices in the region and the country at large.

1.8 Conceptual Framework

Independent variables **Dependent variable**



CHAPTER TWO
LITERATURE REVIEW

2.0 Introduction

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

2.1 Prevalence of breastfeeding practices among mothers attending health facilities in Amuria District

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, 2009a and UNICEF, 2011c) 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 Sudan mortality rates of infants and children younger than five years are high (infant mortality rates 57.9 % per 1000 live births and death rates of children younger than five years is 55.64 % per 1000 live births respectively) while the prevalence of EBF among infants below six months is low (41%) Sudan (11). There has been a major increase in exclusive breast feeding in 19 African countries including Rwanda (88%), Tanzania (41%), Ghana (63%), Benin(70%),Bangladesh (64%), Ethiopia (49%) , and Malawi (57%) among others.(Babirye J.N , 2009).Countries with low practice of exclusive breastfeeding rates include Chad (2%), Cote d'Ivoire (4%), Gabon (6%), Kenya (32%), and south Sudan (36%) among others (Bailey, J, 2008).

Studies have identified various factors that influence breastfeeding practices such as inadequate knowledge of the health benefits of breastfeeding (Blyth, R et al (2002), Brown, Catherine RL, et al

,2014); inadequate antenatal counseling on breastfeeding and belief that breast milk is insufficient (de Paoli M 2001).A range of maternal and child health attributes such as marital status, economical status

2.2 Maternal factors influencing breastfeeding practices among mothers.

The number of parity has shown to have significant association with optimal breastfeeding practices (Alemayehu et al., 2013). Pressure and support from family and partner 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., 2011). Other maternal factors that have shown significant associations with exclusive breastfeeding include knowledge maternal age, mother's health status, experience of breastfeeding and among others. First time mothers are less likely to initiate breastfeeding and continue to breastfeed at 6 months compared to their more experienced counterparts (Ryan et al., 2012). First time mothers also tend to experience more difficulty establishing breastfeeding (Grummer-Strawn, 2008) and are more likely to report discontinuing breastfeeding because parity, the mother's experience with birth, has been shown to be an influential factor for breastfeeding initiation and success (Ruowei et al., 2008). Primiparas, first time mothers, have less self confidence in their ability to successfully breastfeed than multiparas, who have experienced child birth and caring for an infant. Intention to breastfeed has been demonstrated to be a strong predictor of breastfeeding initiation (Ryan et al., 2012). However, there are conflicting findings on the impact of a mother's attitude toward breastfeeding and long term breastfeeding success (Parkinsonetet al., 2010). Nevertheless, studies have found that women who have positive attitudes toward breastfeeding and a strong determination to breastfeed long term are more likely to overcome difficulties related to working outside of the home and successfully breastfeeding their infants (Rojjanasrirat & Sousa, 2010). The feeding method that family and friends have used seems to influence how each feeding method is perceived by the individual (Rojjanasrirat & Sousa, 2010). Another individual factor is mother's knowledge which influences the practice of optimal breastfeeding. Globally, 60% of the infant and young child deaths occur due to inappropriate infant feeding practices and infectious disease where two-thirds of these deaths are attributable to sub-optimal breastfeeding practices (Tamiru etal., 2013). Poor nutrition is not always only the result of lack of food, but it can be due to lack of knowledge about optimal feeding practices and provision of poor quality of food. Clear-cut programs are needed especially in developing countries to provide a basic service and support for infants and young children to promote optimal breastfeeding (Shikur, 2013) .In many developing countries infants and young

children are most vulnerable to malnutrition because of lack of knowledge on how to feed a child and infectious diseases. Consequently, large numbers of children are suffering from a wide-range of malnutrition manifested in stunted growth, wasting and micronutrient deficiencies (International Journal of Nutrition and Food Sciences, 2013). Optimal newborn and infant feeding practices are major determinant of short and long-term health outcomes in individuals and social development. Children who are not breastfed properly have repeated infections, grow less and are more likely to die by the age of one month than children who receive at least some breast milk (Kimani-Murage et al., 2011). Many observational studies showed that maternal knowledge of optimal child feeding practices like exclusive breastfeeding for six months, continued partial breastfeeding and the timely transition to adequate complementary food is basic to deliver physiological and economic benefits to mothers and to keep health of a child (Kimani-Murage et al. 2011). The perceived ease of breastfeeding in comparison to formula feeding also differs across different mothers. Some women believe that formula feeding is easier because it is easier to schedule and it eliminates concerns about appropriate infant weight gain (Rojjanasrirat & Sousa, 2010). Some women also report that formula feeding is less embarrassing, more reassuring because one can visually monitor how much milk an infant is feeding and is easier when someone else has to care for the baby (Moore & Coty, 2006). Other women believe that breastfeeding is easier, more satisfying for child and mother, healthier, more natural, more economic, and more convenient (Moore & Coty, 2006); but that expressing milk for feeding in the mother's absence was more complicated than formula feeding (Holmes et al., 2009). Breastfeeding is nearly universal, but however, large numbers of mothers, both urban and rural areas globally, do not practice appropriate breastfeeding and complementary feeding behavior (International Journal of Nutrition and Food Sciences 2013). In Sub- Sahara African countries, under-five deaths is highly associated with abrupt cessation of breastfeeding and infectious diseases, but it is closely linked to gap of knowledge on how to feed the infant (Tamiru et al., 2013). A recent report showed that mothers early provide water, butter and various types of food to feed their children, thereby reducing the percentage of exclusively breastfeed and increasing the percentage of receiving complementary food at very young age (Mihrshahi et al.,2012). Another factor that influences perceptions of breastfeeding is concerns about mothers own health, stress levels, diet, etc. and how these variables can impact the health of their baby if they were breastfeeding as a woman's situation is a primary determinant of successful long term breastfeeding. A mother's occupation can hinder her ability to use a breast pump at work and make it more difficult to continue breastfeeding long term (Rojjanasrirat & Sousa, 2010). A woman who works part-time is more

likely to breastfeed than a woman who works full-time although they both use most of their timing in trying to get ends meet (Salami et al., 2012). Working mothers are just as likely to initiate breastfeeding, but have a lower rate of exclusive long-term breastfeeding (Johnson & Esposito, 2010).

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 (Rivera, 2014; Bai, 2014; Allen, 2014; Armstrong, 2002; Lawrence, 2011; Domenico, 2013; Ogido, 2014). Some studies in Nigeria have shown that mothers who delivered in a health institution designated as baby friendly are more likely to practice exclusive breastfeeding (EBF) and breastfeed their infants for a longer time (Aidam BA. et al 2005, Ogunlesi TA. et al, 2005).

2.3 Child factors influencing breastfeeding among mothers.

Several studies have documented the impact of cultural factors, maternal age, marital status, family income/social class, mode of delivery, time of initiation of first breastfeeding and proximity to babies on feeding pattern. Outside maternal factors, studies have also shown that the babies' general behaviour influence what feed they receive (Karacam Z. 2008). Low birth weight infants are less likely to exclusively breastfeed (Matias, Nommsen-Rivers et al 2012; Butte Lopez-alatcon et al, 2002) and may be associated with the belief that breast milk substitute is required to make up the low weight (Matias, Nommsen-Rivers,2012).

CHAPTER THREE
METHODOLOGY

3.0 Introduction

This chapter comprised of a description of the study design, study population, sampling techniques, the instrument or tools used for data collection, data collection methods and procedures, data process and analysis and the ethical considerations.

3.1 Research Design

The research design was cross-sectional and descriptive using quantitative and qualitative approaches.

3.2 Study population

The study population included breastfeeding mothers of children aged 0 to 24 months seeking health services from any of the sampled health facilities in Amuria district.

3.2.1 Inclusion criteria

Mothers who have given birth 0 - 6 months prior to the study and lactating and mothers whose children are 6-24 months old and consented.

3.2.2 Exclusion criteria

Lactating mothers who did not consent and mothers nursing children who are above 24 months of age.

3.3 Sample size and sampling technique

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

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

Where n = Estimated minimum sample size required

P= Proportion of a characteristic in a sample (42.9% Ingunn et al 2007)

Z=1.96 (for 95% Confidence Interval)

e = Margin of error set at 5%

$$n = \frac{1.96^2 \times 0.429\ (1 - 0.429)}{0.05^2}$$

n = 376 mothers

3.4 Sampling technique

Simple random sampling technique was used to sample the health facilities and the respondents. The health facilities for this study were sampled from health centers IV and III only since most of the mothers or patients are referred there. Fifty per cent (50%) of the study facilities were therefore sampled from fifteen health facilities (2 HCIV and 13HCIII). The sampled health facilities include; Amuria HCIV, Kapelebyong HCIV, Obalanga HCIII, Acowa HCIII, Asamuk HCIII, Wera HCIII. Orungo HCIII and Morungatun HCIII. Mothers of children aged 0-24 months attending Maternal and Child Health (MCH) clinics in each of the sampled health centers and hospital willing to participate were also sampled randomly.

3.5 Data collection methods

Quantitative data was collected using structured interview while the qualitative data was collected using focus group discussions (FGDs) guide. The researcher and assistants administered the questionnaire to the respondents by reading the question in the local language for them to understand and give the right response.

3.6 Quality control

3.6.1 Training of data collection team

The data collection team comprised of four research assistants who were mainly nurses and could speak the local dialect. The nurses were trained by the principal researcher on the research topic and procedures of data collection.

3.6.2 Pre-testing of questionnaires

The principal researcher and the data collection team conducted the pre-testing of the questionnaires over a period of two days in Wera HCIII in order for the research assistance to gain the practical experience in administering questionnaires as well give the researcher an idea of the population characteristics.

3.7 Validity and Reliability of Research instrument

Data was entered using the Statistical Products and Service Solution (SPSS) data entry module version 17.0 software which has an inbuilt verification ability to check for range and logistical errors.

3.8 Data process and analysis

Quantitative data from the survey was statistically analyzed using the Statistical Package for Social Sciences (SPSS) (version 17.0). Basic descriptive analysis was done using frequency distributions. Qualitative data was sorted, categorized and conceptualized systematically to see the patterns of exclusive breastfeeding. Measures of central tendency were used to give expected summary statistics of variables studied. Descriptive statistics was used to describe a distribution of scores. Findings were presented using frequency distribution tables, charts and graphs. The qualitative data was gathered to answer the research questions and find the themes emerging from the data as well as the meanings attached to those themes.

3.9 Ethical considerations

Letter of introduction was collected from the Faculty of Clinical Medicine & Dentistry to the District health officer (DHO) for permission to conduct this research. Ethical approval was sought from various research and ethical committee of KIU to ensure that the study adhere to acceptable ethical guidelines.

3.10 Limitations & Delimitations

- The study design relative challenges arise from information bias as the respondents prefer not to supply correct information when administering questionnaire to the respondent. However, the respondents were reassured of confidentiality and the reason of the study.
- Language barrier was another challenge; this was curbed by the research assistants who were proficient in local language.

CHAPTER FOUR

RESULTS

4.0 Introduction

This chapter comprise of results of the study which are presented according to the specific objectives. Of the 376 respondents required for the study, only 370 were reached.

Socio-demographic data of respondents

Table 1: Socio-demographic characteristics of the lactating mothers (Respondents)

Variable	Frequency (n=370)	Percentage (%)
Age		
15-19	40	10.81
20-24	154	**41.62**
25-29	104	28.11
30-34	62	16.76
>35	10	2.70
Marital status		
Married	182	**49.19**
Single	108	29.19
Separated	67	18.11
Divorced	13	3.51
Level of education		
No formal education	102	27.57
Primary school	126	**34.05**
Secondary school	88	23.78
Post secondary education	54	14.60
Occupation		
Employed	78	21.08
Self employed	94	25.41
Peasant	106	**28.65**
House wife	92	24.86
Area of Residence		
Rural	275	**74.32**
Urban	95	25.68
Religion Catholic	178	**48.11**
Protestants	120	32.43
Islam	51	13.78
Others	21	5.68

Majority 275 (74.32%) of the mothers that participated in this study reside in the rural area and most 182 (49.19%) were married. Most 154 (41.62%) of the participants fell within the age bracket of 20-24 and were Catholics 178 (48.11%).

4.1: Breastfeeding Practices among mothers attending health facilities in Amuria district

Table 2: Breastfeeding practices of Respondents

Variable	Category	Frequency(n=201)	Percentage
Initiation of breastfeeding after birth	Less than 1 hour after birth	176	**47.57**
	1-3 hours after birth	98	26.49
	4-11 hours after birth	39	10.54
	12-23 hours after birth	23	6.22
	24 hours or more after birth.	11	2.97
	Don't know/don't remember	23	6.22
Exclusive breastfeeding			
During the first six months after birth of this baby, did you feed him/her anything other than breast milk.	Yes	232	62.70
	No	138	**37.30**
If yes, how old was this baby when you introduced other food substances?		**(n=232)**	
	1-2months	72	31.03
	3-4months	122	**52.59**
	5-6 months	38	16.38
If yes, what was fed to your baby in the first 6 months		**(n=232)**	
	Cow's milk	32	13.79
	Water	96	**41.38**
	Glucose (Sugar) water	10	4.31
	Millet Porridge (akima nalos)	57	24.57
	Mashed potatoes	25	10.78
	Meat/fish sauce	12	5.17
Complementary feeding practices			
If you practiced exclusive breastfeeding, what type of food(s) do you regularly give this baby with breast milk?		**(n=138)**	
	Cow's milk	13	9.42
	Beans	28	20.29
	Millet Porridge (akima nalos)	39	**28.26**
	Mashed poptato	12	8.70
	Meat	15	10,86
	Groundnut paste	21	15.22

	All of the above	10	7.25

Results in table 2 above show that most 176 (47.57%) of the respondents had initiated breastfeeding after birth within the first hour of birth. However, during the first six months after birth of their babies, majority 232 (62.70%) of the mothers had fed their babies with other supplements (food) than breast milk. Most 96(41.38%) of the mothers who introduced other foods to the babies within the first six months, gave them water. Most 176(47.57%) of the mothers reported that they introduced other food substances to their babies between the age of 3-4months. Mothers who practiced EBF reported that they introduced other food substances while still breastfeeding their babies after 6 months and the regular foods they give them is millet porridge (akima nalos).

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

"my mother bathe my child and in the process she gives the baby water saying it makes him strong" (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).

During the focus group discussions, the mothers shared their experiences and practices of infant and young child feeding in the first six months and after as follows;

"It took me four hours to initiate breastfeeding, I was feeling weak. When I gained strength, went for shower, fed myself then returned later to feed the child" (FGD participant 1)

Given the low rate of exclusive breastfeeding, during the focus group discussions the mothers were probed on why they practiced mixed feeding;

*"For me I go to the garden everyday because that's where I get the money from to look after the baby and my other children, so when am in the garden, those at home used to feed the baby for me" (*FGD participant 10)

"For me, my child's demand for breast milk is much and because I cannot meet his demand, I had to give him porridge and cow's milk sometimes as I continue to breast feed".(FGD participant 7).

"For me I just felt like I should give the baby cow's milk because for us at home we have a lot of cow's milk" (FGD participant 8)

4.2: Maternal factors influencing EBF among mothers in Amuria district

Table 3: Univariate analysis on the maternal factors of mothers

Variable	Category	Frequency (n=370)	Percentage (%)
Breast milk production for the child	Sufficient Average insufficient	155 106 109	**41.89** 28.65 29.46
Appetite during the first six months	High Average Low	182 110 78	**49.19** 29.73 21.08
Meal frequency during the first six months	One Two Three More than three	69 176 83 42	18.65 **47.57** 22.43 11.35
Parity	Primipara Multipara	111 259	30.0 **70.0**
ANC attendance	Yes No	319 51	**86.22** 13.78
Number of ANC Visits	1 2 3 4	62 77 108 72	19.44 24.14 **33.85** 22.57
Place of delivery	Health facility Home TBA	277 78 15	**74.87** 21.08 4.05

For how long should a baby be breastfed exclusively?	One month	15	4.05
	Two months	56	15.14
	Three months	32	8.65
	Four months	25	6.76
	Five months	30	8.11
	Six months	207	**55.94**
	I don't know	5	1.35

The result in table3 above indicates that, Majority 319(86.22%) of the mothers who participated in this study attended ANC, however the number of ANC visits were poor 108 (33.85%). Also majority 277 (74.87%) had delivered their babies in the health facility and are mostly 259 (70.0%) multipara (mother having more than one child). Based on their of EBF practices, most 207 (55.94%) of the mothers have knowledge of EBF and 182(49.19%), 176 (47.57%) and 155 (41.89%) rated their appetite within the first six month after birth as high, their meal frequency rate as twice a day and milk production sufficiency respectively.

Table 4**: Cross tabulation analysis between maternal factors and EBF practices among the Mothers attending health facilities in Amuria district**

Variable	Category	Exclusive breastfeeding		p-value
		Yes (138)	**No (232)**	
Breast milk production for the child	Sufficient Average insufficient	68(43.67%) 51(48.11%) 19(17.43%)	87(56.13%) 55(51.89%) 90(82.57%)	0.041
Meal frequency during the first six months	One Two Three More than three	29(42.03%) 101(57.39%) 60(72.29%) 20(47.62%)	40(57.97%) 75(42.61%) 23(27.71%) 22(52.38%)	0.000
Appetite during the first six months	High Average Low	90(49.45%) 48(43.64%) 0(0.0%)	92(50.55%) 62(56.36%) 78(100%)	0.002
Parity	Primipara multipara	49(44.14%) 89(34.36%)	62(55.86%) 170(56.64%)	0.571
ANC attendance	Yes No	138(43.26%) 0(%)	181(56.74%) 51(100%)	0.052
Number of visits	1 2 3 4 **Total**	22(35.48%) 18(23.38%) 48(44.44%) 38(52.78%) **120(37.62%)**	40(64.52%) 59(76.62%) 60(55.56%) 34(47.22%) **199(62.38%)**	0.202
Place of delivery	Health facility Home TBA	105(37.91%) 5(6.41%) 0(%)	172(62.09%) 73(93.59%) 15(100%)	0.001

The bi-variate data analysis show in the above table indicates that there was a statistically significant relationship between some maternal factors and exclusive breastfeeding among breastfeeding mothers attending health facilities in Amuria district. These variables include: The self rating of Breast milk production for the child (p = 0.014), Meal frequency during the first six months (p = 0.000), appetite during the first six months (p = 0.000) and Place of delivery (p = 0.001).

Table 5: Multivariate analysis of maternal factors and EBF practice among mothers.

			Confidence interval	
Variable	**Category**	**AOR**	**Lower**	**Upper**
Rate of breast milk production	Sufficient Average Insufficient	0.975 **2.350** 1.000	0.433 0.170	2.197 0.723
Meal frequency during the first six months	One Two Three More than three	0.196 0.078 **1.119** 1.000	0.042 0.010 0.620	0.908 0.614 2.021
Rate of appetite during the first six months	High Average Low	0.250 **2.112** 1.000	0.049 0.621	1.267 7.188
Place of delivery	Health facility Home TBA	**2.250** 0.112 1.000	0.137 0.663	3.977 2.096

The results in the table above show that mothers who rated their milk production for the child as average, mothers whose meal frequency during the first six months was thrice, mothers who rated their appetite during the first six months as average, mothers who delivered in a health facility, and mothers had the higher likelihood of practicing exclusive breastfeeding.

4.3 Child factors associated influencing EBF Practices among mothers in Amuria district.

Table 6: Child factors associated influencing EBF

Variable	Category	Frequency (n=370)	Percentage (%)
Child's age	1-2months 3-4months 5-6months 6-11months 1-2 years	69 72 89 102 38	18.65 19.46 **24.05** 27.57 10.27
Gender	Male Female	178 192	48.11 **51.89**
Birth weight/infant size	1.5 -1.9kg 2.0kg – 2.4kg > 2.5kg I don't remember	78 145 110 37	21.08 **39.19** 29.73 10.00
Child's Appetite	High Average low	178 120 72	**48.11** 32.43 19.46

Table 4.6 above show that most 192 (51.89%) lactating mothers had female children and the children were in the age bracket of 5- 6 months 89 (24.05%). Most 178 (48.11%) of the mothers rated the appetite of their children as being high, and that the children had a birth weight between 20.kg-2.4kg 145 (39.19%).

Table 7: Cross tabulation analysis between Child's factors and breastfeeding practice (EBF) among the mothers.

Variable	Category	Exclusive breastfeeding		p-value
		Yes (138)	No (232)	
Child's age	1-2months 3-4months 5-6months 6-11months 1-2 years	0(0.0%) 0(0.0%) 0(0.0%) 118(85.51%) 20(14.49%)	90(38.79%) 73(31.47%) 69(29.74%) 0(0.0%) 0(0.0%)	0.501
Gender	Male Female	68(49.28%) 70(50.72%)	110(47.41%) 122(52.59%)	**0.010**
Birth weight/infant size	1.5kg -1.9kg 2.0kg – 2.4kg > 2.5kg I don't remember	20(14.49%) 88(63.77%) 30 (21.74%) 0(%)	58(25.0%) 57(24.57%) 80(34.48%) 37 (15.95%)	**0.000**
Child's Appetite	High Average low	67(48.55%) 42(30.43%) 29(21.01%)	111(47.84%) 78(33.62%) 43(18.53%)	**0.024**

Results in table 7 shows that the among the child factors which influence EBF among mothers who attended health facility in Amuria District were gender, birth weight and child's appetite.

CHAPTER FIVE
DISCUSSIONS

5.0 Introduction

This chapter presents the discussions of the findings according to the specific objectives of this study.

5.1 The prevalence of breastfeeding practices among lactating mothers attending Amuria 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 Amuria was low (37.30%) 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 however are slightly higher compared to those reported in previous studies in Kilimanjaro (20.7%) and in Uganda (24%).

Initiation of breastfeeding among the mothers at birth on the other hand was also poor (47.57%) compared to other studies. 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.

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. The results of this study therefore implies that some children born to women in Amuria 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).

5.2 The maternal factors influencing exclusive breastfeeding among mothers attending Amuria district health facilities

In this study, mothers who rated their milk production for the child as average, mothers whose meal frequency during the first six months was three, mothers who rated their appetite during the first six months and mothers who delivered in a health facility had the higher likelihood of practicing exclusive breastfeeding.

The finding that self rating of breast milk production had a significant influence on EBF practices of the mothers in this study, relates with the breastfeeding confidence that the mothers had. Mothers who rated themselves having insufficient breast milk for their children had low confidence in themselves and this affected milk let down at the psychological level. This explains why they mixed fed. Low maternal breastfeeding confidence is associated with early cessation of breastfeeding (Blyth et al., 2002; Dunn, 2006; Ertem, 2002; Forster et al., 2006). To back this explanation, a descriptive study of 198 pregnant women, by O'campo found that women with low confidence in their ability to breastfeed had 3.1 times the risk of discontinuing breastfeeding before six months postpartum when compared with women who had high confidence (95% CI= 1.39- 6.76) (O'campo et al., 1992). This is why mothers who rated themselves as average and sufficient producers of breast milk had better feeding practices than their non confident counterparts.

5.3 Child's factors influencing exclusive breastfeeding among mothers in Amuria District

Finding of this study shows that among the child's or infant's factors associated with EBF practice of were child's gender(p=0.010), birth weight(p=0.000) and child's appetite(p=0.024). This result is confirmed by a study conducted by Karacam Z. who opined that outside maternal factors, studies have also shown that the babies' general behaviour influence what feed they receive. Low birth weight infants are less likely to exclusively breastfeed and may be associated with the belief that breast milk substitute is required to make up the low weight. (Karacam Z. 2008, Matias, Nommsen-Rivers,2012 & Butte Lopez-alatcon et al, 2002**).**

CHAPTER SIX
CONCLUSION AND RECOMMENDATIONS

6.0 Introduction

This chapter presents the conclusion and recommendation of the study. The conclusions are presented based on the findings of each objective while the recommendations are made on the basis of practice, policy making and further research.

6.1 Conclusion

The prevalence of breastfeeding practices among mothers attending Amuria district health facilities.

Findings of this study show that that prevalence of EBF among lactating mothers with infants aged 6–12 months attending health facilities in Amuria district was 37.30%. This implies that mothers in Amuria district practice mixed feeding. Initiation of breastfeeding within one hour of birth among the mothers was found to be also low. However all the mothers who practiced EBF did complementary feeding properly.

The maternal factors influencing exclusive breastfeeding among lactating mothers attending Amuria district health facilities.

Mothers who rated their milk production for the child as average have meal frequency during the first six months was three time daily, with high appetite during the first six months and mothers who delivered in a health facility had the higher likelihood of practicing exclusive breastfeeding.

The Child's factors influencing exclusive breastfeeding among lactating mothers attending Amuria district health facilities

Findings of this study indicate that the child's gender, birth weight and appetite significantly influenced the exclusive breastfeeding practices of lactating mothers.

6.2 Recommendations

The prevalence of breastfeeding practices among lactating mothers attending Amuria district health facilities.

i. Enlightenment campaign about benefits of exclusive breastfeeding for mother and child should be done using various languages in order to accommodate women who do not understand English and those with low educational level.

ii. Government should liaise with all employers of labour to ensure and improve breastfeeding support in the work place.

The maternal factors influencing exclusive breastfeeding among lactating mothers attending Amuria district health facilities

i. Breastfeeding counseling during antenatal care should be centered on solving problems associated with breastfeeding.

The Child's factors influencing exclusive breastfeeding among lactating mothers attending Amuria district health facilities

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

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APPENDICES

APPENDIX 1: CONSENT FORM

My name is……... …….I am currently pursuing a Bachelors degree in clinical medicine from Kampala International University, Uganda. As part of the requirements award of the degree, I am under taking a study titled: **BREASTFEEDING PRACTICES AND DETERMINANTS OF EXCLUSIVE BREASTFEEDING AMONG MOTHERS ATTENDING HEALTH FACILITIES IN AMURIA DISTRICT, UGANDA.**

I hereby wish to solicit your consent to participate in this study. I want to assure you that the responses you will give will be kept strictly confidential for all matters and it will only be used for the purpose of the study mentioned. Your name will not be mentioned to protect your confidentiality.

You have a right not to answer questions which might be inconvenient to you.

Thank you for your cooperation.

Consent form for study participants

I have been informed about the purpose of your study and your promise on confidentiality. After all these, I now understand and:

1. I agree to participate in this research voluntarily ----------

2. I didn't agree to participate in this research ----------

Interviewee name ----------signature/date……..

APPENDIX II: QUESTIONNAIRE

Please tick in the brackets against each item.

SECTION 1: **SOCIO-DEMOGRAPHIC INFORMATION**

1. **Age: .....**

2. Marital status: Married [ ] Single [ ] Separated [ ] Divorced [ ]

3 **level of education:** No formal education [ ] Primary school [ ] Secondary school [ ] Post Secondary education [ ]

4. Occupation: Employed [ ] Self employed [ ] Peasant [ ] House wife [ ]

5. Religion: Catholic [ ] Protestant [ ] Muslim [ ] Others……

6. Area of Residence: Urban [ ] Rural [ ]

SECTION 2: **MATERNAL FACTORS**

7. How can you rate your breast milk production for your child in the past six months?

Sufficient[ ]

Average[ ]

Insufficient[ ]

8. How was your appetite during the first six months of birth?

High [ ]

Average [ ]

Low [ ]

9. How often did you take meals during the first six months of birth?

One[ ]

Two[ ]

Three [ ]

More than three[ ]

Parity

9. Is this your first or only child (Primipara)? [ ]

Do you have another or children beside this current one (Multipara)? [ ]

10. If multipara, did you breast feed the other child or children exclusively?

Yes [ ] No [ ]

Place of delivery

11. Place of delivery

Health facility [ ] Home [ ] TBA [ ]

SECTION 3: CHILD'S FACTOR

12. Age of infant/child

> 1 month [ ] 1-2 months [ ] 3-4 months [ ]

4- 6months [ ] 6months [ ] 1-2years [ ]

13. **Sex:**

Male [ ] Female [ ]

14. **Infant health:**

Cleft Palate [ ] Cleft Lip [ ] Cerebral Palsy [ ] None [ ]

15. **Have your baby been admitted in hospital for malnutrition?**

Yes [ ] No [ ]

Child's appetite

16. Does your child like breast milk? Yes [ ] No [ ]

17. **How can you rate the demand of your child for breast milk?**

Low [ ] Average [ ] High [ ] Very high [ ]

18. **Birth weight/infant size**

>2.5kg [ ] 2.5-3.5kg [ ] <3.5kg [ ]

SECTION D: BREASTFEEDING PRACTICES

Initiation

19. 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 [ ]

Exclusive breastfeeding, complementary and mixed feeding

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

Yes [ ]

No [ ]

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

Cow's milk (amate) [ ]

Glucose (sugar) water [ ]

Porridge [ ]

Mashed potatoes [ ]

Formula-based milk [ ]

Others(specify)……

22. If No, how old was this baby when you introduce other food substances?

3months [ ] 4months [ ] 5months [ ] after 6months [ ] 1 year [ ]

FGD GUIDE

Exclusive Breastfeeding

Probes;

1. How is breast feeding done in the first six months of the child by women in the communities where you stay?

……

……

……

2. During those six months, do women give their children other foods other than breast milk? if yes please explain

……

……

……

3. Why is it that during the first six months, some mothers don't like breastfeeding their children?

……

……

Maternal factors

Probes;

Do you think that the way a mother's body functions can affect the practice of EBF? If yes, what is your opinion on the possible influence of the following?

Parity

……

……

……

……

ANC Attendance

……

……

……

Place of delivery

……

……

……

……

APPENDIX III: BUDGET OF THE STUDY

Serial number	**ITEM**	**QTY**	**UNIT COST**	**TOTAL COST (SHILLINGS)**
1	Stationary (Ream of paper)	2	22,000	20,000
2	Proposal development	1	50,000	30,000
3	Development of research tools			20,000
4	Research assistants	2	20,000	60,000
6	Local transport		100,000	50,000
7	Data analysis	1	400,000	200,000
8	Typing of report	1	40,000	40,000
9	Printing and binding of report	3	70,000	30,000
10	Miscellaneous			150,000
TOTAL				510,000

APPENDIX IV: WORK PLAN

Activity	**Time frame 2018**				**2019**				
	July to September		October to November	Dec.	January	February	March	April	May
Selection of topic/proposal writing									
Submission of proposal & correction									
Data collection/analysis									
Reporting writing									
Submission of research report									

APPENDIX V: INTRODUCTORY LETTER

KAMPALA INTERNATIONAL UNIVERSITY – WESTERN CAMPUS

P O BOX 71, ISHAKA UGANDA
Tel: +256 200923534
www.kiu.ac.ug

OFFICE OF THE DEAN
FACULTY OF CLINICAL MEDICINE & DENTISTRY

17/12/2018

Granted permission to collect data in facilities

DISTRICT HEALTH OFFICE GENERAL STAMP
21 JAN 2019
AMURIA DISTRICT LOCAL GOVT
P. O. BOX 04, AMURIA

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

RE: AGUTI MARY (BMS/0076/133/DU)

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

She wishes to conduct his student research in your community.

Topic: Factors influencing optimal breast feeding practices among mothers attending health facilities in Amuria district

Supervisor: Mr. Mbina Solomon

Any assistance given will be appreciated.

Yours Sincerely,

S.O. Akib

Dr. Akib Surat
Assoc Dean FCM & D

KIU TEACHING HOSPITAL
18 DEC 2018
W.Campus
ASSOCIATE DEAN FCMD

"Exploring the Heights"
Assoc. Prof Ssebuufu Robinson, Dean (FCM & D) 0772 507248 email: [illegible]
Dr. Akib Surat Associate Dean FCM & D) email: [illegible]