

**UNIVERSITY OF EDUCATION, WINNEBA
COLLEGE OF TECHNOLOGY EDUCATION – KUMASI**

**MATERNAL PERCEPTION, ATTITUDE, KNOWLEDGE AND PRACTICES
TOWARDS EXCLUSIVE BREASTFEEDING. A CASE STUDY AT TANO
NORTH DISTRICT IN THE BRONG-AHAFO REGION OF GHANA**

BARIKISU MOHAMMED

OCTOBER, 2016

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BARIKISU MOHAMMED

**A Dissertation in the Department of HOSPITALITY AND TOURISM
EDUCATION, Faculty of VOCATIONAL/TECHNICAL EDUCATION,
submitted to the School of Graduate Studies, University of Education, Winneba,
in partial fulfilment of the requirements for award of the Master of Technology
(Catering and Hospitality) degree**

OCTOBER, 2016

DECLARATION

STUDENT'S DECLARATION

I, BARIKISU MOHAMMED, declare that this Dissertation, with the exception of quotations and references contained in published works which have all been identified and duly acknowledged, is entirely my own original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

SIGNATURE:

DATE:

SUPERVISOR'S DECLARATION

I hereby declare that the preparation and presentation of this work was supervised in accordance with the guidelines for supervision of Dissertation laid down by the University of Education, Winneba.

NAME OF SUPERVISOR: DR. GILBERT OWIAH SAMPSON

SIGNATURE

DATE

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Praise be to Almighty Allah. The Most Gracious and the Most Merciful for His mercy, blessing, wisdom and protection granted unto me.

I would also want to acknowledge the effort of my supervisor Dr. Gilbert Owiah Sampson for his dedication, patience and constructive criticisms for the review of this work without which it would not have been successful.

I also want to acknowledge the immense support of my husband Mr. Bashiru Kardiri and my dear daughter Zafeera Bakariwie Bashiru.

DEDICATION

This work is dedicated to my supervisor Dr. Gilbert Owiah Sampson, my dear husband Kardiri Bashiru, my lovely daughter Zafeera Bakariwie Bashiru and my late mother Madam Mariama Mohammed.

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ABSTRACT

The practice of not giving breast milk to baby has been connected with unexpected infant death syndrome and other neonatal morbidity and mortality. Mothers who breastfeed their babies have several benefits such as decreased risk of postpartum bleeding and others. In addressing this problem, maternal knowledge and perception towards exclusive breastfeeding was assessed. The objective of this study was to assess maternal perception, knowledge, attitude and practices of exclusive breastfeeding among nursing mothers. Cross sectional study type was used to conduct the study. A semi structured questionnaire was used in the study to collect data from the respondent. Sampling was used to select 100 nursing mothers who are still breastfeeding in the Tano North District. The study revealed maternal knowledge, practices, age, marital status and level of education can influence exclusive breastfeeding. It was revealed that 86% affirming to mature mothers affecting breastfeeding. This means that mature mothers exclusively breastfeed more than experienced mothers and teenagers. It was also revealed that (65%) of mothers affirming to the practice of exclusive breastfeeding because of advice from midwives. However, among the reasons some nursing mothers do not practice exclusive breastfeeding were breast milk alone cannot satisfy the child (82%), suffer from pains in the breast during breastfeeding (11%) and sores on the nipples prevent them from practicing (28%). The study also affirms that babies that were not exclusively breastfed but introduced to infant formulas were susceptible to various disease and infections and were either less or overweight. It is recommended that initiation of breastfeeding within the first hour of life also Infants should be exclusively breastfed for the first six months of life to achieve optimal growth, development and health.

CHAPTER ONE

INTRODUCTION

1.0 Background to the Study

Literature is replete with information on the benefits of breastfeeding to mothers and their infants (Forste *et al.*, 2001; Kieffer *et al.*, 1997; and Pascoe *et al.*, 2002). Studies have shown that breastfeeding is superior to infant formula feeding because of its protective properties against illness, in addition to its nutritional advantages (Goldman *et al.*, 1998; Bass & Groer 1997; Dennis, 2002). Considering the extensive benefits of breastfeeding, the World Health Organization and the American Dietetic Association recommend exclusive breastfeeding of infants for the first six months and continued breastfeeding with complementary foods up to 12 months of age (ADA Reports, 2000) mainly due to their weak immune system and their propensity to attract diseases via food poisoning.

Previous research has shown that maternal attitudes toward breastfeeding, perceptions of infant health and benefits of breastfeeding influence the decision to breastfeeding (Forste *et al.*, 2001; Kieffer *et al.*, 1997; Pascoe *et al.*, 2002). Many demographic factors such as maternal age, marital status, education, race, socio-economic status, culture factors, parity, number of children at home, and social support have been shown to potentially influence a woman's decision to breastfeed (Bass & Groer, 1997; Goksen *et al.*, 2002; Li *et al.*, 2002; Scott & Binns 1999).

Along with a number of demographic factors, poor or negative attitudes towards breastfeeding have been shown to be barriers to initiating and sustaining breastfeeding patterns (Bass & Groer, 1997; Dennis 2002). Previous studies have shown that

mothers who do not breastfeed or individuals who do not support breastfeeding have negative attitude towards breastfeeding (Arora *et al.*, 2000; Brown *et al.*, 2001; Forste *et al.*, 2001).

The decline in the practice of breastfeeding which started in developed countries like United State has been observed in developing countries with Ghana not being an exception (Galler *et al.*, 2001). This decrease in breastfeeding rates around the world has led to serious implications such as increase in the prevalence of protein energy malnutrition (PEM) for infants in Africa (Amador *et al.*, 1994). Scarlett *et al.*, 1996, have shown that although high initiation rate of breastfeeding in most developing countries exist the prevalence and duration of exclusive breastfeeding is very low.

In developing countries, there is a tendency to extend breastfeeding for longer periods. In Ghana, women breastfeed for a median duration of 22months with 53.4% of women breastfeeding their young babies. Regrettably, the rates of exclusive breastfeeding are very low compared to overall breastfeeding rate due to the practice of giving complementary feedings. The addition of complementary foods and liquids has been identified as a major cause of diarrhoeal illness and higher mortality rates in infants (Aidam *et al.*, 2005).

Infants and children in developing countries are inexplicably affected by life threatening diseases, poor health care and lack of portable water, malnutrition, poverty and war. In order to give these children a chance for survival, it is crucial for government organizations and medical establishment to promote and support exclusive breastfeeding.

1.1 Statement of the Problem

The practice of not giving breast milk to baby has been connected with unexpected infant death syndrome and other neonatal morbidity and mortality. Premature infants who are not breastfed are at increased risk of developing life threatening gastrointestinal diseases such as necrotizing enterocolitis. On the whole, unbreastfed infants are prone to diseases like otitis media, severe bacterial infections such as meningitis, bacteremia, lower respiratory infection and botulism.

Infants who are breastfed with formula do not usually meet the nutritional requirements and also lack defense factors such as immunoglobulin A which protects against infections and also are associated with increased risks of childhood obesity, type 1 and type 2 diabetes and leukaemia.

Apart from a number of health and nutritional effects on infants, mothers who do not breastfeed have several effects such as increase risk of postpartum bleeding, delayed uterine involution, osteoporosis as well as breast and ovarian cancers and non-insulin-dependent diabetes mellitus.

Most women at Tano North District in the Brong Ahafo Region have developed the habit of not breastfeeding their babies exclusively. Despite these findings, fewer attempts have been made at conducting studies on maternal knowledge and perception towards exclusive breastfeeding. This research therefore seeks to assess maternal knowledge, perception and attitude towards exclusive breastfeeding.

1.2 Main Objective

The main objective of the study was to assess maternal perception, knowledge, attitude, and practices of exclusive breastfeeding among nursing mothers.

1.2.1 Specific Objectives

1. To evaluate the knowledge and attitude of nursing mothers towards exclusive breastfeeding in Tano North District.
2. To determine the practices towards exclusive breastfeeding among nursing mothers in the Tano North District.
3. To identify perception of mothers on exclusive breastfeeding in the Tano North District.

1.3 Research Questions

1. What is the knowledge base and attitudes of nursing mothers in Tano North District concerning exclusive breastfeeding?
2. How do the nursing mothers practice exclusive breastfeeding?
3. What is the attitude and perception of mothers at Tano North District towards exclusive breastfeeding?

1.4 Significance of the Study

In the first place to encourage appropriate health education and health promotion. This document would create the awareness of the importance of exclusive breastfeeding and reduce cost on public health services such as special supplemental nutrition program for women, children, infant especially in the developing communities, the region and would also help nations in Africa and the world at large to redirect resources to other sectors of the economy. This would also help students to have in-depth knowledge about exclusive breastfeeding and serve as future reference for all who will read this work.

Moreover, Ghana Health Service in collaboration with Ministry of Health will be able to know reasons why mothers are not practicing exclusive breastfeeding most especially at Tano North District in the Brong Ahafo Region. Based on the reasons there will be clear intervention as to what message to give during health education programme. After which mothers will be able to make it a must practice. In all these, the nation will also have a fair share of benefit.

Also, this finding will help nursing mothers to understand the essence of exclusive breastfeeding and its benefit to the babies as well as the mothers themselves. Additionally, this research will certainly provide a basis for future research.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter discusses the theoretical evidence and revelation on maternal practices that promote Exclusive breastfeeding, where to seek advice as well as factors that influence mother not to practice exclusive breastfeeding.

2.1 Definition of Exclusive Breastfeeding

The WHO has defined Exclusive breastfeeding as the act of feeding the infant any breast milk from his/her mother without the addition of any other food or fluid (even water). However it is allowed to give vitamins, minerals and medicines in addition to breast milk. Exclusive breastfeeding also applies to a child who receives only breast milk or fed only breast milk from a wet nurse (WHO, 1991). All over the world breastfeeding is of great importance both to mother and child but it has become very obvious that some nursing mothers have not come to this realization. Many government and health organization have tried various ways and means to educate nursing and potential matters on the need to practice exclusive breastfeeding especially in the first six month of life (Steyn, 2001; Huffman & Martin, 2003).

The term “exclusive breastfeeding” refers to a situation where a baby is fed only on breast milk without food, water or drink during the first six months of the baby’s life (Hung, 2009; Cling, 2005; W.H.O & UNICEF, 1999). Many other health organizations have identified breastfeeding as the best measure of ensuring healthy growth and development of both babies and their mothers.

2.2 Benefit of Exclusive Breastfeeding

Breastfeeding contribute to the reduction of incidence of diseases such as respiratory tract infections. Otitis media and others infections have been reported to affect infants who receive breast milk. Kramer *et al.*, (2001), compared the possibility of getting one or more occurrences of gastrointestinal tract (GIT) infection, two or more occurrences of respiratory tract infection and atopic eczema and recurrent wheezing in infants who were exclusively breastfed and those who were not. They found out that exclusively breastfed babies had 40% lower risk of getting GIT infections and 46% lower risk of atopic eczema compared to babies who were not exclusively breastfed to 3-6 months.

Clemens *et al.*, (1999) indicated that infants who initiated breastfeeding in the first three days had reduced incidences of diarrhea in their first six months of life in comparison to those who initiated breastfeeding after three days. Another essential benefit of breastfeeding is the highly reduced risk of infant mortality. There was a report in Latin America that infants who were exclusively breastfed for the first three months followed by partial breastfeeding up to at least 12 months were protected from 55% of the infant mortality caused by diarrhea and acute respiratory infection (ARI) (Betran, Onis, Laver & Villar, 2001).

Early initiation of breastfeeding was reported to reduce neonatal deaths by 16% in Ghana (Edmond *et al.*, 2006). For that matter, it is essential to introduce breastfeeding programs that emphasize early initiation of breastfeeding, especially in sub Saharan Africa where rates of neonatal and infant mortality are unacceptably high.

Arifeen, *et al.*, (2001) indicated that exclusive breastfeeding reduces death related to acute respiratory infections (ARI). Their study to assess the effect of exclusive

breastfeeding on infant death risk reported that infants who were not breastfed or who were partially breastfed were 2.4 times more at risk of dying from ARI than infants who were exclusively breastfed. It was also reported that the chance of infant death due to pneumonia following inadequate breastfeeding was 2 times greater than infants who received adequate breastfeeding (Victoria *et al.*, 1999).

Many studies indicate that breastfed children score higher in intellectual and motor development test than children who were not breast fed (Dewey, 2001; Howard *et al.*, 2001; Mortenson *et al.*, 2002). Mortensen *et al.*, (2002) confirmed that children who were breastfed had better test scores on the Danish Wechsler Adult Intelligence Scale which involves verbal and performance tests than children who were not breastfed. However, these studies did not consider other factors that may influence the results such as the socio-economic status and educational level of the women.

It has been estimated that infants who were exclusively breastfed for the first six months tend to crawl earlier, are able to sit sooner and are more likely to start walking by 12 months than infants who began eating solids from the age of four months (Dewey *et al.*, 2001). One meta- analysis involving 20 studies concluded that the mean advantage in cognitive development scores of breastfeeding was higher than that of formula feeding. Also a greater advantage was seen in infants who were breastfed for longer (Anderson *et al.*, 1999). Again, the direct contact of the mother and the baby that occurs during breastfeeding is believed to cause mental and emotional activation and bonding which contribute to growth advantages (Holme *et al.*, 2010).

Several studies have outlined positive links between breast milk and chronic or non-communicable diseases. According to Gillman *et al.*, (2001), children who received

breast milk for more than seven months were 20% less likely to be overweight and obese than children who received breast milk for less than three months. It was also reported that infants who were not breastfed at the time of discharge from the hospital after delivery had a higher risk of getting diabetes than those who were breastfed at discharge (Jones *et al.*, 1998). The reduced risk of leukemia in childhood was higher than in children who received breast milk for more than six months (Shu *et al.*, 1999). There has also been malnutrition in pre-term infants and blood pressure in later life. Singhal *et al.*, (2001), reported that the mean blood pressure of children aged 13-16 years who were born pre-term and received breast milk from milk banks was lower than that of children of the same age who received formula.

Another study reported that adults who were bottle fed or received formula during their infancy had increased fasting insulin, higher LDL cholesterol and lower HDL cholesterol than adults who were exclusively breastfed during their infancy (Ravelli *et al.*, 2000). Breast milk is ideal for infant growth and development as it has an appropriate balance of nutrients that are easily digested and bioavailable (Dewey, 2000). Studies indicate that exclusive breastfeeding for six months provides adequate nutrition for normal growth of the infant up to six months of age (Dewey, 2001). Evidence indicate that breastfed infants gain weight rapidly during the first two to three months of life followed by a relatively slower growth rate compared to formula fed infants (Nommsen, Rivers & Dewey, 2009). This is because breastfed infants self-regulate their energy requirements by maintaining a lower body temperature and metabolic rate than formula fed infants (Dewey, 2001). Other benefits of breastfeeding to the infant include reduction of the risk of sudden infant death syndrome (Alm *et al.*, 2002; Saadi *et al.*, 1993), Protection against asthma and allergy

(Eigenmann, 2004), protection against lymphoblastic leukemia (Kwan *et al.*, 2004) and protection against inflammatory bowel disease (Klement *et al.*, 2004).

For maternal health, breastfeeding is reported to have both short and long term benefits. In the short term, early initiation of breastfeeding encourages the release of the oxytocin hormone, which is believed to aid in uterine contractions and to reduce postpartum weeding (Labbak, 2001). Exclusive breastfeeding also delays the return of fertility, therefore helping to reduce short birth intervals. This is essential for the health of the mother and the survival of young children and it has been indicated that there is an increased mortality risk among children born after short birth interval (Muhuri & Menken, 1997). Breastfeeding women return to their pre pregnancy weight faster than formula feeding women and also form a strong bond with the babies (Labbok, 2001).

The long term benefits of breastfeeding to the mother include reduced risk of breast cancer (Tryggvadottir *et al.*, 2001; Collaborative Group on Hormonal Factors in Breast Cancer, 2002) and Ovarian Cancer (Ness *et al.*, 2000; Riman, *et al.*, 2002). Breastfeeding also lowers a mother's risk of getting iron deficiency anaemia, as it delays the return of menstruation by up to 30 weeks after delivery (Labbok, 2001). This helps to improve the health of the breastfeeding woman because iron deficiency anaemia is associated with body weakness, fatigue, vertigo, dizziness, pallo, headache, ringing in the ears and headache (Henly *et al.*, 1995). For the breastfeeding woman, iron deficiency anaemia has been reported to be a contributing factor for low milk supply, plugged ducts and mastitis and delayed healing of sore nipples (Henly *et al.*, 1995).

2.3. Where to Seek Advice on Breastfeeding

New and expectant mothers often have many questions and concern about breastfeeding. Although breastfeeding is natural, it often is not easy. Breastfeeding a baby might require some time to develop a successful breastfeeding relationship between mother and child, and there is often a learning curve for both mother and baby after birth. A number of resources are available for mothers to seek obstetrician/gynecologist (OB/Gyn), a lactating consultant, books, the Internet, other nursing mothers and various organizations for nursing mothers. It is good idea for expecting mothers to seek advice and locate sources of information about breastfeeding before their baby is born. Speaking with an OB/Gyn or midwife is a good place to start. Some doctors and midwives have a wealth of breastfeeding knowledge. Doctors and midwives can give a referral to a lactating consultant and recommend other sources of information.

Many OB/Gyn practices and hospitals have consultant or specialist on their staff. It also might be helpful for an expecting mother to read several books about breastfeeding before the baby arrives. Books can give great background information, although they are not as helpful when the mother is having difficulty applying the information found in them.

One of the best sources of breastfeeding help is a lactating consultant. Lactation consultants typically are trained and certified lactating specialist. Breastfeeding is their specialty. They can be wealth of knowledge, tips, techniques, advice and support.

Recommended for nursing mother to have a lactation consultant assess her nursing technique and lactation consultants can give one-on-one breastfeeding help, advice

and support. It highly answers questions during the baby's first day of life. Most hospitals and birthing centers have lactation consultants on their staff. After baby is home and settled, lactation consultants can come for home visits, give advice and answer questions over the phone or hold meetings in their office. Some might even consult with breastfeeding mothers by webcam.

Breastfeeding mothers also can look for support groups consisting of other nursing mothers. Many places have a local non-profit group that holds meeting, information seminars, play dates and fundraisers. Many nursing mothers like these groups because of the personal connections they provide. Mothers can get advice and support from other mothers who have been in similar situations. These group can also be a great way for mother and baby to make new friends.

Other mothers like to seek help from their existing social circle. Asking friends and relatives who have breastfed for advice or help can be quick and easy solution. In many areas of the world, mothers rely on their extended family for breastfeeding help, education and support. Some mothers also do not wipe their breast before they breastfeed the child, which at last tern to affect the child's health. One should be cautions, though, because although a grandmother or mother's advice might be well intended it also might be outdated or unsubstantiated.

With the ever-growing expanse of information available on the internet, many mothers turn to it for breastfeeding help. There are many websites that offer information and advice on breastfeeding, and choosing one that is affiliated with an accredited health organization is wise. There are also many breastfeeding how to videos on the internet that may be helpful. Social networking sites and forums also can be great way for nursing mothers to connect with other mothers who have had

similar experiences and can give helpful advice. Many breastfeeding organizations offer 24-hour support via telephone help lines.

The vast array of resources is always changing. It might be helpful for mothers to consult a variety of resources. Every nursing mother and baby pair is unique, and each pair has problems and circumstances that are unique. Before making changes to a breastfeeding routine, it is important for mothers to consult with a lactation consultant or the baby's pediatrician. (www.google.com copyright protected: (2003-2011) conjecture corporation and www.thebridgeclinic.com).

W.H.O. (2006) reported that exclusive breastfeeding rates were 2% Nigeria, 2% Ghana, 3% in urban Zambia and 4% in rural Zambia. Attitudes towards exclusive breastfeeding, according to the American Academy of Pediatrics (2007), human milk is the optimal form of nutrition for infants and also recommends breastfeeding a baby during the first 24 months of life. A study on attitudes towards exclusive breastfeeding and other feeding options conducted on Abidjan, Cote d'Ivoire by Yeo (2005) revealed that, although majority of the pregnant women saw exclusive breastfeeding as the appropriate method or source of feeding, but water especially was, felt as necessary supplement while in Jamaica, the dominant reason for partial breastfeeding was maternal anxiety that breast milk alone might not provide sufficient nourishment (Jolly, 2000). Breastfeeding is the natural source of infant feeding and as such offers numerous physical and emotional benefits to both mother and child (Renfrew, 200).

Again, breastfeeding aid as a protection against the development of obesity meaning protect against infantile obesity, it also serves as psychological development known as

exterior gestation because it provides continuity with intrauterine environment while providing security and nourishment (Robert, 1992).

The source of exclusive breastfeeding babies are put to breast just after delivery or expulsion based on mothers health and fit to breastfeed. Babies are fed on demand day and night without food, drink and water, through bedding-in and rooming-in of mother and baby (Chen, 2004). The World Health Organization (1996) recommends exclusive breastfeeding for the first six months in the baby's life. A national survey in 2005 in Taiwan shows the rate of exclusive breastfeeding at the month postpartum to be 22.3% dropping to 16.7% at three month (Student Encarta, 2008).

2.4 Factors That Influence Mothers not to Practice Exclusive Breastfeeding

Various factors have been identified which prevent women from breastfeeding exclusively. Shirima *et al.*, (2001) reported that mothers' knowledge about infant feeding options influenced their practices. Women who had satisfactory knowledge regarding maintenance of breastfeeding were reported to have high rates of exclusive breastfeeding compared to those who had poor knowledge. Also those mothers who know the dangers of pre-lacteal feeds were reported to have high rates of exclusive breastfeeding compared to those who did not know the dangers of pre-lacteal feeds. Lack of information about breastfeeding and less contact with the health facility was also correlated to low rates of exclusive breastfeeding. Shirima *et al.*, (2001) reported that mothers who were educated about breastfeeding exclusively and predominantly for longer periods compared to mothers who did not receive any information. Other factors that prevent women from breastfeeding exclusively include the cultural values and practices surrounding the use of colostrum; many regard it as bad for the infant. Another factor is mothers' perceptions of inadequate breast milk (Mabilia, 2003;

Shirima, 2001). Many women worry about whether their babies feed often or seem hungry soon after being breastfed. However, it is normal for a baby to feed often because breast milk is digested faster than formula milk (WHO, 2001).

2.4.1 Delivery Location

Delivery in government health facilities (e.g. polyclinics and general hospitals) have been positively associated with higher breastfeeding initiation and EBF duration compared with delivery in private facilities or at home (Aidam *et al.*, 2005). The main reason for this observation is that a number of government facilities have been designated baby-friendly unlike private facilities. Women who deliver in private health facilities, maternity homes or with traditional birth attendants are also more likely to discontinue EBF before 6 months unlike mothers who deliver in government hospitals or polyclinics (Aidam *et al.*, 2005). This observation has been attributed to the little or no EBF education offered by private health facilities most of which are also not designated baby friendly as compared to most government facilities which have the baby friendly designation and hence tend to promote EBF (Ukegbu *et al.*, 2011; Aidam *et al.*, 2005).

2.4.2 Poor Suckling Ability

During pregnancy, the high concentration of progesterone, a pregnancy hormone in the blood inhibits the production and release of breast milk. However, after birth the level of this hormone declines thereby triggering lactogenesis as the levels of prolactin and oxytocin rise.

Both of these lactation hormones are stimulated by birth of the baby and baby's suckling. Inability of the infant to suck the breast normally due to undeveloped jaws, ill health or poor latch-on techniques could hinder adequate stimulation of the breast which is necessary for the production of human milk and the continuous supply of

milk to the baby. When this happens, babies may not receive adequate milk and hence may cry incessantly causing the mothers to become frustrated and sometimes discouraged with breastfeeding. Some mothers may as a result resort to bottle feeding which also has the potential to cause a decline in breastfeeding frequency and duration (Bragelien *et al.*, 2007; Yokoyama *et al.*, 2006).

2.4.3 Maternal Stress and Anxiety

Stressed and anxious mothers are less likely to breastfeed frequently compared to relaxed and less anxious mothers. Such mothers have a higher tendency to bottle feed and hence usually record lower EBF rates ((Doulougeri *et al.*, 2013). During periods of stress there is the release and activation of the hormone cortisol which is a known inhibitor of prolactin and oxytocin (Doulougeri *et al.*, 2013). Research carried out among urban Guatemalan mothers has revealed that stress during labour and/or delivery which is characterized by high cortisol levels could lead to delayed onset of lactation (Grajeda & Pérez-Escamilla, 2002) which could eventually reduce breastfeeding frequency and duration. Mode of delivery typically emergency (unscheduled) caesarean section has also been identified to exacerbate stress levels especially in primiparous mothers compared with vaginal delivery (Grajeda & Pérez-Escamilla, 2002). Additionally stress triggered by the demands of caring for a sick infant could discourage the mother and may lead to early cessation of breastfeeding (Doulougeri *et al.*, 2013).

2.4.4 Perceived Low Volume of Breast Milk

The perception of the inability to produce adequate amounts of breast milk especially in the case of multiple births is a major challenge in the quest to improve EBF rates. Some mothers find it difficult to believe that it is possible for their babies to survive

on only breast milk in the first 6 months of life without supplementing with any food or drink including water. Persistent crying of the babies even after they have been breastfed usually suggests to them that the babies are still hungry (Ukegbu *et al.*, 2011). This perception of breast milk insufficiency which could frustrate the mother or caregiver and even other members of the family is likely to contribute to early breastfeeding cessation or shorter EBF duration (Fjeld *et al.*, 2008). A study among peri-urban women in Ghana to identify perceived incentives and barriers to exclusive breastfeeding reported that perceived milk insufficiency was one of the main hurdles preventing the achievement of optimum EBF rates (Otoo *et al.*, 2009). In a related study in nearby Nigeria, results of focus group discussions among women with infants between one and six months revealed that many of the participants reported inadequate production of breast milk as a justification for introducing other foods (Ukegbu *et al.*, 2011). The study thus suggested that postnatal education in both the communities and hospitals be intensified to encourage mothers to continue EBF.

The problem hindering the practice of exclusive breastfeeding in Ghana is the habit of giving water, glucose, foods and drinks, and also not feeding on demand before six months of age. This attitude is widespread throughout the world and often begins in the first month of life. Research conducted by Tagoe-Darko and Munkaria (2003) shows that the changes in the infant feeding practices of the mothers as well as society has generated much debate through the world. The debate has to do with what to give to child at what time and for what duration. Infants are fed with breast milk and complementary foods by some mothers with the explanation that water especially should be given immediately after birth because they are thirsty after the exhaustion of the birth process or as a cultural gesture to welcome the child into the world. It shows that 83% of infants in Ghana receive water, food; drink in the first month

including other country like Egypt, Gambia, Guatemala and the Philippines also 62% practicing it. Woman living in poor neighborhood, exclusive breastfeeding was considered harmful for mothers among the community breast milk alone were thought not to be sufficient nourishment for the child. According to Democratic and Health Survey (2003).

Common reasons for this attitude are that, water, food and drink (Hindrances)

1. Is necessary for life
2. Relieves pain (from colic/earache)
3. Breast milk cannot flow as required
4. Baby not satisfied with breast milk

Cultural and Religious beliefs, generation to generation (traditions), spiritual and physiological necessity, mentality and perception and lack of ideas, skills and knowledge all summing up to influence the introduction of other things apart from breast milk to the baby for the first six months of life.

The advice of health care providers also influences the use of water, drink and food in many communities and hospitals. For example, a study in Ghana found that 93% of midwives are encourage these attitudes (giving of water, glucose solution and infant formula). Again mothers are advised to give sugar water to the babies after delivery by many nurses in Egypt (Goldberg, 2003).

A similar study was conducted by Awumbia (2003) in South Africa. According to the study, despite efforts of health care providers to promote exclusive breastfeeding, not much success has been achieved, as feeding practices are often directly related to varied economic, socio-cultural and religious factors in the community and to various dynamics prevailing at the household level. Crucial among these as determinants of

the nutritional and health status of infants and young children are the socio-cultural factors particularly the knowledge, attitudes, beliefs, norms and customs of a community. However, studies on infant and child nutrition often focus on health related aspects, often neglecting the range of factors affecting the care giving environment and complex range of factors operating at the household and community level which ultimately affect feeding behavior.

An observational descriptive study with consecutive sampling was utilized by Sowden (2009). Data of 55 mothers with infants aged 0 to 6 months that were not currently breast-fed was captured in the day care centers and private clinics situated in the Cape Metropolis. Data was collected by means of a self-administered questionnaire available in Afrikaans and English.

Their result revealed that majority of mothers (80%) decided only after the birth of their infant to rather opt for formula feeding. Evident factors that were identified as barriers to breast-feeding include a lack of knowledge and experience (38%) as well as lack of facilities at public places (75%) and at work (71%) to breast-feed. Perceived benefits of infants' formula included that the father could not help with the workload (67%) and does not feel left out (38%), the mother knows what volume of milk is received (84%) and the convenience if the mother is working (64%). The mothers were overall not concerned about possible side-effects of breast-feeding and did not feel that their breasts were physically not of optimal physiology to breast-feed. Furthermore, I also like to use this opportunity to educate mothers not to practice the habit of giving water, glucose, foods and drinks to babies before six months and encourage them to feed babies on demand in order to help them grow both physically and intellectually. I therefore conclude here by saying breast milk alone before 6 months is the best for babies.

2.4.5 The Attitudes of Nursing Mother towards Breastfeeding

Exclusive breastfeeding is defined as the use of breast milk as the only source of food, to the total exclusive of other supplementary foods such as formulas, water, juices or teas (Labbok & Krasovec, 2000; W.H.O, 2009). The study conducted in Havana in the year 2010, showed that the prevalence of breastfeeding among women was 100% and the average duration of breastfeeding was about 18 months or longer. However, weaning was found to be done at very early ages of 2-4 months and 38.0% of mothers admitted to giving water to their babies soon after birth implying most mothers do not know what weaning actually meant.

The study continued to reveal that the most common weaning food was koko and weanimix. Besides, most common reason for early weaning were fear of adequate milk supply (56.0%) followed by breast milk as being nutritious (100%), healthier for children (97%), protecting their children from disease (80.0%), promoting bonding between mother and child (99%) and being cheaper than buying supplements (81.0%). However, 38.0% of mothers disagreed to the contraceptive benefits of breastfeeding.

When asked about duration of Exclusive breast feeding, 51.0% of mothers responded approximately 6 months which means they have the knowledge but they do not practice for certain reason which needs to be evaluated. The knowledge about duration of exclusive breast feeding is further supported by when water should be given to a child and 67.0% of mothers responded to an average of 5 months yet the practice is still poor. Most mothers gained their information about breast feeding from CWC/MCHC and health workers (75.0%) (Bhavana, 2010).

2.4.6. The Source of Knowledge Mothers has on Breastfeeding

Knowledge on exclusive breastfeeding study was conducted in Jordan among 334 women, 3 indicated at 3 months of breastfeeding was considered long enough, 68% agreed at breast feeding was a good source of contraceptive method and 84% thought that breastfeeding reduced the incidence of diarrhea, (Department of Community Medicine, 2003). Again a study carried out in Nigeria under the UNICEF and W.H.O Baby Friendly Hospital Initiative (BFHI) program among health workers showed that, nurses who had participated in the BFHI workshop were significantly more positives to correct practices for the promotion of exclusive breastfeeding (Owuaje, 2002) .

2.4.7 The Practices of Nursing Mothers towards Breastfeeding

Women who are breastfeeding need to be careful about what they eat and drink, since things can be passed to the baby through the breast milk. If a woman has alcohol, a small amount can be passed to the baby through breast milk. She should wait to breastfeed at least 2 hours after a single alcoholic drink to avoid passing any alcohol to the baby. Caffeine intake should be kept to no more than 300 milligrams (about one to three cups of regular coffee) per day for breastfeeding women because it may cause problems such as restlessness and irritability in some babies.

Again another study by Kleinman (2008) in the USA revealed that the first 24hours after birth the newborn infant should be breastfed 8 to 12 times or more every twenty four (24) hours usually for 10 to 15mins per breast. Frequent breastfeeding in the first few days minimizes prostrated weight loss, decreases bilirubin concentration and helps establish a good milk supply. Although every 1.5 to 3hours is the average there is great deal of variation from infant to infant and day to day.

A number of research conducted in children's hospital in Pittsburg by UPMC (2008) revealed that during the first days and week, a newborn infant is fed 8-12times or more in 24hours. The frequent breastfeeding stimulates the mother's hormonal system to increase milk production. Physicians' advice mothers to breastfeed the baby on demand neither than by an hourly schedule. This practice not only ensures that the baby receives the proper nutrient, but also that the mother's milk supply is maintained. Milk at the beginning of a feeding session is different in composition than milk at the end the hind milk or later is much richer in fats. A similar view is shared by Mellissa (2009) who stated that newborns need to nurse frequently, at least every two hours, and not on any strict schedule. This will stimulate the mother's breasts to produce plenty of milk. Agyapong (2010), noted that after six months of exclusive breastfeeding some mothers failed to give nutritional foods to their children and stressed that the local dishes had all the rich sources of nutrient that facilitate the healthy growth of children. Breast milk she said protect children against all kinds of diseases. She also said that malnutrition could not be attributed to poverty because some mothers from very poor communities had well-nourished children and they reveal that they gave them local foods such as nut, green leaves, fruits and fish during their weaning from exclusive breastfeeding, the fore each and every one should try to encourage mothers to practice exclusive in other to protect our future children.

2.5 Initiation of Breastfeeding

It is better for mothers to put their babies within half hour of birth as this first and the foremost step to optimal as at this time the baby's suckling reflex is strongest, and the baby is more ale. Early initiation stimulates breast milk production through prolactin reflex and also stimulates oxytocin reflex for better milk flow from mother's breast to the baby. It helps to ensure colostrums, which provides the infant with the

antibacterial and anti-viral protection, and the crucial nutrition needed at this hour. Early initiation of breastfeeding is associated with fewer breastfeeding problems and better mother-infant relationship. Babies who are put to breast earlier have been shown to have higher core temperature and less temperature instability.

2.5.1. Latching on Feeding and Positioning

Correct positioning and technique for latching on can prevent nipple soreness and allow the baby to obtain enough milk. The “rooting reflex” is the baby’s natural tendency to turn towards the breast with the mouth open wide; mothers sometimes make use of this by gently stroking the baby’s cheek or lips with their nipple to induce the baby to move into position for breastfeeding session, then quickly moving the baby onto the breast while its mouth is wide open. To prevent nipple soreness and allow the baby to get enough milk, a large part of the breast and areola need to enter the baby’s mouth to help baby latch on well, tickle the baby’s top lip with the nipple, wait until the baby has a mouthful of nipple. The nipple should be at the back of the baby’s throat, with the baby’s tongue lying flat in its mouth inverted or flat nipple can be massaged so that the baby will have more to latch onto. Resist the temptation to move towards the baby, as this can lead to poor attachment.

Pain in the nipple or breast is linked to incorrect breastfeeding techniques. Failure to latch on is one of the main reasons for ineffective feeding and can lead to infant health concerns. A 2006 study by American Academy of Pediatrics found that inadequate parental education, incorrect breastfeeding techniques, both were associated with higher rates of preventable hospital admissions in newborns.

The baby may pull away from the nipple after few minutes or after a much longer period of time. Normal feeds at least at the breast can last a few sucks (newborns),

from 10 to 20 minutes or even longer (on demand). Sometimes, after the finishing of a breast, the mother may offer the other breast.

While most women breastfeed their child in the cradling position, there are many ways to hold the feeding baby. It depends on the mother and the child's comfort and the feeding preference of the baby. Some babies prefer one breast to the other, but the mother should offer both breasts at every nursing with her newborn.

When tandem breastfeeding, the mother is unable to move the baby from one breast to another and comfort can be more of an issue. As tandem breastfeeding brings extra strain to the arms, especially as the babies grow, many mothers of twins recommend the use of more supporting pillow.

2.5.2. Benefits of Exclusive Breastfeeding

Important health benefits of breastfeeding and lactation are also described for mothers. The benefits include decreased postpartum bleeding and more rapid uterine involution attributable to increased concentrations of oxytocin, decreased menstrual blood loss and increased child spacing attributable to Lactation Amenorrhea, earlier return to pre-pregnancy weight, decreased risk of breast cancer, decreased risk of ovarian cancer, and possibly decreased risk of hip fractures and osteoporosis in the postmenopausal period (W.H.O. Breastfeeding Definition cited by Katherine A. Dettwyler, Ph.D. Department of Anthropology, Texas A& M University).

In breastfeeding the emotional and physical welfare of mother and infant are interconnected. Infants benefit not only from receiving breast milk but also from skin to skin contact which occurs during feeding. It has been suggested that skin to skin contact comforts and soothes the infants and in turn has an effect on sleep pattern and the ability of self-comfort. The nurturing during breastfeeding also provides

foundation of a good and healthy relationship between mother, baby and within the family as a whole (Renfrew, 1990).

2.5.3. Community Benefits

In addition to specific health advantages for infants and mothers, economic, family, and environmental benefits have been described. These benefits include the potential for decreased annual health care costs of \$3.6 billion in the United States; decreased costs for public health programs such as the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC); decreased parental employee absenteeism and associated loss of family income; more time for attention to siblings and other family matters as a result of decreased infant illness; decreased environmental burden for disposal of formula cans and bottles; and decrease energy demands for production and transport of artificial feeding products. These savings for the country and for families would be offset to some unknown extent by increased office-visit time, and cost of breast pumps and other equipment, all of which should be covered by insurance payments to providers and families W.H.O. (2010)

2.5.4. Time and Place for Breastfeed

Breastfeeding at least every two to three hours helps to maintain milk production. For most women, eight breastfeeding or pumping sessions every 24 hours keeps their milk production high. Newborn babies may feed more often than this: 10 to 12 breastfeeding sessions every 24 hours is common, and some may even feed 18 times a day Feeding a baby “on demand” (sometimes referred to as “on cue”), means feeding when the baby shows signs of hunger, feeding this way rather than by the clock helps to maintain milk production and ensure the baby’s needs for milk and comfort are being. However, it may be important to recognize whether a baby is truly hungry, as breastfeeding too frequently may mean the child receives a disproportionately high

amount of foremilk, and not enough hind milk .Experienced breastfeeding mothers learn that the sucking patterns and needs of babies vary. While some infants' sucking needs are met primarily during feeding, other babies may need additional sucking at the breast soon after a feeding even though they are not really hungry. Babies may also nurse when they are lonely, frightened or in pain.

Comforting and meeting sucking needs at the breast is nature's original design. Pacifiers (dummies, soothers) are a substitute for the mother when she cannot be available. Other reasons to pacify a baby primarily at the breast include superior oral-facial development, prolonged lactation amenorrhea, avoidance of nipple confusion, and stimulation of an adequate milk supply to ensure higher rates of breastfeeding success. Again, most US states now have laws that allow a mother to breastfeed her baby anywhere she is allowed to be. In hospitals rooming – in care permits the baby to stay with the mother and improves the ease of breastfeeding. Some commercial establishments provide breastfeeding rooms, although laws generally specify that mothers may breastfeed anywhere, without requiring them to go a special area.

2.5.5 Timely and Appropriate Complementary Feeding

It is obvious that after six months, infant's requirements cannot be met with breast milk alone. This is the time to begin complementary foods, which are of good quality and in adequate amounts. This is necessary to prevent malnutrition including anaemia. During this period additional foods and fluids are provided to the baby along with breast milk. A study has shown that early introduction of complementary food does not result in improved growth velocities or food acceptance. Several other studies have also documented that early start of complementary foods earlier than 6 months, replaces breast milk intake and does not increase caloric intake and none of these studies reported any benefit of starting these foods earlier than six months. Replacing

breast milk means losing fats, energy and other micronutrients. It would therefore be important to maintain high levels of breastfeeding along with introduction of complementary foods, which are high nutrition density.

2.6 Exclusive Breastfeeding Practices in Ghana

Contrasting exclusive breastfeeding, breastfeeding is usually not predicament in Ghana. This is witnessed by the reality that as high as 98% of all infants younger than six months are being breastfed; and still at age 12 -15 months, 95% of children go on to obtain breast milk alongside with complementary foods. Exclusive breastfeeding on the other hand is short lived with an estimated 84% of children younger than 2 months being exclusively breastfed. Even though primarily higher, the percentage of children who go on to receive exclusive breastfeeding by age 4 to 5 months plummets to about 49% (Ghana Statistical Service & ICF Macro, 2009 p.186 - 188).

In general, the exercise of colostrums has turn out to be widespread as early commencement of breastfeeding is improving. Particularly, children in urban areas(55%) are to be expected to be breastfed within the first hour after delivery in dissimilarity to infants in rural and deprived areas (50%).

Average length of breastfeeding nevertheless, is a bit higher among children in rural and deprived areas (21 months), compared with 19 months for those in urban areas.

Unlike countries including Namibia, Nigeria, Tunisia, and Sudan, where the rate of bottle-feeding is as high as 30% (Sante, 2002), the percentage of bottle-fed infants in Ghana is estimated at 5% among infants younger than 2 months and 21% among those aged 6-8 months (GSS & ICF Macro p,188). At about six months of age and beyond an estimated 68% of Ghanaian breastfeeding children are given both solid and semisolid foods. Most of these complementary foods are prepared from grains, meat, egg, fish, fruits, and vegetables (ibid).

CHAPTER THREE

METHODOLOGY

This chapter discusses the data collection procedures that were adopted in gathering information for the study as well the selected area the study was carried out. The chapter will contain the following sub topics; research approach, research design, research area, population, sampling technique, instruments for data collection and data analysis.

3.0 Research Design

The study was used based on both qualitative and quantitative approaches. Cross sectional study type was used to conduct a study at Duayaw Nkwanta St. Johns of God Hospital to ascertain the perception knowledge, attitude and practice of mothers or draw conclusion from the finding to represent lactating mothers with children 0-6 months, Cross-Sectional study is straight forward in design and is designed at finding out the prevalence of a phenomenon, problem, attitude or issue by taking a picture or cross-section of the population.

3.1 Research Area

The area for the study is Tano North District in the Brong Ahafo Region of Ghana. The Tano North District is one of the 22 administrative districts of Brong Ahafo Region of Ghana. It was carved out of the then Tano North District in 2004 with its administrative capital Duayaw-Nkwanta. It shares boundaries with Offinso and Ahafo-Ano Districts both in Ashanti Region in the North-East and South –West respectively. Other districts that share boundaries with the Tano North include Tano South in the South, Asutifi in the west and Sunyani municipal in the North. The

District lies between longitude 7°00' 25 latitude 1°45W and 2°15W with a total land areas of 876 square kilometres, constituting about 1.8% of the total land area of the Brong Ahafo. The Tano North District has a total population of 78,415 comprising 39,338 males and 39,077 females as at 2010. The District has a population growth rate of 2.4%. The District lies in the semi-equatorial zone which experiences two (2) rainy seasons (major and minor). Agriculture is the main occupation in the District employing about 64.4% of the total work force in the District.

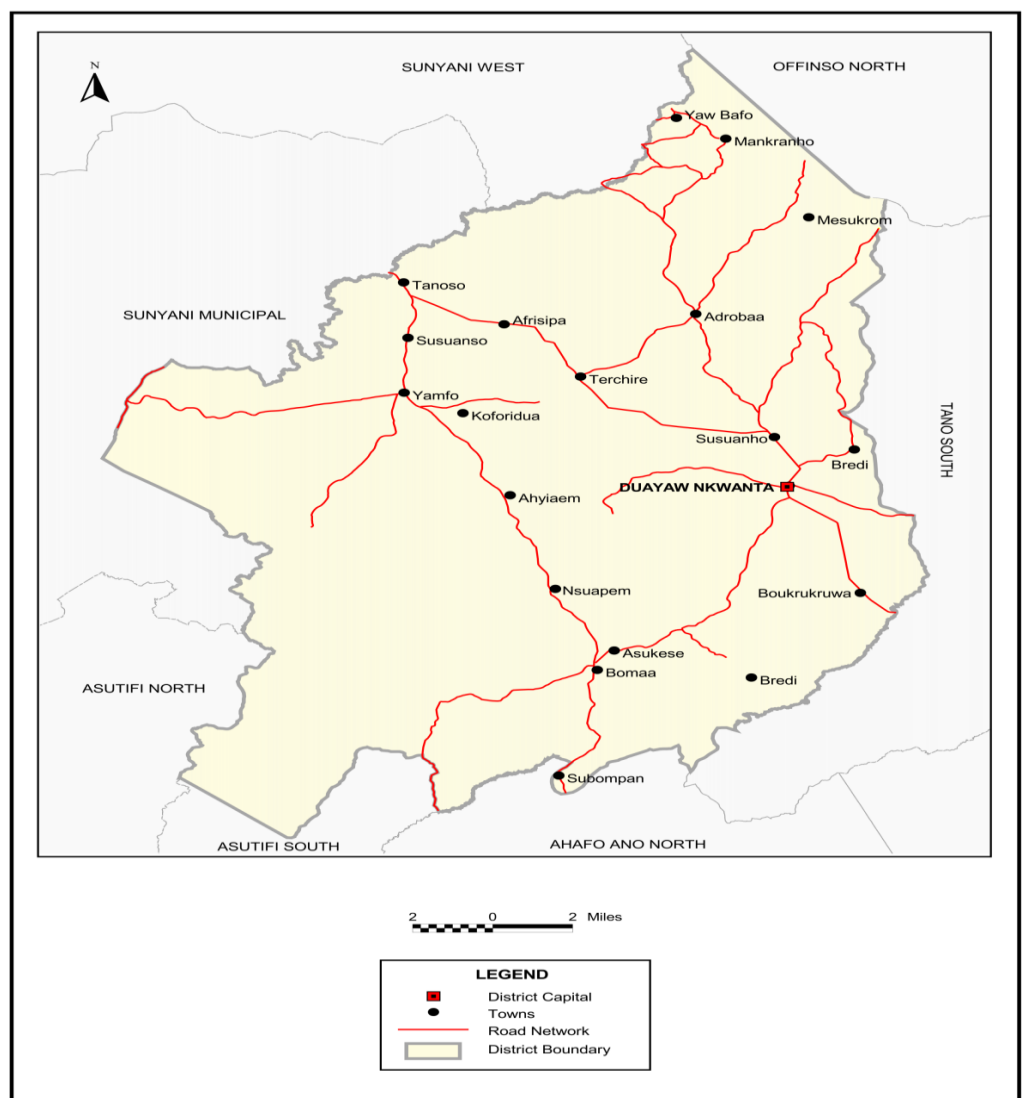


Fig. 3.1: Map of Tano North

Source: Tano North District analytical report 2014

3.2 Population

The population for the study comprises all nursing mothers caring for babies aged between 0-6 months in the Tano North District attending child welfare clinic. It is estimated to be around 500 mothers according to the medical director.

3.3 Sampling Techniques and Sampling Size

Random sampling was used to select nursing mothers who are still breastfeeding in the Tano North District. A sample size of 100 was used for the study.

3.4 Instruments for Data Collection

A semi-structured questionnaire was used in the study to collect data from the respondent. The respondents completed the questionnaire in a confidential setting, therefore diminishing possible bias connected to researcher presence and devoid of instant time constraints.

3.5 Data Analysis

Data collected would be edited, coded and fed into the computer using statistical package for social science (SPSS). Data would be presented in tables and graphs to give usual impression of the data.

3.6 Ethical Consideration

Permission was sought from the Medical Director of the Duayaw Nkwanta St. John of God Hospital to undertake the research. The respondents were informed of the purpose of the research to seek the consent to participate in the research process. The respondents were assured that the use of the response were for academic purposes only. Moreover, ethically anonymity and non-traceability was assured.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.0 Demographic Characteristics of Mothers

This section presents the results of socio-demographic characteristics of respondents (mothers). The data gathered from the questionnaires were presented, analyzed and discussed to set the background for discussion of results in line with the study questions and objectives. The results are presented as descriptive statistics including frequencies and percentages in tables and graphs.

4.1 Age

The age distribution of the respondents for the study have been categorized into ranges to give the researcher a fair idea of the category of age group that mostly participated in the study and this is indicated in Table 4.1 below.

Table 4.1: Age Distribution of Respondents (n=100)

Age (years)	Frequency (N)	Percentage (%)
<16	3	3.0
16-25	7	7.0
26-35	31	31.0
36-45	44	44.0
>45	15	15.0
Total	100	100.0

The age group of distribution of respondents in Tano North District revealed that majority (44%) of nursing mothers is within the age group of 36-45 years. The second largest age group of nursing mothers representing 31% was within the range of 26-35 years. The age group of 45 years and above as well as 16 – 25 years recorded 15% and 7% respectively whereas the least age group of nursing mothers representing 7% were below 16. The data showed that majority of the respondents were matured and experienced nursing mothers when it comes to breastfeeding a child.

This varies with the study conducted by Chalmers *et al.*, (2009) Chin *et al.*, (2008) which says. With increased age, there is often an increased in the level of education; both factors are associated with higher breastfeeding rates.

4.2 Marital Status

Marital status also affects breastfeeding initiation and duration. Married Black women are twice as likely to breastfeed as unmarried Black women (Chin *et al.*, 2008; Thulier & Mercer, 2009). This therefore contradicts this finding because 71% of nursing mothers were married yet do not exclusively breastfeed.

Marital status of nursing mothers was gathered for the study. Table 4.2 gives detail information of marital status from the data gathered.

Table 4.2: Marital Status (n=100)

Marital Status	Frequency (N)	Percentage (%)
Married	71	71.0
Single	7	7.0
Divorce	3	3.0
Separate	19	19.0
Total	100	100.0

The data gathered from the study revealed that majority of the respondents, representing 71% of nursing mothers in Tano North District were married. The study further showed that 19% were separated and three percent 3% divorced while seven percent 7% were single. This indicates that majority of the nursing mothers are married.

4.3 Number of Children of the Nursing Mothers

The data gathered from the study also revealed that almost half representing 44% of nursing mothers in Tano North District had three (3) children follow by thirty-five percent 35% having two (2) children. Nursing mothers having four (4) and above children recorded thirteen percent 13%. The study further showed that 8% had a child. The number of children that the nursing mothers have was investigated in the study.

Trussel *et al.*, (2010) found that women with higher children tended to breastfeed the longest, those with seven or more children were twice as likely to breastfeed their children than women with firstborn children. This therefore confirms with this findings. The details of the investigation are presented in Table 4.3 below.

Table 4.3: Number of Children of the Nursing Mothers (n=100)

Number of Children	Frequency (N)	Percentage (%)
1	8	8.0
2	35	35.0
3	44	44.0
≥ 4	13	13.0
Total	100	100.0

4.4 The Average Years Intervals between Nursing Mothers' Children

Information about the average year(s) intervals between the children was gathered and examined. The details of the examination are presented in figure 4.1 below.

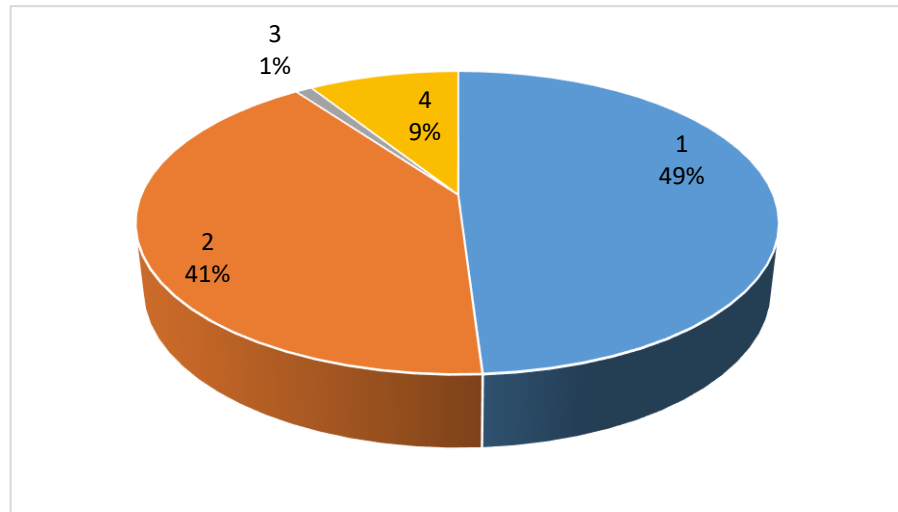


Figure 4.1 Marital Status (n=100)

The average year(s) interval between the children of the nursing mothers for the study revealed that out of 100 respondents, forty-nine (49) nursing mothers representing 49% said one, forty-one (41) representing 42% said two, nine (9) representing 9% said four and one percent said three.

4.5 Occupations of the Nursing Mothers

Women of lower socio economic status are also less likely to breastfeed (Chalmers *et al.*, 2009) and to continue breastfeeding (Thulier & Mercer, 2009). According to McCann *et al.*, (2007), less than 50% of women enrolled in a Women, Infants and Children (WIC) programme initiate breastfeeding, and less than 25% of those women are breastfeeding their infants at 6 months postpartum. The occupations of the

respondents were studied in Tano North District to ascertain whether nursing mothers were employed or employed. Figure 4.2 below illustrates the details.

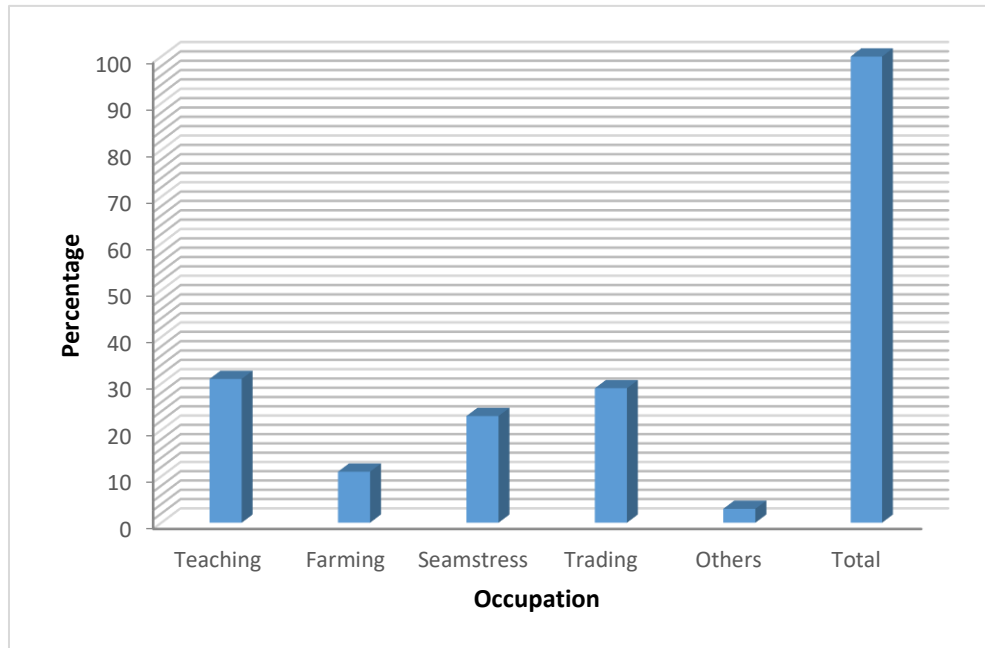


Figure 4.2 Occupations of the Nursing Mothers (n=100)

The study on the mothers' occupational status revealed that, 31% were teaching, 29% were trading, 23% were seamstress, 11% were farming and 3% were doing other jobs. It can be concluded that majority 31% of the nursing mothers in Tano North District are teachers. It was recorded that trading was done by most of them and some were teachers. It was observed that few were farmers.

4.6 Religious Background of Respondent

The religious background of the respondents was studied in Tano North District to ascertain the dominant religion at the District. Figure 4.3 below presents the details of the studies done.

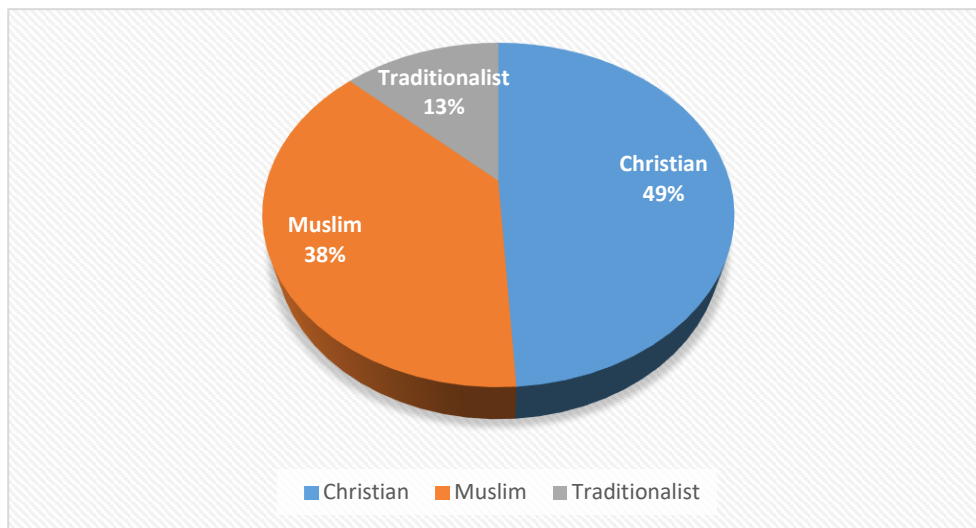


Figure 4.3 Religious Background of Nursing Mothers (n=100)

The study revealed that, 49% of the nursing mothers were Christians, 38% were Muslim and 13% were traditionalists. This shows that majority of the nursing mothers in the Tano North District are Christians.

4.7 Level of Education

Women of higher educational status also have higher rates of breastfeeding. In the study by Chin *et al.*, (2008), women who graduated from high school 70% were more likely to breastfeed than those who did not; women who attended college were four times more likely to breastfeed than women who graduated from high school. This therefore confirms with this findings. The level of education of the nursing mothers was investigated in the study. Figure 4.4 shows the educational background of the respondents

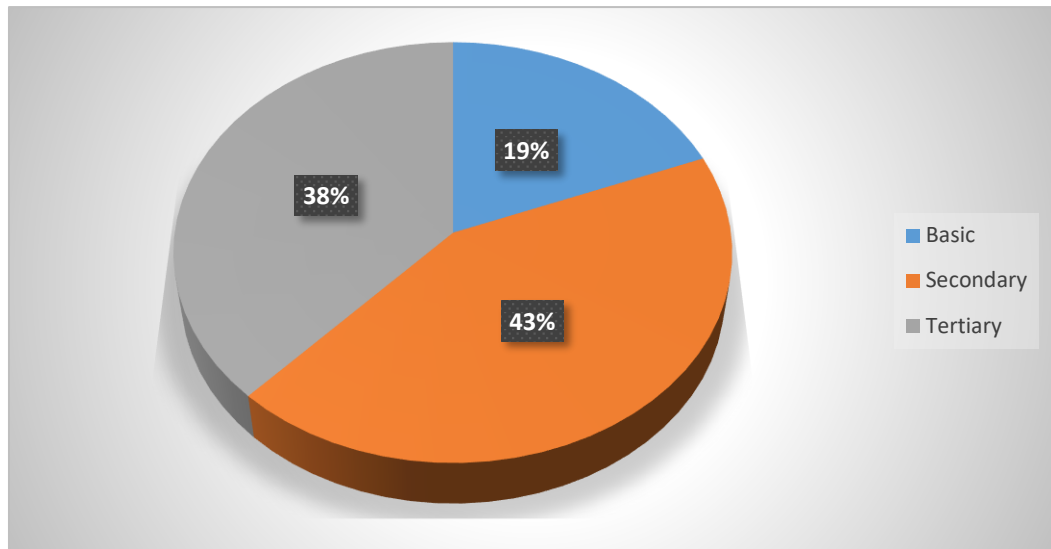


Figure 4.4 Level of Education (n=100)

The educational level of nursing mothers determines to a large extent their attitudes towards breastfeeding their children. Figure 4.4 showed that majority (43%) obtained secondary education followed by (38%) with tertiary education and (19%) with basic education.

4.8 Daily Income of Respondents

In a national study of Canadian mothers, Chalmers *et al.*, (2009) found women who were educated, older, had incomes above low income cutoff level, and had vaginal births were most likely to breastfeed. This is in line with these findings. The daily income of the nursing mothers was investigated in the study. Table 4.4 shows the details.

Table 4.4: Daily Income of Respondents (n=100)

Range of income	Frequency	Percentage (%)
Less than 50 Ghana cedis	84	84.0
50-100 Ghana cedis	10	10.0
Above 100 Ghana cedis	6	6.0
Total	100	100.0

The study on the daily income of respondent revealed that, majority of the nursing mothers receive daily income that is less than 50 Ghana cedis (84%). Ten percent (10%) receive daily income of 50 – 100 Ghana cedis and six percent (6%) receive above 100 Ghana cedis.

4.9 Observation of Three Square Meals

Data was collected on observation of the three square meals by nursing mothers in the Tano North District. The analysis of the data collect is presented in the table 4.5 below.

Table 4.5: The Three Square Meals (n=100)

Responses	Frequency	Percentage (%)
Yes	35	35.0
No	65	65.0
Total	100	100.0

The study of whether nursing mothers observe the three square meals or not revealed that, majority of the nursing mothers (65%) do not observe the three square meals while 35% of them observe it.

4.10 Knowledge on Exclusive Breastfeeding

Nursing mothers' knowledge on exclusive breastfeeding in Tano North District was studied. The details are presented in tables and figures below.

4.10.1 Practices of Exclusive Breastfeeding

Data on options of nursing mothers on who practice exclusive breastfeeding was investigated and the findings are presented in the table 4.6 below.

Table 4.6: Practice of Exclusive Breastfeeding (n=100)

Responses	Frequency	Percentage (%)
Matured mothers	86	86.0
Teenage mothers	6	6.0
Experienced mothers	8	8.0
Total	100	100.0

The study options of nursing mothers on who practice exclusive breastfeeding revealed that, majority of the nursing mothers (86%) affirmed that exclusive breastfeeding needs to be practiced by matured mothers, eight percent (8%) said it needs to be practiced experience mothers and six percent (6%) said that exclusive breastfeeding needs to be practiced by teenage mothers.

4.10.2 Frequency a Baby Breastfeeding

Data on how often should a baby be breastfed was investigated and the findings are presented in the Table 4.7 below.

Table 4.7: Breastfeeding Patterns of a Baby

Responses	Frequency	Percentage (%)
On demand	84	84.0
By routine	2	2.0
Does not know	8	8.0
Total	100	100.0

The study on how often should a baby be breastfed revealed that, majority of the nursing mothers (84%) affirmed that babies should be breastfed on demand and two (2) nursing mothers representing 2% also affirmed that babies should be breastfed routinely. However, eight (8) nursing mothers representing 8% affirmed they do not know.

4.10.3 Respondents' opinion on feeding babies with breast milk alone without even water

Data on how long breast milk alone without even water is sufficient for baby was investigated and the findings are presented in the table 4.8 below.

Table 4.8: Duration for breastfeeding a baby

Responses	Frequency	Percentage (%)
2 – 3 months	51	51.0
4 – 5 months	49	49.0
0 – 6 months	0	0.0
Total	100	100.0

The study on how long is breast milk alone without even water is sufficient for the baby revealed that, majority of the nursing mothers (51%) affirmed 2 – 3 months while forty – nine percent (49%) affirmed 4 – 5 months. However, none of the

nursing mothers affirmed that 0 – 6 months. The study has revealed that majority of the nursing mothers affirmed that 2 – 3 months is adequate for breast milk alone without even water for babies. WHO also recommends that mothers breastfeed frequently and on demand until two years of age or beyond. This means breastfeeding the infants as often as it wants, day and night. This therefore contradicts with this findings.

4.10.4 Appropriate age to give solid foods to a baby

Negative effects of early introduction of solid foods are very important concern for the health of infants. In this study majority of the respondents 76% affirmed that the appropriate age to start giving solid funds to a baby is when the child is above 6 months. The result from this study is not in line with findings from the TDHS (NBS & KF Macro, 2010), which identified that most babies in Tanzania are not exclusively breastfeed for the first six months of life. A study was conducted to ascertain the appropriate age to start giving solid foods to a baby. The findings are presented in the table 4.9 below.

Table 4.9: Appropriate age to give solid foods to a baby (n=100)

Responses(Months)	Frequency (N)	Percentage (%)
2 – 3	3	3.0
4 – 5	21	21.0
> 6	76	76.0
Total	100	100.0

Source: Authors construct with field data, August, 2016.

Table 4.9 illustrate the findings of appropriate age to start giving solid foods to a baby. Majority of respondents (76%) affirmed that the appropriate age to give solid

foods to a baby is when the child is Above 6 months. Twenty – one percent (21%) asserted that it should be done when the baby is between 4 – 5 months and three percent (3%) were of the view that it should be done when the baby is between 2 – 3 months.

4.10.5 Responses on breastfeeding duration as well as giving a baby a formula milk in the first 6 months of life

The researcher conducted study to obtain options of nursing mothers on breast feeding duration as well as giving a formula milk to babies in the first 6 months of life. The researcher’s findings are presented in the table 4.10 below.

Table 4.10: Responses on breastfeeding duration as well as giving a baby a formula milk in the first 6 months of life (n=100)

Statement	Responses			Total
	Yes	No	Does not know	
Baby should be allowed to breastfeed for at least 10 – 20 minutes for each feeding.	54 (54%)	12 (12%)	34 (34%)	100 (100%)
Do you intend to give your baby formula milk in the first 6 months of life?	72 (72%)	28 (28%)	-	100 (100%)

Table 4.10 demonstrates that out of the 100 respondents, 54% affirmed that babies should be allowed to breastfeed for at least 10 – 20 minutes for each feeding whereas 12% of the nursing mothers were not in support it. Moreover, majority of nursing mothers (72%) affirmed that they intend to give their babies formula milk in the first 6 months of life whilst 28% think otherwise.

4.10.6 True or False Responses

The researcher conducted study to obtain opinions of nursing mothers on some assertions. The findings and their analysis are presented below.

Table 4.11: True or False (n=100)

Statement	Responses		Total
	True	False	
Breastfeeding should be continued up to 2 years even though the baby has received solid food	90 (90%)	10 (10%)	100 (100%)
Mothers may mix breastfeeding and formula feeding once baby start taking solid food.	68 (68%)	32 (32%)	100 (100%)
Giving water to baby is encouraged after every breastfeeding	31 (31%)	69 (69%)	100 (100%)
Baby who receives breast milk is less prone to get diarrhea	53 (50%)	47 (47%)	100 (100%)
Breastfeeding causes good development of baby's teeth and gum	58 (58%)	42 (42%)	100 (100%)

Out of the 100 respondents, 90 respondents representing 90% said it is true that breastfeeding should be continued up to 2 years even though the baby has received solid food whereas the remaining 10% thought otherwise. Also majority of the nursing mothers (68%) said it is true that mothers may mix breastfeeding and formula feeding once baby start taking solid food and of course the remaining 32% thought otherwise. Again, table 4.11 illustrates that majority (69%) reacted negatively to the assertion that giving water to baby is encouraged after every breastfeeding.

On the issue of the benefits of breastfeeding babies, majority (53%) affirmed that babies who receive breast milk are less prone to get diarrhea and 58% out of the 100

respondents affirmed that breastfeeding causes good development of baby's teeth and gum.

4.10.7 Nursing mothers opinions on benefits and effects of exclusive breastfeeding

The study was conducted on benefits and effects of exclusive breastfeeding. The findings and their analysis are presented table 4.12 below.

Table 4.12: Nursing mothers opinions on benefits and effects of exclusive breastfeeding (n=100)

Statement	Responses			Total
	Strongly Agree	Agree	Disagree	
Breastfeeding reduces the risk of lung infections among babies.	70 (70%)	10 (10%)	20 (20%)	100 (100%)
Breastfeeding is beneficial for the mother.	12 (12%)	76 (76%)	12 (12%)	100 (100%)
Exclusive breastfeeding is beneficial in birth spacing.	17 (17%)	65 (65%)	18 (18%)	100 (100%)
Mothers who practice breastfeeding are less likely to experience breast problems.	2 (2%)	77 (77%)	21 (21%)	100 (100%)
Babies will gain weight if they receive effective breastfeeding	62 (62%)	14 (14%)	24 (24%)	100 (100%)
Exclusive breastfeeding is for 12 months.	15 (15%)	3 (3%)	82 (82%)	100 (100%)
Exclusive breastfeeding involves feeding with infant formula.	71 (71%)	17 (17%)	12 (12%)	100 (100%)
Colostrum contains antibodies	23 (23%)	74 (74%)	3 (3%)	100 (100%)

Table 4.12 illustrates that majority of the respondents (70%+10%=80%) agreed that breastfeeding reduces the risk of lung infections among babies while the remaining 20% disagreed, most nursing mothers (12%+76%=88%) agreed that breastfeeding is beneficial for them whereas the rest (12%) disagreed with the assertion, 82% (17%+65%) agreed that exclusive breastfeeding is beneficial in birth spacing while the remaining 18% disagreed, 79% (2%+77%) agreed that mothers who practice breastfeeding are less likely to experience breast problems but the remaining 21% did not agree, 76% (62%+14) agreed to the assertion that babies will gain weight if they receive effective breastfeeding whereas 24% disagreed. However, majority of the nursing mothers (82%) disagreed that exclusive breastfeeding is for 12 months whilst the 18% agreed. On the issue of infant formula, 88% (71%+17%) agreed that exclusive breastfeeding involves feeding with infant formula and 12% disagreed. Finally the study revealed that majority of the nursing mothers encountered (97%) agreed that colostrum contains antibodies whilst 3% disagreed.

4.11 Practice of Exclusive Breastfeeding

The practice of exclusive breastfeeding in Tano North District was studied. The researcher using the data collection instrument collected data on how nursing mothers in the District practice exclusive breastfeeding. The details are presented in tables and figures below.

4.11.1 Group of people that practice exclusive breastfeeding

A study was conducted on group of people that practice exclusive breastfeeding. The findings and their analysis are presented Figure 4.5 below.

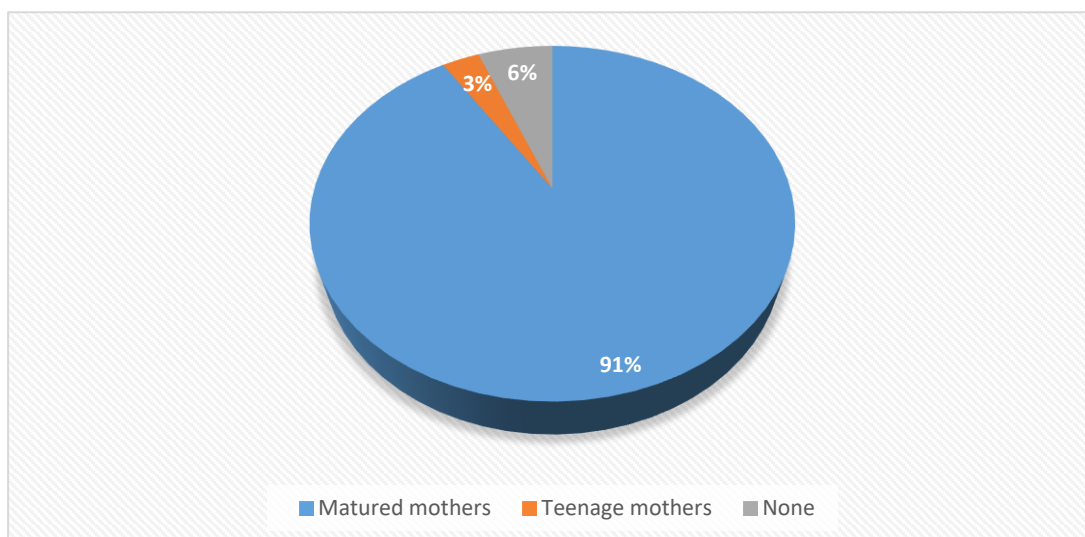


Figure 4.5 Group of people that practice exclusive breastfeeding (n=100)

Figure 4.5 illustrates that 91% of matured mothers and 6% of teenage mothers practice exclusive breastfeeding. However, it was recorded that 3% had the option that exclusive breastfeeding is practice by neither matured mothers nor teenage mothers.

4.11.2 Reason for Practice Exclusive Breastfeeding

The reason why nursing mothers practice exclusive breastfeeding was studied. The findings and their analysis are presented table 4.13 below.

Table 4.13: Reasons for Practice Exclusive Breastfeeding (n=100)

Reasons	Frequency(n)	Percentage (%)
Advice from midwife	65	65.0
For growth	28	28.0
For protection against diseases	7	7.0
Reduce incidence of diarrhea	0	0.0
Total	100	100.0

Table 4. 13 illustrates the reasons given by nursing mothers for practicing exclusive breastfeeding. Out of the 100 respondents, 65% said they practice it because of advice from midwives, 28% said because of growth and 7% said because of protection against diseases. However, no one said because it will reduce incidence of diarrhea. Hence, it obvious that majority of the nursing mothers practice exclusive breastfeeding because of advice from midwives.

4.11.3 Reasons for not practice exclusive breastfeeding

The reason why some nursing mothers do not practice exclusive breastfeeding was studies. The findings and their analysis are presented table 4.14 below.

Table 4.14: Reasons for not practice exclusive breastfeeding (n=100)

Options	Frequency(n)	Percentage (%)
Breast milk alone cannot satisfy the child	82	82.0
Suffer from pains in the breast during breastfeeding	11	11.0
Sour on the nipple prevents me from practicing	7	7.0
Total	100	100.0

When the researcher went further to ask respondents about the reasons why they do not practice exclusive breastfeeding, it was revealed that majority of the nursing mothers (82%) do not practice because they thought breast milk alone cannot satisfy the babies, 11% said because they suffer from pains in the breast during breastfeeding and 7% said sour on the nipple prevents them from practicing it.

4.11.4 The period to start exclusive breastfeeding

A study was conducted on when nursing mothers in the Tano North District start exclusive breastfeeding. The findings and their analysis are presented table 4.15 below.

Table 4.15: The Period to start Exclusive Breastfeeding (n=100)

Options	Frequency(n)	Percentage (%)
Right after birth	49	49.0
The next 24 hours after delivery	36	36.0
Two to three days after delivery	15	15.0
Total	100	100.0

The period to start exclusive breastfeeding was investigated by the researcher. The study revealed that about a half of the nursing mothers (49%) started exclusive breastfeeding right after birth, 36% of the nursing mothers started it the next 24 hours after delivery and 15% started it two to three days after delivery.

4.11.5 Duration for the Practice of Exclusive Breastfeeding

Respondents were investigated on how long they practice exclusive breastfeeding. The findings and their analysis are presented table 4.16 below.

Table 4.16: The Period to start Exclusive Breastfeeding (n=100)

Options	Frequency(n)	Percentage (%)
2 months	8	8.0
3 months	21	21.0
4 months	6	6.0
6 months	65	65.0
Total	100	100.0

Table 4.16 illustrates how long nursing mothers practice exclusive breastfeeding. The study revealed that majority of the nursing mothers (65%) practice it for 6 months followed by 21% who practiced it for 3 months. 8% and 6% practiced it for 2 months and 6 months respectively.

4.11.6 Time to Initiate Breastfeeding

Exclusive breastfeeding means giving infants only breast milk with no addition of other funds or drinks including water (World Health Organization (WHO/UNICEF, 2003). The WHO recommends on early initiation of breastfeeding of one hour after birth and exclusive breastfeeding for six months (WHO, 2001b; WHO/UNICEF, 2003). Exclusive breastfeeding for the first six months of life is estimated to lower instant death by 13% (Jones *et al.*, 2013). Respondents were investigated on when they initiate breastfeeding. The findings and their analysis are presented table 4.17 below.

Table 4.17: Time to Initiate Breastfeeding (n=100)

Options	Frequency(n)	Percentage (%)
Within 6 hours	49	49.0
7-24 hours	37	37.0
25 – 72 hours	11	11.0
Less than 7 days	3	3.0
Total	100	100.0

The study revealed that majority of the nursing mothers (49%) initiate breastfeeding within 6 hours followed by 37% who initiate it from 7 – 24 hours. 11% and 3% initiates for 25 – 72 hours and less than 7 days respectively.

4.11.7 How Long Respondents have Breastfed their Babies

Respondents were investigated on how long they have breastfed their babies. The findings and their analysis are presented table 4.18 below.

Table 4.18: How Long Respondents have Breastfed their Babies (n=100)

Options	Frequency(n)	Percentage (%)
Less than 6 months	7	7.0
More than 6 months	93	93.0
Total	100	100.0

How long nursing mothers have breastfed their babies was investigated and it was identified that majority of them (93%) have breastfed their babies more than 6 months whereas 7% have done so for less than 6 months.

4.11.8 Discarding Colostrum and Purbing the Baby Immediately after Breastfeeding

Respondents were investigated on whether they discarded colostrum and purb the babies immediately after breastfeeding. The findings and their analysis are presented table 4.19 below.

Table 4.19: Discarding Colostrum and Purbing the Baby Immediately after Breastfeeding (n=100)

Statement	Responses		Total
	Yes	No	
Did you discard the colostrum?	48 (48%)	52 (52%)	100 (100%)
Do you purb the baby immediately after breastfeeding?	42 (42%)	58 (58%)	100 (100%)

It was revealed that majority of nursing mothers (52% and 58%) did not discard the colostrum and do purb the babies immediately after breastfeeding respectively.

4.11.9 Giving Something to the Baby before Breastfeeding

A study was conducted on what is given to the babies before breastfeeding them. The findings and their analysis are presented table 4.20 below.

Table 4.20: How Long Respondents have Breastfed their Babies (n=100)

Options	Frequency(n)	Percentage (%)
Honey	19	19.0
Breast milk	5	5.0
Artificial milk	73	73.0
Sugar solution	3	3.0
Total	100	100.0

The study has revealed that 73% give artificial milk to babies before breastfeeding them, 19% give them honey, 5% give them breast milk and 3% give them sugar solution. Therefore, it can be inferred that majority of the nursing mothers give artificial milk to babies before breastfeeding them.

4.11.10 Usual Position for Breastfeeding

A study was conducted on usual position for breastfeeding the babies. The findings and their analysis are presented Figure 4.6.

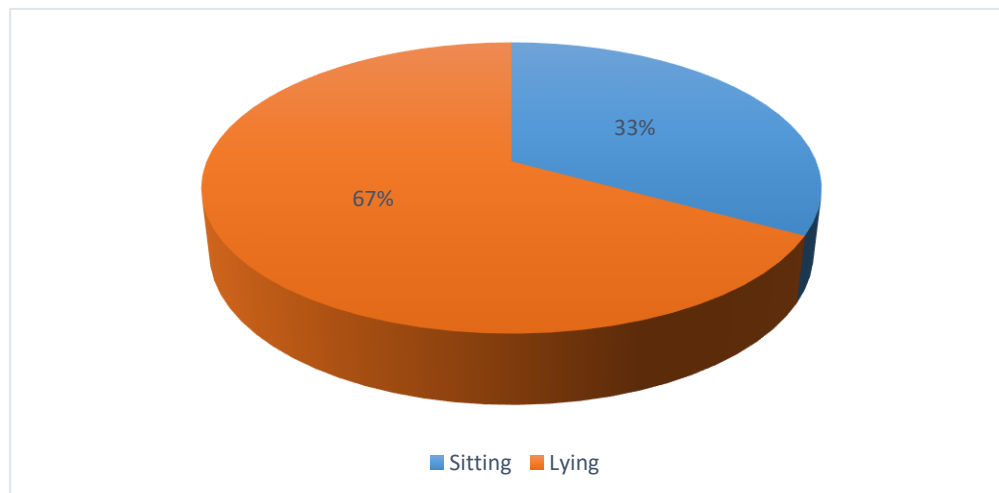


Figure 4.6 Usual position for breastfeeding (n=100)

Figure 4.6 illustrates that majority of the respondents (67%) feed their babies by lying whereas 33% do so by sitting.

4.11.11 Keeping the Breast Clean while Breastfeeding

A study was conducted on how often nursing mothers clean their breast while breastfeeding. The findings and their analysis are presented table 4.21 below.

Table 4.21: Breastfeeding Duration (n=100)

Options	Frequency(n)	Percentage (%)
Each time after breastfeeding	6	6.0
Each time before and after feeding	20	20.0
Each time before feeding	58	58.0
Only while taking bath	16	16.0
Total	100	100.0

The study has revealed that 53% clean their breast each time before feeding, 20% clean it each time before and after feeding, 16% does so only while taking their bath and 6% clean it each time after breastfeeding. It is obvious that majority of respondents clean their breast each time before feeding their babies.

4.12 Attitude and Perceptions of Mothers on Exclusive Breastfeeding

The attitudes and perceptions of mother on exclusive breastfeeding in Tano North District were studied. The details are presented in tables and figures below.

4.12.1 Cleaning the Nipple

How often mothers clean their nipples was studied. The findings and their analysis are presented Table 4.22 below.

Table 4.22: Cleaning the Nipple (n=100)

Options	Frequency(n)	Percentage (%)
Once a day	21	21.0
As much as possible	79	79.0
Not at all	0	0.0
Total	100	100.0

The study has revealed that 79% clean their nipples as much as possible and 21% clean it once a day probably because they may be busy throughout the day.

4.12.2 People who influence mothers to introduce supplementary food to infants before the first 6 months.

The influence of midwives, in-laws and friends on mothers to introduce supplementary food to infants before the first 6 months was studied. The findings and their analysis are presented Table 4.23 below.

Table 4.23: People who influence mothers to introduce supplementary food to infants before the first 6 months (n=100).

Options	Frequency(n)	Percentage (%)
Midwives	11	11.0
In-laws	67	67.0
Friends	22	22.0
Total	100	100.0

The study has revealed that 67% were influenced by in-laws, 22% were influenced by friends and 11% were influenced by midwives. It can therefore be inferred that majority of the mothers are influenced by in-laws to give supplementary food to infants before the first 6 months.

4.12.3 How Mothers Breastfeed their Babies.

How mothers breastfeed their babies was studied. The findings and their analysis are presented table 4.24 below.

Table 4.24: How Mothers Breastfeed their Babies (n=100).

Options	Frequency(n)	Percentage (%)
Directly from the breast	67	67.0
Squeezed into feeding bottle	13	13.0
None of the above	20	20.0
Total	100	100.0

The study has revealed that 67% of the mothers fed their babies directly from the breast, 13% of them squeezed into feeding bottles before feeding the babies with them and 20% affirmed neither options. It can be inferred that majority of the mother breastfed their babies directly from the breast.

4.12.4 Best Position of Placing the Child when Feeding

Responses on the best position to place a babies when feeding them was collected. The findings and their analysis are presented table 4.25 below.

Table 4.25: Best position of placing the child when feeding (n=100).

Options	Frequency(n)	Percentage (%)
Place on the lap	46	46.0
Supported by the hand	33	33.0
Bring the baby upwards the nipple	21	21.0
Total	100	100.0

The study has revealed that 46% of the mothers place the babies on their laps when feeding them, 33% of them supported the by their hands and 21% brought the babies upwards the nipple.

4.12.5 Effects of Cultural Practices on Exclusive Breastfeeding

Despite national effects to promote exclusive breastfeeding for the first six months after delivery, the majority of women provide water, glucose and formula milk to their infants by the end of the first month (NBS & ICF Macro, 2010). This may be due to culture beliefs that breast milk is not enough for infants. Respondents were

asked why cultural practices have effect on exclusive breastfeeding. The findings and their analysis are presented table 4.26 below.

Table 4.26: Effects of cultural practices on exclusive breastfeeding (n=100).

Options	Frequency(n)	Percentage (%)
Most parents do not know that the breast milk contain water	10	10.0
Of the believe that the milk is inadequate	34	34.0
Of ignorance	56	56.0
Total	100	100.0

The study has revealed that majority of the respondents (56%) were ignorant, 34% were of the belief that the milk is inadequate and 10% did not know that the breast milk contain water.

4.12.6 When to Add Foods to Breastfeeding

A study was conducted on when a mother should start adding foods to breastfeeding. The findings and their analysis are presented table 4.27 below.

Table 4.27: When to add foods to breastfeeding (n=100).

Options	Frequency(n)	Percentage (%)
Start adding earlier than 4 months of age	5	5.0
Start adding between 4 – 6 months of age	25	25.0
Start adding later than 6 months of age	70	70.0
Total	100	100.0

The study has revealed that majority of the respondents (70%) were of the view that addition of food to breastfeeding should start latter than 6 months of age, 25% said should start between 4 – 6 months of age, and 5% said mothers should start adding earlier than 4 months of age.

4.12.7 Opinions of Nursing Mothers on Exclusive Breastfeeding

Whether mothers can determine that babies are getting enough breast milk, whether babies have finished breastfeeding and exclusively breastfed babies have less gastrointestinal and respiratory illness was investigated. The findings and their analysis are presented table 4.28 below.

Table 4.28: Opinions of Nursing Mothers on Exclusive Breastfeeding (n=100)

Statement	Responses			Total
	Strongly Agree	Agree	Disagree	
Mothers can always determine that babies are getting enough breast milk	70 (70%)	10 (10%)	20 (20%)	100 (100%)
Mothers can always tell when their babies have finished breastfeeding	12 (12%)	76 (76%)	12 (12%)	100 (100%)
Exclusively breastfed babies have less gastrointestinal and respiratory illness such as can infection and asthma than those who are not breastfed	17 (17%)	65 (65%)	18 (18%)	100 (100%)

Source: Authors construct with field data, August, 2016.

Table 4.12 illustrates that majority of the respondents (70%+10%=80%) agreed that mothers can always determine that babies are getting enough breast milk while the remaining 20% disagreed, most nursing mothers (12%+76%=88%) agreed that mothers can always tell when their babies have finished breastfeeding whereas the

rest (12%) disagreed with the assertion, 82% (17%+65%) agreed that exclusively breastfed babies have less gastrointestinal and respiratory illness such as can infection and asthma than those who are not breastfed while the remaining 18% disagreed.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter consists of the summary of the findings, conclusion and recommendations of the study.

5.1 Summary of Findings

The study revealed that, majority of the respondents (44%) were within the age brackets of 36 years to 45 years with 31%, 15% and 7% within the age brackets of 26-35 years, 45 years above and 16-25 years respectively. The study showed that, majority 43% of the nursing mothers obtained secondary education followed by 38% with tertiary education and 19% with basic education. Marital status indicated seventy-one percent (71%) married; seven percent (7%) single, three percent (3%) divorced and the remaining nineteen percent (19%) separated. It was identified that majority (44%) of nursing mothers in the Tano North District had three (3) children follow by thirty-five percent (35%) having two (2) children. Nursing mothers having four (4) and above children recorded thirteen percent (13%). The study further showed that (8%) had a child. Respondents' occupation status revealed that 31% were teaching, 29% were trading, 23% were seamstress, 11% were farming and 3% were doing other jobs. The study revealed that, 49% of the nursing mothers were Christians, 38% were Muslim and 13% were traditionalists.

The study established that, majority (84%) of the nursing mothers receive daily income that is less than 50 Ghana cedis, ten percent (10%) receive between 50 and 100 Ghana cedis and six percent (6%) receive above 100 Ghana cedis. It also

established that, majority of the nursing mothers (65%) do not observe the three square meals while 35% of them observe it.

In response to respondents' knowledge on exclusive breastfeeding it was revealed that, mature mothers (86%) practiced exclusive breastfeeding followed by experienced mothers (8%) and teenage mothers (6%).

In investigating how often a baby should be breastfed, majority of the nursing mothers (84%) affirmed that the baby should be breastfed on demand and 2% responded that it should be done routinely. However, eight percent (8%) did not know.

In addressing the duration for feeding babies with breast milk alone without even water findings revealed that, babies should be fed with breast milk alone without water for 2 – 3 months (51%) while some respondents (49%) affirmed 4 – 5 months as the deal duration for feeding babies with breast milk alone without water.

The study conducted on the appropriate age for nursing mothers to give solid foods to their babies revealed that, babies should be giving solid foods when they are above six (6) months (78%). However, some respondents, 21% and 3%, asserted that it should be done between 4 – 5 months and 2 – 3 months respectively. Also on the issues of whether babies should be allowed to breastfeed for at least 10 – 20 minutes for each feeding and whether formula milk are given to babies in the first 6 months of life, majority of the respondents (54% and 72% respectively) responded affirmatively. However, 34% said they do not know that babies should be allowed to breastfeed for at least 10 – 20 minutes for each feeding.

Out of the 100 respondents, 90 respondents representing 90% said it is true that breastfeeding should be continued up to 2 years even though the baby has received solid food whereas the remaining 10% thought otherwise. Also majority of the nursing mothers (68%) said it is true that mothers may mix breastfeeding and formula

feeding once baby start taking solid food and off course the remaining 32% thought otherwise. Again, majority (69%) reacted negatively to the assertion that giving water to baby is encouraged after every breastfeeding. On the issue of the benefits of breastfeeding babies, majority (53%) affirmed that babies who receive breast milk are less prone to get diarrhea and 58% out of the 100 respondents affirmed that breastfeeding causes good development of baby's teeth and gum.

Investigating the benefits and effects of exclusive breastfeeding, the study revealed that breastfeeding reduces the risk of lung infection (80%), it is beneficial to nursing mothers (88%) and in birth spacing (65%), mothers who practice breastfeeding are less likely to experience breast problems (77%), babies will gain weight if they receive effective breastfeeding (76%) and exclusive breastfeeding is not for 12 months (82%). On the issue of infant formula, it was found that exclusive breastfeeding involves feeding with infant formula (88%) and that colostrum contains antibodies (97%).

Evaluating the practice of exclusive breastfeeding in the Tano North District, the study affirmed that, majority of the nursing mothers practice exclusive breastfeeding because of advice from midwives (65%), other because of growth (28%) and because of protection against diseases (7%). However, among the reasons some nursing mothers do not practice exclusive breastfeeding were; breast milk alone cannot satisfy the child (82%), suffer from pains in the breast during breastfeeding (11%) and sour on the nipple prevents them from practicing (7%). The period to start exclusive breastfeeding was investigated by the researcher. The study also revealed that majority of the nursing mothers (49%) started exclusive breastfeeding right after birth, 36% of the nursing mothers started it the next 24 hours after delivery and 15% started it two to three days after delivery. Again, it was discovered that majority of the

nursing mothers (65%) practice exclusive breastfeeding for 6 months and 49% initiate breastfeeding within 6 hours. Regarding how long respondents have breastfed their babies, it was unearthed that 93% have done it more than 6 months whereas 7% have done it for less than 6 months.

The findings on discarding colostrum, purbing baby immediately after breastfeeding, giving something to the baby before breastfeeding and usual position for breastfeeding shows that majority of nursing mothers (52% and 58%) did not discard the colostrum and do purb the babies immediately after breastfeeding respectively; 73% give artificial milk to babies before breastfeeding them, 19% give them honey, 5% give them breast milk and 3% give them sugar solution; 67% feed their babies by lying whereas 33% do so by sitting.

The study has revealed that 53% clean their breast each time before feeding, 20% clean it each time before and after feeding, 16% does so only while taking their bath and 6% clean it each time after breastfeeding. It is obvious that majority of respondents clean their breast each time before feeding their babies. 79% clean their nipples as much as possible and 21% clean it once a day probably because they may be busy throughout the day.

Having investigated the influence of midwives, in-laws and friends on mothers to introduce supplementary food to infants before the first 6 months it was revealed that 67% were influenced by in-laws, 22% were influenced by friends and 11% were influenced by midwives.

The study revealed that 67% of the mothers fed their babies directly from the breast and 13% of them squeezed into feeding bottles before feeding the babies with them.

Evaluating effect of cultural practices on exclusive breastfeeding revealed that majority of the respondents (56%) were ignorant, 34% were of the view believe that

the milk is inadequate and 10% did not know that the breast milk contain water. The study has revealed that majority of the respondents (70%) were of the view that addition of food to breastfeeding should start latter than 6 months of age, 25% said should start between 4 – 6 months of age, and 5% said mothers should start adding earlier than 4 months of age.

Finally, an examination of whether mothers can determine that babies are getting enough breast milk, whether babies have finished breastfeeding and exclusively breastfed babies have less gastrointestinal and respiratory illness revealed that mothers can always determine that babies are getting enough breast milk (80%), mothers can always tell when their babies have finished breastfeeding (88%), exclusively breastfed babies have less gastrointestinal and respiratory illness such as can infection and asthma than those who are not breastfed (82%).

5.2 Conclusions

The study had confirmed that exclusive breastfeeding for a minimum of six months from birth and continuing till two years, improved the cognitive skills, prevented stunting, wasting and obesity with its attendant complications. Also, exclusive breastfeeding has the potential of prolonging a baby's life and drastically reducing under-five mortality as well as maternal mortality because it makes babies less prone to get diarrhea, causes good development of their teeth and gum, reduces the risk of lung infection and prevent breast problems. To this end babies are to be breastfed on demand, which is as often as the child wants (day and night) as discovered.

The study also affirms that babies that were not exclusively breastfed but introduced to infant formulas were susceptible to various disease and infections and were either less or overweight.

The misconceptions about exclusive breastfeeding without giving the baby water (breast milk alone cannot satisfy the child), suffer from pains in the breast during breastfeeding, sour on the nipple and societal discouragement (in-laws, friends), had also accounted for the downward trend in exclusive breastfeeding rates in the Tano North District.

However the study revealed that majority of the nursing mothers initiates breastfeeding within 6 hours, practice exclusive breastfeeding for 6 months, gave artificial milk to babies before breastfeeding them, clean their breast each time before feeding, and breastfed babies directly from the breast.

On the issue of whether mothers can determine that babies are getting enough breast milk, whether babies have finished breastfeeding and exclusively breastfed babies have less gastrointestinal and respiratory illness revealed that mothers can always determine that babies are getting enough breast milk, mothers can always tell when their babies have finished breastfeeding, exclusively breastfed babies have less gastrointestinal and respiratory illness such as can infection and asthma than those who are not breastfed.

5.3 Recommendations

The researcher recommends the following:

- Initiation of breastfeeding within the first hour of life
- Infants should be exclusively breastfed for the first six months of life to achieve optimal growth, development and health.
- After six months of exclusive breastfeeding, to meet their evolving nutritional requirements, infants should receive nutritionally adequate and safe

complementary foods, while continuing to breastfeed for up to two years or beyond based on the advice of health professionals such as midwives.

- 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
- Government and Non-governmental agencies should help in educating nursing mothers and will-be nursing mothers on the benefits of practicing exclusive breastfeeding.

5.4 Suggestions for Future Improvement

The researcher believes that in every situation there is always room for improvement.

The researcher suggests an improvement in the number of nursing mothers under study should be increased to 200 or more in order to involve more nursing mothers from many Districts in the study.

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APPENDIX

UNIVERSITY OF EDUCATION, WINNEBA

COLLEGE OF TECHNOLOGY EDUCATION- KUMASI CAMPUS

Topic: Maternal perception knowledge and Attitudes towards Exclusive Breastfeeding a case study at Tano North District in the Brong Ahafo Region.

QUESTIONNAIRE FOR PARENTS

PREAMBLE

In partial fulfilment of the Master of Technology Education in Catering and Hospitality Programme on the writing of dissertation, research is made to assess maternal perception, knowledge and attitude towards exclusive breastfeeding in Tano North District. This questionnaire intends to solicit information on the above topic. You are assured to total anonymity so feel free to express your views on the questions that follows.

PLEASE, tick the appropriate response.

SECTION A

1. In which of the age group below do you fall?
 - a. Below 16 years []
 - b. 16-25 years []
 - c. 26-35 years []
 - d. 36-45 years []
 - e. Above 45 years []
2. What is your marital status?
 - a. Married []

- b. Single []
 - c. Divorce []
 - d. Separate []
3. How many children do you have?
- a. 1 []
 - b. 2 []
 - c. 3 []
 - d. 4 and above []
4. What are the average year(s) intervals between the children?
- a. 1 []
 - b. 2 []
 - c. 3 []
 - d. 4 []
5. What is your occupation?
- a. Teaching []
 - b. Farming []
 - c. Seamstress []
 - d. Trading []
 - e. Other []
6. What is your religion?
- a. Christian []
 - b. Muslim []
 - c. Traditionalist []
7. What is your educational background?
- a. Basic []

- b. Secondary []
 - c. Tertiary []
 - d. Other e.g. stopped at
8. What is your income daily?
- a. Less than 50 Ghana cedis []
 - b. 50 - 100 Ghana cedis []
 - c. Above 100 Ghana cedis []
9. Do you observed the three square meals?
- a. Yes []
 - b. No []

SECTION B

KNOWLEDGE ON EXCLUSIVE BREASTFEEDING

10. Exclusive breastfeeding needs to be practiced by
- a. Matured mothers []
 - b. Teenage mothers []
 - c. Experienced mothers []
11. How often should a baby be breastfed
- a. On demand []
 - b. By routine []
 - c. Does not know []
12. How long do you think breast milk alone without even water is sufficient for the baby?
- a. 2-3 months []

b. 4-5 months []

c. 0-6 months []

13. What age is appropriate to start giving solid foods to a baby?

a. Between 2-3 months []

b. Between 4-5 months []

c. Above 6 months []

14. Baby should be allowed to breastfeed for at least 10-20 minutes for each feeding.

a. Yes []

b. No []

c. Does not know []

15. Do you intend to give your baby formula milk in the first 6 months of life

a. Yes []

b. No []

16. Breastfeeding should be continued up to 2 years even though the baby has received solid food.

a. True []

b. False []

17. Mothers may mix breastfeeding and formula feeding once baby starts taking solid food

a. True []

b. False []

18. Giving water to baby is encouraged after every breastfeeding.

a. True []

b. False []

19. Breastfeeding reduces the risk of lung infection among babies.

- a. Strongly agree []
- b. Agree []
- c. Disagree []

20. Baby who receives breast milk is less prone to get diarrhea

- a. True []
- b. False []

21. Breastfeeding causes good development of baby's teeth and gum.

- a. True []
- b. False []

22. Breastfeeding is beneficial for the mother

- a. Strongly agree []
- b. Agree []
- c. Disagree []

23. Exclusive breastfeeding is beneficial in birth spacing

- a. Strongly agree []
- b. Agree []
- c. Disagree []

24. Mother who practiced breastfeeding is less likely to experience breast problems

- a. Strongly agree []
- b. Agree []
- c. Disagree []

25. Babies will gain weight if they receive effective breastfeeding.

- a. Strongly agree []
- b. Agree []
- c. Disagree []

26. Exclusive breastfeeding is for 12 months

- a. Strongly agree []
- b. Agree []
- c. Disagree []

27. Exclusive breastfeeding involves feeding with infant formula.

- a. Strongly agree []
- b. Agree []
- c. Disagree []

28. Colostrum contains antibodies.

- a. Strongly agree []
- b. Agree []
- c. Disagree []

SECTION C

PRACTICES OF EXCLUSIVE BREASTFEEDING

29. Which of the following groups of people practice exclusive breastfeeding?

- a. Matured mothers []
- b. Teenage mothers []
- c. None []

30. Why do you practice exclusive breastfeeding?

- a. Advice from midwife []
- b. For growth []
- c. For protection against diseases []
- d. Reduce incidence of diarrhea []

31. Why don't you practice exclusive breastfeeding?

- a. Breast milk alone cannot satisfy child []
- b. Suffer from pains in the breast during breastfeeding []
- c. Sour on the nipple prevents me from practicing []

32. When did you start exclusive breastfeeding?

- a. Right after birth []
- b. The next 24 hours after delivery []
- c. Two to three days after delivery []

33. For how long do you practice exclusive breastfeeding?

- a. 2 months []
- b. 3 months []
- c. 4 months []
- d. 6 months []

34. The problem hindering the practice of exclusive breastfeeding is the habit of giving supplementary and not feeding the child on demand before six (6) months of age.

- a. Agree []
- b. Disagree []
- c. Strongly agree []

35. When did you initiate breastfeeding?

a. Within 6 hours []

b. 7- 24 hours []

c. 25-72 hours []

d. Less than 7 days []

36. How long have you breastfed your baby?

a. Less than 6 months []

b. More than 6 months []

37. Did you discard the colostrum?

a. Yes []

b. No []

38. Before starting the breastfeeding, what did you feed your baby?

a. Honey []

b. Breast milk []

c. Artificial milk []

d. Sugar solution []

39. Do you burp the baby immediately after breastfeeding?

a. Yes []

b. No []

40. You usually breastfeed your baby in what position.

a. Sitting []

b. Lying []

41. How often do you clean your breast while breastfeeding your baby?

- a. Each time after breastfeeding
- b. Each time before and after feeding
- c. Each time before feeding
- d. Only while taking bath

42. Mother should offer whole breast – not just nipple.

- a. Agree []
- b. Disagree []
- c. Strongly agree []

SECTION D

ATTITUDE AND PERCEPTION OF MOTHERS ON EXCLUSIVE BREASTFEEDING

43. How often do you clean the nipple?

- a. Once a day []
- b. As much as possible []
- c. Not at all []

44. Who influence mothers to introduce supplementary food to infants before the first 6 months?

- a. Midwives []
- b. In-laws []
- c. Friends []

45. How do you breastfeed your child?

- a. Direct from the breast []
- b. Squeezed into feeding bottle []
- c. None []

46. What is the best position of placing the child when feeding?
- a. place on the lab []
 - b. Supported by the hand []
 - c. Bring the baby upwards the nipple []
47. Cultural practices have effect on exclusive breastfeeding because
- a. Most parents do not know that the breast milk contain water []
 - b. Of the believe that the milk is not inadequate []
 - c. Of ignorance []
48. When should a mother start adding foods to breastfeeding?
- a. Start adding earlier than 4 months of age
 - b. Start adding between 4-6 months of age
 - c. Start adding later than 6 months of age
49. When should supplementary foods be introduce in addition to the breastfeeding?
- a. Start adding earlier than 4 months of age []
 - b. Start adding between 4-6 months of age []
 - c. Start adding later than 6 months of age []
50. Mothers can always determine that babies are getting enough breast milk.
- a. Strongly agree []
 - b. Agree []
 - c. Disagree []
51. Mothers can always tell when their babies have finish breastfeeding.
- a. Strongly agree []
 - b. Agree []
 - c. Disagree []

52. Exclusively breastfed babies have less gastrointestinal and respiratory illness such as can infection and asthma than those who are not breastfed.

a. Strongly agree []

b. Agree []

c. Disagree []