SCHOOL OF PUBLIC HEALTH
COLLEGE OF HEALTH SCIENCES
UNIVERSITY OF GHANA

CHALLENGES OF EXCLUSIVE BREASTFEEDING AMONG FEMALE HEALTH WORKERS IN TWO HOSPITALS IN ACCRA

BY

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THIS DISSERTATION IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF MASTER OF PUBLIC HEALTH DEGREE

JULY, 2013

DECLARATION

This dissertation "Challenges of Exclusive Breastfeeding among female health workers in two hospitals in Accra" consist entirely of my own work, produced under supervision, with the exception of specified quotations duly acknowledged. I declare therefore that this work has not been accepted in substance for any other degree, nor is concurrently being submitted in candidature for any academic reward.

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ABSTRACT

The recent decades have seen a sharp increase in the labor force participation of mothers with young children throughout their childrearing. The World Health Organization (WHO) recommends 6 months of exclusive breastfeeding starting from birth with establishment of early breastfeeding within 30 minutes after delivery. The benefits of exclusive breastfeeding are shown by numerous studies and include both the maternal and infant outcomes. Health workers are in general the first advocate of health benefits and subsequently are regarded as role models in whatever they teach and therefore in the practice of exclusive breastfeeding. This study sought to determine the proportion of female health workers practicing exclusive breastfeeding and to describe the reasons for the non practice of exclusive breastfeeding as described by female health workers in two hospital in Accra- La general and Ridge. It was a cross-sectional study involving 163 female health workers of reproductive age (15-49 years old) with a child aged between 6 months and 10 years at the time of working with both institutions. A structured Questionnaire was administered following informed consent to obtain information on their socio-demographic background characteristics as well as factors influencing the non practice of exclusive breastfeeding in their place of delivery, at work and at home. SPSS 16.0 was used for the analysis of the data and Pearson Chi-square test and logistic regression the tools to determine the association and significance of exclusive breastfeeding and the factors associated with the non practice of exclusive breastfeeding at work and at home and at the place of delivery. Sixty height percent (68%) of the female health workers interviewed reported practicing Exclusive breastfeeding for 6 months with their children. Two background variables - high level of education and moderate monthly income were found to influence positively the practice of Exclusive breastfeeding with a p-value of 0.009 and 0.019 respectively. Childbirth through assisted surgery and an income of more than 1000 Ghana cedi were associated with the likelihood of non exclusive

breastfeeding with a p-value of less than 0.001 and 0.045 respectively. Female Health workers who are nursing mothers are faced with challenges at the venue of delivery and at their work places in the practice of exclusive breastfeeding despite their exposure on the benefits of the practice of Exclusive Breastfeeding. These findings suggest to the policies makers that health education programmes alone are not sufficient to improve the practice of exclusive breastfeeding among the population. Policies which address adequate hours work upon return to maternity leave and mandatory availability of nursing room at workplace as well as emulation of more baby friendly hospital with emphasis on the practical training of both health workers and clients in the establishment and sustainability of Exclusive Breastfeeding are necessary. These measures will improve the rate of exclusive breastfeeding among female health workers and eventually the rate of exclusive breastfeeding among all nursing mothers who are looking up to female health workers as role models in the practice of health recommendations in general and exclusive breastfeeding in particular.

DEDICATION

This piece of academic work is dedicated to my dear husband Constant Koku Gladzah, my parents Amon Marcel Tiemele and Yaba Claudine Elloh, and all working nursing mothers worldwide.

ACKNOWLEDGEMENTS

My sincere gratitude goes to a number of personalities who contributed in diverse ways to the completion of this academic work. I thankfully acknowledge the School of Public Health, College of Health Sciences, University of Ghana, the Department of Population, Family and Reproductive Health, the Ministry of Health, La General and Ridge Hospital.

Mention should be made of my supervisor, Dr Augustine Ankomah for his guidance, criticism, encouragements and suggestions.

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LIST OF ABREVIATIONS

BFHI: - Baby Friendly Hospital Initiative

EBF: - Exclusive Breastfeeding

GDHS: - Ghana Demographic Health Survey

WHO: - World Health Organization

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

In the last decade, a growing number of women have remained in the labor force throughout their childbearing and childrearing years (Bromberg, 1998). In 2001, the World Health Organization (WHO) changed its recommendation for exclusive breastfeeding from four to six months of age for optimal growth, development and health of the infant. How have these changes affected the adherence of exclusive breastfeeding by nursing working mothers?

Although seventy two percent (72%) of women living in US initiated breastfeeding for at least the first six months of life as recommended by the World Health in 2002, by six months, the rate dropped to thirty five percent (35%) substantially lower than Healthy People 2010 objectives of fifty percent (50%)(Kramer et al., 2003). This recommendation of six months of exclusive breastfeeding is evidence-based and adherence to it improves infant's outcomes (Kramer et al., 2003).

The prevalence of exclusive breastfeeding rates for all women varies worldwide. Industrialized countries like Australia and the U.S, fifty four (54) and forty one (41) percent of women exclusively breastfeed for three months. The exclusive breastfeeding rate of Australia and the U.S was thirty two (32) and fourteen (14) percent for six months, respectively (ABS, 2004). In developing countries such as Kenya, Bangladesh, Vietnam and Turkey, the exclusive breastfeeding rate for three months by working mothers ranges from thirteen (13) percent to fifty nine (59) percent (Haider, 2000). In Ghana, it is sixty three percent (63%), a rate far higher than other neighboring countries in the region like republic of Benin (43.1%), Cameroon (23.5 %) (Abdulwadud & Snow, 2008).

CONCEPTUAL FRAMEWORK

The conceptual framework for this study utilizes three levels of factors influencing exclusive breastfeeding. These levels are: individual factors, group of individuals' factors in a society and society's factors as a whole. The framework can be used to generate findings about factors affecting breastfeeding and the types of interventions that might be used to address them.

Individual level factors relate directly to the mother, infant, and the 'mother-infant dyad'. These factors include the mother's knowledge, skills and childcare experience. The health status of mothers and/or infants can be included among individual factors. Each of these factors can directly influence the initiation and duration of breastfeeding. A sick mother may not be able to breastfeed her child and a very sick child might not be able to suck his/her mother breasts.

Group level factors and societal factors are the attributes of the environment in which mothers and infants find themselves, the attributes that enable mothers to breastfeed. Environments with a direct influence on mothers and infants include: the hospital and health facility environment, in which practices procedures such as infants routinely rooming-in with mothers, post delivery skin-to-skin contact and providing professional support with breastfeeding technique influence the early feeding experience and the follow-up care and support.

The home and peer environment, where physical and social factors such as size of household, parity, family circumstances, partner attitudes and support, and peer support affect the time, energy and resolve that nursing mother share for breastfeeding.

The work environment, in which policies, practices and facilities such as work hours and flexibility, place and type of work that enable on-site expressing and storing of breast milk influence mother's ability to combine work and breastfeeding .**Our emphasis in this study is**

on the group support at work and at the place of delivery where changes can be made in the life of the individuals if the issues are conveyed to the specific authorities.

Societal level factors are policies, beliefs of a larger group of individual for example in a country which can influence the practice of exclusive breastfeeding. In this study societal factors are restrained to policies planning like length of maternity leave in Ghana, Exclusive Breastfeeding policies to promote EBF in Ghana. More over

Conceptual Framework of factors affecting exclusive breastfeeding

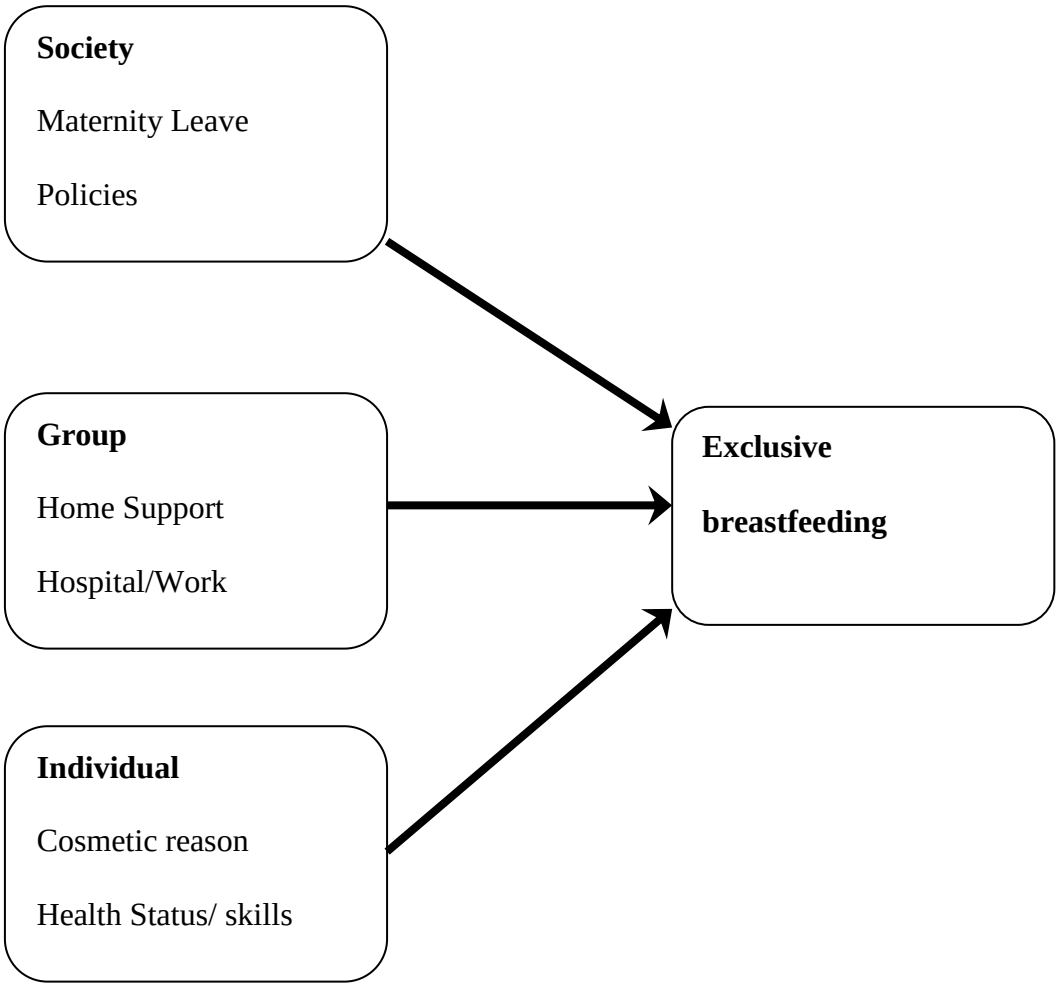


Figure 1: Conceptual framework of factors affecting exclusive breastfeeding

1.2 Statement of the problem

Numerous studies have shown the benefits of exclusive breastfeeding (EBF) and its relevance in maternal and infants outcomes. There is evidence for delayed return of menses with an additional two months of exclusive breastfeeding (Kramer et al., 2003) from the previous four months of EBF. The benefits of prolonged amenorrhea (no menses) include increase birth spacing and reduced blood loss during delivery, resulting in reduced iron requirements for lactating mother (Dewey et al., 2001). There is also good evidence that six months comparing to four months of exclusive breastfeeding provide infants with additional protection against gastro intestinal infections (Kramer et al., 2003).

Research has consistently shown that low educational attainment, young age, being single, being black, and for multiparous (mother of more than one child) having no previous breastfeeding experience are risk factors for early breastfeeding cessation (Guendelman et al., 2009). For working mothers, the challenge of balancing breastfeeding and paid work is an important reason for breastfeeding cessation in the first six months and therefore failure to achieve exclusive breastfeeding for six months. Recent studies by Guendelman et al (2009) suggest that inflexible work schedule is associated with breastfeeding cessation.

WHO and UNICEF recommend that babies should be exclusively breastfed from birth until 6 months of age(WHO, 2003). Such long period of EBF may be difficult for women to achieve unless they receive greater support from employers, family, friends indeed from social norms in general, as well as from health care professionals and lactation specialists when needed (Rea et al., 1999).

Despite the many benefits of EBF, it has been shown that numerous factors hinder its optimal practice. Some of these barriers include mother's employment, unfriendly hospital practices, advertisement of breast milk substitutes, ignorance, family pressure, and mother's ill health among other factors (Utoo et al., 2012).

In a survey conducted in Nigeria by Utoo et al (2012) 97.2% of participating health workers identified breastfeeding to be the preferred mode of feeding for an infant, versus artificial milk. The same study showed that as high as 83.4% of the respondents knew the correct duration of EBF revealing that at least as far as EBF duration is concerned, health workers are knowledgeable. Similarly the breastfeeding experience of 36 female doctors in Nigeria in a study by Sadoh et al (2011) showed that all respondents knew that babies should be exclusively breastfed for the first 6 months of life however the exclusive breastfeeding rate for the studied doctors was 11.1%. Very few studies have been done on female health workers in Ghana and the challenges they face when going through the practice of exclusive breastfeeding despite their exposure on the need to practice EBF. And fewer studies are available in Africa, West Africa and in Ghana. The intention of this study is to help improve the rate of exclusive breastfeeding among nursing mothers in general notwithstanding the profession having in mind that women will be encouraged in their practice of exclusive breastfeeding if the very female health workers who advice them in the practice of EBF are practicing what they teach. So by identifying the reasons for the non practice of exclusive breastfeeding as described by the female health workers the first recipient in the training and promotion of EBF policy, one could reach meaningful conclusions to ensure the success of the EBF among female health workers and therefore promoting the practice of EBF more than before among patients attending health facilities or in contact in one way or another with female health workers.

1.3 Objectives of the Study

1.3.1 General Objective

To identify the factors associated with exclusive breastfeeding among female health workers

1.3.2 Specifics Objectives

1. To determine the proportion of female health workers practicing exclusive breastfeeding

2. To describe the reasons for the non practice of exclusive breastfeeding as described by female health workers.

1.4 Study Hypotheses

Some hypotheses (at home, in health facilities and at workplace) have been associated with the practice of exclusive breastfeeding. They are: Maternity leave less than 17 weeks, women who undergo surgery during childbirth and availability of help at home. A test of those hypotheses will determine the significance of these difficulties in the practice of EBF among the participants of this survey.

Other factors like maternal health, child health, peer influence as well as social norms were not tested in this study.

Hypotheses related to work .Maternity leave in Ghana is 12 weeks and maternity leave less than 17 weeks has been identified to be associated with cessation of breastfeeding.

Hypothesis: Exclusive breastfeeding is related to duration of maternity leave

Hypotheses related to health facilities. Surgery during childbirth has been identified with non practice of exclusive breastfeeding.

Hypothesis: Exclusive breastfeeding is related to the type of delivery

Hypotheses related to home Availability of help at home has been identified with the practice of exclusive breastfeeding.

Hypothesis: Exclusive breastfeeding is related to the availability of help at home.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Benefits of Breastfeeding

Breastfeeding has been recognized for many years as superior to bottle feeding in a variety of respects. Studies show that breastfeeding benefits infant, mother and society (Yimyam & Morrow, 1999). The first two years of life are critical stages for a child's growth and development. Any damage caused by nutritional deficiencies during this period could lead to impaired cognitive development, compromised educational achievement and low economic productivity (Kimani-Murage et al., 2011). Breastfeeding confers both short-term and long-term benefits to the child. It reduces risk of infections and mortality among infants, improves mental and motor development, and protects against obesity and metabolic diseases later in the life course (Kimani-Murage et al., 2011).

Early initiation of breastfeeding is encouraged for a number of reasons. Mothers benefits from early suckling because it stimulates breast milk production and facilitates the release of hormone which helps the contraction of the uterus and reduce postpartum blood loss (Stuebe & Bonuck, 2008). Among mothers, not breastfeeding is associated with an increased risk of type 2 diabetes, breast and ovarian cancer, and myocardial infection (Stuebe & Bonuck, 2008).Infants who are not breastfed face increased risks of lower respiratory tract infections, obesity, diabetes, childhood leukemia, and sudden infant death syndrome (Stuebe & Bonuck, 2008)

The first breast milk contains colostrums, which is highly nutritious and has antibodies that protect the newborn from diseases. Early initiation of breastfeeding also fosters bonding between mother and child (Health Canada, 2004).

UNICEF and WHO recommend children to be exclusively breastfed during the first 6 months of life because breast milk is usually uncontaminated and contains all the nutrients necessary for children in the first few months of life (WHO, 2003). Breast milk protects the infant from pathogens and decreases their risk of infection, especially diarrheal diseases and in low resource settings, supplementary food is often nutritionally inferior and detrimental to the infant's nutritional status (Chudassama et al., 2009).

2.2 Breastfeeding Epidemiology

In Ghana, over 98 percent of children born between 2003 and 2008 are ever breastfed. The results from the Ghana Demographic Health Survey 2008 show that there is no difference in early initiation of breastfeeding by sex of child. Children in urban areas (55 %) are slightly more likely to receive breast milk during the first hour after birth than children in rural areas (50 %). Similarly, children of women who gave birth in a health facility (56%) are more likely to initiate breastfeeding early than women who deliver at home (47 %)(GDHS, 2008).

The survey results indicate that children whose births were assisted by someone other than a health professional or a traditional attendant, and children born at home, are more likely to receive a prelacteal feed (something other than breast milk) during the first three days of life than children whose births were assisted by a health provider, and children born in a health facility(GDHS, 2008).

Recent trends from the GDHS indicate that the percentage of children ever breastfed has remained stable at 97-98%,on the other hand, the percentage of children who started breastfeeding within one hour of birth has increased from 46 to 52 % and the proportion of children who received prelacteal feeds decreased slightly from 20 percent to 18 percent between 2003 and 2008(GDHS, 2008). Promotion of exclusive breastfeeding for the first 6 months of life has been estimated to be the most effective preventive strategy for saving the

lives of young children in low-income settings, and could contribute towards the Millennium Development Goal 4 of reducing child mortality (Tylleskar et al, 2011).

In Ghana, breastfeeding extends to 20 months, while exclusive breastfeeding has short duration, with overall 63 percent of children under 6 months exclusively breastfed. In addition to breast milk children less than 6 months are given non breast milk (3 %), water (17 %), non-milk liquids or juice (less than 1 %) and solid food (17 %)(GDHS, 2008).

Poor breastfeeding and complementary feeding practices have been widely documented in the developing countries. Only about thirty nine (39) percent of infants in the developing countries, twenty five (25) percent in Africa are exclusively breastfed for the first 6 months. Additionally, six (6) percent of infants in developing countries are never breastfed (Kimani-.Murage et al, 2011).

Internationally, the relationship between employment and breastfeeding is far from established. Differences exist both among and within countries. Employment does not seem to influence breastfeeding initiation in either developed or developing countries (Yimyam & Morrow, 1999). Research on Exclusive breastfeeding by employment status is rarely available; however employed mothers are less likely to practice Exclusive Breastfeeding (Seteqn et al., 2012).

2.3 Factors affecting Exclusive Breastfeeding

Exclusive breastfeeding is now the hallmark for breastfeeding during the first 6 months of life especially for the past decade. Despite its benefits, EBF is not always practiced.

2.3.1 Individual (mother) Factors

Some of the reasons for not practicing EBF are personal. Some women believe that they can lose their beauty and especially the firmness of their body and their breast in particular (Lindberg, 1996). And most of them claimed not to have enough breast milk for their baby or that their breasts or nipples are painful (Lindberg, 1996). Maternal knowledge and comfort (acceptance) with the practice of breastfeeding affect prenatal feeding intentions, and these intentions are strong predictors of feeding outcomes (Stuebe & Bonuck, 2008). The main reason given for introducing complementary foods to children below six months was that the mother had no or little breast milk (about forty percent) (Kimani-Murage et al., 2011).

This reason according to Lindberg (1996) may not be the actual reason because women are often unable to articulate in survey responses and/or are uncomfortable reporting, less socially acceptable or mother-driven' reasons (such as fear or loss of breast shape) for not breastfeeding or stopping breastfeeding early. They tend to report more child-centered reasons such as "child did not want the breast" or reasons beyond the mother's control, notably, insufficient milk (Lindberg, 1996). Insufficient milk is said to be one of the commonest reasons women give for stopping breastfeeding, yet evidence indicates that less than five (5) percent of women are physiologically incapable of producing an adequate supply of milk. The explanation of insufficient milk therefore masks a range of underlying factors that undermine breastfeeding (Lindberg, 1996).

Other personal reasons for common breastfeeding problems are inability to breastfeed due to sore nipples, inverted nipples, and breast engorgement. These problems are usually overcome when the right positioning, timing and techniques is applied in the practice of breastfeeding (Nankunda et al., 2006). The knowledge and skills of the mother in the practice of breastfeeding is therefore important and lack of knowledge and skills can prevent mothers to breastfeed their children.

Various factors associated with sub-optimal breastfeeding have been identified in various settings. These include maternal characteristics such as age, marital status, occupation, and education level; antenatal and maternity health care; health education and media exposure; as well as method of delivery, birth order, and the use of pacifier (Kimani-Murage et al, 2011).

2.3.2 Group Factors (Work and/or home)

Very few studies mentioned the lack of support at home as a factor preventing mothers to breastfeed their infants. This can be explained by the fact that women are reluctant to accuse people they love being the husband, the older children or close relatives for not giving the needed support at home for a successful breastfeeding practice.

A lot of studies on the other hand address the role of workplace environment in the promotion of breastfeeding. In recent years, there has been a rise in the participation rate of women in employment. Some may become pregnant while in employment and subsequently deliver their babies. Most may decide to return early to work after giving birth for various reasons. Unless these mothers get support from their employers and fellow employees, they might give up breastfeeding when they return to work. As a result the duration and exclusivity of breastfeeding to the recommended age of the babies would be affected (Abdulwadud & Snow, 2008).

Employers hold a range of attitudes about nursing working mothers, and they offer varying degrees of support for breastfeeding in the workplace. They express concerns about the difficulties of providing formal breastfeeding support, including monetary constraints, challenges of providing breaks, and limited space. Even when generally positive, employers' attitudes about breastfeeding have not translated into practices supporting breastfeeding mother in the workplace (Stratton & Henry, 2011).

Workplace programs could help women to continue breastfeeding, and some programs may help women to initiate breastfeeding. By promoting and supporting the programs, employers may be able to influence the duration of exclusive breastfeeding and so improve the health of mother and baby, but also benefit from less work absenteeism, high productivity and increased employee morale and retention. A study from Abdulwadud & Snow showed that among working mothers enrolled in an employer-sponsored lactation program; breastfeeding was initiated by 97.5 percent of the women (Abdulwadud & Snow, 2008).

Breastfeeding at the work place challenge the myth of separate worlds in which employment and family exist separately. It erases boundaries between women's private roles as mothers and public roles as worker (Lindberg, 2006). However if there are nursery breaks and child care provisions at the workplace, even formal urban employment can be compatible with breastfeeding (Yimyam & Morrow, 1999).

2.3.3 Societal Factors (Policy Planning)

Efforts towards promoting the practice of breastfeeding led to the 1990 Innocenti Declaration which states that "all governments should create an environment enabling women to practice EBF for the first 6 months of life (Uchendu et al., 2009).

The Labor Law provisions in the constitution and other statutes set up the legal framework for "labor" for the citizens of the country. In Ghana, there are Labor law provisions related to Exclusive breastfeeding and working mothers.

Mothers feeding options have been influenced by both the existence of the regulation and the strong breastfeeding policy together with the Baby Friendly Hospital Initiative (BFHI).

LI 1667 regulate the advertisement of infant formula by Manufacturers both in the Media and in the Heath facilities

PNDC 305B section 3 on Deception of consumers stipulate that : a person who manufactures, labels, packages, sells or advertises a food in a manner that is false, misleading or deceptive as regards its characters, nature, value, additives, substance, quality, composition or safety commit an offence.

PNDC 305B and LI 1667 were implemented to restrain manufacturers to deceive the public about the benefits of infant formula versus Exclusive Breastfeeding.

Labor law in Ghana seeks to protect working mothers and some of them are:

Act 55(1) unless with her consent, an employer shall not

Assign or employ a pregnant woman worker to do any night work between the hours of 10.00 in the evening and 7.00 in the morning.

Engage for overtime a pregnant worker or a mother of a child less than eight months old.

Maternity, annual and sick leave

Act 57(1) A woman worker, on production of a medical certificate issued by a medical practitioner or a midwife indicating the expected date of her confinement is entitled to a period of maternity leave of at least twelve weeks in addition to any period of annual leave she is entitled after her period of confinement.

Act 57(2) a woman worker on maternity leave is entitled to be paid her full remuneration and other benefits to which she is otherwise entitled.

Act 57(3) the period of maternity leave may be extended for at least 2 additional weeks where the confinement is abnormal or where in the course of the same confinement 2 or more babies are born

Act 57(6) a nursing mother is entitled to interrupt her work for an hour during her working hours to nurse her baby.

Act 57(7) this shall be treated as working hours and paid accordingly.

In general, to achieve high rates of breastfeeding and women's employment, socio-cultural support and labor market, health and early childhood policies are vital (Abdulwadud & Snow, 2008).

The WHO and UNICEF have initiated the Global Strategy for Infant and Young Child Feeding. The strategy highlights the priority actions, duties and responsibilities of various organizations and calls for governments to pass imaginative legislation to protect the rights of working women to breastfeed, and to establish the means to enforce these policies, which are consistent with international labor standard (Abdulwadud & Snow, 2008).

WHO/UNICEF encourage the **ten steps of successful breastfeeding** for BFHI which are:1 have a written breastfeeding policy that is routinely communicate 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 a half-hour of birth, 5show mothers how to breastfeed and how to maintain lactation even if they should be separated from their infants, 6 give newborn infants no food or drink other than breast milk, 7practice rooming-in-allow mothers and infants to remain together 24 hours, 8 encourage breastfeeding on demand, 9 give no artificial teats or pacifiers to breastfeeding infants, 10 foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.

In most industrialized countries, there is workplace-related legislation or regulation, or both, to support women employees to continue breastfeeding when they return to work. Legislation has been passed to have an effect on breastfeeding (Abdulwadud & Snow, 2008). Some developing countries are also making some efforts in the promotion of EBF. For instance, Agho et al (2011) report that the Nigerian government supported the Baby Friendly Hospital Initiative (BFHI) with the aim of providing mothers and their infants a supportive

environment for breastfeeding. BFHI promotes appropriate breastfeeding practices thus helping to reduce infant morbidity and mortality rates. Some working nursing mothers commended the federal government (In Nigeria) for increasing the maternity leave from 12 to 16 weeks, calling for more baby-friendly policies to help nursing mothers to devote more time to their babies at the very crucial stage of the babies' lives (Sheyin, 2012).Some Health facilities in Ghana like the Mamprobi Polyclinic in Accra have provided a nursing room for nursing mothers to promote the practice of breastfeeding in infants less than 2 years.

The purpose of BFHI is to actively protect, promote, encourage and support breastfeeding through education of health care workers in maternity and neonatal services. It also accredits those meeting the WHO/UNICEF criteria as a BFHI. (Nankunda et al., 2006)

CHAPTER THREE

3.0 METHODS

3.1 Type of study and study design

This was a cross-sectional study involving 163 mothers working in a health facility with a child of at least 6 months but less than 10 years at the time of working in the health facility. A quantitative study was conducted for a period of six weeks from15th May to 30th June 2012 at two health facilities in the greater Accra region in Accra, the capital of Ghana.

3.2 Study Location

The study locations were La General Hospital and Ridge Regional Hospital. La General Hospital was established in 1963 and accredited to a district hospital status in 2004. It is the only government heath institution overseeing the work of both private and quasi government hospitals in the La Sub- Metropolis. La General Hospital has a catchment population of 243,471 and a bed complement of 105.

Ridge Regional Hospital which was once known as the European Hospital was established in 1920 by the British to take care of the health needs of the European merchants and missionaries. The Hospital became the Greater Accra Regional Hospital in 1997. The Hospital is located in the OSU Clottey sub-district. The bed capacity at Ridge hospital is 348. Ridge Hospital receives referrals from other districts and clinics in the Greater Accra Region.

3.3 Variables

The dependent variable is Exclusive Breastfeeding.

The **independent variables** were the factors affecting Exclusive Breastfeeding.

Independent Variables

Background variables: Profession

Age

Marital status

Level of education

Number of children

Income

Skills of the mother in the practice of breastfeeding

Sickness of the mother and/or the baby

Mother desire to conserve the firmness of her breast

Baby unfriendly atmosphere at work

Nursing mother unfriendly atmosphere at work

Nursing mother unfriendly atmosphere at home

3.4 Study Population

This study involves women of reproductive age from 15 to 49 years working in the health Institutions of La General Hospital and Ridge Hospital as health workers, with a child of at least six months and at most ten years at the time of working in those health facilities. The health workers the study focus on are: Female Doctors of Medicine, Pharmacist, Nurses and Health care Assistants and allied health workers and administrators who have worked at La General Hospital and Ridge Hospital during the first six months of the life of the baby involved in the study.

3.5 Sampling Procedure

The Sampling frame of La General Hospital Workers obtained from the general Administration is 278 and include 13 Public Health nurses, 118 General Nurse's midwives, 6 Psychiatric nurses so at least 137 female health workers. Ridge Hospital total health workers are 872 including 203 professional nurses, 60 midwives, 79 enrolled nurses, 13 community health nurses, and 9 health assistants so at least 161 female health workers.

The Sampling method chosen was purposive and convenient. Female health workers who fit the study population were taken from each department of both hospitals (La General and Ridge). The female health workers were Doctors, Pharmacist, Nurses, and Health care Assistant as well as allied Health workers and administrators in this Study who fitted the study population.

3.6 Sampling Size

163 female Health workers were involved in this study. The sample size for this quantitative survey was determined using a formula for estimation of single population proportion assuming an expected prevalence for exclusive breastfeeding of 11% using the prevalence of EBF in the female health workers in a similar study in Nigeria by Sadoh et al (2011) with 95% confidence level, 5% margin of error.

$$N = \frac{Z^2 P (100-P)}{\varepsilon^2}$$

N = the required minimum sample size

ε= margin error set at 5

P= prevalence of EBF among health workers-

Z=95% confidence interval (1.96)

N= 150 rounded to 163 for 10% missing data

3.7 Sampling Method

The survey was carried out in selected health facilities which are La general Hospital and Ridge Hospital. These health facilities were selected on the basis of the assumption of having a large number of female heath workers in their institutions. Selection of the participants was done by using purposive and convenience sampling technique.

Inclusion criteria were mothers who were workers at La General and Ridge Hospital with a child aged between 6 months and 10 years while working at those facilities at the time of the study. Exclusion criteria were mothers of child aged less than 6 months or more than 10 years and child with congenital malformations or born preterm and unable to suck. A structured survey questionnaire was administered by trainee interviewers to mothers of reproductive age from 15 to 49 years working in both health institutions of La General and Ridge. La General Hospital was first screened following by Ridge Hospital. Female health workers were approached department by department in each Hospital starting from the wards to the administration block and finally the allied health care centers like radiology, physiotherapy. The interviewer first introduce himself/herself, then introduce the topic of the survey and the permission to interview the female workers when she answered being a mother of a child aged between six months and ten years at the time of working in the selected health facilities. The usual age of six to five years used to assess EBF in most studies could not be achieved in this study due to the poor number of participants with a child age between six and five years during the pilot study and has to be extended to ten years despite the risk of recall-bias. . Exclusive Breastfeeding were assessed by referring to the Ten Steps to Successful Breastfeeding (WHO, 2002) by Bulle et al and a participant's answer to "Do you practice EBF" was filled YES when: 1 She has initiated breastfeeding within a half hour of delivery. 2

She was given the newborn infants no food or drink other than breast milk unless medically indicated. 3 No artificial teats or pacifiers were given to the breastfeeding infants .4 she was given Breast milk on demand as and when the child wanted

3.8 Data Collection techniques/Methods & Tools

Data collection occurred between May and June 2012. Data collected include socio-demographic characteristics like marital status, level of education, number of children exclusively breastfeed and income. Some of the characteristics included exclusive breastfeeding status and this was assessed using the WHO recommendation for establishment and sustenance of breastfeeding. Mothers who have not given any liquid or semi-solid or solids food except breastmilk before the child was 6 months were said to have exclusively breastfed their children in the first 6 months of life.

The data for the study was collected through a questionnaire. Interviewers administered questionnaire and a face-to-face interview was used to gather data from 163 participants. The researchers conducted all the interviews and the language of the interview was English. Participants with a busy schedule were given two options: the flexibility to fill the form within three days or an attachment to their email address given previously to the researcher and to be sent back within three days. All participants filled the forms; none of the participants gave their email address.

3.9 Quality Control

Researchers assistant were given one day training on the administration of the questionnaires and introduction to the various departments of the two selected Hospitals were done on the day training. Three assistant researchers were responsible for the follow up of the

Questionnaire. Collection of the forms was done every day at closing official hour (5pm).The forms were reexamined at the end of the day and cross-examined by the researcher.

3.10 Data Processing and analysis

Field data were entered by the researcher using the Statistical Package for Social Sciences (SPSS) Version 16.0. The data was then cleaned thoroughly to ensure that all inconsistencies and recording errors were eliminated. Data analysis was done with the same software. Frequency distributions were obtained and these were summarized in tables and charts. The charts were drawn with Microsoft Excel. For all statistical tests, $\alpha = 0.05$ was used to determine statistical significance. Logistic regression was performed to determine the strongest determinant of exclusive breastfeeding using stata8.

3.11 Ethics

The following measures were taken to ensure that participants' rights were protected and their safety was guaranteed:

Ethical clearance was obtained from the Ghana Health Service Ethical Review Committee.

Participants were assured of privacy and confidentiality. They were informed about their rights to withdraw from the study at any point of time.

Informed consent was obtained from all participants after the study had been explained to them.

Permission was obtained from the authorities of La General and Ridge Regional Hospitals.

3.12 Pretest and Pilot Study

The study questionnaire was pre-tested among 10 female health workers sampled from a different hospital which is the Legon Hospital in Accra at the premises of the University of Ghana, Legon. Feedbacks from the pre-test were noted and the necessary modifications were made to the questionnaire for readability and comprehension.

3.13 Limitation of the study

The age of the child involved in the study should have been ideally less than 5 years to avoid the risk of recall-bias unfortunately the pretesting at the pilot study site revealed that the number of participants for the survey would have drastically reduced so the age of 6 months to 10 years was finally chosen.

Female Health workers was first thought to be only female medical doctors for this study but the poor number of female doctors available in these institutions forced to expand the female health workers to any female working in those health institutions (Ridge and La General).

CHAPTER FOUR

4.0 RESULTS

4.1 Socio-demographic Characteristics

The 163 respondents surveyed for this study were females with each having a child aged between six months and 10 years. A cross-section of the female health workers at the La General Hospital as well as Ridge Hospital had their opinions represented in this survey. The study sought the age, marital status, level of education, number of children, number of children exclusively breastfed, profession, and income level. Details summarized in the Table 1.

The majority of respondents interviewed were from the Ridge Hospital- a total of 103 and representing 63.2% of the respondents while the remaining 60 (36.8%) were health workers at the La General Hospital. The majority of the respondents were Nurses. These made up 57.1% of the total respondents. Allied Health Workers interviewed (Lab Technicians, Radiologists, Physiotherapists) numbered 36 out of the 163 (22.1%) health professionals interviewed. Nineteen (11.7%) of the professionals interviewed were Hospital Administrators, 11 (6.7%) were Healthcare Assistants, and only 4 (2.4%) were Medical Doctors. There were 77 (47.2%) of the respondents interviewed who fell within the 31-40 years age bracket, 64 respondents representing 39.3% were aged between 20-30 years, and 22 (13.5%) were above 40 years old. The majority (153 respondents) reported being married and made up 93.9% of total respondents surveyed. Six (3.7%) were single and 4 (2.5%) were either divorced or widowed.

Only one respondent did not go beyond primary level education. Thirty five respondents (21.5%) had up to secondary school education. The majority (127 respondents) however had tertiary education, and this represented 77.9% of the total respondents. The majority of

female health workers (84 and representing 51.5% of respondents) had more than one child. Female health workers who earned a monthly income of 500 Ghana cedi or less numbered 54 (33.1%). Those who earned between 501–1000 Ghana cedi were 79 (48.1%) in total and representing the majority. Twenty eight (17.2%) of the female health workers interviewed earned between 1001 and 2000 Ghana cedi. Only 2(1.2%) of the respondents reported earnings of more than 2000 Ghana cedi.

Table 1: Background Characteristics of Female Health workers (N=163)

Name of Health facility	**Frequency**	**Percent**
La Hospital	60	36.8
Ridge Hospital	103	63.2
Profession		
Doctors	4	2.4
Nurses	93	57.1
Health Care Assistants	11	6.7
Allied Health Workers	36	22.1
Administrators	19	11.7
Age group		
20 – 30	64	39.3
31 – 40	77	47.2
Above 40 years	22	13.5
Marital status		
Married	153	93.9
Single	6	3.7
Divorced/Widow	4	2.5
Level of Education		
Primary	1	0.6
Secondary	35	21.5
Tertiary	127	77.9
Number of children		
One	79	48.5
More than one	84	51.5
Monthly income(Ghana Cedi)		
500 or less	54	33.1
501 – 1000	79	48.5
1001 – 2000	28	17.2
More than 2000	2	1.2

4.2 Exclusive Breastfeeding

Background variables such as respondents profession, age group, marital status, level of education, and income level were matched against their responses that they exclusively breastfeed or not. The purpose was to explore the existence of any association or otherwise between the dependent variable (exclusive breastfeeding), and the background variables.

The reported exclusive Breastfeeding (for 6 months) rate among the participants were **sixty height (68) percent** representing 111 female health workers.

Table 2 shows that exclusive breastfeeding is not significantly associated with most of the background variables including profession, age, marital status, and number of children. There is no significant difference among the categories of health workers in their practice of exclusive breastfeeding (Nurses are not more likely to exclusively breastfeed compared to the other professionals). Similarly, there is no significant difference in the age group of respondents to exclusive breastfeeding, no difference in marital status to exclusive breastfeeding, and no significant difference in the number of children one has given birth to and their practice of exclusive breastfeeding.

However, significant effects or differences were discovered among respondents' level of education vis a vis exclusive breastfeeding. Health workers with a tertiary education as per this study are more likely to exclusively breastfeed their child/children than female health professional with a secondary or a primary education. Similarly significant differences were observed with respondents' monthly income and their practice of exclusive breastfeeding. Female health workers with a monthly income of less than 1000 Ghana cedi are more likely to practice exclusive breastfeeding than their counterpart with a monthly income of more than 1000 Ghana cedi.

Table 2: Exclusive Breastfeeding According to Background Characteristics of Respondents

	Exclusively breastfed child				
	No	Yes	Total	Pearson Chi-Square	p-value
Profession					
Nurses	36 (38.7%)	57(61.3%)	93(100.0%)	7.68	0.104
Health Care Assistants	5(38.5%)	8(61.5%)	13(100.0%)		
Allied Health Workers	5(15.2%)	28(84.8%)	33(100.0%)		
Administrators	4(21.1%)	15(78.9%)	19(100.0%)		
Pharmacies/Doctors	2(40.0%)	3(60.0%)	5(100.0%)		
Age group					
20 – 30	21(32.8%)	43(67.2%)	64(100.0%)	1.24	0.538
31 – 40	22(28.6%)	55(71.4%)	77(100.0%)		
Above 40 years	9(40.9%)	13(59.1%)	22(100.0%)		
Marital Status					
Married	48(31.4%)	105(68.6%)	153(100.0%)	0.322	0.571
Not married	4(40.0%)	6(60.0%)	10(100.0%)		
Level of education					
Secondary	5(13.9%)	31(86.1%)	36(100.0%)	6.901	**0.009**
Tertiary	47(37.0%)	80(63.0%)	127(100.0%)		
Number of children					
One	25(31.6%)	54(68.4%)	79(100.0%)	0.005	.946
More than one	27(32.1%)	57(67.9%)	84(100.0%)		
Income					
Less than 1000	37(27.8%)	96(72.2%)	133(100.0%)	5.543	**0.019**
More than 1000	15(50.0%)	15(50.0%)	30(100.0%)		
TOTAL	**52(32%)**	**111(68%)**	**163(100%)**		

4.2.1 Proportion of female health workers who practice exclusive breastfeeding

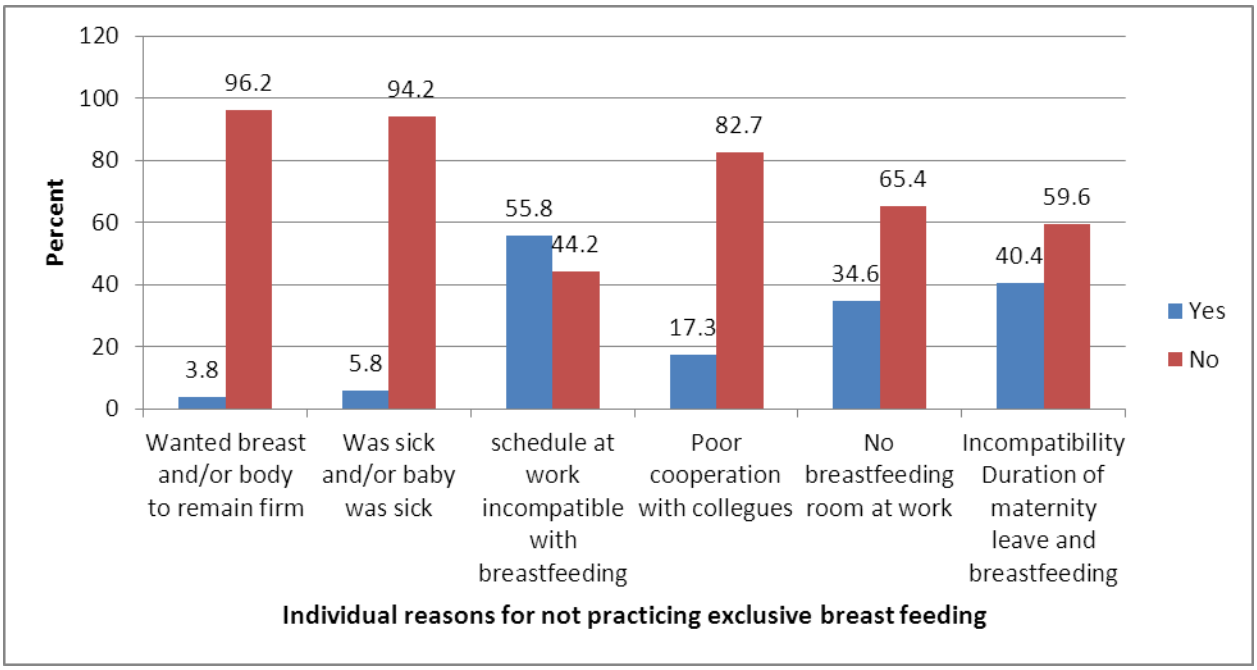
The question asked was "did you exclusively breastfeed your child", question 10 in the questionnaire? The participants were told prior to the question the meaning of EBF in our study and as recommended by WHO/UNICEF and GHS.EBF was initiating breastfeeding within half hour delivery, giving newborn infant no food or drink other than breast milk,

unless medically indicated, giving no artificial teats or pacifiers to breastfeeding infants and giving breastfeeding on demand. One hundred and eleven respondents representing **68%** of the female health workers interviewed (the majority) said that they did practice exclusive breastfeeding with their child/children for 6 months as recommended by WHO/ GHS. **32%** responded that they did not practice exclusive breastfeeding and those numbered 52.

4.3. Individual Factors influencing respondents inability to exclusively breastfeed

Exclusive breastfeeding can be influenced by a number of factors. One of them is the individual personal reasons for not practicing exclusive breastfeeding. Cosmetic reasons like flat breasts, poor health status of the mother or the infant, poor skills in the practice of exclusive breastfeeding, poor knowledge of the benefits of exclusive breastfeeding were some of the personals reasons for not practicing exclusive breastfeeding. Most respondents mentioned multiple reasons and responses were analyzed separately as shown in Figure2. Figure 2 show that 3.8% of the 52 respondents who did not practice exclusive breastfeeding said 'they wanted to preserve the firmness of their breasts/body'. Out of the 52 who did not exclusively breastfeed 5.8% reported that either they or their baby was sick and resulted in their inability to exclusively breastfeed. The majority of the respondents (55.8% of the 52 who did not exclusively breastfeed) reported incompatible work hours with the practice of exclusive breastfeeding as their reasons for not practicing exclusive breastfeeding. Some 17.3% out of the 52 did not exclusively breastfeed because co-workers became antagonist of their having to close earlier than others in order to exclusively breastfeed their babies. 34.6% out of the 52 who did not practice exclusive breastfeeding could not do so because of the unavailability of private rooms for breastfeeding at work places. Finally 40.4% respondents selected their having to resume work as a factor that caused them to break their practice of exclusive breastfeeding.

Figure 2: Individual Factors influencing respondents inability to exclusively breastfeed



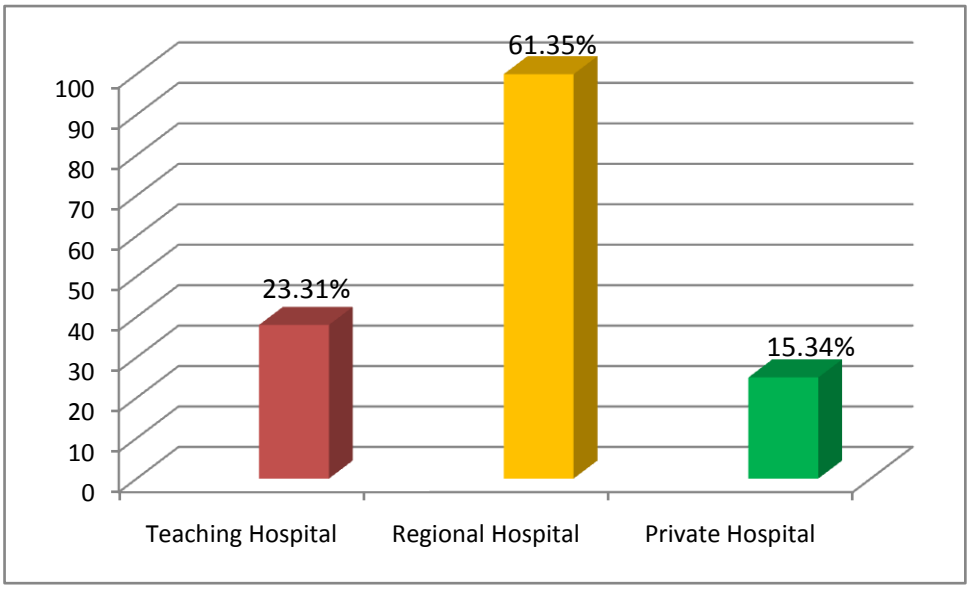
4. 4 Hospital Factors influencing Exclusive Breastfeeding Practice

4.4.1 Venue of Delivery

The structure of a Health facility, adequate drugs provision and equipments in a Health center as well as the human resources especially the skilled professionals make a huge difference in the outcome of health service delivery. The venue of delivery can influence the practice of exclusive breastfeeding especially the information given to the pregnant women and more importantly in this study the counseling given and the guidance given in the practice of exclusive breastfeeding just after delivery (the positioning of the baby on the breast, the timing of early breastfeeding and other practical short steps to ensure successful exclusive breastfeeding). The majority of the respondents representing 61.4% had their child delivery at the Regional Hospitals. Thirty eight (23.3%) female health workers delivered in a

Teaching Hospital and the remaining 25(15.3%) respondents delivered in Private Hospitals. (Refer to Figure3).

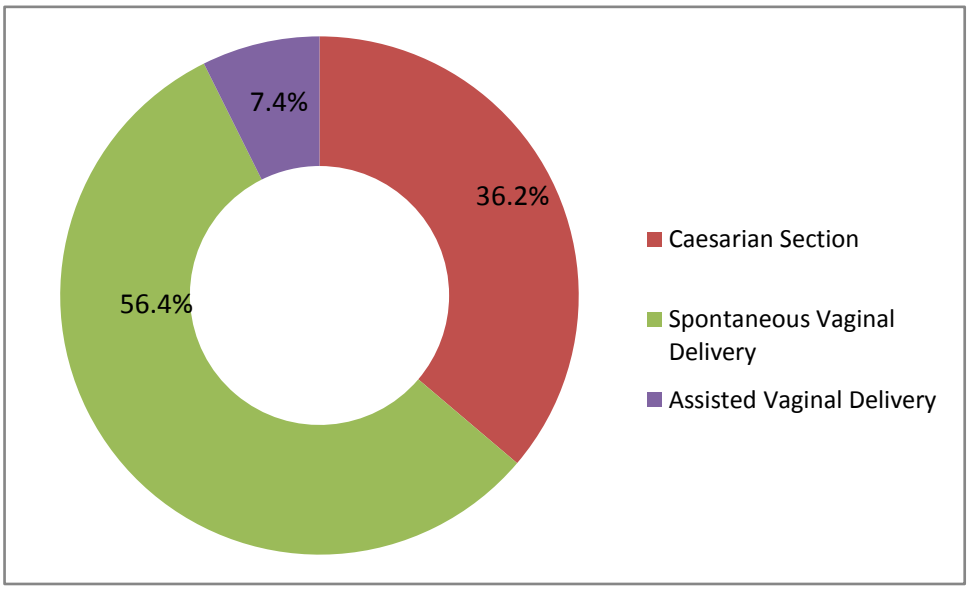
Figure 3. Venue of Delivery



4.4.2 Type of Delivery

With respect to the delivery type, 56.4 % of the female health workers interviewed delivered through a spontaneous vaginal delivery, 36.2 % through a Caesarean section, and 12 (7.4%) said they delivered via assisted vaginal delivery (Figure 4).

Figure 4: Type of Delivery



4.5 Factors at work affecting Exclusive breastfeeding

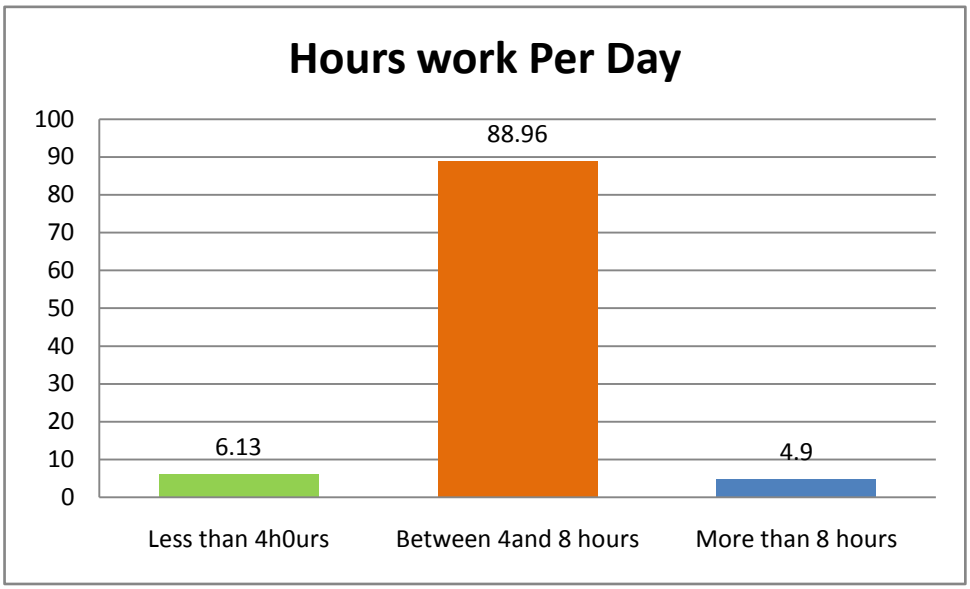
4.5.1 Breastfeeding hour break at work within 6 months post delivery

The majority of the respondents (115; 70.6%) said they did not have any hour break for breastfeeding during the day at their workplace. The remaining 48 (29.4%) said they did have one hour break for breastfeeding their babies during work hours.

4.5.2 Work hours after Delivery

In the majority of developed countries, the labor law has statutory decrees to protect the right of the working nursing mother and one of them is the working hours of a nursing mother which ideally should be maximum 4 hours a day especially the first 6 months after delivery. With respect to the duration of hours of work after resumption of work following Delivery, 6.1% of the respondents said they worked for less than four hours a day, 88.9% said they did so for between 4 – 8 hours a day and 4.9% said they worked for a period longer than 8 hours a day (Figure5).

Figure 5. Work Hours per day



4.5.3 Work/Duty Resumption

Data collated indicates that 67.5% of the sampled female health workers from La General Hospital and Ridge Hospital resumed work between 3 and 6 months after delivery. Twenty seven % (27%) resumed work within 1 to 3 months postpartum, 4 (2.5%) resumed work in less than one month postpartum. There were 5 (3.1%) of the respondents who resumed work after 6 months for various reasons including being on cumulated leave or on leave without pay.

4.6 Factors at home affecting exclusive breastfeeding

A respondent's receipt of home assistance in catering to basic chores such as washing/cleaning, cooking, bathing the baby, etc is very important to their ability to exclusively breastfeed their baby. Over 90% (152) of the respondents received help at home after giving birth. Only 11 (6.7%) of the respondents said they did not receive any help at home after their having delivered a child.

For the 152 female health workers who received help at home following their delivery, a multiple response set was used to capture the source of help received. (Refer to table 3).

Table 3: Sources of Help At Home after Child Birth

Source of Help	N=152 (100%)
Husband	**26.9%**
Older Children	**0.5%**
Close relative (Mother, Aunt)	**59.4%**
Friends	**2.4%**
Help maid	**10.8%**

The multiple response from table 3 indicates that out of the 152 respondents who indicated that they got help at home after their child birth, (26.9%) obtained the assistance from their husbands, only one person said she obtained help from her older child/children, 59.4% said they got help from close relatives such as their respective mothers/older aunties, cousins or nieces/nephews. Two point four (2.4%) got help from their friends and (10.8%) got help from their housemaids. An individual help could have come from several persons at the same time (example husband, mother and older children or husband and help maid).

4.7 Tests of Hypothesis

Table 4 EBF by selected independent variables

VARIABLE	EXCLUSIVE BREASTFEEDING FOR 6 MONTHS		χ^2(df)	P-value
Resumption at work	YES	NO		
Three months or less	30 (27.0%)	17 (32.7%)	1.699	0.428
More than three months but less than six months	78 (70.3%)	32 (61.5%)		
Six months and more	3 (2.7%)	3 (5.8%)		
Type of delivery			21.2	**<0.001**
SpontaneousVaginal Delivery	75 (67.5%)	17 (32.7%)		
Assisted Vaginal Delivery	8 (8.1%)	5 (8.3%)		
Caesarean Section	27 (24.3%)	32 (61.5%)		
Help at home			1.02	0.312
Yes	102 (91.9%)	9 (8.1%)		
No	50 (96.2%)	2 (3.8%)		

Test of hypothesis one: Exclusive Breastfeeding is related to duration of maternity leave.

The p value of 0.428 is greater than 0.05 our chosen level of significance so the null hypothesis is rejected and therefore the practice of EBF is not significantly associated with the resumption at work after the maternity leave (before six months as per this study).The practice of EBF among Female health workers who resumed work before six months is not different from their counterpart who did not resume work.

Test of hypothesis two: Exclusive breastfeeding is related to the type of delivery

The chi square test of EBF with the type of delivery female workers experienced shows a p value of 0.000 a value lower than our significance level, the null hypothesis is therefore not rejected. Female health workers who delivered spontaneously are twenty one time more likely to practice EBF than the female mother who delivered through surgery/caesarean section.

Test of hypothesis three: Exclusive breastfeeding is related to the availability of help at home

The p value for this test is 0.312 and it is greater than 0.05 so therefore the null hypothesis is rejected and the availability of help at home do not influence the practice of EBF. Female workers who get help at home do no practice EBF more than those who do not get help at home.

4.8 Logistics Regression of Exclusive Breastfeeding on Various Independent Variables

Direct logistic regression was performed to assess the impact of a number of factors on the likelihood that female health workers (respondents) would exclusively breastfeed their child/children. The model contains seven independent variables (level of education, income, type of delivery, hour break for breastfeeding, hours of work per day, resumption of work, help at home,).

Table 5 logistic regression table on EBF and independent variables

Variable	Odds Ratio (95% CI)	P-value
Level of education		
Secondary	1 (ref)	0.187
Tertiary	0.50 (0.15-1.44)	
Income		
Less than 1000.00 Ghana cedi	1 (ref)	**0.045**
More than 1000.00 Ghana cedi	0.38 (0.14-0.98)	
Type of Delivery		
Assisted Delivery	1 (ref)	**< 0.001**
Spontaneous vaginal Delivery	4.9 (2.23-10.62)	
Help at home		
No	1 (ref)	0.323
Yes	0.38 (0.06-2.5)	
Hours break for breastfeeding per day		
No	1 (ref)	0.976
Yes	1.0 (0.42-2.42)	
Hours per day 6 months post delivery		
Less than 4 hours	1 (ref)	
Between 4 and 8 hours	1.67 (034-8.27)	0.526
More than 8 hours	4.74 (0.27-83.39)	0.287
Resumption of work		
Less than one month	1 (ref)	
Between 1-3 months	5.63 (0.41-76.66)	0.194
More than 3 months but less than 6 months	7.24 (0.55-94.88)	0.131
0ther	1.31 (0.06-32.42)	0.829

As shown in table 5, only two of the independent variables made a statistically significant contribution to the model (Income and type of delivery).One of the strongest predictor of factors influencing health workers to practice exclusive breastfeeding is income, recording an odd ratio of 0.38 and 95% confidence interval (014-0.98) with a p value of 0.045. This

indicated that respondents who get more income are less likely to exclusively breastfeed. The other strongest predictor of factor influencing health workers practice of EBF is type of delivery. The odd ration is 4.9 with 95% confidence interval (2.23-10.62) with a p value of 0.000 thus indicating that respondents who deliver spontaneously have almost five times the likelihood of practicing EBF compare to those who delivered through assisted delivery including surgery (caesarean section).

CHAPTER FIVE

5.0 DISCUSSION

5.1 Background information and Characteristics of the study population

Exclusive breastfeeding (EBF) has been defined as feeding an infant with breast milk only without given any other foods, not even water. The definition allows for prescribed medicine, immunizations, vitamins and minerals supplements (WHO, 2001). There is a wealth of information on the benefits of Exclusive Breastfeeding for the first 6 months of life for the mother and infant (Okolo et al, 2002), some of them are adequate growth, anti-infective properties and increase intellect quotient and is one of the most natural and best forms of preventive medicine (WHO, 1991; WHO, 2008). It has been estimated that EBF reduces infant mortality rates by up to 13% in low income countries (Jones et al, 2003). The importance of supporting breastfeeding stands in the spotlight for health promotion (Stratton et al, 2011).

This study was carried out in two hospitals- La General Hospital and Ridge Hospital both in the Greater Accra Region. The respondents were female health workers from those two institutions. This study considered Health workers as professionals working in a health institution and included Health professionals like doctors, pharmacists, nurses, healthcare assistants but also workers from allied health field like laboratory technicians, and finally administrators including secretary, accountant etc...

There were 163 respondents for this study with each of them having a child aged between 6 months and 10 years at the time of working for those institutions. The range for the age of the child was important since the assessment was on the practice of EBF by the female Health workers. Six months was the minimum time to assess EBF since the mother would have just completed the recommended duration of time for EBF; 10 years was the maximum time to

assess EBF in order to avoid recall bias from the respondents. The majority of respondents interviewed were from the Ridge Hospital- a total of 103 representing 63.2 % of the respondents while the remaining represented 36.8%. Ridge Hospital is a regional hospital and its human resources are far greater than the staff at La General Hospital and explain the greater percentage of female health workers found at Ridge Hospital compared to La General Hospital. Doctors represented the least percentage of female Health workers (2.4%) while the nurses represented the majority (57.1%). A look at the Ghana Health Services information on Health workforce status show big disparities between categories of Health workers in Ghana (example Total of General medical practitioners- 1945 with 545 women and 1362 in Urban area, 538 in rural area, 1400 in Public institutions and 545 in Private Health institution compared to Nursing Professionals- 8938 with 6882 women and 2459 in urban area, 5738 in rural area, 3302 in Public institutions, 1627 in private Health institutions).

The respondents who fell within the 31-40 age brackets were 47.2%, 39.3% were aged between 20-30 years and13.5% were above 40 years. The majority of the respondents representing 77.9% of the total study population had tertiary education, and this result could be explained by making a parallelism with the majority of category of health workers presents in this study meaning the nurses whose education level is tertiary education for the majority. Female Health workers reported being married at 93.9% of the total respondents surveyed. The criteria of having a child in a setting where single mothers are seen as failure may have had an influence of mothers who were not married to report being married and therefore bloating the percentage of married female health workers. The influence of Religion in the decrease of premarital sex could also explain those values.

The proportion of female health workers who practice EBF is 68% an encouraging number which is slightly higher than the Ghana Demographic Heath Survey (2008) value where the percentage of children at 6 months exclusively breastfed is 63%.

This report is similar to the study "Breastfeeding practices of mothers in the Legon hospital catchment area" by Sartie, K. (2010) where 47.6% of mothers did practice EBF. However the Female Health workers reported rate of practicing EBF in this study is higher. The higher percentage of EBF among female health professionals may be due to bias-answer since a health professional is expected to promote EBF. The participants may also have a better knowledge of the benefits of the practice of EBF although some studies like a study by Utoo et al (2012) showed otherwise. In Utoo et al survey, 36 health workers were screened for their breastfeeding knowledge and the study revealed that there is unacceptable knowledge gaps among frontline cadres of health workers.

Female health workers who earned a monthly income of 501-1000 Ghana cedi were the majority of the respondents interviewed with 48.1% of them, followed by those who earned less than 500 Ghana cedi and 17.2% for those earning between 1001 and 2000 Ghana cedi. Female health workers of La Hospital and Ridge hospital were more likely to earn an income of less than 1000 Ghana cedi since the majority of the respondents were nurses and the income of less than 1000 Ghana cedi correspond to the income of majority of the nurse in Ghana at the time of the study.

Exclusive breastfeeding is not significantly associated with most of the background variable including profession, age, marital status, number of children. There is no significant difference among the different categories of health workers in the practice of EBF. No particular age group among the respondents in this study does influence the practice of EBF. Similarly there is no significant difference in the number of children one has given birth to and the practice of EBF as per this study. These findings do not compare favorably with some studies published earlier on this issue and among them Guendelman et al (2009) where the author states that low educational attainment, young age, being single and for multiparous (

giving birth more than once) having no previous breastfeeding experience is a risk factor for early breastfeeding cessation". This observation may have several possible explanations. First, the women in the sample are 94% married so that the effect of being single and not practicing EBF is not felt. Secondly, the category of health workers did not significantly influence the practice of EBF and this finding correlate with a survey by Sadoh et al (2011) in which 30 medical doctors in Nigeria were interviewed about their breastfeeding knowledge and experience. The study by Sadoh et al showed that the female health workers knew all the duration of EBF but only 11% did practice EBF for the 6 months. The practice of EBF lay on different factors than the category of the female health workers. Beside the information can be easily acquired and does not need a particular hierarchy position to be understood.

Thirdly, the number of children did not significantly influence the practice of EBF because a female health worker choice of EBF is not influenced by her knowledge but by different factors imposed on her, consequently the mother of one who did not practice EBF will not practice EBF when she is mother of two if the challenges forcing her first choice are still present.

In the other way significant differences were observed with respondents' monthly income and their practice of EBF. Respondents with a monthly income of less than 1000 Ghana cedi are more likely to practice EBF than female health workers with a monthly income of more than 1000 Ghana cedi. This report go against a study by Stratton and Henry (2011) in "What employers and Health care providers can do to support breastfeeding in the workplace: aiming to match positive attitudes with action" stated that "mother from low income are less likely to breastfeed than women of higher socioeconomic status due to mixed factors including lack of education, confidence, and social support, in addition to perceived difficulties associated with return to work. These moms may return to work earlier than higher income groups for financial reasons" The difference with Stratton and Beverly work is

that among female health workers in this study who earned more than 1000 Ghana cedi in Ghana, the flexibility of work is poorly available compare to those who earn less than 1000 Ghana cedi making the latter group more likely to have time for the practice of EBF and explaining the findings. In addition the female health workers as per this study have the same length of maternity leave making less likely for one to return from work before the expected length of maternity leave because of financial constraints. The relation between income level and the practice of EBF is that the higher the income level, the weaker the practice of EBF and this can be explained by the fact that high income earners usually hold managerial position which may lack job flexibility and these can lead to non practice of EBF.

Similarly significant differences were discovered among respondents 'level of education and their practice of EBF. Health workers with a tertiary education as per this study are more likely to exclusively breastfeed their child/children. Then the significant association between higher education and the practice of EBF in this study may follow the high percentage of tertiary education holder in this study.

The reported percentage of respondents who reported practicing EBF is 68% (111 respondents) suggesting that 52 female health workers (32% precisely) reported not practicing EBF. This findings show the determination of the female health workers at La General Hospital and Ridge to practice EBF contrary of Sadoh et al (2011) study in which only 11% health workers did practice EBF for 6 months.

Cosmetic reason is one of the individual reason for not practicing EBF and represented 3.8% of the reasons Health workers did not practice EBF in this study. Agunbiade & Opeyemi (2012) in their work on breastfeeding in Southwest Nigeria explained that some of the

obstacles prevalent in some African communities include the perception that by continually breastfeeding the child, the breast becomes floppy and unappealing for their husband who preferred well shaped breasts. They also explained that one reason why breastfeeding is discontinued is due to the breast aches and pain experienced by mothers during breastfeeding. These concerns are similar to the study findings and can be addressed by more information on the role of pregnancy on the body of the mother which has nothing to do with EBF. Pregnancy plays more than EBF an important role in the change of shape of mother's body.

The schedule at work as well as poor cooperation with colleagues and non availability of nursing office room are all challenges from the work place. Incompatibility of duration of maternity leave and EBF is a policy planning setting imposed on the individual.

A greater percentage of the respondents (61.4%) delivered in a Regional hospital and this can be explained by the greater percentage of respondents from Ridge hospital which is a regional hospital..

Only 6% of the female health workers interviewed worked for less than 4 hours after resumption of work following delivery; 89% work between 4-8 hours and 5% more than 8 hours. Less than one-third (29%) of the respondents did have an hour break at work while 71% did not have an hour break. The labor law of the Republic of Ghana Act 57 section 6 stipulates that "a nursing mother is entitled to an hour break during working hours" but unfortunately most of the health workers concentrate on their work and have few knowledge about their right. Consequently few of them were entitled to an hour break during working hours.

The majority of the female health workers (68%) resumed work 3-6 months following delivery while 27% resumed work 1-3 months after delivery and 5% less than a month after delivery. Yimyam & Morrow (1999) in "breastfeeding among employed Thai women in Chiang Mai" revealed that women who were working outside the home for a long period or

had shift jobs encountered many obstacles to maintain breastfeeding, and most gave it up within 1 month after resuming employment. ”

The chi square testing Exclusive breastfeeding and resumption at work (before six months as per this study) in table 4 showed a p value of 0.428. Therefore the hypothesis related to resumption of work (less than 6 months) is not accepted and Resumption at work is not associated with the practice of Exclusive breastfeeding. The explanation of this finding can come from the fact that in Ghana the resumption at work following delivery is usually between three to five months. The maternity leave is three months and female workers usually add their annual leave which is approximately two months to get five months off work. However the practice of exclusive breastfeeding is done during the first six months of life of the infant and the duration of maternity leave is less than six months so one can think of the difficulties female workers go through to maintain the exclusive breastfeeding especially the last month of EBF. Female health workers are usually left with a month to complete the 6 months EBF when they resumed work. They have the choice of expressing their breast milk during that period for the infant at home. This finding correlate with the work of Yimyam and Morrow (1999) in “Breastfeeding practices among employed Thai women in Chiang Mai” which stated that “women who were working outside the home for long period or had shift jobs encountered many obstacles to maintaining breastfeeding, and most give up within one month after resuming employment”. And those difficulties are accentuated when the place of work is far from home and Yimyam and Morrow acknowledge in their work that “rural occupations are usually more compatible with child-care activities, including breastfeeding because work in or around the home is usually flexible”. Abdulwadud and Snow (2008) in “Interventions in the work place to support breastfeeding for women in employment” stated that “most women may decide to return to work and unless they get support from their employers and fellow employees, they might give up

breastfeeding when they return to work". The return from work is then a problem for the success of the practice of exclusive breastfeeding and unless the return from work is done after the duration of exclusive breastfeeding so after six months, the risk for the mother to interrupt the breastfeeding and not achieve exclusive breastfeeding is still present. And Guendelman et al (2008) said in their study in "Juggling work and Breastfeeding: effects of maternity leave and occupational characteristics" where they examine the relationship between breastfeeding and maternity leave before and after delivery among working mothers in \southern California that " a maternity leave of less than six weeks or six to twelve weeks after delivery was associated respectively, with a fourfold and twofold higher odds of failure to establish breastfeeding and an increase probability of cessation after successful establishment, relative to women not returning to work". In our study, female health workers who resumed work before six months did not practice exclusive breastfeeding more than those who did not resume work. Nursing mothers working in most Health institutions in Ghana resumed work in general 5 months following delivery (12weeks of maternity leave added to 2 months of annual leave) and close work before 2pm when they resumed work These schedule probably allow flexibility to express and keep breastmilk at home and continuing breastfeeding when returning home .

The majority of the respondents (56.4%) delivered by spontaneous vaginal delivery while an important number (36.2%) delivered by Caesarean section and 7.4% by assisted vaginal delivery

The chi square test show a strong relation between Exclusive breastfeeding and the type of delivery and this relation is significant ($p<o.oo1$).The hypothesis is therefore not rejected. Exclusive breastfeeding is strongly associated with spontaneous vaginal delivery. Female health workers who deliver through spontaneous vaginal delivery are more likely to practice

exclusive breastfeeding than those who deliver through caesarean section or assisted vaginal delivery. These findings correlate with Blick et al (1998) in his work "What influences the uptake and early cessation of breastfeeding" where he found that non initiation of breastfeeding was predicted by a different set of factors among them general anesthesia performed during surgery mainly caesarean section during delivery. In most health institutions in Ghana women who delivered through surgery are less likely to practice exclusive breastfeeding usually because their infant are taken from them and given a formula while they are under general anesthesia and most of the time when they are under other type of anesthesia as well including spinal anesthesia (the most commonly performed anesthesia during delivery for the past decade). The type of delivery women experienced during delivery influence the practice of Exclusive breastfeeding

More than 90% of the respondents received help at home and from a close relative mainly the mother while about 7% did not received any help.

The testing of Exclusive breastfeeding with availability of help at home with the chi square test shows that the test is not significant. Therefore female health workers who get help at home are not more likely to practice Exclusive breastfeeding than those who did not get help at home. This report shows that Exclusive breastfeeding is not influenced by the help the female workers get at home. The difficulties in maintaining Exclusive breastfeeding come from a different angle so that the availability or non availability of help at home does not make much difference in the practice of Exclusive breastfeeding. A female health worker can be supported at home during cooking, bathing the child and cleaning the house but she may not be able to practice Exclusive breastfeeding if her activities outside home like her work do not allow her to take care of her child primary need which is Exclusive breastfeeding during the first six months of the infant' life.

5.2 Logistics regression of EBF on various independent variables.

This test confirm that the strongest predictor of factors influencing female health workers in their practice on EBF is type of delivery where respondents who deliver through vaginal delivery are more likely to practice EBF compare to those who deliver through surgery. This is because the anesthesia given during the surgery is preventing mother from initiating breastfeeding within the first hours of delivery while the baby is taken from the mother and given a formula having in mind that EBF is breastfeeding with only breastmilk for 6 months. . The second indicator is income where respondents who get more income are less likely to practice EBF usually because of their tight schedule which did not allow them to practice EBF.

CHAPTER SIX

6.0 CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

Sixty height (68) percent of the participants in this survey reported the practice of Exclusive Breastfeeding

Findings from this study show that the practice of Exclusive breastfeeding among female health workers was associated with the type of delivery. Delivery through surgery was associated with non practice of EBF. The results showed that respondents who undergo Spontaneous Vaginal Delivery were more likely to breastfeed within 30 minutes post delivery and sustained it by giving only breastmilk for 6 months as per the definition of Exclusive breastfeeding in our study and recommended by WHO/UNICEF and GHS.

The practice of Exclusive breastfeeding was found to be related to the level of income of the female health worker whereby those earning less than 1000.00 Ghana cedi were more likely to practice EBF than those earning more than 1000.00 Ghana cedi. The practice of EBF among moderate income earners was related to the flexibility of their work schedule making EBF achievable in these groups.

Resumption at work after delivery as per Ghana maternity leave (which is between three to five months), do not influence the practice of Exclusive breastfeeding in our study. Female health workers who resume work before six months do not reported practice of EBF more than their counterpart who did not have a maternity leave so that resumption before the sixth month after delivery do not make any difference in the maintaining of EBF .Flexibility at work after delivery is an adding factor .

Female health professionals who get assistance from significant others like their husband, mothers ,helpmaid, children or friends do not practice EBF more than those who do not get any assistance. The help at home among female heath workers was of no significance in the practice of EBF. Flexibility at work can also be a adding factor.

Female health workers of childbearing age constitute a high proportion of human resources at the workplace and make significant contributions to national economies. Rapid social and economic change over recent decades in developing countries has been accompanied by the increase in the participation of women in the paid labor force and has become an economic necessity. Demands of the formal labor market in an urban setting usually require mothers to leave their children while they are working. Women now face different set of decisions regarding work and childcare than their own mothers faced.

6.2 Recommendations

Research points to several factors that are important in helping employed women (female health workers) to continue nursing successfully. They include:

Mothers who undergo surgery during their delivery should be allowed to initiate breastfeeding early (within a couple of hours after delivery) for the establishment and maintenance of EBF.

The length of maternity leave should be at least 4 months plus the 2 months annual leave to make it 6 months for successful and *less stressful* EBF by working nursing mothers although the study did not find any incompatibility with EBF.

The hours worked upon return to work which ideally should not be more than 4 hours a day should be practice in all health facilities as well as other workplaces .

The availability of workplace lactation or nursing room office with good lighting and ventilation, privacy (locking door or “occupied sign), sink, electrical outlet and a refrigerator

should be made available for female health workers so that breastfeeding can be practice in various health institutions. Workers with tight schedule should be encouraged to use these facilities during hour break for best EBF practice. The health care facility can provide a hospital grade breast pump.

Studies have found that employers are more likely to support breastfeeding at work if they know other institutions where such policies have been successfully implemented. A pilot study in an institution with the availability of the recommendations above when successful could help authorities to understand the importance of supporting nursing mothers in their practice of EBF for the health benefits of both mothers and infants to help the mother being more productive and less stressed at work.

Further studies can look at the knowledge of EBF by Health workers category by category and the reflecting prevalence of EBF in a larger population of Health workers.

The purpose of this study would have been achieved if authorities look at the above recommendations and implement them successfully for an improved rate of exclusive breastfeeding among female health workers and a subsequent improved rate of EBF among women of reproductive age in general. Female health workers are role models and aside the fact that their adherence to EBF is a benefit for them and their offspring, it will improve the adherence of EBF among women who understood the benefits of EBF but would not practice EBF because the female health workers who taught them are not practicing EBF so putting a doubt in the benefits of the practice of EBF.

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APPENDICES

APPENDIX 1 QUESTIONNAIRE

TOPIC: CHALLENGES OF EXCLUSIVE BREASTFEEDING AMONG FEMALE HEALTH WORKERS IN TWO HOSPITALS IN ACCRA.

A SECTION A

Answer the following Questions or choose the right answer.

1 Profession:

2 Age (By end of 2012):

3 Marital status: A married

B single

C divorced / widow

4 *Level of education*: A tertiary education

B secondary education

C Primary education

5 *Nationality:* A Ghanaian

B Non Ghanaian (Precise)

6 Number of children: A One

B More than one- Precise number

7 Number of children exclusively breastfed: A None

B One

C More than one- Precise number

8 *Income:* A less than 500 Ghana cedi

B Between 500 and 1000 Ghana cedi

C between 1000 and 2000 Ghana cedi

D More than 2000 Ghana cedi

SECTION B

Circle your answer for the following Questions

9 Do you have a child aged between 6 months and ten years? YES / NO

10 If YES to Question 9 .Did you exclusively breastfeed your child? YES / NO

11 If NO to Question 10.Tick the following if it applied to you during the first six months of life of your last child aged between six months and ten years. You can tick as many answers as it applied to you and your child.

A I wanted my breast and/or my body to remain firm

B I was sick and/or the baby was sick

C I thought exclusive breastfeeding for six months was not necessary (Precise why)

…….

D My schedule at work did not allow me to go home on time to exclusively breastfeed my child

E My Colleague at work were not happy when I had to go home early to breastfeed my baby

F There was no room at work to keep the baby and breastfeed in between work

G I stopped exclusive Breastfeeding when I resume work after my Maternity Leave

F Others (precise)

…….

SECTION C

Circle your answer for the following questions.

12 How long did you exclusively breastfeed your child?

A Less than1 month

B 1-3 months

C More than 3 months but less than 6 months

D Six months

13 Where did you deliver?

A Teaching Hospital

B Regional Hospital

C Private Hospital

D Home

14 How did you deliver?

A Spontaneous Vaginal delivery

B Assisted vaginal delivery

C Caesarean section

15 Do you have an hour break for breastfeeding during the day? YES / NO

16 How many hours of work per day did you have during the first six month postpartum?

A Less than 4 hours

B Between 4 and 8 hours

C More than 8 hours

17 When did you resume work?

A less than 1 month postpartum

B Between 1-3 months postpartum

C More than 3 months but less than 6 months

D Others (Precise the

reason)……..

SECTION D

18 Did you get any help at home? YES / NO

19 If YES to question 18, who did you get help from at home?

A husband

B older children

C close relative (niece, cousin, mother, aunt /opposite sex)

D friends

E help maid

20 If you chose more than one person in question 19, arrange them by order of importance.

A first most helpful **B Second most helpful**

APPENDIX 2

INFORMED CONSENT FORM

PROJECT TITLE

Challenges of exclusive breastfeeding among female health workers in two Hospitals in Accra.

Department of Population, Family and Reproductive Health

School of Public Health

College of Health Sciences

University of Ghana, Legon

BACKGROUND

Dear Participant my name is Dr Nouffan Danielle Gladzah. I am a student from the School of Public Health, University of Ghana. I am conducting a study on the challenges faced by female Health workers in two Hospitals in Accra. The study seeks to find out the proportion of female health workers who practice exclusive breastfeeding and to determine the challenges they faced. Information gathered will be given to specific authorities to address the issues.

PROCEDURES

The study will involve answering questions from a Questionnaire on individual experiences about breastfeeding and its challenges. Participants will fill the form immediately, and for participants not able to fill it at once a period of three days is given to do so. The same Questionnaire will be sent through email for participants who have an email and answers will be expected within three days.

RISKS AND BENEFITS

The study is non invasive and will not cause any discomfort to participants. The results from the information gathered will be given to specific authorities to address the issues; hopefully for the benefits of female health workers, their children and society as a whole.

CONSENT

I ……, declare that the purpose, procedures as well as risks and benefits of the study have been thoroughly explained to me in English language and I have understood.

I hereby agree to answer the questionnaire.

Signature of Participant ……

Date…….

INTERVIEWER'S STATEMENT

I, the undersigned, have explained this consent form to the subject in the English language, which she understands the purpose of the study, procedures to be followed as well as the risks and benefits involved. The subject has freely agreed to participate in the study.

Signature of the interviewer……

Date……..

ADDRESS P.O Box 473 Ridge Hospital Accra

RIGHT TO REFUSE

Participation in this study is voluntary and you can choose not to answer any individual question or all the questions. You are at liberty to withdraw from the study at any time. However I will encourage you to fully participate since your opinions are important to help the documentation on the challenges of exclusive Breastfeeding among female Health workers for adequate policy to be implemented.

ANONYMITY AND CONFIDENTIALITY

Participant's identification number will be used instead of names. They will be assured of strict confidentiality and privacy throughout the study. All information concerning individual's subjects will remain anonymous and confidential.

DISSEMINATION OF RESULTS

The results of this study will be mailed to you if you provide your address below

……..

……

BEFORE TAKING CONSENT

Do you have any questions you wish to ask about the study? YES / NO

(If YES, questions to be noted below)

……

……..

……

……..

……

If you have further questions, you may contact Dr Nouffan Danielle Gladzah (TEL: 0244256482).