

UNIVERSITY FOR DEVELOPMENT STUDIES

**BREASTFEEDING PRACTICES AMONG WOMEN IN THE NANUMBA NORTH
DISTRICT**

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2018

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DISTRICT**

BY

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(UDS/CHD/0202/15)

**THESIS SUBMITTED TO THE DEPARTMENT OF PUBLIC HEALTH, SCHOOL OF
ALLIED HEALTH SCIENCES, UNIVERSITY FOR DEVELOPMENT STUDIES IN
PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER
OF PHILOSOPHY (M.Phil) DEGREE IN COMMUNITY HEALTH AND
DEVELOPMENT**

JULY, 2018



DECLARATION

Student

I hereby declare that this submission is my own work towards the award of Master of Philosophy and that, to the best of my knowledge it contains no materials previously published by another person nor material which has been presented for the award of any degree of the University, except where due acknowledgement has been made in the text.

Candidate Signature: Date:

Name:.....

Supervisor

I hereby declare that the preparation and presentation of the thesis was supervised in accordance with the guidelines on supervision of thesis laid down by the University for Development Studies.

Principal Supervisor's Signature:..... Date:

Name:.....



ABSTRACT

Exclusive breastfeeding (EBF) practice is safe and simple intervention in improving child health and growth. The study was conducted to assess breastfeeding practices among women in the Nanumba North District in Northern region of Ghana. This study employed a descriptive cross-sectional study design using a paper based self design questionnaire to collect primary data from 200 respondents. Simple random sampling technique was employed as sample respondents. Findings from the research revealed that, 37% indicated that they initiated breastfeeding within 1 hour immediately after delivery. It was also revealed that, 28% of the respondents had ever practiced exclusive breastfeeding. The findings further revealed that, 89.5% of the study participants agreed with the statement that breastfeeding protects the baby from illnesses. From the results, 83.7% agreed with the statement that unsupportive husbands and other family members affect women practice of exclusive breastfeeding. From the results, 83.7% of the study participants indicated that the parity of a woman influences the practice of EBF, 26.4% of the study participants said the educational status of a woman does not influence the practice of EBF. The findings presented in this study could assist policy formulation in terms of EBF. The researcher concludes that study participants, knowledge on breastfeeding practices was good whilst the practice of EBF was insufficiently observed. The researcher recommends that there is the need for research to identify breastfeeding messages having the greatest impact in influencing mothers to practice exclusive breastfeeding in the study area.



ACKNOWLEDGEMENT

I am greatly indebted to a host of individuals who contributed in numerous ways during the conduct of this thesis. First and foremost, I am particularly grateful to the Almighty God, for His abundant grace, strength and guidance, without which this could not have been achieved.

Secondly, I would like to thank my supervisor Dr. Benson Boinkum Konlaan (PhD), for his guidance and selfless dedication from the beginning to the completion of this thesis. To him I wish to express my deepest gratitude and sincere thanks. Special thanks also go to all the study participants most especially the women and health workers who participated in the study voluntarily for their useful and important suggestions.

I am also grateful to all my friends for their availability and immense cooperation during my research work. I also want to say a big thank you to all my colleague students for their ideas and support especially those who encouraged me.

Finally I want to say special thanks to my husband and children for their unceasing prayers and support during the conduct of this research. May God also bless all those who equally contributed in diverse ways to make this thesis a reality.



DEDICATION

To my family, friends and loved ones.



TABLE OF CONTENTS

DECLARATION PAGE.....	i
ABSTRACT.....	ii
ACKNOWLEDGEMENT	iii
DEDICATION.....	iv
LIST OF TABLES.....	viii
LIST OF FIGURES	ix
LISTS OF ACRONYMS	x
CHAPTER ONE	1
1.1 Introduction	1
1.2 Background of study	1
1.3 Problem statement	4
1.4 General objective.....	5
1.5 Specific objectives.....	5
1.6 Research questions	6
1.7 Significance of the study	6
1.8 Delimitations of the study	7
1.9 Conceptual Framework of the study	8
1.10 Theoretical foundation of the study	11
1.11 Operational definition of terms	14
1.12 Organization of the study	15
CHAPTER TWO	16
LITERATURE REVIEW.....	16
2.1 Introduction	16
2.2 History of exclusive breastfeeding practices.....	16



2.3 Knowledge and practices of women towards breastfeeding	26
2.4 Factors affecting women from practicing exclusive breastfeeding.....	39
2.5 Health workers role in optimal breastfeeding practices among women	47
2.6 Ways of encouraging women to practice exclusive breastfeeding	51
2.7 Strengths and limitations of this review	57
CHAPTER THREE	59
METHODOLOGY	59
3.1 Introduction	59
3.2 Profile of the study area	59
3.3 Research design.....	64
3.4 Research population	64
3.5 Sample size determination	65
3.6 Sampling technique	65
3.7 Research variables.....	66
3.8 Study measurements.....	66
3.9 Data collection techniques	67
3.9.1 Structure questionnaire.....	67
3.10 Data collection methods	68
3.10.1 Sources of data collection	68
3.10.2 Key informants interview	68
3.11 Reliability and validation of the instrument.....	68
3.13 Ethical considerations	70
CHAPTER FOUR	71
RESULTS.....	71
4.1 Introduction	71



4.2 Demographic data of respondents	71
4.3 Knowledge and practices of women towards breastfeeding	73
4.4 Factors affecting women from practicing exclusive breastfeeding.....	85
4.5 How health workers promote optimal breastfeeding practices among women	89
4.6 Ways of encouraging women to practice exclusive breastfeeding	90
CHAPTER FIVE	92
DISCUSSION OF RESULTS	92
5.1 Knowledge and practices of women towards breastfeeding	92
5.2 Factors affecting women from practicing exclusive breastfeeding.....	96
5.3 Ways of encouraging women to practice exclusive breastfeeding	102
CHAPTER SIX	105
SUMMARY, CONCLUSION AND RECOMMENDATIONS	105
6.1 Introduction	105
6.2 Summary of the main findings	105
6.3 Conclusion.....	106
6.4 Recommendations	107
REFERENCES	109
APPENDIX I	121
APPENDIX II	128



LIST OF TABLES

Table 4.1: Demographic data of respondents	72
Table 4.2: Breastfeeding practice by mothers.....	79
Table 4.3: Benefits of exclusive breastfeeding	80
Table 4.4: Paired Samples Test of demographic data and feeding options	83
Table 4.5: Occupational status and initiation of breastfeeding by mothers	84
Table 4.6: Multiple comparison analysis	84
Table 4.7: Factors affecting exclusive feeding practice among women	86
Table 4.8: Demographic data and practice of exclusive breastfeeding	87
Table 4.9: Ways of encouraging women to practice EBF	91



LIST OF FIGURES

Figure 1.1: Conceptual framework	9
Figure 1.2: The Health Belief Model adapted for breastfeeding practices	13
Figure 3.1: Map of Nanumba North district	63
Figure 4.1: Time of initiation of breastfeeding after delivery	74
Figure 4.2: Mode of feeding	76
Figure 4.3: Duration of exclusive breastfeeding.....	78
Figure 4.4: Appropriate time to start complementary foods.....	82
Figure 4.5: Breastfeeding problems.....	88



LISTS OF ACRONYMS

ANC	Antenatal Clinic
ANOVA	Analysis of Variance
BSES	Breastfeeding Self-efficacy Scale
EBF	Exclusive Breastfeeding
FWP	Field Weighing Post
GHS	Ghana Health Service
GSS	Ghana Statistical Service
HBM	Health Belief Model
UNICEF	United Nation Emergency Children Fund
WHO	World Health Organisation
SPSS	Statistical Package for Social Sciences



CHAPTER ONE

1.1 INTRODUCTION

This chapter presents the background of study, problem statement, research objectives, research questions, significance of the study, delimitations of the study, theoretical foundation of the study, operational definition of key terms and structure of the thesis.

1.2 Background to the study

Breastmilk is the primary source of nutrition for newborns before being able to digest other foods other than milk (UNICEF, 2006). Breast milk is the milk produced by the breast (or mammary glands) of the human female for her infant offspring. Breast milk is the natural first food for infants (Marques and Lopez, 2013; Ojofeitimi, Esimai & Owolabi, 2013). It provides all the nutrients an infant needs for the first six months of life.

Breastfeeding together with complementary feeding continues to meet a child's nutritional needs during the second half of the first year until the second year of life when a child could be weaned (Witters-Green, 2013). It is an essential part of the reproductive process and contributes to the health and wellbeing of both mother and baby (WHO, 2013). Breastfeeding is accepted globally as the preferred method of feeding infants.

According to World Health Organization (2012) exclusive breastfeeding, is defined as giving only breast milk from a mother or wet nurse or expressed without any additional food or liquid for six months. Exclusive breastfeeding is adequate in quality as well as quantity in terms of energy, protein, nutrients, water etc. (WHO, 2011). Research indicates that the quantity and quality of milk produced by undernourished mothers is remarkably good, with the amount of milk and energy concentration being only a little



less than that of well-nourished mothers (Venuta & Vaienti, 2013). However the level of milk production could be increased by improving maternal nutrition (Tella, Falaye & Aremu, 2014).

Breastfeeding is regarded by health professionals as one of the most effective ways to protect the health of both mother and child (Schmied & Barclay, 2014). The United Nations Children's Fund (UNICEF, 2011) appropriately refers to breast milk as "the baby's first "immunization" that helps to protect against diarrhea, ear and chest infections, and other health problems (Schmied & Barclay, 2014).

Research has showed that populations with more successful rates of breastfeeding have shown lower rates of infant morbidity and mortality, decreased rates of chronic disease (i.e. cancer, diabetes, obesity, etc...), and increased cognitive development (Weiner & Weiner, 2011).

Several guidelines have been developed to promote appropriate infant feeding including the optimal duration of exclusive breastfeeding (EBF). The World Health Organization recommends EBF for the first six months of life (WHO, 2010). This recommendation is based on evidence of the importance of good nutrition in the early months of life and the role it has in achieving good health. The benefits include prevention of disease and infection in childhood (Oweis, Tayem & Froelicher, 2013) and improved cognitive and motor skills development (Otoo, Lartey & Pérez-Escamilla, 2013).

However, breastfeeding practices are determined by various factors including cultural norms, beliefs, mother's knowledge and previous experience (Ojofeitimi, Esimai & Owolabi, 2013). These factors operate differently across communities and therefore, do affect child health to varying degrees. In exploring a region in northeastern Brazil, some



authors identified socio-cultural factors that had influenced the decline of breastfeeding in northeastern Brazil.

Few of the main influences were familial change, societal and cultural differences, absence of elders informing the tradition of breastfeeding, associations made between the chosen method of feeding and socioeconomic status (that is the belief that only poor women breastfeed their babies), and the woman's changing economic role in support of her family (Oweis, Tayem & Froelicher, 2013).

In Tanzania, 42% of children were stunted due to poor socio-cultural factors affecting breastfeeding practices (Muchina & Waithaka, 2013). Stunting in children leads to delay in motor and mental development and increased morbidity and mortality, low physical strength and low economic productivity in adulthood (Marques & Lopez, 2013). Nutritional problems of children are to a large extent associated with inappropriate feeding practices (Oweis, Tayem & Froelicher, 2014; Henry, Nicolau, Americo & Ximenes, 2010).

Despite WHO's recommendations on breastfeeding, the global picture falls short of these standards, as only 35% of infants worldwide are exclusively breastfed (Otoo, Lartey & Pérez-Escamilla, 2013). A study also in Nigeria among lactating mothers reported an exclusive breastfeeding rate of 17% for the first 6 months of life. Only 38% of lactating mothers initiated breastfeeding early, and low socioeconomic status was found to be associated with a decrease in the exclusive breastfeeding rates (Ojofeitimi, Esimai & Owolabi, 2013).



Similarly, Afrose et al. (2012) observed that that exclusive breastfeeding is not common as only 32% of infants under six months of age were exclusively breastfed. This was however an improvement from the exclusive breastfeeding rates reported in other studies where only 13% of infants under six months of age were exclusively breastfed. The general trend indicates a decline in exclusive breastfeeding practice with age, with only 13.2% of infants still exclusively breastfed by 6 months of age. This situation is of public health concern and factors contributing to low uptake of exclusive breastfeeding for six months need to be identified and addressed.

1.3 Problem statement

Globally, sub-optimal breastfeeding practices especially non-exclusive breastfeeding in the first six months of life, results in 1.4 million deaths and 10% of disease burden in children younger than 5 years. Most of the infant deaths in the first year of life are largely associated with inappropriate feeding practices (Otoo, Larrey & Pérez-Escamilla, 2013). According to the World Health Organization (WHO, 2012), sub-Saharan Africa recorded the lowest coverage of 37% in terms of breastfeeding practices.

In Ghana, for example, the median breastfeeding duration is 22 months and 53.4% of women with children less than six months breastfed exclusively (Ogunlesi, 2010; Venuta & Vaienti, 2013). According to Oweis, Tayem and Froelicher (2013), although breastfeeding is most common in Ghana large numbers of mothers, do not practice appropriate breastfeeding and complementary feeding recommendations. These are largely due to lack of knowledge on how to feed properly and food unavailability.



Many mothers are unable to practice breastfeeding as advocated (Karacam, 2010; Mani, Dwivedi & Pandey, 2012) and there is limited scientific data on reasons why breastfeeding is sub-optimal. Besides normative expectations, personal experiences and networks of support have influence on the forms and quality of breastfeeding practices especially in Northern Ghana. Largely, these factors exert pressure on breastfeeding mothers thereby making their experience pleasurable or painful within time and space (Ogunlesi, 2010).

The factors that influence practices of breastfeeding among women in the Nanumba North district are poorly understood. This could be of public health importance. This area of research has not been given much attention within the Northern region context. Few reports from the Nongovernmental Organisations world (NGOs) and social media exist. This background needs a research to offer empirical insights into the reasons for low practice of breastfeeding among the women as a first step toward promotion of breastfeeding practices in the study area. In keeping with this imperative, this study seeks to fill this gap.

1.4 General objective

The main objective of this study is to assess breastfeeding practices among women in the Nanumba North district in Northern region of Ghana.

1.5 Specific objectives

1. To assess the knowledge and practices of women towards breastfeeding in the Nanumba North district
2. To examine the factors affecting women from practicing exclusive breastfeeding in the Nanumba North district



3. To determine how health workers promote optimal breastfeeding practices among women in the Nanumba North district
4. To identify ways of encouraging women to practice exclusive breastfeeding in the Nanumba North district

1.6 Research questions

1. What is the knowledge and practices of women towards breastfeeding in the Nanumba North district?
2. What are the factors affecting women from practicing exclusive breastfeeding in the Nanumba North district?
3. How do health workers promote optimal breastfeeding practices among women in the Nanumba North district?
4. Are there ways of encouraging women to practice exclusive breastfeeding in the Nanumba North district?

1.7 Significance of the study

There is a paucity of published works on breastfeeding practices among women conducted in Nanumba North District. A study within this area is therefore very important as it would reveal the areas where challenges are being faced. This study was conducted to provide local expressions of women regarding breastfeeding that could be incorporated locally into the design and implementation of breastfeeding programs in communities in Northern region and other rural settings.





Ministry of Health (MoH), Ghana Health Service (GHS), and other non-governmental organisations interested in promoting good infant feeding practices especially in the Northern region would find information from this research useful in the design and planning of their programs. It would also provide information about how early breastfeeding is initiated exclusive breastfeeding rates, and identify undesirable practices, adding to the body of knowledge on breastfeeding practices in the Northern region.

The information gathered would help policy makers in the Nantumba north district and health workers design and implement interventions that would enable more infants and nursing mothers have access to the unequalled benefits of breastfeeding. Families and the district as a whole would also benefit from the economic and environmental benefits of breastfeeding such as reduced costs from childhood illnesses and infant mortality, reduced environmental burden for the disposal of bottles and formula cans and reduced energy demands for the production and transportation of artificial feeding products.

Other researchers would also use the findings to advance their arguments on related matters in breastfeeding practices.

1.8 Delimitations of the study

The study was conducted to assess breastfeeding practices among women in the Nantumba North District. The study was restricted only to finding out the knowledge and practices of women regarding breastfeeding, explore factors affecting women from practicing exclusive breastfeeding, examined how health workers promote optimal breastfeeding practices among women and also identified ways of encouraging women to

practice exclusive breastfeeding. These delimitations of the study were done to manage the data collection considering the time and the resources of the researcher.

1.9 Conceptual Framework of the study

This study adopted a conceptual framework by Ogunlesi (2010) on factors influencing breastfeeding practices. According to the framework, breastfeeding is a complex process governed by psychological and physiological factors that in turn condition a wide spectrum of environmental, socio-economic and cultural factors (Ogunlesi, 2010).

These factors affect breastfeeding practices in different ways and to varying degrees depending on culture. For purposes of this research, the framework guided in investigating the demographic characteristic of women, knowledge of women on breastfeeding and contextual factors such as accessibility and attitude of health workers that influence breastfeeding practices among women in the district.



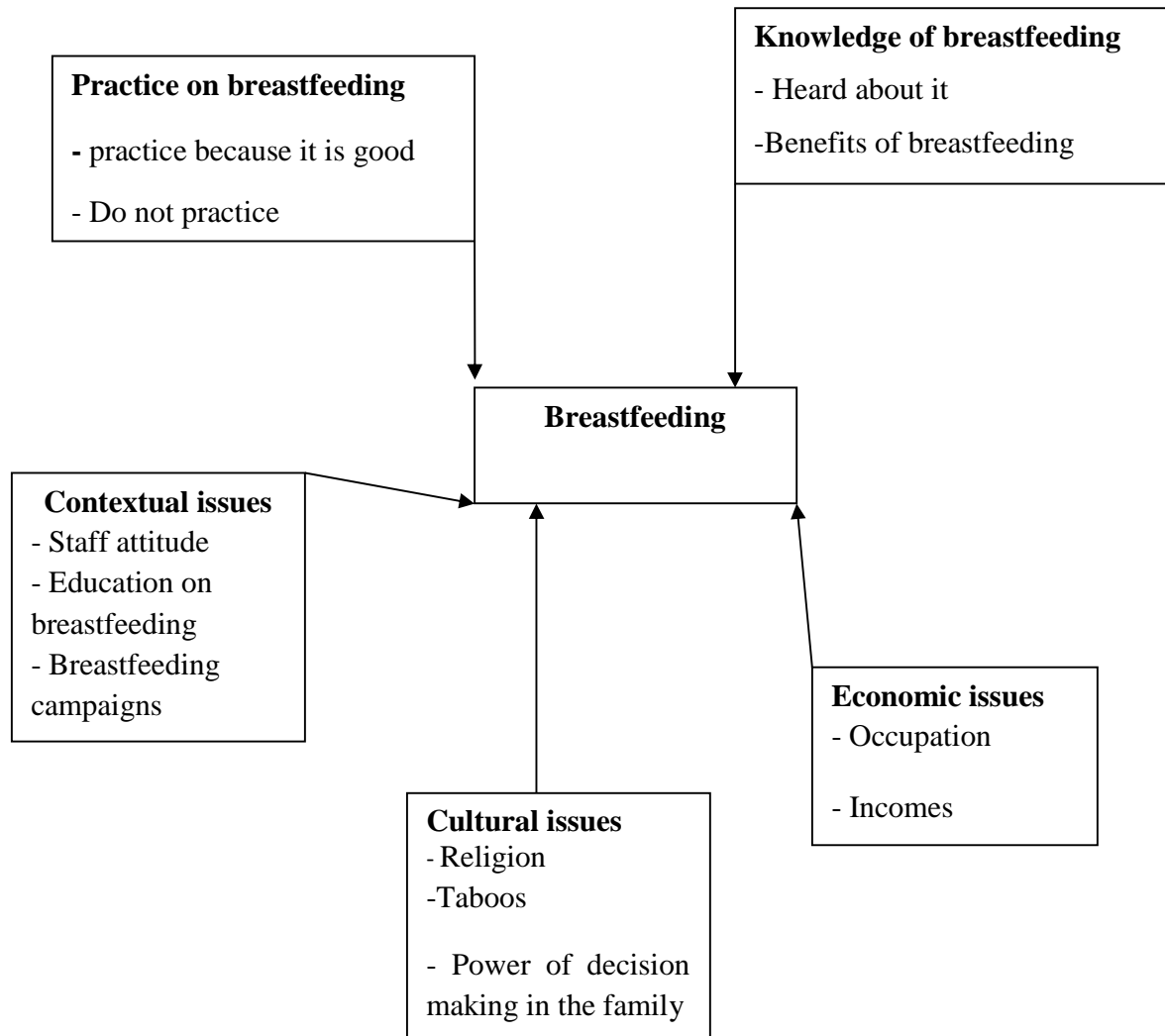


Figure 1.1: Conceptual framework

Source: Ogunlesi, 2010

From the Figure shown in 1.1, breastfeeding practice is influenced by contextual issues based on the extent to which health staff show attitude towards breastfeeding information at antenatal and post natal visits and how frequent education and campaign programmes are organized on breastfeeding which are planned to promote breastfeeding.



A poor education on breastfeeding especially among lactating mothers could therefore lead to low practice of breastfeeding whereas the contrary would lead to an increase in practice.

Further, other characteristics, which are connected and influenced by cultural and social issues include; religion, birth patterns, and taboos that are local and further by decision making power especially in traditional communities where the man is the head of the family could also influence the practices of breastfeeding.

Poor social and cultural perspective on breastfeeding due to religion, moral or cultural factors may limit the practice and acceptability of breastfeeding (Weiner and Weiner, 2011). In addition, economic status and good attitude of people towards breastfeeding could empower their decision-making and further suppress negative social perspective of breastfeeding, and increase its practice. However, unemployment which leads to economic dependency may affect one's decision making on birth control and therefore determines the practice of breastfeeding.

Finally, knowledge of breastfeeding information has a direct and indirect influence on breastfeeding practice. Directly, a more enlightened person on breastfeeding may practice it but the less enlightened, may doubt its potency and its benefit and therefore may not find it attractive to practice. Society may not accept the practice of breastfeeding due to cultural, religious and economic reasons, coupled with poor health staff attitude (Weiner and Weiner, 2011).

The more enlightened a person is with breastfeeding could suppress these hindrances and still pursue its practice whilst the non-enlightened value such as social and cultural issues which will make them not to practice breastfeeding.



1.10 Theoretical foundation of the study

The study adapted the “Health Belief Model” which is a psychological model that attempts to explain and predict health behaviours. The main principle of the model is the way in which an individual perceives the world and how these perceptions motivate his/her behaviour. It was first developed in the 1950s by social psychologists Houchbaum, Rosenstock and Kegels working in the U.S Public Health Services (Muchina & Waithaka, 2013). The HBM was initially spelled out in terms of four constructs representing the perceived threat and net benefits.

These four constructs include Perceived Susceptibility, Perceived Severity, Perceived Benefits and Perceived Barriers. Perceived susceptibility reflects a person’s belief about the likelihood of getting a disease/ condition. The greater a person’s perceived risk, the greater the likelihood of the person engaging in behaviours to lessen the risk.

Perceive severity also reflects a person’s belief about the seriousness or consequences of a disease/condition. Also a person’s belief that a certain action will reduce risk or the seriousness of an impact is termed Perceived benefits. Meanwhile, a person’s evaluation of obstacles in his/her way that prevents him/her from adopting a new behaviour is termed perceived barriers.

These concepts were proposed as accounting for people's "readiness to act." An added concept, Cues to Action, would activate that readiness and stimulate overt behaviour. A recent addition to the HBM is the concept of Self-efficacy, or one's confidence in the ability to successfully perform an action. This concept was added by Rosenstock and others in 1988 to help the HBM better fit the challenges of changing habitual unhealthy



behaviours, such as being sedentary, smoking, or overeating (Otoo, Larrey & Pérez-Escamilla, 2013).

The HBM suggest that a person's perceived susceptibility to a disease and perceived severity of harm are based to a great extent on that person's knowledge of the disease and its potential outcome. Although the combination of susceptibility to harm and severity of harm provides the force for action and the perception of high benefits and low barriers provides a course of action, it is the cues to action that start the whole process of change (Muchina & Waithaka, 2013).

For the purpose of this study only five constructs were adapted to describe the likelihood of mothers to practice exclusive breastfeeding. There are a number of factors that can influence their decision making.



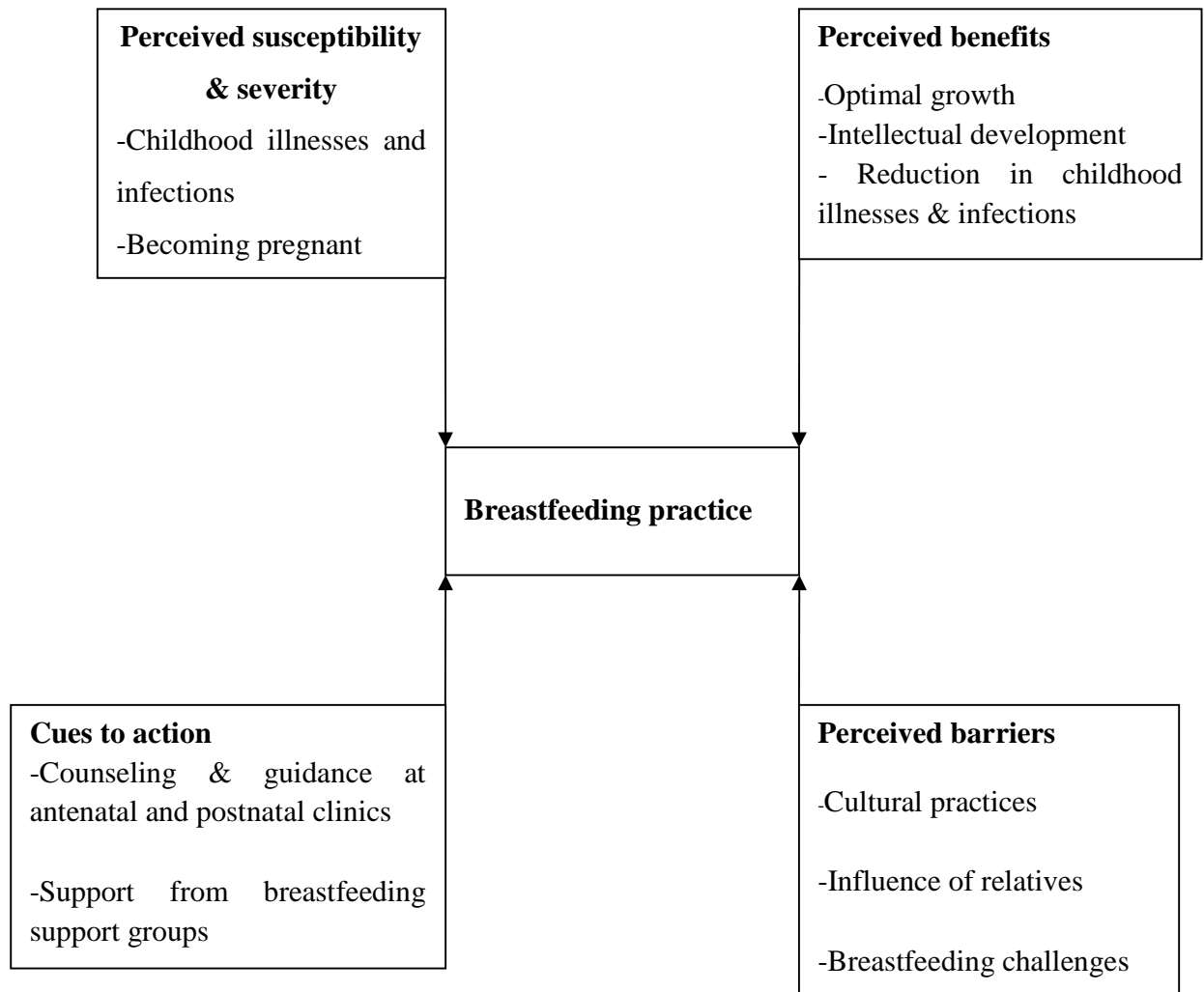


Figure 1.2: The Health Belief Model adapted for breastfeeding practices

Source: (Muchina and Waithaka, 2013)

For example, there is a high likelihood that a mother will practice breastfeeding if she perceives that the practice of breastfeeding has benefits that protects her infant and herself against infections and diseases, as well as promotes good mental health and reduces the mother's risk of breast and ovarian cancer even in the mist of barriers or challenges.



Other times her decision to practice breastfeeding can be influenced, when she feels threatened after perceiving how susceptible and severe the consequences of not practicing breastfeeding are to her infant. But in other instances it is the support and knowledge she gets from the cues to action (health workers, TBAs) that initiates the whole process of behaviour change. The framework in Figure 1.2 shows the various ways a mother's decision to breastfeeding can be influenced.

1.11 Operational definition of terms

Operational definition means defining a concept or variable in terms of the operation or procedure by which it is to be measured. This research explains the following concepts as they are used in the research work for the sake of clarity.

- **Breastfeeding:** The process of breastfeeding a baby at least up to the two years old regardless of addition of other complimentary foods.
- **Breastfeeding support:** A mothers perception of supportive behaviour from their social network
- **Culture:** The legacy that group members pass down to one another intergenerationally
- **Exclusive Breast Feeding (EBF):** The process of feeding breast milk for 6 months of life since birth, without feeding any type of food, drinks, even water, except medicine like vitamin and minerals



1.12 Organization of the study

The study is organized into six chapters. Chapter one contains the introduction, the background of study, problem statement, objectives of the study, research questions, significance of the research, delimitations of the study, conceptual framework of the study, theoretical foundation of the study and operational definition of key terms. Chapter two presents the review of related literature.

Chapter three presents the methodology that was used in conducting the study. Subsections such as profile of study area, research design, study population, sampling technique, sample size determination, data collection procedures, sources of data collection, data validity and reliability, limitations of the study, assumptions by the study, data processing and analysis and ethical considerations among others are included.

Chapter four contains the data analysis and presentation and chapter five presents the discussion of the data from the respondents with specific references to the reviewed literature presented in chapter two. Chapter six contains the summary of the research findings, conclusion and recommendations.



CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a critique of the current relevant literature on breastfeeding practices. It gives context to the subject of this research and establish a gap in the existing literature, providing a rationale for the study. To begin this, the review presents the broad benefits of exclusive breastfeeding relating to childbirth and maternity care, to offer a spatial perspective on how these profound experiences and the researches within them are shaped and created.

The review then turned to the specific objectives of the study. Finally the chapter concluded with an overview of the researcher's experiences relating to the reviewed literature.

2.2 History of exclusive breastfeeding practices

All hominoids have had similar defining features of their reproductive physiology including lactation and breastfeeding throughout history (Agunbiade & Ogunleye, 2012; Baumslag & Michels, 2010) yet detailed anthropologic work on ancient breastfeeding practices and patterns have rather been scanty. Even so, however, breastfeeding practices has been reported as an age-old practice that has been very critical not only to the physiology, growth, and overall well-being of neonates but the physiology and health of women as well (Agunbiade & Ogunleye, 2012; Baumslag & Michels, 2010).

Indeed, scarcely does a society exist without some form of infant breastfeeding, for it is one of the practices among human societies that transcend the boundaries of time and place (Weiner & Weiner, 2011). Nurturing babies is an issue inextricably bound to all



species in nature. In pre-historic times, breastfeeding was the first priority of mothers until later in infancy (Weiner & Weiner, 2011). In ancient times breastfeeding continued to be of crucial importance, and goddesses of motherhood are presented with naked breasts.

Concurrently, for the first time in history, wet nurses appeared in societies as a legal profession to replace mothers when they were unable to feed their children; special utensils for artificial feeding appeared as well (Weiner & Weiner, 2011). In Ancient Egypt breastfeeding was first priority of mothers until infants reached six months of age and then, cow's milk was given to children (Witters-Green, 2003; Callen & Pinelli, 2004). In Ancient Mesopotamia and Ancient Greece, breastfeeding was of high value and one can find numerous references in mythology (Witters-Green, 2003).

Wet nursing was also widespread in these societies. Nevertheless, great historians and philosophers, such as Aristotle and Plutarch opposed to employing wet nurses, as they strongly believed that breastfeeding was a duty of the mother (Callen & Pinelli, 2004). In Israel and China, breastfeeding continued until the age of two years, while in Indies, it stopped at six months, when teething starts (de Montigny & Lacharite, 2004).

In Islam, breastfeeding had a religious basis and usually lasted for two years and wet nurses were selected by parents with great thoughtfulness (Cooke, Sheehan & Schmied, 2003). In Byzantine times, the duration of breastfeeding was set at around twenty months (Cooke, Sheehan & Schmied, 2003). Colostrum was considered unsuitable and for the first days of life honey was given to newborns instead (de Montigny & Lacharite, 2004).

In the middle Ages, objections against wet nursing reappeared as it was considered that breast milk could transmit physical and psychological characteristics of the woman and



that breastfeeding was a maternal duty (Dennis, 2002b). At the end of eighteenth century, new substitutes of feeding infants appeared such as animal milk, pap and panada. In the ensuing years (19th century) mothers had to work in order to contribute to family income, and for the first time artificial feeding became the first choice (Dennis, 2002b).

Notwithstanding, in the twentieth century, formulas continued to be the first choice as advertising exerted its influence on public opinion. Especially in developed countries, there was a dramatic increase in the use of formulas, as it was considered to be the best nutrition for the infants (Ekstrom, Widsrom & Nissen, 2003).

2.2.1 Benefits of exclusive breastfeeding

World Health Organization (WHO) recommends optimal breastfeeding practices to promote healthy growth and development of the child (WHO, 2013). The practices include initiation of breastfeeding within one hour after delivery, exclusive breastfeeding (EBF) up to six months of the infants' life and after six months complementary feeding with adequate nutritious foods and continued breastfeeding up to the age of two years after birth (WHO, 2003).

Early initiation of breastfeeding that is, breastfeeding within 24 hours after birth is reported to prevent infections and 22% of neonatal death (DiGirolamo et al. 2003).

Exclusive breastfeeding that is, giving infant breast milk only for the first six months of the infants' life has many health benefits for the child and mother (Ekstrom, Widsrom & Nissen, 2003).

Exclusive breastfeeding during the initial months of life and continued breastfeeding through to at least the first two years of life is associated with substantial reduction in the burden of infections (Hannula, Kaunonen & Tarkka, 2014; Aidam, Pe & Lartey, 2005).



In addition, breastfeeding in the first six months of life is not only protective against childhood diarrhea and acute respiratory infections but it also boosts response to vaccination (UNICEF, 2003). Breastfeeding induces uterine contractions that reduce the mother's risk of postpartum hemorrhage, it also reduces the risk of breast and ovarian cancer, and it is a natural barrier to conception in the first six months post delivery (Leininger, 2010).

Breastfeeding provides infants with superior nutritional content that is capable of improving infant immunity and possible reduction in future health care spending (Mani, Dwivedi & Pandey, 2012; Martens, 2002). The short-term benefits of breastfeeding include reduction of risk of postpartum haemorrhage and an easier loss of extra weight put on during pregnancy.

They long-term benefits include a lower prevalence of ovarian and premenopausal breast cancer and a possible reduced risk of hip and spinal fractures (Karacam, 2010). There is also evidence that bonding with the infant is facilitated and a high level of self-esteem is often achieved (de Montigny & Lacharite, 2004).

In concordance with these findings the WHO recommends that all infants should be exclusively fed on breast milk from birth to four to six months of age. The UK Baby Friendly Initiative was launched in 1994 with the aim of ensuring that at least 75% of women breastfeeding on discharge from hospital (WHO/UNICEF, 2003).



2.2.2 Types of human breast milk

The following are the types of human breast milk

1. Colostrum or early milk is produced in the late stage of pregnancy until four days after delivery it is rich in nutrients for the infants (Tella, Falaye, & Aremu, 2014)
2. Transitional Milk produced from day 4–10 is lower in protein in comparison to Colostrum (Mani, Dwivedi & Pandey, 2012)
3. Mature milk is produced from approximately ten days after delivery up until the termination of the breastfeeding
4. Fore milk: It comes at the beginning of a feed. It looks grey and watery (Mani, Dwivedi & Pandey, 2012)
5. Hind milk: The hind milk comes at the end of a feed. It looks whiter than the fore milk because it contains more fat (de Montigny & Lacharite, 2004)

2.2.3 Human milk is uniquely suited for human infants

1. Human milk is easy to digest and contains all the nutrients that babies need in the early months of life (Mani, Dwivedi & Pandey, 2012)
2. Breast milk contains factors that help infants grow and mature.
3. Factors in breast milk protect infants from a wide variety of illnesses.
4. Breast milk contains antibodies specific to illnesses encountered by each mother and baby.
5. Fatty acids, unique to human milk, may play a role in infant brain and visual development.



6. In several large studies, children who have been breastfed had a small advantage over those who have been artificially fed when given a variety of cognitive and neurological tests, including measures of IQ.

2.2.4 Breastfeeding positions commonly used by lactating mothers



2.2.4.1 Cradle Hold

This is the most common position used by mothers. Infant's head is supported in the elbow, the back and buttock is supported by the arm and lifted to the breast (Tella, Falaye, & Aremu, 2014)



2.2.4.2 Football hold position

The infant's is placed under the arm, like holding a football. Baby's body is supported with the forearm and the head is supported with the hand. Many mothers are not comfortable with this position. Good position after operative procedures (de Montigny & Lacharite, 2004)

Mothers must devote several hours per day to breastfeeding if it is the sole feeding method, and some mothers feel confined to their homes because they are uncomfortable breastfeeding in public (Mertens, 2015). Breastfeeding mothers also face significant logistical and professional challenges in the workplace. Majority of women will experience some discomfort during breastfeeding, particularly early in the postpartum period, which can sometimes develop into painful conditions requiring medical attention (Nwankwo & Brieger, 2002)

2.2.4.3 Side lying position

1. The mother lies on her side propping up her head and shoulder with pillows
2. The infant is also lying down facing the mother
3. Good position after Caesarean section
4. Allows the new mother some rest
5. Most mothers are scared of crushing the baby

2.2.4.4 Cross cradle hold position

1. Ideal for early breastfeeding
2. Mother holds the baby crosswise in the crook of the arm opposite the breast the infant is to be fed



3. The baby's trunk and head are supported with the forearm and palm
4. The other hand is placed beneath the breast in a U-shaped to guide the baby's mouth to your breast

2.2.4.5 Types of breastfeeding

2.2.4.5.1 Full breastfeeding

1. Exclusive Breast feeding: No other liquid or solid from any other source enters the baby's mouth
2. Almost Exclusive Breast feeding: Occasional tastes of other liquids, traditional preparations, vitamins, medicines (Arora, McJunkin, Wehrer & Kuhn, 2000).

2.2.4.5.2 Full breast-milk feeding

Infant receives expressed breast milk in addition to breastfeeding (Beck, 1992).

2.2.4.5.3 Partial breastfeeding

- Refers to the infant receiving breast-milk for some feedings and liquid supplements, such as formula (artificial baby milk) or glucose water, at other Times (Brown & McDaniel, 2008).

2.2.4.5.4 Predominant breastfeeding

1. Refers to the infant being fed breast-milk as the predominant source of nourishment. Liquids (water, water-based drinks, fruit juice, oral re-hydration



solution), ritual fluids and drops or syrups (vitamins, minerals, medicines) are allowed (Clemons & Goss, 2001).

2.2.4.6 Potential benefits of breastfeeding

Human milk is a perfect balance of nutrients. It contains substances to help resist infection, mature the lining of the gut, assist with digestion and reduce the chance of allergy. When the baby nurses, a hormone called oxytocin causes the uterus to contract, reducing bleeding and shrinking the uterus back to its normal size (Mohler, 2011).

Milk production uses fat that accumulated during pregnancy, speeding weight loss. Breast milk is free and requires no preparation or storage. Breastfed infant stools have no odor and do not stain. Many mothers find breastfeeding relaxing, restful, and rewarding (Newman, 2003). Breastfeeding has many possible benefits for mothers, but it can also clash with other goals for women, such as having a full-time career (Dykes & Williams, 1999)

2.2.4.7 Disadvantages of artificial feeding

1. Interferes with bonding
2. More diarrhoea and persistent diarrhoea
3. More frequent respiratory infections
4. Malnutrition; Vitamin A deficiency
5. More allergy and milk intolerance
6. Increased risk of some chronic diseases
7. Obesity



8. Lower scores on intelligence tests
9. Mother may become pregnant sooner
10. Increased risk of anaemia, ovarian cancer, and breast cancer in mother

2.2.4.8 How nurses can help mothers breastfeed

Nurses may need to talk with new mothers about how important it is to breastfeed and teach them how to do it. Most nursing schools do not teach enough about breastfeeding. Look for ways to get more professional training, such as continuing education on how to help mothers breastfeed (Mohler, 2011). As a nurse, you can help mothers decide how to feed their babies. Mothers may not know that breastfeeding can protect them and their babies from some health risks (Mani, Dwivedi & Pandey, 2012)

You can talk with pregnant women about what to expect and encourage them to ask for help with any problems. Clinical care practices can make it easier—or harder—for mothers to start and keep breastfeeding. For example, placing a healthy newborn in skin-to-skin contact with the mother rather than on an infant warmer and keeping the baby in the mother's room at the hospital both help mothers to breastfeed more easily (Dykes & Williams, 1999)

On the other hand, giving gift packs with infant formula samples to breastfeeding mothers can hinder successful breastfeeding. If mothers have trouble breastfeeding, they may need assistance from a health care team that includes professionals with special training in this area.

If mothers get the support they need in the first 4 weeks of a new baby's life, they are more likely to keep breastfeeding. Mothers may need help finding people who are trained



to help with breastfeeding problems after they leave the hospital. Without help, some new mothers may stop breastfeeding.

2.3 Knowledge and practices of women towards breastfeeding

The Cambridge Dictionary of the English language defines knowledge as awareness that something exists; or an understanding of a situation or subject based on the available information and experience (Cooke, Sheehan & Schmied, 2003). Basic information that a product exists is at the lower end of a knowledge continuum scale for a product; at the higher end of the knowledge continuum scale is high level of familiarity of the product including its prior use (Cameron, 2013).

Knowledge of women is therefore the logical first step necessary for their practice of breastfeeding after delivery (Chapman et al. 2004). The most important determinant of one's behaviour is one's behavioural intention (DiGirolamo et al., 2005). Not surprisingly, women intention to breastfeed is one of the strongest predictors of breastfeeding initiation and duration (DiGirolamo et al., 2005; Forster et al., 2006; Ryser, 2004).

It has been reported that approximately 50% to 90% of pregnant mothers decide how they will feed their child either before becoming pregnant, or very early in their pregnancy (Bailey and Sherriff cited in DiGirolamo et al, 2005). In a longitudinal study of 300 Australian women, Blyth et al (2004) found that women who intended to breastfeed for longer than 12 months were 2.4 times as likely to continue breastfeeding until four months compared to those who intended to breastfeed for less than six months (87.5% Vs 35.7%, $\chi^2 = 33.67$ $P < 0.001$).



This study only failed to identify what type of study was conducted, the type of sampling technique that was used in selecting the women and where they were specifically sampled. The study failed to also identify the setting of the study since that could also influence the responses of the study. Even though, these lapses are identified in the study, the study has proven to the fact that, the first antecedent of every behavior is the behavior intention. Thus, women practice of breastfeeding is largely shaped by the intention of the women.

Similarly, a community based cross sectional survey conducted on determinants of exclusive breastfeeding practice among mothers of children age less than 6 month in Southwest Nigeria showed that practice of exclusive breastfeeding was 49.1% (Agunbiade & Ogunleye, 2012). In Pakistan, a study conducted on the impact of maternal knowledge and practice on the nutritional status of infants revealed that the breast feeding initiation rate is about 95%, however prevalence of exclusive breastfeeding is alarmingly low, only 16% of mothers exclusively breastfeed their children up to 4 months, 31% complementary feeding, 56% continued breastfeeding up to 24 month (Baumslag & Michels, 2010; Blum, 2010).

In Singapore, the National Breastfeeding Survey in 2001 found about 94.5% of the mothers attempted breastfeeding, at 1 month 71.6% were still breastfeeding, 49.6% continued to do so at 2 months, and only 29.8% persisted till 4 months and by 6 months, the breastfeeding prevalence rate fell to 21.1%. The average EBF duration in Xinjiang, PR China was 1.8 months. In Al Hassa, Saudi Arabia, only 24.4% of infants were exclusively breastfed at the age of 6 months (Callen & Pinelli, 2004). Earlier studies in Malaysia indicated that the prevalence of ever breastfed were high. However, to maintain



breastfeeding practice exclusively up to 4 and 6 months were not successful and the prevalence were low (Cooke, Sheehan & Schmied, 2003).

A cross-country comparison of selected infant and young child feeding indicators and associated factors in four South Asian countries revealed that Exclusive breast feeding rates were 42.5% in Bangladesh, 46.4% in India, and 53.1% in Nepal. The rate of full breast feeding ranges between 60.6% and 73.9% (Dennis, 2002b). The 2007-2011 censuses showed that the proportion of early initiation of breast feeding was 46%, the rate of exclusive breast feeding in the period between 1 and 6 months after birth was 43% (Dykes & Flacking, 2010; Ekstrom, Widsrom & Nissen, 2003).

Study conducted on cost of individual peer counseling for the promotion of exclusive breastfeeding in Uganda showed that though the health benefits of EBF have been documented in various studies, this form of infant feeding is not universal, with about 40% of all children below 6 months exclusively breastfed worldwide in 2010 (Gartner, Morton & Lawrence, 2011).

Similarly, in a randomized controlled trial of 889 Australian women, Forster et al (2006) found a significant relationship between intended and actual duration of breastfeeding among all groups of women with different socio-demographic characteristics. The study revealed that, women from poor socio-economic background were 0.47 times more likely not to practice exclusive breastfeeding.

This finding indicates how socio-demographic factors may be operating to influence the woman's intentions about breast feeding initiation and duration. In Forster et al (2006) study, if the woman had no intention to breastfeed for six months or more then this was negatively associated with feeding any breast milk at six months (Adj OR 0.47, 95% CI



0.30, 0.62) (Forster et al., 2006). Although they have reported that breastfeeding intention changes over time, Forster et al (2006) did not identify how the women's intention to breastfeed may be modified.

In a related development, a cross-sectional survey of 123 women in Nigeria using a simple random sampling method revealed that, women identified health centres, friends, family members, health workers and radio as their sources of knowledge on breastfeeding (Agunbiade & Ogunleye, 2012). In Ghana, according to a descriptive cross sectional study design conducted by Aborigo et al. (2014) among lactating mothers, it was shown that, 56% of the women practice breastfeeding and artificial feeding, 30% said they practice exclusive breastfeeding whilst 14% of the women practice artificial (bottle) feeding.

The study showed the various feeding methods adopted by mothers in feeding their children. The study concluded that mothers were using the various feeding practices to promote growth in their children. However, according to a cross sectional survey using 210 women, Tella, Falaye and Aremu (2014) stated that women in Uganda were not interested in exclusive breastfeeding. It was shown that, most of the women were using artificial feeds and cow milk to feed their babies. Worldwide, it is estimated that only 34.8% of infants are exclusively breastfed for the first 6 months of life, with the majority receiving some other food or fluid in the early months (WHO, 2003).

Exclusive breastfeeding for the first 6 months of life meets the energy and nutrient needs of the infants (Papinczak & Turner, 2000). Moreover, data collected from 64 countries covering 69% of births in the developing world suggested that there have been improvements in the rate of exclusive breastfeeding between 1996 and 2006, the rate of



exclusive breastfeeding for the first 6 months of life increased from 33% to 37%. Significant increases were made in sub-Saharan Africa, where rates increased from 22% to 30%, and Europe, where rates increased from 10% to 19% (Oweis, Tayem & Froelicher, 2013).

In Latin America and the Caribbean, excluding Brazil and Mexico, the percentage of infants exclusively breastfed increased from 30% in 1996 to 45% in 2006 (Tella, Falaye, & Aremu, 2014). This study was cross country studies that examine breastfeeding practices among infants. The study identified the period it was conducted, stated the number of countries that were involved and sparingly also cited countries with improved and reduced rates of breastfeeding practices.

This study to some extent based on this review covered the salient areas of a non interventional studies. In Sri Lanka, Baumslag and Michels (2010) investigated nutritional status and associated feeding practices among children aged 6-24 months in a selected community using cross-sectional study design. Purposely, their study sought to determine the nutritional status of children aged 6-24 months in a selected health unit area and to describe the associated feeding practices.

With regards to methodology, the researchers conducted a cross sectional study among 428 mother child pairs living in Akuressa health division in Mataradistrict, Sri Lanka. Study participants were selected using cluster sampling and field weighing post (FWP) was identified as a cluster. Due to logistic issues, 24 (out of 72) clusters were randomly selected and 18 children in the age group of 6 months to 2 years attending selected FWP for regular growth monitoring and their mothers were recruited as study subjects.



The study revealed that most of the children who had good nutritional status were women who had practice good breastfeeding. It was shown that 78% of the women admitted giving the first yellowish milk that came out from their breast to their babies whilst the rest indicated because of ill health they did not give breast milk to their children.

Breastfeeding is an important determinant of a child's growth and development. A major cause of death in infants and young children is inadequate breastfeeding practices in combination with high levels of disease (Purnell, 2013). According to Blum (2010), sub-optimal breastfeeding especially non-exclusive breastfeeding in the first six months of life results in 1.4 million deaths and 10% of disease burden in children younger than 5 years. This study which has established this fact could not identify what types of experimental studies have been done in line with breastfeeding practices to come to the conclusion with this conviction.

In South Africa, the Demographic and Health Survey of 1998 indicated that 10% of children 0-3 months were exclusively breastfed and only 2% of children 4-6 months were exclusively breastfed (World Health Organization, 2008). This report of WHO, however, could not identify what type of study was done and what type of sampling technique was used. In Nigeria, while breastfeeding initiation is on the increase, the duration, and practice of exclusive breastfeeding among women who had their delivery in a health facility, and outside such facility, has remained low (Agunbiade & Ogunleye, 2012).

The early introduction of complementary feeding, based on erroneous assumptions, affects breastfeeding initiation and sustainability in most Africa countries (WHO, 2008). Among the Yoruba people, a common belief around infant feeding is that exclusive



breastfeeding is beneficial to both infants and mothers, but complementary feeding is essential for babies to adapt to other meals with ease (Agunbiade & Ogunleye, 2012).

This is a Yoruba perspective, based on the traditional practice of distributing foods (especially prestige foods such as animal proteins) according to seniority and status within the family (Nwankwo & Brieger, 2002). It is believed that this is an important way of teaching the child his or her proper place in the hierarchy.

Thus, meat is not actually taboo, but receiving too large a share of meat can be harmful to a child by interfering with socialization and moral training. This is a complex belief system which cannot be fully described here, but it is important to consider its potential impact on Yoruba child feeding practices (Ogunlesi, 2010; Nwankwo & Brieger, 2002).

Knowledge of the advantages of breastfeeding does not necessarily lead to practice. In Ibadan area, only 5% of rural mothers were considered to be aware of advantages of breastfeeding compared with 93% of the urban elite, yet at twelve months, 100% of the rural mothers and none of the elite mothers were breastfeeding.

The author summarized by stating that socio-economic factors often determine attitudes and practices regarding breastfeeding. Rather than being seen primarily as something a mother does because it is important for the health of her baby, it is often viewed as something many women have to do because they are poor (Ojofeitimi, Esimai & Owolabi, 2013). Within Nigeria, breastfeeding rates vary widely with a very high rate reported in a study conducted in Sokoto state where the exclusive breastfeeding rate for the first 6 months of life was found to be 78.7%, but only 8% of mothers initiated breastfeeding within the first hour after delivery (Agunbiade & Ogunleye, 2012). Finding



from the study showed that most women gave other foods aside breastmilk to their children.

This study failed to identify the study design and the sampling technique that was used in conducting the study. Similarly, in Ghana, most women 83.8% indicated they gave porridge made of (winimis /maize) infant formula and tea to their babies (Aidam, Pe & Lartey, 2005). This practice has the tendency to affect breastfeeding practice of babies. The sampling technique if judgmental sampling was more likely to adjust the findings more to a particular results which could have revealed the high rates of mothers stating they breastfed their babies with other food substance.

Similarly, a study conducted in Edo State, Nigeria, reported that although 82% of the women were breastfeeding their babies, only 20% did so exclusively for 6 months whilst other were using infant formula, porridge and others liquid foods to feed their babies (Agho et al. 2011).

Another study in Edo State revealed that 16% of the mothers introduced bottle feeding to their infants when they were just 3 weeks old (Agho et al. 2011). This study however, could not state the sampling method that was used to sample the mothers and where specifically they were sampled since the setting was more likely to influence their response. However, in Igbo-Ora, Oyo State, 99.8% of the mothers sampled in a study gave plain water to their infants at birth (Blum, 2010; Ogunlesi, 2010). Less than half of these women had heard about exclusive breastfeeding, and only 7.5% of them knew any mother who was practicing exclusive breastfeeding (Blum, 2010; Ogunlesi, 2010).

In a descriptive study of 198 pregnant women, O' campo et al. (1992) found that women with low confidence in their ability to breastfeed had 3.1 times the risk of discontinuing



breastfeeding before six months postpartum when compared with women who had high confidence (95% CI=1.39-6.76). In 1999 Dennis and Faux developed and used Breastfeeding Self-efficacy Scale (BSES) to measure maternal breastfeeding confidence. In their study maternal breastfeeding confidence was significantly related to breastfeeding at six weeks postpartum ($F = 9.89$, $P < .001$) (Ogunlesi, 2010).

Similarly, Forster et al (2006) found a statistically significant relationship between high BSES score and duration of breastfeeding at four months ($\lambda^2 = 14.89$, $P < 0.001$). In a phenomenological study, deterioration in breastfeeding confidence during the postnatal period was a major factor in the decision to stop breastfeeding among women in developing countries (Dykes & Williams, 1999).

Although breastfeeding is most common in Ethiopia large numbers of mothers, do not practice appropriate breastfeeding and complementary feeding recommendations. These are largely due to lack of knowledge on how to feed properly and food insecurity (Sikorski et al., 2001). A recent report revealed that 27% of mothers offer water, butter and various types of food to nourish their babies, thus reducing the percentage of exclusively breastfeed and increasing the percentage of receiving complementary food at very young age (Otoo et al. 2013).

A cross sectional study conducted on factors associated with timely initiation and exclusive breast feeding among mothers of Axum town showed that, only 44.7% of infants started breastfeeding within one hour of birth, which was less than the national prevalence (Arts, Geelhoed, DeSchacht & Prosser, 2011)

The study revealed that prevalence of timely initiation and exclusive breastfeeding was 41.6% and 40.9%, respectively. About 45%, mothers squeezed out and throw away the



colostrums. And only, 17.2% of the mothers were giving the child other than breast milk in the first three days after delivery, out of this, 33.3% mothers gave cow milk. Surprisingly, mothers breastfed their child when the child cries and 81.6% mothers still breast feed their child. A majority, 59.1% of the mothers started complementary feeding before six months. Only 34% mothers got support from their husband while they breastfeed their child (Arts, Geelhoed, DeSchacht & Prosser, 2011).

A cross sectional study conducted on factors associated with exclusive breastfeeding practices among mothers in Goba district showed that from the total mothers who had ever breastfed their infant (98.7%), about 96.3% of them were breastfeeding at the time of the survey. The prevalence of exclusive breastfeeding for infants' aged less than six months was 71.3%. The results of month-specific lifetime exclusive breastfeeding analysis showed that the majority 88.8% of infants were breastfed exclusively for 2 months, while 84.4% of infants were breastfed exclusively to 2 to 3 months of age.

For mothers with infants older than six months, 68.2% reported giving breast milk with additional food, such as cow's milk (57.0%), cereal based fluids 45.2% and tea 23.9% before their infant reached six months (Schim, Doorenbos & Benkert, 2013). Some countries with low practice of exclusive breastfeeding rates include Chad 2%, Cote d'Ivoire 4%, Gabon 6%, and Sierra Leone 8% (Schim, Doorenbos & Benkert, 2013). Other countries in the region which have achieved high levels of exclusive breastfeeding include Benin 70%, and Rwanda 85% Ghana's exclusive breastfeeding rate is about 63% (Ukegbu et al. 2013).

A study conducted on low adherence to exclusive breastfeeding in Eastern Uganda in Mbale district in the eastern region of Uganda showed that though breastfeeding was



common, exclusive breastfeeding was low, with only about 7% of children 3 months old fed exclusively on human milk (de Montigny & Lacharite, 2004).

In their study, “Meat consumption was associated with less stunting among toddlers in four diverse low-income settings”, Lawoyin, Olawuyi and Onadeko (2010) sought to describe breast feeding practices and growth in infants and young children in diverse low-income settings prior to undertaking a complementary feeding trial. Regarding study design and methods used, the researchers conducted a pilot study in four countries of the Global Network for Women’s and Children’s Health Research: Democratic Republic of Congo, Zambia, Nigeria, and Pakistan. These sites were all characterized by low socioeconomic status. Most of the communities in all sites were areas defined by an area served by a health centre.

Lawoyin, Olawuyi and Onadeko (2010) adopted a cross-sectional descriptive study, with collection of data from two sets of children defined by age. A feeding questionnaire was administered to a convenience sample of mothers of 5- to 9-month-old infants. Measurements of length, weight, and head circumference of 12- to 24-month-old toddlers were recorded, and a different feeding questionnaire was administered to the mothers of these toddlers. Data were collected in at least 10 communities in each country; the same communities were used to collect data for both infants and toddler.

The subjects of their study were infants (5 to 9 months) and toddlers (12 to 24 months) attending clinics for routine visits. Twenty-five to thirty subjects from each group were enrolled in each community. Any child found to be visibly malnourished was referred to a local health facility for care. Their study was approved by the Colorado Multiple Institutional Review Board, by the ethics boards of the other US-affiliated universities



and of the Data Coordinating Centre, Research Triangle Institute, and by the ethics boards in each of the participating countries. The rights of the participants were carefully protected, as described in the Declaration of Helsinki. All caregivers gave written informed consent to participate and permission for their children to participate in their study (Lawoyin, Olawuyi & Onadeko, 2010).

All sites contributed to the development of common dietary questionnaires for the two age groups. The questionnaires were developed specifically to provide background dietary information considered of particular value for the subsequent feeding trial or to meet specific interests of individual sites. They were not designed to be sufficiently comprehensive to determine dietary diversity nor to be quantitative.

For frequency of consumption of foods of interest, the questionnaires offered possible choices of “most days,” “1 to 3 times per week,” “once a month or less,” and “never.” Senior team members from each site were trained in procedures for performing anthropometric measurements and administration of dietary questionnaires. Following a train-the-trainer model, these individuals then trained and certified the field personnel (Lawoyin, Olawuyi & Onadeko, 2010).

Identical equipment for anthropometric measurements was used at all sites. Recumbent length was measured by SECA 416 infant meters accurate to 0.1 cm, naked weight by Salter scales accurate to 120g, and head circumference by Inser-Tapes graduated to 1 mm. Two measurements were taken for each anthropometric variable. If the two measurements were not in agreement within a prescribed range (10g for weight and 0.4 cm for recumbent length and head circumference), a third measurement was taken and the two closest values were averaged (Lawoyin, Olawuyi & Onadeko, 2010).



Regarding data analysis, basic descriptive analyses were performed according to site and for the entire cohort. Means and standard deviations were calculated for continuous variables, and counts and percentages were calculated for categorical variables. Responses to questions on frequency of consumption of foods were collapsed into two categories: most days and 1 to 3 times per week (defined as “regularly”) vs. once a month or never.

Anthropometric data were characterized by the following z-scores: length-for-age (LAZ), weight-for-age (WAZ), head circumference-for-age (HCAZ), and weight-for-length (WLZ). These were based on 2006 WHO Growth Standard. Stunting was defined as LAZ < -2.00 and wasting as WLZ < -2.00 . Post hoc analyses were performed to explore associations between dietary patterns and physical growth in the second year of life (Lawoyin, Olawuyi & Onadeko, 2010).

Specifically, Lawoyin, Olawuyi and Onadeko (2010) used a logistic type general estimating equation (GEE) model to summarise the relationships between stunting and wasting and consumption of meat (including chicken and liver and not including fish). The model was controlled for age, sex, country of origin, breastfeeding status, and other dietary factors, including the consumption of staples such as cereal, maize, tapioca, rice, potato, cassava, and wheat; peanuts, beans, or insects; store-bought foods, liver, other animal-source foods (fish, dairy, eggs), infant formula, salt (iodized) and mineral supplements, such as zinc and iron.

Exclusive breastfeeding up to six months of age was a part of two feeding practices that came up first during the ranking of the top 15 preventative child survival interventions for the effectiveness in preventing under-five mortality (Mani, Dwivedi & Pandey, 2012).



Research has found out that EBF also reduces HIV transmission from mother to child when compared to mix feeding (Cooke, Sheehan & Schmied, 2003; Callen & Pinelli, 2004).

In Ghana, breastfeeding is almost generally practiced and extends for an average period of 20 months. Over a 98% of children have been breastfed at some time in their life and this has been stable for a number of years (Aborigo et al. 2014). There has been a remarkable improvement in the rate of exclusive breastfeeding from 5% in 1989 to 63% in 2008 (Aborigo et al. 2014). But on the other hand, exclusive breastfeeding, which is most important within the first six months of an infant's life, rather has a short duration. Infants are exclusively breastfed up to an average age of 4 months (Aborigo et al. 2014; Aidam, Pe & Lartey, 2005) and by the age of about 2 years, over 50% of infants may have been weaned.

2.4 Factors affecting women from practicing exclusive breastfeeding

Breastfeeding practices, including initiation and duration, are influenced by multiple interwoven factors which include health, psychosocial, cultural, political, and economic factors (Aidam, Pe & Lartey, 2005; Baumslag & Michels, 2010). Among these factors, decisions regarding initiation and duration of breastfeeding in low-income countries are influenced by education, employment, place of delivery, family pressure, nipple problem and cultural values (Agunbiade & Ogunleye, 2012; Aidam, Pe & Lartey, 2005).

Besides normative expectations, personal experiences and networks of support have influence on the forms and quality of breastfeeding practices. Largely, these factors exert



pressure on breastfeeding mothers thereby making their experience pleasurable or painful within time and space (Baumslag & Michels, 2010).

As an embodied experience, breastfeeding practices and experiences are context bound and culture dependent (Britton et al. 2007). Despite the available body of knowledge on breastfeeding practices in most African countries, studies interrogating the agency of breastfeeding mothers as lived within their socio-cultural context are limited (Callen & Pinelli, 2004).

In Ghana, for example, the median BF duration is 22 months and 53.4% of women with children less than six months breastfeed exclusively (Aborigo et al. 2012; Afrose, Banu, Ahmed & Khanom, 2012). Anecdotal evidence has it that in spite of high rates of breastfeeding practices among mothers in Kassena Nankana district, the practices of exclusive breastfeeding still remain low especially among first-time mothers (Adokiya, 2010). The study concluded that early introduction of complementary foods may be a risk factor for increased morbidity and undernutrition of children. It was showed that, stunting was 15.6%, underweight 15.3% and wasting 8.7%.

While in Accra, Ghana, a study conducted to assess factors associated with EBF highlighted that EBF practices are influenced by the level of education of the mother, place of delivery and positive attitude of the mother towards EBF practices before delivery as well as owning a house. All these were factors that would determine whether the mother was likely to breast feed exclusively (Aidam et al., 2005).

Also, EBF can be very effective among people with a strong breastfeeding culture and good counselling on lactation (Aidam et al., 2005). But although there is effective counselling on breastfeeding and its guidelines among the Kassena and Nankani people,



their cultural beliefs and practices prevents them from exclusively breastfeeding especially first-time mothers who have to go through some cultural rituals before they are deemed able to breastfeed (Aborigo et al., 2012; Adokiya, 2010).

Hence, the practice of EBF can sometimes be influenced by the mother's beliefs, intentions and fears. In Ghana we have a number of varying cultures which have different effects on a person's decision making or opinion. For instance in the Ghanaian setting, non-milk-based fluids rather than the milk-based are being used during non-exclusive breastfeeding practices (Aidam et al., 2005).

Also mothers request to breastfeed exclusively is determined by the beliefs and practices of the secondary caregivers which according to the cultural settings of rural families in Tamale, the mother has no control over. These beliefs and practices which involve "mallam water" ritual is the feeding of infants with herbal concoctions or teas for a number of days. It is perceived culturally to protect the infant against diseases and any harm which could be caused by the "mallam water". These practices has a negative influence on EBF practices (Iddrisu, 2013) since the breast milk is being supplemented with other liquids.

Biophysical factors including intrapartum experiences (Dennis, 2002b; Scott et al., 2001), early breastfeeding practices (Cernadas et al., 2003; DiGirolamo, et al. 2005; Scott et al., 2001) and perceived milk supply (Cooke, Sheehan & Schmied, 2003; Dennis, 2002b) have been demonstrated to influence the initiation and duration of breastfeeding among women. Among these researchers, no mention is made of how the identified factors among women have influenced breastfeeding practices.



The women's birth experiences impacts upon their breastfeeding behaviours, particularly the successful initiation of breastfeeding. For instance, there is a negative association between caesarean delivery and breastfeeding initiation (Scott et al., 2001) and a positive association between birth centre births and both the initiation and continuation of breastfeeding (Ekstrom, Widsrom & Nissen, 2003).

These findings of the perceived factors were further explained in a cross sectional studies. In a cross-sectional descriptive study of 60 women, McLeod, Pullon and Cookson (2002) found a significant correlation ($r = 0.487$, $p < 0.01$) between perceived insufficient milk supply and low maternal breastfeeding confidence at 11 weeks postpartum. They also found a moderate correlation between maternal confidence and perceived sufficient milk supply.

They explained that women who believe that they are able to breastfeed and to deal with any breastfeeding challenges lead to perceive that they have sufficient milk supply. However, the women who doubt their breastfeeding ability may perceive insufficient milk supply and start complementary feed (McLeod, Pullon & Cookson, 2002).

Similarly breastfeeding difficulties including nipple pain do affect short term breastfeeding duration but not long term duration (DiGirolamo et al., 2005). DiGirolamo et al (2005) believe that women who experience problems develop greater self-efficacy and that is positively associated with breastfeed longer as the woman develops confidence in her ability to solve breastfeeding problems.

Some authors indicated that women, who are positive thinkers and problem solvers, perceive breastfeeding problems as "normal", whereas women who are self-doubting, anxious and rigid in their breastfeeding practice are more likely to focus on negative



aspects of breastfeeding (Dennis, 2002b). Insufficient milk supply is one of the most common reasons women give for breastfeeding cessation (Miracle, Meier & Bennett, 2004; DiGirolamo et al., 2005).

This is a biological factor which has a strong psychological component. Only about 5 percent of women actually have physiologic and real insufficient milk supply although up to 50% report that they have insufficient milk for their baby (Miracle, Meier and Bennett, 2004). Studies in different countries have identified various factors associated with the early abandonment of EBF among young mothers.

In Brazil study conducted on factors associated with low incidence of exclusive breastfeeding for the first 6 months showed that that adolescent mothers had a 1.5 times greater risk of abandoning EBF before their babies were 6 months of age when compared with adult women. Low socio-economic status, difficulties with breastfeeding like pain, sore nipple and mastitis, the presence of a partner and negative familial influence are all factors associated with the early abandonment of EBF in young mothers (Marques & Lopez, 2013).

A cross sectional study conducted on determinants of exclusive breastfeeding among mothers in Ghana, Laos USA, Kingoma region of west Tanzania and Harar Ethiopia revealed that mothers who delivered at health facility had a higher probability to practice exclusive breastfeeding compared to mothers who delivered at home, or a private health facility. Place of delivery has been found to be associated with exclusive breastfeeding (Cooke, Sheehan & Schmied, 2003; De Oliveria, Camache & Tedston, 2001; Dennis, 2002b).



A cross sectional study conducted in Bahrdar city administration found that mothers who were unable to read and write or in primary school were 3 times more likely to practice EBF than those who completed secondary school or higher.

This might be explained by the fact that women who were better educated could have a better opportunity for employment that could lead them to be out of house the whole day (Dykes & Flacking, 2010). A study at Morogoro, Tanzania, indicated 43% of mothers in the rural areas are discarding colostrums (Sikorski et al. 2003). This study could not identify the type of rural and urban settlements that were discussed. Study in Ethiopia reported the mothers are pressured by family member (mother-in-law) to introduce other liquid (Martens, 2002; Marques & Lopez, 2013).

Cross sectional study design done in Uganda, aiming to identify the factors affecting the infant feeding. The study indicated most of nursing mother started early prelacteal feeding, mainly to wait the breast milk flow; also believed that, water used to clean the baby throat, to reduce baby's hungry, About 51.1% infant were given water based liquids as pre-lacteal feeds within the first three days of their life (Dykes & Williams, 1999).

The another study in Tanzania at Morogorro, Igunga and Kilimanjaro reported, introducing of pre-lacteal is norm common in both rural and urban, believes water calms the crying baby (Forster, McLachlan & Lumley, 2006; Dykes & Flacking, 2010). The attitude of the woman's partner to breastfeeding is crucial to both the woman's attitude and her breastfeeding behaviour. In a longitudinal study of 108 expectant couples in (UK), Scott et al (2004) reported that a woman's infant feeding attitude was significantly correlated with her partner's attitude ($r = 0.67$, $p < 0.001$).





In a prospective Cohort study of 1069 Australian women, the likelihood of breastfeeding at discharge was higher among women who perceived their partner preferred them to breastfeeding compared to women who perceived their partner preferred bottle feeding or were unsure about their baby's feeding method (OR = 9.13, 95% CI 4.83–17.26). In that study women whose partner preferred breastfeeding were less likely to stop breastfeeding at any time (RR = 0.58, 95% CI 0.45–0.75) (Scott et al., 2001). Other studies also reported that the support of the infant's father and encouragement of society in general, plays an important role in the woman's success of breastfeeding (de Montigny & Lacharite, 2004; Dykes & Flacking, 2010).

Study concerning the attachment during breastfeeding conducted in Uganda found that, many mother had the problems with positioning and attaching their babies at the breast (Nwankwo & Brieger, 2002). Another study conducted at the same area in Uganda to identify the common breast feeding problems, the commonest problem were cracking of nipples, breast feeding engorgement, and mastitis (Cernardas et al., 2003).

The traditional practice among the Yoruba (the major ethnic group in southwestern Nigeria has been to provide prelacteal feeds of water or an herbal infusion known as *agbo* (Ojofeitimi, Esimai & Owolabi, 2013; Nwankwo & Brieger, 2002). The majority of Yoruba babies born in hospitals and maternity centers are given first feeds of water or glucose water (Nwankwo & Brieger, 2002).

In the major urban center of Ibadan, it was found that the majority of women discarded colostrum for the first 24 hours, citing reasons such as hospital advice or an absence of milk in the breast. The author concluded that the practice of discarding colostrum was not based on underlying cultural beliefs. However, while the majority of mothers (66%) in

florin, Kwara State, said colostrum should be fed, one third said it should not be given because it is dirty and yellow in color (Nigeria Demographic and Health Survey, 2013). Compared to other regions of the country, the southwest has a much lower proportion of mothers who has had practiced good breastfeeding.

A cross sectional study conducted on factors associated with Exclusive Breastfeeding Practices among Mothers in Syria showed that smoking was the only variable that was significantly associated with exclusive breastfeeding (Dennis, 2002b). While maternal age, maternal education, husband education, monthly income, mothers' and fathers' employment status, household composition, infant's gender, and infant's birth weight did not have any significance association with exclusive breastfeeding. The study also showed that a significant association exists between parity, relatives advice not to add formula to breastfeeding, and husbands' advice not to add formula to breastfeeding and exclusive breastfeeding practice among women.

A study conducted in Kuwait by Cooke, Sheehan and Schmied (2003) revealed that maternal education and higher parity was positively associated with breastfeeding duration. Similarly, a study by Callen and Pinelli, (2004) depicted that maternal education was positively associated with EBF. A cross-sectional study conducted in Mecha district, North West Ethiopia showed that mothers who reported having three and above ANC visits during pregnancy, who got PNC Counseling on infant feeding and who have adequate knowledge on breastfeeding were positively associated with breastfeeding. A cross-sectional study conducted in Goba district, South East Ethiopia on determinants of EBF practices in Ethiopia showed that age of infants were associated with EBF practice (Baumslag & Michels, 2010). Cross-sectional studies conducted in rural area of



Egypt and Bahir Dar city administration of Ethiopia showed that sex of infant were associated with EBF practice (Aidam, Pe & Lartey, 2005).

A study conducted in Vietnam showed that compared to infants who were exclusively breastfed, infants who were not exclusively breastfed were more likely to have diarrhea; another study from Bangladesh confirmed that EBF has a protective effect against infectious disease related morbidity in infancy (Callen & Pinelli, 2004).

2.5 Health workers role in optimal breastfeeding practices among women

Exclusive breastfeeding to six months of age has been one of the primary aims of nutrition and public health programs across the world (World Health Organisation, 2010). Midwives and lactation consultants are actively engaged in attempting to increase women's rates of breastfeeding to at least six months post partum. Yet, in spite of these efforts, in developed and less developed countries, most women do not continue breastfeeding until six months postpartum (Williams, 2005).

Witters-Green (2013) emphasizes the importance of health workers support in increasing the duration of breastfeeding. In their study of 488 Swedish women, they found that multiparous women ($n = 294$) whose health workers told them about their breastfeeding history breastfed longer than women whose mothers did not ($P < 0.006$). This study concluded that health workers were very key in the promotion of EBF among women through their regular education on the importance of good feeding practices at ANC and at post natal wards.

Although research indicates that in Ghana and the United States of America, most mothers are provided breastfeeding guidance at antenatal and postnatal clinics and they



show signs of being well informed about EBF practices, adherence is minimal. Some studies conducted between 2005 and 2014 indicate that, there has been a steady increment in exclusive breastfeeding from 51% to 84%. This was among infants under-six months of age in Ghana as well as Greensboro in the United States of America (Aidam, Pe & Lartey, 2005; Iddrisu, 2013; Witters-Green, 2003).

A mother's decision to breastfeed does not only depend on the mother's knowledge, or perception on EBF but also on the influence of other decision makers of the family. These may include mother in-laws, grandmothers and other relations who have questioned the practicability of EBF and introduced water, traditional medicines, and porridges to infants before 6 months of age (Aborigo et al. 2012). They may possibly support EBF if they were well informed by health workers. Therefore if health workers (nurses) are knowledgeable and share information on EBF practices verbally without the needed counselling skills, it might not aid in influencing the practice (Wolfberg et al. 2004).

Witters-Green (2003) suggested providing an opportunity to health workers to discuss their breastfeeding perceptions with each mother as a helpful intervention to support breastfeeding (UNICEF/WHO, 2008). Health care providers are primary source of accurate and helpful information. A study done by Sikorski et al. (2003) reported that, health worker information to nursing mothers are valued and taken as the final word. Adequate exclusive breastfeeding information from health care providers' is key factor to exclusive breastfeeding practices (Sharps, El-Mohandes & El-Khorazaty, 2003; Scott, Shaker & Reid, 2004). Women frequently describe looking to health professionals for



support in getting breastfeeding established. This is particularly true of women with little family support.

Confidence and self-efficacy with breastfeeding are critical enablers of breastfeeding success. Yet the healthcare culture within which health professionals practice contributes to support being provided in a way that undermines rather than builds on women's confidence in breastfeeding. Developing a healthcare system culture that can support health professionals to practice patient-and family-centred care is important if the healthcare system is to do more good than harm.

Taking a patient- and family-centred approach to care involves working collaboratively with moms and babies within the context of their individual families and lives (Scott, Shaker & Reid, 2004). The culture of the healthcare system is widely described as a barrier to breastfeeding across much of the literature reviewed. Women describe an overall lack of individualized or personalized care. Hospital organizational factors described as being not helpful include: rules that prevent the partner from staying with the new mom and baby; staff shortages; conflicting advice and information; the judgmental attitudes of some health professionals; and even rude, impatient or unprofessional behaviour exhibited by health professionals (Scott, Shaker & Reid, 2004; Sikorski et al. 2003).

Women describe feeling like “naughty children” when they try to breastfeed and fail, and are “reprimanded” for not doing what is expected. *“No one offered to show me how to breastfeed, bath or change my baby, and I was shouted at for falling asleep and not feeding the baby although he hadn’t woken up either”* (Ryser, 2004; Savage, Anthony, Lee & Kappesser, 2013).



Other women describe being afraid to ask for help from health professionals because of the way they are made to feel, as this quote illustrates: *“Some doctors, midwives, and nurses made me feel stupid when I asked a question or talked down to me, though it was my second child”* (Ryser, 2004).

A specific issue related to hospital-based care is the lack of time nurses and midwives have to establish helpful relationships with new mothers - relationships that enable them to provide the kind of support that women require to get breastfeeding started (Dykes, 2005b; McInnes & Chambers, 2008). As one woman states:

“It would be nice if somebody could just come and spend 10 minutes with you to talk about breast feeding. If they did that they could learn about your concerns and anything you feel you need help with...I’m not very confident at all” (Dykes, 2005b, p246). The way hospital wards are staffed can prevent nurses and midwives from spending very much time at all with individual women, and create huge challenges to providing continuity of care.

This contributes to the conflicting advice many women describe receiving (Dykes et al, 2005; McLeod, Pullon & Cookson, 2002) as illustrated by this quote: *“I’ve seen different people this morning and they have all had a different approach”* (Dykes, 2005b, p247).

Another barrier to breastfeeding is the promotion of formula in hospitals and in other health and human services settings. This is a contributing factor to the development of a bottle-feeding culture and it has been shown to decrease the rates of exclusive breastfeeding (Mertens, 2015; Martens, 2002). Hospitals across North America often provide formula advertising and free samples as part of the packages they routinely give to new moms (Muchina & Waithaka, 2013).



Given the importance of family support in initiating and sustaining breastfeeding, actively supporting and involving family members is necessary. Women's partners want to be involved in the care of their babies and in supporting breastfeeding in whatever way they can (Marques & Lopez, 2013; Leininger, 2013). Health professionals can support fathers by giving them more information about breastfeeding and its benefits, and providing them with suggestions about how they can help their partners both emotionally and practically.

2.6 Ways of encouraging women to practice exclusive breastfeeding

Breastfeeding benefits for newborns and infants are well-documented (WHO, 2013). Women do not practice exclusive breastfeeding or do not continue breastfeeding for the recommended duration. Supplementation or exclusive formula feeding and the introduction of solid foods before six months of age are two practices that go against the WHO recommendation.

Sub-Saharan Africa has the poorest child health record, accounting for over half of all deaths of children worldwide. The most common causes of mortality are pneumonia and diarrhea, together accounting for over 30% of child deaths, but these diseases may in part be prevented by exclusive breastfeeding. Exclusive Breastfeeding promotion has been identified as one of the interventions with the highest life-saving potential globally, and if all children were optimally breastfed, this could potentially save 13% of child deaths worldwide (Iddrisu, 2013).

There have even been select reports of medical professionals pushing the "breast is best" message, regardless of the mother's circumstances and choices, leading some mothers to





report they are breastfeeding “just to keep the nurses happy” (Ryser, 2004; Oweis, Tayem & Froelicher, 2013). These overt instances of pressure from health professionals are likely extreme, rare examples. For many years, physicians, breastfeeding consultants, nurses, and clinical experts have been aware that encouraging mothers to breastfeed by supporting them is helpful, but that pressuring them or creating guilt for lack of success is not (Spencer, 2013; Sharps, El-Mohandes & El-Khorazaty, 2003).

Nonetheless, even when healthcare professionals are sensitive in their approach, family, friends, and even strangers share their advice about best practices for breastfeeding initiation, duration, and weaning. Interviews with new mothers have revealed that when the expectations of others do not match the choices of the mother, mothers can often feel guilt (Witters-Green, 2013; Ojofeitimi, Esimai & Owolabi, 2013).

An overview of nine systematic reviews by Graffy and Taylor (2012) about interventions to support and promote breastfeeding revealed that multifaceted interventions were more likely to be effective than single interventions in increasing the initiation and duration of breastfeeding (Graffy & Taylor, 2012).

They reported that the combination of the following strategies was an effective method in improving breastfeeding practices. The strategies that they recommended included education of mothers, peer support and changes to hospital practices such as rooming-in and early skin-to-skin contact, staff training, policy, paid maternity leave, media campaigns/ programs (Grassley & Eschiti, 2010). According to this study educational intervention that span both the prenatal and postnatal periods are the most effective.

In one of their systematic review considering 37 experimental and quasi experimental studies they found that a combination of group education sessions, home visits or

individual sessions, which started in the antenatal period and continued into the postnatal period was the most effective strategy in increasing the duration of breastfeeding (De Oliveria et al., 2001).

A weakness of this systematic review is that the studies do not provide information of the details of the interventions. For instance no detail is given about the educational strategies, the learning materials, the frequency and duration of each session, the qualification and experience of educators or the settings for learning. In a Cochrane meta-analysis, Bronner et al (2001) systematically reviewed 34 randomised or quasi-randomised controlled trials (29,385 mother-infant pairs) from 14 countries. They found that all forms of lay and professional support increase the duration of breastfeeding up to the first six months postpartum (0.91, 95% CI 0.86 to 0.96). A combination of lay and professional support extended the duration of any breastfeeding significantly.

Although this Cochrane review found clear evidence of the benefit of support, it did not include the effect of the support from father, family members and mothers own social support networks during lactation. Some studies suggested educational strategies to increase maternal self efficacy instead are more effective than those strategies that focus on enhancing knowledge in improving women attitude and practice of breastfeeding (Hoddinott, Chalmers & Pill, 2006; Hannula, Kaunonen & Tarkka, 2014).

In a descriptive study of 63 Canadian women, observing breastfeeding role models through videotapes and pictures significantly increased women's breastfeeding self efficacy compared to women who did not observe those videotapes or pictures ($P < 0.01$) (Hussein, 2010). In an educational intervention study of 70 women in Western Australia, breastfeeding rates at six weeks postpartum were significantly increased in the



intervention group who had antenatal breastfeeding education with “hands on” activities ($\chi^2 = 28.8$, $df = 1$, $p < 0.001$).

Place of the delivery is one of the factors that may lead to proper or improper exclusively breast feeding. Study conducted in Uganda at Rakai and Ghana has shown that exclusive breastfeeding was significantly associated with delivery at hospital (Afrose, et al. 2012)/Guatemala studies, reported a place of delivery is associated with early initiation of breastfeeding, a mothers who gave birth at health facility initiate breastfeeding early (Aidam, Pe & Lartey, 2005). Therefore, health care providers could encourage women to deliver at health care centres.

Although there are social costs associated with breastfeeding for mothers, there can also be social costs associated with not breastfeeding (Blum, 2010). Because of the widespread beliefs about the positive effects of breastfeeding on a child, women sometimes feel extensive social pressure to breastfeed. Although most mothers are physically capable of breastfeeding, other barriers just as real can make breastfeeding nearly impossible.

If women do not have access to accurate information regarding proper breastfeeding techniques, they may not produce enough milk to support the needs of their infant or may develop physical problems that make breastfeeding painful (Baumslag & Michels, 2010). Therefore, health care providers could make conscious efforts to provide enough information to women concerning breastfeeding practices.

Furthermore, many mothers must work to financially support the needs of their children and are not allowed convenient or flexible breaks to breast pump, nor are they given the space necessary to pump and store their breast milk. Whatever the reasons behind the



decision not to breastfeed, many women feel that this decision will lead to the perception that they are “bad mothers” (Blyth, et al. 2004).

In many quantitative studies, the decision to breastfeed is largely a matter of individual choice, and the intention to breastfeed a key predictor of breastfeeding initiation and duration (Sikorski et al. 2003; Blyth et al., 2004). To make better feeding choices, mothers need specific, culturally appropriate information that responds to their constraints and concerns (Weiner and Weiner, 2011; Webb, Marks, Lund-Adams & Abraham, 2002).

High qualities of counseling improve an adherence and long duration of exclusive breastfeeding up to six months (WHO, 2006). The research carried out in Zambia at Nola area, under the program of PMTCT, reported that nursing mother who had received adequate counseling on exclusive breastfeeding had high rate of practicing exclusive breast feeding than those who do not, 56% to 70% respectively (Scott, Shaker & Reid, 2004).

Mother who had the knowledge regarding the importance of exclusive breast feeding was likely to adhere to exclusive breastfeeding compared to those with limited knowledge on importance of exclusive breastfeeding conducted in South Africa, Zambia and Zimbabwe among HIV infected and HIV uninfected mothers indicated that consistent messages and high quality of counseling improved adherence and longer duration of exclusive breast feeding up to six months (Scott, Shaker & Reid, 2004).

A major theme that emerged here is the importance of creating spaces within different kinds of communities where women feel truly comfortable breastfeeding. Women who are breastfeeding consistently describe feeling isolated and excluded from society,



primarily because of the social disapproval around breastfeeding in public places. In particular, workplaces and schools are described as settings where women feel a lot of discomfort both with breastfeeding and pumping. Young people in particular express a lot of disapproval about breastfeeding in public.

As a result, many young women stop breastfeeding sooner than they intended to because of the sense of isolation that results from this reluctance to breastfeed in public places. Developing workplace and school policies and practices that actively support breastfeeding, as well as peer support initiatives can positively contribute to breastfeeding rates (Schmied & Barclay, 2014; Schim, Doorenbos & Benkert, 2013).

Social support according to McGrath (2000) defined as “an individual's perception of supportive behaviours from others in their social network that will ultimately be beneficial to that individual” (Schim, Doorenbos & Benkert, 2013). For the purpose of this study breastfeeding support is women’s perception of supportive behaviour from their social network.

Woman’s experience support when they receive care, concern, respect, understanding, advice, encouragement and practical help (Coffman and Ray cited in Willams, 2005).

The word ‘confidence’ is usually translated to ‘Self-efficacy’ in the research literature. ‘Self efficacy’ is defined as an individual’s confidence in his or her perceived ability to perform a specific task or behavior (Bandura, 1997). Self-efficacy has been reported to influence individual choices, goals, emotional reaction, coping and persistence (Witters-Green, 2003).



To enable mothers establish and sustain exclusive breastfeeding for 6 months, WHO/ UNICEF (2003) recommend:

- Initiation of breastfeeding within the first hour of life
- Exclusive breastfeeding, that is the infant only receives breast milk without any additional food or drink, not even water
- Breastfeeding on demand – that is as often as the child wants, day and night
- No use of bottles, teats or pacifiers

Also WHO recommends some successful steps to exclusive breastfeeding and these are:

- Have a written breastfeeding policy that is communicated to all health staff
- Train all health care staff in skills necessary to maintain this policy
- Inform all pregnant women about benefits and management of breastfeeding
- Help mothers initiate breastfeeding within one hour of birth
- Show mothers how to breastfeed and how to maintain lactation even if they are separated from their infants
- Give infant no food or drink other than breastmilk unless medically indicated
- Practice rooming in-allow mothers and infants to remain together 24 hours a day
- Encourage breastfeeding on demand
- Give no pacifiers or artificial nipples to breastfeeding infant

2.7 Strengths and limitations of this review

This critical review of the literature was reviewed to capture the knowledge of women and their partners or supporters of the barriers, challenges and enablers to the initiation and duration of breastfeeding. Qualitative and quantitative researches were specifically



targeted in order to get best firsthand knowledge, attitudes and experiences of women related to breastfeeding practices.

The review identified a large volume of reasonable to good quality published qualitative and quantitative researches in this area. There is, however, inadequate research related to breastfeeding practices of women conducted in Ghana that were published. Much of the research captured in this review is from the United States, U.K but there are also sizeable bodies of literature from the West Africa and from East African countries.

Both the developed and the developing countries appear to have considerable variability across groups of women with respect to breastfeeding initiation and duration. Both countries have some commonalities with strong bottle-feeding cultures. There seems to be a strong breastfeeding culture across majority of the studies regardless of country specific or to particular sub-populations of women such as low socioeconomic status, younger moms, working moms and/or particular ethno-cultural groups.

A major strength to this critical review of the research is the volume of literature reviewed that enabled the identification of key themes related to the barriers and enablers of breastfeeding that cut across boundaries related to SES, age, ethno-cultural experience, family situation, and professional or working status. Although strategies for increasing breastfeeding rates still need to be tailored for different sub-groups and individualized for women within these sub-groups, the broad strategies are more the same than different.



CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presents the research methodology that was used to conduct the study. The subsections include; brief profile of the study area, research design, research population, sample size determination, sampling procedure, research instruments, data collection procedures, limitations of the study, validity and reliability of the study, data analysis and ethical considerations.

3.2 Profile of the study area

3.2.1 Location and Size

The Nanumba North District is one of the twenty-six districts in the Northern region of Ghana. It was created as a separate district in 2004 under LI 1754 when the then Nanumba District was split into two, North and South, with an area of 2260.8 sq/km. It is found in the eastern part of the Northern Region and lies between latitudes 8.5° N and 9.25° N and longitudes 0.57° E and 0.5°E. The district shares boundaries with East Gonja to the west, Yendi Municipal to the north. To the east, it shares its boundary with Zabzugu, the south with Kpandai and to the south east the Nanumba South Districts. The administrative district capital is Bimbilla (GSS, 2010).

3.2.2 Population size, structure and composition

The population of Nanumba North District, according to the 2010 Population and Housing Census, is 141,584 representing 5.7 percent of the Northern region population of 2,479,461. Males constitute 49.4 percent and females represent 50.6 percent. The



majority (71.7%) of the population in the district reside in rural localities. The district has a sex ratio of 97.8, meaning that for every 100 females there are 98 males.

The district has a youthful population, with close to half (47.6%) of the population aged below 15 years. The elderly population (population aged 60 years and older) is relatively small (5.7%) and coupled with the youthful nature of the population, the population pyramid for the district has a broad base which tapers off at the top. Age dependency ratio for the District is 106.8, meaning that on the average; one person in the working age has one more person to take care of (GSS, 2010).

3.2.3 Fertility, mortality and migration

The Total Fertility Rate for the district is 3.4. The General Fertility Rate is 97.5 births per 1,000 women aged 15-49 years. The Crude Birth Rate (CBR) is 22.2 per 1,000 population. The crude death rate for the district is 4.6 per 1,000. The majority (78.5%) of migrants in the district were born in other districts in the Northern region. For those who were born in other regions, the majority (722) were born in the Volta region, followed by those who were born in the Brong Ahafo region (GSS, 2010).

3.2.4 Household Size, composition and structure

The district has a household population of 139,405 with a total number of 5,037 households. The average household size in the district is 8.2 persons per household. Children constitute the largest proportion of household members accounting for 54 percent of household members on the average. Household heads constitute 12.1 percent of household members whilst spouses make up 9.7 percent.

The majority (58.5%) of the population reside in extended households, that is, households made up of head, spouse, children and relatives of the head of household. Nuclear



households (head, spouse(s) and children) constitute just about one third (34.2%) of the total number of households in the district (GSS, 2010).

3.2.5 Marital status

More than half (54%) of the population aged 12 years and older are married and 39.0 percent have never married. The population in consensual unions, separated or divorced constitute one percent each while those widowed form four percent of the population aged 12 years and older.

Except for the population widowed where the percentage for females (6.9%) far exceed that of males (0.9%), a similar trend is observed for both males and females in the remaining marital categories (GSS, 2010).

3.2.5 Ethnicity

The District has a heterogeneous population in terms of ethnicity but is populated by two major ethnic groups, the Konkomba (60.6%) and Nanumba (31.0%) and a few other minority tribes, including the Chokosis (1.3%). Major languages spoken in the District are Nanungli and Lekpakpan (GSS, 2010).

3.2.6 Religious affiliation

The religious composition of the district is largely ethnic, especially with the dominant groups. Whilst the Nanumba are predominantly Moslems, the Konkomba are largely Christians and atheist. However, those affiliated with the Traditional religion (42.0%) form the highest percentage in the district, followed by those affiliated with Islam (34.7%). Catholics (7.4%) and other Christians constitute the minority (GSS, 2010).



3.2.7 Health

For health care delivery, the district is divided into six sub-districts, each with at least a health centre. In all, there are eight health centres under the management of the District Health Management Team (DHMT). There are four health sub-districts with six facilities, one of which is provided by the Catholic Mission in the District. There is currently a District hospital in Bimbilla with three doctors, one medical superintendent/doctor supported by two Cuban doctors delivering services to the people in the district. The patient-doctor ratio was at 47,195:1 in 2010 (GSS, 2010).

3.2.8 Water and Sanitation

Currently Nanumba North District depends on one conventional treatment plant system which services a section of Bimbilla town and Dangbenayili, 239 functioning boreholes, 3 hand-dug wells which dry up in the dry season and 20 dams/dugouts and streams. There are 17 public toilets in the District. Household latrines are mostly found in government premises and smaller communities.

Majority of the people in the district practice the free range system as a method of excreta disposal. About 79.4 percent of the communities practice this method. In 2006, the district was ranked the 9th most guinea worm endemic district in Ghana. However through UNICEF I-WASH programme no case of guinea worm was reported in the district since 2009 (GSS, 2010)

3.2.9 Economy

The Economic potential of the district lies in its vast arable land with a huge agricultural investment potential. The District is predominantly agrarian with (78.6%) of the people engaged in the agriculture and forestry sector (2010 PHC). Out of the total land area of



173,459 hectares in the District, about 130,094 hectares representing 75% are agricultural lands. However, only 46,566 hectares representing 28% is under cultivation.

There is currently no area under irrigation despite the fact that two major rivers; Oti and Daka run through the district. The district also has some valleys such as the Kaleogu and Sabonjida for commercial rice production, which are under-utilized. Crops grown are roots and tubers, cereals, legumes and tree crops such as teak and cashew nuts. Animal rearing including poultry keeping is an integral part of the economic activity of every household (GSS, 2010).

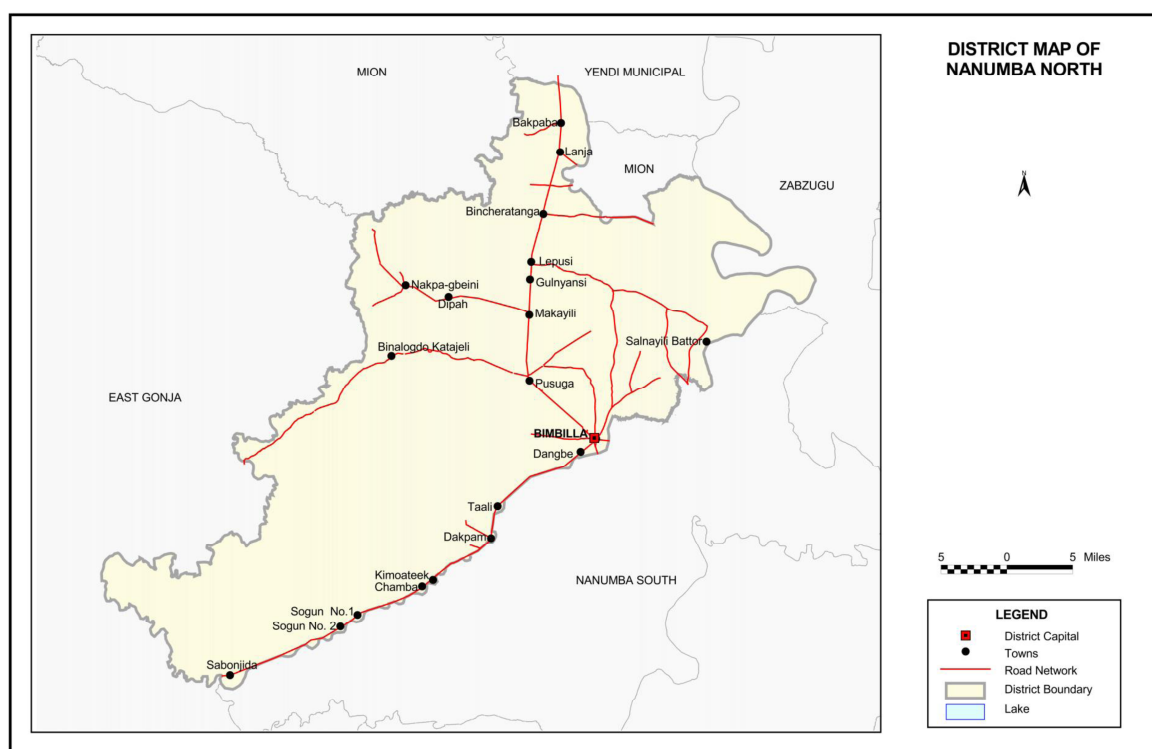


Figure 3.1: Map of Nanumba North district



3.3 Research design

A research design guides the researcher in planning and implementing the study in a way that is most likely to achieve the intended goal (Creswell, 2005). This study employed a descriptive cross sectional study design using a survey to collect the data. The research used both quality and quantitative data approach to gather the primary data. This complementary mixed method design was beneficial in the data collection process. Considering the fact that, most of the answers were not provided in the quantitative approach.

Therefore, the qualitative approach was used to complement that. A qualitative approach is well suited for exploring the intricate issue of misconceptions and barriers to the practice of breastfeeding among people where little knowledge exist about the issue. Qualitative methods allow for a free form of investigation into topical areas, for which there is little prior knowledge.

They are also useful for examining sensitive issues, such as; breastfeeding, and cultural preferences. This approach is particularly useful in the context of Northern society, where open discussion of childbirth practices is unacceptable and research related to breastfeeding can be difficult.

3.4 Research population

In this study, all women in the study area were considered as the target population and the accessible population was drawn from this population particularly women in fertile age (WIFA) who met the study inclusion criteria. These respondents were sampled from the health centres, houses and at the market.



3.4.1 Inclusion criteria

- Only sexually active females aged (18-49) years were considered
- Only females who were willing to be used as study participants
- Nurses and midwives in the study area were contacted
- Women having a living child aged less than one year
- Caretakers of babies in the absence of the mother

3.4.2 Exclusion criteria

- Females who were not willing to response to the study variables

3.5 Sample size determination

The study involved 200 study respondents' from the study area. This sample size was calculated using the sample size to proportionate approach at the study area where respondents were sampled from using a Confidence level of 95% with a margin of error of 2.5% and a desired precision of 5%.

At the places where respondents were sampled from, the number of respondents who met the inclusion criteria was expressed as a percentage of the total number of the target population and the figure that was obtained constituted the number of respondents that were interviewed in that place.

3.6 Sampling technique

Purposive sampling technique was used to sample the study area whilst simple random sampling technique was used to select the respondents who met the study inclusion



criteria. This sampling technique was employed to give each respondent in the study place an equal chance of being selected for the study.

3.7 Research variables

3.7.1 Dependent variable

Exclusive breastfeeding is dependent variable and was measured as a proportion of respondents who has breastfed their infants exclusively for the first six months of life.

3.7.2 Independent variables

The independent variables in this study were socio demographic characteristics (age, education level, marital status, parity and occupation), social-culture (place of delivery, pre-lacteals, perception, cultural beliefs/customs, peers group, family support/relatives support), other variables included maternal and pediatric difficulties in relation to breastfeeding as well as respondents breast feeding knowledge.

3.8 Study measurements

Attitude towards EBF was measured using a 5 points Likert scale. The order of scoring for negative statements was reversed (disagree = 3, agree =2, and neutral= 1) and the reverse was true for positive statements.

3.8.1 Research assistants training

Research assistants were provided with two days training on research objectives, administering research tools and research ethics. The criteria used for the selection of the research assistants were based on their ability to speak and understand the local language



fluently and having fair knowledge of the geographical setting and culture of the study area because of the caliber of study population that were contacted as respondents and perhaps based on their previous experiences in data collection in similar topic especially in the study area.

3.9 Data collection techniques

The study used a structured questionnaire, in-depth interview guide, and focus group discussion guide as techniques for collecting data from the respondents. In the quantitative phase of this study, a structured questionnaire was the dominant method while face to-face in-depth interviews and focus group discussion guide was adopted in the qualitative phase to enhance, as well as clarify, the quantitative results that were generated in the survey. This decision was influenced by the nature of the research objectives and the position that mixed methods provided the researcher the opportunity to understand social reality from different research paradigms.

3.9.1 Structure questionnaire

A structured questionnaire with both closed and open-ended questions was used in this study to collect the primary data. The idea of using questionnaire was considered because it can be administered to a large number of study participants concurrently with uniform instructions and explanations. The questionnaire was designed in line with the study.



3.10 Data collection methods

3.10.1 Sources of data collection

Data was gathered from both primary and secondary sources. Primary data was obtained using a structured questionnaire. Copies of the questionnaire were administered by the researcher and research assistants at the study area. Secondary data was obtained from reliable records and related literature, such as books, journals and internet articles.

3.10.2 Focus Group Discussions (FGDs)

A focus group discussion was organized for the study participants. This method was employed to gather data on the qualitative aspect of the research work. Qualitative methods allow for a free form of investigation into topical areas, for which there is little prior knowledge. Probing as a communication strategy was used as a clarity seeking methods to interact with the study participants. Data was then translated into English afterwards before data analysis.

3.10.3 Key informants interview

Face to face interview as a method of data collection was conducted with nursing and midwives at the study area to gain insight into the topic under consideration.

3.11 Reliability and validation of the instrument

On the basis of an extensive and in-depth review of literature that covered a wide range of source material that was collected to date, a draft questionnaire was designed. The initial draft of the instrument was subjected to face validating by the study supervisor.



The essence of validating the instrument was to ensure that it would elicit the information it was designed for. According to Creswell (2005), validity refers to the extent to which an empirical measure adequately reflects the real meaning of a concept under consideration.

The relevance of the items to the purpose of the study was checked, clearly stated and confirmed to be capable of eliciting for the right response from the respondents. To determine the reliability of the instruments, they were tried and tested using few randomly picked female teachers (4) in the Tamale Metropolis.

Creswell (2005) recommended pre-testing of health research instruments before use in actual field of data collection. The Tamale Metropolis was used for piloting of 5 women to avoid contamination of respondents. Tamale metropolis was chosen because it has the same characteristics with the area of study. All questions that produced tentative results were reframed.

3.12 Data analysis

The data was analyzed using the Statistical Package for Social Science (SPSS) software version 22.0 and Microsoft word 2013. Descriptive and inferential statistics were used to describe and make inferences from the results where applicable. The analysis of the data was presented descriptively in the form of frequency tables and charts. All qualitative data were analyzed manually. Texts in terms of narratives were adopted to support the results that were obtained from the qualitative data.

This approach was adopted because it allows for in-depth analysis of the dynamics of women and the sentiments of women that might not be easily obtained using other



approaches such as statistical methods. ANOVA and crosstabulations were used to compare the results. All statistical tests were performed using two-sided tests at the 0.05 level of significance. P values less than 0.05 was considered significant.

3.13 Ethical considerations

Permission was sought from the University for Development Studies via my supervisor before embarking on the study. The questionnaire was perused by the study supervisor before they were administered. An informed consent of the respondents was sought and in the consent form, the objectives and significance of the study were clearly stated and explained to the potential respondents.

Respondents were asked to decide whether to partake in the study or not. Anonymity and confidentiality of the actual sources of information from the study was ensure by not indicating the names of individuals who took part in the study. Names were not provided on the data collection tools and therefore no clues were provided for someone to trace the source of information.



CHAPTER FOUR

Results

4.1 Introduction

This chapter presents the results from the data that was collected from the respondents. It is presented using descriptive proportions in the form of tables and charts and organized according to the specific themes of the study. There are direct quotes from respondents illustrated in this chapter from the key informants. All statistical tests in this analysis were done with the p value less than 0.05 considered as statistically significant.

4.2 Demographic data of respondents

The demographics variables were summarized using descriptive summary measures expressed as mean and standard deviation. The socio-demographic background of the respondents are shown in Table 4.1 under the following headings; age, marital status, occupational status, education, and parity of respondents.



Table 4.1: Demographic data of respondents

Variable	Frequency n= (200)	Percent (%)	Mean ± standard deviation
Age			
15-20	40	20.0	
21-25	59	29.5	
26-30	56	28.0	
31+	45	22.5	2.530 ±1.051
Marital status			
Single	38	18.8	
Married	125	61.9	
Separated	37	18.3	2.00 ± 0.614
Education			
No formal education	70	35.0	
Basic	58	29.0	
Secondary	41	20.5	
Tertiary	31	15.5	2.17 ±1.07
Occupation			
Housewife/unemployed	80	40.0	
Salaried worker	29	14.5	
Farmers	57	28.5	
Student	34	17.0	2.23 ±1.15
Parity			
1-2	34	17.0	
1-4	62	31.0	
1-6	59	29.5	
6+	45	22.5	2.58 ± 1.02

Source: Field data, 2017



It is important to state that age is very importance in maternal health. From Table 4.1, the demographic data of the respondents' revealed that most (29.5%) were aged between 21-25 years whilst 20% were considered as teenagers. The mean age and standard deviation of the respondents was 2.530 ± 1.051 . This showed a slight uniform distribution of the study participants in the various age categories that were sampled for the study.

More than half (61.9%) of the study participants indicated they were married whilst the rest were single or separated. The mean and standard deviation in terms of marital status of the respondents was 2.00 ± 0.614 .

From Table 4.2, the analyses revealed that 35% of the study participants did not have any form of formal educational training whilst the rest had formal educational training. The study participants' educational status was slightly towards those without any form of formal educational training as the mean and standard deviation was found to be 2.17 ± 1.07 (See Table 4.1).

The occupational status of the participants revealed that few (14.5%) were salaried workers whilst (17%) of the study participants were students at various level of the educational ladder. Ten (5%) health workers were sampled as key informants. From the Table 4.1, 31% of the study participants had 1-3 children whilst 22.5% of the study participants had above 5 children. The results are showed in Table 4.1.

4.3 Knowledge and practices of women towards breastfeeding

Deciding how an infant will be breastfed is a complex decision involving various social, psychological, emotional, and environmental factors. But all these factors are anchored on the knowledge and perceived benefits the mother thinks she might get if she should



practice good breast feeding. The results of the study revealed that all the study participants had ever heard of exclusive breastfeeding from various sources such as the media, church, school, health workers, workshops and from friends/family members. This result is not surprising as exclusive breastfeeding practice are been discussed in various outlets including the media and at the health centres.

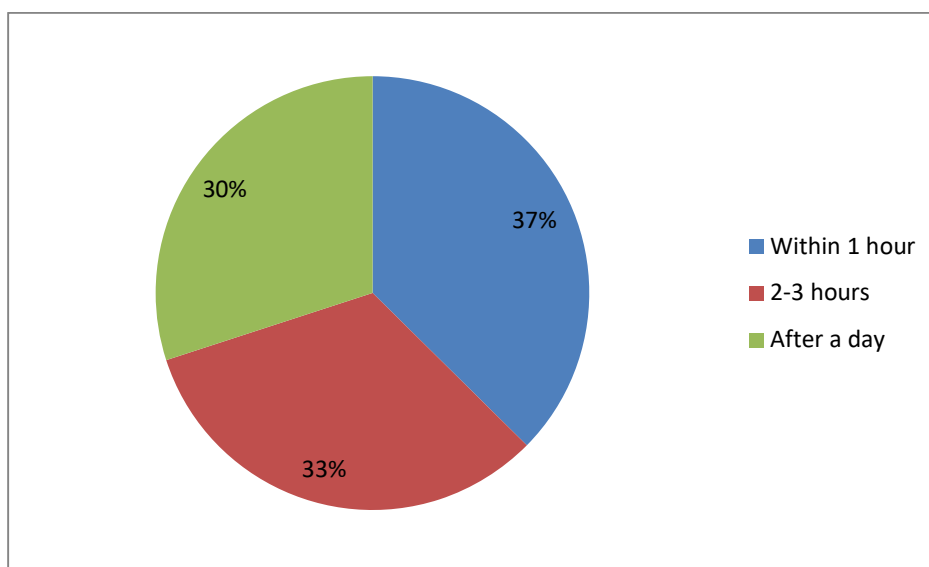


Figure 4.1: Time of initiation of breastfeeding after delivery by mothers

From Figure 4.1, respondents' knowledge on the time of initiation of breastfeeding immediately after delivery was sought since the timely initiation of breastfeeding could indicate mothers knowledge on the time of initiation of breastfeeding. From Figure 4.1, few (37%) of the study participants indicated that they initiated breastfeeding within 1 hour immediately after delivery whilst 30% said a day after delivery. This result is quite good since that could lay the foundation for a good breastfeeding practice.



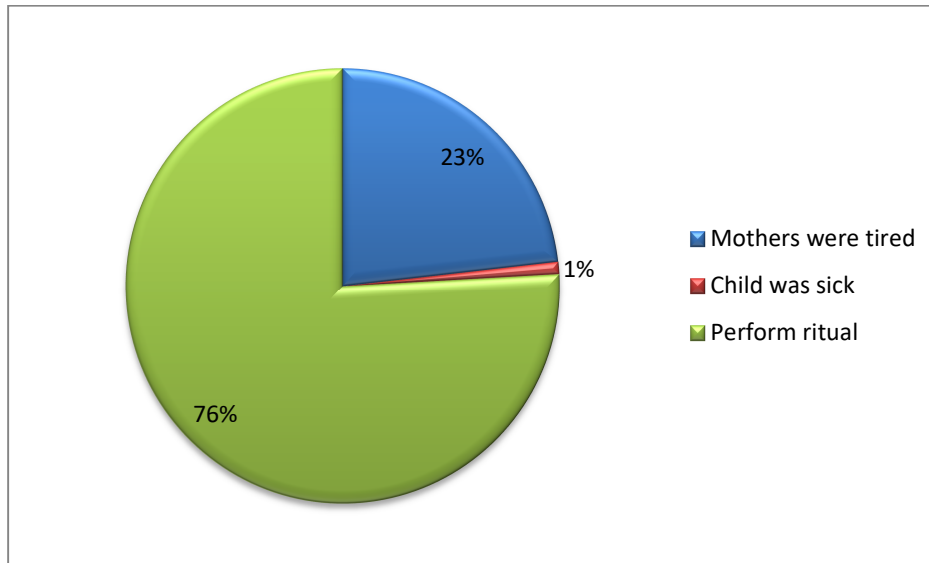


Figure 4.2: Reasons for late initiation of breastfeeding by mothers

Source: Field data, 2017

Study participants still did not initiate breastfeeding immediately (Figure 4.2) after delivery with few of the reasons identified as mothers were very tired (23.2%), the child was sick (0.9%) and other family members wanted to perform certain rituals before the child was put to the breast (75.9%). These reasons identified are worrying since that could influence the practice of breastfeeding negatively.



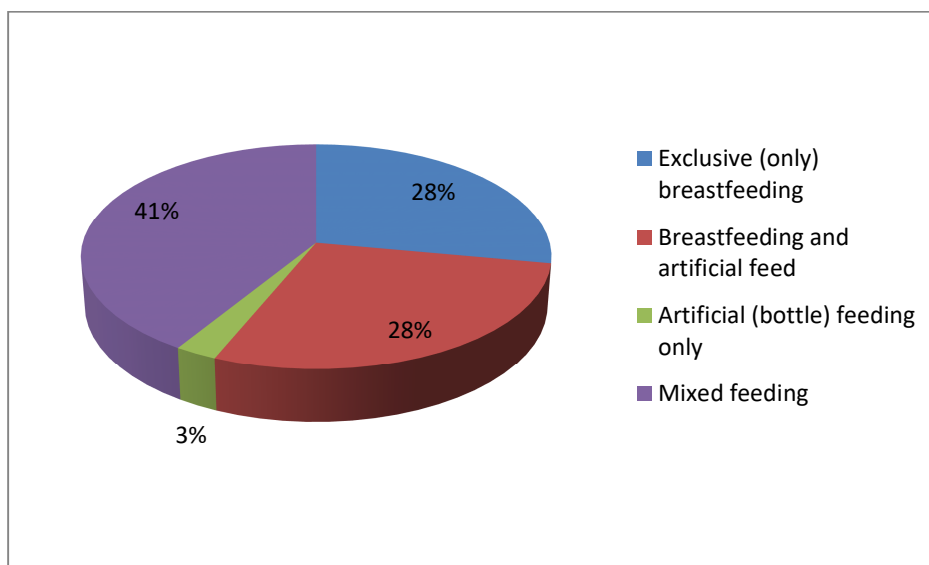


Figure 4.3: Mode of feeding babies by lactating mothers

Source: Field data, 2017

From Figure 4.3, the study participants were asked on the feeding option they had adopted for their child for those who were lactating mothers and for those who had been lactating mothers. From the results, most (41%) of the study participants indicated that they were practicing mixed feeding where they gave breast milk to their babies with other food substances such as porridge, “koko” (winimis / maize), solid foods, cow milk and water. Only 28% of the study participants had ever practiced exclusive breastfeeding before or where practicing exclusive breastfeeding at the time of the research (See Figure 4.3). The rest of the results are shown in Figure 4.3.

From this finding, the practice of exclusive breastfeeding was found to be very low. With the high knowledge of study participants on exclusive breastfeeding, one would have thought that, the practice of exclusive breast feeding would have been higher. Nonetheless, it was found to be very low. Implying based on the results of this study that, knowledge of a particular issue may not necessarily translate into practice.



Concerning the feeding of their children with colostrum, majority of the respondents (65%) indicated that they had ever fed their babies with the first breast milk whilst 35% of the study participants said they had never fed their babies with the first breast milk that came out from their breast. From the analyses, 75% of the study participants said they do not leave expressed breast milk for feeding their babies when they were away whilst 25% study participants said they had ever left expressed breast milk for feeding their babies when they were away.

4.3.1 Reasons that informed study participants practice of breastfeeding

This part presents the qualitative data on reasons why respondents breastfed after delivery.

- *I gave birth in the hospital and the nurses told me to breastfeed and I did*
- *I am told the colostrum is good for my baby so after delivery, I breastfed in the house*
- *I know that colostrum provides protection against diseases for my child, so any time I deliver I breast feed my baby with colostrum.*

4.3.2 Reasons that informed study participants practice of breastfeeding

This part of the study identified few of the reasons that were given as to why mothers did not breastfeed their babies with the colostrum.

- *My baby was sick and I did not breast feed immediately and subsequently I expressed the breast milk away*



- *The old ladies in your husband house would not allow you to breastfeed the newborn baby with colostrum. In the house I express the breast milk before breast feeding.*

4.3.3 Duration of exclusive breastfeeding

This part of the analysis presents the duration of exclusive breastfeeding practiced by mothers

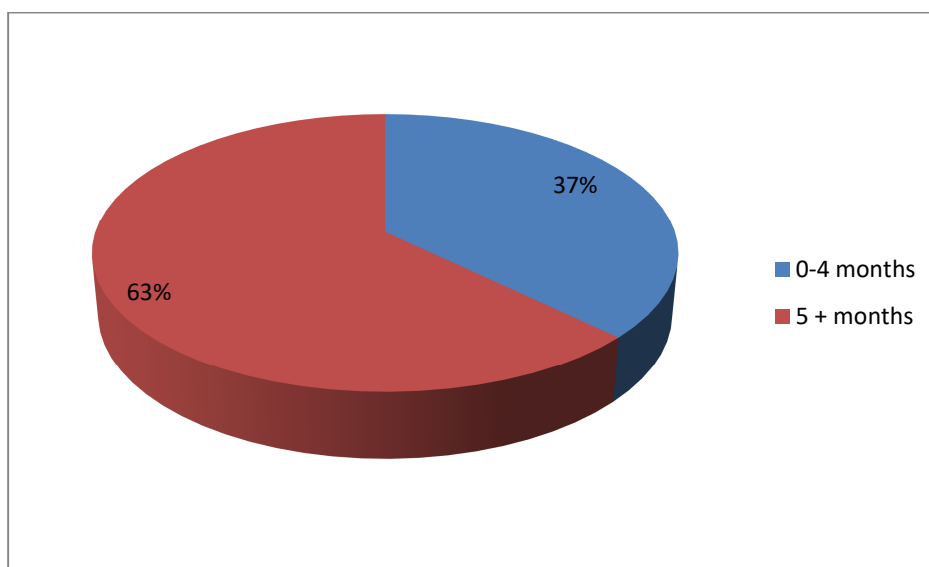


Figure 4.4: Duration of exclusive breastfeeding

Source: Field data, 2017

From Figure 4.4, study participants knowledge on the duration of exclusive breastfeeding was assessed. From the results, majority (63%) of the study participants cited that exclusive breastfeeding should be practiced more than 5 months while the rest indicated that it should be practiced between 0-4 months. Respondents' knowledge on the duration of



breast feeding could be informed by the health education and the media messages they have received on the duration of the practice of exclusive breastfeeding.

Table 4.2: Breastfeeding practice by mothers

Variable	Agree n (%)	Disagree n (%)	Do not know n (%)
Breastfeeding should be the first feed a baby is given after birth	173 (91.1)	17 (8.9)	0 (0.0)
The first yellowish milk/colostrum should be fed to the baby	167 (87.9)	18 (9.5)	5 (2.6)
Breast milk alone without even water sustain the baby for six months	153 (80.5)	26 (13.7)	11 (5.8)
Breastfeeding protects the baby from illnesses	170 (89.5)	0 (0.0%)	20 (10.5%)
Expressed breast milk should be fed to the baby when the mother is away	135 (71.1)	45 (23.7)	10 (5.2)
Semi-solid/solid foods should be introduced to the baby at six months of age	134 (70.5)	50 (26.3%)	6 (3.2)
Artificially fed babies are healthier	18 (9.5)	107 (56.3)	65 (34.2)
Breastfeeding women are less likely to develop cancer of the breast and cervix	90 (47.3)	21 (11.1)	79 (41.6)

Source: Field data, 2017

Respondents' knowledge on breast feeding practice was assessed on certain variables to see how they could influence breastfeeding. Respondents were to indicate the extent to which they agree, disagree or do not know how those variables could influence breast feeding practices among women.



From Table 4.2, 89.5% of the study participants agreed with the statement that breastfeeding protects the baby from illnesses, 8.9% of the study participants disagreed with the statement that breastfeeding should be the first feed a baby should be given after birth whilst 2.6% of the study participants do not know whether the first yellowish milk/colostrum should be fed to the baby after birth.

From Table 4.2, about 26.3% of the study participants disagreed with the statement that semi-solid/solid foods should be introduced to the baby at six months of age and 9.5% of the study participants agree with the statement that artificially fed babies are healthier.

The results are showed in table 4.2.

Table 4.3: Benefits of exclusive breastfeeding

Variable	Agree n (%)	Disagree n (%)	Neutral n (%)
Breastfeeding delays pregnancy in some women	94 (49.5)	40 (21.1)	56 (29.4)
Breastfeeding enables mother and child to bond	171 (90.0)	0 (0.0)	19 (10.0)
Breast milk is safe, hygiene and always available	150 (78.9)	40 (21.1)	0 (0.0)
Breast milk is natural food for babies	190 (100.0)	0 (0.0)	0 (0.0)
Society values breastfeeding practice	68 (35.8)	68 (35.8)	54 (28.4)

Source: Field data, 2017

From Table 4.3, study participants knowledge on the benefits of breast feeding was assessed. From the results, 29.4% of the study participants did not know whether breastfeeding delays pregnancy in some women or not, nearly all (90%) of the study participants agree with the statement that breastfeeding enables mother and child to bond together whilst 21.1% of the study participants disagree with the statement that breast milk is safe, hygiene and always available. From Table 4.3, all the study participants agree with the statement that breast milk is a natural food for babies and 35.8% of the



study participants disagreed with the statement that society values breastfeeding practice.

The results are showed in Table 4.3.

The study also explored the views of health workers in the form of key informant interviews concerning how well mothers are well informed on the benefits of breast feeding practices.

4.3.3 Health workers views on breastfeeding

Interactions with the health staff at the study place showed that they had adequate facilities to enhance breast feeding practice. From the analyses few of the discussions that ensued are illustrated below;

- *As for here, I think women who come here for ANC, they always receive the education on breastfeeding practices (KI: A female Nurse at ANC)*
- *Women do not have absolute control of the practice of breastfeeding practice here because a women would deliver and by the time she will get home concoctions and herbal medicines are ready for the child (KI: A Midwife at ANC)*
- *Women here do not want to practice exclusive breastfeeding that the child will be dehydrated (KI: A female nurse)*
- *Some mothers also know the importance of exclusive breastfeeding but do not want to practice it (KI: A nurse)*



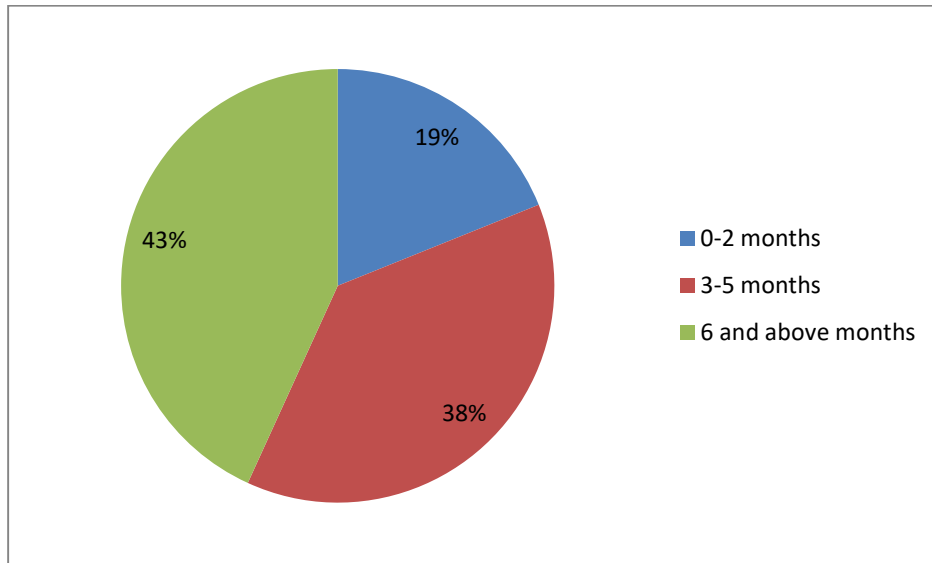


Figure 4.5: Appropriate time to start complementary foods

Source: Field data, 2017

From Figure 4.5, respondents' knowledge on the time of introduction of complementary foods was examined. From the results in Figure 4.5, most (43%) of the study participants cited that complementary food should be introduced after six months whilst 19% of the study participants cited 0-2 months.



Table 4.4: Paired Samples Test of demographic data and feeding options

	Paired differences					T	df	Sig. (2-tailed)
	Mean	Std. deviation	Std. Error	95% Confidence interval of the difference				
				Lower	Upper			
Age	0.00	1.75	0.13	-0.25	0.25	0.0	189	1.000
Marital	-0.63	1.41	0.10	-0.83	-0.42	-6.1	189	0.000
Education	-0.39	1.75	0.13	-0.65	-0.14	-3.1	189	0.002
Occupation	-0.28	1.65	0.12	-0.52	-0.04	-2.3	189	0.001
Employment	0.03	1.70	0.12	-0.22	0.27	0.2	189	0.832

Source: Field data, 2017

From Table 4.4, there was an association between marital status, educational level and occupational status of respondents and the type of feeding options they were more likely to adopt for their babies ($p < 0.001$, $p < 0.002$ and $p < 0.001$) respectively. Educated mothers were also more likely to be informed on the benefits of good breastfeeding practices leading to adoption of good practice and women occupation may be more likely to influence the practice of good breastfeeding practice especially those who were salaried workers.



Table 4.5: Occupational status and initiation of breastfeeding by mothers

Occupation	Knowledge		
	Within 1 hr	2-3 hours	After a day
Housewife/unemployed	30.0%	32.9%	37.1%
Salaried worker	51.7%	10.3%	37.9%
Farmers	40.4%	38.6%	21.1%
Students	35.3%	41.2%	23.5%

Source: Field data, 2017

From Table 4.5, there was also a statistical relationship between respondents occupational status and knowledge of initiation of breastfeeding immediately after delivery ($\chi^2=12.383$; $P < 0.002$) when the cross tabulation of the variables was done.

Table 4.6: Multiple comparison analysis

Dependent: Knowledge

	(I) Knowledge	(J) Knowledge	Mean Difference (I-J)	Std. Error	Sig.
LSD	Within 1 hour	2-3 hours	0.33689	0.17341	0.054
		After a day	.65579	0.17742	0.000
	2-3 hours	1 hour	-.33689	0.17341	0.054
		After a day	.31890	0.18307	0.083
	After a day	1 hour	-.65579	0.17742	0.000
		2-3 hours	-.31890	0.18307	0.083
	Dunnett t (2-sided)	1 hour	.65579	0.17742	0.001
		2-3 hours	.31890	0.18307	0.145

Source: Field data, 2017

From Table 4.6, one way ANOVA test using multiple comparison analysis revealed that there was a statistical relationship between parity of respondents and knowledge of when



initiation of breastfeeding should be done. This could mean that, women with children were more likely to be informed of the possible benefits of early initiation of breastfeeding.

4.4 Factors affecting women from practicing exclusive breastfeeding

Factors affecting women practice of exclusive breastfeeding are hinged on multi-dimensional places such as social, cultural and geographic access to health information. Under this objective, respondents were assessed on the factors influencing women negatively from practicing exclusive breastfeeding.



Table 4.7: Factors affecting exclusive feeding practice among women

Variable	Agree n (%)	Disagree n (%)	Neutral n (%)
Unsupportive husbands and other family members	159 (83.7%)	31 (16.3%)	0 (0.0%)
Nipple pain	137 (72.1%)	49 (25.8%)	4 (2.1%)
Lack of knowledge on the benefits of EBF	125 (65.8%)	65 (34.2%)	0 (0.0%)
EBF is time consuming	138 (72.6%)	39 (20.6%)	13 (6.8%)
Belief that women had inadequate milk production	109 (57.4%)	81 (42.6%)	0 (0.0%)
Exclusive breastfeeding is an out dated practice	35 (18.4%)	128 (67.4%)	27(14.2%)
The baby needs more than breast milk	55 (28.9%)	130 (68.4%)	5 (2.7%)
Breastfeeding causes mother to be socially tied down	109 (57.4%)	81 (42.6%)	0 (0.0%)
It is embarrassing to breastfeed in public	158 (83.2%)	32 (16.8%)	0 (0.0%)
Breastfeeding makes my breasts loose shape	174 (91.6%)	11 (5.8%)	5 (2.6%)

Source: Field data, 2017

From Table 4.7, respondents' knowledge on the factors affecting exclusive breastfeeding was assessed. From the results, majority of the study participants representing 83.7% agreed with the statement that unsupportive husbands and other family members affect women practice of exclusive breastfeeding, 25.8% of the study participants disagreed with the statement that nipple pain prevents women from practicing exclusive breastfeeding whilst 72.6% of the study participants agreed with the statement that EBF is time consuming.

From the results in Table 4.7, 67.4% of the study participants disagreed with the statement that exclusive breastfeeding is an out dated practice, 28.9% of the study



participants agreed with the statement that the baby needs more than breast milk whilst 2.6% of the study participants did not know whether because breastfeeding makes their breasts loose shape that is why women do not practice breastfeeding.

Table 4.8: Demographic data and practice of exclusive breastfeeding

Variable	Yes n (%)	No n (%)	Do not know n (%)
Parity influences women practice of EBF	159 (83.7)	11 (5.8)	20 (10.5)
Education influences women practice of EBF	127 (66.8)	50 (26.4)	13 (6.8)
Low economic status of women influence the practice of EBF	89 (46.8)	91 (47.9)	10 (5.3)
Rural vs urban resident of women affect their practice of EBF	123 (64.7)	60 (31.6)	9 (4.7)
Cultural practices affect women practice of EBF	145 (76.3)	45 (23.7)	0 (0.0)

Source: Field data, 2017

From Table 4.8, 83.7% of the study participants indicated that the parity of a woman influences the practice of EBF, 26.4% of the study participants said the educational status of a woman does not influences the practice of EBF whilst 5.3% of the study participants said they do not know whether low economic status of a woman influences the practice of EBF. From the results in Table 4.9, majority (76.3%) of the study participants said cultural practices affect women practice of EBF. The results are showed in Table 4.8.



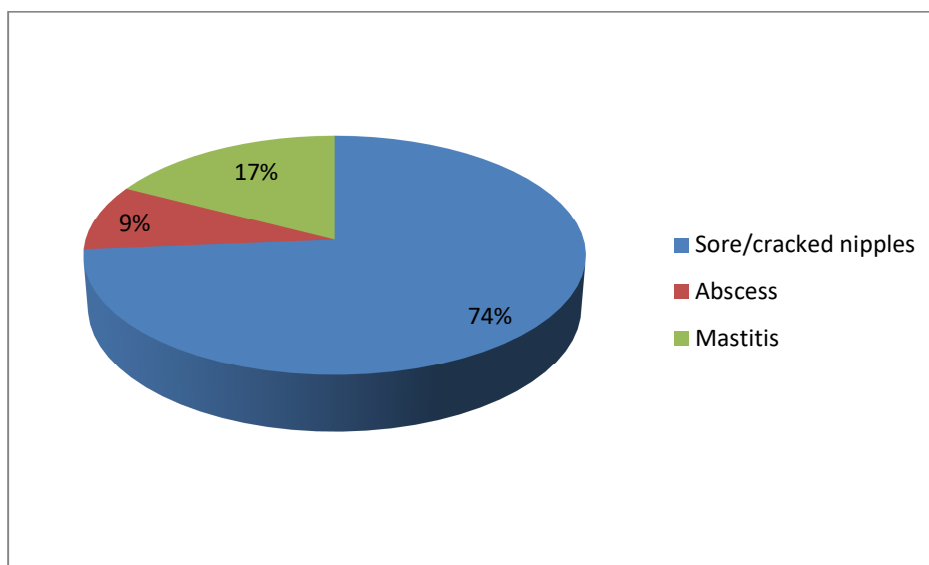


Figure 4.6: Breastfeeding problems faced by mothers

Source: Field data, 2017

All the study participants indicated that they had ever had a problem with breastfeeding. From Figure 4.6, majority (74%) of the study participants indicated that sore/cracked nipples were problems associated with breastfeeding practices among women. The rest of the results are showed in Figure 4.5.

4.4 The interview with health workers (Key informants)

This part sought responses from key informants at the study place. Discussion with key informants on factors affecting breastfeeding practices revealed the following reasons.

Responses from these key informants:

- *I think here there is lack of support from the family and community members on the need to encourage women to practice good breastfeeding (KI: A female midwife)*
- *The education on the importance of breastfeeding is also very low at the community level (KI: A female nurse)*



- *Some women too are so adamant to change and are culturally inclined (KI: A female nurse)*
- *Sometimes the woman will leave the baby with the care taker and the care taker may give the baby water without the knowledge of the mother (KI: A Nurse administrator)*
- *Some men will normally encourage their wives to give herbal water to their babies to drink in the form of protection against witches and bad spirits this will obviously discourage the practice of exclusive breastfeeding (KI: A female nurse)*

4.5 Promoting the practice of good breastfeeding practices among women by health workers

Nurses may need to talk with new mothers about how important it is to breastfeed and teach them how to do it. The study assessed how nurses could promote optimal breastfeeding practices among women. The following were few of the suggestions identified by the health workers. Study participants agreed with the statements that health workers in the hospital could improve exclusive breastfeeding by providing more education on the benefits of exclusive breastfeeding at ANC, one-one counseling on the importance of exclusive breastfeeding at ANC and health messages of breastfeeding practices during post natal clinics.



4.5.1 Ways of improving the practice of exclusive breastfeeding among women by key informants

The health workers revealed that the practice of exclusive breastfeeding in the study area could be improved in the following ways;

- As a nurse, you can help mothers decide how to feed their babies. This can be done by giving the woman the importance of good breastfeeding
- Clinical care practices can make it easier or harder for mothers to start and keep breastfeeding. For example, placing a healthy newborn in skin-to-skin contact with the mother rather than on an infant warmer and keeping the baby in the mother's room at the hospital both help mothers to breastfeed more easily.
- If mothers have trouble breastfeeding, they may need assistance from a health care team that includes professionals with special training in this area. If mothers get the support they need in the first 4 weeks of a new baby's life, they are more likely to keep breastfeeding

4.6 Ways of encouraging women to practice exclusive breastfeeding

Conventional wisdom holds that breastfeeding helps mothers bond with their babies. In fact, one of the most common reasons given by women for wanting to breastfeed is the opportunity to bond with their children. The study explored ways women could practice exclusive breastfeeding.



Table 4.9: Ways of encouraging women to practice EBF

Variable	Agree n (%)	Disagree n (%)	Neutral n (%)
Encouraging women to attend ANC always	190 (100.0)	0 (0.0)	0 (0.0)
Supportive husband and other significant others	150 (78.9)	0 (0.0)	40 (21.1)
Bring education of EBF to the community level	190 (100.0)	0 (0.0)	0 (0.0)

Source: Field data, 2017

From Table 4.9, all the study participants agree with the statement that bringing education of EBF to the community level could encourage women to practice exclusive breastfeeding whilst 21.1% of the study participants cited that they did not know whether supportive husbands and other significant others in the family could encourage a woman to practice exclusive breastfeeding or not.



CHAPTER FIVE

DISCUSSION OF RESULTS

5.1 Knowledge and practices of women towards breastfeeding

Nurturing babies is an issue inextricably bound to all species in nature. In prehistoric times, breastfeeding was the first priority of mothers until later in infancy. In ancient times breastfeeding continued to be of crucial importance, and goddesses of motherhood were presented with naked breasts. In this study also, the findings present good knowledge of women on breastfeeding.

This could possible explain the fact that, during the course of human history, infants were fed with human milk in order to assure survival; this could be a product of their mothers (breastfeeding), or of another woman (adoptive breastfeeding). From antiquity until today, the importance of breastfeeding has been well appreciated. This is reflected in its depiction in mythology, philosophy, art and religion all around the world.

From the results, all the study participants had ever heard of breastfeeding since they were all women in their reproductive ages and most of them were even breastfeeding their babies at the time of the study. This finding is similar to the study done by Arts, Geelhoed, DeSchacht and Prosser (2011) where mothers in a survey stated that they had ever heard of breastfeeding and even breastfed immediately after delivery.

From the results, all the study participants cited different sources of information as their starting point as knowledge of breastfeeding particularly on the media and friends. This is not so surprising considering the fact that breastfeeding campaigns have been enrolled out in the past years extensively in the electronic media for women to adopt the practice of EBF.



The fact that respondents also identified their friends as their sources of information suggests that people in the study area share information with their friends and family members. This finding from the study is similar to the study done by Agunbiade and Ogunleye (2012) where women in Nigeria identified friends and radio stations among others as their sources of information concerning breastfeeding practices.

It is important to state that, time of initiation of breastfeeding after delivery is considered vital in the critical path leading to the initiation of EBF. From the results, the findings showed that most of the respondents (37%) stated that they initiated breastfeeding after delivery within the first one hour.

This could suggest that women were told to either do so at the health centre or perhaps at home where women who had knowledge on the importance of early initiation of breast milk encouraged them to do so or by their own volition. This knowledge of respondents however did not significantly influence them to practice EBF. Because, from the results, only 28% of the respondents stated that they had ever practiced EBF at the time of the research work, this could possibly be due to the fact that awareness on EBF might be high among respondents but the zeal to do so it was lacking among them.

This finding from the study is at variance with the study done by Aborigo et al. (2014) where majority of women sampled in Ghana stated that they had ever practiced EBF. However, the finding is similar to the findings presented by Tella, Falaye and Aremu (2014) where women in Uganda cited lack of interest in practicing EBF. Concerning the knowledge of women on the importance of giving colostrums to their children, findings from the research suggested that, knowledge of women was high in this direction.



It was shown from the study that 65% of the study participants admitted giving colostrums to their babies after delivery. This was necessitated because they were encouraged to do so. This response was backed by one respondent succinctly as;

- *I know that colostrum provides protection against diseases for my child, so any time I deliver I breast feed my baby with colostrum.*

This explains this respondent knowledge of giving colostrum to the baby. This result agrees with the findings presented by Baumslag and Michels (2010) where majority of women in Sri Lanka, mentioned that they gave colostrums to their babies. The study also revealed that, women did not also give colostrums to their babies after delivery. This finding is buttressed by one respondent in this way;

- *The old ladies in your husband house would not allow you to breastfeed the newborn baby with colostrums. In the house I express the breast milk before breast feeding.*

This explained that significant others such as the grandparents and relatives influence the practice of breast feeding among women in the study area. This finding from the study is similar to the study done by Arts, Geelhoed, DeSchacht and Prosser (2011) where husbands and others were found to be instrumental in the practice of EBF among women. Therefore, the level of knowledge of mothers on EBF could influence their perception to consider the benefits of EBF over the challenges they experience and therefore influence their decision to exclusively breastfeed their Babies. The discussion with the mothers also indicated that there was a changing perception on EBF, which could be linked to the level of awareness of the mother.



Since some mothers exhibited knowledge about the cultural beliefs and practices relating to breastfeeding and its implications but still desired to exclusively breastfeed their babies. It pointed out that most traditional ways of feeding infants were giving way to current recommendations of breastfeeding babies.

Breastfeeding is recognized as the preferred form of infant nutrition by the American Academy of Pediatrics (AAP), the American Academy of Family Physicians (AAFP) and the American College of Obstetricians and Gynecologists (ACOG). Infants who are breastfed experience nutritional and developmental advantages that enhance their health throughout their lives. The choice to breastfeed conveys health benefits to the mother as well.

From the results, 56.3% of the study participants disagreed that artificially fed babies are healthier than normal fed babies. This could explain the reasons women sometimes attach to for having low breast milk to be able to breastfeed their babies effectively. This finding however, disagrees with Aborigo et al. (2014) where mothers were found to be practicing artificial feeding to promote growth in their children.

The beliefs that breast milk alone is not enough to support optimal growth and that some mothers naturally do not produce enough milk, were common reasons for not practicing exclusive breastfeeding and for the introduction of other foods earlier than six months. This study provides a breadth of knowledge about the social and cultural beliefs and practices that influence breastfeeding practices in the district.

Some of the beliefs align with the WHO recommendations on breastfeeding and positively influence the translation of the recommendations into practice, these include the common belief that colostrums is natural medicine and that breast milk promotes



brain and intellectual development. These positive beliefs could be used in behavior change interventions to develop messages on optimal breastfeeding.

From the results, nearly all the respondents representing 90% agreed with the statement that, the benefits of EBF enables mother and child to bond. Breastfeeding is an intimate experience between a mother and her child that can sometimes lead the other parent to feel left out.

Even when fathers are supportive of their partners' breastfeeding, many also admit to feelings of jealousy at their inability to contribute during the feeding process. From the results, 47.3% of the study participants cited that breastfeeding women were less likely to develop cancer of the breast and cervix.

Mothers who received advice on breastfeeding from health care workers after delivery had higher odds of exclusively breastfeeding than those advised by traditional birth attendants (TBA) or family members. Women might have a strong belief on the advice given by health care workers. Health care workers have been reported to be the key information personnel regarding infant and young child feeding and their word is believed to be correct especially in the rural community.

5.2 Factors affecting women from practicing exclusive breastfeeding

From both the quantitative and qualitative findings, breastfeeding mothers were faced with personal and social constraints in practicing exclusive breastfeeding. Specific constraints identified included maternal health, breast and nipple problems, perceived milk insufficiency, and pressure from significant others. The findings also revealed that a



good mother would struggle to blend the cultural issues and benefits associated with exclusive breastfeeding despite all the challenges they might face.

The mismatch between breastfeeding intention and the practice of exclusive breastfeeding indicates the existence of conflict revolving around intentions, normative expectations, and social pressures to practice exclusive breastfeeding among the breastfeeding mothers. From the results, 83.7% of the study participants cited unsupportive husbands and other family members as a problem associated with the practice of EBF.

This could explain the role of men in a patrilineal home where the man is seen as the one with the highest decision making in the family and whose orders cannot be overruled. From the results also, 57.4% of the study participated agreed with the statement that the belief that women had inadequate milk production also influence their practice of EBF.

This finding from the study is similar to the study done by McLeod, Pullon and Cookson (2002) where insufficient milk production perceived by women was found to influence their practice of EBF. From the results also, 72.1% of the study participants agreed with the statement that nipple pain was associated with the problems women had with regards to practices of EBF.

Some nipple tenderness may occur for a few days due to stretch by the infant's sucking. This finding from the study is similar to the study done by Agunbiade and Ogunleye, (2012) and Aidam, Pe and Lartey (2005) where similar results have been identified.

Women often reported feeling "vulnerable" while breastfeeding in public and expect to receive negative attention for it. These feelings can lead women to remain housebound or restrict their movements during exclusive breastfeeding to avoid the social stigma of



breastfeeding in public. This is because majority of the respondents (83.2%) agree with the statement that, it was embarrassing to breastfeed in public.

This could be a big issue especially for women who would like to practice EBF and are also engaged in other forms of work. In cultures where the primary function of the breast is thought to be sexual, the sight of a women breastfeeding is often considered “perverted” or “obscene.” Women who breastfeed in cultures where breastfeeding is taboo often face continual pressure from friends and family to use formula, have low breastfeeding confidence, feel intense stigma around breastfeeding in public, and have very little access to breastfeeding information outside of medical professionals.

Additionally, from the results, 76.3% of the study participants agreed with the statement that, cultural practices affect women practice of EBF. This finding was further re-echoed by one nurse at the study area as she puts it in this manner;

- *Some men will normally encourage their wives to give herbal water to their babies to drink in the form of protection against witches and bad spirits this will obviously discourage the practice of exclusive breastfeeding.*

This finding from the study is similar to the report done by Britton et al. (2007) where it was shown that breast feeding practice among women was culturally bound. From the results also, 66.8% of the study participants agreed with the statement that educational status of women influences their practice of EBF. It was however, disagreed by 47.9% of the study participants that low economic status of women influence the practice of EBF. This finding from the study did not support the study done by Agunbiade and Ogunleye (2012) and Aidam, Pe and Lartey (2005).



With the focus on mothers currently seeking postnatal care at a modern health facility that is baby friendly, there are likely chances that their awareness and dispositions towards exclusive breastfeeding could differ from the larger population of mothers. However, finding from the study reported low level of ANC education and sensitization on the importance of EBF practice among women. For example one women respondent reported;

- *The education on the importance of breastfeeding was also very low.*

Besides, while the relevance of colostrum had increased among the breastfeeding mothers in this study, traditional child feeding practices such as feeding infants with herbal concoction are still common among the people. This may be hinged on some cultural beliefs associated with child birth and rearing practices among the people in the study area. Thus, breastfeeding culture is well enshrined in the various ethnic groups in Ghana. For example one respondent remarked;

- *Some women too are so adamant to change and are culturally inclined (KI: A female nurse)*

5.3 How health workers promote optimal breastfeeding practices among women

From the findings, all the respondents cited that more education on the benefits of EBF at ANC would encourage more women to practice good breast feeding practice. This finding from the study agrees with Witters-Green (2013) where health workers were very key in the promotion of EBF among women through regular messages at ANC and at postnatal clinics.



Breastfeeding benefits for newborns and infants are well-documented. Breastfeeding provides infants with superior nutritional content that is capable of improving infant immunity and possible reduction in future health care spending. The nurse can provide information about, and support of, breast feeding. The prenatal nurse can inform the mother of the advantages of breast feeding to herself and her baby.

The labour and delivery nurse can aid the mother in her first contact with the baby and reassure the mother who has a caesarean birth, or a premature or sick infant, that she too can nurse. The postpartum nurse can help breast feeding to continue by providing frequent maternal-infant contact during the mother's hospital stay. The post natal ward supports breast feeding by refraining from giving the baby other fluids.

The paediatric nurse continues the helping pattern by reinforcing the statements and actions of others which will further impress the mother with the appropriateness of her infant feeding method.

From the results all the respondents stated that one –one counseling on the importance of EBF at ANC would encourage post natal women to practice good breastfeeding practice. This is because, women may have the options to use other feeds such as infant formula with the reasons usually justified by themselves. This finding from the study is similar to the study done by Sikorski et al. (2003) where health care providers' information was taken seriously by women.

Nutrient content of formula is as close to breast milk as manufacturers can make it. Formula feeding allows others to assume feeding tasks. Some mothers find formula feeding less inhibiting or embarrassing. Parents can see the amount of formula taken in



by the infant. Formula fed babies usually feed less often than breastfed babies because the formula is less completely digested and stays in the baby's stomach longer.

Mothers need to be informed about infant feeding options in order to make a knowledgeable choice based on awareness of alternatives. The nurse's role in support of breast feeding varies with the time and place where patient care is provided. In each setting, however, the nurse plays a significant role in helping the mother to begin breast feeding and to enjoy it, at the same time providing her infant with optimum nutrition for his early growth and development.

Exclusive breastfeeding to six months of age has been one of the primary aims of nutrition and public health programs across the world (WHO, 2007). Midwives and lactation consultants are actively engaged in attempting to increase women's rates of breastfeeding to at least six months post partum. The literature review highlights the importance of the modifiable factors including breastfeeding intention, confidence and support in duration of breastfeeding among women.

This evidence emphasises the importance of maternal breastfeeding confidence in continuation of breastfeeding. Health care professionals may modify a mother's breastfeeding practice by designing interventions that respect breastfeeding self efficacy. Self efficacy, when combined with understanding the other factors that affect breastfeeding may provide a conceptual framework to guide effective interventions.

Health care providers could provide timely and better information concerning good practice of breastfeeding to women which would also provide information about how early breastfeeding is initiated, exclusive breastfeeding rates, and identify undesirable practices, adding to the body of knowledge on breastfeeding practices in the community.



The information if tailored to the target group could also involve policy makers and health facility managers to design and implement interventions that would enable more infants and nursing mothers have access to the unequalled benefits of breastfeeding.

Families and the society as a whole would also benefit from the economic and environmental benefits of breastfeeding such as reduced costs from childhood illnesses and infant mortality, reduced environmental burden for the disposal of bottles and formula cans, reduced energy demands for the production and transportation of artificial feeding products.

5.4 Ways of encouraging women to practice exclusive breastfeeding

The breast is a symbolic part of the woman's body constructed as a vital source of nutrients and a medium of physical and spiritual bond sustenance between the mother and the child. From the results, all the study participants agreed with the statement that women could improve on the practice of EBF if health care professionals bring education of EBF to the community level. This is so because the practice of EBF is dependent on a myriad of factors.

Education is a powerful method for addressing this need. In fact, education, or breastfeeding knowledge, proved to be the most powerful factor in determining a mother's ability to meet her breastfeeding goals in most studies. From the results, all the study participants agree with the statement that, encouraging women to attend ANC always would promote good breastfeeding practice.

Specific individual differences in attitudes, beliefs and experience are known to influence the decision to breast feeding practices and therefore, as indicated in this study, predictors



of EBF vary widely. This finding from the study supports the study done by Graffy and Taylor (2012) where it was stated that multifaceted interventions on the practice of EBF was a key issues in promoting the practice.

Education should also be available for expectant fathers as that the most common reason women choose to feed with artificial feeding practice is their perception of the father's attitude about breastfeeding. Hence, designing effective and prompt intervention initiatives that could promote the provision of quality support for nursing mothers' would require concrete efforts from all stakeholders, not just from the hospitals or healthcare system.

Such efforts would go a long way in creating a sustainable exclusive breastfeeding culture. Breastfeeding as a health behaviour could be protected and supported by the interventions that incorporate amendable influencing factors in women's social network. In the literature breastfeeding intention, support and confidence have been reported as important factors in breastfeeding behaviour. Women who have strong desire to breastfeed for longer period of time, confident in their ability to breastfeed and well supported by their own family demonstrated positive and prolong breastfeeding behaviours.

Interventional studies used to extend breastfeeding were usually combined and varied with the strategies and procedures used. The most effective interventions reported to have a combination of face to face education, support and guidance spanning both during antenatal and postnatal period. However, because of the variety of the approaches in the literature, it is difficult to identify the best intervention with the optimal effectiveness in breastfeeding duration.



It is important to develop new strategies based on the evidence and factors that may influence women's decisions to sustain breastfeeding practice. There has been no interventional study aiming to increase women's breastfeeding intention, support and confidence at the same time. There is a need to design a unique multi-phased intervention to increase women's breastfeeding intention, confidence and to involve women's social support because still women stop breastfeeding in very early stages of postpartum period. According to Bandura's self-efficacy theory, to increase participant's self-efficacy, they must first be fully informed of the multiple health benefits: otherwise, they have little reason to keep driving themselves to face challenges. Linking breastfeeding knowledge to health promotion provides some incentive to continue breastfeeding. In order to enhance self efficacy parents need to be taught about challenges that may arise during early breastfeeding and how to overcome them.

Problem solving and role-play activities in education sessions are useful strategies to increase self-efficacy. This finding suggests that interventions that aim to increase women's intention to prolong breastfeeding should involve women, their partner and their broader social networks. From midwifery perspective interventions can be designed to specifically involve fathers and/or close family members in a woman's education and support.



CHAPTER SIX

Summary, conclusion and recommendations

6.1 Introduction

This chapter presents the summary, conclusion and recommendations of the study

6.2 Summary of the main findings

The social acceptability of breastfeeding varies by culture and ethnicity, which has implications for breastfeeding rates. Because of the growing evidence of the health benefits of breastfeeding for infants and their mothers, it makes sense for social policies to attempt to reduce barriers to breastfeeding. Policy makers and healthcare professionals have made strides in breastfeeding promotion in recent years. Educating mothers, partners, families, and communities about the health benefits of breastfeeding, along with how to overcome the challenges, have proven to be particularly effective.

The demographic profile of the respondents representing 29.5% was aged between 21-25 years. Majority of the respondents representing 61.9% indicated that they were married whilst 35% of the study participants had no formal education. The findings also revealed that, majority of the respondents were engaged in informal sector whilst 22.5% of the study participants had above 6 children.

The knowledge and practices of women towards breastfeeding was found to be adequate. Knowledge was significantly associated with some breastfeeding practices in that a larger proportion of those who gave pre lacteal feeds and those using feeding bottles had only fair breastfeeding knowledge and only 3% of those who were using feeding bottles had good knowledge about breastfeeding.



Concerning the factors affecting women from practicing exclusive breastfeeding in the study area, it was revealed that, lack of knowledge concerning the benefits of breastfeeding practices, low level of education and the influence of family members significantly affected the practice of exclusive breastfeeding among women at the study area.

The study was conducted to assess breastfeeding practices among women in the Nanumba North district. Four specific objectives were carved after a vigorous reviewed of related literature on the topic. From the findings of the study, the specific objectives that were set as a guide to the study were achieved. The study revealed that, women had knowledge concerning breastfeeding at the study place. The study also revealed that, there were several factors that were thought to be influencing women choice of breastfeeding with cultural practices been the most predominant determinant.

6.3 Conclusion

The study showed that, EBF was insufficiently practiced among the sampled population. The results showed that women gave herbal concoction prepared by family members to their babies immediately after delivery as a practice of protecting the baby against all forms of evils spirits. This practice was still enforced at the time of the study at the study area.

Therefore, cultural issues related to breastfeeding practices among women in the study area were identified as factors preventing the practice of exclusive breastfeeding among the respondents. The findings showed that, women had little role to play when it came to the issue of administering herbal concoction to the newborn.



There was an indication that significant others most especially husbands and grandparents play active roles in encouraging or discouraging exclusive breastfeeding practices among the study population. The overall rate of breastfeeding in Nantumba North district was generally good, but remains low in comparison with WHO recommendations with regards to the practice of exclusive breastfeeding. The low rate of exclusive breastfeeding at six months indicates that very few women and infants in the district were receiving the benefits of breastfeeding for the duration recommended by the World Health Organization.

6.4 Recommendations

Based on the findings of this study the following recommendations were made to assist policy makers improve upon breastfeeding practices among women in the study area.

- Health workers in the district should design a more comprehensive programmes aimed at promoting exclusive breastfeeding especially among women who attend ANC
- The media should intensify the need to stop some form of updates cultural practices like giving herbal medicine to a newborn baby in the study area
- Health care providers should continuously provide information on breastfeeding practices to men in the study area to increase their support for the promotion of exclusive breastfeeding
- Health workers need to help community members form breastfeeding support groups to motivate mothers who are faced with breastfeeding challenges to develop strategies to continue breastfeeding exclusively for six months.



6.5 Future research

The study findings are deficit in few areas that future research could investigate concerning breastfeeding especially in rural areas. This study did not look at the most effective form of education that could promote optimal breastfeeding in the study area. There is the need for a research to identify the breastfeeding messages having the greatest positive effect in influencing mothers to practice exclusive breastfeeding in the study area.

The study again could not examine community engagement that has the tendency to promote optimal breastfeeding among women in the study area. Therefore, research is also needed to identify the most feasible and cost-effective community-based approaches in promoting breastfeeding in different contexts especially in the study area.

From the results, there was the need for health workers and opinion leaders in the study area assist in the promotion of optimal breastfeeding among women. Therefore, opinion leaders and health workers could use the findings to develop more ways of improving good behavior of community members especially in relation to handling breastfeeding issues.

The findings of this study would also make important contributions to major stakeholders inputs because interested organizations in the study setting may use the study findings as a reference in the implementation of health campaigns messages and the media could also use the findings of the study to sensitize community members about good breastfeeding practices. This could go a long way to improve upon breastfeeding practices in the study area.



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APPENDIX I

UNIVERSITY FOR DEVELOPMENT STUDIES

SCHOOL OF ALLIED HEALTH SCIENCES

TAMALE

Questionnaire

Informed consent

Good morning/afternoon Madam, my name Eunice Addae Akua and am conducting a study on the topic: **Assessing breastfeeding practices among women in the Nanumba North District** as part of the requirements for the award of a master degree by the University for Development Studies. Any information given will be strictly confidential and will not be used for any other purpose outside this thesis. You are not required to give your name.

Section A: Demographic data

1. Age of respondent a. 15-20 () b. 21-25 () c. 26-30 () d. 31+ ()
2. Marital status a. Single () b. Married () c. Divorced ()
3. Educational level a. No formal education () b. Basic () c. Secondary () d. Tertiary ()
4. Occupational status a. housewife/unemployed () b. salaried worker () c. student () d. farmer ()
5. Parity a. 1-2 () b. 1-4 () c. 1-6 () d. 6+ ()

Section B: Knowledge and practices of women towards breastfeeding

6. Have you ever heard of exclusive breastfeeding before? a. yes () b. no () c. do not know ()





7. If yes where?
8. Which is your feeding option? a. Exclusive (only) breastfeeding () b. Artificial (bottle) feeding only () c. breastfeeding and artificial feed () d. Others (specify)
9. Did you feed the infant on the first milk (colostrum) soon after birth? a. Yes () b. No If no, why? -----
10. When did you initiate breastfeeding your child for the first time after delivery? a) Within 1 hour () b) 2-3 hours () c) Days (mention) ()
11. Do you express breast milk to leave for feeding baby while you are away? a. Yes () b. No ()
12. Do you feed your infant on other drinks / foods apart from breastmilk? a. Yes () b. No ()
13. If yes, which drinks / foods? i) Glucose water () ii. Fresh cow`s milk () iii) Infant formula () iv). Porridge (winimis /maize) () v) Tea () vi) Fruit juice () vii) Solid foods ()
14. At what age of infant did you start giving other foods? a. At birth () b. 2 months () c. months () d. 6 months () e. Other (specify)
15. What is the appropriate time to start complementary foods? a) Less than 1 month () b) 1 to 3 months () c) 4 to 5 months () d) 6 months ()

16. To your understanding, how long should a baby be exclusively (only) breastfed? a. 0-2 months () b. 2-4 months () c. 4-6 months () d. other (specify)

.....

17. Indicate the extent to which you agree, disagree or are neutral to the following variable below (Tick against each variable)

Variable	Agree	Disagree	Do not know
Breastfeeding should be the first feed a baby is given after birth			
The first yellowish milk/colostrums should be fed to the baby			
Breast milk alone without even water sustain the baby for six months			
Breastfeeding protects the baby from illnesses			
Expressed breast milk should be fed to the baby when the mother is away			
Semi-solid/solid foods should be introduced to the baby at six months of age			
Artificially fed babies are healthier			
Breastfeeding women are less likely to develop cancer of the breast and cervix			



18. Do you consider the following as benefits of exclusive breastfeeding?

Variable	Agree	Disagree	Neutral
Breastfeeding delays pregnancy in some women			
Breastfeeding enables mother and child to bond			
Breast milk is safe, hygiene and always available			
Breast milk is natural food for babies that contains all nutrients			
Society values breastfeeding practice			

Section C: Factors affecting women from practicing exclusive breastfeeding

19. Who takes care of your children when you are away? a. care taker () b.

Neighbours () c. family members ()

20. Did you experience any breastfeeding problems? a) Yes () b) No ()

21. If “Yes”, What was the problem? a) Abscess () b) Mastitis () c) Sore/cracked nipples () d) Others (mention).....



22. Do the following factors influence breastfeeding among women?

Variable	Agree	Disagree	Neutral
Unsupportive husbands and other family members			
Nipple pain			
Lack of knowledge on the benefits of EBF			
EBF is time consuming			
Belief that women had inadequate milk production			
Breastfeeding is an out dated practice			
The baby needs more than breast milk			
Breastfeeding causes mother to be socially tied down			
It is embarrassing to breastfeed in public			
Breastfeeding makes my breasts loose shape			



23. Demographic factors of women

Variable	Yes	No	Do not know
Parity			
Education			
Low economic status of women			
Place of child birth			
Rural vs urban resident			
Cultural practices			
Family pressure			

Section D: How health workers promote optimal breastfeeding practices among women

24. Do you consider the following as ways health workers can improve breastfeeding among women?

Variable	Agree	Disagree	Neutral
More education on the benefits of EBF at ANC			
One –one counseling on the importance of EBF at ANC			
Health messages on breastfeeding during post natal clinics should be available			

25. Do healthcare providers use to spend time to monitor your breast feeding practices? a) Yes () b) No ()



26. What do you think health workers can done to make breastfeeding among women successful?

Section E: Ways of encouraging women to practice exclusive breastfeeding

27. Do you consider the following as ways of encouraging women to practice exclusive breastfeeding?

Variable	Agree	Disagree	Neutral
Encouraging women to attend ANC always			
Supportive husband and other significant others			
Having adequate breast milk			
Having breastfed exclusively a child before			
Bring education of EBF to the community level			

28. What can be done to improve breastfeeding practices among women in this district?.....

Thank you for participating in this exercise



APPENDIX II

Key informant guide

Health workers- health facility in-charges

1. Is this facility a baby friendly hospital? Explain
2. What systems and structures exist that support breastfeeding interventions in this community/district?
3. How many health facilities offer breastfeeding services in this district?
4. How has been community/women response to these breastfeeding services?
5. What are the challenges/constraints encountered during implementation of breastfeeding services in the district?
6. Are there socio-cultural practices/misconceptions that affect uptake of breastfeeding services in this community?
7. What ways can health workers improve the practice of exclusive breastfeeding among women in this district?

Thank you

