

THESIS ABSTRACT

Master of Public Health
Emphasis in Nutrition

Adventist University of Africa

School of Postgraduate Studies

TITLE: ASSESSMENT OF EXCLUSIVE BREASTFEEDING KNOWLEDGE AND PRACTICE AMONG POST-NATAL MOTHERS ATTENDING ASHAIMAN POLYCLINIC IN THE GREATER ACCRA REGION OF GHANA

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It is expected that every country promotes, protects and supports breastfeeding program for infants and the mother's health (WHO 1990). This study was designed to assess the knowledge and the extent to which breastfeeding was practiced among postnatal mothers who accessed Ashaiman Polyclinic in the Greater Accra Region of Ghana. The study utilized a survey as a research design by employing structured questionnaire as data collection technique.

A sample size of 422 breastfeeding mothers whose children were less than two years old was used for the study. The data was analyzed using the Statistical Package for Social Sciences (SPSS version 21). The results were presented in frequency, percentages and inferences were made using a paired sample test. The significant values were computed to check for the relationship between the participants' knowledge and the practice of exclusive breastfeeding and the P-value was set at 0.05.

The exclusive breastfeeding rate according to WHO's recommendation was found to be 71%. Although there were considerable variations in the exclusive breastfeeding duration, the mothers generally had good knowledge (98%) and practices (96%) regarding exclusive breastfeeding.

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AND PRACTICES AMONG POST-NATAL MOTHERS
ATTENDING ASHAIMAN POLYCLINIC IN THE
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A thesis

presented in partial fulfillment

of the requirements for the degree

Master of Public Health

by

Frank Ofosuhene

April 2019

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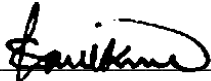
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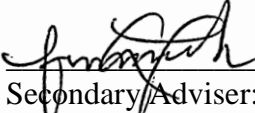
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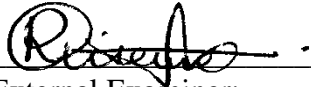
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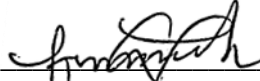
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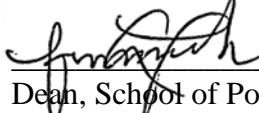
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This thesis is dedicated to my dear wife, Mabel Serwah,
children and parents for their support and encouragement.

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LIST OF ABBREVIATIONS

AAFP	American Academy of Family Physicians
AAP	American Academy of Pediatricians
ANC	Ante Natal Clinic
BF	Breast Feeding
BFHI	Baby-Friendly Hospital Initiative
CWU	Child Welfare Unit
EBF	Exclusive Breast Feeding
EBM	Expressed Breast Milk
GDHS	Ghana Demographic and Health Survey
GSS	Ghana Statistical Service
GHS	Ghana Health Service
HBM	Health Belief Model
IEC	Information Education and Communication
IGF-1	Insulin-like growth factors I
IYCF	Infants and Young Child Feeding
LI	Legislative Instrument
PRP	Proline-rich polypeptides
SPSS	Statistical Package for Social Sciences
UNICEF	United Nations International Children's Emergency Fund
USBC	United States Breastfeeding Committee

USDHHS United States Department of Health and Human
Services

WHO World Health Organization

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CHAPTER 1

INTRODUCTION

Background of the Study

Breastfeeding is undoubtedly very important for the health and the survival of children. It contains bacterial and viral antibodies, including relatively high concentrations of secretory immunoglobulin (IgA) that prevents microorganisms from adhering to the intestinal mucosa. Recent study (Kliegman et al., 2011) showed that human milk contains antibodies that are thought to provide local gastrointestinal immunity against organisms entering the body via this route. Lamberti et al. (2011) found in their study that the high incidence of morbidity and mortality from gastrointestinal infection in developing countries requires large-scale interventions to increase breastfeeding prevalence and exclusivity as evidence shows that “no breast feeding” is associated with a significant 165% increase in diarrhea incidence in 0-5 month old infants and a 32% increase in 6-11 month old infants.

To achieve optimum growth, the World Health Organization (WHO) recommended exclusive breastfeeding (EBF) to infants till 6 months of age (WHO, 2001). The World Health Organization (WHO, 2013) defined breastfeeding as the normal method to provide infants with the nutrients they need for healthy growth and development.

However, according to (WHO, 2013) exclusive breastfeeding means that the infant is given only breast milk. No other liquids or solids are given-not even water-with the exception of oral rehydration solution or drops/syrups of vitamins, minerals

or medicines, if needed. Breast milk has all the needed nutrients that are able to sustain infant in the critical period of their life. Breast milk has protective element against common and widespread childhood diseases that can be detrimental to the health of the infants. This protection goes a long way to maintain their blood pressure, reduce cholesterol level and the risk of being obsessed.

Exclusive breast feeding in developing countries according to recent data (Cai X et al., 2012) indicated that there has been increase from 33% in 1995 to just 39% in 2010. A study conducted World health organization and the United Nations International Children Education Fund (UNICEF & WHO, 2012) in 66 countries covering 74% of the developing world population also indicated increase in EBF prevalence in almost all regions in the developing world, with a major improvement seen in West and Central Africa where the prevalence doubled from 12% to 28%. The same study (WHO & UNICEF, 2012) showed that more modest improvements were seen in South Asia where the increase was from 40% in 1995 to 45% in 2010. The same recent WHO report shows that the median coverage of EBF has increased from 26% in 2000-2005 to 40% in 2006-2011 in the 48 countdown countries.

There are good practices that support the success of exclusive breastfeeding which include avoidance of prelacteal feeds, skin to skin contact, roaming, and others. A research by (Chapman et al., 2010) found that peer counselors effectively improved breastfeeding initiation, duration and exclusivity. The American Academy of Pediatrician (AAP, 2012) also stated the importance of breastfeeding and its health significant as medical choice of both the mother and the baby.

The WHO and UNICEF (1998) recommended a guideline to promote breastfeeding advocacy and education. Below is the summary of the "Ten Steps to Successful Breastfeeding" which are necessary to support the initiation and duration of

breastfeeding for better maternal infant care. (1) Have a written breastfeeding policy that is routinely communicated to all health care staff; (2) Train all health care staff in skills necessary to implement this policy; (3) Inform all pregnant women about the benefits and management of breastfeeding; (4) Help mothers initiate breastfeeding within half-hour of birth; (5) Show mothers how to breastfeed, and how to maintain lactation even if they should be separated from their infant; (6) Give newborn infants no food or drink other than breast milk, unless medically indicated; (7) Practice rooming-in - allow mothers and infants to remain together – 24 hours a day; (8) Encourage breastfeeding on demand; (9) Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants; (10) Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.

To increase mother's knowledge on the benefits of exclusive breastfeeding and make it normal in our cultural settings, medical establishments, governments and other public health advocacy groups will have to intensify education and promotion to encourage the practice of exclusive breastfeeding by mothers. A number of interventions on exclusive breastfeeding have been implemented to increase mothers' knowledge level and the practice of exclusive breastfeeding. Such programs are done through the use Information, Education and Communication (IEC) materials, and advocacy materials which are designed and, used by healthcare professionals and the general public.

According to Food and Drugs Board (FDB, 2006) the 1991 Baby-Friendly Hospital Initiative (BFHI), led to the formation of BFHI Authority which was mandated to initiate, develop and implement breastfeeding policy and, strategies. As part of the core functions of the BFHI Authority, master-trainers in lactation

management for all hospitals in the country were to be trained. Mothers had support for exclusive breastfeeding because of the use of health professionals. There has also been Legislative Instrument [LI] 1667) to prevent aggressive marketing of breast milk substitutes, and thus promote breastfeeding in the country.

According to (FDB, 2006) the failure of exclusive breastfeeding promotion is attributed to the violation of Ghana's breastfeeding promotion regulation 2000 on the marketing of breast milk substitutes.

There is inadequate information for exclusive breastfeeding and mothers support group at the Ashaiman Polyclinic because of improper keeping of records. It is not a baby –friendly polyclinic and as such it does not offer such thing as mother support group. There are, however, education and support services on exclusive breastfeeding to mothers who come for routine postnatal clinics weekly.

Despite the education to promote EBF for the first six months of life, and other interventions to encourage women to acquire knowledge and practice exclusive breastfeeding, most mothers fail to do so. The study therefore, seeks to assess the relationship between the knowledge and the extent to which exclusive breastfeeding is practiced among postnatal mothers accessing Ashaiman Polyclinic in the Greater Accra Region of Ghana.

Statement of the Problem

Records from the United Nations on the second goal (hunger) of the sustainable development goals stands that the majority of the world's hungry people live in developing countries, where 12.9 per cent of the population is undernourished. It further states that poor nutrition causes nearly half (45%) of deaths in children under five – 3.1 million children each year.

To solve this challenge, exclusive breastfeeding can plays vital role to the

health of both mother and child which is universally recognized and acknowledged by health and non-health professionals.

Records from Ghana Statistical Service and Ghana Health Service (GSS & Macro, 2004; GSS, GHS & Macro, 2003) indicated that in Ghana for example, the median breast feeding duration is 22 months and 53.4% of women with children less than six months breastfeed exclusively. Further study confirms that the duration of breastfeeding practice in Ghana is estimated to be long; Data available indicates that 98 percent of children are still being breastfed at age 9-11 months and 50 percent at age 20-23 months. Although 99 percent of children under age 6 months are being breastfed, only about half (52 percent) are however breastfed exclusively, as recommended (Ghana Statistical Service & Ghana Demographic and Health Survey, 2014 p. 28).

Again, a study by (Aidam et al., 2005) in Accra showed that although 99.7% of mothers were breastfeeding, only 51.6% of them exclusively breastfed their infants. This same study confirms that 98% of the participants had heard of EBF. The results from a study conducted by (Gyampoh et al., 2014) also indicated that 60% of mothers had knowledge on the appropriate age of introduction of foods to infants. The universal awareness and high knowledge about exclusive breastfeeding among mothers was again confirmed in a research undertaken in Tema Manhean but prevalence among infants less than 6 months was 66.0% (Asare et al., 2018). Anecdotal evidence has it that in spite of high rates of breastfeeding practices among mothers in Ashaiman municipality, the practices of exclusive breastfeeding still remain low.

Records from the Ashaiman municipal health directorate indicated that early introduction of complementary foods may be a risk factor for increased diarrheal of

children in 2016. From the municipal health Director, the high rate (68%) of child diarrheal in 2016 could be as a result of mothers' failure to breastfeed their infants for long especially exclusive breastfeeding according to the WHO's recommendation. This is confirmed from a study by (Poorhassan et al., 2011) which showed that the severity of diseases like diarrhea, gastrointestinal infections and respiratory infections, and their symptoms that may affect infants are reduced when they are exclusively breastfed. It is therefore important to assess the exclusive breast feeding knowledge and the practice among postnatal mothers accessing Ashaiman Polyclinic in the Greater Accra Region of Ghana.

Broad Objective/Purpose of the Study

The main objective or the purpose for which this research was undertaken was to assess the knowledge and the extent to which exclusive breastfeeding was practiced among post-natal mother who attend Ashaiman Polyclinic.

Specific Objectives of the Study

1. To determine the level of knowledge on exclusive breastfeeding among Post-natal women who attend Ashaiman Polyclinic.
2. To ascertain the extent to which exclusive breastfeeding is practiced among postnatal mothers who attend Ashaiman Polyclinic.

Research Questions

1. What is the knowledge level of Post-natal mothers who attend Ashaiman Polyclinic on exclusive breastfeeding?
2. What is the extent of exclusive breastfeeding practiced among postnatal mothers who attend Ashaiman Polyclinic?

Hypothesis

There is no relationship between the Knowledge level and the extent to which exclusive breastfeeding is Practiced among Postnatal Mothers accessing Ashaiman Polyclinic.

Theoretical Framework

This study was based on the Health Belief Model (HBM), on the premise that successful breastfeeding practice is largely dependent on the target group's knowledge of the benefits to be derived if adopted and the risks involved.

The Health Belief Model (HBM) was developed as a theory to guide design intervention and prevention programs. It was subsequently, extended by Leventhal, Rosenstock, and Becker in 1966 to explain differing reactions to symptoms and to explain variations in adherence to treatment. The HBM explains that an individual will take a health-related action if that individual feels a negative health condition can be avoided and is convinced that taking the recommended action would yield positive results (Mojaye, 2008). Since health behaviors are influenced by a person's desire to avoid illness (perceived susceptibility) or to get well, and by their confidence that the recommended action will achieve this, it is assumed that by understanding the benefits of exclusive breastfeeding (perceived benefits) and having a good knowledge of the danger of not completing the six months exclusive breastfeeding (perceived severity), mothers will have the confidence to overcome the challenges and exclusively breastfeed their babies for six months as recommended by WHO.

According to Ogwezzy-Ndisika (2012), access to information creates awareness which affects perception and in turn leads to acceptance. Sensitizing and educating mothers on the advantages of exclusive breastfeeding; and providing adequate information on how to deal with the challenges will help mothers adopt the

desired behavior. Factors like cultural beliefs and norms as perceived by the individual may serve as barriers to the desired behavior (perceived barriers). For instance, mothers might fail to breast-feed their infants for fear of the breast-milk not being adequate for the infants' nutrition.

External factors also influence the desired behavior, serving as cues to action. In the case of exclusive breastfeeding, information from health professionals, radio and television as well support and encouragement from family members and relatives may influence mother to exclusively breastfeed their babies. The whole concept and its application on breastfeeding knowledge and practice are summarized in the model below.

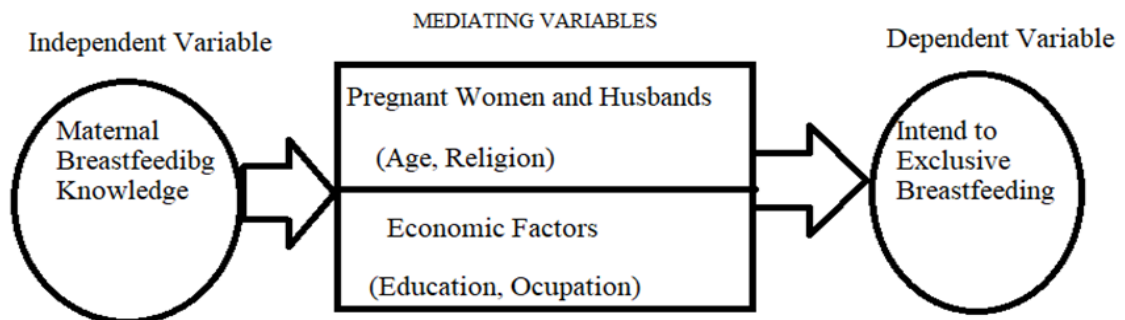


Figure 1. Conceptual framework

Source: Adapted from HBM (Janz & Becker 1984)

Significance of the Study

In 2012, the World Health Assembly Resolution 65.6 endorsed a comprehensive implementation plan on maternal, infants and young child nutrition which specified six global nutrition targets for 2025. This study covers the fifth target which seeks to increase the rate of exclusive breastfeeding in the first 6 months up to at least 50%.

However the global exclusively breastfeeding rate of infants 0 to 6 months old stood at an average of around 38% with 48% from the least developed countries, 36% Sub-Saharan Africa (UNICEF, 2014) which is below average. This research seeks to assess knowledge and the extent to which exclusive breastfeeding is practiced among postnatal Ghanaian mothers.

This will lay out the foundation for improving the knowledge and the extent to which exclusive breastfeeding is practiced. It will also help to appreciate the critical role played by health interventions on the knowledge and practice of exclusive breastfeeding by mothers. Again, it is believed that this research's findings will add to the rising body of scientific understanding and knowledge on newborn feeding practices and how to plan and position health interventions among Ghanaian mothers.

Scope and Limitations of the Study

The study was concentrated on the postnatal mothers accessing Ashaiman Polyclinic for postnatal services whose children were below two (2) years. The respondents to the questionnaires and interviews were centered on a sample population of four hundred and twenty-two (422) which is relatively a small size of the mothers.

There was a bias of double of answering questionnaire, because not all the total population was present to be sampled at the same time. However, the name of mothers who had already answered the questionnaire were written in a book to avoid repetition and possible multiple answering of the questionnaire. Again, not all the mothers available at the period could have the chance to be selected. It was also mitigated by explaining to mothers that not all of them could have the chance for participation but they might be selected in their next attendance.

Organization of the Study

The whole study consisted of five chapters with the chapter one covering the introduction. The second chapter talks about the literature review. Chapter three describes the research methodology and the Data with its analysis has also been presented and discussed in the fourth chapter. Finally, the summary, conclusion and the Recommendations are found in the chapter five.

Operational Definition of Terms

- Knowledge : Facts, information, and skills acquired through experience or education.
- Practice : The actual application or use of an idea.
- Mother : Female Parent
- Postnatal : Period of time after the birth of a baby.
- Morbidity : The incidence or prevalence of a disease.
- Mortality : The incidence of death in a population
- Age : The length of time that a person has lived or a thing has existed.
- Religion : The belief in and worship of a superhuman controlling power especially a personal God or gods.
- Ethnicity : The fact or state of belonging to a social group that has a Common national or cultural tradition
- Education : The process of receiving or giving systematic instruction, especially at a school or university, an enlightening experience.
- Occupation : a job or profession.

CHAPTER 2

LITERATURE REVIEW

Background

A study by (WHO, 2012) shows that estimated 1 million lives could have been saved from 6.9 million under five children who were reported dead globally in 2011 if there more access to exclusive breastfeeding practice. This confirms the growing attention in the endorsement of exclusive breastfeeding as the recommended feeding practice for newborns. In view of this, health care professionals and public health campaigns should encourage breastfeeding practice especially exclusive because breast milk is endorsed as the optimal source of nutrition for infants by many organizations (American Academy of Family Physicians [AAFP], 2008; AAP, 2012; United States Department of Health and Human Services [USDHHS], 2011; [WHO], 2001). Therefore (WHO, 2003) recommended exclusive breastfeeding (EBF) for the first 6 months of an infant's life, with continued breastfeeding up to 2 y of age or beyond, along with nutritionally adequate, safe, and appropriate complementary foods.

The Meaning of Exclusive Breastfeeding

Breastfeeding is explained as “a Child feeding method where the child receives some breast milk but can also receive any food or liquid including non-human milk” (Webb, Marks, Lund-Adams, & Abraham, 2002). However, exclusive breastfeeding is explained as a child feeding method where the child receives only

breast milk from his/her mother, or expressed breast milk, and no other liquids or solids with the exception of drops or syrups consisting of vitamins, mineral supplements or medicines (Webb et al., 2002). World Health Organization (WHO, 2010) defined Exclusive breastfeeding as “an infant’s consumption of human milk with no supplementation of any type (no water, no juice, no nonhuman milk, and no foods) except for vitamins, minerals, and medications until six months”.

Exclusive breastfeeding means that no liquids or solids food apart from human breast milk are given to the baby except oral rehydration solution or drops/syrups of vitamins, minerals or medicines. Breast milk has all the needed nutrients that are able to sustain infant in the early critical period of their life. Breast milk has protective elements against common and widespread childhood diseases that can be detrimental to the health of the infants. This protection goes a long way to maintain their blood pressure, reduce cholesterol level and the risk of being obese. Breastfeeding is currently acknowledged and recommended as the optimal feeding for infants through various researches one of which was the conveyance of panel of experts by the World Health Organization in 2001.

This panel reviewed over 3000 research papers and confirmed six months as the optimum age for exclusive breastfeeding for infants which was adopted in World Health Assembly Resolution in May, 2001. WHO in an attempt to increase the policy of breastfeeding have adopted a resolution, healthy people 2020. The aim of this relative to breastfeeding are to increase the categories ever breastfed from 74%-81.9%.

Prevalence of Exclusive Breastfeeding (EBF)

The Global exclusively breastfeeding rate of infants 0 to 6 months old stood at an average of around 38% with 48% from the least developed countries, 36% Sub-Saharan Africa and 52% Eastern and Southern Africa (UNICEF, 2014). A study conducted by (Cai X et al., 2012) also showed an increase in the prevalence of exclusive breastfeeding in developing countries from 33% in 1995 to just 39% in 2010.

Human Colostrum

Colostrum, the yellowish, sticky breast milk produced at the end of pregnancy by the mammary glands of mammals (including humans) which is recommended by WHO as the perfect food for the newborn, and feeding should be initiated within the first hour after birth. It is low in fat, and high in carbohydrates, protein, and antibodies to help keep your baby healthy.

Colostrum is extremely easy to digest, and is therefore the perfect first food for your baby. It is low in volume (measurable in teaspoons rather than ounces), but high in concentrated nutrition for the newborn. It contains antibodies to protect the newborn against disease. Newborns have very immature digestive systems, and colostrum delivers its nutrients in a very concentrated low-volume form. It has a mild laxative effect, encouraging the passing of the baby's first stool, which is called meconium. This clears excess bilirubin, a waste-product of dead red blood cells, which is produced in large quantities at birth due to blood volume reduction from the infant's body and helps prevent jaundice.

Colostrum is known to contain immune cells (as lymphocytes) and many antibodies such as IgA, IgG, and IgM. These are some of the components of the adaptive immune system. In preterm infants some IgA may be absorbed through the

intestinal epithelium and enter the blood stream though there is very little uptake in full term babies. This is due to the early "closure" of the intestinal epithelium to large molecule uptake in humans unlike the case in cattle which continue to uptake immunoglobulin from milk shortly after birth.

The intention of expressing breast milk previously was to feed preterm and sick babies who could not breastfeed directly from their mothers' breast. Of late, due to the trend of women in active service, the act of expressing breast milk by lactating mothers for future use has become a frequent practice (Stevens, 2009).

It is very important that care is taken in how breast milk is expressed, handled and stored since it may get contaminated with viruses and bacteria or its nutritional content may be compromised (Chang et al., 2010).

For safety and preservation of nutrients, breast milk can be stored at a room temperature (no more than 25-degree Celsius) for a maximum period of six hours, and for a maximum of four hours at a hot temperature of 30 to 38 degrees Celsius. It can also be stored at a temperature of 4 degrees in the refrigerator to be used within 72 hours or stored in a freezer at -20 degrees to be used within a duration of up to six months (Canadian Agency for Drugs and Technologies in Health, 2016). To ensure safety, refreezing or reheating of expressed breast milk is not recommended. Even though freezing is a safe method of storing breast milk, it reduces the immunological components in the expressed breast milk (Peterset. al., 2016).

Initiation of Exclusive Breastfeeding

A study showed that initial breastfeeding within at least the first hour after delivery reduces neonatal mortality by 22%, and it could prevent more than one million newborn deaths every year all over the world (Jana, 2009). The research further states that initial breastfeeding reduces deaths due to diarrheal disorders and

lower respiratory tract infections in children in developing countries. According to Jana (2009), initial breastfeeding could save about 1.45 million lives each year.

Practices that Support Exclusive Breastfeeding

There are several practices that support the success of exclusive breastfeeding. Giving mothers information during antenatal about the benefits of breastfeeding might influence those who have not already made the decision to breastfeed or not. A study by WHO, found that mothers who attended the antenatal classes started breastfeeding more than those who did not attend the classes (45% compared to 22%). Another good practice that supports the success of exclusive breastfeeding is avoidance of prelacteal feeds. Giving prelacteal feeds increases the risk of infection in infants, and if given by bottle, may interfere with suckling (step nine of successful breastfeeding).

Beliefs and Practices that Affect the Success of Exclusive Breastfeeding

Africa several studies were conducted to assess mothers` knowledge on exclusive breastfeeding. In Nigeria it was found that 71.35% of the mothers had good knowledge on breastfeeding (Ajibuah, 2013). In that study by Ajibuah, 46% of mothers reported that breastfeeding is a contraceptive method, while 76% knew that it promotes mother, baby bond and 70% knew that it maintains mothers` weight.

Another study done in a different state in Nigeria by Adebayo et al.(2014) showed that only 18.2% knew that breastfeeding promotes bonding between mother and baby 27% of mothers gave correct definition of EBF, while Ogbonnac in Jos, Nigeria found a higher response rate for the correct definition of EBF which was 82.3%. Literature has confirmed that proper positioning of the baby positively affects the success of EBF. Studies were done to assess mothers` knowledge on proper techniques of breastfeeding. Ajibuah in his study (Nigeria, 2013) reported that 52.8%

of the mothers couldn't properly position their babies to breastfeed. Of importance is mother's knowledge on mother to child transmission of HIV through breastfeeding because this determines the choice of baby's feeding, whether EBF or formula feeding.

Benefits of Exclusive Breastfeeding for Infants and Mothers

Exclusive breastfeeding is of great benefit to both infant and child which can never be down played. Its short-term and long-term benefits for infants, mothers and the community as a whole are given detail explanation with data. Research findings from (Kalantari et al., 2013) showed breastfeeding as an ideal method of providing diversified nutrition for the growth and development of the infants intellectually. In other words, infant and young child feeding is seen as a delicate issue that has effects on the nutrition, health status, psychological development and the proper eating habits of the infant.

A confirmation from a study by (Poorhassan et al., 2011) showed the severity of diseases like diarrhea, gastrointestinal infections and respiratory infections, and their symptoms that may affect infants are reduced when they are exclusively breastfed. A study conducted by (Sun et al., 2011) to examine the association between breastfeeding and development and function of nervous system showed that continuously breastfeeding infant for long period protects the infant from developing epilepsy. Similarly, Bernard et al. (2013) tried to research into how breastfeeding affects the cognitive development of infants. The findings confirmed that breastfeeding positively increases the cognitive understanding and development of infants who are exclusively breastfed. Another study by Sabuncuoglu (2013) on infants Attention-deficit/hyperactivity disorder (ADHA) indicated that lack of

breastfeeding or early weaning increases infants' risk to ADHA. On the part of the mother those who breastfeed their infants for six months and above are less vulnerable to postpartum depression (Nishioka et al., 2011).

Again, there are studies to assess the correlation between breastfeeding and the incidence of diabetes and hypertension by (Stuebe et al., 2011) which confirmed mothers who breastfeeding their infants for six months and more are both protected from type II diabetes. It was also shown in the same study that mothers who breastfeed their infants for the recommended duration are protected from hypertension.

Following the similar study by (Gunderson et al., 2010) mothers who prolong the breastfeeding duration of their infants protects themselves against metabolic disorders. Moreover, (Silvers et al., 2009) in examining the relationship between breastfeeding and incidence of asthma and allergies indicated that infants who are exclusively breastfed may have reduced asthma. A further research for confirmation by (Schnooyi et al., 2012) concluded that breastfeeding up to six months reduces the risk of asthma in 2-8-year old children. According to (WHO, 2012), infants are protected against childhood diseases when they are giving exclusive breastfeeding. A research finding stated that "In particular, the risk of hospitalization for lower respiratory tract infections during the first year of life is reduced by 72% when infants are exclusively breastfed for more than 4 months" (AAP, 2012).

According to (Taylor, 2013) breast milk contains living components like infection fighting antibodies, white blood cells, red blood cells, and anti-viral factors that are beneficial to the growth and development of infants. In a research by (Kramer & Kakuma, 2012) it was also indicated that breastfeeding facilitates the reduction of pregnancy weight. Again, breastfeeding Practice helps mothers lose weight after

pregnancy and facilitates the return of the uterus to its normal position prior to another pregnancy (The Office on Women's Health, 2012).

Information Sources and, Knowledge and Practice of Exclusive Breastfeeding

According to (Kovach, 2002) participatory strategies such as Initiative (BFHI), peer counseling, paternal support, and education of the mothers and on breastfeeding with health professionals inclusive have been found to improve the information flow on exclusive breastfeeding. A study conducted in Europe showed that the knowledge mothers derive on breastfeeding knowledge from partners, health professionals and books influence their decisions on infant feeding (Tully & Ball, 2013). Mothers' knowledge on infant feeding especially breastfeeding has also been reported in previous studies not to have been translated into optimum infant feeding practice (Malik et al., 2013; Adebayo et al., 2014; Adhikari, 2014).

Several studies conducted on exclusive breastfeeding in the past years have shown progressive rates in maternal knowledge in exclusive breastfeeding among mothers (Oche et al., 2011; Mogre et al., 2016; Dun-Dery & Laar 2016). A study by (Oche et al., 2011) reported a rate of 54 % of knowledge in exclusive breastfeeding among mothers. In 2016, a study conducted by Mogre et al. among rural lactating mothers in Ghana reported that 74 % of mothers who took part in the study had general knowledge in exclusive breastfeeding. Also, a study conducted among professional mothers in Ghana by Dun-Dery & Laar in 2016 reported that almost all mothers (98 %) who took part in the study had adequate knowledge about exclusive breastfeeding.

Information on exclusive breastfeeding according to mothers was gained through their healthcare providers during prenatal and postnatal lessons (Mogre et al.,

2016). Furthermore, (Tully & Ball, 2013) stated others sources of mothers' knowledge about infants and young child feeding (IYCF) during pregnancy from many formal services (health care providers, antenatal classes), informally (family members and friends), through consulting books and other written materials, and engaging with audio-visual media, such as television and DVDs. In Ethiopia, 87.3% of mothers indicated their knowledge about EBF and, 12.7% mothers showed their ignorance about EBF because they believe it is insufficient to satisfy the infants (Wolde et al., 2014). Similarly, a study conducted by (Bayissa et al., 2015) to find out the knowledge and practice of mothers towards exclusive breastfeeding in Ethiopia confirmed that (90.8%) of mothers know exclusive breastfeeding by giving only human breast milk to a baby for the first six month after birth without any additional food except prescribed medications. In that same study by (Bayissa et al., 2015), it was concluded that (34%) of mothers had their main Sources of information on exclusive breastfeeding from television, (28.8%) from others which include health workers and neighbors and (0.2%) from magazine. This is an indication that information dissemination is inadequate. In view of information on the importance of exclusive breastfeeding, the same study by (Bayissa et al., 2015) stated that (93.8%) of mothers knew the benefits of EBF for the child. Mothers having such rich information are not enough until it is implemented or practiced.

A Study conducted in Wajir North, Eldas and Wajir West Sub-Counties, Wajir County of Kenya by (Islamic relief & Ministry of health, 2014) also showed 83.2% of mothers having knowledge on exclusive breastfeeding. Save the Children (2013), further indicated in their survey that Knowledge, practice and coverage (KPC) in Wajir East and Wajir South showed high knowledge on EBF among breastfeeding mothers. Adequate knowledge about exclusive breastfeeding is said to be the

fundamental tool that can direct the course of EBF practice among mothers (Kiragu et al., 2014; Ayawine et al., 2015). Yet indicated that most mothers have knowledge of EBF 97.6%, but only 64.6% have adequate knowledge and mother's higher knowledge about breastfeeding correlated with longer duration of practice. A study on knowledge of the importance of EBF for the first 6 months also showed that the knowledge level of participants was (35.7%), this figure was seen to be relatively high. Yet, only about half of the participants (17.9%) practiced EBF (Motee et al., 2013).

According to (Nukpezah et al., 2018) 70.5% of mothers had heard about EBF, surprisingly most of the mothers 53.2% heard through the electronic media 209 (53.2%) as major source of information. Concerning initiation, the research further stated that, the majority 73.8% of the respondents concluded that exclusive breastfeeding period should be started immediately after birth.

Global Trends in Exclusive Breastfeeding

The implementation plan of WHO on Maternal, Infant and Young Child Nutrition presented at the World Health Assembly 2012 set a global target to increase exclusive breastfeeding rates in the first 6 months of life by at least 50%. This target means that currently, the global average estimated to be 37% for the period 2006-2010, should increase to 50% by 2025. According to (Gupta et al., 2012) about 90 million infants are given exclusively breastfeeding for the first 6 months out of about 136 million babies born each year, notwithstanding clear documentation of the contributions optimal infant feeding practices make to child's health, survival, growth and development is well documented. A comparative study globally also indicates that, there was steady increase on exclusive breastfeeding rate in the developing world within a range of 12% and 39% from 1995 to 2012 among infants aged six months

and below (Cai, Wardlaw & Brown, 2012; UNICEF, 2012). This was within a range of 12% and 39% from 1995 to 2012 among infants aged six months. There is therefore direct relationship between age and EBF which implies that EBF rate decreased with age increase. A report indicates that in 2012, 85 million newborns failed to receive breastfeeding at the first six month of life, half of them (40 million) were from Asia. In South Asia, the percentage of infants who are breastfed within one hour of birth was 78% and at six months was 65% (UNICEF, 2013; WHO, 2014). A Study conducted in Wajir North, Eldas and Wajir West Sub-Counties, Wajir County by (Islamic relief & Ministry of health) also established EBF rate of 43.6%.

Exclusive Breastfeeding Trends in the Developing World

World health statistics indicates globally, only 38% of infants aged 0 to 6 months are exclusively breastfed. Recent analyses indicate that suboptimal breastfeeding practices, including non-exclusive breastfeeding, contribute to 11.6% of mortality in children under- 5 years of age. This was equivalent to about 804 000 child deaths in 2011(WHO, 2013).A UNICEF state of the world's children, Childinfo, and demographic and health surveys report on exclusive breastfeeding of children under 6 months confirms that in 2012, the Sub-Saharan Africa recorded 35.8% of exclusive breastfeeding children under 6 months in the low and middle income region, the Low Income regions reported 45.9 while 33% was reported in middle income region. The same data showed that in 2013, Nigeria reported 17.4%, Cote d'Ivoire recorded 12.1% in 2012, and however, 62.4% was reported in Togo in 2013.

Exclusive Breastfeeding Practices in Ghana

The perception of breast milk as an ideal food for babies is farfetched within the Ghanaian society. It used to be a very common practice for mothers to breastfeed

their babies from birth until the child is two or more years, however due to barriers faced in breastfeeding, the need to perform other duties, coupled with advertisements in the media (electronic and print) about infant commercial food products, most mothers have taken to feeding their infants with breast milk substitutes (Fosu, Brefo & Arthur, 2015). Lack of knowledge about the right way to breastfeed a child, the option of bottle feeding a child with expressed breast milk in the mother's absence and the lack of knowledge of the benefits of breastfeeding especially during the first six months of an infant's life are also among the reasons for reduced rates in breastfeeding (Gyampoh et al. 2014; Arthur et al. 2015; Mogre et al., 2016).

According to Ghana Statistical Service & ICF Macro (2009), breastfeeding is normally not a problem in Ghana because as high as 98% of all infants younger than six months are being breastfed; and still at age 12 -15 months, 95% of children breast feed milk alongside with complementary foods. Exclusive breastfeeding is however 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 drops to about 49%. A further report from Ghana multiple indicator cluster surveys showed that EBF in Ghana dropped drastically from 63.7% in 2008 to 46% in 2011 (GSS, 2011). More specifically, the rate of EBF in Tamale was 63.3%. In effect, the rate of EBF is low globally (39%), with 36% occurring in low-income countries (WHO, 2009).

Further research on demographic and Health survey indicates downward trend in Ghana. From Ghana Statistical Service and Ghana Health Service (GSS & GHS, 2012) the duration of breastfeeding in Ghana is long; 98 percent of children were still being breastfed at age 9-11 months and 50 percent at age 20-23 months.

Although 99 percent of children under age 6 months were being breastfed, only about half (52%) were exclusively breastfed, as recommended by WHO. A Child's information and, Demographic and Health Surveys by UNICEF report on the trend of exclusive breastfeeding of children under 6 months indicate in Ghana. In 1998, 31% of children less than 6 months were exclusively breastfed, 2003 recorded 53.6 %, 54.4% were recorded in 2006, 62.8% for 2008, 45.7% and 52.3% were also recorded in 2011 and 2014 respectively (GSS & GHS, 2014).

Again, a study by (Aidam et al., 2005) in Accra showed that although 99.7% of mothers were breastfeeding, only 51.6% of them exclusively breastfed their infants. This same study confirms that 98% of the participants had heard of EBF. The universal awareness and high knowledge about exclusive breastfeeding among mothers was also confirmed in a research undertaken in Tema Manhean but prevalence among infants less than 6 months was 66.0% (Asare et al., 2018). The results from a study conducted by (Gyampoh et al., 2014) over 60% of mothers had knowledge on the appropriate age of introduction of foods to infants. According to (Tampah-Naah et al., 2013) the rate of exclusive breastfeeding was 64 percent. Even though most mothers initiated breastfeeding within an hour of delivery (91 %), the EBF rate at six months was 10.3 % which was low (Dun-Dery et al., 2016). From (Mogre et. al., 2016) about 26 % of the mothers were unable to correctly define EBF however, 58% of the mothers breastfed their babies exclusively.

Another study by (Nukpezah et al., 2018) concluded that 27.7% of mothers practiced EBF and 39.9% still breastfeed baby. On breastfeeding practices, 13.2% expressed breast milk when away from baby, 39.4% of the respondents-initiated breast feeding within one hour after birth and 49.6% of the respondents indicated they gave prelacteal feeds to their infants during the first six months.

From the data above exclusive breastfeeding is although above average, the trend is not stable implying there is the need to intensify the education and promotion in Ghana.

CHAPTER 3

METHODOLOGY

Research Design

The research design was basically survey which utilized systematic sampling. Although there were biases, the objective was to choose a group of participants who possessed the characteristics of the population of interest so that the study results can be generalized. Finally, the study entailed collection of quantitative data.

Study Area

The study area is Ashaiman Polyclinic which was upgraded from a health center to a Polyclinic status when it was politically curved from the Tema Metropolitan Assembly and given a Municipal status in 2008. The Municipality is bordered to the north by Kpone-Katamanso district and to the south by Tema Metropolis. The total area of the municipality is 45 square kilometers. According to the 2010 census, the population of the district is 190,972, with 93,727 males and 97,245 females (GSS, 2010).

The polyclinic is located at an area called Roman down. It is adjacent to the Main Roman Catholic church in Ashaiman. It is about 1 km from the main lorry station and the only government health facility within the Municipality.

The polyclinic is the major government health facility in the municipality with its main referral point as Tema General Hospital in the Tema metropolis. Activities that are carried out often at the child welfare unit (CWU) include health education, registration of clients, growth monitoring, individual counseling, immunization, birth

registration and referrals. The CWU caters for infants of zero (0) to 18 month old babies on monthly bases. Infants of over 11 months also visit the clinic for growth monitoring. According to the head of CWU the average number of mothers who receive postnatal care daily stood at approximately 185 which implies that monthly average will be about 2960 mothers because the days for attendance are four times weekly. The CWU has 5 permanent staff members including a Birth Registrar. There are however, national service personnel on annual basis.

Population and Sampling Procedure

The target population for this research was the post-natal mothers with infants under-24 months who were attending the Ashaiman Polyclinic for postnatal services and the sampling technique was systematic sampling. It was chosen because it is more convenient and easy to administer. Concerning the sampling of the participants, the matron of the CWU talked to the mothers every visiting morning about the study and encouraged them to participate as many as those who could.

Most of the participants could neither read nor write and for that reason the researcher and the assistants had to translate, tick and write according their choice of options available from the questionnaire. In view of that, only the first 36 postnatal mothers who received their care and were willingly and prepared to be part of the study were selected in sequence on daily basis for three weeks. Again, mothers of preterm children, children with multiple gestations, and birth defect or chronic disease were not involved in the study. The respondent should also have breastfed before.

Data Collection, Instrument, Structure and Determination

Data was collected from both primary and secondary sources. The primary data was taken from the field while the secondary data was read from book, journals

and research reports. Primary data was collected through the use of questionnaire. The questionnaire consisted of both close-ended and open-ended type of questions which is found at appendices B. The open-ended questionnaire which were dichotomous allowed the respondents to choose from only two alternatives while more than two alternatives were given in the multiple choice questions. The open-ended questions however allowed the participants to express their views on the practice of exclusive breastfeeding. The questions administered were grouped under three major sections. The questionnaire assessed the participants' demographic information like age, education level, religion and occupation among others.

It further assessed the knowledge level of the participants on exclusive breastfeeding and the extent to which participants practiced exclusive breastfeeding.

Using the formula by Fisher *et al* (1978), a sample size of 422 was determined:

$$n = z^2 pq/d^2$$

The sample size was determined based on 50% since the proportion in the larger population estimated to have exclusive breastfeeding knowledge and practice characteristics was not known and a level of precision at 95% level of confidence.

Using the formula by Fisher *et al* (1978),

$$n = z^2 pq/d^2$$

n = Desired sample size/Minimal sample size

z = Standard normal deviation of 1.96 which corresponds to 95% confidence level

p = the proportion in the larger population estimated to have exclusive breastfeeding knowledge and practice characteristics (50%).

q = 1-p, expected proportion of mothers with infants breastfeeding exclusively (1-0.5 = 0.5)

d = Acceptable error (precision) of +0.05

$$n = (1.96)^2 \times 0.5 \times 0.5 / (0.05)^2 = 384$$

Attrition rate of 10% is added (38.4) = 422

$$n = z^2 pq/d^2$$

$$z = 1.96$$

$$p = 50\% \text{ or } 0.5$$

$$q = (1 - 0.5) \text{ that is } 0.5$$

$$d = +0.05$$

Instrument for Data Collection (Validity) and Quality Control

To ensure the validity of study the questionnaire was given to three (3) experts in Public Health for editing before it was finally given to the researchers' supervisor for the necessary corrections and approval to be made. Moreover, fifty (50) breastfeeding mothers with babies under 24 months were selected purposively from the Ashaiman market through the assistance of the Market queen during their meeting days and the same questionnaire were administered to them for pre-testing to ensure it was valid. Out of the total of fifty (50) to be covered, each research assistant covered 25 mothers. The principal researcher and the data collection team conducted the pre-test. This was done to impart practical experience to the team in administering questionnaires and interviewing.

Any ambiguities were noted and necessary corrections done in the process of the finalization of questionnaires and procedures after the pre-test. The research assistants were retrained after the pretesting of the questionnaires for one day before actual data collection commenced.

Data Collection Procedure or Techniques

An introductory letter was collected from the School of Public Health – (Adventist University of Africa) and sent to the regional Director of health for further introductory letter to the Medical Superintendent of the Polyclinic through the Administrator for permission. Interviews were conducted using the questionnaire for those mothers who were unable to write because they were handling their babies and those who for some reasons can neither read nor write. The researcher used three (3) weeks to administer and collect the data.

Method of Data Analysis

Statistical Package for Social Sciences (SPSS) version 21 which has an inbuilt verification ability to check for range and logistical errors was used to enter and analyze the data.

Descriptive analysis was done from the data obtained which included the use of frequency distribution tables, graphs and charts to report the numbers and percentages. A descriptive table was drawn to show the knowledge level and the extent to which EBF is practiced by the participants. A t sample test was used to check for association between the knowledge and the practice of EBF. A p - value of < 0.05 was set as the criterion for statistical significance.

Ethical Consideration

Participants in the research had an understanding of the study before it began as is indicated at Appendix A. Again, to ensure voluntary participation of the study each participant signed a consent letter indicating the purpose for which the study was conducted. It can be found at Appendix B. Appendix C which is showing the

questionnaires had no space for names of participants and it was deliberately done to ensure their anonymity and confidentiality.

CHAPTER 4
RESULTS AND DISCUSSION

Response Rate

Demographic Characteristics of Respondents

Socio demographic factors have been associated with the success of breastfeeding in various studies. With respect to this, Age, Educational Level, Occupation, Religion, Marital Status and the number of times they've visited the Ante Natal Clinic were analyzed. All respondents were breastfeeding mothers. Table 1 presents a summary of the demographic characteristics of the respondents.

Table 1. Socio-economic Characteristics of Respondents

Characteristics	Frequency	Percent (%)
Age		
18- 25	62	15
26- 35	239	57
36- 45	121	21
More than 40	0	0
Total	422	100
Educational Level		
None	196	46
Primary	135	32
Junior High	65	15
Secondary	11	3
Tertiary	15	4
Total	422	100
Occupation		
Full time housewife	188	45
Civil Servant	4	1
Trading/ Business	233	53
Others	7	2
Total	422	100
Religion		
Islamic	41	10
Christian	379	90
Traditional	2	1
Total	422	100
Are you married?		
Yes	369	87
No	51	12
Divorced	2	1
Separated	0	0
Widowed	0	0
Total	422	100

This chapter is devoted to the analysis of the data obtained from questionnaire administration as well as the presentation of the study findings. It consists of four sections and each encompasses sub-concepts as to how the set objectives were met.

It further gives a discussion of the data presented and the findings so divulged by answering the study research questions. The findings from the study highlight the assessment of knowledge level and the extent to which breastfeeding is practiced among post-natal mother who attend Ashaiman Polyclinic. It also analyses the knowledge and techniques of breastfeeding, practice of Exclusive breastfeeding and the social support associated with breastfeeding.

Access to Ante Natal Clinic

Respondents were asked whether they visited the Ante Natal Clinic before delivery. From the survey, out of the 422 respondents, 413 representing 98% visited the Ante Natal whiles 9 representing 2% never visited the Ante Natal Clinic as shown in Table 2.

Table 2. Did You Ever Visit Ante Natal Clinic?

	Frequency	Percent (%)
Yes	413	97.9
No	9	2.1
Total	422	100.0

Objective One

To determine the level of knowledge on exclusive breastfeeding among Post-natal women who attend Ashaiman Polyclinic.

Knowledge on Exclusive Breastfeeding

Advantages of breastfeeding. Breastfeeding is the simplest, healthiest and least expensive method of feeding for all infants. In view of this, respondents were asked of the advantages and disadvantages of breastfeeding. The primary reason of breastfeeding mothers for initiating any breastfeeding was the health benefits to the infant. Eighty-seven point two (87.2%) of the mothers consistently described breastfeeding as having nutritional content that is good for the baby. Breast milk has all the needed nutrients that are able to sustain infants in the critical period of their life. The respondents (2.4%) again confirmed breastfeeding as protective agent to prevent babies from infections. Most of the mothers (82.5%) viewed breastfed babies as having a strong bond with their mothers and this serves as a great motivation to continually breastfeed their wards.

The finding again indicated that 50.9% of the respondents said breastfeeding helps maintain mother's body weight and 99.5% also said it's very cheap and available. However, only 0.7% and 1.4% of the mothers confirmed that breastfeeding serves as a contraception method and prevents maternal breast cancer respectively. This supports the assertion according to UNICEF (2003) that, breastfeeding is the simplest, healthiest and least expensive method of feeding for all infants. It also serves as an appropriate method through which new born are offered essential nutrients necessary for optimal growth and intellectual development.

Table 3. What Advantages of Breast Feeding do You Know?

	Frequency	Percent (%)
It is nutritious to the baby	368	87.2
Protects the baby from infections	10	2.4
It is very cheap	420	99.5
Mother baby bonding	348	82.5
Contraception method	3	0.7
Maintains mothers body weight	215	50.9
Prevents maternal breast cancer	6	1.4

Disadvantages of breastfeeding. The study accessed the disadvantages associated with breastfeeding. For some mothers (19.7%), breastfeeding was painful and more challenging than anticipated. Some of the disadvantages were the transmission of diseases like HIV (56.2%), breast and nipple pain (19.7%), avoidance of food and beverages that are too spicy, cause gas and baby discomfort (13%) as well as unequal feeding responsibilities (11.1%).

Table 4. What Are the Disadvantages of Breast Feeding?

	Frequency	Percent (%)
Transmission of diseases like HIV	237	56.2
Breast and nipple pain	83	19.7
Avoidance of foods and beverages that are too spicy, cause gas or cause baby discomfort	55	13.0
Unequal Feeding Responsibilities	47	11.1

Proper techniques of breastfeeding. Breastfeeding is the normal method of providing infants with the nutrients they need for healthy growth and development. There are proper techniques and practices that support the success of breastfeeding. From the survey, 85% use both breast (left and right) at each feeding. Breastfeeding

was also practiced day and night as indicated by the respondent (99.5%) with good attachments (100%). Expressed breast milk for baby feeding was however not encouraging (1.4%). These techniques were acquired from the ante natal.

Table 5. Proper Techniques of Breastfeeding

	Frequency	Percent (%)
To use both breast at each feeding	358	85
Breastfeed day and night	420	99.5
Good attachment (baby close, facing mum with wide opened mouth)	422	100
Use of EBM when Mother is away.	6	1.4

Source of Knowledge on Exclusive Breastfeeding

Breastfeeding mothers derive information on breastfeeding from diverse sources. Some of these sources were ante natal, partners, health professionals and books. Information from these sources can influence their decisions on infant feeding. From the survey, 98% of the respondents have heard of exclusive breastfeeding while 2% have never heard of it. Out of the 98% who have heard of exclusive breastfeeding, 92% had their own source of information on exclusive breastfeeding from the antenatal clinic, 4% heard it from the television and 2% heard it from the radio. Mothers acquired knowledge and the practicalities from the antenatal. The mothers overwhelmingly applauded the lactating consultants in the health services for providing them with vital information on the benefits of initiating early breastfeeding

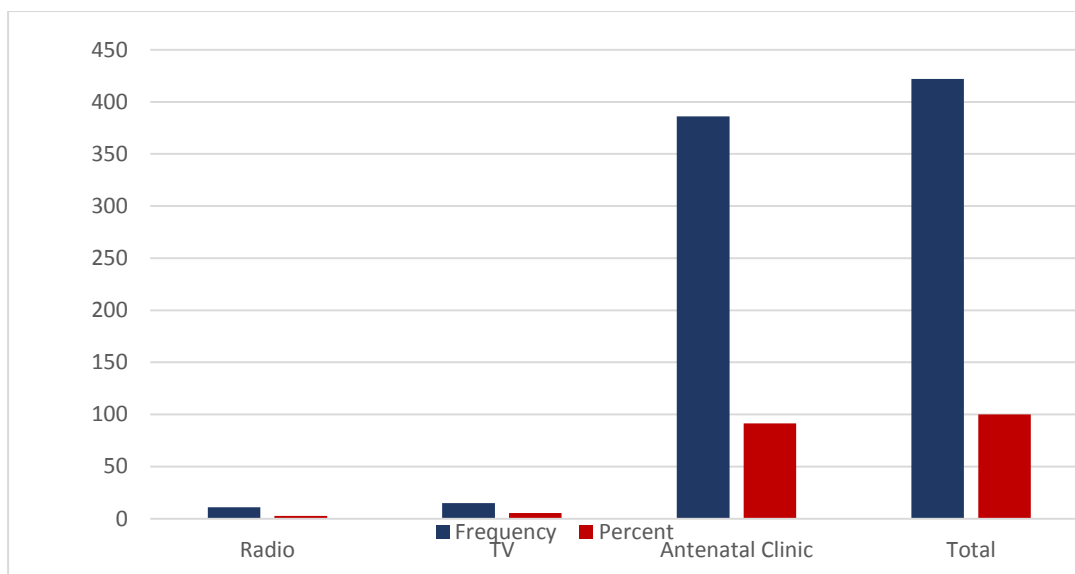


Figure 2. Source of knowledge on exclusive breastfeeding

Explanation of Exclusive Breastfeeding

A comparable number of mothers (95%) explained exclusive breastfeeding as feeding a baby with only breast milk for 6 months and medicine if indicated. This supports the survey conducted by the Ghana statistical service & ICF Macro (2009) that breastfeeding knowledge is normally not a problem in Ghana because as high as 98% of all infants younger than six months are being breastfed. Figure 1 depicts the explanation of exclusive breastfeeding by respondents.

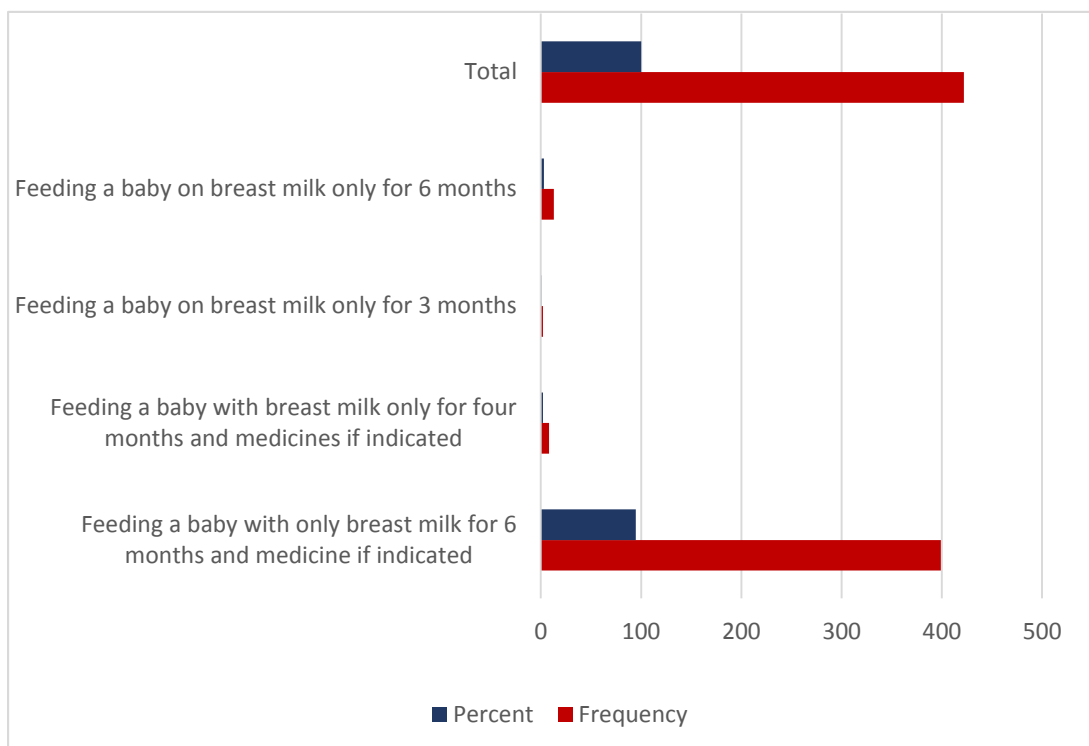


Figure 3. Explanation of exclusive breastfeeding

Through the ante natal clinic, the respondents were taught of the benefits, expression and storage of breast milk as well as the makeup of breast milk. They also learnt to breastfeed their child only for 6 months and medicine if indicated. All these forms of education were done through lecture and demonstration. 49% said they learnt through lectures and 36% said they learnt through demonstration. Demonstration is more participatory than lecturing. There is likely to be an improved information flow for mothers who were educated on exclusive breastfeeding through demonstration to mothers who were educated through lecturing.

Expression of Breast Milk

In the study, 27% of the respondents claimed to express breast milk. The main reason for the expression of breast milk was due to work. Mothers expressed breast milk in order to resume work due to unpaid maternal leave and also

to attend to other activities.

Table 6. Have You Ever Breastfed?

	Frequency	Percent (%)
Yes	114	27.0
No	308	73.0
Total	422	100.0

On how babies are fed, 80% fed their babies with cup and spoon, 18% fed with feeding bottles whiles the remaining 2% fed with their hands.

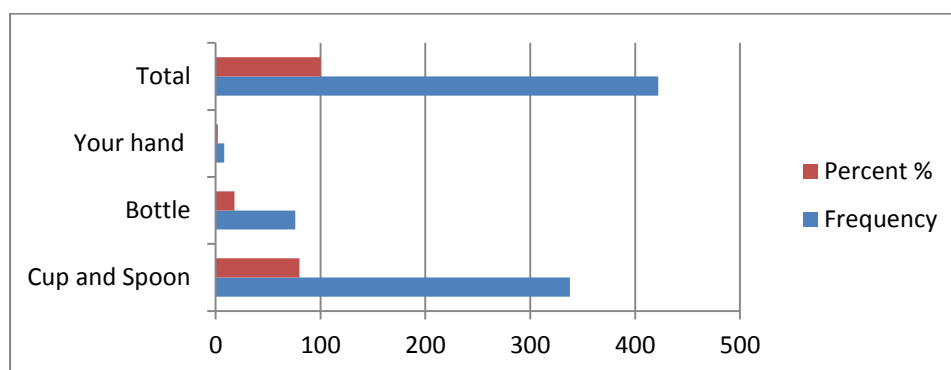


Figure 4. How would babies be breastfed?

With regards to the dangers associated with bottle, 45% said feeding with bottle can cause diarrhea, 23% said it can cause nipple confusion, 20% and 12% said it is inconvenient and less nutritious respectively.

Table 7. What Dangers of Bottle Feeding do You Know?

	Frequency	Percent %
Can cause diarrhea	190	45
Nipple confusion	98	23
It is inconvenient	84	20
Less nutritious	50	12
Total	422	100

Objective Two

To ascertain the extent to which exclusive breastfeeding is practiced among postnatal mothers who attend Ashaiman Polyclinic.

Practice of Exclusive Breastfeeding Practice

Breastfeeding practices of respondents. Of the 422 respondents, 410 mothers initiated breastfeeding in the first hour of delivery, whereas 12 did not. Out of the 12 representing 5% respondents who could not breastfeed their wards in the first hour of delivery, 5 had no milk immediately after delivery, 3 of the mothers were sick and weak after delivery and the remaining 4 could not breastfeed because their babies were taken away from them as shown in Table 8.

Table 8. Reasons for Not Initiating Breastfeeding

	Number	Percent (%)
Colostrum is not good	0	0
No milk	5	2
Mother was sick	3	1
Baby was sick	0	0
Baby was taken away from me	4	2
Total	12	5

When asked whether mothers had skin to skin contact with their babies after birth, 93% of the respondents said yes and 7% said no. Most of the mothers 400 (95%) did not offer any prelacteal feeds to their babies before the initiation of breast feeding.

Exclusive breastfeeding. Exclusive breastfeeding is explained as a child feeding method where the child receives solely breast milk from his/her mother or expressed breast milk, and no other liquids or solids with the exception of drops or syrups consisting of vitamins, mineral supplements or medicines (Webb et al., 2002).

From the findings, 400 mothers said they breastfeed their babies exclusively while 22 said they don't breastfeed their babies exclusively. It was revealed that a comparable number of mothers breast fed their babies exclusively up to six months. From the table, 299 mothers breastfed their babies up to 6 months, 93 breastfed from 5-6 months, 8 breastfed exclusively from 3-4 months while 22 were not practicing exclusive breastfeeding. This supports Ghana Statistical Service Report that 98% of all infants younger than six months are being breastfed; and still at age 12-15 months, 95% of children breast feed milk alongside with complementary foods.

*Table 9. Did You Breastfeed Your Baby Exclusively? * If Yes, For How Long did You Breastfeed Your Baby Exclusively? Cross Tabulation*

		If Yes, for how long did you breastfeed your baby exclusively?				Total
		Don't Practice EBF	3- 4 months	5- 6 months	Up to 6 months	
Did you BF your baby exclusively?	Yes	0	8	93	299	400
	No	22	0	0	0	22
Total		22	8	93	299	422

On the other side, the study sort to find out the reason why some mothers do not practice exclusive breastfeeding.

From Table 11 out of the 22 mothers who were not practicing exclusive breastfeeding, 10 said it was because they were not having enough milk, 3 said it was

because of work, 9 said water should be given as weather is hot.

Table 10. Did You Breastfeed Your Baby Exclusively? * If No, Give Reasons. Cross Tabulation

		If No, give reasons				Total
		Practice Exclusive Breastfeeding	I don't have enough milk	I resumed work	Water should be given as weather is hot	
Did you breastfeed your baby exclusively?	Yes	405	0	0	0	400
	No	0	10	3	9	22
Total		405	10	3	4	422

Introduction of Complementary Foods

Water is very essential and a vital nutrient for babies. The study sort to find out whether mothers gave water in between feed or not. Out of the 422 respondents, (299) 71% said no whiles (123) 29% said yes. Mothers introduced complementary foods in addition to the initiation of the breast milk due to traditional practices, breast milk being too small for the baby, nipple pain and the reason of resuming work.

From the findings, 15 mothers started the complementary food before 2 months. A total of 6 started between 2-4 months, 102 started between 4-6 months while the remaining 299 (71%) started after 6 months. Babies are being fed throughout day and night on the basis of demand. Others feed the wards when they cry and other mothers, three times daily. From Table 11, 331 mothers said their child had never been sick before whiles 91 of the mothers said their babies have been sick before. Out of the 91, 81 continued to breastfeed their babies even when the baby is sick and 10 do not breastfeed when baby is sick.

*Table 11. Has Your Child Ever Been Sick? * Did You Continue to Breastfeed Even When the Baby Was Sick? Cross Tabulation*

	Did you continue to breastfeed even when the baby was sick?			Total
	Child has never been sick	Yes	No	
Has your child ever been sick? Yes	0	81	10	91
No	331	0	0	331
Total	331	81	10	422

Problems Associated with Exclusive Breastfeeding

From the findings, 90% were breastfeeding and 10% were not breastfeeding. Out of the 10% who were not breastfeeding, 2% said the babies refused by themselves, 3% said the babies were not feeling well, while 5% said they got pregnant that's why they have stopped breastfeeding. On the problems associated with exclusive breastfeeding, 169 said they have sleepless night, 18% said it doesn't satisfy the baby so they have introduced complementary foods. 19% said it makes it difficult to go to work, 11% said it creates breast engorgement, and the remaining 12% said it causes pain at nipple, and makes baby feel thirsty as a result, they give the babies water in between feeding. Figure 5 shows the problems associated with exclusive breastfeeding.

Hypothesis

There is no relationship between the knowledge and the level of practice of exclusive breastfeeding among postnatal mothers accessing Ashaiman Polyclinic.

Table 12. Paired Samples Test Results for the Hypothesis

	Paired Differences					T	df	Sig. (2-tailed)
	Mean	Std. Deviati on	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1								
Have you heard of Exclusive breastfeeding? - Did you breastfeed your baby exclusively up to six months? Were you educated on Exclusive breastfeeding at the clinic? - Did you breastfeed your baby exclusively up to six months?	-.02844	.40089	.01951	-.06679	.00992	-1.457	422	.026
Pair 2								
the clinic? - Did you breastfeed your baby exclusively up to six months?	-.04265	.36871	.01795	-.07793	-.00737	-2.376	422	.018

In the SPSS output of the paired sample test, it could be seen that the calculated ($p=0.026$ and 0.018) values in the test are less than ($p < 0.05$), there is therefore sufficient evidence to reject the null hypothesis and to conclude that there is a significant relationship between the knowledge and EBF Practice among postnatal mothers accessing Ashaiman Polyclinic.

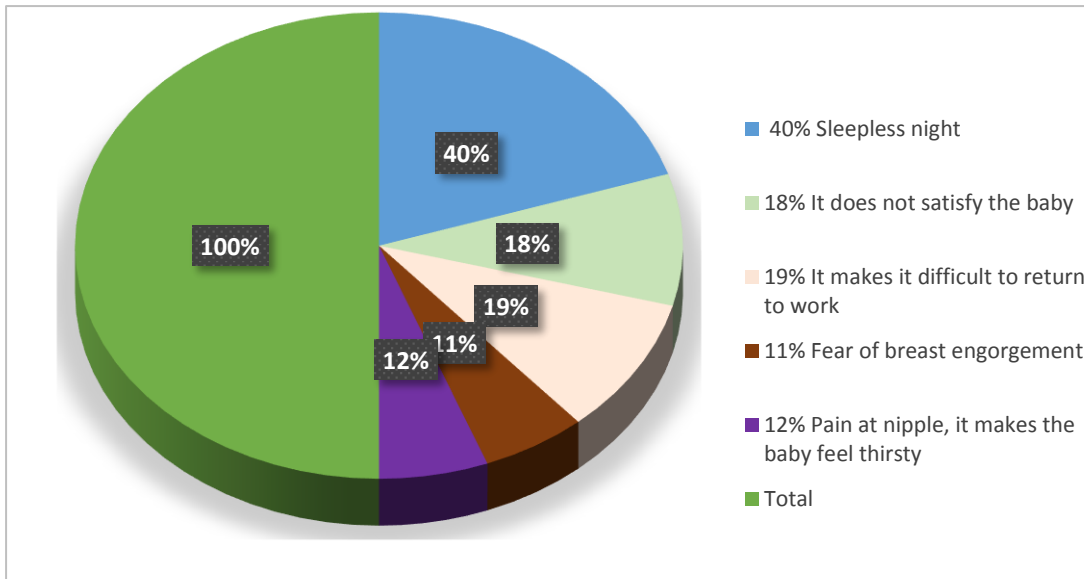


Figure 5. Problems associated with breastfeeding

Social Support

This section describes the current situation pertaining to maternal breastfeeding support from family and workplace. Generally, breastfeeding support from family members and friends was positive. Majority of the breastfeeding mothers reported more support from their child's father and other family relatives. Involvement of fathers and family members in the breastfeeding process is vital to enhance breastfeeding practices. Paternal support and companionship are proven to positively affect breastfeeding practices (Odom et al., 2014).

From the study, only 4% were employed in secular jobs. Out of this, 10 had maternity leave from 1-5 months, 7 also had maternity leave for 6-10 months. 5 of the respondents said their maternity leave was enough for them, and 12 said the leave was not enough for them. The respondents said that their organization supported breastfeeding mother by paying them even on maternal leave.

Results and Discussions Based on the Research Questions

The focus of the study was to assess the knowledge and the extent to which exclusive breastfeeding is practiced among post-natal mother who attend Ashaiman Polyclinic. The study collected the data from 422 respondents (100%) with majority (239) of the respondents' age being between 26-35 years (57%).

The study assessed mother's knowledge on key advantages of breastfeeding for both mother and baby. Majority of the mothers had good knowledge on the advantages of breastfeeding to the baby as being nutritious (87.2%). This agrees with a study conducted in Ethiopia, which shows that 87.3% of mothers indicated their knowledge about EBF and, 12.7% mothers showed their ignorance about EBF because they believe it is insufficient to satisfy the infants (Wolde et al., 2014).

To further confirm that, a similar study conducted by (Bayissa et al., 2015) to find out the knowledge and practice of mothers towards exclusive breastfeeding in Ethiopia confirmed that (90.8%) of mothers know exclusive breastfeeding by giving only human breast milk to a baby for the first six month after birth without any additional food except prescribed medications

Knowledge on proper techniques of breastfeeding was found to be good (85%) which was in contrast to Ajibuah who reported that 52.8% of mother in his study could not properly position their babies to breastfeed. This can be due to the fact that most mothers live in extended families, so they were educated on good attachment. The majority of the mothers (95%) gave the correct definition of exclusive breastfeeding as giving only breast milk and medicines and that the recommended duration for exclusive breastfeeding was six months (71%). This was much higher than 27% from Ajibuah (2013), study in Nigeria. This higher rate of knowledge of

definition of EBF in Ashaiman can be due to high rate of ANC attendance (97.9%) although variation can occur in different health facilities in Ashaiman. However, not all those who gave correct definition of EBF practiced it.

The level of the mothers' knowledge on EBF was established through the analysis of the questionnaire relating the knowledge. From this study, about (95%) of the respondents were able to give the meaning of EBF according WHO's definition which is although high but less than, the result from the study conducted by (Dun-Dery et al., 2016) among professional mothers in Ghana that is (98%). The mothers' knowledge in this study is however higher than a similar study by (Mogre et al., 2016) among rural lactating mothers in Ghana (74 %) and (Oche et al., 2011) which is 54%. Still the universal awareness and high knowledge about exclusive breastfeeding among mothers was also confirmed in a research undertaken in Tema Manhean but prevalence among infants less than 6 months was 66.0% (Asare et al., 2018) which is lower. According to (Gyampoh et al., 2014) over 60% of mothers had knowledge on the appropriate age of introduction of foods to infants which is also lower than the result from this study.

Seventy-one percent (71%) of the respondents exclusively breastfed their infants for the first six months. This finding is higher than the reports that 36% and 52% of mothers in Sub-Saharan Africa and Eastern and Southern Africa respectively breastfeed their babies exclusively (UNICEF, 2014) and 64% results from (Tampah-Naahet al., 2013). Again, a study by (Aidam et al., 2005) in Accra showed that although 99.7% of mothers were breastfeeding, only 51.6% of them exclusively breastfed their infants which is lower than the 71% reported from this study. Moreover, confirmed report from a research undertaken in Tema-Manhean Ghana

showed prevalence among infants less than 6 months was 66.0% (Asare et al., 2018) it is still lower than the 71% from this report.

It is again still higher than the results (52.3%) from another study conducted in Ghana (GSS & GHS, 2012). Although there is a steady increase on EBF relative to a study conducted by (Cai X et al., 2012) in developing countries from 33% in 1995 to just 39% in 2010 they are again lower than the findings from this study. This could be as a result of the education being intensified now in the area of the study.

It was shown that early practices that support exclusive breastfeeding success were done by most of the mothers. Ninety seven percent (97%) of the mothers actually initiated breastfeeding in the first hour of delivery which is comparatively more than the 64% of mothers initiating breast feeding in the first two hours of delivery as reported in a study in Kenya (Ganu, 2013) and 39.4% by (Nukpezah et. al., 2018). Probing into the possible reasons for these results, findings of this study showed a high rate (98%) of Ante Natal visit for the breastfeeding education. In the study, of those who didn't start breastfeeding in the first hour, 5% gave reasons that there were no milk immediately after delivery, baby was taken away from them and mother was sick.

The study found that 93% had skin to skin contact after birth with their babies. This is more than the report from a study in El Sabbah Hospital Juba-South Sudan that (70.1%) of mothers had skin to skin contact in the first one hour of birth (Warille, 2012). This difference can be attributed to differences in settings. It has been a custom to place the baby immediately after birth on mother's abdomen.

Mothers who even delivered at home had their babies placed on their bare abdomen even without any medical knowledge on the advantage of this practice.

Of the women interviewed, only 68 had breast problems, but the practice of stopping breastfeeding only occurred in 3 mothers, those were the ones who developed breast abscess and were treated medically. Nipple sore, however, was not a reason to stop breastfeeding in all the mothers. The study found that only 6 representing 1.4% mothers did express their milk for baby`s feeding. This practice is not accepted by most of the mothers, partly because they think that the milk will not be good by the time they will be giving their children, but mostly because they had no idea about EBM use. The small number who had heard about EBM use didn`t practice it because of difficulty of storage. The small percentage who expressed their breast milk did so not for feeding but to discard therefore milk after being away for hours, especially when the sun is hot, assuming that the milk will then be changed and can cause diarrhea to the baby.

The majority of the mothers (71%) started complementary feeding after six months of age while only 24% started between 4-6 months but (Nukpezah et al., 2018) reported 49.6% of the respondents indicated they gave prelacteal feeds to their infants during the first six months. A study by (Shirima et al., 2001) showed that 75.2% of mothers started complementary food around 4-6 months.

This difference could be as a result of Ashaiman mothers` knowledge on the importance of breast milk to the baby and WHO recommendation which makes them not to start complementary food early. Generally, breastfeeding support from family members and friends was positive. Majority of the breastfeeding mothers reported more support (76%) from their child`s father and other family relatives. Involvement of fathers and family members in the breastfeeding process is vital to enhance breastfeeding practices.

Although Mothers' knowledge on infant feeding especially breastfeeding have been reported in previous studies not to have been translated into optimum infant feeding practice (Malik et al., 2013; Adebayo et al., 2014; Adhikari, 2014) in this study, it can be seen from the t sample test that ($p=0.026$ and 0.018) values in the test are less than the ($p < 0.05$) showing a significant relationship which contradicts the various studies above.

On the Socio-demographic factors affecting success of breastfeeding, the analysis indicated that occupation was very important regarding the socio demographic factors associated with exclusive breastfeeding. The level of education was found not to be significantly associated with exclusive breastfeeding. The lower the level of education the more likely is the mother to exclusively breastfeed. As confirmed by this study 46% were uneducated, 32% had received primary education, 15% and 3% had received secondary and tertiary education respectively while the remaining 4% had Junior High School qualification.

This finding is different from a study done by given by (Agu, 2011) which stated that, maternal education was not associated with more exclusive breastfeeding. This also contradicts a study by (Grummer-Strawn, 2009) that lower maternal education is not associated with breastfeeding. This can be due to the fact that tertiary education leavers constituted a small proportion. Again, mothers with lower education are either house wives or doing casual works or their own petty trading and therefore have much more time to spend with their babies.

CHAPTER 5

RECOMMENDATIONS AND CONCLUSION

Summary

The study design was that of a survey that relied on quantitative data collection using questionnaires administered to 422 postnatal mothers who were breastfeeding their babies. From the study, majority of the participants from Ashaiman municipality area apparently with low infrastructural development and low residential status, suggesting lower income level earners and low educational level. Also, (95%) of the respondents had adequate knowledge in EBF and only (71%) practiced it as similar report by (Aidam et al., 2005) in Accra showed 99.7% of mothers were breastfeeding, only 51.6% of them exclusively breastfed their infants. This may be attributed to the adequate knowledge on EBF from the health professionals from the facility. It could also result from the fact that (45%) of the mothers were house wives and (53%) doing their own businesses gave them the enough time to breast feed their infants especially with exclusivity.

With regards to the suggestions and recommendations, if healthcare providers and professional are motivated and given adequate capacity building to intensify education on EBF, the knowledge and the extent to which EBF is practiced would be increased.

Conclusion

The nutritional status of a child is evidently the reflected in his or her general health condition (Benson & Shekar, 2006). Quality diet reduces diseases and

increases growth. Exclusive breastfeeding is a well campaigned child feeding practice noted for child health and survival. This study presents data on mother's level of knowledge and practice of exclusive breastfeeding. The findings from this study indicate that the postnatal mothers selected from the Ashaiman Polyclinic generally have good knowledge (95%) and practices (71%) regarding EBF although use of expressed breast milk for infant's feeding were not encouraging (29%). There were although considerably variation in the EBF duration among the mothers, all the selected mothers breastfed their babies. Early practices that support exclusive breastfeeding were also found to be done by the majority of the respondents and the rate of exclusive breastfeeding was satisfactorily. It can therefore be concluded that there is a significant relationship between the knowledge and the extent to which exclusive breast feeding is practiced.

Recommendations

The following recommendations are given based on the study findings.

1. More advocacy and education should be done on the use of expressed breast milk.
2. Breast feeding sensitization and education through the electronic medium specifically Television, should be intensified.
3. More emphasis should also be placed on the protections obtained from breastfeeding of babies against infectious diseases because a few (2.4%) mothers had knowledge on that concept.
4. The BF education should again focus on the positive implications of EBF against the development of maternal breast cancer and early birth.

Suggestion for Future Research

Further study ought to be conducted to ascertain the factors that prevent the use of expressed breast milk.

APPENDICES

APPENDIX A
SURVEY FORM

Dear Madam,

This questionnaire is designed to assess Knowledge Exclusive Breastfeeding level and the extent to which it is practiced by postnatal mother. The information you provide will help us understand if postnatal mothers have adequate information on exclusive breastfeeding and whether the information is put into practiced. Because you are the one who can give us a correct picture of your experience, I request you to respond to the questions frankly and honestly. Please, 'be very sincere' in answering the questions since the way you answer the questions will give credit or cast a doubt on the study.

Kindly note that any information provided on this sheet will be kept confidential. I really appreciate your time and support in furthering this research endeavor.

Thank you.

Yours faithfully,

Frank Ofosuhene

(The Researcher)

APPENDIX B
CONSENT FORM

Study Title: ‘Assessment of breastfeeding Knowledge and Practices amongst post-natal mothers attending Ashaiman Polyclinic in the Greater Accra Region of Ghana’

I agree to participate in this study,
Conducted by Frank Ofosuhene, Master Public Health (Nutrition) student from
Adventist University of Africa-Kenya.

I have understood that I can withdraw freely from the study without giving reasons, at
any time, whether before it starts or while I am participating.

I have received answers to all questions that I asked the researcher.

My signature below indicates my consent to participate voluntarily.

Signature _____ Date _____

Participant

Signature _____ Date _____

Researcher

APPENDIX C
QUESTIONNAIRE

DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS

1. Age (years)

- a) 18–25 b) 26-35 c) 36-45 d) ≥46

2. Educational level

- a) None b) Primary c) Secondary d) Tertiary e) others. Please,
specify.....

3. Occupation

- a) Full time housewife b) Civil Servant c) Trading/business d) others

Please specify.....

4. Religion

- a) Islamic b) Christian c) Traditional d) Others. Please,
specify.....

5. Are you married?

- a) Yes b) No If no state the reason a) Divorced b) Separated c) Widowed

6. Did you ever visit Ante Natal Clinic?

- a) Yes b) No

If yes in question 6 above, please specify Number of visits _____

KNOWLEGDE ABOUT BREASTFEEDING:

7. What advantages of breastfeeding do you know? (Tick all that apply)

- i. It is nutritious to the baby ii. Protects the baby from infections iii. Mother baby bonding
- iv. Cheap and available v. Contraception method vi. Maintains mothers body weight
- vii. Prevents maternal breast cancer

8. What are the disadvantages of breastfeeding?

- i. Transmission of diseases like HIV ii Breast and Nipple Pain
- iii Avoidance of foods and beverages that are too spicy, cause gas, or cause their baby discomfort
- iv Unequal Feeding Responsibilities

Other (Specify)

.....

KNOWLEDGE ON TECHNIQUES OF BREASTFEEDING:

9. Proper techniques of breastfeeding are:(Tick all that apply)

- i. To use both breasts at each feeding
- ii. Breastfeed day and night
- iii. Good attachment (baby close, facing mum with wide opened mouth)
- iv. Use of EBM when mother is away

10) Have you heard of Exclusive breastfeeding?

- a) Yes
- b) No

11) If yes, through which medium did you hear? (Tick all that apply)

- a) Radio
- b) TV
- c) Newspaper
- c) Antenatal clinic
- d) others. Please, specify.....

12) Were you educated on Exclusive breastfeeding at the Clinic?

- a) Yes
- b) No

13) If yes, how would you explain Exclusive breastfeeding?

- a) Feeding a baby with only breast milk for 6 months and medicine if indicated.
- b) Feeding a baby with breast milk only for 4 months and medicines if indicated
- c) Feeding a baby on breast milk only for 3 months.
- d) Feeding a baby on breast milk only for 6 months.

14) Which of these were you educated on? (Tick all that apply)

- a) Only breastfeeding for 6 months and medicine if indicated
- b) The benefits of only breastfeeding for six months
- c) What makes up breast milk
- d) Expression and storage of breast milk

15) Which of these forms did the Exclusive breastfeeding education take?

- a) Group education
- b) Individual counseling
- c) Lecture
- d) Demonstration
- e) Others. Please, specify.....

16. Have you ever expressed your milk?

- a) Yes b) No

17. If yes, state reason?

.....
.....

18. If you go to work, do you express your breast milk and leave for the child?

- a) Yes b) No

19. How would babies be fed?

- a). Cup and spoon b). Bottle c). Your hand d). Cup with the head turn up-side-down

20 What dangers of bottle feeding do you know?

- a). Can cause diarrhea b). Nipple confusion c). It is inconvenient d). Less nutritious

C PRACTICE OF EXCLUSIVE BREAST FEEDING

21) Do you need to exclusively breastfeed your child?

- a) Yes b) No

22. Give reason for the need of exclusive breastfeeding.

- a) Provides good health b)It is hygienic c)Previous experience d) others.

Please,

specify.....

23. Did you initiate breastfeeding in the 1st hour of delivery? a) Yes b) No

24. If No give reasons (tick all that apply)

- a) Colostrum is not good b) No milk c) Mother was sick d) Baby was sick

e) Baby was taken away from me

25. Did you have skin to skin contact with your baby after birth? a)

Yes b) No

26. Did you offer Prelacteal feeds to your baby? (any food before initiation of

a) Sleepless night b) It does not satisfy the baby c) It makes it difficult to return to work.

d) Fear of breast engorgement. e) Pain at nipple, it makes the baby feel thirsty.

34. Has your child ever been sick? a) Yes b) No

35. Did you continue to breastfeed even when the baby was sick?

a) Yes b) No

a) If No give reason(s) _____

36. Do you express your milk for the baby to take when you are away?

a) Yes b) No

37. At what age did you start complementary food?

a) Before 2 month b) Between 2 and 4 months c) Between 4 and 6 months' d) After 6 months

38. Are you breastfeeding? A) Yes b) No

39. If you are not breastfeeding now, why did you stop breastfeeding?

a) Child refused by himself b) I got pregnant c) Child is not feeding well

d) Others

SOCIAL SUPPORT

40. Do you have support from your family members in regards to breastfeeding?

a) Yes b) No

If yes, who gives you support? Please, specify.....

41. If you are employed, did you get the maternity leave?

a) Yes b) No

42. How long was it? Please, specify.....

43. Do you think the maternity leave is enough? A) Yes b) No

44. Does your employer support you in breastfeeding by giving you time to go to your baby? A) Yes b) No

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