

**KNOWLEDGE, ATTITUDES AND PRACTICES TOWARDS BREAST FEEDING
AMONG MOTHERS WITH INFANTS AT KASANA HC IV,
LUWEERO DISTRICT**

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DECLARATION

I hereby declare, to the best of my understanding that this research report is my original effort and has never been presented to this university or any other institution of higher learning for a scholarly award.

Signature.....

NAMATA MARGARET

Date.....

APPROVAL

I hereby certify that Namata Margaret, a student who is pursuing a Bachelor's degree in Nursing Science has worked upon this research report under my supervision.

Signature.....

SUPERVISOR

Date.....

DEDICATION

I dedicate this research report to my parents Mr. and Mrs. Sekitte Livingstone who always believed in me and whose support, prayers and encouragement, gave me hope and impetus to complete this study. I dedicate this scholarly achievement to you for standing up with me in the critical time I needed you most.

I also dedicate this research report to my husband, Mr. Mubiru Jethro, my University Friend Honest Rebeca, and siblings and all those who encouraged me in pursuing this academic endeavour in one way or the other. May the Lord's love embrace them all.

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DEFINITION OF TERMS

Infant: is a child younger than one year of age (WHO, 2013). In this study, an infant will be defined as a young child aged 0 to 1 year of age.

Breastfeeding: the practice of feeding infants and young children with milk from a woman's breast (Dhakal, Lee & Nam, 2017).

Knowledge: refers to human faculty resulting from interpreted information as well as understanding that germinates from combination of data, information, experience and individual interpretation (Haqiqhi & Varzande, 2016).

Attitudes: refers to a collection of beliefs and individuals' perceptions towards a particular state of affair and in turn influences their health seeking behaviour (Johansson & Westmar, 2013).

ABSTRACT

Background: Globally, infant breast feeding is well recognized since ancient ages as the best feeding method for infants because of its associated benefits including providing immunologic protection against death from infectious diseases, such as diarrhoea, respiratory infections, otitis media, among others. Despite this relevance, breastfeeding rates among women with infants has been stagnated with global statistics indicating that only 45% of new borne are put to the breast within the first hour of birth, and roughly the same proportion of infants less than 1 year of age are exclusively breastfed. In Uganda, available statistics estimate that the current death toll of 141,000 children dying annually could be due to inadequate breastfeeding practices. Therefore, this study sought to determine the knowledge, attitudes and practices among mothers towards breast feeding of infants in Kasana H/C IV, Luweero district.

Methods: The study employed a cross sectional research design in which opinions were obtained from 113 mothers although only 80 successfully filled and returned the questionnaires, giving a response rate of 70.8%. These questionnaires were coded, tabulated, analyzed and processed using SPSS ver20 from which findings were derived.

Results: The findings indicated that knowledge factors were significant predictors of breastfeeding intent among mothers with infants less than one year whereby mothers who had adequate knowledge on the relevance of exclusive breastfeeding were likely to breastfeed their children for longer before adding food supplements. In relation to attitudes, the study revealed that maternal attitudinal factors such as perception of inadequate support from community members, shyness during breastfeeding especially in public, poor perception of breastfeeding in minimizing family expenses were responsible for their failure to comply with the recommended infant breastfeeding practices. Moreover, the study found out inadequate practices to infant breastfeeding including use of pre-lacteal feeds before the recommended age of the infant, less time of exclusive breastfeeding, and use of food supplements.

Conclusion: It can be concluded from the study that knowledge and attitudinal factors are very significant in explaining variations in infant breastfeeding. In the same way, the practices of mothers such as use of pre-lacteal feeds, less time of exclusive breastfeeding and use of food supplements were cited as influential among breastfeeding mothers. Thus, breastfeeding mothers with infants need to pay attention to these factors if they are to maximise the benefits of infant breastfeeding.

Recommendations: Based on these findings, the researcher recommended that health workers should ensure dissemination of information to create awareness among mothers on best infant feeding practices especially on issues of frequency of breastfeeding, when to initiate food supplements, benefits and limitations of food supplements. More so, there is need to train midwives on proper customer care skills as this will bridge the gap between mothers and health service providers and this will improve their attitudes.

CHAPTER ONE

INTRODUCTION

This study explored the knowledge, attitudes and practices of breastfeeding among mothers with infants at Kasana HC IV, Luweero district. Therefore, knowledge, attitudes and practices formed the independent variables while breastfeeding among mothers was the dependent variable. This chapter presents the background to the study, statement of the problem, general objective, specific objectives of the study, research questions, scope of the study, significance of the study and the conceptual framework.

1.1 Background to the study

Historically, infant breast feeding is well recognized since ancient ages as the best feeding method for infants because of its associated benefits including providing immunologic protection against death from infectious diseases, such as diarrhoea, respiratory infections, otitis media, pneumonia and meningitis as well as offering the best start in life for infants (Tamiru & Mohammed, 2013). Besides, consistent breastfeeding during this period of rapid growth is vital to ensure that the infant develops both physically and mentally to the fullest potential. According to the WHO (2015), breastfeeding is the best way of providing ideal food for healthy growth and development of infants, and its advantages range from physiological to psychological for both mother and infants. Moreover, breast milk in addition to calories and proteins contain bioactive factors like IgA, lactoferrin, K-casein, cytokines, growth factors, glutathione peroxides, among others, which have anti-infective, antioxidant, growth promoting properties (Isaacs *et al.*, 2010). Therefore, it protects infants from various acute and chronic conditions like obesity, allergies, cancers thereby avoiding hospitalizations and reducing infant mortality (Belfield & Kelly, 2010).

Despite this relevance, breastfeeding among women has been stunted with global statistics indicating that only 45% of new borne are put to the breast within the first hour of birth, and roughly the same proportion of infants less than 1 year of age are exclusively breastfed (WHO, 2015). The data shows that about three quarters of children globally aged 12-15 months and who would still be breastfeeding are on food supplements. Yet the World Health Organization (WHO) recommends that breastfeeding practice should continue until age two and beyond. Despite this recommendation, only about half of infants less than one year are

breastfed (WHO, 2013). In other parts of Europe, especially in Canada, Ukraine, Australia, Belarus and Bulgaria, infant breastfeeding has stagnated over the past 15 years with current trend data stalling at around 30 per cent (UNICEF, 2016). It is also indicated that in some countries, significant numbers of infants are being introduced to complementary foods too early, particularly in Latin America and the Caribbean where many infants are also not receiving any breast milk at all (Paintal & Aguayo, 2016).

On the African continent, levels of recommended breastfeeding practices vary widely among regions with the share of infants that are breastfed within one hour of birth ranging from around 40 per cent in West and Central Africa to about 60 per cent in Southern Africa (UNICEF, 2016). Similarly, within the East African context, continued breastfeeding for infants of 1-year-old has been low with rates varying from country to country. For instance, different rates have been registered across the East African countries with only 46% of Ugandan children breastfed up to the recommended age of two years, compared to Tanzania's 51%, Kenya (54%), Burundi (79%) and Rwanda (84%), making Uganda the worst performing country in terms of infant breastfeeding (Kagolo, 2014). Inadequate breastfeeding has been responsible for moderate underweight in children, which is highest in Uganda at 14% compared to the regional average of 10%. Consequently, this has partly been responsible for the increasing malnutrition, stunted growth as well as underachievement of the sustainable development goal of reducing child mortality. Additionally, in terms of under-five mortality, UNICEF (2016) ranks Uganda ahead of most sub-Saharan countries like Kenya, Burundi, DRC, Ghana and Mali. In fact, health experts estimate that the current death toll of 141,000 children dying annually in Uganda under the age of one year is partly attributed to inadequate breastfeeding practices. This has made Uganda to be ranked as one of the 30 countries in the world with the highest number of deaths of children aged one year (UBOS, 2016).

Luwero district has not been spared either as available evidence indicates at least 39.1% of the infants lack adequate breastfeeding to comply with the world health guidelines (Luweero District Health report, 2015). Moreover, the same trend has been reported in Kasana HC IV as 1 in every 8 breastfeeding mothers breastfeed their infants with food supplements before the recommended age. Lactating mothers within the district have been counselled as well as offered free training on best breastfeeding practices, but the trend of improper infant feeding practices seems to be on the increase instead. If this is not checked, the country will

experience an increasing trend of malnutrition, outbreak of illnesses such as diarrhoea, respiratory infections, pneumonia, meningitis on top of increasing the mortality rate currently standing at 43 deaths per 1,000 live births (UDHS, 2016). In addition, such a trend may compromise the country's efforts to achieve the sustainable development goals. In light of the above, a study to examine the knowledge, attitudes and practices of mothers regarding breastfeeding of their infants aged one-year-old was extremely crucial.

1.2 Statement of the problem

Indisputably, proper feeding of infants can increase their chances of survival, as well as promote optimal growth and development, especially in the critical window from birth to two years of age (WHO, 2015). Moreover, consistent breastfeeding of children for their first time is associated with numerous benefits including providing immunologic protection against death from infectious diseases, such as diarrhoea, respiratory infections, pneumonia and meningitis on top of offering the best start in life for infants (Tamiru & Mohammed, 2013). Despite these widely known benefits, breastfeeding among breastfeeding mothers of children aged one year in Uganda has declined from 46% in 2014 to 32% in 2015 (MoH, 2015). Additional statistics from UBOS reveal that malnutrition is on the rise in Uganda with 33% of infants experiencing stunted growth, 4.8% are wasted, 16% underweight, 49% anaemic, 38% are vitamin A deficient while 3% are obese (UDHS, 2016). Similarly, within Luwero district, the district local government abstract indicates that an estimated 39.1% of the infants are not breastfeed by their mothers in conformity with the World Health Organization guidelines (Luwero District Health report, 2015). The same trend has been manifested within Kasana HC IV as only 8% of breastfeeding mothers breastfeed their babies (UDHS, 2016). Whereas several measures such as counselling and community sensitization have been applied, the impact has been inconsequential. Therefore, this study intends to determine the knowledge, attitudes and practices of mothers towards breast feeding among infants in Kasana HC IV Luweero district.

1.3 General objective

To determine the knowledge, attitudes and practices among mothers towards breast feeding of infants in Kasana H/C IV, Luweero district.

1.4 Specific objectives of the study

- (i) To establish the knowledge towards breast feeding among mothers with infants in Kasana HC IV, Luweero district.
- (ii) To assess the attitudes towards breastfeeding among mothers with infants in Kasana HC IV, Luweero district.
- (iii) To determine the practices of mothers towards breastfeeding of infants in Kasana HC IV, Luweero district.
- (iv) To ascertain the socio demographic factors influencing breast feeding among mothers with infants in Kasana HC IV, Luweero district.

1.5 Research questions

- (i) What are the knowledge towards breast feeding among mothers with infants in Kasana HC IV, Luweero district?
- (ii) What are the attitudes towards breastfeeding among mothers with infants in Kasana HC IV, Luweero district?
- (iii) What are the practices of mothers towards breastfeeding of infants in Kasana HC IV, Luweero district?
- (iv) What are the socio demographic factors influencing breast feeding among mothers with infants in Kasana HC IV, Luweero district?

1.6 Scope of the study

This study concentrated on the content and geographical scopes respectively.

1.6.1 Content scope

The study focused on four variables including knowledge, attitude and practices towards infant breastfeeding. Thus, knowledge, attitude and socio-demographic factors were regarded as the independent variables while optimal breastfeeding practices was considered the dependent variable.

1.6.2 Geographical scope

This study was conducted within Kasana HC IV, Luwero district.

1.7 Significance of the study

The study is expected to benefit the following categories of people.

To management practice within Kasana HC IV, the study findings will provide policy makers with up-to-date information regarding specific practices that influence mothers towards breastfeeding their infants and how they can be improved to increase infant breastfeeding among children aged one year.

At the community level, the findings will provoke leaders to take action and sensitise community residents of Kasana HC IV on the dangers associated with poor infant breastfeeding practices. This will improve their knowledge and attitudes on breastfeeding leading to proper adherence to the recommended practices.

To the nursing practice, the findings of the study will provide recommendations to assist practitioners improve the knowledge, attitudes and practices of breastfeeding mothers to adhere to the recommended guidelines of breastfeeding infants aged one-year-old.

Furthermore, future academicians will also benefit from the study as findings will provide a basis for further research regarding how knowledge, attitudes and practices of breastfeeding mothers are relevant in promoting infant breastfeeding.

1.8 Conceptual framework

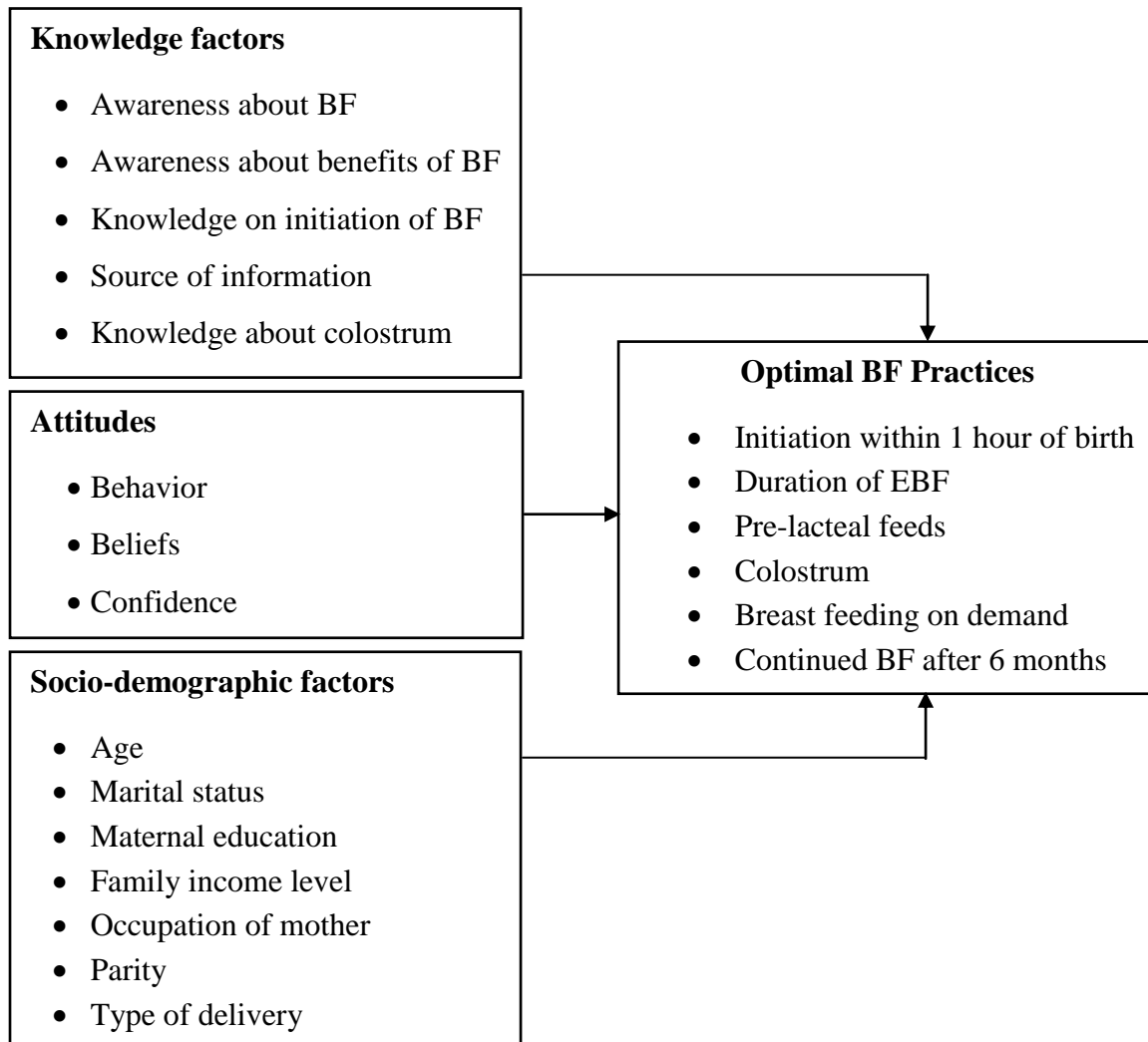


Figure 1: Relationship between independent and dependent variables of the study

Source: Adopted from: Karnawat *et al.*, (2015), Chinnasami *et al.*, (2016), Al-Bustan and Kohli (2017), and Taneja *et al.*, (2013), and modified by the researcher.

The above conceptual framework indicates the relationship between the dependent and independent variables of the study. In the framework, infant breastfeeding practices was the dependent variable while knowledge, attitude and socio- demographic factors formed the independent variables. Furthermore, knowledge factors were conceptualized in terms of awareness about breastfeeding, awareness about benefits of breastfeeding, knowledge on initiation of breastfeeding, source of information and knowledge about colostrum as suggested by Karnawat *et al.*, (2015). Meanwhile, understanding the attitudes of breastfeeding mothers has to do with their behaviour, beliefs, perceptions and level of confidence towards breastfeeding. These measures were also emphasized by Chinnasami *et al.*, (2016). In addition, Al-Bustan and Kohli (2017) emphasized that socio-economic factors

influencing breastfeeding include age, marital status, maternal education, family income level, type of delivery, occupation of mother as well as parity. On the other hand, Taneja *et al.*, (2013), revealed that practices of mothers towards infant breastfeeding involves analysing aspects of initiation within 1 hour of birth, duration of exclusive breastfeeding, when to give pre-lacteal feeds, colostrum, breast feeding on demand and continued breastfeeding after 6 months. These measures were equally adopted in this study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the review of literature in line with the objectives of the study. The literature review presented areas of agreement and disagreement between the authors.

2.2 Conceptual background to breastfeeding

According to Dhakal, Lee and Nam (2017), breastfeeding, also literally known as nursing, is the practice of feeding babies and young children with milk from a woman's breast. In the same way, Belfield and Kelly (2010) articulated that breastfeeding means providing only a woman's breast milk to the infants with no other liquids or solids including water, except oral rehydration solution or drops/syrups of vitamins, minerals, or medicines. In the context of this study, Belfield and Kelly's (2010) definition will be upheld since it indicates several food supplements that are not supposed to be used by mothers during the initial years of infant breastfeeding. The World Health organization, the trend setters for best practices of breastfeeding, recommends that breastfeeding begins within the first hour of a baby's life and continue as often and as much as when the baby wants (WHO, 2013). Furthermore, it is suggested that breastfeeding should be practiced exclusively for the first six months whereby during this period, no other foods or drinks save for vitamin D are typically given. However, after the introduction of supplementary foods at six months of age, it is a good practice for the mother to continue breastfeeding until at least one to two years of age. Similarly, during the first few weeks of life, babies may nurse roughly every two to three hours and it is suggested that the appropriate duration of a feeding is usually ten to fifteen minutes on each breast (Eidelman *et al.*, 2012).

Mothers' own milk is considered to be the best source of infant nutrition (Lessen & Kavanagh, 2015). Extensive evidence has shown that breast milk contains a variety of bioactive agents that modify the function of the gastrointestinal tract and the immune system, as well as in brain development. Thus, breast milk is widely recognized as a biological fluid required for optimal infant growth and development. Recently, studies have further suggested that breast milk mitigates infant programming of late metabolic diseases, particularly protecting against obesity and type2 diabetes (Savino *et al.*, 2013). The World Health

Organization recommends that infants should be exclusively breastfed for the first six months of life (WHO, 2013). The American Academy of Paediatrics also recommends breastfeeding for at least 12 months (Eidelman *et al.*, 2012). Recently, the Academy of Nutrition and Dietetics reaffirms and updates their mission that exclusive breastfeeding provides optimal nutrition and health protection for the first six months of life, and that breastfeeding with complementary foods from six months until at least 12 months of age is the ideal feeding pattern for infants (Lessen & Kavanagh, 2015). In addition to its nutritional advantage, breastfeeding is convenient and inexpensive, and is also a bonding experience for the mother and infant.

In Uganda, Atwine (2018) emphasises that infant breastfeeding is the best way to provide infants with the nutrients they need for the first six months of life. The breast milk by that time provides all the nutrients they need and also protects the body against infections in addition to building bonding between the mother and the baby. The World Health Organization (2015) reinforces this belief by recommending that babies start breastfeeding within the first hour of birth. It also recommends that mothers practice exclusive breastfeeding up to six months of life and thereafter introduce complementary foods but with continued breastfeeding preferably up to two years unless otherwise advised on medical grounds. Moreover, breastfeeding is one of the most effective ways to ensure child health and survival (Atwine, 2018). This is because when the baby is put to the breast every 3-4 hours and the baby is properly attached, the mother will produce sufficient breast milk even if she is malnourished. Additionally, evidence shows that feeding a child only breast milk (and nothing else, not even water for the first six months of life) can improve a child's health prospects, and reduce mortality by up to 20% (Atwine, 2018). Other benefits of breastfeeding include extension of health benefits into adulthood.

Other than the direct benefits to the child, it is also important to note that the mother's health is improved with breastfeeding (Atwine, 2018). For instance, initiating breastfeeding within the first hour enables reflexes of contractions that expels the placenta. In Uganda, exclusive breastfeeding is reported to range from 40-66 percent (UDHS, 2016). However, a big challenge is faced by the working class in both formal and informal labour where it drops to lower than 30%. Uganda credits the efforts of local health workers with the improvement of breastfeeding rates countrywide. Educating and urging those health workers to promote breastfeeding is key to popularizing the practice among mothers. Research has demonstrated

that mothers and other caregivers require active support for establishing and sustaining appropriate breastfeeding practices. More effort is needed to improve counselling on infant feeding to promote exclusive and continued breastfeeding and provide coordination between maternal care services and other services such as HIV treatment.

2.3 Knowledge of mothers with infants towards breast feeding among mothers

2.3.1 Knowledge about breast feeding

World over, it is well known that individuals' knowledge about the benefits of particular stages in their life style is interconnected with their healthcare-seeking behaviours (Yadav & Singh, 2014). In particular, women who understand the benefits of infant breastfeeding are more likely to stick to the practice than their counterparts with inadequate knowledge about the benefits of breastfeeding. Knowledge about breastfeeding involves an analysis of the level of awareness, associated benefits and sources of information that breastfeeding mothers rely on during the lactation period (Karnawat *et al.*, 2015). In addition, knowledge of breastfeeding also involves an understanding by mothers on the initiation of breastfeeding, choice of milk, duration of breastfeeding, initiation of complementary feeding, schedule of complementary feeding, use of utensils as well as choice of vegetable/fruits in feeding infants (Slama *et al.*, 2010). Thus, knowledge on breastfeeding is of immense importance since it influences many feeding aspects of lactating mothers. Accordingly, knowledge of mothers is critical in promoting exclusive breastfeeding, a practice recommended worldwide as the ideal feeding for first six months of life. Similarly, for successful lactation, timely initiation of breastfeeding (within half an hour from normal delivery and within 4 hrs of caesarean delivery) is essential. Recently, a study from Ghana found that 22% death among newborn babies could be prevented if they are given breastfeeding within one hour of birth (Edmond *et al.*, 2016).

A related study involving 60 breastfeeding mothers of infants below one year of age in India, inadequate knowledge about the benefits of breastfeeding was cited as a factor for termination of breastfeeding among mothers as they did not know the purpose for continued breastfeeding and adopted food supplements instead (Karnawat *et al.*, 2015). The same study also indicated that rural mothers had poor knowledge about choice of milk for their newborns neither did they know the proper duration of exclusive and total breastfeeding. In addition, only 20% rural mothers knew about correct age of weaning compared to 51.3% of their urban counterparts. Knowledge and practice scores of urban mothers were better than that of rural

ones. The average knowledge score of urban mother in breast feeding and weaning was 61.6% and 64.0% respectively as compared to 45% and 44% respectively of rural mother (Karnawat *et al.*, 2015). These variations point to the fact that knowledge of breastfeeding is predictive of the mothers' intent to continue breastfeeding their children until the recommended age of at least two years.

For instance, Sriram *et al.*, (2013), study in India concluded that 70.67% of mothers were knowledgeable about initiation of breast feeding within one hour of birth whereas 54.67% practiced it. In the same way, 90.67% of mothers had a good opinion about colostrum, 96% of mothers had the knowledge of exclusive breast feeding but only 68.67% practiced it. Meanwhile, a mere 34.67% of infants had received pre-lacteal feeds. All these variations are attributed to the level of knowledge on the importance of feeding infant using breast milk.

2.3.2 Source of information about breast feeding.

With regard to sources of information, Begna *et al.*, (2015), emphasized that knowledge on breastfeeding benefits involves medical practitioners disseminating information about the recommended breastfeeding guidelines, and how mothers can maximize those benefits to promote growth of their infants. In support of this argument, Kuzma (2013), suggested that health care workers need to actively promote best practices about awareness of breastfeeding through educating all women about the recommended breastfeeding guidelines, frequency of breastfeeding in a day, as well as benefits and limitations of food supplements in case a mother decides to use them. At the community level, awareness about breastfeeding practices could be promoted by using leaders at the grass root whereby all members can be mobilized with the help of village health teams (VHTs) to disseminate information about the importance of breastfeeding, risks of complementary feeds as well as frequency of breastfeeding.

Whereas this is the case, mothers in many social economic settings receive conflicting information from various health care providers. This likely occurs due to the lack of formal training that health care providers receive about breastfeeding. Pound and colleagues identified several gaps of information dissemination with respect to breastfeeding among Canadian physicians (Pound *et al.*, 2014). They range from inadequate training, tight work schedules to limited level of education among mothers. Thus, it is argued that medical colleagues and their support staff should receive training in identifying infant challenges associated with feeding distress and then implementing successful remedies. In the same spirit of sharing knowledge, providers should also learn strategies on how to provide

anticipatory guidance on the subject. With this new knowledge, health care providers can educate mothers and other caregivers about appropriate infant breastfeeding mechanisms that suggest breastfeeding success.

2.3.3 Knowledge about benefits of breastfeeding

There is consensus among several scholars that breast feeding is very important for public health and epidemiological studies because it has an important role in many different countries, as available literature suggests a number of benefits to both mother and baby, which infant formula lacks (Ajetunmobi *et al.*, 2015; Boccolini, Carvalho & Oliveira, 2015). Notably, UNICEF (2016) indicated that effective and exclusive breastfeeding for the first six months reduces the risk of many chronic conditions, for example high cholesterol, obesity and childhood leukaemia. In relation to the mother, breastfeeding is beneficial in that it reduces the risk of getting diseases as type two diabetes, obesity and breast cancer on top of being cost effective (Dermer, 2011). Additional benefits for the mother include less blood loss following delivery, better uterus shrinkage, weight loss, and less postpartum depression. In the same way, Leon-Cava *et al.*, (2012), opined that breastfeeding delays the return of menstruation and fertility, a phenomenon known as lactational amenorrhea. Meanwhile, long term benefits for the mother include decreased risk of breast cancer, cardiovascular disease, and rheumatoid arthritis. By contrast, children in developing countries who are raised on instant formula feeding instead of breast milk have a 25% higher risk of mortality because of diarrhoea and a four times bigger risk of mortality rate due to pneumonia (UNICEF, 2016). This is attributed to the fact that infant formula feeding doesn't contain antibodies required to boost the immunity of the infant. The formula feeds must also be prepared properly with sterilized equipment and clean water; otherwise such feeds will contain bacteria that are dangerous for the baby.

Likewise, related studies by Shaker, Scott and Reid (2004), Sriram *et al.*, (2013), Kuzma (2013) have all revealed in their separate findings that adherence to breastfeeding among lactating mothers is dependent to their understanding of the associated benefits of breastfeeding. Relatedly, acquiring the right information to boost the knowledge of mothers is a fundamental aspect in promoting breastfeeding rates among mothers (McIntyre, 2009).

This is in line with a study by Belfield and Kelly (2010) who noted that infant breastfeeding has numerous benefits ranging from providing immunologic protection against death from infectious diseases, such as diarrhoea, respiratory infections, otitis media, pneumonia and

meningitis; to offering the baby with the best start in life. Moreover, breast milk in addition to calories and proteins contain bioactive factors like IgA, lactoferrin, K-casein, cytokines, growth factors, glutathione peroxides, among others, which have anti-infective, antioxidant, growth promoting properties (Isaacs *et al.*, 2010). Therefore, it protects infants from various acute and chronic conditions like obesity, allergies, cancers thereby avoiding hospitalizations and reducing infant mortality (Hörnell *et al.*, 2013). Conversely, if a mother declines to comply to infant breastfeeding, asking her why and assisting her to make an informed decision is vital. These interventions can help mothers and their infants increase knowledge base about the associated benefits of breastfeeding and get courage to continue with breastfeeding with no food supplements.

2.4 Socio-economic factors influencing breastfeeding mothers with infants aged one-year-old

In most community settings, socio-economic factors are important in explaining why there are widespread variations in breastfeeding rates among mothers. In particular, socio-economic factors influencing breastfeeding practices include maternal education, level of income as well as occupation of the mother (Wuthrich-Reggio, 2008). In relation to maternal education, several scholars concur that variations in breastfeeding among mothers are linked to their level of education; with illiterate women likely to breastfeed their children longer than their educated counterparts (Grijbovski *et al.*, 2005). This could be attributed to the fact that illiterate women have more time to attend to their children than educated mothers with formal employment. For instance, in a Kuwait study involving 1,553 mothers; it was revealed that maternal education was a factor in explaining variations in breastfeeding intent. In the study, the proportion of women who never breastfed their infants at all was the lowest for the illiterate women (14.2%) compared to those who had school certificates at 30% (Al-Bustan & Kohli, 2017). Similarly, among the university degree holder mothers, nearly one fourth reported that they did not breast feed at all, a proportion that was lower than the educated women but higher than the illiterate mothers. Moreover, regarding the duration of breast feeding, the study results indicated an inverse relationship between years of school and duration of breast feeding with illiterate mothers breastfeeding an average of 13.2 months compared to 4.3 months only by university graduate mothers (Al-Bustan & Kohli, 2017). These findings suggest that mothers with more education in developing countries are likely to breastfeed their infants for a shorter duration than their illiterate counterparts.

Similar findings were reported by Almeida, De Marins and Valle (2009) who noted that more educated mothers breastfeed their babies less frequently because they have jobs and spend much of their time at work instead of attending to their babies. Therefore, the likelihood for such mothers to have their babies breastfed frequently is minimal. In support of this view, a study by Agudo *et al.*, (2010), revealed that educated mothers wean their babies early due to the affordability of feeding supplements. Likewise, Oommen *et al.*, (2009), in their study found 55% usage of formula feeds among educated women, which was higher than 5% for illiterates. According to Karnawat *et al.*, (2015), 20% of all mothers had correct knowledge about weaning age and in Yadav and Singh (2014)'s study, only 55% correctly practiced weaning between six to twelve months. While Taneja *et al.*, (2013), showed that 40% of mothers improperly wean their infants before reaching four months. By contrast, illiterate mothers have enough time that they dedicate to their babies and can breastfeed them whenever the need arises.

Nevertheless, mixed findings are observed as some scholars indicate a positive correlation between education level and increase in breastfeeding rates; arguing that more educated mothers understand the risks associated with inadequate breastfeeding and endeavour to follow the recommended guidelines compared to illiterate mothers (Liu *et al.*, 2013). In addition, they receive advice from friends and are eager to research on the best feeding practices for the proper growth of their children. Moreover, educated mothers can easily access information pertaining to breastfeeding and are exposed to information from media channels such as TV and newspapers where they can understand the nutritional and health benefits of complying to infant breastfeeding compared to their illiterate counterparts (Yotebieng *et al.*, 2013).

In relation to level of income, availability of income negatively influences breastfeeding intent among mothers with higher rates reported among women with lower income levels in comparison to their counterparts with higher incomes (Wallby & Hjern, 2009). This is in line with Earland, Ibrahim and Harpin (2007) who noted that lactating mothers with higher incomes tend to breastfeed for shorter periods compared to those in lower income brackets. More recently, a study by Victoria *et al.*, (2016), among 360 mothers in Zambia also revealed similar findings whereby the proportion of mothers who never breastfed their infants at all was the lowest among the housewives (22%) compared to middle level professionals (24%) and senior professionals (33%) depending on their income levels. The study also revealed

that housewives breastfeed their infants for longer duration. The mean duration of breastfeeding was 10.3 among housewives compared to about 5 months among working mothers. Similar findings were reported in Kuwait where the mean duration of breast feeding among lactating mothers decreased as the family income increased (Al-Bustan & Kohli, 2017).

2.5 Attitudes of mothers with infants aged one-year-old towards breast feeding.

Attitudes and confidence among women can predict the duration of infant breastfeeding, which translate into more advantages for both mother and child (Wojcicki *et al.*, 2010). Brown and Lee (2011) explored the attitudes and experiences in mothers who successfully breastfed their infants for one year and established that a positive attitude towards breastfeeding was associated with a longer duration of breastfeeding. Moreover, the same study also revealed that a high level of support, confidence and a natural determination to breastfeed had a connection to a positive attitude. As a result of this linkage, the mothers were able to realize several benefits with infant breastfeeding and also established that it was the natural and healthiest choice for both themselves and their infants. Positive breastfeeding attitude also make mothers feel the close bondage between them and their infants. These results are further supported by a recent study among 79 mothers in Bang Pa-In, Ayudhaya, Thailand, where it was revealed that differences in attitudes of mothers explained the different levels of breastfeeding uptake among lactating mothers. Notably, the outcome of the study demonstrated that the majority of the women had a neutral attitude towards breastfeeding, 13% had a positive attitude towards formula feeding and 7% had a positive attitude towards breastfeeding (Johansson & Westmar, 2013). These studies demonstrate that attitudes among women is a predictive factor in the mother's decision to breast feed her infant longer.

A related study in Riyadh, Pakistan, showed that the low level of maternal attitude was the contributing factor for the low level of infant breastfeeding among 201 respondents (Saied *et al.*, 2013). It was reported that whereas maternal attitude about breastfeeding was generally good as reported by 72.2%, a sizeable proportion of 12.4% of the mothers had low attitude while 15.4% had a moderate attitude towards breastfeeding (Saied *et al.*, 2013). Another study in four European centres showed that mothers who had a negative attitude toward breastfeeding in public were less likely to breastfeed in public and more likely to discontinue breastfeeding earlier (Scott *et al.*, 2015). So, perceived social norms may exert a stronger

influence on breastfeeding in comparison to maternal attitude and knowledge toward breastfeeding (Scott *et al.*, 2015). This is in line with Haqhiqi and Varzande (2016) who argued that maternal attitude toward infant breastfeeding is an important factor to promote the consistency of breastfeeding among babies. In Haqhiqi and Varzande's (2016) study, 73.2% of mothers had high level of attitude and the remainders were in low and moderate level, which showed positive maternal attitude toward breastfeeding. These results suggested that mothers' attitudes and awareness varied in different areas due to different social norms, supportive and educational programs, effective baby-friendly hospital, efficient health providers and mass media.

Wojcicki *et al.*, (2010), investigated maternal attitudes towards breastfeeding in San Francisco, California, by interviewing mothers who recently delivered a healthy newborn. The main findings of the study showed that those participants who were using instant formula were more likely to have a negative attitude towards breastfeeding. Elements that promoted the negative attitude were embarrassment of breastfeeding in public, physical concerns, uncomfortable feelings and negative influence from family/friends. Likewise, Stuebe and Bonuck (2011) also found comfort with breastfeeding in social environments and knowledge about the benefits of breastfeeding as factors related to the intention of infant breastfeeding. The authors suggested that strong reinforced messages about the health benefits of breastfeeding and strategies for encouraging breastfeeding in social environments should increase the duration and the exclusivity. In another study, Idris *et al.*, (2012), found that Asian women, who are not well informed about breastfeeding advantages or who previously have breastfed for a short period tend to exclusively breastfeed shorter than the recommendations. Also Asian women who work tend to have a shorter duration of exclusive breastfeeding.

Consistent with Orem's theory about self-care, breastfeeding women need special education and nursing interventions during pregnancy, childbirth and breastfeeding (Kirkevold, 2000). The education aspects to be emphasized need to suit the needs of the individual and the existing knowledge on the subject matter. Similarly, guidance and support should be given to the mother when it is needed. If the mother will receive this help to continue breastfeeding, she will according to Orem make the effort that is needed to proceed. This is further supported by Idris *et al.*, (2012), who claim that women who are not well-informed about the advantages of breastfeeding tend to breastfeed exclusively for a shorter period. The low

attitude level of 13%, reported by the breastfeeding women in a Thailand study, as having a positive attitude towards formula feeding could be that these women hadn't received enough information about the advantages of breastfeeding. Stuebe and Bonuck (2011) suggest that strong reinforced messages about the health benefits of breastfeeding should increase the duration and the exclusivity of breastfeeding. This is also emphasized by Kylberg *et al.*, (2009), who claims that first when a positive attitude to and knowledge about breastfeeding is impregnated in the society that breastfeeding will become self-evident. Interestingly, Kuzma (2013) also reported similar findings in his study where the majority of mothers (87.9%, n = 123) regarded breastfeeding as good, giving various reasons for their perception relating to this. Less common explanations given in support of breastfeeding were: "it is in line with the culture", "mother shows responsibility for a baby", "breastfeeding is easy as it has no need to prepare food for a baby", and some believed that it prevents pregnancy.

Concerning mother's behaviour and beliefs, adherence to breastfeeding is deeply rooted in the belief by the mother about the relevance of breast milk compared to formula (mixed) feeding (Dungy *et al.*, 2008). Thus refraining from bottle-feeding after delivery of the baby has a significant difference between mothers who value breast milk than those whose preference is bottle-feeding. These beliefs in turn influence their feeding behaviour and confidence towards their infants. According to Mossman *et al.*, (2008), a bad confidence can be related to lack of support from either health professionals or from parents to the mother. If the mother receives the support that is needed, her confidence might increase and so might the breastfeeding. From the above analysis, literature from different authors has indicated a relationship between the study variables while others do not seem to agree. This study will investigate the extent to which attitudes of mothers can explain the variations in breastfeeding among lactating mothers.

2.4 Practices of mothers towards breastfeeding of infants aged one-year-old

According to Memon *et al.*, (2010), practices for infant feeding involve using techniques and artificial methods that are believed to be more effective at delivering optimum growth for the baby while ensuring the safety and health of the child. Globally, it is indicated that breastfeeding mothers adopt different methods ranging from use of animal milk, formula milk, food supplements, fluids and water, pre-lacteal feeds as well as mixed feeding in their quest to promote their infants' growth and development. In an Indian study among 150 breastfeeding mothers, it was revealed that various customs and feeding practices were

adopted by mothers to supplement their breast milk (Sriram *et al.*, 2013). In the study, 34.67% of infants had received pre-lacteal feeds and the most common food substance given was tea and jaggery. Similarly, the most common top milk practiced was packaged milk (29.79%), followed by goat's milk and cow's milk at 25.53% and 22.1% respectively (Sriram *et al.*, 2013). Moreover, majority of mothers (58.67%) had practiced breast feeding up to 12 months of age while only 4% breast fed up to 24 months. 74.67% of mothers initiated complementary feeding before 6 months of age but only 29.33% had a good score (>80%) regarding the attributes of proper complementary feeding. The study recommended that increased awareness and education campaigns among breastfeeding mothers should be emphasized by health service providers in order to instil good practices of infant feeding.

Similarly, in an Ethiopian study involving 350 mothers, respondents reported different practices associated with their infant feeding. In the study, the majority of participants (n = 188; 59.9%) had initiated breastfeeding immediately after delivery, while 4.5% (n = 14) initiated breastfeeding one day after giving birth (Tadele *et al.*, 2016). Two thirds of mothers (n = 209; 66.6%) were breastfeeding on demand and the majority had not given any pre-lacteal feeds to their newborn baby (n = 243; 77.4%). Of those who gave pre-lacteal feeds, about half gave plain water (n = 34; 47.8%). Exclusive breastfeeding was reported only by 26.4% (n = 83) of mothers, while 50.2% (n = 116) gave additional cow milk and 20.4% used packed milk to their infants prior to six months of age (Tadele *et al.*, 2016). In addition, mothers of 179 infants who did not receive exclusive natural breastfeeding reported that the feeding practices adopted were based on the experience of the mother herself and/or her family. Paediatrician recommendations and media information were respectively the second and third most common sources of information about breastfeeding (Tadele *et al.*, 2016).

In most cases, whereas artificial methods of infant feeding are preferred by some breastfeeding mothers, questions related to weaning practices including personal hygiene, use of vegetables or fruits, use of oil/ghee, dilution of top milk, use of utensils, have resulted into adverse consequences to both the mother and her baby. Notably, with respect to dilution of cow milk, Taneja *et al.*, (2013), reported in a study of infant feeding practices among 284 breastfeeding mothers, that the practice of diluting milk is nearly universal cited by 95.3% of the respondents. Most mothers resort to dilution of animal milk thinking that it will make milk easily digestible. In reality though, it is highly recommended for mothers not to dilute animal milk because it will decrease the nutritional value of milk as well as increase the

chances of contamination. Therefore, these aspects must be taken care of for artificial infant feeding practices to promote child growth and development.

Meanwhile, Caetano *et al.*, (2010), indicated that infant formula feeding is a widely applied method for feeding infants both in developed and developed countries, however, it should be applied sparingly to avoid its negative consequences to affect child growth. In fact, it is argued that most women use it but do not mind so much on its associated weaknesses. According to Stuebe (2009), health outcomes in developed and third world countries differ substantially for mothers and infants who formula feed compared with those who breastfeed. For infants, not being breastfed is associated with an increased incidence of infectious morbidity, as well as elevated risks of childhood obesity, type 1 and type 2 diabetes, leukemia, and sudden infant death syndrome; while for mothers, failure to breastfeed is associated with an increased incidence of premenopausal breast cancer, ovarian cancer, retained gestational weight gain, type 2 diabetes, myocardial infarction, and the metabolic syndrome (Stuebe, 2009). Obstetricians are uniquely positioned to counsel mothers about the health impact of breastfeeding and to ensure that mothers and infants receive appropriate, evidence-based care, starting at birth. A related study on infant formula feeding, Kuzma (2013) noted that even though the large proportion of mothers (77%, n =108) considered infant formula feeding as not good, knowledge about its disadvantages was very low. One third of participants (30%, n = 42) did not know why infant formula feeding was not good (Kuzma, 2013). Interestingly, all mothers lacking knowledge of the hazards associated with infant formula feeding were below Grade 8 educational level. Although 70% of mothers (n = 98) considered that infant formula feeding was not healthy and some noted that it was expensive, very few thought it could cause diarrhoea or illness. This finding demonstrates that most women apply infant feeding without knowing its shortcomings.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This section presents the methodological aspects that were used in the study. These include the research design, study methods, data collection instruments, validity and reliability of instruments, data processing, population, sample size and selection, sampling techniques and procedure, type of data, data collection and analysis, measurement of variables as well as limitations of the study. These aspects are explained in the subsections that follow hereunder.

3.2 Research Design

The study used a cross sectional research design. This design was chosen because it helped the researcher collect information at a single point in time. In addition, the study used a quantitative research approach where the collected data was tabulated to derive meaning. According to De Vos *et al.*, (2005), a quantitative research approach is one that identifies relationships that exist between variables.

3.3 Study area

This study was conducted from the immunisation and postnatal units at Kasana H/C IV located in Luweero district along Kampala- Gulu Highway. This health centre was chosen because of the large number of mothers who turn up for immunization and postnatal services. According to district health records, the health centre has an average patient turn up of 7,000 monthly (Wandera, 2017).

3.4 Study population

The study considered mothers with children aged 0 to 1 year visiting the immunization and postnatal wards of Kasana HC IV, who voluntarily consented and satisfied the selection criteria below:

3.4.1 Inclusion criteria

The study targeted all breastfeeding and biological mothers attending the immunization and postnatal wards and voluntarily consented to participate in the study.

3.4.2 Exclusion criteria

The study did not consider breastfeeding mothers such as, those who refused to consent voluntarily, under age or adolescent mothers below 18 years, mothers with breast feeding problems like mastitis, caretakers, and mothers with ill or sick infants as well as those with severe illness, mentally sick, and babies with major birth defects.

3.5 Sample Size

The study adopted Kish Leslie (1965) formula for determining a sample size to represent the entire population. According to Kish Leslie (1965), the formula for sample size calculation at 95% level of significance, considering a standard of error (e), of 5% as indicated below;

$$n = \frac{z^2 pq}{d^2}$$

Where;

n = the number of breastfeeding mothers required (sample size).

P = the proportion of the target population estimated to be breastfeeding, estimated at 50%.

$$q = 1-p = 1-0.50 = 0.50$$

Z = the standard normal deviation (1.96) at 95% of confidence.

d = degree of accuracy desired in this case is 0.05

$$n = \frac{z^2 pq}{d^2}$$

$$\begin{aligned} n &= \frac{1.96^2 \times 0.50 \times (1-0.50)}{0.05^2} = \frac{3.8416 \times 0.5 \times 0.5}{0.0025} \\ &= \frac{0.9604}{0.0025} = 384 \end{aligned}$$

Therefore, n = 384 breastfeeding mothers

3.6 Sample Size Selection Technique

To obtain the required sample size, the researcher applied simple random sampling technique where all mothers attending the clinic were codenamed and then randomly selected to participate in the study. Under this technique, all mother's names were written on small pieces of paper and the researcher then selected one by one until the required 327 respondents were obtained. This technique was selected because it is free from bias and offered the same

chance for every member of the target population to participate in the study, thereby obtaining balanced responses.

3.7 Sources of Data

The researcher used only primary data. According to Sekaran (2003), primary data is the first hand data collected from eligible breast feeding mothers with infants to provide answers to the research questions. This data was only obtained using data collection tools (questionnaires). For specificity, the questionnaire was preferred to other collection methods.

3.8 Data Collection Methods

The researcher used the researcher-administered questionnaire for data collection. This method was adopted because it allowed the researcher to participate in data collection to provide clarification and explanations where needed. Moreover, the questionnaire also collected data from a large pool of respondents in a short period of time. The questionnaire was designed in a way that allowed the researcher to obtain information to answer the research questions objectively.

3.9 Validity and Reliability

To obtain consistency of the research findings, the validity and reliability was ensured by applying the expert judgment technique where by the instrument was submitted to the supervisor's review and scrutiny to check for its accuracy before giving it to respondents to provide their opinions during the data collection exercise.

3.10 Data Processing and Analysis

After gathering opinions from respondents, the data was coded, sorted and entered into SPSS version 20 to derive frequency tables and graphs. In the same way, quantitative data was summarized and analyzed using descriptive statistics technique of mean and standard deviation.

3.11 Measurement of Variables

In this study, independent variables constituted of knowledge factors, attitudes as well as socio-demographic characteristics while infant breastfeeding was the dependent variable. These variables were then anchored on a five point Likert scale response on the statements in which different respondents were required to provide their opinions. A scale ranging from 1-5

as extreme points was used. Under this scale, 1 meant Strongly Disagree (SD), 2-Disagree (DA) 3-Undecided, 4- Agree (A) and 5 represented Strongly Agree (SA).

3.12 Ethical Considerations

This research study was conducted purely for academic reasons. As such, the views that were solicited from respondents were used for the same purpose. Furthermore, to build the confidence of the respondents, the researcher obtained an introduction letter from the university authorities that was presented to the local hospital authorities to obtain permission of conducting the study. Thereafter and with the guidance of hospital nurses, the researcher addressed potential respondents who were later informed of their voluntary participation in the study. The researcher also explained any matters arising from the questionnaire statements and gave a consent form to potential respondents. Besides, the researcher also designed the data collection instrument without providing the option for a name to increase confidentiality of the responses. The other observation was that collection of the filled questionnaires was done considering convenience on the part of the respondents. Furthermore, the researcher also made a written informed consent for each participant.

3.13 Limitations of the study

The researcher faced the following limitations;

Firstly, this research was carried out in a health facility, therefore, it might not be possible to generalise the findings to the entire community. In observing this limitation, the researcher ensured that all respondents who were targeted for this study were reached and supplied with questionnaires.

In addition, not all breastfeeding mothers in Luweero attend Kasana HC IV for their immunization and postnatal services yet the findings were generalized to the entire population. In anticipation of this limitation, the researcher collected data for an extended period stretching for one and a half months to ensure that a bigger proportion of breastfeeding mothers was achieved.

Furthermore, issues of breastfeeding are highly personal. As such, some individuals could have provided less information for fear of exposing their breastfeeding behaviour. However, the researcher ensured that she emphasized the reason for undertaking the study to avoid scenarios where some members were suspicious of other motives for carrying out the study.

Balancing the time between academic work and research was also a challenge to the researcher. The researcher had academic obligations and responsibilities, which she has to fulfil, yet she also needed time to complete her research. However, the researcher ensured that she designed a work plan where each task was given the proper time to avoid conflicting tasks.

CHAPTER FOUR

PRESENTATION, INTERPRETATION AND ANALYSIS OF FINDINGS

4.1 Introduction

This chapter provides the presentation, analysis and interpretation of findings based on the objectives of the study which were: establishing the knowledge factors influencing breast feeding among mothers with infants, identifying the attitudes influencing breastfeeding among mothers with infants, determining the practices of mothers towards breastfeeding of infants as well as ascertaining the socio demographic factors influencing breast feeding among mothers with infants in Kasana HC IV, Luweero district. In addition, this section also analyzed the descriptive statistics in respect to the study variables. The chapter begins with the response rate of respondents.

4.2 Response rate

From the 384 target respondents that the study sought to obtain information from, the researcher successfully collected 327 filled questionnaires giving a response rate of 85.2% while an estimated 14.8% did not return the questionnaires. This means that the interpretation was based on the 85.2% response rate.

4.3 Demographic characteristics

Under this section, the researcher was interested in exploring the demographic characteristics in form of their age, marital status, maternal educational level and monthly income. These are summarised in table 1 on the following page.

Table 1: Socio demographic characteristics of respondents

Demographic characteristics	Parameters	Frequency (n=327)	Percent (%)
Age	30 years & below	97	29.7
	31-35 years	80	24.5
	36-40 years	78	23.8
	41 years & above	72	22.0
Marital status	Single	86	26.3
	Married	100	30.6
	Widowed	68	20.8
	Divorced	73	22.3
Maternal education level	None	63	19.2
	Primary	95	29.1
	Secondary	104	31.8
	Tertiary	65	19.9
Monthly income	<100,000	77	23.6
	100,000-200,000	140	42.8
	201,000-300,000	57	17.4
	Above 300,000	53	16.2
Occupation	Peasant	97	29.7
	Formally employed	67	20.5
	Business woman	35	10.7
	House wife	128	39.1
Number of children	Only one child	69	21.1
	Two and more	258	78.9
Type of delivery	Spontaneous vaginal delivery	256	78.3
	Caesarean delivery	71	21.7
Age of children	Less than 4 months	156	47.7
	5-8 months	75	22.9
	9-12 months	55	16.8
	13 months & more	41	12.6
Birth order of child	1 st child	46	14.1
	2 nd child	158	48.3
	3 rd child	55	16.8
	4 th child	68	20.8

Source: Primary data

4.3.1 Age bracket

From table 1 above, it is indicated that the majority of respondents that participated in the study were aged 30 years and below representing 29.7%, those in the age bracket of 31-35 years constituted 24.5%, while age brackets of 36-40 constituted 23.8% while respondents aged 41 years and above constituted 22.0%. The results therefore meant that majority of the respondents that participated in the study were aged below 30 years which is an interval in which child bearing and breast feeding are common.

4.3.2 Marital status

Results from table 1 indicated that majority of the respondents who participated in the study were married (30.6%) compared to those who were single (26.3%), divorced (22.3%) and widowed (20.8%). The findings further indicate that married respondents were the majority in the study to observe knowledge, attitude and practices of breast feeding among mothers with infants. Therefore, they were in position to clearly understand the factors that influence breast feeding among mothers with infants.

4.3.3 Education Level

In relation to education level, the results from table 1 above indicated that the views were solicited from respondents who had at least attained secondary education representing 31.8% compared to the alarming 19.2% who had not gone through any formal education. The other categories attracted responses of 29.1% and 19.9% for primary and tertiary levels respectively. The implication of these results indicate that at least these respondents had some knowledge on breastfeeding and were informed about maternal education and could clearly understand the range of questions, hence giving well thought reactions as well as attributes that influence breast feeding among the mothers with infants. Moreover, the findings also indicated that the views were obtained from different respondents with various educational backgrounds so that objective responses are obtained.

4.3.4 Family income level

Furthermore, table 1 above results revealed that the majority of the respondents that took part in the study were earning monthly incomes ranging between UGX100,000-200,000 represented by 42.8% followed by those who were earning below UGX100,000 with 23.6% of the total respondents. The other categories of UGX201,000-300,000 constituted 17.4% while respondents above 300, 000 attracted 16.2%. The implication of the results indicated

that majority of the respondents that took part in the study were earning some reasonable incomes that enhanced their access to medical services that reveal the essence of breast feeding among mothers with infants. However, considering the increasing cost of living standards and family demands associated with many families, these moderate incomes could strain the family's ability to obtain timely medical intervention to family members.

4.3.5 Occupation

As indicated in table 1 above, the majority of breast feeding mothers who took part in the study were unemployed and were house wives representing 39.1% compared to mothers engaged in peasantry work at 29.7%, formally employed at 20.5% and the business women category contributing 10.7%. This suggested that most of the people who participated in the study on how knowledge, attitude and other practices influence breast feeding among mothers with infants at Kasana HC IV Luwero District were house wives who spent most of their time at home and could clearly understand the influencing factors to breast feeding. In this study, analysis of occupation was relevant because the better the occupation, the higher the incomes associated with families and this influences the family's ability to afford medical from preferred service providers of their choice.

4.3.6 Number of children

Table 1 further revealed that majority of the respondent that took part in the study had at least given birth to more than two children (78.9%) compared to those who had only one child (21.1%). The implication of these results is that mothers with at least more two children were well informed to provide reliable data about the significance of breast feeding among mothers with infants at Kasana HC IV Luwero District. More so, the findings revealed that the majority of mothers were experienced with suitable breastfeeding practices for their children.

4.3.7 Type of delivery

With regard to the type of delivery, results indicated that the majority of respondents constituting 78.3% of breastfeeding mothers that took part in the study had given birth through spontaneous vaginal delivery compared to their counterparts who had delivered through caesarean birth at 21.7%. The implication of the results is that the biggest proportion of breast feeding mothers who participated in the study were used to spontaneous vagina delivery and had reliable information in the study to understand the influence factors of breast feeding among the mothers with infants in Luwero district.

4.3.8 Age of children

Data obtained from table 1 revealed that the majority of breast feeding children were aged below 4 months indicated by 47.7% of the total respondents compared to their counterparts with children that consisted of age between 5-8 months (22.9%), 9-12 months (16.8%) as well as 13 months and above giving (12.6%) respectively. This implied that majority of the respondents that participated in the study were well informed about the breast feeding concept and were in better positions to clearly apprehend the study about how knowledge, attitude and other practices influencing breast feeding among mothers with infants at Kasana HC IV Luwero District.

4.3.9 Birth order

The researcher also analysed data on birth order for the children they were currently breastfeeding and the results indicated that 48.3% of the respondents that participated in the study were breastfeeding their second child and they represented the biggest majority of respondents. Other respondents constituting 20.8% of the respondents in the study were breastfeeding their fourth child, 16.8% indicated that they were breastfeeding their third child while 14.1% of the respondents were breastfeeding their first child. This implies that the majority of respondents were experienced in breastfeeding practices since they had given birth to at least more one child and were fully informed about the factors influencing breast feeding among mothers with infants in Kasana HC IV Luwero District.

4.4 Knowledge of mothers towards breast feeding.

The first objective of this study was to understand the knowledge factors influencing breast feeding among mothers with infants in Kasana HC IV, Luwero District. The results for this objective are summarised in table 2 hereunder.

Table 2: Knowledge of mothers with towards breastfeeding

Knowledge Statements	Yes		No		(N)
	Freq.	%	Freq.	%	
Breastfeeding is the best milk/food for babies.	230	70.3	97	29.7	327
Colostrum as the first breast milk is important for the baby.	204	62.4	123	37.6	327
Breast feeding helps the mother to bond with her child	274	83.8	53	16.2	327
Breast feeding should be initiated within one hour after delivery	243	74.3	84	25.7	327
Mothers should continue breastfeeding after 6 months.	260	79.5	67	20.5	327

Source: Primary Data.

In table 2 above, the findings revealed that the majority of breast feeding mothers agreed that breast feeding provides best milk and food for babies. This is indicated by 70.3% response rate in comparison to their counterparts (29.7%) who disagreed that breast feeding doesn't provide best milk and food to babies. This implies that most breast feeding mothers with infants in Kasana HC IV Luwero District acknowledged that breast feeding is vital because it provides best milk and food for babies.

On the importance of colostrum as the first breast milk for babies, it is indicated that on average 62.4% of every 327 breast feeding mothers strongly agreed that indeed colostrum serves an important role in providing better milk and food for babies. Nevertheless, 37.6% disagreed with the notion that colostrum as the first breast milk is important for the baby. This exposes knowledge gap for such mothers.

In addition, results in table 2 indicated that breast feeding mothers sighted breast feeding as a practice that binds mothers and children together in Kasana HC IV Luwero District with a resounding 83.8% revealing so while a mere 16.2% disagreed to the notion. The implication of the results is that breast feeding mothers were aware that breastfeeding binds them together with their babies in Kasana HC IV Luwero District, something that increased the breast feeding practice in the area.

When asked whether breast feeding should be initiated within one hour after delivery, 74.3% agreed while 25.7% disagreed. This meant that majority of the breast feeding mothers who participated in the study knew the importance of early initiation of breastfeeding to their babies, a factor influencing their breastfeeding intent. Nevertheless, a disagreement of 25.7% for respondents who did not support the notion cannot be taken for granted as this is a clear

indication for limited awareness among mothers on the benefit of early initiation of breastfeeding.

In addition, breast feeding mothers were asked whether mothers should continue breastfeeding after 6 months and the results obtained revealed that 79.5% agreed while 20.5% of the breast feeding mothers in the area disagreed indicating that beyond 6 months, breast feeding shouldn't be continued. This implies that majority of the breast feeding mothers in Luwero district continue with the practice of breast feeding even after 6 months, though a sizeable proportion of them did not support the idea.

4.5 Attitude of mothers towards breastfeeding

The researcher also analysed maternal attitudes towards breastfeeding practice among mothers with infants in Kasana HC IV Luwero District, and the findings are summarised in table 3 on the following page below.

Table 3: Attitude factors influencing breastfeeding among mothers with infants

Statements	True		False		I don't Know		(N)
	Freq.	%	Freq.	%	Freq.	%	
Health workers encourage me to exclusively breastfeed	218	66.7	70	21.4	39	11.9	327
Community members encourage breastfeeding	106	32.4	149	45.6	72	22.0	327
Breastfeeding is easier than bottle feeding	268	82.0	59	18.0	0	0	327
Breastfeeding helps to decrease family expenses	98	30.0	145	44.3	84	25.7	327
I feel breast milk is nutritious and healthy for my child	272	83.2	7	2.1	48	14.7	327
I am shy when the baby touches my breasts	222	67.9	105	32.1	0.0	0	327
I believe breastfeeding encourages bonding and protects from disease	249	76.1	69	21.1	9	2.8	327
Breast milk has a family planning advantage	121	37.0	139	42.5	67	20.5	327
Mothers in my community are shy (not confident) to breastfeed in public places	137	41.9	119	36.4	71	21.7	327

Source: Primary Data.

From table 3, findings revealed that majority of breast feeding mothers acknowledged that health workers encourage them to exclusively breastfeed, indicated by 66.7% of the total respondents. Accordingly, most mothers' attitudes to breast feed are exclusively stimulated

by health workers while 21.4% revealed that they were not in line with the notion labelling it false as well as 11.9% of the breast feeding mothers who didn't know anything about the role played by health workers in encouraging mothers to breast feed or not. This implies that indeed attitudes of breast feeding mothers in Kasana HC IV Luwero District are widely encouraged by health workers. This is therefore a factor in boosting proper breastfeeding among mothers with infants.

In relation to community support, the findings revealed that 32.4% received encouragement from their friends within the community about good breast feeding practices in comparison to 45.6% who had no support and a mere 22.0% who did not know whether they received any support from their colleagues. This means that a lack of support from community members was a contributing factor to the limited intent for mothers to exclusively breastfeed their infants. In every setting, the influence of peers and colleagues is a common practice in stimulating breastfeeding intent as mothers adopt similar practices basing on the experiences of their friends within the same location. Therefore, the lack of such support is a barrier to the proper breastfeeding among mothers with infants.

Furthermore, the results also revealed that the major attribute that contributed to breast feeding among mothers with infants was because breast feeding was perceived easier than bottle feeding revealed by 82.0% who were in agreement with the notion, compared to 18.0% who were against the statement while none of the breast feeding mothers were indifferent to the statement. This meant that majority of the mothers in the area breast feed their babies simply because it is an easier practice compared to bottle feeding.

Respondents were also asked whether breastfeeding helps to decrease family expenses and the majority of respondents with 44.3% disagreed in comparison to 30.0% who perceived it as relevant in decreasing family expenses. In addition, a sizeable 25.7% were indifferent to the statement. This implies that the majority of breastfeeding mothers had limited awareness on the relevance of breastfeeding practice in reducing family expenses yet it reduces on the expenditure of buying milk for the infants. Perhaps, this could explain the low breastfeeding uptake among mothers with infants in the study area.

In other subsequent results, respondents were asked whether breast milk is nutritious and healthy for a child. In this regard, almost all mothers agreed represented by a remarkable

83.2% response rate, in comparison to 2.1% who were against it while minority respondents didn't know whether breast milk is nutritious and healthy for a child or not indicated by 14.7% of the total respondents. This therefore implies that majority of the breast feeding mothers in Kasana, Luwero District had a positive perception that breast feeding is a practice that provides breast milk that is nutritious and healthy for a child.

On whether some mothers become shy when their babies touch their breasts, the majority of respondents represented by 67.9% agreed while 32.1% disagreed and none of the respondents were indifferent to the statement. This implies that shyness is a barrier towards proper breastfeeding among mothers with infants. This is especially true to the primi gravida mothers who are breastfeeding for the first time. A related finding also indicated that 41.9% of mothers in the study area were not confident or comfortable to breastfeed in public places in comparison to 36.4% who were confident and 21.7% who were indifferent. Therefore, the lack of confidence among mothers is a barrier as it makes mothers develop a negative attitude towards breastfeeding.

Respondents were also asked whether breastfeeding encourages bonding and protects babies from diseases. In this regard, 76.1% agreed, 21.1% disagreed while 2.8% of the respondents indeed didn't know whether breastfeeding encourages bonding and protects babies from diseases or not. This implies that majority of the breast feeding mothers in Kasana HC IV, Luwero District believe that breast feeding is vital and central in encouraging bonding as well as protecting babies form diseases.

Moreover, respondents were asked to indicate whether breast milk had a family planning advantage. In this regard, 20.5% didn't know of any relationship between breast feeding and family planning, 42.5% disagreed while 37.0% agreed. This meant that majority of breast feeding mothers in Kasana HC IV Luwero District indeed had no idea on whether family planning and breast milk are associated. The implication of the results is that breast feeding mothers therefore did not take breast feeding for their babies very serious because they were not aware of its relevance in promoting family planning affairs.

4.6 Practices of mothers towards breastfeeding

Respondents were asked questions on best breastfeeding practices. Their responses are summarised in table 4 below.

Table 4: Practices of breastfeeding mothers towards breastfeeding of infants

Statement	Responses	Results	
		Freq. (n=327)	Percent
After giving birth when did you start breast feeding	< one hour	106	32.4
	During the first hour	98	30.0
	After more than 1 hr	123	37.6
Total		327	100.0
How often do you breastfeed your baby?	When the baby cries	112	34.3
	When baby wants	215	65.7
Total		327	100.0
Did you give colostrum to your baby after delivery?	Yes	214	65.4
	No	113	34.6
Total		327	100.0
Did you give pre-lacteal feeds to your child?	Yes	228	69.7
	No	99	30.3
Total		327	100.0
Are you exclusively breast feeding this child	Yes	210	64.2
	No	117	35.8
Total		327	100.0
After 6 months did you continue to breast feed this child	Yes	227	69.4
	No	100	30.6
		327	100.0

Source: Primary Data.

Breast feeding mothers were asked whether they started breast feeding after giving birth in Kasana HC IV Luwero District, 37.6% of the respondents agreed that indeed they started the breast feeding practice after a period of more than an hour, 32.4% revealed that they started breast feeding within less than an hour after birth while 30% of the respondents revealed that breast feeding of their babies started off during the first hour. This implies that majority of the mothers were informed about the importance of breast feeding that is why majority started it off even after the first hour.

When asked about how often do they breast feed their babies, 65.7% agreed that they breast feed as long as the baby wants while 34.3% indicated that they only breast feed when the baby cries. This means that majority of mothers with infants were in agreement with the notion that breast feeding is carried out more often whenever the baby wants. Similarly, on whether they gave colostrum to their babies after delivery, 65.4% of the breast feeding

mothers agreed that they gave colostrum to their babies after delivery while 34.6% responded otherwise. The implication of these results is that the majority of breast feeding mothers in Kasana HC IV Luwero District were aware of the importance of giving colostrum to their babies after delivery.

Furthermore, respondents were also asked whether it was a practice for breast feeding mothers to give pre-lacteal feeds to their babies. In this regard, 69.7% agreed while 30.3% disagreed over the notion of giving pre-lacteal feeds to their babies. Based on these findings, majority of the breast feeding mothers in Kasana, Luwero District gave pre-lacteal feeds to their babies. Pre-lacteal feeding is a practice where any food except mother's milk is provided to a newborn before initiating breastfeeding and it is a major barrier to exclusive breastfeeding. Thus, in the study area, the observation that 69.7% had ever given pre-lacteal feeds to their infants is a contributing factor for the low intent to breastfeeding of infants.

In addition, when asked whether they exclusively breastfeed the child, the majority of 64.2% agreed while 35.8% disagreed over exclusively breast feeding their babies. This implies that majority of the breast feeding mothers in Kasana HC IV, Luwero District exclusively breastfed their infants. This is line with the recommendations of the World Health Organization that revealed that exclusive breast feeding of babies should be conducted for at least six months before adding food supplements to their diets.

On the other hand, when asked whether mothers continued breast feeding their children after 6 months, majority of mothers were in agreement with the notion with an estimated 69.4% indicating so. The exception was the 30.6% who disagreed and therefore revealed that they were uncomfortable to continue with the breastfeeding practice after 6 months. This implies that majority of the breast feeding mothers in Kasana HC IV, Luwero District continue with the practice of breast feeding even after 6 months. This finding is in line with the recommendations made by the World Health Organization (2015) that emphasized that continuing with breast feeding for two years is the best practice for infant feeding since it allows the baby to have the mother's milk which in turn helps in the development and growth of the baby's organs.

CHAPTER FIVE

DISCUSSION OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the discussion of findings based on the research objectives earlier set in chapter one. These were: establishing the knowledge factors influencing breast feeding among mothers, identifying the attitudes of mothers with infants towards breastfeeding, determining the practices of mothers towards breastfeeding of infants as well as ascertaining the socio demographic factors influencing breast feeding among mothers with infants in Kasana HC IV, Luweero district. The chapter also gives the conclusion and study recommendations highlighting the gaps that it proposes other researchers to undertake in future studies.

5.2 Discussion of findings

Under this area, the researcher provides a discussion of findings based on the objectives of the study to identify the agreements and disagreements between the findings and the available literature. These are summarised in line with the research objectives as discussed hereunder.

5.2.1 Knowledge of mothers towards breast feeding;

The study revealed that maternal knowledge towards breast feeding among mothers with infants less than one year in Kasana HC IV, Luwero District. In particular, this study revealed that aspects including knowledge gap on initiation of breastfeeding, inadequate awareness on the relevance of colostrum and limited awareness on the duration of exclusive breastfeeding were the knowledge related factors hindering mothers to effectively breastfeed their infants. These findings are consistent with Yadav and Singh (2014) who revealed that individuals' knowledge about the benefits of particular stages in their life style is interconnected with their healthcare-seeking behaviours arguing that women who understand the benefits of infant breastfeeding stick to the practice than their counterparts with inadequate knowledge about the benefits of breastfeeding. Whereas mothers in this study knew the importance of breastfeeding to their babies as a practice that could improve the child's health, boosting the immune system of the baby as well as helping the mother to bond with her child, they lacked the proper knowledge on when to initiate breastfeeding after delivery and this was a hindrance to breastfeed their babies according to the recommended practice.

To complement, Karnawat *et al.*, (2015), further emphasized that knowledge about breastfeeding involves an analysis of the level of awareness, associated benefits and sources of information that breastfeeding mothers rely on during the lactation period. Therefore, based on the above, lack of adequate knowledge on best practices of infant breastfeeding indeed posed a major challenge for proper breastfeeding among mothers with infants less than one year in Kasana HC IV Luwero District. Numerous studies have also emphasized that knowledge is a crucial attribute in predicting the mother's intent to breastfeed their children. Notably, Taneja *et al.*, (2013), indicated that breast feeding mothers with basic knowledge have the vigour to breast feed their babies whenever the need arises even after six months. In the same view, Karnawat *et al.*, (2015), highlighted that knowledge of breastfeeding is predictive of the mothers' intent to continue breastfeeding their children until the recommended age of at least two years. From this observation, it can be concluded that having knowledge on proper breastfeeding is predictive of the mother's intent to give breast milk to their infants.

Relatedly, Karnawat's *et al.*, (2015), study in India also concluded that inadequate knowledge about the benefits of breastfeeding was cited as a factor for termination of breastfeeding among mothers as they did not know the purpose for continued breastfeeding and adopted food supplements instead. In the same way, McIntyre (2009), suggested that acquiring the right information to boost the knowledge of mothers is a fundamental aspect in promoting breastfeeding rates among mothers with women who obtain the right information about breastfeeding more likely to breastfeed their infants than their counterparts who have no access to the right information. These variations point to the fact that knowledge of breastfeeding is predictive of the mothers' intent to continue breastfeeding their children until the recommended age of at least two years.

Moreover, the study revealed that usage of pre-lacteal feeds among breastfeeding mothers was common, which further points to the fact that mothers were not ware on the right time to initiate food supplements to their infants. Provision of pre-lacteal feeds to infants was also highlighted by Sriram *et al.*, (2013), as one of those aspects related to inadequate knowledge among mothers in their breastfeeding practices to their infants. Edmond *et al.*, (2016), revealed that failure to initiate breast feeding within one hour of delivery is a practice associated with mothers with inadequate knowledge on proper breastfeeding for new-born babies.

5.2.2 Attitude towards breastfeeding among mothers with infants

Under this subsection, the findings revealed that attitudes are important attributes in influencing breast feeding practices among mothers with infants below one of age within Kasana HC IV Luwero District. As per the study, perception of inadequate support from community members, shyness during breastfeeding especially in public, poor perception of breastfeeding in minimizing family expenses, as well as family planning advantage were the attitudinal factors identified in this study as having a negative influence on breastfeeding intent among mothers with infants within Kasana HC IV Luwero District. In support of these findings, Wojcicki *et al.*, (2010), Brown and Lee (2011) had earlier observed in their earlier studies that factors related to the mothers' attitudes take centre stage in influencing mothers intent to breastfeed their infants. In particular, having a positive perception for the relevance of breastfeeding creates a positive attitude among mothers thereby encouraging them to fulfil the breastfeeding schedule for their infants than mothers with negative perception about breastfeeding. Similarly, Johansson and Westmar (2013) also concluded that developing a positive attitude towards breastfeeding is associated with a longer duration of breastfeeding and so did Kylberg *et al.*, (2009), who noted that a high level of support, confidence and a natural determination to breastfeed had a connection to a positive attitude and consequently leading to a higher likelihood among mothers with infants. These studies demonstrate that positive attitudes among women are predictive in the mother's decision to breast feed her infant longer.

Conversely, Saied's *et al.*, (2013), study in Riyadh, Pakistan, also showed that the low level of maternal attitude was the contributing factor for the low level of infant breastfeeding among 201 respondents and so did Scott *et al.*, (2015), who acknowledged that mothers who had a negative attitude toward breastfeeding in public were least expected to breastfeed in public and more expected to discontinue breastfeeding earlier. More recently, Haqhiqi and Varzande (2016) also concluded in their study that maternal attitude toward infant breastfeeding is an important factor to promote the consistency of breastfeeding among babies. The author's argument is based on the fact that there are common elements that promote negative attitude including embarrassment of breastfeeding in public, physical concerns, uncomfortable feelings and negative influence from family/friends which collectively undermine the breastfeeding potential for mothers. Stuebe and Bonuck (2011) also found discomfort with breastfeeding as one of the major impediments for proper breastfeeding among mothers with infants less than one year.

Interesting results were reported by Kuzma (2013) who noted that mothers who regard breastfeeding as good, giving various reasons for their perception relating to this are twice as likely to proceed with breastfeeding their infants than those with negative perceptions towards breastfeeding. He argued that women with a positive attitude give explanations such as breastfeeding “is in line with the culture”, “mother shows responsibility for a baby”, “breastfeeding is easy as it has no need to prepare food for a baby”, and some mothers believe that it prevents pregnancy. Moreover, results indicated that indeed mothers hold a positive attitude towards breast feeding and highly believe that the practice encourages bonding and protects infants from diseases. Certainly, this notion was the driving force for some mothers to exclusively breast feed their babies in Kasana HC IV, Luwero District due to the positive attitude that breast feeding and protection of diseases among babies are intertwined as maintained by Savino *et al.*, (2013), who asserted that breast milk mitigates infant programming of late metabolic diseases, particularly protecting against obesity and type2 diabetes.

In addition, breast feeding mothers realized that breast feeding had no relationship with family planning. Based on that observation, mothers continued attaching a negative value on breast feeding within the study area. This is in line with Brown and Lee (2011) who highlighted that attitudes and positive experiences among breast feeding mothers were greatly through community involvement and encouragement by either community leaders or village health groups to promote consistency among mothers towards the practice of infant breastfeeding for a long time. In relation to mother’s behaviour and beliefs, Dungy *et al.*, (2008), emphasized that adherence to breastfeeding is deeply rooted in the belief by the mother about the relevance of breast milk compared to formula (mixed) feeding. Therefore, refraining from bottle-feeding after delivery of the baby has a significant difference between mothers who value breast milk than those whose preference is bottle-feeding. These beliefs in turn influence their feeding behaviour and confidence towards their infants. The same view had earlier been emphasized by Mossman *et al.*, (2008), who noted that a bad confidence can be related to lack of support from either health professionals or from parents to the mother. If the mother receives the support that is needed, her confidence might increase and so might the breastfeeding.

5.2.3 Practices of infant breastfeeding applied by mothers

Under this objective, the findings revealed that breastfeeding mothers within the study area were using breastfeeding practices that were inadequate. In particular, the study revealed that most mothers used pre-lacteal feeds, which are widely believed to be barriers for exclusive breastfeeding for infants less than one year and a contributing factor for the mothers' low intent to breastfeeding of infants per the recommended guidelines. Similarly, the study revealed that the majority of breastfeeding mothers planned to breastfeed their infants for less than six months contrary to the WHO guidelines. This could explain the inadequate breastfeeding practices among mothers in the study area. This is because whereas these artificial methods of infant feeding are preferred by some breastfeeding mothers, questions related to weaning practices including personal hygiene, use of vegetables or fruits, dilution of top milk, use of utensils, have resulted into adverse consequences to both the mother and her baby explaining why they should not be adopted when the infant's digestive organs have not yet matured. These findings are in consonance to the WHO (2013) report that noted that the limited time for exclusive breastfeeding is a poor practice for infant feeding since it is widely emphasized by health practitioners that babies should be exclusively breastfed for at least six months before adding food supplements to their diets. Similarly, the study revealed that the majority of respondents indicated that they would continue breastfeeding their current child for only one year, contrary to the WHO recommendation of two years.

Much earlier, an Indian study by Sriram *et al.*, (2013), among 150 breastfeeding mothers also revealed that various customs and feeding practices were adopted by mothers to supplement their breast milk whereby infants whereby pre-lacteal feeds, cow's milk and packed milk were the most common food substances given to infants. This study also demonstrated that mothers initiated complementary feeding before 6 months of age. More recently, Tadele *et al.*, (2016), also reported similar findings in group of 350 Ethiopian mothers where it was noted that mothers adopted different infant feeding practices including using pre-lacteal feeding, breastfeeding on demand, giving plain water to their infants, giving animal milk and using packed milk to their infants prior to six months of age.

More so, Stuebe (2009) indicated that using artificial feeding practices is not only inadequate but hazardous and so did Kuzma (2013) who noted that most mothers resort to infant formula feeding because of their inadequate knowledge on its disadvantages. Notably, dilution of milk

decreases the nutritional value of milk as well as increase the chances of contamination. Likewise, using the practice of fluids is contested on grounds of personal hygiene especially for the containers used in feeding infants. Such issues may result into adverse consequences to both the mother and her baby. Memon *et al.*, (2010), also articulated that mothers rely on several practices for infant feeding involving artificial methods that are believed to be more effective at delivering optimum growth for the baby while ensuring the safety and health of the child. They identified methods such as animal milk, formula milk, food supplements, fluids and water, pre-lacteal feeds as well as mixed feeding as the most cited practices used by mothers in infant breastfeeding.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter presents a conclusion in line with the study objectives and suggests recommendations. The chapter has also identified gaps that it proposes other researchers to undertake.

6.2 Conclusion

The study revealed that knowledge of mothers of infants less than one year towards breast feeding and socio-demographic factors are very crucial. Notably, the study revealed that lack of knowledge on initiation of breastfeeding, inadequate awareness on the relevance of colostrum and limited awareness on the duration of exclusive breastfeeding among mothers were the knowledge factors hindering mothers to effectively breastfeed their infants in Kasana HC IV, Luwero District in relation to socio-demographic factors like age, economic status .education background. In particular, the study revealed that mothers who had adequate knowledge on the relevance of exclusive breastfeeding were to feeding their children for at least one year before adding food supplements. Likewise, mothers with adequate knowledge on breast feeding have the vigour to breast feed their babies whenever the need arises even after six months after delivery. Thus, lack of adequate knowledge on best practices of infant breastfeeding poses a major challenge for proper breastfeeding among mothers with infants less than one year.

In relation to attitudes, the study revealed that the mothers' attitudes towards breastfeeding of their infants were important considerations in encouraging mothers to follow the recommended practices of infant feeding. Specifically, the study revealed that women with a positive attitude about initiation and benefits of breastfeeding had better perceptions of infant feeding than their counterparts with negative attitudes about breastfeeding. In particular, maternal attitudinal factors identified in the study included perception of inadequate support from community members, shyness during breastfeeding especially in public, poor perception of breastfeeding in minimizing family expenses and family planning benefits. These were the cited factors identified in this study as contributors to negative attitudes among mothers with infants within Kasana HC IV Luwero District.

Furthermore, this study found out that the practices of mothers in relation to breastfeeding were inadequate. These included use of pre-lacteal feeds before the recommended age of the infant, exclusive breastfeeding for less than six months, and use of food supplements like fluids, water, animal milk and packed milk. Whereas these practices were being used, mothers were not aware of the likely consequences arising due to unhygienic conditions.

6.3 Recommendations

Health workers should ensure dissemination of information to create awareness among mothers. This will ensure that mothers understand the frequency of breastfeeding in a day, as well as benefits and limitations of food supplements in case a mother decides to use them. Within the community, awareness about breastfeeding practices could be promoted by using leaders at the grass root whereby all members within the community are mobilized with the help of village health teams (VHTs) to disseminate information about the importance of breastfeeding, risks of complementary feeds as well as frequency of breastfeeding.

There is also need to train midwives on proper customer care skills as this will bridge the gap between mothers and health service providers. This will improve the perception that mothers have towards infant breastfeeding.

6.4 Areas for further study

Since this study looked at Kasana HC IV, Luwero District, future researchers should undertake a longitudinal research on the knowledge, attitudes and practices among breastfeeding mothers in Uganda.

Future researchers should also undertake research on factors influencing the uptake of exclusive breastfeeding among mothers with infants of less than one year.

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APPENDICES

APPENDIX I: CONSENT FORM

KNOWLEDGE, ATTITUDE AND PRACTICES TOWARDS BREASTFEEDING AMONG MOTHERS WITH CHILDREN AGED 0 TO 1 YEAR IN KASANA HC IV, LUWEERO DISTRICT

My name is **Namata Margaret** from International Health Sciences University pursuing a bachelor's degree in nursing sciences. I am conducting a study on **Knowledge, Attitude and Practices towards Breastfeeding among Mothers with Children Aged 0 to 1 Year in Kasana HC IV, Luweero District**. The results from this study will come up with better strategies of enhancing community's knowledge, attitude and practices of mothers towards proper breastfeeding of their infants aged 0 to 1-year-old. I am going to ask you some questions about your knowledge, attitudes and practices on breastfeeding. This is therefore to request you to voluntarily participate in this study. The expected duration of the discussion will be approximately 20 minutes. The answers and opinions from the discussions will be kept confidential.

Kindly note that this exercise has no direct benefits to you, but your participation is likely to help us understand the underlying reasons that might encourage or discourage mothers from breastfeeding their babies in line with the recommended practices. Consequently, if the community's knowledge, attitude and practices on infant breastfeeding are addressed, there will be reduced mortality rates and improvement in the health seeking behaviour of community mothers and their babies. If you have any other questions or concerns about this study, you may contact the principal investigator, Ms. Namata Margaret on telephone number +256-784-002-210. Thank you very much for agreeing to participate in this research.

If you are willing to participate, please sign on this form in the space provided below.

Mother's signature/ thumbprint:

Date:

APPENDIX II: QUESTIONNAIRE FORM

Dear Respondent,

My name is **Namata Margaret**, pursuing a bachelor's degree of Nursing Science of International Health Sciences University, Kampala. This questionnaire is designed to carry out a study on *the knowledge, attitudes and practice towards breast feeding among mothers with children aged 0 to one year in Kasana HC IV, Luweero district*. The investigation is purely for academic research purpose and all the information you will provide under this study will be kept with ultimate confidentiality. Due to your experience in the medical profession, you have been considered as a resourceful person given your knowledge and expertise on issues of breastfeeding. Thank you so much in advance for your time.

SECTION A: BIO DATA

Please tick (✓) the option that best describes you.

Q1. In which age bracket do you fall?

< 18 yrs.	18-25 yrs.	25–32 yrs.	32 -40 yrs	40 yrs and above
1	2	3	4	5

Q2. What is your marital status?

Single	Married	Widowed	Divorced
1	2	3	4

Q3. Indicate your highest education status (maternal education)

None	Primary	Secondary	Tertiary
1	2	3	4

Q4. Indicate your level of monthly income

<100,000	101,000-200,000	201,000-300,000	above 300,000
1	2	3	4

Q5. What is your occupation?

Peasant	Formally employed	Business woman	House wife
1	2	3	4

Q6. Indicate the number of children (parity)

Only one child (primi gravida)	Two & more (multi gravida)
1	2

Q7. Indicate the type of delivery you underwent in delivering this child

Spontaneous vaginal delivery (SVD)	Caesarean delivery
------------------------------------	--------------------

1	2
---	---

Q8. Age of child in months

< 6 months	6 months	6 month and above
1	2	3

Q9. Birth order of child

1 st child	2 nd child	3 rd child	4 th child
1	2	3	4

SECTION B: PRACTICES

Q9. After giving birth, when did you start breast feeding?

< one hour During the first hour After more than 1 hour

Q10. How often do you breastfeed your baby?

When the baby cries When baby wants

Q11. Did you give colostrum to your baby after delivery? Yes No

Q12. Did you give pre-lacteal feeds to your child? Yes No

Q13. Are you exclusively breast feeding this child Yes No

Q14. After 6 months did you continue to breast feed this child Yes No

SECTION C: MOTHERS' KNOWLEDGE TOWARDS BREAST FEEDING

Q14. Breastfeeding is the best milk/food for babies. Yes No

Q15. Colostrum as the first breastmilk is important for the baby. Yes No

Q16. During the first 6 months, babies should be exclusively breast fed. Yes No

Q17. Breast feeding helps the mother to bond with her child. Yes No

Q18. Breast feeding should be initiated within one hour after delivery. Yes No

Q19. Mothers should continue breastfeeding after 6 months. Yes No

SECTION D: STATEMENTS ON ATTITUDES OF MOTHERS

The following questions explore your opinions on the attitudes influencing breastfeeding among mothers of infants in Kasana HC IV, Luweero district. You are requested to tick the option that suits your opinion in as far as the statement raised is concerned using the following key: 1-True (T), 2-False (F) and 3-I don't know (ID).

STATEMENTS		T	F	ID
AT0	Attitudes			
AT1	Health workers encourage me to exclusively breastfeed	1	2	3
AT2	Community members encourage breastfeeding	1	2	3
AT3	Breastfeeding is easier than bottle feeding	1	2	3
AT4	Breastfeeding help to decrease family expenses	1	2	3
AT5	I feel breast milk is nutritious and healthy for my child	1	2	3
AT6	I am shy when the baby touches my breasts	1	2	3
AT7	I believe breastfeeding encourages bonding and protects from disease	1	2	3
AT8	Breast milk has a family planning advantage	1	2	3
AT9	Mothers in my community are shy/not confident to breastfeed in public places	1	2	3

Thank you for your active participation!

APPENDIX III: INTRODUCTORY AND CORRESPONDENCE LETTER

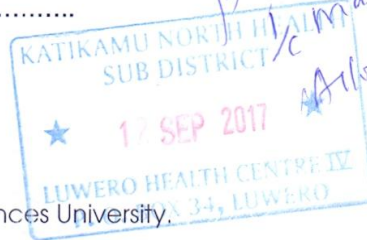


making a difference in health care

Office of the Dean, School of Nursing

Kampala, 4th September 2017

TO THE INCHARGE
KASAMA HEALTH CENTRE IV
P.O. Box -
LUWERO DISTRICT



*Per mission granted
Allocate her for
duties
Dr. Sam D
12/9/17.*

Dear Sir/Madam,
RE: ASSISTANCE FOR RESEARCH

Greetings from International Health Sciences University.

This is to introduce to you **Namata Margaret**, Reg. No. **2015-BNS-JAN-020** who is a student of our University. As part of the requirements for the award of a Bachelors degree in Nursing of our University, the student is required to carry out research in partial fulfillment of the award.

The topic of research is: **Knowledge Attitudes and Practices of Breast Feeding Among Mothers With Infants at Kasana Health Centre IV, Luwero District.**

This therefore is to kindly request you to render the student assistance as may be necessary for the research.

I, and indeed the entire University are grateful in advance for all assistance that will be accorded to our student.

Sincerely Yours,

Ms. Agwang Agnes
Dean, School of Nursing



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