SCHOOL OF PUBLIC HEALTH

COLLEGE OF HEALTH SCIENCES

UNIVERSITY OF GHANA

EXCLUSIVE BREASTFEEDING PRACTICE AMONG FORMALLY AND INFORMALLY EMPLOYED NURSING MOTHERS ATTENDING CHILD WELFARE CLINIC AT MAMPROBI POLYCLINIC, ACCRA

BY

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A DISSERTATION SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON, IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF PUBLIC HEALTH DEGREE

JULY, 2019

DECLARATION

I hereby declare that the work presented, except for references to other people who have been dully acknowledged, is entirely the product of my own effort carried out at the University of Ghana School of Public Health. This is an original research work which has neither in a whole nor in part been submitted anywhere for any other degree.

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Mercy Adubea Frimpong

(Student)

18th October, 2019

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Prof. Alfed E. Yawson

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To the person through whom you made this happen, I say I appreciate the time, money ,love, support and trust you invested in me to make sure this dream becomes a reality. Mr. Dominic Savio Numekevor, thank you for availing yourself to be used to impart my life in diverse ways. You are indeed a rare husband.

My appreciation also goes to my abled supervisor who made time to go through my work and made the necessary corrections and inputs to make my work academically credible. May God bless you for your efforts, patience, kindness and genuine concern for people.

To the entire SPH staff, especially the lecturers who took time to impart the knowledge that equipped and prepared me to carry out this research, I say God bless you all.

I also would like to acknowledge the administrative staff and nursing staff of the Mamprobi Polyclinic postnatal unit for their immense contribution and co-operation that enabled me to complete this work on time.

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ABSTRACT

Background: Breastfeeding is the simplest and most reliable means of feeding infants to their maximum satisfaction and it reduces the likelihood of childhood illnesses such as pneumonia, diarrhoea. EBF in particular, promotes the optimal health of the infant in diverse ways. Although there is evidence on exclusive breastfeeding among professional working nursing mothers and mothers working in the informal sector, there has been no comparative studies between these two categories of women in Ghana. The study aimed at exploring the prevalence and barriers to EBF among informal working nursing mothers and mothers working in the formal sector in Ghana in order to bridge the knowledge gap and add to existing findings on barriers to exclusive breastfeeding.

Methods: The study adopted a facility based cross-sectional quantitative study design where simple random sampling technique was used to select 115 informal sector nursing mothers and 114 formal sector working mothers aged 15-45 years who had children between the ages of 6 and 24 months. A structured questionnaire was used to gather the data for the study. Descriptive statistics, and inferential was used in analysis of data.

Results All 229 respondents from the Postnatal unit of the Mamprobi Polyclinic breastfed their infants during their most recent birth. Out of this number, 23.1% of mothers working in the formal sector and 76.9%of mothers working in the informal sector exclusively breastfed. After controlling for potential confounders, factors that significantly predicted exclusive breastfeeding were; health condition of baby within first six months, mothers occupation and mothers hospitalization within six months after delivery .An association was also found between, marital status, maternal age, level of education and practice of exclusive breastfeeding

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Conclusion: The research revealed that EBF practice is very low among nursing mothers who work in the formal sector. Factors which affect exclusive breast feeding practice among women in the formal sector therefore need to be urgently addressed through interventions like advocacy for change in policies, public health education as well as increased support at home and in working institutions to promote exclusively breastfeeding.

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OPERATIONAL DEFINITION OF TERMS

1. Exclusive Breastfeeding: Feeding the new-born with only breast milk without water or drink with the exception of prescribed medication up to six months after delivery.
2. Breastfeeding: The act of giving breast milk to an infant either directly from the mother's breast or from a container into which it has been expressed.
3. Formal Employment: A job that is done on regular hour basis which attracts a fixed monthly wage from which tax is deducted.
4. Informal Employment: Self-employed business or working for someone who owns a business which does not attract a fixed income on which tax is deducted.
5. Early Initiation: Attaching a baby to breast within the first 30 minutes after birth.
6. Under Five :Children below the age of five (5) years.
7. Postnatal/post-partum : Six (6) months period after birth

ABBREVIATIONS

1. EBF	Exclusive Breastfeeding
2. WHO	World Health Organization
3. ANC	Antenatal Clinic
4. GDHS	Ghana Demographic and Health Survey
5. MOH	Ministry of Health
6. CWC	Child Welfare Clinic
7. UNICEF	United Nations Children Fund
8. DHS	Demographic Health Survey
9. PNC	Postnatal Clinic
10. BFHI	Baby Friendly Hospital Initiative

CHAPTER ONE

INTRODUCTION

1.0 Background

According to the World Health Organization (2017a), exclusive breastfeeding is feeding a baby only breast milk for the first six months of life. Thus, no other foods or liquids, not even water, in addition to breast milk except medications prescribed by a medical officer (WHO, 2017a). Breastfeeding decreases the occurrence of childhood infectious illnesses such as diarrhea and pneumonia, and also boosts the immune system of the newborn (UNICEF, 2011; World Health Organization & UNICEF, 2015). In view of the increasing global child mortality, the WHO recommends Early Initiation of Breastfeeding (EIBF), which will eventually promote EBF (World Health Organization, 2017a). Optimum breastfeeding in the initial six months plus continued breastfeeding up to twelve months,is ranked highest among the preventive measures that will significantly bring down the rate of death among children less than five years old from various causes (Aryeetey and Goh, 2008).

In spite of its countless benefits, many efforts to promote exclusive breastfeeding (EBF) have yielded less than desired outcomes. This may be related to the challenges mothers encounter when breastfeeding. Exclusive breastfeeding challenges occur at the maternal, infant, family, healthcare system, and at community and national level. The challenges to the practice of EBF include: cracked or sore nipples, breast engorgement, insufficient breastmilk production, disapproval and discomfort of breastfeeding in public, insufficient

breastfeeding support from society and healthcare providers, short maternity leave periods, difficulties associated with combining breastfeeding and other maternal responsibilities, and emotional stress. A number of variables have also been noted in the literature to predict EBF practice. Among them are infant's age, maternal age, marital status, formal educational level, and occupation (Diji et al, 2017). Studies conducted in Ghana revealed that EBF was positively associated with women's intention to breastfeed, hospital delivery, positive attitude, living in one's own house , lactation counseling , income and mode of delivery . An analysis of the 2008 Ghana Demographic and Health Survey (GDHS) by TampaNaah and Kumi-Kyereme also showed that, the region of birth, place of delivery and perceived birth size of baby were the independent predictors of EBF. Similar to other African societies, the breastfeeding culture in Ghana is heavily influenced by family members, friends, society , and the duration of maternity leave. The Act 57 of the Ghana Labour Law also makes provisions for expectant working mothers to enjoy at least 12 weeks of paid maternity leave in addition to any accumulated annual leave . Nursing mothers who have an abnormal pregnancy or multiple babies are also entitled to a possible extension of their maternity leave for a minimum duration of two weeks. Considering the socio-cultural dynamics and the few research studies from Ghana, the factors that hinder and predict EBF practice in other countries may be different in the Ghanaian setting. The study therefore sought to examine EBF practice and its prevalence among formal and informal working nursing mothers attending child welfare clinic at Mamprobi Polyclinic in Ghana.

1.1 Problem Statement

Breastfeeding confers on both mother and child,numerous benefits and advantages, but most especially the child.All newbrns must therefore be exclusively breastfed beacause breastfeeding decreases the occurrence of childhood infectious illnesses such as diarrhea and pneumonia, and also boosts the immune system of the newborn (UNICEF, 2011; World Health Organization & UNICEF, 2015). In view of the increasing global child mortality, the WHO recommends Early Initiation of Breastfeeding (EIBF), which will eventually promote EBF (World Health Organization, 2017a). Optimum breastfeeding in the initial six months plus continued breastfeeding up to twelve months,is ranked highest among the preventive measures that will significantly bring down the rate of death among children less than five years old from various causes (Aryeetey and Goh, 2008).

However, it is globally estimated that only 38% of infants aged 0 to 6 months are breasfed exclusively, and lesser children are breastfed in advanced countries (Black et al., 2013). Findings by the WHO, in 2011 indicate that sub-optimal breastfeeding practices, such as late initiation of breastfeeding, throwing away of colostrum and non-exclusive breastfeeding still persist in developing countries and this contributes to over 800,000 under five deaths each year which represents 11.6% of all under-five mortality (WHO/UNICEF, 2012). Literature has shown that most professional women resort to formula feeding although they know the significant benefits conferred on them and their infants if they breastfeed.Dun-Dery & Laar (2016), averred that the awareness of

exclusive breastfeeding among working mothers is high, but its practice is the problem. They found out that duration of maternity leave is a major setback for its practice among other factors as engorged breast, sore nipples, and inadequate milk flow. Other reviewed literatures show similar findings.

There is therefore the need to examine more closely the breastfeeding practices of mothers working in the formal and informal sectors using relatively improved designs such as comparative designs to compare the prevalence rate among these two groups of nursing mothers and find out the possible barriers that may be accounting for the difference. This will help stakeholders to develop specific interventions to help bridge the gap and promote EBF in general among the two groups of nursing mothers.

1.2 Justification of the study

Previous research have found out that maternity leave duration is a major reason why most women who work in the formal sector are not able to exclucivelly breaastfeed. On the other hand, research done on exclusive breastfeeding on mothers who work in the informal also revealed that engorged breasts, sore nipples, inadequate milk and mode of delivery are factors that affected exclusive breastfeeding practice. This research therefore is being conducted to compare the prevalence rate and breastfeeding practices of nursing mothers working in the formal sector to those working in the informal sector to substantiate the findings that indeed duration of maternity leave is the main reason why there is low practice of exclusive breastfeeding among mothers working in the formal

sector. The findings of this research will be a basis for further comparative research to find out other possible reasons that are similarly barriers to the practice of exclusive breastfeeding so that instead of stakeholders channeling all their energies into advocating for an extension in the duration of maternity leave which will undoubtedly have serious implications on the Ghanaian economy, the focus can be shifted to addressing other possible barriers and amending of regulations and policies that can reform the working environment and make it child friendly so nursing women can work and still breastfeed their children exclusively.

1.3 Research Questions

1. Are nursing mothers who work in the formal sector unable to practice exclusive breastfeeding?
2. Are nursing mothers who work in the informal sector unable to practice exclusive breastfeeding?
3. Comparatively, are nursing mothers who work in the informal sector able to practice exclusive breastfeeding than nursing mothers who work in the formal sector?

1.4 General Objective

To examine the prevalence of breastfeeding practices of formally employed and informally employed nursing mothers who attend Child welfare Clinic at Mamprobi Polyclinic,Accra.

1.5 Specific Objectives

1. To evaluate the breastfeeding practices of formally employed nursing mothers who attend Child welfare Clinic at Mamprobi Polyclinic,Accra.
2. To assess the breastfeeding practices of informally employed nursing mothers who attend Child Welfare Clinic at Mamprobi,Accra
3. To determine factors which affect the practice of exclusive breastfeeding practice among formally employed nursing mothers who attend Child Welfare Clinic at Mamprobi Polyclinic,Accra.
4. To determine factors which affect the practice of exclusive breastfeeding among nursing mothers working in the informal sector who attend child welfare clinic at Mamprobi Polyclinic,Accra.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter will review studies that have been done on exclusive breastfeeding globally with a specific focus on the situation in Ghana. The review was done under the following headings: importance of breastfeeding,definition of EBF, employment and breastfeeding practices, Global trends on breastfeeding.

2.2 Definition of exclusive Breastfeeding

According to the World Health Organization (2017a), exclusive breastfeeding is feeding a baby with breast milk only for the first six months of life. Thus, no other foods or liquids, not even water, in addition to breast milk except medications prescribed by a medical officer (WHO, 2017a). Breastfeeding decreases the occurrence of childhood infectious illnesses such as diarrhea and pneumonia, and also boosts the immune system of the newborn (UNICEF, 2011; World Health Organization & UNICEF, 2015). In view of the increasing global child mortality, the WHO recommends Early Initiation of Breastfeeding (EIBF), which will eventually promote EBF (World Health Organizaton, 2017a).

2.3 Components Of Breastmilk

Human milk contains two types of proteins: whey and casein. Approximately 60% is whey, while 40% is casein. This balance of the proteins allows for quick and easy digestion. If artificial milk, also called formula, has a greater percentage of casein, it will be more difficult for the baby to digest. Approximately 60-80% of all protein in human milk is whey protein. These proteins have great infection-protection properties.

Lactoferrin inhibits the growth of iron-dependent bacteria in the gastrointestinal tract. This inhibits certain organisms, such as coliforms and yeast, that require iron.

Secretory IgA also works to protect the infant from viruses and bacteria, specifically those that the baby, mom, and family are exposed to. It also helps to protect against E. Coli and possibly allergies. Other immunoglobulins, including IgG and IgM, in breast milk also help protect against bacterial and viral infections. Eating fish can help increase the amount of these proteins in your breast milk.

Lysozyme is an enzyme that protects the infant against E. Coli and Salmonella. It also promotes the growth of healthy intestinal flora and has anti-inflammatory functions.

Bifidus factor supports the growth of lactobacillus. Lactobacillus is a beneficial bacteria that protect the baby against harmful bacteria by creating an acidic environment where it cannot survive.

Human milk also contains fats that are essential for the health of your baby. It is necessary for brain development, absorption of fat-soluble vitamins, and is a primary

calorie source. Long-chain fatty acids are needed for brain, retina, and nervous system development. They are deposited in the brain during the last trimester of pregnancy and are also found in breast milk.

The amount and types of vitamins in breast milk is directly related to the mother's vitamin intake. This is why it is essential that she gets adequate nutrition, including vitamins. Fat-soluble vitamins, including vitamins A, D, E, and K, are all vital to the infant's health. Water-soluble vitamins such as vitamin C, riboflavin, niacin, and pantothenic acid are also essential. Because of the need for these vitamins, many healthcare providers and lactation consultants will have nursing mothers continue on prenatal vitamins.

Lactose is the primary carbohydrate found in human milk. It accounts for approximately 40% of the total calories provided by breast milk. Lactose helps to decrease a large number of unhealthy bacteria in the stomach, which improves the absorption of calcium, phosphorus, and magnesium. It helps to fight disease and promotes the growth of healthy bacteria in the stomach.

Breast milk has the perfect combination of proteins, fats, vitamins, and carbohydrates. There is nothing better for the health of your baby. Leukocytes are living cells that are only found in breast milk. They help fight infection. It is the antibodies, living cells, enzymes, and hormones that make breast milk ideal. These cannot be added to the formula. Though some women ultimately are not able to breastfeed, many who

think they cannot actually are able to breastfeed. Lactation consultants are able to provide support to women learning to breastfeed.

2.4.Process of Lactation

Lactogenesis is the process of developing the ability to secrete milk and involves the maturation of alveolar cells. It takes place in 2 stages: secretory initiation and secretory activation.

- Stage I lactogenesis (secretory initiation) takes place during the second half of pregnancy. The placenta supplies high levels of progesterone which inhibit further differentiation. In this stage, small amounts of milk can be secreted by week 16 gestation. By late pregnancy, some women can express colostrum.
- Stage II lactogenesis (secretory activation) starts with copious milk production after delivery. With the removal of the placenta at delivery, the rapid drop in progesterone, as well as the presence of elevated levels of prolactin, cortisol, and insulin, are what stimulate this stage. Usually, at days 2 or 3 postpartum, most women experience swelling of the breast along with copious milk production. In primiparous women, the secretory activation stage is slightly delayed, and early milk volume is lower. Lower milk volume is also observed in women who had cesarean births compared with those who delivered vaginally. Late onset of milk production has also been seen in women who have had retained placental fragments, diabetes, and stressful vaginal deliveries. With retained placental

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fragments, lactogenesis stage II could be inhibited by the continued secretion of progesterone and would continue to be inhibited until removal of the remaining placental fragments.

Lactation is maintained by regular removal of milk and stimulation of the nipple, which triggers prolactin release from the anterior pituitary gland and oxytocin from the posterior pituitary gland. For the ongoing synthesis and secretion of milk, the mammary gland must receive hormonal signals; and although prolactin and oxytocin act independently on different cellular receptors, their combined action is essential for successful lactation.

Prolactin is a polypeptide hormone synthesized by lactotrophic cells in the anterior pituitary and is structurally similar to growth hormone and placental lactogen. Prolactin is both positively and negatively regulated, but its main control comes from hypothalamic inhibitory factors such as dopamine which act on the D2 subclass of dopamine receptors present in lactotrophs. Prolactin stimulates mammary gland ductal growth and epithelial cell proliferation and induces milk protein synthesis. Emptying of the breast by the infant's suckling is thought to be the most important factor. Prolactin concentration increases rapidly with suckling of the nipple which stimulates nerve endings located there.

Oxytocin is involved in the milk ejection or letdown reflex. The tactile stimulation of the nipple-areolar complex by suckling leads to afferent signals to the hypothalamus that trigger release of oxytocin. This results in contraction of the myoepithelial cells, forcing milk into the ducts from the alveolar lumens and out through the nipple. Oxytocin also

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2.5 Importance of Breastfeeding

Optimum breastfeeding in the first six months after delivery and continued breastfeeding to 12 months,is ranked highest among the list of preventive interventions that would most reduce the number of deaths of children less than five years old from all causes (Aryeetey and Goh, 2008). Optimal breastfeeding can potentially alleviate 1.4 million deaths yearly among infants less than five years of age. The advantages for infants goes beyong childhood . The benefits extend to the mother and family. Research conducted in Ghana and elsewhere reveal that breastfeeding a baby wthin the first hour post delivery could avert close to 20 percent of deaths among neonates.(UNICEF, 2010).

Evidence available through numerous research reveals that initiating breastfeeding early has a significant role to play in the reduction of neonatal mortality. Children who are breastfed,are six times likely to survive in the early months as compared to their counterparts who are not breastfed. During the early six months of life,infants who are breastfed are six times less likely to die from diarrhoea and 2.5 times less likely to expire from acute respiratory infection. Children are protected by breastmilk against diarrhoea through

1.The transfer of antibodies that helps to prevent stunted growth,which results from acquisition of infectious diseases. Also, children who are breastfed do better on tests of cognitive motor development and academic outcomes and have lower risk of mental health problems than children who are not breastfed (Lucas et al., 1992). Breastmilk contains decosahehaenoic acid which also contributes to the growth and development of healthy eyes and nervous system (Drover et al.,2011; Jorgensen et al.,2001). Yadavannavar and Shailaja (2011) reported that exclusive breastfeeding and longer duration of breastfeeding is known to protect a child from obesity risk, helps enhancing brain and learning readiness. It also serves as child spacing method. This is good for developing countries, like Ghana. It further gives bonding of mother and infant through skin-to-skin contact for the infants' wellbeing (GDHS, 2008).

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1.The transfer of antibodies that helps to prevent stunted growth,which results from acquisition of infectious diseases. Also, children who are breastfed do better on tests of cognitive motor development and academic outcomes and have lower risk of mental health problems than children who are not breastfed (Lucas et al., 1992). Breastmilk contains decosahehaenoic acid which also contributes to the growth and development of healthy eyes and nervous system (Drover et al.,2011; Jorgensen et al.,2001). Yadavannavar and Shailaja (2011) reported that exclusive breastfeeding and longer duration of breastfeeding is known to protect a child from obesity risk, helps enhancing brain and learning readiness. It also serves as child spacing method. This is good for developing countries, like Ghana. It further gives bonding of mother and infant through skin-to-skin contact for the infants' wellbeing (GDHS, 2008).

2.6 Employment and Breastfeeding Practices

Bick et al. (1998 as cited by Sika bright, 2011) stated that, mothers level of education and employment status is related significantly to infant feeding practices. They added that, working mothers are less likely to maintain breastfeeding and are more likely to introduce mixed feeding before 6 months of a child life when the leave period expires (Sika-bright, 2011). Auerbach & Guss (1984 as cited by Sika- Bright, 2011) realized that, mothers who are given short maternity leave will have difficulty maintaining breastfeeding as would those who are doing full time as opposed to part-time. According to Liben et al. (2016), being a housewife is associated positively to breastfeeding exclusively. They stated that housewives have ample time and hence are able to provide breastmilk to their babies on demand. Tewabe et al. (2017) stated that mothers who are unemployed are able to practice exclusive EBF in comparison to employed mothers because they earned less money than the employed mothers hence have no less money to buy other feeds for their infant, therefore, they have no option than to breastfeed exclusively.

The findings in a study done by Draman, Mohamad, Yusoff, & Muhamad (2017) show significant association among exclusive breastfeeding practices and father's income, mother's income and mother's occupation. Similarly, factors that showed positive associations with breastfeeding duration in a study done in Indonesia are higher social class, higher income and higher socioeconomic status (Kumala, 2017). Mothers who are

self employed have their own schedule of work and are therefore have adequate time to exclusively breastfeed teir children.(Mensah et al., 2017)

2.7 Global trends on Exclusive Breastfeeding

Breastfeeding, as estimated by WHO, has the potential for providing great influence on child health and survival all over the world and studies show that about 1.4 million deaths that occur in children under five years can be prevented each year in developing countries (Black et al. 2008). Yet the earlier identified barriers to breastfeeding, has led to poor breastfeeding practices and rates worldwide.

Globally,of all children aged 0 to 6months,only 38% are exclusively breastfed , and lesser children are breastfed in developed countries (Black et al., 2013). Breastfeeding prevalence has been reported to have increased in developing countries and in sub-Saharan Africa with about 39% of infants 0-5 months being exclusively breastfed (Cai, Wardlaw, and Brown, 2012). Also about 60% of these infants were found still breastfeeding and receiving complementary foods between 6-12 months (WHO/UNICEF 2012).

A study conducted by Natalia,Lauren et al on mapping exclusive breastfeeding in Africa between 2000 and 2017 found out that EBF prevalence and trends varied greatly across the African continent between 2000 and 2017, often irrespective of national or subnational boundaries . The greatest observable patterns of improvement, where estimated EBF levels had increased from <25% to ≥40% in the modeled period, were along or near the East African Rift, including Sudan, South Sudan, Democratic Republic

of the Congo (DRC), Kenya, Tanzania, Zambia and Malawi. Within these countries, an estimated 68 second administrative subdivisions (out of 534) had low EBF prevalence (estimates: <25%) in 2000, which subsequently increased to meet or exceed the World Health Organization's (WHO's) Global Nutrition Target (GNT; estimated EBF prevalence of >50%) by 2017. The estimated national prevalence nearly doubled in some countries in western (for example, Burkina Faso) and southern (for example, Namibia) sub-Saharan Africa (SSA) between 2000 and 2017. This was achieved by reducing the number of areas with low EBF prevalence.

Despite reports of increased EBF in many areas (22–30% in sub-Saharan Africa and 30–45% in Latin America and the Caribbean, excluding Brazil and Mexico), the prevalence is still low compared to the 90% recommended by the WHO. (2009). The global prevalence is low, at 37%, with low income countries having a slightly higher prevalence (47%) (WHO, 2010). According to the Nigerian Demographic and Health Survey (NDHS), in 2008 (National Population Commission Federal Republic of Nigeria (NPC), 2009), 17% of children were exclusively breastfed for less than 4 months, while 13% were exclusively breastfed for less than 6 months. The median exclusive breastfeeding period in Southwest Nigeria in 2003 was 7 months, but by 2008, it was 6 months. In the same period, early initiation of breastfeeding among women in the region was 12.7% in 2003, but increased to 35.5% in 2008 (NPC, 2009). However, by 2011, the percentage of EBF dropped to 15.1% in Nigeria (WHO, 2010). Child mortality remains high in low- and middle-income countries. According to the most recent NDHS, in 2013, Nigeria has

one of the highest child mortality rates among selected sub-Saharan Africa countries, with 128/1000 live births for under 5, 69/1000 for infants and 37/1000 for neonates (NPC, 2014). Malnutrition and communicable diseases are implicated as major causes of death, and children

A study conducted by Diji et al(2017) on challenges and predictors of exclusive breastfeeding among mothers attending the child welfare clinic at a regional hospital in Ghana reported that the EBF rate among the 240 participants was 66.7%. While 160 of the participants reported to have practised EBF, the remaining 80 participants reported to have practised mixed or formula feeding.The top three breastfeeding challenges were: mothers' perception of breastmilk alone not meeting their babies' nutritional needs, short maternity leave period , and socio-cultural pressure to introduce water and artificial feeds.

The Ghana Demographic and Health Survey, (2014) reported that 98% of all children born two years prior to the health survey, were breastfed at some point in time. Also 56% of all these children started to breastfeed within the first hour of birth. About 87% are breastfed within the first day of birth. It also found that more than 52% of children less than 6 months old were breastfedexclusively. Conversely, at 46 months, only 36% of mothers continued to breastfeed their babies exclusively.Sub-optimal feeding practices was seen in 15% of children especially in urban areas and children born to wealthy families. Also 12% of infants 2-3months of age and 34% of children 4-5 months received complementary foods, which does not meet the WHO recommendations for infant feeding (Ghana Demographic Health Survey,2015)

CHAPTER THREE

METHODOLOGY

3.1 Study Design

In this study, the design used was cross-sectional. Data was collected over a two week period.(Fink, 1995; Polit & Hungler, 1995). Cross-sectional study is straightforward 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.This design method was chosen because of the short time frame within which this research was conducted.

3.2 Study Area

Mamprobi Polyclinic is located at Mamprobi, a town in the Accra Metropolitan district, a district of the Greater Accra Region of Ghana. It is located south of Latebiokorshie, northeast of Old Dansoman and north of Chorkor. The Ablekuma South Sub Metropolitan District Council is one of the Six (6) Sub Metropolitan District Councils of Accra Metropolitan Assembly (AMA). The Sub Metro is the largest in the Metropolis and shares its boundaries with Ablekuma Central, Ablekuma North and Ashiedu Keteke. It covers an area of 15.1 Sqkm.

The Sub Metro has an estimated population of 257,543 with 22,751 houses and 69,401 households according the 2010 housing Census. In 2018, using the Greater Accra Growth Rate of 3.1%, it is projected that the population of Ablekuma South Stands at 315,051.

Mamprobi Polyclinic receives patients and clients from this population.It has all the units of a hospital with the exception of a Mortuary.It has about 900 staffs who work in various departments in the hospital.

3.3 Population

Formally employed nursing mothers, thus nursing mothers who have jobs with normal hours and earn regular wages, and are recognized as income sources on which income taxes must be paid. Example, nurses, doctors, bankers, teachers, civil servants, etc and informally employed nursing mothers that is, nursing mothers who are self-employed, or who work for those who are self-employed and in most cases are not on payrolls so are not taxed on their incomes. Examples are seamstresses, hairdressers, bakers, and market traders etc. who attend child welfare clinic at Mamprobi Polyclinic in the Ablekuma South District in the Greater Accra Region.

3.4 Inclusion Criteria

- Breastfeeding women between 15-45 years old.
- Nursing mothers with children aged 6– 24 months.
- Formally or informally employed nursing mothers who have had singleton delivery.
- Nursing mothers who attend child welfare clinic at Mamprobi Polyclinic.

3.5 Exclusion criteria

- Mothers who have had multiple birth recently.

3.6 Sample size estimation

With reference to a cross sectional study conducted by Diji et al,2017 which used a sample of 240 mothers to assess the challenges and practices of EBF among mothers attending CWC at a regional hospital in Ghana, the clinical records on attendance at the Mamprobi Polyclinic child welfare clinic was requested. It was revealed that the clinic received two hundred nursing mothers on the average in a week. The data was collected over a two (2) week period. Based on this it can be said that the total number of nursing mothers over the two (2) week period will be four hundred (400). Using Yamane (1967) simplified formula given below the size was determined.

$$n = \frac{N}{1+N\,(e)^2}$$

Where N is population size, e is level of precision (95% confidence level, giving e= 0.05) Based on the formula a sample of 229 samples of nursing mothers who qualified based on the inclusion criteria were selected ensuring equal representation of mothers working in the formal and informal sectors. The simple random sampling technique which is a kind of a probability sampling technique was employed.A 10% non-response rate was anticipated and hence increased the number of respondents to 220 participants.In all,229 participants were recruited in the actual study.

3.7 Sampling Method

Over the two week period, postnatal mothers who satisfied the inclusion criteria, were randomly selected on clinic visit days. This procedure was done by grouping the mothers into two.Those working in the formal sector in one group and those working in the informal sector in another group.Mothers in both groups were then numbered.On each day,an average of 12 nursing mothers were selected to be participants using either all odd numbered mothers or all even numbered mothers.This was done daily till the required number of willing participants for each group was obtained. That is, a hundred and fifteen formally employed nursing mothers and a hundred and fourteen informally employed nursing mothers. All the nursing mothers who participated were selected randomly

3.8 Data Collection Technique

Quantitative survey was used to collect data using structured questionnaires. Questionnaires were administered to mothers who could read and write while mothers who could not read and write were interwiewed using the same questionnaire. Each of the respondents was given an information sheet which was read and explained to them before a consent form was given to be signed or thumprinted.

3.9 Data Collection Tool

The main tool used to collect data in this research was a structured questionnaire.It was developed from reviewed literature.The questionnaire was made up of close ended questions.In all there were four sections.Section A, collected information on infant data,Section B on Socio demographic characteristics of mother,Section C on maternal

health and delivery history and Section D, on cultural and societal factors related to exclusive breastfeeding.In all,there were 33 questions.Pretesting of the questionnaire was done to ensure its reliability. In instances where an interview was necessary, it was done in a conducive atmosphere agreed on that was free from noise and intrusion to ensure privacy. Permission was sought to record the interview on a tape recorder with assurance of confidentiality and anonymity after which interview was transcribed and recordings discarded.

3.10 Study Variables

3.10a Dependent Variables

The dependent variable for the study was exclusive breastfeeding and it was measured by its definition, which is not giving anything to the infant except breast milk only for 6 completed months.

3.10b Independent Variables

Independent variables include:

1. Infant factors: infant health, weight.

2. Maternal factors: age, educational level, occupation, delivery history, mother's health, marital status.

3. Cultural/ societal factors: norms, beliefs and practices on infant feeding, health staff support and support from family and friends.

3.11 Data analysis

The data that was collected was screened for errors and omission. Data coded and entered into excel was exported into Stata version 15 for cleaning and analysis. Respondent's basic characteristics was described using descriptive statistics such as frequencies,graphs and charts. Bivariate analysis was employed to examine associations between dependent and independent variables, while the strength of association between the dependent and independent variables was determined using logistic regression analysis while adjusting for other variables with confidence interval set at 95% and p-value of less than 0.05.

3.12 Ethical consideration

Ethical clearance was sought from Ghana Health Service Ethical Review Committee (ERC) through the School of Public Health (SPH), University of Ghana (UG). Ethical clearance with reference number GHS-ERC088/04/19 was thus received from the Ethical Review Committee to conduct the study at the Mamprobi Polyclinic. Permission was received from the District Health Directorate. An introductory letter from the Department of Socal and Behavioural Sciences Department of SPH, UG was presented at the directorate as well as a personal letter seeking to conduct the study. All respondents provided consent to partake in the study before questionnaires were administered. Where necessary, consent and accent was sought from parents or guardians of mothers below 18 years of age before they participated in the research. This was done through the signing/ thumb printing of the consent form (see appendix) , the potential risks and benefits of participating in the study was explained. Privacy and confidentiality was maintained during data collection. This was achieved by interviewing respondents one-on-one at a serene location away from other third parties. Comfortable venues free from interruptions agreed

upon by both participants and the researchers were used. Translation was done for those who could not read in the presence of a witness they chose. Copies of the information sheet and signed or thumb printed consent forms was given to the respondents before the administration of the questionnaires. Participants of the study were assured of confidentiality of information collected. They were also offered the opportunity to opt out of the study anytime they felt like doing so. No personal identifiers like names was recorded on any questionnaire. Respondents were assigned and identified by digits ranging from 001 to 229. Information retrieved from participants was stored in a password-protected personal computer. Access to the data was limited to the principal investigator and it will be destroyed after five years. All data collected (questionnaires) will be stored under lock and key for 5 years after which the data would be destroyed.

CHAPTER FOUR

4.0 RESULTS AND FINDINGS

Introduction

This chapter presents the analysis of data collected. The aim of this study was to examine and compare breastfeeding practices of formally employed and informally employed nursing mother who attend Child Welfare clinic at Mamprobi Polyclinic

4.1 Demographic characteristics of participants

One hundred and fifteen informally employed women and one hundred and fourteen formally employed women were involved in this study. The mean age of all participants was 25.5 ± 5.24. the mean ages of informally employed women and formally employed women were 25.4±4.89 and 25.7±5.59 respectively. Majority (82.6%) of informally employed women and 86.8% of the women in the formal sector had children aged 7 to 24 months. The prevalence of low birthweight among formal sector women was 7.0% compared to 5.2% for informally employed women. Among, the formally employed women, 31.6% indicated their children were sick in the first six months as against 9.6% among the informally employed women.

With regard to maternal age, most women from both groups were aged between 20 and 34. Education wise, more than a third (34.8%) of informally employed women had schooled up to the primary level while for formally employed women, more than half (79.8%) had tertiary education. Most the study participants opined they lived with their partners (Table 4.1).

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With regard to maternal age, most women from both groups were aged between 20 and 34. Education wise, more than a third (34.8%) of informally employed women had schooled up to the primary level while for formally employed women, more than half (79.8%) had tertiary education. Most the study participants opined they lived with their partners (Table 4.1).

Table 4.1 Demographic characteristics of participants

Characteristic	Informally employed [n=115] n (%)	Formally employed [n=114] n (%)	Total [n=229 n (%)
Child characteristics			
Age of child (months)			
< 6	20(17.4)	15(13.2)	35(15.3
7-24	95(82.6)	99(86.8)	194(84
Birthweight			
Low birth weight (< 2.5 kilograms)	6(5.2)	8(7.0)	14(6.1
Normal birth weight (> 2.5 kilograms)	109(94.8)	106(93.0)	215(93.9
Child admitted to NICU			
No	110(95.6)	108(94.7)	218(95
Yes	5(4.4)	6(5.3)	11(4.8
Reasons for admission to NICU			
Jaundice	4(66.7)	7(87.5)	11(78.6
Asphyxia	0(0.0)	1(12.5)	1(7.1
Hypoglycemia	2(33.3)	0(0.0)	2(14.3
Baby sick in first 6 months			
No	104(90.4)	78(68.4)	182(79.3
Yes	11(9.6)	36(31.6)	47(20.5
Did sickness interfere with breast feeding			
No	9(81.8)	29(80.6)	38(80.8
Yes	2(18.2)	7(19.4)	9(19.2
Mother's characteristics			
Mean age (years) SD	**25.4(4.89)**	**25.7(5.59)**	**25.5 (5.2**
Age of mother (years)			
< 20	8(7.0)	12(10.5)	20(8.7
20-34	103(89.6)	96(84.2)	199(86.9
35-49	4(3.5)	6(5.3)	10(4.4
Marital status			
Single	46(40.0)	22(19.3)	68(29.7
Married	69(60.0)	92(80.7)	161(7
Education			
None	1(0.9)	0(0.0)	1(0.4)
Primary	40(34.8)	2(1.7)	42(18.3
JHS	71(61.7)	6(5.3)	77(33.6
SHS	0(0.0)	15(13.2)	15(6
Tertiary	3(1.6)	91(79.8)	94(4
Religion			
Christianity	95(82.6)	84(73.7)	179(78
Islam	20(17.4)	30(26.3)	50(21.8
Live with partner			
No	41(35.6)	33(28.9)	74(32.3
Yes	74(64.4)	81(71.1)	155(67

4.2 Maternal Health and Delivery history

Maternal health and delivery history of study participants is summarized in table 4.2 below. All mothers irrespective of employment status delivered at the Mamprobi Polyclinic. The most common delivery mode was spontaneous vaginal delivery (informally employed: 90.4% vs formally employed: 88.6%). A large proportion (94.8%) of informally employed women had initiated breastfeeding within 30 minutes after delivery and 89.5% of formal sector women had also initiated breastfeeding within 30 minutes after delivery. All women involved in this study stated they had support from health staff to initiate breastfeeding.

Table 4.2 Maternal Health and Delivery history

Characteristic	Informally employed [n=115] n (%)	Formally employed [n=114] n (%)	T [n n
Place of delivery			
Mamprobi Polyclinic	115(100.0)	114(100.0)	229
Delivery mode			
Spontaneous Vaginal delivery	104(90.4)	101(88.6)	205
Caesarian section	11(9.6)	13(11.4)	24
Number of children			
1	52(45.2)	42(36.8)	94
2	42(36.5)	51(44.7)	93
3	18(15.7)	18(15.8)	36
4	3(2.6)	3(2.6)	6
Experienced any complication after delivery			
No	112(97.4)	109(95.6)	221
Yes	3(2.6)	5(4.4)	8
Hospitalized for any condition within six months after delivery			
No	113(98.3)	110(96.5)	223
Yes	2(1.7)	4(3.5)	6
Diagnosis for hospitalization			
Post-partum Haemorrhage	2(66.7)	2(50.0)	4
Hypertension	1(33.3)	2(50.0)	3
Able to initiate breastfeeding within 30 minutes after delivery			
No	6(5.2)	12(10.5)	18
Yes	109(94.8)	102(89.5)	211
Support from health staff to initiate breastfeeding			
Yes	115(100.0)	114(100.0)	229

4.3 Cultural and societal factors in relation to Exclusive Breastfeeding practice

Cultural and societal factors in relation to exclusive breastfeeding practice were also explored in this study. In that regard, all participants knew about exclusive breastfeeding. For both groups, the dominant source of information about exclusive breastfeeding was health workers. The practice of exclusive breastfeeding showed that 78.8% of informally employed women exclusively breastfed their children compared to 23.7% among formally employed women. Weight of baby was the most common source of motivation for exclusive breastfeeding among both groups. Additionally, all participants stated their religions support and promote exclusive breastfeeding (Table 4.3).

Table 4.3 Cultural and societal factors in relation to Exclusive Breastfeeding practice

Characteristic	Informally employed [n=115] n (%)	Formally employed [n=114] n (%)	Total [n=229] n (%)
Know about exclusive breastfeeding			
Yes	115(100.0)	114(100.0)	229(100.0)
Source of information on breastfeeding			
Health staff	44(38.3)	72(63.2)	116(50.7)
Family	33(28.7)	16(14.0)	49(21.4)
Friends	38(33.0)	26(22.8)	64(27.9)
Practice exclusive breastfeeding			
No	25(21.7)	87(76.3)	112(48.9)
Yes	90(78.3)	27(23.7)	117(51.1)
Source of motivation for exclusive breastfeeding			
Family	3(3.3)	4(14.8)	7(6.0)
Friends	4(4.4)	1(3.7)	5(4.3)
Health of baby	21(23.3)	6(22.2)	27(23.8)
Health staff	4(4.4)	4(14.8)	8(6.8)
Weight of baby	58(64.4)	12(44.4)	70(59.8)
Practice EBF because you could not afford infant food			
No	61(67.8)	27(100.0)	88(75.2)
Yes	29(32.2)	0(0.0)	29(24.8)
Does your religion support and promote EBF			
No	0(0.0)	0(0.0)	0(0.0)
Yes	115(100.0)	114(100.0)	229(100.0)
Do you have any cultural belief against EBF			
No	115(100.0)	114(100.0)	229(100.0)
Yes	0(0.0)	0(0.0)	0(0.0)
Working conditions allow adequate time for EBF			
No	0(0.0)	114(100.0)	114(49.8)
Yes	115(100.0)	0(0.0)	115(50.2)
Duration of leave after delivery before resuming work			
Three months	0(0.0)	114(100.0)	114(49.8)
Unlimited	115(100.0)	0(0.0)	115(50.2)
Occupation influenced your practice of EBF			
No	0(0.0)	0(0.0)	0(0.0)
Yes	115(100.0)	114(100.0)	229(100.0)
Received social support after delivery			
No	0(0.0)	0(0.0)	0(0.0)
Yes	115(100.0)	114(100.0)	229(100.0)

4.4 Occupational differences in initiation of breastfeeding within 30 minutes after delivery

There was no statistically significant difference with regard to occupational differences in initiaition of breastfeeding within 30 minutes after delivery (p=0.136)

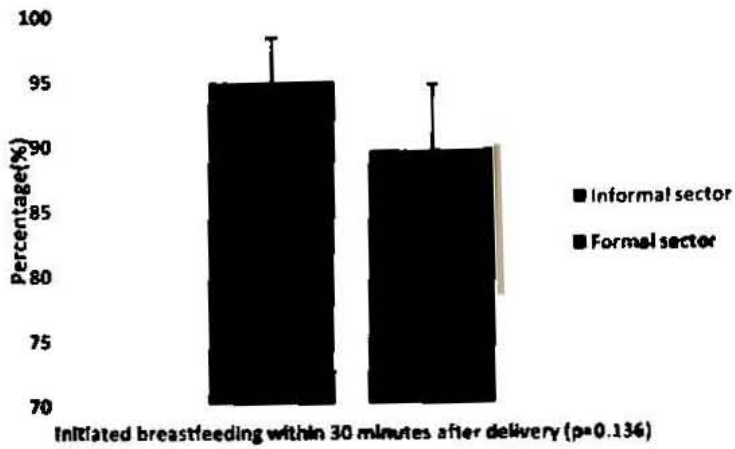

Figure 1 Occupational differences in initiation of breastfeeding within 30 minutes after delivery

4.5 Occupational differences in practicing Exclusive breastfeeding

Figure 2 below shows that there was a statistically significant difference between type of occupation and the practice of exclusive breastfeeding. Majority of participants who practiced exclusive breastfeeding were in the informal sector (p<0.001).

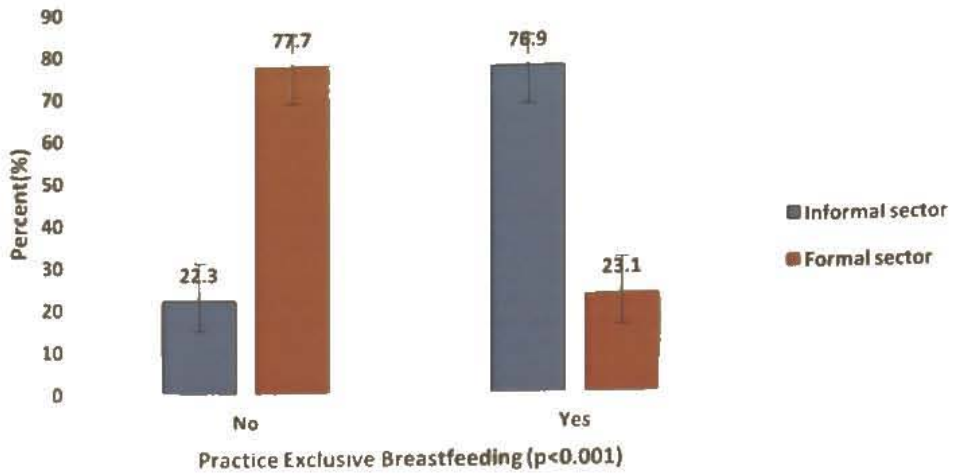

Figure 2 Occupational differences in practicing Exclusive breastfeeding

4.6 Association between demographic, maternal health, socio cultural characteristics and exclusive breastfeeding

There were statistically significant differences between a baby being sick in the first 6 months (χ^2 =12.99, p<0.001, α=0.05), marital status (χ^2 = 37.8, p<0.001, α=0.05), education (χ^2 =55.24, p<0.001, α=0.05), occupation (χ^2 =8.30, p=0.014, α=0.05) and practice of exclusive breastfeeding. Maternal age (χ^2 =10.10, p 0.006, α=0.05), living with partner (χ^2 =8.30, p=0.004, α=0.05), number of children (χ^2 =10.64, p=0.014, α=0.05), experiencing complications after delivery (χ^2 =4.94, p=0.026, α=0.05) were significantly associated with practice of exclusive breastfeeding. Furthermore, there were statistically significant differences between exclusive breastfeeding and hospitalization (χ^2 =6.43, p=0.011, α=0.05), working conditions allowing adequate time for exclusive breastfeeding (χ^2 =68.24, p<0.001, α=0.05) and duration of leave after delivery (χ^2 =68.24, p<0.001, α=0.05).

Table 4.4 Association between demographic, maternal health, socio cultural characteristics and exclusive breastfeeding

Variable	Practiced Exclusive Breastfeeding			
	No N (%) [n=112]	Yes N (%) [n=117]	χ^2	p-value
Age of child (months)			0.10	0.746
0-6	18(16.1)	17(14.5)		
7-24	94(83.9)	100(85.5)		
Birthweight			3.03	0.082
Low birth weight (< 2.5 kilograms)	102(91.1)	113(96.6)		
Normal birth weight (≥ 2.5 kilograms)	10(8.9)	4(3.4)		
Child admitted to NICU			2.62	0.105
No	104(92.9)	114(97.4)		
Yes	8(7.1)	3(2.6)		
Baby sick in first 6 months			12.99	<0.001
No	78(69.6)	104(88.9)		
Yes	34(30.4)	13(11.1)		
Age of mother (years)			10.10	0.006
< 20	3(2.7)	17(14.5)		
20-34	104(92.9)	95(81.2)		
35-49	5(4.5)	5(4.3)		
Marital status			37.8	<0.001
Single	12(10.7)	56(47.9)		
Married	100(89.2)	61(52.1)		
Education			55.24	<0.001
None	0(0.0)	1(0.8)		
Primary	12(10.7(	30(25.6)		
JHS	20(17.7)	57(48.7)		
SHS	7(6.3)	8(6.8)		
Tertiary	73(65.1)	21(17.9)		
Occupation			68.24	<0.001
Informal	25(22.3)	90(76.9)		
Formal	87(77.7)	27(23.1)		
Live with partner			8.30	0.004
No	26(23.2)	48(41.0)		
Yes	86(76.9)	69(59.0)		
Delivery mode			0.01	0.910
Spontaneous Vaginal delivery	100(89.3)	105(89.7)		
Caesarian section	12(10.7)	12(10.3)		
Number of children			10.64	0.014
1	34(30.4)	60(51.3)		
2	55(49.1)	38(32.5)		
3	20(17.9)	16(13.7)		

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Baby sick in first 6 months			12.99	<0.001
No	78(69.6)	104(88.9)		
Yes	34(30.4)	13(11.1)		
Age of mother (years)			10.10	0.006
< 20	3(2.7)	17(14.5)		
20-34	104(92.9)	95(81.2)		
35-49	5(4.5)	5(4.3)		
Marital status			37.8	<0.001
Single	12(10.7)	56(47.9)		
Married	100(89.2)	61(52.1)		
Education			55.24	<0.001
None	0(0.0)	1(0.8)		
Primary	12(10.7(	30(25.6)		
JHS	20(17.7)	57(48.7)		
SHS	7(6.3)	8(6.8)		
Tertiary	73(65.1)	21(17.9)		
Occupation			68.24	<0.001
Informal	25(22.3)	90(76.9)		
Formal	87(77.7)	27(23.1)		
Live with partner			8.30	0.004
No	26(23.2)	48(41.0)		
Yes	86(76.9)	69(59.0)		
Delivery mode			0.01	0.910
Spontaneous Vaginal delivery	100(89.3)	105(89.7)		
Caesarian section	12(10.7)	12(10.3)		
Number of children			10.64	0.014
1	34(30.4)	60(51.3)		
2	55(49.1)	38(32.5)		
3	20(17.9)	16(13.7)		

4	3(2.7)	3(2.6)		
Experience any complication after delivery			4.94	0.026
No	105993.8)	116(99.1)		
Yes	7(6.2)	1(0.9)		
Hospitalized for any condition within six months after delivery			6.45	0.011
No	106(94.6)	117(100.0)		
Yes	6(5.4)	(0.0)		
Able to initiate breastfeeding within 30 minutes after delivery			2.46	0.116
No	12(10.7)	6(5.1)		
Yes	100(89.3)	111(94.9)		
Working conditions allow adequate time for EBF			68.24	0.001
No	87(77.7)	27(23.1)		
Yes	25(22.3)	90(76.9)		
Duration of leave after delivery before resuming work			68.24	0.001
Three months	87(77.7)	27(23.1)		
Unlimited	25(22.3)	90(76.9)		

4.7 Factors influencing practice of exclusive breastfeeding

Binary logistic regression was performed to determine risk factors associated with exclusive breastfeeding. Baby being sick in its first 6 months after birth, maternal age, being employed in the formal sector and hospitalization for any condition within six months after delivery were significantly associated with the practice of exclusive breastfeeding.

The regression model showed that women whose babies were sick in their first six months after birth had 0.39 reduced odds of being breastfed compared to non-sick children (AOR=0.39; 95% CI: 0.16-0.95; p=0.038). Also, mothers aged between 20 and 34 years had 0.02 reduced odds of exclusively breastfeeding their children compared to those aged less than 20 years (AOR=0.02; 95% CI: 0.01-0.40; p=0.001). Furthermore, participants employed in the formal sector also had 0.10 reduced odds of exclusively breastfeeding their children (AOR=0.10; 95% CI: 0.05-0.29; p=0.001). Mothers who were hospitalized for any condition within six months after delivery also had 0.04 reduced odds of practicing exclusive breastfeeding (AOR=0.04; 95% CI: 0.01-0.98; p=0.049).

Table 4.5 Factors influencing practice of exclusive breastfeeding

Variable	Crude Odds Ratio OR (95% CI) p-value	Adjusted Odds OR (95% CI) p-
Birthweight		
Low birth weight (< 2.5 kilograms)	Reference	
Normal birth weight (> 2.5 kilograms)	1.13(0.55-2.31) 0.746	
Child admitted to NICU		
No	Reference	
Yes	0.34 (0.09-1.32) 0.120	
Baby sick in first 6 months		
No	Reference	Reference
Yes	0.29(0.14-0.58) <0.001	0.39(0.16-0.95)
Age of mother (years)		
< 20	Reference	Reference
20-34	0.16(0.05-0.57) 0.004	0.02(0.01-0.40)
35-49	0.18(0.03-1.000 0.051	0.30(0.03-3.46)
Marital status		
Single	Reference	
Married	0.13(0.06-0.26) <0.001	
Education		
None	Reference	
Primary	0.81 (0.03-21.34) 0.901	
JHS	0.93(0.04-23.87) 0.968	
SHS	0.38(0.01-10.74) 0.569	
Tertiary	0.10(0.04-2.48) 0.159	
Occupation		
Informal	Reference	
Formal	0.09(0.5-0.16) <0.001	0.10(0.05-0.29)
Live with partner		
No	Reference	
Yes	0.43(0.24-0.77) 0.004	
Delivery mode		
Spontaneous Vaginal delivery	Reference	
Caesarian section	0.95(0.41-2.21) 0.910	
Number of children		
1	Reference	
2	0.39(0.22-0.71) 0.002	0.58(026-1.29)
3	0.45(0.21-0.99) 0.047	0.44(0.15-1.28)
4	0.57(0.11-2.96) 0.501	0.41(0.03-5.11)
Experience any complication after delivery		
No	Reference	Reference
Yes	0.13(0.01-1.07) 0.058	0.15(0.02-1.40)

Table 4.5 Factors influencing practice of exclusive breastfeeding

Variable	Crude Odds Ratio OR (95% CI) p-value	Adjusted Odds Ra OR (95% CI) p-va
Birthweight		
Low birth weight (< 2.5 kilograms)	Reference	
Normal birth weight (≥ 2.5 kilograms)	1.13(0.55-2.31) 0.746	
Child admitted to NICU		
No	Reference	
Yes	0.34 (0.09-1.32) 0.120	
Baby sick in first 6 months		
No	Reference	Reference
Yes	0.29(0.14-0.58) - 0.001	0.39(0.16-0.95) 0.0
Age of mother (years)		
< 20	Reference	Reference
20-34	0.16(0.05-0.57) 0.004	0.02(0.01-0.40) 0.0
35-49	0.18(0.03-1.000 0.051	0.30(0.03-3.46) 0.3
Marital status		
Single	Reference	
Married	0.13(0.06-0.26) <0.001	
Education		
None	Reference	
Primary	0.81 (0.03-21.34) 0.901	
JHS	0.93(0.04-23.87) 0.968	
SHS	0.38(0.01-10.74) 0.569	
Tertiary	0.10(0.04-2.48) 0.159	
Occupation		
Informal	Reference	
Formal	0.09(0.5-0.16) <0.001	0.10(0.05-0.29) 0.0
Live with partner		
No	Reference	
Yes	0.43(0.24-0.77) 0.004	
Delivery mode		
Spontaneous Vaginal delivery	Reference	
Caesarian section	0.95(0.41-2.21) 0.910	
Number of children		
1	Reference	
2	0.39(0.22-0.71) 0.002	0.58(026-1.29) 0.1
3	0.45(0.21-0.99) 0.047	0.44(0.15-1.28) 0.1
4	0.57(0.11-2.96) 0.501	0.41(0.03-5.11) 0.4
Experience any complication after delivery		
No	Reference	Reference
Yes	0.13(0.01-1.07) 0.058	0.15(0.02-1.40) 0.0

Hospitalized for any condition within six months after delivery		
No	Reference	Reference
Yes	0.07(0.03-1.25) 0.071	0.04(0.01-0.98) 0.0
Able to initiate breastfeeding within 30 minutes after delivery		
No	Reference	Reference
Yes	2.22(0.80-6.13) 0.124	2.59(0.73-9.19) 0.1
Duration of leave after delivery before resuming work		
Three months	Reference	
Unlimited	11.6(6.24-21.5) <0.001	19.01(0.71-40.49 0.078

CHAPTER FIVE

DISCUSSION

The chapter presents the discussion of the results by relating it with findings from other similar studies. The chapter also contains the conclusion and recommendations proposed to improve adhehernce to the practice of EBF among nursing mothers.

5.1 Discussion

The current study compared breastfeeding practices among formally and informally employed nursing mothers who attend child welfare clinic at the Mamprobi Polyclinic. It also determined the factors which influences the practice of exclusive breastfeeding among the two groups of mothers. Generally, this study found higher practice of EBF among informally employed nursing mothers compared to their counterparts who are in the formal sector. An association exist between marital status, maternal age, level of education and the practice of exclusive breastfeeding. Similarly, the logistic regression found health condition of baby in first 6 months, maternal age, mother's occupation and hospitalization within 6 months of delivery to influence the practice of exclusive breastfeeding.

Owing to results from previous studies which correspond with this study, there is a near universal awareness of exclusive breastfeeding among nursing mothers (Dun-Dery & Laar, 2016). Nevertheless, there exist some disparities in the practice of EBF among

mothers. Dun-Dery & Laar (2016) found from their cross sectional study done in Ghana that, initiation of breastfeeding is high among all mothers but the rate of continuation is comparatively lower among professional working mothers. This study also found a difference in initiation of EBF among mothers in the formal (48.3%) and informal (51.7%) sector however, there was a great difference in the practice of EBF among the two categories of mothers thus, formal working mothers (23.1%) and informal working mothers (76.9%). Although not all informal working mothers adhere to the practice of EBF, this and other study (Dun-Dery & Laar, 2016) found an improvement in practice of EBF among the informally employed to the formally employed mothers. Undoubtedly, the variation in practice of EBF among the two group of nursing mothers is ascribed to multiple factors some of which are associated with mother's occupation and or culture. This study however, found significant association between mother's occupational status and practice of exclusive breastfeeding. The odds ratio indicates that mothers who are in the informal sector have an increased odds of 3 and are therefore more likely to practice EBF compared to those employed in the formal sector. Likewise, Danso (2014) who conducted a similar study on EBF among mothers in Kumasi, Ghana found that professional working mothers find it difficult to exclusively breastfeed their babies compared to the informally employed mothers. Also, Egenti et al. (2018) found a significant association between occupation and EBF by indicating that mothers who are informally employed practice EBF as recommended than mothers who are formally employed. As indicated by Dun-Dery et al. (2016), in Ghana, female workers who are formally employed are by law, given a fully paid leave of 12 weeks.The leave is extended to accommodate two more weeks instances where the woman had a caesarean or abnormal delivery. They found that mothers who had

shorter maternity leave .were less likely to practice exclusive breastfeeding than their informally employed counterparts. This is to suggest that the working class mothers have less time to spend at home caring for their baby's. The situation subjects such mothers to the option of reducing the duration recommended for exclusively breastfeeding their babies. This assumption supports the finding of Mogre et al. (2016) that mothers who had babies less than 3 months old are likelier to exclusively breastfeed than those who have infants $\geq$ 3 months old. In view of this, it is of the essence that this policy be re-modified either by increasing the duration of study leave given to working class mothers or intensify sensitization offered to them for them to understand and appreciate the essence of exclusively breastfeeding their baby's in light of the precluding factors. Notwithstanding, some working class mothers receive support from their family members particularly, mother in-laws or lady siblings in providing care. As indicated by Danso (2014), professional working mothers finds it difficult to EBF their babies however, the presence of family members influence the practice of exclusive breastfeeding. Sekyi & Anyobodeh (2016) also opined that husband and family support are factors that could influence EBF by promoting and constantly reminding their fellow to adhere to the practice of EBF.

Although this study found no association between the presence of married partner to the practice of EBF among mothers, it will be useful if husbands and family members could be involved in EBF since their effort could help mothers adhere to the practice of EBF more particularly, among women employed in the formal sectors.

Maternal age was also identified as a general factor influencing the practice of EBF among mothers in this study. The odds ratio indicated that mothers aged 20-34 years were 99% more likely to practice EBF than mothers below the age of 20 years. Previous studies linked

knowledge to practice of EBF (Aliyu & Shehu, 2016). Similarly, Egenti et al. (2018) opined that the non-adherence to EBF among some mothers is due to the fact that they are ill-informed abut the entire practice. It could be inferred from these findings therefore that nursing mothers below the age of 20 do not adhere to EBF because they are unaware of the practice. Also, it is likely majority of those young mothers might not have experienced breastfeeding hence, they find the practice challenging. Regard of this, more of the young nursing mothers should be educated by nursing staffs at antenatal and postnatal care clinic on the essence of EBF and the need to adhere it.

In addition, the study found health condition of baby in first 6 months and hospitalization within 6 months of delivery to influence the practice of exclusive breastfeeding. Often times but not always the case, mothers who are hospitalised for so many days before being discharged might have gone through the caesarean mode of delivery or encountered haemorrhage or some pregnancy related condition. Most of these conditions coupled with the pain incurred through delivery put some mothers through some state of discomfort hence, the feeling to initiate breastfeeding is absent. This suggestion concurs with findings of Dun-Dery & Laar (2016) who found that mothers who deliverd spontaneously through the vagina were almost 10 times likely to exclusively breasfeed their babies than their counterparts who underwent caesarean sections. It is worth to note that the ability and affinity of infants to breastfeed relies on their health conditions. Thus, infants not in a good health condition are likely to reject breast milk. All these factors, serve as barriers to the practice of EBF. This study however, found no association between mothers' educational level and practice of EBF as found by Mogre et al. (2016). To this end, the study identified variations in the practice of EBF among formally and informally employed nursing

mothers and has found factors associated with these disparities. However, there are still some contrasting findings in literature with regards to factors associated with these differences in EBF among mothers. This calls for more practically oriented research to identify factors serving as barrier among nursing mothers.

CHAPTER SIX

CONCLUSION AND RECOMMENDATION

6.1 Conclusion

Although the benefits of exclusive breastfeeding have been documented widely, there are some lapses still in the practice as a result of factors such as occupation, maternal age, health condition of baby and hospitalization after delivery. Nursing mothers in the formal sector tend not to adhere strictly to EBF due to workload and demands compared with mothers in the informal sectors. There is the need to amend policies on maternity leave to make working environments breastfeeding friendly so that nursing mothers can adhere to exclusive breastfeeding.

6.2 Recommendations

1. The Ministry of Health in collabouration with Ghana Health service and Public Health Practitioners should embark on massive educational campaigns to raise awareness on the barriers to EBF, adding its effect on childrens health in order to draw the attention of the government and the populace to put measures in place to facilitate exclusive breastfeeding.
2. The Ministry of Gender,Women and Children Protection should engage the Ministry of Employment and Labour Relations to advocate for an amendment in the policy on maternity leave to allow for an extension. This is likely to increase

3 adherence to the practice of exclusive breastfeeding especially among nursing mothers who work in the formal sector.

4. Public Health Practioners should champion the cause of creating and promoting the formation of social support groups that will encourage nursing mothers to address challenges that prevent them from practicing exclusive breastfeeding.

5 Government and Employers in the private sector should be bounded by laws to provide breastfeeding friendly environments so that nursing mothers can have adequate time and space to breastfeed their babies on demand irrespective of where they work.

6. I recommend future researchers employ a more robust risk factor evaluation design such as cohort study since findings generated in this cross sectional study are only hypothesis generating.

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QUESTIONNAIRE

University Of Ghana- School Of Public Health

The researcher is a student of the School of Public Health, University of Ghana pursuing Master of Public Health degree. She is researching on "EXCLUSIVE BREASFEEDING PRACTICE AMONG FORMALLY AND INFORMALLY EMPLOYED NURSING MOTHERS ATTENDING CHILD WELFARE CLINIC AT MAMPROBI POLYCLINIC". Kindly respond to the following questions accordingly. Your responses will be duly appreciated and treated with utmost confidentiality. Be informed that this study is for academic purposes only.

QUESTIONNAIRE ID NO..... Facility name..... Name of the interviewer.....

Respondent ID :..... Date of interview.....Time started.....Time finished.....

Questionnaire checked for completeness: Yes ( ) No ( )

SECTION A: INFANT DATA

Instruction: Please tick where applicable

1. Age of baby

a. 0-6months ( ) b.7-24months ( )

2. Weight at birth

a. Above 2.5 ( ) b. Below 2.5 ( )

3. Was the baby sent to NICU after birth?

a. Yes ( ) b. No ( )

4. What was the reason?

a. Jaundice b. Asphyxia c. Hypoglycemia d. Sepsis

5.Did your baby ever fall sick within six months after delivery?

aYes ( ) b.No ( )

6. Did the sickness interfere with breastfeeding?

a. Yes ( ) b. No ( )

SECTION B: SOCIO DEMOGRAPHIC CHARACTERISTICS OF THE MOTHER

Instruction. Tick where appropriate

1. How old are you?

a.15-17yrs ( ) b.18-35yrs ( ) c.36-45yrs ( )

2. Marital status

a. Single ( ) b. Married ( ) c. Divorced ( ) d. Separated ( ) e. Widowed ( )

3. Level of education

a. No formal education ( ) b. Some primary/Primary c. Secondary ( ) f. Tertiary ( )

4. What is your religion?

a. Christianity ( ) b. Islam ( ) c. Traditional ( ) d. Other (specify).....

5. What is your occupation? a. Housewife ( ) b. Casual worker ( ) c. Self-employed ( ) d. Trading ( ) e. Farming ( ) f. Other (Specify).....

6. Do you receive a monthly salary on which you are taxed?

a. Yes ( ) b. No ( )

7. Do you live together with your husband, partner?

a. Yes ( ) b. No ( )

SECTION C:

MATERNAL HEALTH AND DELIVERY HISTORY

1. Place of delivery

a. Hospital ( ) b. Maternity home ( ) c. TBA ( )

2. Mode of delivery

a. SVD ( ) b. Caesarian ( )

3. How many children do you have?

Specify.....

4. Did you experience any complication after delivery?

a. Yes ( ) b. No ( )

6. Were you hospitalized for any condition within six months after delivery?

a. Yes ( ) b. No ( )

7. If yes, what was the diagnosis? .....

8. Were you able to initiate breastfeeding within 30 minutes after delivery?

a. Yes ( ) b. No ( )

9. Did the health staff encourage or support you to initiate and practice exclusive breastfeeding after delivery?

a. Yes ( ) b. No ( )

SECTION D. CULTURAL AND SOCIETAL FACTORS IN RELATION TO EXCLUSIVE BREASTFEEDING PRACTICE

1. Do you know about exclusive breastfeeding?

a. Yes ( ) b. No ( )

2. What was your source of information?

a. Health staff ( ) b. Family ( ) c. Friends ( ). d. Media ( ) e. Others (specify).....

3. Did you breastfeed your child exclusively for the first six months?

a. Yes ( ) b. No ( )

4. If yes, what was your source of motivation?

a. Health staff ( ) b. Family ( ) c. Friends ( ). d. Media ( ) e. Others (specify).....

5. Did you practice EBF because you could not afford infant food?

a. Yes ( ) b. No ( )

6. Does your religion support and promote exclusive breastfeeding?

a. Yes ( ) b. No ( )

7. Do you have any cultural belief or practice that is against exclusive breastfeeding?

a. Yes ( ) b. No ( )

8. Does the working conditions of your job allow you to have adequate time to breastfeed your baby exclusively for six months after delivery?

a. Yes ( ) b. No ( )

9. How long do you stay home after delivery before resuming work?

.....

10. Do you think your occupation influenced your practice of EBF?

a. Yes ( ) b. No ( )

11. Do you receive instrumental social support from family and friends after delivery?

a. Yes ( ) b. No ( )

THANK YOU FOR YOUR PARTICIPATION

GHANA HEALTH SERVICE ETHICS REVIEW COMMITTEE

In case of reply the number and date of this Letter should be quoted.

MyRef. GHS/RDD/ERC/Admin/Apr
Your Ref. No.

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8th July, 2019

Mercy Adubea Frimpong
University of Ghana
School of Public Health
Legon

The Ghana Health Service Ethics Review Committee has reviewed and given approval for the implementation of your study protocol.

GHS-ERC Number	**GHS-ERC 088/04/19**
Project Title	Exclusive Breastfeeding practice among formally and informally employed nursing mothers attending child welfare clinic at Mamprobi Polyclinic,Accra.
Approval Date	8th July,2019
Expiry Date	7th July,2020
GHS-ERC Decision	Approved

This approval requires the following from the Principal Investigator.

- Submission of yearly progress report of the study to the Ethics Review Committee (ERC)
- Renewal of ethics approval if the study lasts for more than 12 months,
- Reporting all serious adverse events related to this study to the ERC within three days verbally and seven days in writing.
- Submission of a final report after completion of the study.
- Informing ERC if study cannot be implemented or is discontinued and reasons why
- Informing the ERC and your sponsor (where applicable) before any publication of the research findings.
- Please note that any modification of the study without ERC approval of the amendment is invalid.

The ERC may observe or cause to be observed procedures and records of the study during and after implementation.

Kindly quote the protocol identification number in all future correspondence in relation to this approved protocol.

SIGNED.....
DR CYNTHIA BANNERMAN
(GHS ERC CHAIRPERSON)

Cc: The Director, Research & Development Division, Ghana Health Service, Accra