

**SCHOOL OF PUBLIC HEALTH  
COLLEGE OF HEALTH SCIENCE  
UNIVERSITY OF GHANA**

**DETERMINANTS OF BREASTFEEDING PRACTICES OF WORKING  
MOTHERS IN ACCRA. GHANA**

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

**NOVEMBER, 2015**

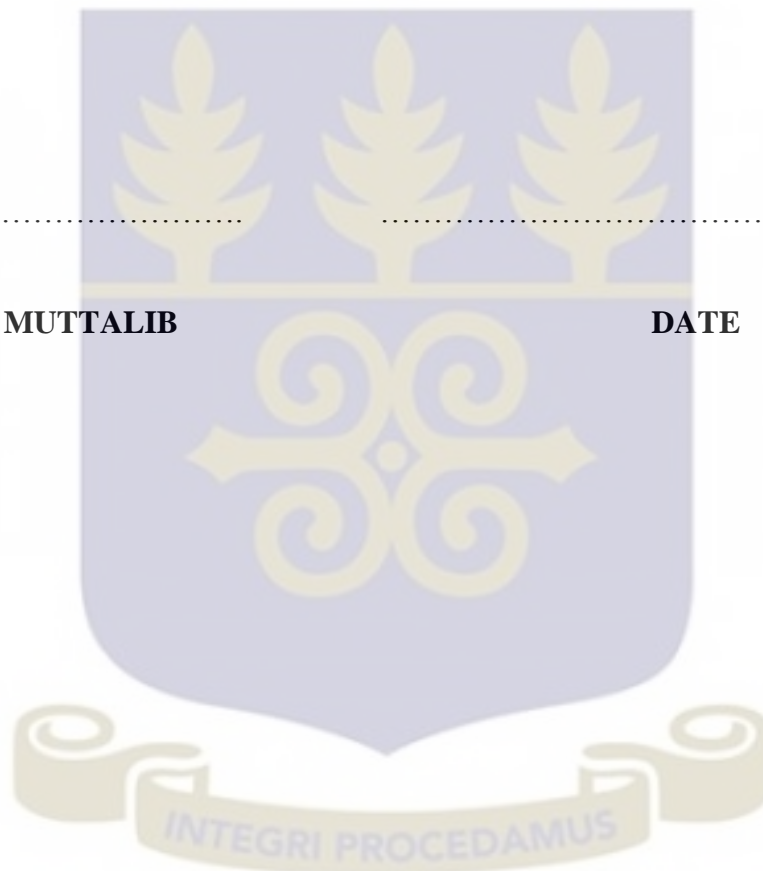
## DECLARATION

I, AMIN ABDUL MUTTALIB, declare that except for the other people's investigations which have been duly acknowledged, this work is the result of my own original research, and that this dissertation, either in whole or in part has not been presented elsewhere for another degree.

.....

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(SUPERVISOR)

**DATE**

## **DEDICATION**

This work is especially dedicated to my parent Imam Umar Amin and Hajia Madinatu

Iddres for their love, care and moral support.

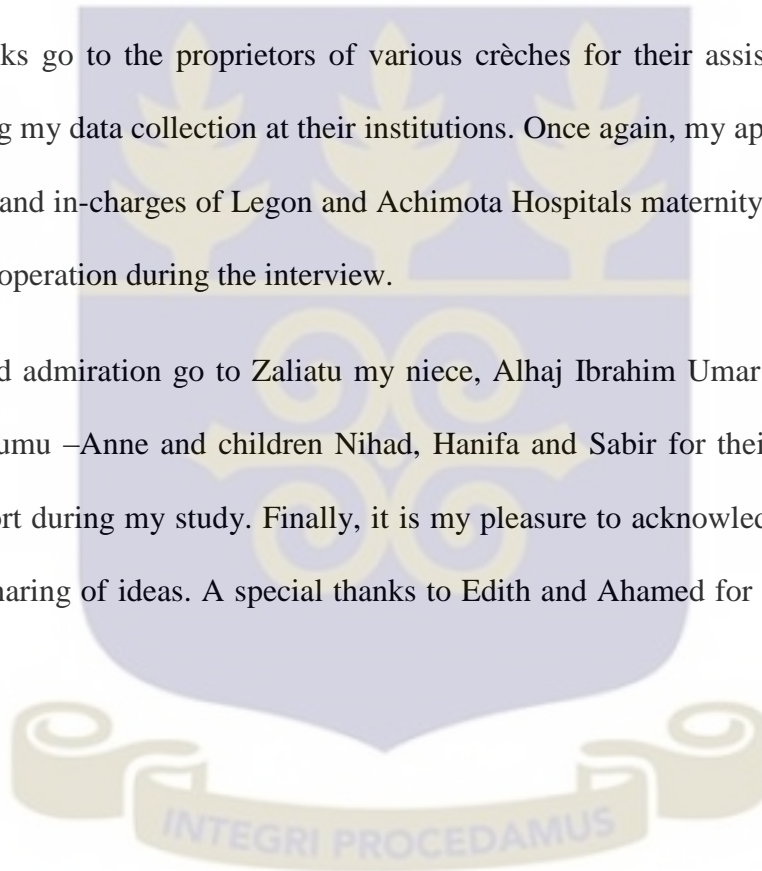


## ACKNOWLEDGEMENT

First and foremost, I 'm very grateful to Almighty Allah for his mercy, protection and guidance over me during the course of my study. Secondly, I'm most grateful to Dr, Richmond Aryeetey, for his commitment, dedication and objective comments as well as direction during the supervision of my work. I'm also grateful to Head of Department professor Augustine Ankomah for his suggestions and contribution to my work.

My sincere thanks go to the proprietors of various crèches for their assistance and hospitality during my data collection at their institutions. Once again, my appreciation goes to the staff and in-charges of Legon and Achimota Hospitals maternity and RCH units for their cooperation during the interview.

My gratitude and admiration go to Zaliatu my niece, Alhaj Ibrahim Umar my uncle and my wife, Humu –Anne and children Nihad, Hanifa and Sabir for their spiritual and moral support during my study. Finally, it is my pleasure to acknowledge all my colleagues for sharing of ideas. A special thanks to Edith and Ahamed for helping in data collection.



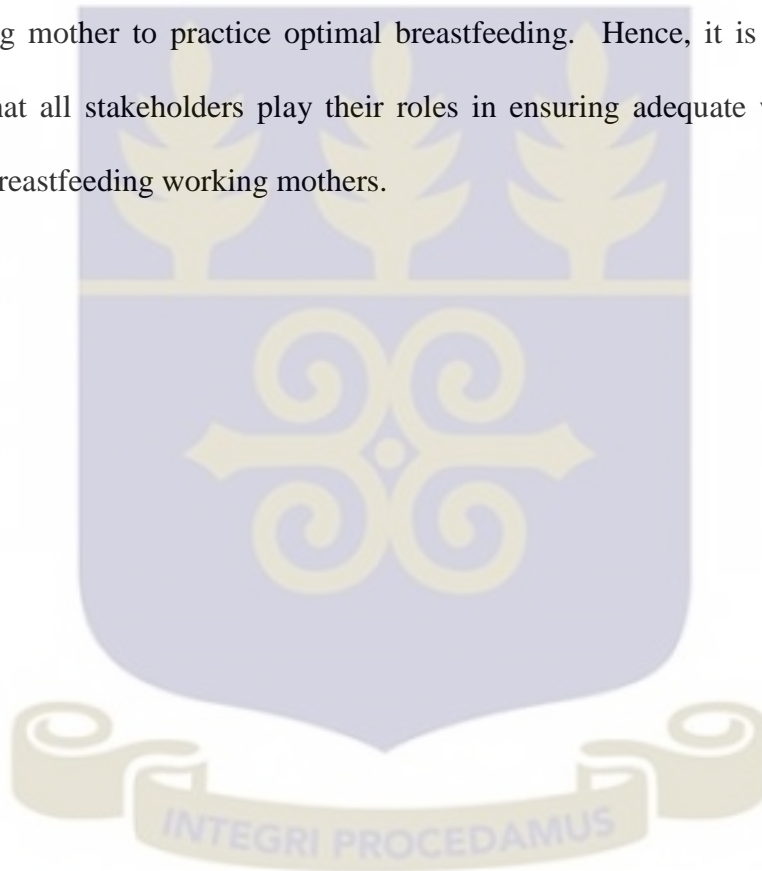
## ABSTRACT

Optimal breastfeeding practices ensure adequate nutrients for growth, development, and protection of infant and young child. However, some mothers are unable to breastfeed their children as recommended due to their work. In light of this, the study sought to describe the determinants of breastfeeding practices of working mothers with children 4-23 months in Accra.

A cross-sectional design, utilizing a quantitative approach was used to sample 400 working mothers of children 4-23 months and 24 health workers in two sub-metropolitan areas in Accra, Ayawasu West and Okaikoi North. A three-stage sampling procedure was used for the purpose of this study. Simple random sampling techniques was used to select the two study areas and the ten day care centers (crèches). Systematic random sampling was used to select respondents from the school registers. All Health care providers working in Child Welfare Clinic were purposively selected. A Structured questionnaire was used. Variables were described using frequencies, charts and tables. Logistic regression was used to determine the relationship between breastfeeding practice and mother's demographic variables and workplace factors. The dataset was analyzed with a Stata version 12.

The result indicates that, only 58.7% mothers initiated breastfeeding within one hour after birth, while 30.8% gave pre lacteal feeds to their infants. Colostrum was consumed by 85.8% infants. More than 89%, started complementary feeding earlier than the recommended age of 6 months. Eighty six percent introduced first water to their child between the ages of 4 to 6 months. More than 74% of mother's had their workload reduced after maternity leave. Nursery facilities were available at only 28.6% workplaces. Almost 95% do not have workplace breastfeeding policies. Duration of maternity leave is a key determinant of breastfeeding practice and was

significantly associated with breastfeeding practice ( $P < 0.001$ ). Only 45.8% providers had received in-service trainings on breastfeeding after school. Majority of mothers 94.9% received counselling on breastfeeding. Only 17% of the mothers were visited at home by health workers. Finally, type of occupation of mothers ( $p = 0.004$ ) and the duration of maternity leave ( $P < 0.001$ ) were found to be key determinants that associated significantly with duration of exclusive breastfeeding practices of working mothers. Currently, workplace support and current maternity leave duration does not enable a working mother to practice optimal breastfeeding. Hence, it is therefore, recommended that all stakeholders play their roles in ensuring adequate workplace support for the breastfeeding working mothers.



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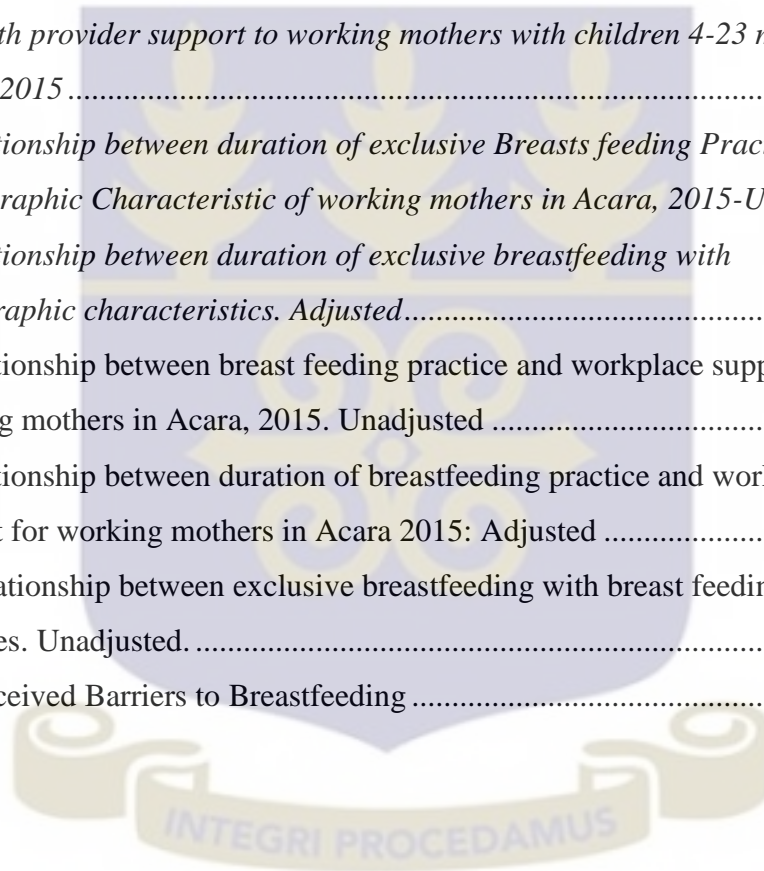
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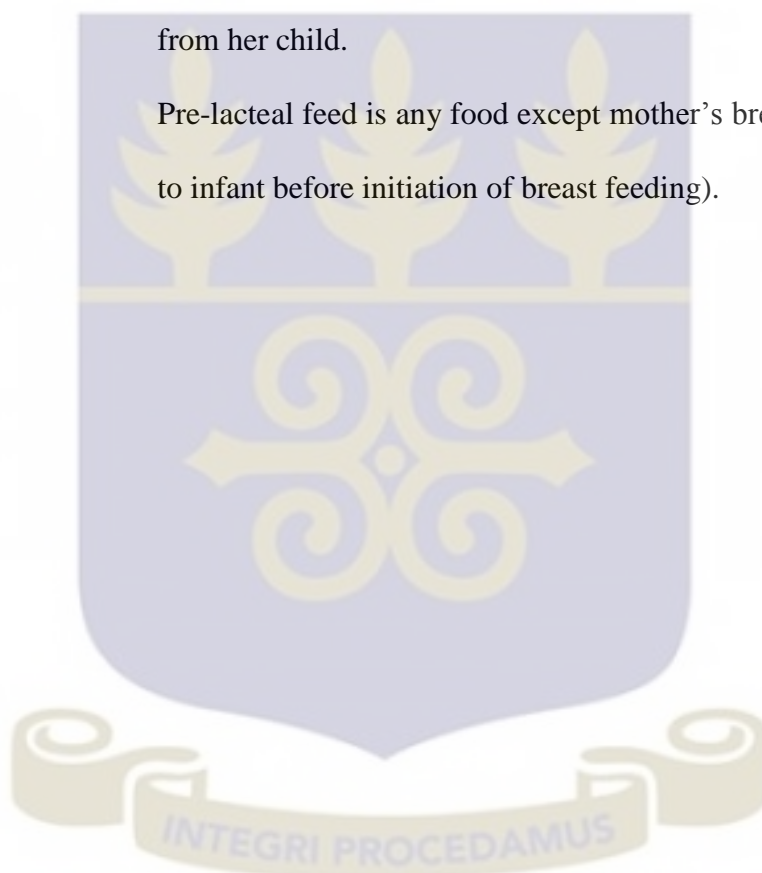


## LIST OF ACRONYMS

GHS	Ghana Health Services
ANC	Ante Natal Services
AOR	Adjusted Odds Ratio
BFHI	Baby-Friendly Hospital Initiative
CDC	Center for Disease Control
CGHFB	Collaborative Group on Hormonal Factors in Breast cancer
CHPS	Community –Based Health Planning and Services
CWC	Child Wealth Services
EBF	Exclusive breastfeeding
GDHS	Ghana Demographic and Health Survey
GMA	Ghana Medical Association
GNA	Ghana news Agency
GSS	Ghana statistical service
IBAN	International Breastfeeding for Action Network
IEC	Information Education and Communication
LI	Legislative instrument
MIC	Multiple Indicator Cluster Survey
MOH-T	Ministry of Health Turkey
NHS-T	National Health Survey –Turkey
OR	Odds Ratio
PNC	Post Natal Services
SGS	School of Graduate Studies
UNICEF	United Nation Children Fund
WABA	World Alliance for Breastfeeding Action
WHO	World Health Organization

## DEFINITION OF TERMS

Breastfeeding	Feeding a baby with natural milk
Exclusive breastfeeding	Giving breast milk only to a baby for the first six month with no Water, food or medicine, except medically indicated.
Early Initiation	Putting a baby to breast within first one hour after birth
Working mother	Working mother is a mothers who is engaged in any income earning activity outside her home that normally takes her away from her child.
Pre-lacteal feed	Pre-lacteal feed is any food except mother's breastmilk provided to infant before initiation of breast feeding).



## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background

Appropriate Infant and Young Child Feeding ensures optimal child health, growth, development, and survival (WHO/UNICEF, 2008). WHO and UNICEF recommend that infants and young children are exclusively breastfed for the first 6 months of life with continued breastfeeding plus complementary feeding until 2 years of age or beyond (WHO/UNICEF, 2008). This is because breast milk contains all the nutrients the child need during this period, for growth and protection against diseases such as diarrhea and respiratory infections (Coppa 2006; Chantry et al, 2006; Heinig & Dewey, 1996).

It has been further established that a long-term effect of breastfeeding is that it lowers blood pressure, increase intelligence level and minimize risk of type two diabetes in the children (Horta et al., 2007). All these benefits that are associated with breastfeeding practices makes it a critical window for improving child nutrition. Deficits or deficiency as a result of poor feeding practices acquired at this age will be difficult to reverse later in life (WHO/UNICEF, 2008).

Globally in 2012, about 162 million children under 5 were estimated to be stunted and 51 million have low weight-for-height, mostly as a consequence of poor feeding and repeated infections (WHO, 2014). It is also estimated that 45% child death is associated with under-nutrition due to poor feeding practices. Currently, only 38% of the infant are exclusively breastfed worldwide and few children receive nutritionally adequate and safe complementary foods (WHO, 2014). Meanwhile, WHO estimated that about 800 000

children's lives could be saved every year among children under 5 years if all children 0–23 months were optimally breastfed (WHO, 2014).

In view of this, a number of exclusive breastfeeding programs and strategies have been rolled out in Ghana. One of these is, the adoption and implementation of the 1991 Baby-Friendly Hospital Initiative (BFHI) A global strategy to increase support, protection, and promoting of exclusive breastfeeding. Presently at global level, an estimated 21,000 facilities had been certified as 'Baby-Friendly', representing about a quarter of all maternity facilities (Labbok, 2012). Within the sub-regions, there are wide variations in rate of designation, with sub-Saharan Africa, currently designating about 20% of its estimated facilities.

In Ghana as at the end of 2011, about 325 maternity facilities had been designated Baby Friendly (Aryeetey & Antwi, 2013). In Greater Accra region, out of 85 facilities which conduct deliveries, only 47 % ( 40) have been designated baby friendly (GHS-RCH, 2013). Under the BFHI strategy, health care providers are trained to support mothers to initiate and continue with exclusive breastfeeding.

In spite of all these strategies, exclusive breastfeeding in Ghana, has witnessed a significant decline, from 63% in 2008 to 46% (GSS, 2011). This decrease has raised several questions on the implementation of those strategies as well as other associated factors which are not known. For instance, cultural practices, beliefs, norms, and knowledge could influence breastfeeding practice. In other settings, educational orientation, socioeconomic background, ethnicity, religion and job status among others could also determine how a mother will breastfeed her child. It has been found that

obstacles such as family pressures tend to hinder the practice of exclusive breastfeeding (Otoo, Lartey, & Perez-Escamilla, 2009).

Another important factor affecting child breastfeeding is mother's occupation. Over 75% of women age 15-49, who are in their reproductive age, are currently employed and the majority of them are married and bearing children (GSS, 2008). In Greater Accra, the proportion of women currently employed is about 67 percent (GSS, 2008). Most of them are engaged in sales or service sector, others are professional, technical and managerial positions (GSS, 2008).

To this end, mode of breastfeeding practice among working mothers as well as workplace support for the mothers are critical in ensuring continuation and maintenance of optimal breastfeeding. With regards to the type of employer and breastfeeding practice of a working mother, Amin et al. (2011) observed that, more mothers who worked in the private sector about 57% had discontinued breastfeeding than mothers (40%) who worked with the government. Duration of maternity leave was also found to be associated with duration of breastfeeding of working mother. This was found in a study of which 16% participants suggested that the longer the period of paid maternity leave, the longer breast feeding duration (Begley, Gallagher, Clarke, Carroll, & Millar, 2008).

The Second National Health and Morbidity Survey in Malaysia (NHMS II) revealed that the prevalence of working women who had ever breastfed was 91.4%. However, only 25.4% of employed women practiced exclusive breastfeeding compared to 31.3% among non- working women. It further established that the mean duration of breastfeeding among working mothers was 26 weeks as compared to 30 weeks among those who were not working (MOH Malaysia: 1997). In reality, some working mothers are unable to

continue breastfeeding due to the nature of their work. This has potential in contributing to the low breastfeeding rate and other health consequences among children in the country. Hence, the study was carried out to determine breastfeeding behavior/practice of the working mothers in Accra.

## **1.2 Problem Statement**

Optimal breastfeeding for the first six months and continued breastfeeding up to two years and beyond gives the child a good start in life. However, too many mothers stop breastfeeding earlier than recommended. Poor breastfeeding practices sometimes influenced by cultural practices, peers, or family members (WHO, 1997; Sach event al.1991). Studies have reported the important role of women's involvement in the world of work on breastfeeding. A review of existing literature suggests that poor or absent of support system at the workplace such as lack of breastfeeding breaks, child care centers, maternity related workplace policy ( Burgess J, 1998). Flexible work schedules for nursing mothers and access to health system support services are all key factors in supporting workplace breastfeeding (Johnston & Esposito, 2007).

The labor act in Ghana affords working mothers 12 weeks maternity leave plus entitled annual leave (Labour Act, Act 651, 2003). Typically, this period is insufficient to allow women to be with their children for 6 months to carry out exclusive breastfeeding (Hammer, Bryson, & Agras, 1999). Also, after returning to work, the ability of working mothers to exclusively breastfeed for six months are further constrained by factors related to the type of work, place of work as well as the work schedules. In many instances, mothers often leave their children at homes with an alternative caregiver, since there are no workplaces support system and facilities that facilitate breastfeeding at work (Akbar et

al., 2013). These barriers to breastfeeding are likely to expose young children to early complementary feeding and increase risk of infectious, morbidity, and related deaths. In Malaysia, it was found that only 25.4% of employed women practiced exclusive breastfeeding as compared to 31.3% among non- working women (MOH Malaysia: 1997). Low level breastfeeding among working mothers could contribute to low prevalence exclusive breastfeeding rate. Little is known about breastfeeding practices of working mothers and also the barriers to optimal breastfeeding practice of the working mothers in Accra.

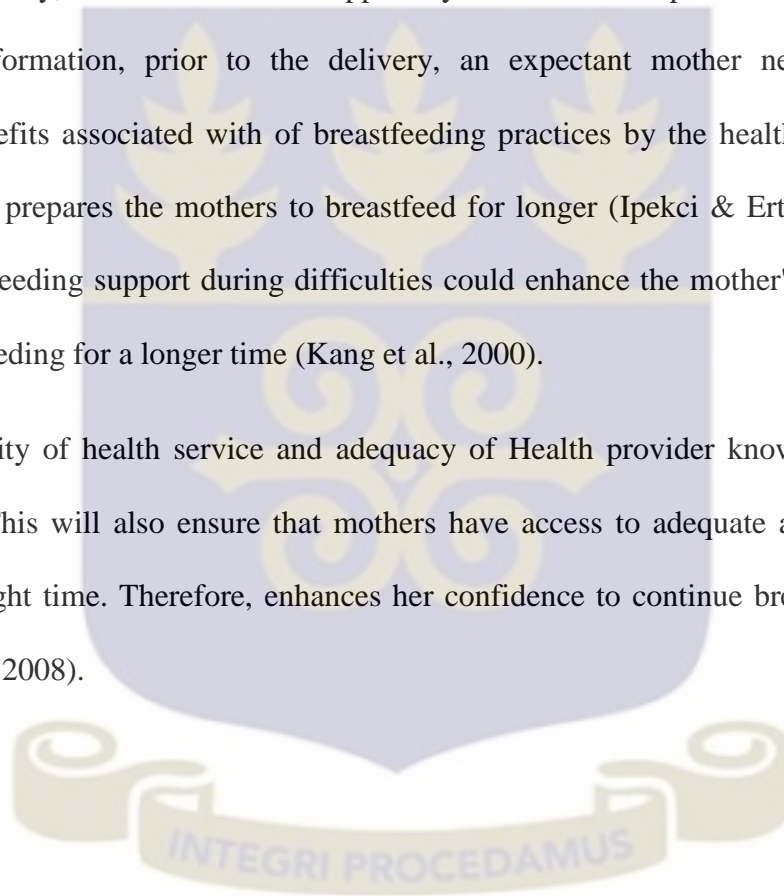
### **1.3 Conceptual Framework**

There is no existing conceptual framework however, Heywood et al. (2005) has reported three level of factors. Therefore this framework has been developed to guide this study which has three main levels or dimensions associated with breastfeeding practices by working postpartum mothers. The first level or dimension in this study is the characteristic of the mother. These factors relate to mother's educational status, mothers with high education are likely to initiate and breast feed their children as recommended. On marital status, married mothers would feel comfortable to breastfeed more than probably the single mothers. Others such as age, economic status and profession of a mother could also determine how a mother will breastfeed her child. These factors are expected to have one way or the other, influence on the mothers breastfeeding practices (Sika B, 2011). The second dimension of the study relates to the mother's working environment. The work place factors could have a direct influence on her breastfeeding behavior. For instance, the type of work the mother is engaged in, the flexibility of her Work schedules, distance to the work place and availability of Workplace breastfeeding

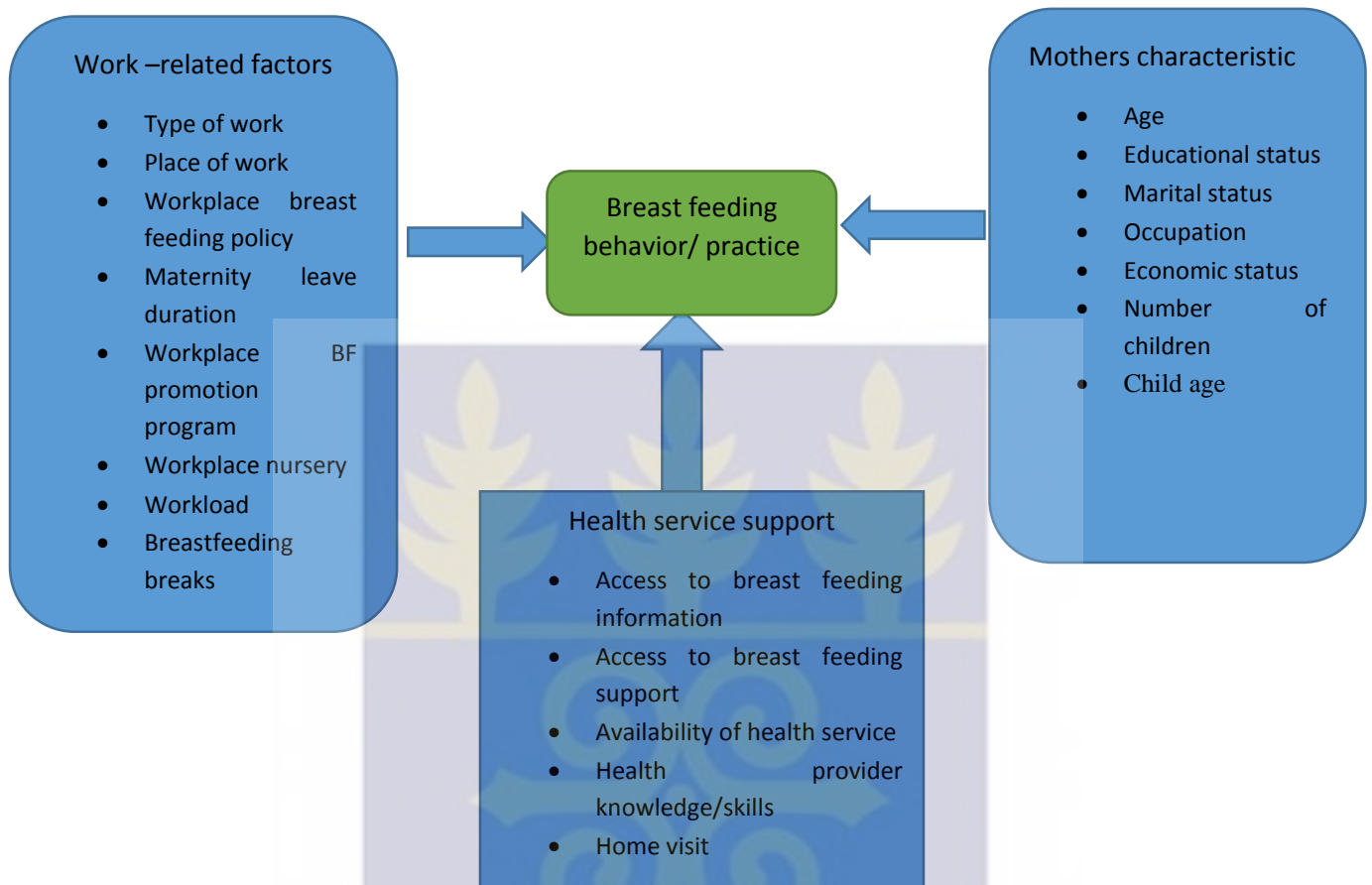
policy (Burgess, 1998). Other related factors include maternity leave duration, Workplace facilities to support breastfeeding, on-site nursery and the position of the mother at work. These and other factors influence mother's ability to combine work and breastfeeding (Johnston & Esposito, 2007).

The third dimension of factors likely to influence breastfeeding practice of a working mother in this study, is health service support system. This comprises of access to breastfeeding information, prior to the delivery, an expectant mother needs to be informed on benefits associated with of breastfeeding practices by the health provider. This information prepares the mothers to breastfeed for longer (Ipekci & Ertem, 2012). Access to breastfeeding support during difficulties could enhance the mother's ability to continue breastfeeding for a longer time (Kang et al., 2000).

Finally, availability of health service and adequacy of Health provider knowledge and skills is a key. This will also ensure that mothers have access to adequate and correct information at right time. Therefore, enhances her confidence to continue breastfeeding (WHO/UNICEF, 2008).



**Figure 1: Conceptual Frame Work**



#### 1.4 Justification of the Study

Several barriers associated with breastfeeding practices. Some are perceived barriers while some have proven and has contributed to decline in breastfeeding practice. One such barrier that might contribute to decline in exclusive breastfeeding practice is work. Study mothers 57 %, said they could not breastfeed because they were too busy at work (Saied, Mohamed, Suliman, & Anazi, 2013).

Working mothers could face challenges during breastfeeding period as a result of inadequate or absence of workplace support. In view of this, the study sought to establish

factors that affect breastfeeding practices of a working mother, determine work-related factors that will support working mother to breastfeed. The findings of the study will be used by Government, Ministry and Agencies, Non-Governmental Organization, Employers and Individuals to review and strengthen workplace breastfeeding policy, for example maternity leave policy. The findings will further be used to make recommendations to Ghana Health Services and its partners to strengthen and strategize on going breastfeeding interventions. Additionally, the outcome will add a new knowledge and skills to the existing ones in order to improve the capacity of healthcare providers through trainings. Finally, the findings will help bridge the gaps that limit working mothers to optimally breastfeed through awareness creation.

### **1.5 Research Questions**

What are work-related determinants of breastfeeding practices of working mothers in Accra?

- What are the breastfeeding practices of working women in Accra?
- What health service support is available for working mothers with infants towards practicing optimal breastfeeding?
- What workplace support exists for working mothers with infants to breastfeed?

### **1.6. Main Objective**

To identify determinants of breastfeeding practices of working mothers in Accra.

#### **1.6.1 Specific Objective**

- To describe the breastfeeding practice of working mothers in Accra.

- To identify health service support that is available to working mothers with infant practicing breastfeeding?
- To identify workplace support for working mothers with infants who are breastfeeding



## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Importance of Breastfeeding

After exclusive breastfeeding practice for 6 months, breastmilk is still an essential source of energy and nutrients in children aged 6 to 23 months. It gives more than half of a child's energy needs between the ages of 6 and 12 months, and one-third of energy needs between 12 and 24 months. It also helps in reducing child morbidity and mortality, as well as malnutrition (WHO, 2014). Breastfeeding also contributes to the health and well-being of mothers; it reduces the risk of ovarian and breast cancers and helps space pregnancies. Exclusive breastfeeding of babies under 6 months has a hormonal effect which often induces menstruation. Mothers and families need to be supported for their children to optimally breastfeed (WHO, 2014). With regards to the early initiation of breastfeeding, that is when a child is put to a breast within one hour of birth, there are several benefits to the mother and to the baby. For example, early suckling helps in the release of oxytocin and stimulates production of breastmilk. The oxytocin also helps in the contraction of the uterus and reduces post-partum blood loss (GSS, 2008). The first breast milk contains colostrum which has antibodies that protect the newborn from diseases. Early initiation of breastfeeding also fosters bonding between mother and child (Ipekci & Ertem, 2012). Despite some misconceptions about colostrum giving as being impure, indigestible to babies, 92.4% of studied mothers in Diyarbakir City gave colostrum. This is an indication of positive development by mothers giving colostrum to their babies (Ipekci & Ertem, 2012). Early initiation is most likely to be practiced in urban settings where there are a lot of health facilities. This was established in the MICS, (2011) that Children in urban areas (55%) are slightly more likely to receive breastmilk

during the first hour after birth than children in rural areas. The report further indicated that about 56% of children delivered at health facilities were breastfed within the first hour and those delivered at home were 47%. Breastfeeding is one of the most effective way to ensure child health and survival. If every child was breastfed within an hour of birth, and given only breast milk for the first six months of life, and continued breastfeeding up to the age of two years, about 800 000 child lives would be saved every year (WHO, 2014).

Globally, less than 40% of infants under six months of age were exclusively breastfed. Adequate breastfeeding counseling and support are essential for mothers and families to initiate and maintain optimal breastfeeding practices (WHO, 2014). Breastfeeding is the ideal form of nutrition for the first 6 months of infant life for both mother and child. Mothers who breastfeed can expect a significant reduction in their risk of breast cancer. For example, if a woman were to have 2 children and breastfeed each as recommended 6 months, she would reduce her risk of breast cancer by more than 17% (CGHF, 2002).

Furthermore, six months of breastfeeding can help prevent future obesity in the infant. Those children would be 37% less likely to be overweight at 5 years of age (Hediger, Overpeck, Kuczmarski, & Ruan , 2001) and 22% less likely to be overweight at adolescence (Gillman , Rifas-Shiman , Camargo , Berkey , Frazier , Rockett , et al. 2001)

## **2.2 Recommended Breastfeeding Practice**

Recommendations for the infant and young child feeding indicate that every mother should initiate breastfeeding within the first one hour after delivery. Infants should be exclusively breastfed for the first 6 months of life to achieve optimal growth, development, and health. Thereafter, they should receive nutritionally adequate and safe

complementary foods while breastfeeding continues up to 2 years or beyond (WHO/UNICEF, 2008).

In updated recommendations WHO/UNICEF reiterated that, after the exclusive breastfeeding for the first six months of life, at six months, solid foods, such as mashed fruits and vegetables, should be introduced to complement breastfeeding for up to two years and beyond. It added that, breastfeeding should be on demand both day and night and that bottle or pacifier should be avoided as much as possible (WHO, 2014). In countries where stunting is highly prevalent, promotion of breastfeeding and appropriate complementary feeding could prevent about 220 000 deaths among children under 5 years of age. It further added that Optimal breastfeeding could save about 800 000 under 5 child lives every year. (WHO, 2014).

Similar findings have also shown that these practices ensure infants and young children get the best possible start in life (Betrán, de Onís, Lauer, & Villar, 2001). To further confirm the recommendation, Breastfeeding and complementary feeding if adequately promoted and practiced, can prevent up to 19% of all childhood deaths in low-income countries (Lancet 2003). Various studies indicated that timely initiation of complementary feeding (6–9 months) was observed in 58% of infants by Narayanan et al, (1988) and 48% by Gupta A, et al, (2008). While Basnet, et al, (2012) also estimated that most mothers on the average introduced solid/semi solid food at the age of 5 months. Cerelac was first food given to children (Manandhar et al, 2004).

Laxmaiah et al., (2012) estimated that about 60% of all deaths among children <5 years of age are attributed to malnutrition, either directly or indirectly, and further disclosed

that about two-thirds of these deaths are linked to poor feeding practices during the first year of life.

It is also noted that Exclusive breastfeeding (EBF) for the first 6 months of life has been associated with a lower incidence of diarrhea and respiratory disease in infants, especially in less-developed countries (Lancet, 2000). In this regard, there is no doubt that Infant and young child feeding practices have a major role in determining the nutritional status of a child (Betrán, de Onís, Lauer, & Villar, 2001).

However, this assertion was not in agreement with Laxmaiah et al., (2012), who did not observe any significant association between feeding practices and nutritional status of infants, but indicated that prevalence of underweight and stunting was higher among infants who did not receive colostrum as compared to infants who received colostrum. To ensure uptake of colostrum WHO recommend that all children born should be put to breast within the first one hour. Following this recommendation, Laxmaiah et al, (2012) indicated that 84.9% infants were given colostrum in their study. The same was reported by Galhotra et al. (2008).

With regards to maternal education, Singh, (2013) realized that, illiterate mothers (46.6%) who practiced exclusively breastfeeding for the six months were higher than mothers with higher education (39.4%). Still on maternal education in relation to breastfeeding practices, MICS, (2011) also observed that breastfeeding status decreases with the mother's educational level. For example, children 0-5 months whose mothers have no education are more likely to be exclusively breastfed (55%) compared to children whose mothers have secondary or higher education (46%). After 2 years, only 35 % of children continue to receive breast milk.

About 45% of infants received pre-lacteals such as honey and 85% of infants received colostrum. One of the reasons for mothers not giving colostrum was attributed to conflicting advice from elders in the house (Laxmaiah et al, 2012). Mother's age and level of education were found to have a positive correlation with early initiation and duration (Sika-bright, 2011). This correlation influences Infant feeding practice.

Even though early breastfeeding within the first one hour is key determinant in contributing to the success of exclusive breastfeeding (WHO, 2003), this relationship is in disagreement with (Nakao et al.2008) but agreed by Noughabi et al, (2014) and Eslami et al, (2009) as well as Rowe- Murray and Fisher (2002).

However, Paine et al. 2001 stated in their article of feeding practice in Brazil that Mother's education, however, showed that the more the education, the better chances of breastfeeding and complementary feeding practices. Specifically, older and more educated women are the categories most likely to choose breastfeeding as their preferred choice of infant feeding method, and would breastfeed their children longer than others (AAP, 1997; Scott & Binns, 1999; Arora, McJunkin, Wehrer, & Kuhn, 2000; De La Mora, Russell, Dungy, Losch, & Dusdieker, 1999). Additionally, multiple studies have also associated and identified adolescent mothers who are unlikely to breastfeed as recommended (Volpe & Bear, 2000). According to Spisak & Gross, (1991), most studies agreed that full-time employment and school enrollment are associated with the reduction in breastfeeding duration due to some environmental factors at both workplace and school. And with regards to married and unmarried women those who are married tend to breastfeed exclusively than single women (Arora et al., 2000; Scott & Binns, 1999). De La Mora et al, (1999) also observed that attitudes of married women concerning

breastfeeding were more positive than single mothers. Similarly, unmarried women with less than a high school education choose recommended breastfeeding practice at much lower rates than married women or women with a higher level of education. (Grossman et al.1989). In terms of area of residence, infants aged 0-5 months in the urban area (49%) are more likely to be exclusively breastfed than their counterparts in rural areas (43%). The reverse is true for infants in the 12-15 months and 20-23 months age-groups, where children in the urban areas are less likely to receive continue recommended breastfeeding in year one and two (MICS, 2011).

Another recommended feeding practice is early initiation of breastfeeding. The level of early initiation varies 46% (MICS, 2011) and 52% (GSS, 2008). Laxmaiah, et al, (2012) reported as high as 75.8% mothers initiating within one hour. Similar study in India as cited in National guidelines on infant and young child feeding India in 2006, also reported 36%, emphasizing that, early initiation is able to reduce weight loss, blood glucose level and uncoagulated bilirubin in the serum and dehydration in infants. Pre-lacteal feeding on the other hand, has the potential to affect breastfeeding practice. Laxmaiah, et al, (2012) reported that 45% infants received pre-lacteal feeds. But as low as 8% of infants reported fed with pre-lacteal feeds (GSS, 2008). The study by Galhotra A, et al, (2008) found that most Infants received honey and cow/buffalo milk as pre-lacteal feeds. Breast milk expression is a recommended feeding practice which contributes to the maintenance of breastfeeding process, particularly with working mothers. With the adequate storage facility, 98% of mothers succeeded in expressing milk at work to continue practicing breastfeeding. (Ortiz, 2004).

### **2.3 Barriers to Exclusive Breastfeeding**

The cultural practices and beliefs that hinder exclusive breastfeeding vary among ethnic groups and traditions. For example, some caregivers see water as a necessity for life which quenches thirst and relieves pain. Others also perceived water as a preventive tool for colds and constipation as well as being able to soothe fretfulness (WHO, 1997; Sachdev et al.1991). Culture and religious beliefs also affect exclusive breastfeeding as water is introduced in the early infancy (Glover & Sadilands, 1990). From the physiological and spiritual point of view water is viewed as life, and the act of offering water to an infant at an early age is a way of welcoming the child (Golberg & Adams.1983).

Sometimes health providers give conflicting information to mothers based on their individual beliefs and orientation as opposed to professional directives. This has also contributed to the poor flow of information to the mothers. For instance, 93% of midwives in a study believed that water should be given to infants on a first day of life (Sachdev et al.1991). Regarding workplace barriers, it was found that the prevalence of breastfeeding practices declined from 96% to 31% and the study associated the declined to workplace barriers among the working mothers (Akbar, Hirani, & Karmaliani, 2013).

Some barriers to breastfeeding in the workplace include: the perception that infants at work may impede mothers job performance, lack of privacy for expressing breast milk or for breastfeeding, inability to find a day care facility at or near the workplace, the high cost of day care and long waiting periods and insurance regulations, building codes, and other rules that limit infants and children in workplaces. Women in low-wage jobs may

face substantially greater barriers to breastfeeding than those in higher-wage jobs (Johnston & Esposito, 2007).

A study in Saudi Arabia cited the following as Barriers that prevent Saudi women from breastfeeding their children: Embarrassment from lactation in public (83.2%), insufficient milk production (61.4%), too busy at work and breastfeed (57.0%), and mother in pain (58.8%) (Saied, Mohamed, Suliman, & Anazi, 2013).

#### **2. 4 Workplace Facilities for Breastfeeding Support**

To promote and facilitate breastfeeding practices among working mothers, there is the need for workplace support system and facilities for breastfeeding mothers. This is important because the lack of space and flexible time to express breast milk were found to be associated with breastfeeding discontinuation (Burgess J, 1998). Another area of concern is, providing physical facilities at workplace settings. The commonly recommended physical facilities in some literature include: onsite child care center, breast pumps, storage facilities, privacy, and most importantly, provision of time to breastfeed or express breast milk (Burgess J, 1998).

Other findings further asserts to the fact that, long term breastfeeding could be encouraged among employed mothers through workplace initiatives by provision of private, clean pumping locations and regular breaks for pumping of breast milk (Lewallen , Dick , Flower , Powell , Zickefoose , Wall , et al, 2006). Also, while supporting the need for physical facilities at workplace, a study in New Jersey, revealed that out of 38 working mothers who were part of a workplace breastfeeding support program, 22 continued breastfeeding for a longer duration (mean duration 11.7 months, range 4-24 months) as compared to mothers (16) who only had maternity leaves without

workplace support program (mean duration 6 months, range 1-18 months) (Katcher, & Lanese, 1985).

As part of workplace breastfeeding support and promotion, a number of corporate organizations instituted a lactation management promotion program for working mothers. About 97.5% mothers who were enrolled in corporate lactation program, 57.8% initiated Breast Feeding (Ortiz, 2004). In support of above evidence, Amin, et al, (2011) indicated that, 97.5% of mothers initiated breastfeeding and were supported to continue after they had received corporate sponsored lactation support program.

In addition, another quasi-experimental study conducted in two corporations in the United States revealed that, provision of physical facilities and equipment like breast pump, breast milk storage facility, pumping room, and privacy facilitated 59 working mothers in the breastfeeding group to continue their breastfeeding practices. This resulted in three times lesser rate of illness among their babies ( $p = 0.005$ ) than those who formula-fed their babies (Cohen, & Mrtek, 1995). The above finding accepted the fact that, logistic arrangements could facilitate breastfeeding promotion as a primary outcome and lowers illness rates among breastfed babies, as a secondary outcome (Seijts GH, 2002).

A related study described breastfeeding accommodation at the workplace as a provision of a private room with a breast pump, refrigerator, sink, and a desk to enables working mothers to breastfeed or express milk at work (Seijts GH, 2002). Findings from another study also reported that the arrangement of a private room for breastfeeding is the cheaper and easier aspect of support system (Seijts GH, Yip J, 2008). Additionally, a mixed method study conducted in Thailand indicated that the importance of having

private space, flexible timetable, breastfeeding breaks, and child care facilities to breastfeed, will enhance breastfeeding practices of working mothers (Yimyam, Morrow, & Srisuphan, 1999). Another study, also noted that, about 462 women showed that the provision of antenatal services, counseling, privacy, equipment for pumping and breastfeeding breaks, under a company-sponsored lactation support program, enabled 97.5% mothers to initiate breastfeeding and they were also supported to continue breastfeeding (Amin, Said, Sutan, Shah, & Darus, 2011).

To emphasize on association between breastfeeding and workplace support especially regarding the facilities, it was found that mothers who have no access to some basic facilities and support at workplace, like refrigerators were more likely to discontinue breastfeeding (Amin et al., 2011). In other study, it was found that working mothers face a lot of challenges to continue breastfeeding with employment, especially if workplace support is minimal or missing (Akbar et al., 2013). Still on workplace facility to supporting breastfeeding, Dunn et al. (2004) reported that only handful of employers (8.8%) provided onsite child care or nursery facility for working mothers who are breastfeeding. Thompson and Bell (1997) justified that, availability of workplace nursery has been reported to increase breastfeeding success among working mothers. Rojjanasrirat, (2004) on the other hand, mentioned that unpredicted workload will make breastfeeding difficult for working mothers.

## **2.5 Health Service Support to Breastfeeding Practice**

Mothers who had been given prior information about breastfeeding and are convinced, were more likely to give only breast milk for the first 6 months than those who had not (Ipekci & Ertem, 2012). The fact that an effort was made to offer counseling on how to

breastfeed, especially at "Baby-Friendly" hospitals, led to the idea that it could contribute to the positive improvement. Additionally, giving birth with the help of healthcare personnel is an opportunity for mothers to receive breastfeeding support. Hence, provision of routine counseling services by Healthcare personnel to mothers (Ipekci & Ertem, 2012).

At "Baby-Friendly" hospitals, counseling is offered to all postpartum women on breastfeeding practices (MOH-T, 2009). However, there are studies that report no difference between women giving birth with the help of healthcare personnel and those giving birth at home with the help of the local midwife. For example, Gun et al. (2009) could not establish any significant correlation between the place of childbirth and the person assisting and breast milk alone being provided for the first 6 months. However, in the "Baby-Friendly" facilities, there were differences between hospital births and home births in terms of breastfeeding practices, especially where health providers personally intervene and provided breastfeeding assistance to mothers (NHS-T, 2008). Baby-Friendly hospitals policy is to bring the mother and the baby together within the first half-hour and ensure that breastfeeding starts at an early stage (Ipekci & Ertem, 2012). This kind of support system has been effective. A study in Turkey has revealed an increase in the frequency of breastfeeding from 51% and 80%. This was attributed to the baby-friendly support system for the mothers and change in the traditional structure and organizational regulations in "Baby Friendly" hospitals (Ipekci & Ertem, 2012). In relation to health education, a study found that women were four times more likely to breastfeed if they were encouraged to do so by a nurse or physician (Lu, Lange, Slusser, Hamilton, & Halfon, 2001). From the point of view of Brenda and Mary, (1996), low

breastfeeding rate could be as a result of the inadequate health care professional's advice to pregnant and lactating women on breastfeeding. So most mothers tend to terminate breastfeeding as they are unable to overcome breastfeeding difficulties they encounter during the process (Kang et al, 2000). Therefore, effective counseling and health education and promotion of breastfeeding will be an effective intervention to increase the breastfeeding rate.

## **2.6 Breastfeeding Counseling Service**

The counseling, as defined by WHO/UNICEF, is “Listening to clients and helping them decide what is best for them among various options or suggestions; in addition, helping them to have the confidence to carry out their decisions. Behavioral change and communication are the key components in infant and young child feeding practices. Effective counseling services from health care providers enables a mother to make an informed decision in improving on her child feeding practices (WHO/UNICEF, 2008). Providing Mothers with adequate information through counseling boost their confidence in practicing exclusive breastfeeding and this emphasizes the role of health workers in shaping the feeding practices of mothers (Black et al, 1990). However, in terms of the source of mothers information there was no relationship between the source of information and her current feeding practices (Sika-bright, 2011). Singh, (2013) observed that, there is a reduction in breastfeeding trend among educated and women with higher socioeconomic status. She, therefore, suggested intensive Information Education and communication (IEC) on adolescent and young girls regarding infant feeding practices at school. Provision of prenatal breastfeeding education and frequent lactation counseling increase breastfeeding practices (Ortiz, 2004). Counseling and support by health care

providers have been shown to be an essential tools in mother's decision to practice breastfeeding (Arora et al.2000, Philipp, et al, (2001).

## **2.7 Employment and Breastfeeding Practices**

Bick et al. (1998 as cited by Sika –bright, 2011) stated that Mother's level of education and employment status have a significant relationship to infant feeding practices. She 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 with short maternity leave will find it difficult to maintain breastfeeding as would those who are doing full time as oppose part-time. This assertion resulted from the fact that 60% of under two months infants were mixed fed, 38% received formula feeding and only 2% were exclusively breastfed among the study groups.

Workplace support system or a policy that seeks to promote, protect and support breastfeeding should provide education to working mothers and create awareness on the importance of breastfeeding to the employer in particular. In supporting the process, the system should provide accommodation at the workplace; arranging physical facilities for lactating mothers like privacy, childcare facilities, breast pumps, and breast milk storage facilities and job flexibility to working mothers (Akbar et al., 2013). Early mixed feeding by working mothers occurred after 3 months of maternity leave (Bick, et al, 1988). Studies by Brown et al., (2001); Dunn et al., (2004); and Witters-Green, (2003) revealed that the majority of workplaces in their studies did not have policies on breastfeeding for their employees. Only 4.4% employers provided workplace breastfeeding policy in

Colorado (Dunn et al, 2004). Such a policy allows working mothers to have access to their babies for breastfeeding. It also enables breastfeeding working mothers to have flexible work schedules, reduce workload and adequate maternity leave. Well-informed employers can help promote breastfeeding practice among working mothers. This was confirmed in a study which highlighted that, raising employer's awareness about benefits of breastfeeding is one of the essential interventions in workplace settings (Thompson & Bell, 1997). Other findings have also agreed that, employers and managements knowledge on the benefit of breastfeeding could install receptivity among co-workers with regard to breastfeeding accommodation for employed mothers (Seijts % Yip, 2008).

Also, an Australia-based project that aimed at promoting a balance between breastfeeding and employment indicated that provision of educational material to workplaces helped employers in reviewing their existing workplace policies. Hence, increased in breastfeeding support at the workplace (McIntyre, Pisaniello, Gun, Sanders, Frith, 2002). Amin et al. (2011) found that, more mothers who worked in the private sector about 57% had discontinued breastfeeding than mothers who worked with the public sector 40%.

A national survey in 2005, showed that, the rate of exclusive breastfeeding in Taiwan at one month postpartum was only 22.3% and dropped to 16.7% at three months (Chien, Chu, Tai, & Lin, 2005). To bring Taiwan in line with WHO guidelines, effective worksite strategies was implemented to encourage new mothers to breastfeed in the workplace (Chen, Wu, & Chie, 2006).

## 2.8 Policies/Legislations That Support Working Mothers On Breastfeeding

Breastfeeding Mothers and families need support for their children to be optimally breastfed. Actions that help protect, promote and support breastfeeding at all level should be enforced by all stakeholders. WHO and UNICEF have urged all nations to support breastfeeding by:

- Adoption of policies such as the International Labour Organization's Maternity Protection Convention 183 and the International Code of Marketing of Breast-milk Substitutes.

- Implementation of the Ten Steps to Successful Breastfeeding specified in the Baby-Friendly

Hospital Initiative, including:

- . Skin-to-skin contact between mother and baby immediately after birth and initiation of breastfeeding within the first hour of life.

- . Breastfeeding on demand (that is, as often as the child wants, day and night)

- . Rooming-in (allowing mothers and infants to remain together 24 hours a day) not giving babies additional food or drink, even water.

- Provision of supportive health services with the infant and young child feeding counseling during all contacts with caregivers, such as during antenatal and postnatal care, well-child, and sick child visits and immunization.

- Finally, Community support, including mother support groups and community-based health promotion and education activities.

Studies have revealed that length of maternity leave is positively associated with the duration of breastfeeding (Hammer, Bryson, & Agras, 1999). In view of this, the International Labour Organization (ILO) recommends a period of maternity leave of not less than 14 weeks (Organization IL: Maternity Protection Convention 183). However, the typical maternity leave in many Asian and Middle Eastern countries and sub-Saharan African falls below these levels.

In the USA, about 38 states have enacted some legislations in support of breastfeeding. Some of these laws include: exempting breastfeeding from public indecency law, considering breastfeeding a valid excuse for exemption from jury duty, waiving sales and other taxes for products manufactured for initiating, supporting and sustaining breastfeeding (Chen, Wu, & Chie, 2006).

## **2.9 Breastfeeding Support for Working Mothers in Ghana**

In Ghana, one thing that limits women in terms of progress in their career is childbirth. When a woman gives birth, she needs rest, and she needs to breastfeed the child exclusively for six months. However, current maternity leave policy does not allow a mother to do so. In November 2013, the Ghana Medical Association called for the review of labour law to grant mothers six months maternity leave instead of current 3 months, and also a mandatory establishment of nurseries in all public and private institutions. The association added that, exclusive breastfeeding among working nursing mothers must be encouraged and health facilities in the country should be baby friendly (GNA, 2013). In supporting the GMA call, a study has also revealed that adequate maternity leave policies might increase breastfeeding practices sufficiently to prevent one to two neonatal deaths

per 2,000 live births (Ruhm, 2000). Gantry. (1997) proposes that 16-week maternity leave is considered ideal for helping mothers establish and maintain a good milk supply.

Maternity leave duration is a key determinant of breastfeeding practice of a working mothers. Several studies have established that fact. Authur, et al (2003) reported that longer maternity leave increased duration of breastfeeding practice. Visness, et al. (1997) also established a similar relationship. Additionally, Sika-bright, (2011) on the other hand realized that mothers with short maternity leave will find it difficult to maintain breastfeeding. However, a study by Amin, et al, (2011) did not support this assertion that longer maternity leave results in a better opportunity for working mother to breastfeed.

#### **2.10 Breastfeeding Legislation and Policies in Ghana**

In 1991, Ghana adopted Baby-Friendly Hospital Initiative (BFHI) strategy and constituted an authority to oversee the implementation of the initiative. Under the strategy health facilities with the maternity units were to be designated as Baby Friendly after training and assessing on ten steps to successful breastfeeding. The strategy also makes room for training of mother support groups in the communities to support lactating mothers on breastfeeding practices (Otoo, Larrey, Perez-Escamilla, 2009).

Another measure instituted to further strengthen breastfeeding was the promulgation of Ghana Breastfeeding Promotion Regulation 2000 (LI 1667). The main aim of the regulation was to prevent marketing of breast milk substitutes and thus promote breastfeeding in Ghana (IBAN, 2000)

### **2.11 Breastfeeding Recommendations/ Policies Adopted in Ghana**

- Early initiation of breastfeeding within one hour after birth.
- Exclusive breastfeeding for six months no water, no food and medication, unless medically

Indicated and continuing breastfeeding up to two years and beyond

- Introduction of appropriate complementary feeding at six month
- Baby friendly hospital initiative (implement ten steps)
- Breastfeeding Promotion Regulation 2000 (LI.1667, 20I00)

### **2.12 Occupation**

Any job which earns an individual a living or an activity that occupies one's time for a pay is and an occupation (Eencater dictionary, 2009). Overall, 75 percent of women age 15-49 who are in their reproductive age are currently employed and majority of them are married and reproducing (GSS, 2008).

Eleven percent of employed women are skilled manual workers. Five percent are working in professional, technical and managerial positions (GSS, 2008). The proportion of women currently employed is about 67 percent in the Greater Accra. Most of them are engaged in sales or service sector, others are in professional, technical and managerial positions. About 30% working women are in the agricultural sector (GSS, 2008). Regarding the relation between occupation and breastfeeding practices, mothers who did not work outside their homes, were more likely to continue breastfeeding than those who

were employed (Kurinu, Shiono, & Ezine, 1989). But in a related study by Basnet, et al's (2012), relationship between occupation and breastfeeding practices was not observed.



## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1. Type of Study**

The study design was cross-sectional. It described the breastfeeding behavior and workplace support for working mothers in Accra. It also identified the health service support to breastfeeding working mothers.

#### **3.2. Study Location /Area**

The study was conducted in Accra Metropolitan area of Greater Accra Region. The Accra Metropolitan Area is one of sixteen districts in the Greater Accra Region. It is the national as well as the regional capital. It occupies a land area of approximately one hundred and forty-four kilometers square (144km<sup>2</sup>. Sq.). The metropolitan area shares boundaries with two districts. Ga East in the Northern part and part of Ga West District. The Southern part of the metropolis is bordered to the ocean (Gulf of Guinea).

By the Local Government Structure, Accra Metropolitan Health Directorate geographical area has ten (10) sub-metropolitan areas. These are Ablekuma Central, Ablekuma South, Ablekuma North, Okaikoi South, Okaikoi North and Ayawaso West. The rest are Ayawaso Central, Ayawaso East, Osu Clotney and Ashiedu Keteke. In terms of land area Ablekuma is the largest whilst Ashiedu Keteke is the smallest. Ablekuma has the largest population and Ashiedu Keteke is the least populous (Accra Metropolitan Health Directorate Annual report, 2013).

The study area was chosen because of its high population of working women in the Metropolis. In Greater Accra, the proportion of women currently employed is about 67

percent (GSS, 2008). Two sub-metropolitan areas, Ayawaso West and Okaikoi North were randomly selected for the study.

### **3.3 The Study Location**

The study was conducted in selected daycare centers (crèches) within the Ayawaso West, and Okaikoi North sub-metropolitan areas as the study centers for data collection. It was the contact point where working mothers of children 4-23 months who brought their children to crèche were interviewed. Two health facilities, Legon Hospital and Achimota hospital where mothers usually seek services were also visited.

### **3.4 Study Population**

Although the Metropolitan area covers a small land area, it has about 70% of Greater Accra Region's population, that is One million eight hundred and fifty-seven and five hundred and fifty-seven (1,857,557) (projected, 2010 census). The projected sub-metropolitan population of Ayawaso West and Okaikio North are 84,321 and 265,916 respectively (Projected, 2010 Census).

Health services delivery in the Accra Metropolitan area is provided principally by Government Health Centers and a number of private clinics and maternity homes. A Total 1 of 93 private health institutions, 7 Quasi Government. The current Government hospitals in the metropolis are 5 with 4 polyclinics, 14 clinics and 11 CHPS zones (Accra Metropolitan Health Directorate Annual report, 2013).

### **3.5 Study Variables**

The outcome or dependent variable that was measured in the study was:

- Breastfeeding Practice (Timely initiation, exclusive breastfeeding and pre-lacteal feeding)

The independent variables or exposure variables that were associated with the outcome variable includes:

**Mothers characteristic**

- Age
- Educational status
- Marital status
- Occupation
- Economic status
- Number of children
- Child age (in completed month)



**Work –related factors**

- Type of work
- breast-feeding policy
- Maternity leave duration
- Workload after leave
- Workplace BF promotion program
- Workplace nursery
- Breastfeeding breaks

**Health service support**

- Access to breastfeeding information
- Access to breastfeeding support
- Counselling
- Home visit
- Availability of health service
- Health provider knowledge/skills

Barriers to breastfeeding



### **3.6. Target Population**

The study population was in different categories. The first group comprised of working mothers with children between the ages of 4-23 months old who had resumed work were interviewed. Here, a working mother is a woman who is engaged in any income generating activity outside her home that normally takes her away from her child.

The second category of the study population also included health care providers such as Community Health Nurses, Midwives and Nutrition officers. These health care providers usually provide breastfeeding support service to the mothers either during antenatal, post-natal or delivery.

### **3.7. Sampling**

#### **3.7.1. Sample Size**

The sample size was calculated based on the prevalence rate of exclusive breastfeeding rate, which is currently 46% in Ghana (MICS, 2011). The calculation was based on the formula  $n = (z^2pq)/e^2$ . With 95% confident interval and at 0.05 degree of freedom or desire level of precision. An estimated sample size of 400 respondents was arrived. This, however, included 10% non-respondents.

#### **3.7.2 Sampling Method**

The study employed three-staged sampling techniques. The First stage involved selection of two sub-metropolitan areas within Accra metropolis. With the simple random method, two sub-metropolitan areas were selected by writing the names of all the ten sub-metropolitan areas on a sheets of paper, folded and dropped into a box. The box was shaken vigorously. Two people were then asked to pick one piece of paper each from the box without opening, the two persons picked Ayawaso West sub-metropolitan area which

has a total population of 84,321 and Okaikio North Sub metropolitan area with population of 265,916 inhabitants.

The second stage of the sampling process involved selection of ten crèches from the two sub-metropolitan areas for the respondents. The number of crèches per sub-metropolitan area was proportionally determined based on the population of the area and the sample size of the study. For instance, out of the 400 respondents sampled, 305 (76 %) were obtained from Okaikoi North sub-metropolitan area which has a population of 265,916. The other proportion 95 (24%) of respondents from Ayawaso west sub-metropolitan area with population 82,321.

A total of ten day-care centers (Crèches) were selected proportionally and randomly on the basis of the population of the two sub-metropolitan areas. This translated into eight crèches from Okaikoi North and two from Ayawaso West. In selecting the crèches, a list of crèches within each sub metropolitan area was obtained. At Okaikoi North, a list of 19 crèches were identified and assigned a unique number, then one digit random number was generated from the pool of numbers between 1-19 using a Microsoft office 2010 excel sheet. The first eight single digits numbers that were generated by the random number generator were selected as the crèches for the Okaikoi North. The same process was done to select two crèches at Ayawaso west sub-metropolitan area.

The third stage of the sampling procedure employed systematic sampling procedure to identify respondents (working mothers of children from 4-23 months). At each selected crèche, the population of the eligible children (4-23 months) was obtained from the school register. The population was used to determine proportionally, the number of respondents to be interviewed at each crèche. The same register was used to compile

names all eligible children between the ages of 4-23 months. The list of the eligible children was then numbered and divided by the total number of eligible children targeted for that crèche in order to obtain a sampling interval. With the sampling interval calculated, an arbitrary number was then selected as a starting point on the list of eligible children (sampling frame). After locating the starting point on the list, then every other child on the list was picked per the interval till the total number respondents required from that crèche was obtained. All the children who were picked were selected by chance and their mothers became study respondents. However, this was subjected to her acceptance to participate. Again all selected children, their mothers were contacted and were informed for their consent and participation. Mothers who refused to participate were replaced by the next child on the list. The same procedure was replicated in all the other selected crèches.

Regarding the health providers, two health facilities within the study area were purposively selected. They were Legon Hospital and Achimota Hospital. All 24 health providers such as Midwives, Community Health Nurses, and Nutrition Officers, who usually deal with breastfeeding mothers at maternity and Child Welfare Clinics were all interviewed.

### **3.8 Data Collection Technique/Methods & Tools**

The study which was cross-sectional collected only quantitative data with the use of a structured questionnaire for working mothers and health care providers. The questionnaire was designed in four different sections. The section A of the questionnaire took demographic and employment information or data of the working mothers. The next section, which was section B on the questionnaire focused on breastfeeding behavior or

practices of a working mother. Information on workplace breastfeeding support system that aimed at facilitating breastfeeding process of working mothers, as well as perceived barriers to breastfeeding, were collected under the section C of the questionnaire. The section D component of the questionnaire focused on an assessment of knowledge and health service support system that is available for working mothers with an infant who breastfeed. (Appendix1)

Each interview session lasted for about 15 minutes maximum, for health providers who were interviewed directly. For the mothers, some were given the questionnaires to take home through the crèches and submitted within 1 to 4 weeks after receiving the questionnaire. Others also granted interviewed at the crèches. Only mothers who were sampled were issued with the questionnaires or interviewed upon their acceptance. Mothers who were sampled but did not agree to take part were replaced with the next eligible child's mother on the list.

### **3.9 Quality Control**

In order to ensure the integrity of the data and its validity, as well as accuracy, the data collectors, and data entry clerks, were given an orientation on how to administer the questionnaire. The questionnaire was translated orally into the local language during the training to ensure that all the variables in each section of the questionnaire were understood. The data collectors were also trained on how to determine child's complete age in months in order to make sure non-target groups were captured. All questionnaires that were received were cross-checked and validated on a daily basis to ensure accuracy and completeness.

During data entry, the questionnaires were further screened and vetted. Others were coded where necessary before data entry was done. Uncompleted questionnaires were not entered until they were completed. The dataset was further cross checked with the questionnaires by the independent person to ascertain the accuracy of the dataset before the analysis.

### **3.10 Data Processing and Analysis**

The Data were screened, validated and coded before entered into EPI INFO software (version 3:4:1). The dataset was cross-checked again with the hard copies and ensured that every variable defined was completed and consistent. The dataset was then copied into Excel (2010 Microsoft offices). The dataset on the excel sheet was then exported into a Stata version 12 for the analysis.

The analysis results from Stata output determined mean and standard deviation of the continuous data such as maternal age, child age and number of children per a mother as well as other continuous variables. All the other variables were also analyzed using simple frequencies and percentages. They were then, summarized in a graphical and tabular presentations. Logistic regression analysis was done show whether there were any significant relations between breastfeeding practice/behavior and demographic characteristic workplace factors etc. The statistical relationships were indicated by the P-values and their corresponding odds ratios at 95% confident interval. The strength of associations obtained between breastfeeding behavior/practice of the mothers and workplace support as well as health service support were further confirmed by adjusting other for possible confounders. Tables were constructed in the excel sheet with relevant Stata output information and finally copied into Microsoft word for final write ups.

### **3.11 Statistical Methods**

The Summary or descriptive statistic was done for all variables, this were presented in tables and chart with frequencies and percentages. A student t-test was also used to compare mean and standard deviations for all continuous data such as age. Logistic regression was done to establish relationships that existed between independence and outcome variable.

### **3.12 Ethical Consideration Issue**

Prior to the interview, the purpose of the study was explained to the mothers in a letter through the school authority and sought their consent. Those who agreed to participate were then issued with a consent form and the questionnaire. Some mothers took their questionnaire home and submitted later, others also were interviewed on an individual basis at a quiet a place in order to maintain privacy and confidentiality. The respondents were informed on their right to withdraw at any time from the study if they so wish. Mothers also were told to omit or ignore any question in the questionnaire that they are not comfortable or clear with.

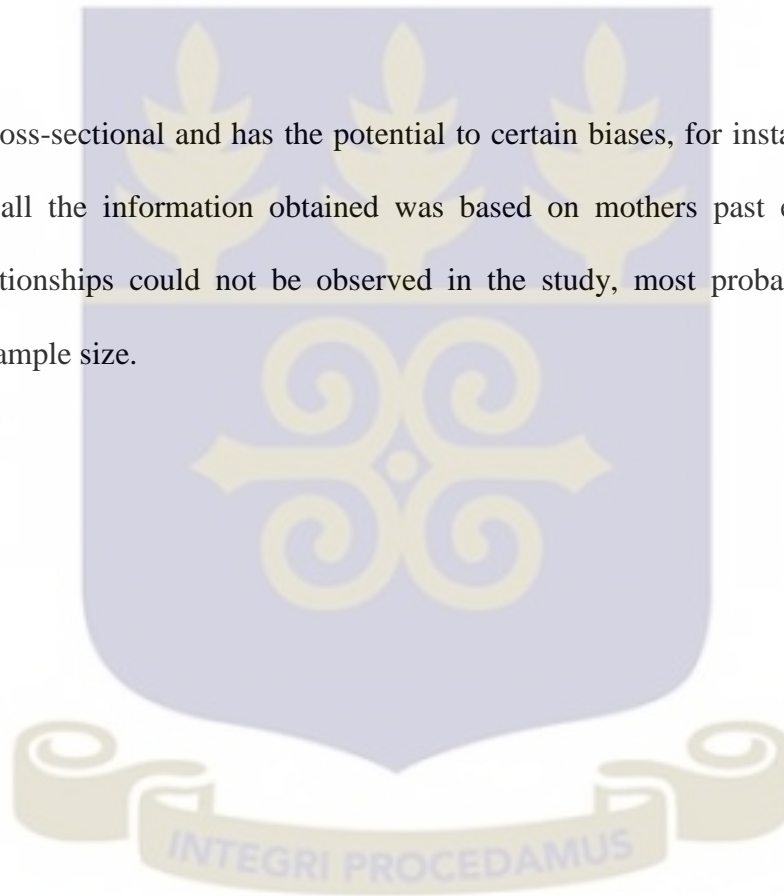
At each crèche, the proprietors and the staff were duly informed as well as the in charges of the health facilities for prior approval. The study also sought ethical approval from the Ghana Health Service Ethical Review Board.

### **3.13. Pretest/ Pilot Study**

The questionnaires were piloted or pre-tested at a non-study area with about ten working mothers. This was done to ensure feasibility and accuracy of the questions. It was also meant to test if some of the questions were answerable and could meet the objective set. The exercise also allowed for some amendment on the structure of the questionnaire prior to the data collections.

### **3.14 Limitation**

Our study was cross-sectional and has the potential to certain biases, for instance, recall biases, because, all the information obtained was based on mothers past experience. Again some relationships could not be observed in the study, most probably due to relatively small sample size.



## CHAPTER FOUR

### RESULTS

This chapter presents the results and interpretation of study data. The chapter has been sectioned into four parts. The first part highlights on working mother's socio-demographic characteristic, then second part addresses breastfeeding practices of working mothers, whereas the third part highlights on health workers support and knowledge on breastfeeding practices, and the last part focuses on workplace support for working mothers as well as their perceived barriers to breastfeeding. Additionally, regression analysis data was provided to establish relationships among the variables. Data were presented in tables, with their frequency, percentages, mean and standard deviations as well as charts.

#### **4.1 Demographic Characteristic of Working Mothers in the Study**

The study interviewed a total of 400 working mothers of children age 4-23 months and 24 health care providers within the study area. Less than half of the mothers representing 172 (40.7%) are between the age ranges of 26 to 30 years. The mean age of the mothers was 30.59 (SD 5.5) years, while the mean age of their children estimated as 10.64 (SD 4.2). More than ninety eight percent of the mothers have acquired formal education of which, half have completed tertiary level and 5 (1.3%) completed a primary level. Majority (78.3%) of the mothers are currently married with average children per mother as 2.14 (SD 1.3)

With regards to mother's employment, 43.3% and 33.3% are in public sector and private sector respectively (*Table 4.1*)

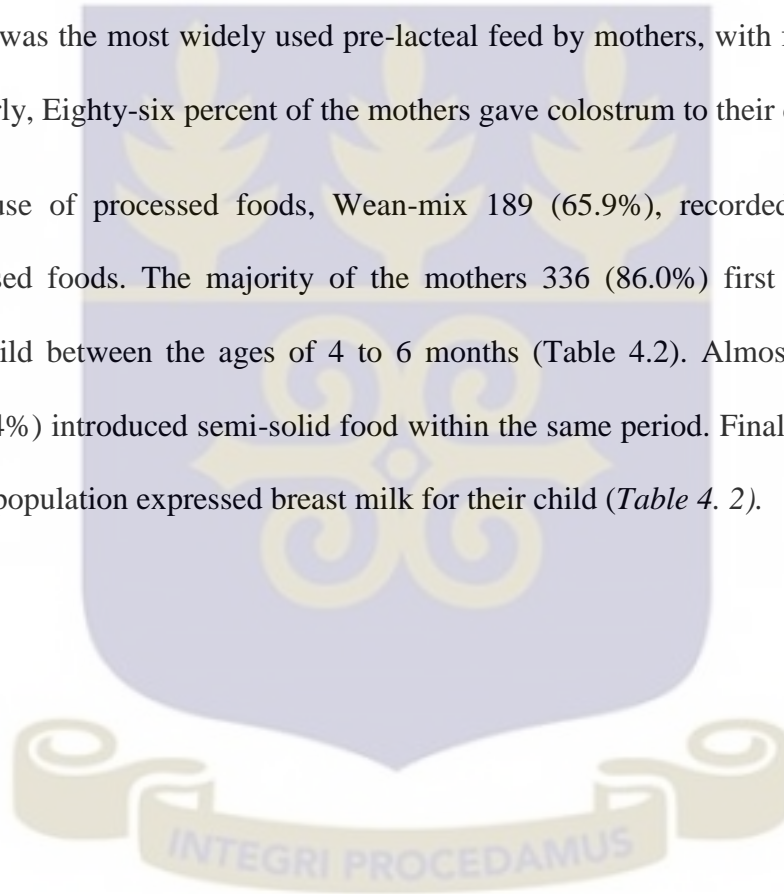
**Table 4. 1:** Demographic Characteristic of working mothers of children 4-23 months in the study in Accra, 2015

<b>Characteristic</b>	<b>n</b>	<b>%</b>
<b>Mother's Age groups (years)</b>		
20-25	50	12.7
26-30	172	40.7
31-35	86	21.7
36-49	92	23.1
<b>Highest level of Education completed</b>		
Primary	5	1.3
Junior High School	61	15.4
Middle School	28	7.1
Senior High School	106	26.0
Tertiary	200	50.6
<b>Marital Status</b>		
Single	66	16.5
Married	313	78.3
Divorce /separated/widowed	21	5.3
<b>Number of Children per mother</b>		
1-2	295	74.7
3-4	79	20.0
5-6	21	5.3
<b>Child's Age group (months)</b>		
4-9	189	47.3
10-15	154	38.5
16-23	57	14.3
<b>Occupation</b>		
Public Sector	180	45.0
Private Sector	133	33.2
Self employed	87	21.8

#### 4.2 Breastfeeding Practices of Working Mothers

All mothers interviewed have ever breastfed before. More than half of the mothers (58.75. %) initiated breastfeeding within one hour after birth, while, 105 (26.25%) started breastfeeding more than one hour after birth. Close to 31% of infants received pre-lacteal feed within the first day after birth (pre-lacteal feed is any food except mother's breastmilk provided to an infant before initiation of breastfeeding). Infant formula (84.6%) was the most widely used pre-lacteal feed by mothers, with few (4.1%) using water. Nearly, Eighty-six percent of the mothers gave colostrum to their children.

Regarding the use of processed foods, Wean-mix 189 (65.9%), recorded the most preferred processed foods. The majority of the mothers 336 (86.0%) first introduced water to their child between the ages of 4 to 6 months (Table 4.2). Almost the same number 357 (89.4%) introduced semi-solid food within the same period. Finally, close to half of the study population expressed breast milk for their child (Table 4. 2).



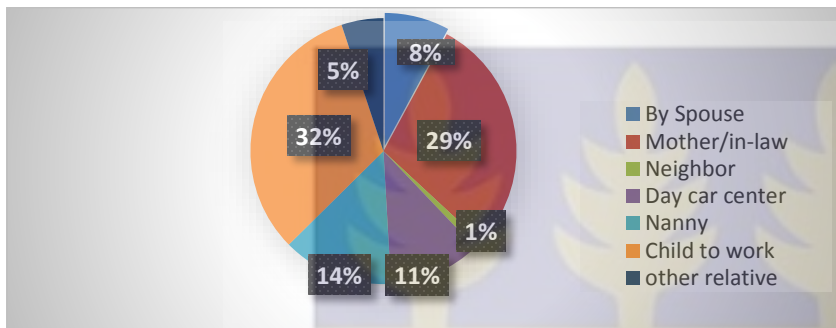
**Table 4. 2:** Breastfeeding-practices of working mothers with children 4-23 months in Accra, 2015

<b>Characteristic</b>	<b>n</b>	<b>%</b>
<b>Ever Breastfed</b>		
Yes	400	100.0
<b>Time of Initiation of Breastfeeding after Birth</b>		
Within one hour	235	58.75.
>Hours	105	26.25
>24 hours	60	15.0
<b>*Infant received Pre-lacteal feed</b>		
Yes	123	30.8
<b>Type of Pre-lacteal Feed given</b>		
Milk	14	11.4
Plain water	5	4.1
Infant Formula	104	84.6
<b>Currently Breastfeeding mothers</b>		
Yes	306	77.7
<b>Number of Infant who received Colostrum</b>		
Yes	348	85.8
<b>Mothers who Expresses and Store Breastmilk</b>		
Yes	179	48.8
<b>Infant Fed with processed food</b>		
Yes	287	76.3
<b>Type of food processed foods used</b>		
Cereal	91	31.7
Cow gate Cereal	7	2.4
Wean Mix	189	65.9
<b>Exclusive breastfeeding duration</b>		
1-3months	56	14.3
4-6months	336	86.0
<b>Age at start of complementary feeding (months)</b>		
1-3months	29	7.5
4-7months	357	92.5

\*(pre-lacteal feed is any food except mother's breastmilk provided to infant before initiation of breast feeding)

### 4.3 Mode of Child Care after Maternity Leave

From the figure 2 below, 32% of the mothers took their children to work when their maternity leave expired, and about the same number also left the child under the care of their mothers or mother in-laws. Meanwhile, mothers who left their children with nannies and those who send to day care centers were 14% and 11% respectively.



**Figure 2:** Mode of child care after maternity leave

### 4.4 Workplace Breast Feeding Support for Working Mothers

Mothers, representing 299 (94.9%) reported having no breastfeeding policy at their workplace. Only 90 (28.6%) mothers, reported that they have a nursery at or near their workplace. Still on work place support, more than ninety percent of the mothers indicated that they were not entitled to maternity leave at their work place.

Regarding the Duration of maternity leave mothers enjoy, fifty- two percent of the mothers were entitled to between 2 to 3 months maternity leave. But average duration of maternity leave was estimated as 3.64 (SD 0.9) months. Only a few mothers 41.7% were allowed to send their children to work when the maternity leave expired. Mothers 234 (74.2%) reported that their workload reduced immediately they return to work, whereas 81 (25.7%) said their workload remained the same. Moreover, mothers 170 (59.9%) were

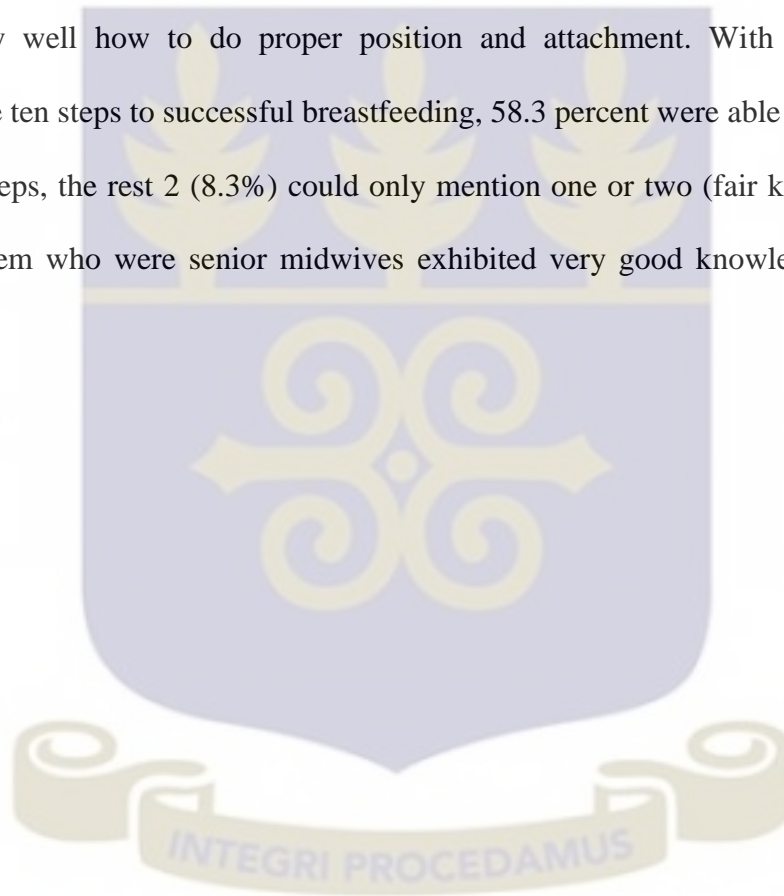
not allowed to breastfeed at work. Concerning the availability of workplace breastfeeding promotion programme, only 9 (2.9%) of mothers indicated they have. (Table 4. 3)

**Table 4. 3:** workplace breast feeding support for working mothers with children 4-23 months in Accra, 2015

<b>Characteristic</b>	<b>n</b>	<b>%</b>
<b>Workplace Breastfeeding policy</b>		
Available	16	5.1
Not available	299	94.9
<b>Nursery at or near Workplace</b>		
Available	90	28.6
Not available	223	71.0
<b>Mothers who were entitled to Maternity Leave</b>		
Yes	296	90.2
<b>Duration Maternity leave given (months)</b>		
2-3	156	52.7
4-5	121	40.88
6 and above	19	6.42
<b>Mothers who reported that they were allowed to send their child work</b>		
Yes	123	41.7
<b>Reduction in workload after returning to work</b>		
Yes (reduced working hours)	238	74.2
No (same working hours)	81	25.7
<b>Mothers who were allowed Breastfeeding break at Work</b>		
Yes (Allowed )	114	40.1
No (Not allowed)	170	59.9
<b>Time allowed for break</b>		
<30minutes	96	90.2
>60minutes	18	9.8
<b>Workplace breastfeeding Promotion program</b>		
Exist	9	2.9
Don't exist	306	97.1

#### 4.5 Health Provider Knowledge on Breastfeeding Practices

Less than half of the Health providers interviewed had received an in-service training on lactation management. While, the rest 54.2% were trained at the school. Fifty percent of providers have a very good knowledge on the importance of breastfeeding and could counsel mothers very well. Although all the health workers interviewed, said they knew how to position and attach a child to the breast. However, only 9 (37.5%) were able to demonstrate very well how to do proper position and attachment. With regards to knowledge on the ten steps to successful breastfeeding, 58.3 percent were able to mention more than five steps, the rest 2 (8.3%) could only mention one or two (fair knowledge). But 29.2% of them who were senior midwives exhibited very good knowledge in ten steps. (Table 4.4)



**Table 4. 4:** Assessment of Health provider knowledge and skills on breastfeeding in Accra, 2015

<b>Characteristic</b>	<b>n=24)</b>	<b>%</b>
<b>Trained in lactation management</b>		
(Only Pre-service training )	13	54.2
(Both In-service training and Pre-service training)	11	45.8
<b>Knowledge on importance of breastfeeding</b>		
Fair	2	8.3
Good	10	41.7
Very Good	12	50.0
<b>Can you demonstrate how to position and attach a child to breast</b>		
Yes	24	100.0
<b>Skills in demonstration</b>		
Fair	2	8.3
Good	13	54.1
Very Good	9	37.5
<b>Knowledge about breastmilk production techniques</b>		
Fair	3	12.5
Good	15	62.5
Very Good	6	25.0
<b>Knowledge on advantage of cup feeding over bottle feeding</b>		
Fair	1	4.2
Good	13	54.2
Very Good	10	41.7
<b>Knowledge on ten step to successful breastfeeding (mention)</b>		
Fair	3	8.3
Good	14	58.3
Very Good	7	29.2

#### 4.6 Health Provider Support to Working Mothers

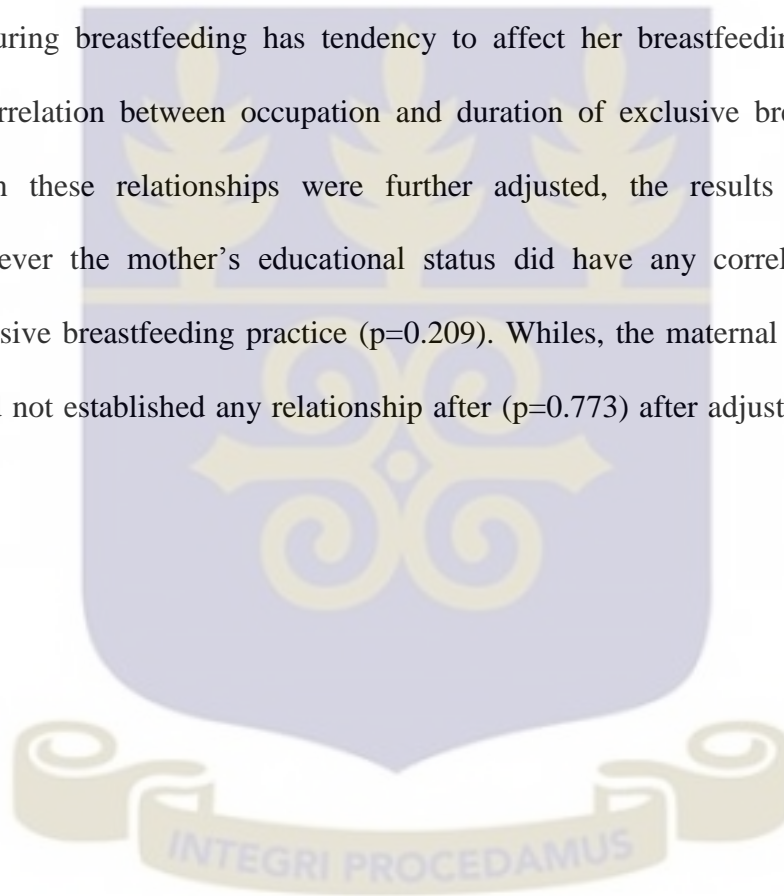
Most mothers representing 373 (94.9%) have ever received some information on breastfeeding practices. Health facility 341 (91.4%) were the major source of breastfeeding information and education. Most mothers (88.1%) said, they were shown how to put child to breast after their delivery, Midwives were highly 297 (78.1%) mentioned Regarding the type of support received from health providers, over ninety percent of the respondent said, they were counselled on feeding practices. On the issue of home visit by health providers, the greater number of mothers 303 (83.0%) said, they have never been visited by a health provider at home. (Table 4.5)

**Table 4. 5:** Health provider support to working mothers with children 4-23 months in Accra, 2015

<b>Characteristic</b>	<b>n</b>	<b>%</b>
<b>Mothers reported ever received information on breastfeeding</b>		
Yes	373	94.9
<b>Support health workers provide to mothers</b>		
Counselling	388	92.7
<b>Mothers who reported visited and supported at home by health provider</b>		
Yes	62	17.0
<b>Mothers source of breastfeeding information</b>		
Health Facility	368	92.0
Media	18	4.5
Relatives	14	3.5
<b>Mothers who were showed how to put child to breast after delivery</b>		
Yes	333	88.1
<b>Persons who show mothers how to put child to breast</b>		
Midwife	302	75.5
Nurse(CHNs)	53	13.3
Friend/Relative	14	5.5
Doctor	26	6.5

#### **4.7 Relationship between Mother's Demographic Characteristic with Duration of Exclusive Breastfeeding Practice**

On the relationship between mother's demographic characteristic and duration of exclusive breastfeeding practice, mothers who are married are more likely to exclusive breast feed for longer. This correlation was strongly established between the duration of exclusive breastfeeding and the marital status ( $p < 0.001$ ). Mothers who engage in any form of work during breastfeeding has tendency to affect her breastfeeding practice hence, strong correlation between occupation and duration of exclusive breastfeeding ( $p < 0.001$ ). When these relationships were further adjusted, the results were still significant. However the mother's educational status did have any correlation with duration of exclusive breastfeeding practice ( $p = 0.209$ ). Whiles, the maternal age on the other hand, could not established any relationship after ( $p = 0.773$ ) after adjusting. (Table 4.6 & 4.7)



**Table 4. 6:** Relationship between duration of exclusive Breastfeeding with Demographic Characteristic of working mothers in Acara, 2015-Unadjusted

Characteristic	Duration of Exclusive Breastfeeding			
	n (%)	OR	95% CI	P-value
<b>Mother's Age groups (years)</b>				
20-25	60(15.0)			
26-30	162(40.5)	1.45	1.08-1.96	0.014
31-35	86(21.5)			
36-49	92(32.0)			
<b>Highest level of education completed</b>				
Primary	5(1.3)			
Junior High School	61(15.3)	1.16	0.92-1.47	0.209
Middle School	28(7.0)			
Senior High School	106(25.5)			
Tertiary	200(50.0)			
<b>Marital status</b>				
Single	66(16.5)			
Married	313(78.3)	3.56	1.96-6.49	0.001
Divorce /separated/widowed	2(2.3)			
<b>Number of children</b>				
1-2	295(74.7)			
3-4	79(20.0)	1.08	0.85-1.37	0.520
5-6	21(5.3)			
<b>Child's age groups (months)</b>				
4-9	189(47.3)			
10-15	154(38.5)	1.03	0.96-1.10	0.458
16-23	57(14.3)			
<b>Occupation</b>				
Public Sector	180(45.0)			
Private Sector	133(33.2)	0.59	0.41-0.84	0.004
Self employed	87(21.8)			

**Table 4. 7:** Relationship between duration of exclusive breastfeeding with demographic characteristics. Adjusted

Characteristics	n (%)	Duration of Exclusive Breastfeeding		
		AOR	95% CI	P-value
<b>Mother's Age groups (years)</b>				
20-25	60(15.0)			
26-30	162(40.5)	1.05	0.73-1.48	0.778
31-35	86(21.5)			
36-49	92(32.0)			
<b>Marital status</b>				
Single	66(16.5)			
Married	313(78.3)	3.11	1.69-5.71	0.001
Divorce /separated/widowed	2(2.3)			
<b>Occupation</b>				
Public sector	180(45.0)			
Private sector	133(33.2)	0.58	0.41-0.84	0.004
Self employed	87(21.8)			

#### 4.8 Relationship between Work Place Support Factors with Duration of Exclusive Breastfeeding

The result indicated a strong and positive relationship between availability of workplace nursery ( $p=0.019$ ), duration of maternity leave ( $p=0.001$ ) and mode of child care when mother resumes work ( $p=0.002$ ) on breastfeeding practice. When the result was adjusted, it was revealed that only duration of maternity leave ( $p=0.003$ ) and mode of child care when mother resumes work ( $p=0.002$ ) were significantly associated with breastfeeding practices. (Table 4.8&4.9) This result implies that duration of maternity leave and mode of child care when mother resumes work has a great tendency of influencing the breastfeeding behavior of a working mother.

**Table 4. 8:** Relationship between Duration of exclusive breastfeeding practice and workplace support of working mothers in Acara, 2015. Unadjusted

Characteristics	Duration of Exclusive Breastfeeding			
	n(%)	OR	95% CI	P- value
<b>Workplace breastfeeding policy</b>				
Available	16(5.1)			
Not available	299(94.9)	0.99	0.99-1.00	0.074
<b>Nursery at or near workplace</b>				
Available	90(28.6)			
Not available	223(71.0)	0.99	0.98-0.99	0.019
<b>Mothers who were entitled to maternity leave</b>				
Yes	296(90.2)	1.33	0.39-4.62	0.655
<b>Maternity leave duration given (months)</b>				
2-3	156(52.7)			
4-5	121(40.9)	6.10	2.37-15.74	0.001
6 and above	19(6.42)			
<b>Mothers who reported that they were allowed to send their child Work</b>				
Yes	123(41.7)	0.99	0.98-1.00	0.078
<b>Reduction in workload after returning to work</b>				
Yes (reduced working hours)	238(74.2)			
No (same working hours)	81(25.7)	0.99	0.99-1.00	0.168
<b>Mothers who were allowed Breastfeeding break at work</b>				
Yes (Allowed )	114(40.1)			
No (Not allowed)	170(59.9)	1.00	0.99-1.00	0.775
<b>Person with child when mother resumed work</b>				
Spouse	31(7.9)	1.22	1.07-1.39	0.002
Mother	138(30.1)			
Day care center	44(11.2)			
House help/Nannies	53(13.5)			
Took child to work	127(32.3)			
<b>Workplace breastfeeding Promotion program</b>				
Exist	9(2.9)			
Not exist	306(97.1)	0.99	0.98-1.00	0.075

**Table 4. 9:** Relationship between duration of exclusive breastfeeding practice and work place support for working mothers in Acara 2015: Adjusted

Characteristics	Duration of Exclusive Breastfeeding			
	n(%)	AOR	95% CI	P-value
<b>Duration maternity leave (months)</b>				
2-3	156(52.7)			
4-5	121(40.9)	5.07	1.76-14.62	0.003
6 and above	19(6.42)			
<b>Person with child when mother resumed work</b>				
Spouse	31(7.9)	1.22	1.76-1.39	0.002
Mother	138(30.1)			
Day care center	44(11.2)			
House help/Nannies	53(13.5)			
Took child to work	127(32.3)			

#### 4.9 Relationship between Exclusive Breastfeeding Duration and Breast Feeding Practices

##### Practices

The result revealed that mother's breastfeeding practices had no relationship with exclusive breastfeeding. From this result, it can be concluded that time of first breastmilk initiation, express and storage of breastmilk, and mothers show how to breast feed had no influence on exclusive breastfeeding.

**Table 4. 10:** Relationship between Duration of exclusive breastfeeding with breastfeeding practices. Unadjusted.

Characteristic	Duration of Exclusive Breastfeeding			
	n (%)	OR	95% CI	P-value
<b>Time of initiation of breastfeeding after Birth</b>				
Within one hour	235(58.7)			
>Hours	105(26.2)	0.932	0.72-1.19	0.576
>24 hours	60(15.0)			
<b>Number of infants who received colostrum</b>				
Yes	348(85.8)	0.99	0.98-1.000	0.606
<b>Number of mothers who expressed and stored breastmilk</b>				
Yes	179(48.8)	1.04	0.96-1.13	0.256
<b>Mothers showed how to breastfeed after delivery</b>				
Yes	333(88.1)	1.03	0.92-1.10	0.23

#### 4.10 Mother's Perceived Barriers to Breastfeeding Practice

The commonly perceived barriers cited by the mothers were fear of distorting breast shape 233 (58.3%), embarrassment from lactation in public places 275 (70.7%), Busy Schedule to breastfeed 251 (63.4%), fear of disease transfer to kid 221 (55.3%), husbands discouraged breastfeeding (66%) and inadequate knowledge 200 (50.0%) (*Table: 4.11*)

**Table 4. 11:** Perceived Barriers to Breastfeeding

Variables	n	Agree n (%)	Neutral n (%)	Disagree n (%)
Pain	400	140 (35.0%)	114(28.5%)	146(36.5%)
Fear of distorting breast shape	400	233(58.3%)	99(24.8%)	69(17.3.0%)
Poor Pre and post -natal support	395	182(46.1%)	150(38.0%)	63(15.9%)
Perceived not enough milk	395	191(48.4%)	128(32.4%)	76(19.2%)
Discourage by husband	389	258(66.2%)	104(26.7%)	28(7.2%)
Embarrassment in public places	389	275(70.7%)	50(12.9%)	64(16.5%)
Embarrassment from lactating in front of family members	400	10(2.5%)	126(31.5%)	264(66.0%0
Too busy to breastfeed baby	396	251(63.4%)	57(14.4%)	88(22.2%)
House help availability encourage to give bottle feeding	387	75(19.4%)	72(18.6%)	240(62.0%)
Contraceptive intake	385	260(67.5%)	74(19.2%)	51(13.2%)
Fear of disease transfer to kid	400	221(55.3%)	80(20.0%)	99(24.8%)
Bad smell on the mother	400	186(46.5%)	128(32.0%)	86(21.5%)
Depression	400	210(52.5%)	81(20.3%)	109(27.3%)
Inadequate knowledge	400	200(50.0%)	52(15.0%)	148(37.0%)

## **CHAPTER FIVE**

### **DISCUSSION**

This section provides a critical discussion of the results derived from the field. The discussion has been done in accordance with other related studies, with a focus on this current research. For easy reading and understanding, the discussion has been done according to themes, which includes: breastfeeding practices of working mothers, workplace breastfeeding support, and health service support to mothers. Mother's demographic factors were also related to some findings as well.

#### **5.1 Breastfeeding Behavior /Practices of Working Mothers**

The study revealed that all the mothers have ever breastfed before. Out of this number, 71.4% initiated breastfeeding within one hour after birth. This is higher than the 46% reported in MICS, 2011 and 52% in GDHS, 2008 in the general population. Laxmaiah, et al. (2012) also reported that 75.8% mothers initiated breastfeeding within one hour. This is however, consistent with our findings. While our study found 14.1% of the mothers initiating after a day or more, a similar study in India reported greater (36%) proportion. To further emphasize the importance of early initiation, Ipekci et al. (2012) found early initiation of breastfeeding as fostering bonding between mother and child. National guidelines on infant and young child feeding in India, 2006, added that, early initiation is able to reduce weight loss, blood glucose level, and uncoagulated bilirubin in the serum and dehydration in infants. The difference in coverage could be due to certain biases during the design or data collection stage. There is therefore the need to conduct further study with larger sample size.

Concerning the use of pre-lacteal feeds, 30.8% of our respondents gave pre-lacteal feeds to their children before the flow of mother's breast milk. In a related study by Laxmaiah, et al. (2012), 45% of infants reported receiving pre-lacteal feeds. Additionally, in GDHS, (2008) as low as 8% of infants were reported fed with pre-lacteal feeds. Probably, a delay in starting breastfeeding within the first hour could be the reason for high pre-lacteal feeding. Additionally, an infant whose mothers undergo cesarean sections, are usually fed with other foods by health providers before the mother recovers.

This study further found that, Infant formula, milk, and plain water were the main pre-lacteal feeds mothers give to their infants, while the used of honey and cow/buffalo milk have been reported used in other studies Galhotra et al. (2008). More infants in our study received pre-lacteal before being introduced to the breast milk. The difference could be attributed to some biases in the study or the previous study. If it is a real difference then there is the need to investigate the reason for high pre-lacteal feeding. It could also imply there are a lot of breastmilk substitute available in the health facilities, which is against the BFHI policy, hence the need for further investigations.

Regarding uptake of colostrum, our result revealed that, the majority of children (85.8%) received colostrum after delivery, this high rate agrees with a similar study by Laxmaiah et al. (2012) which recorded 84.9%. Again, Galhotra et al. (2008), also reported high consumption of colostrum. A similar study in Diyarbakir City revealed that 92.4% of mothers gave colostrum to their children. This confirms mother's awareness on the importance of colostrum as a first immunization for the infants. Our study, however, did not observe any relationship with giving colostrum and duration of exclusive

breastfeeding practices. Probably as a result of some bias or due to the type of study design adopted or sample size of the study.

Timely initiation of complementary feeding (6–9 months) was observed in 58% of infants by Narayanan et al. (1988) and 48% by Gupta A, et al. (2008). However, contrary to our study 89.4% mothers introduced semi-solid food between the ages of 4 to 6 months. The mean duration at which complementary Feeding was started according to our study was 5 months. The same was reported by Basnet, et al. (2012). The early introduction of complementary food could be attributed to mothers returning to work after average three months of maternity leave. Regarding the type of solid food introduced, most mothers in our study (65.9%) started with wean mix follow by cerelac (31.7%). In another related study by Manandhar et al. (2004) and Basnet, et al. (2012) cerelac was not widely used by the mothers as the first food to the child.

Even though early initiation within the first one hour is a key determinant in contributing to the success of duration of exclusive breastfeeding (WHO, 2003). However, this study could not confirm that relationship ( $p=0.576$ ) as in a similar study by Nakao et al. (2008). However, other studies by Noughabi et al. (2014) and Eslami et al. (2009) as well as Rowe- Murray and Fisher (2002) strongly agreed with the assertion that early initiation enhances exclusive breastfeeding duration. This agreement and disagreement could be by chance or certain biases introduced during data management. It could also be attributed to difference in sample sizes.

Breast milk expression was found to be rather low (48.4%) among the working mothers in this study, this is probably due to an absence of storage facility at the workplace. But in other studies, it was found that, where there were adequate storage facility most

mothers 98% succeeded in expressing milk at work to continue practicing breastfeeding (Ortiz, 2004).

## **5.2 Workplace Breastfeeding Support for Working Mothers Practicing**

### **Breastfeeding**

The logistic regression analysis of their demographic information revealed that, the occupation of the mothers was significantly associated with their breastfeeding practices (AOR= 0.59, CI: 0.41-0.84). In an agreement with these findings, Amin et al. (2011) found that more mothers who worked in the private sector discontinued breastfeeding than mothers who worked with the Government. Similarly, in Malaysia, women working in the government sectors are more likely to have flexible time to express breast milk compared to those working in private sectors such as factories (Amin et al, 2011). However, Basnet, et al's. (2012), observed no relationship between occupation and breastfeeding practices. This could be attributed to the difference in sampling process and presence of other confounders.

To further highlight on this findings, mothers who did not work outside the home, were more likely to continue breastfeeding than those who were employed or work outside their homes. Occupation therefore relate significantly to breastfeeding practices. (Kurinu, Shiono, & Ezine, 1989). Even though it is not required by law to have workplace breastfeeding policy, it is a means of promoting the health of the child and the mother, again it also encourages the mother to combine work with breastfeeding with an arranged flexible schedules as stipulated in such policy. Most of working mothers interviewed (94.9%) reported the non- availability of breastfeeding policy at their workplaces. This findings, is in line with other studies (Brown et al., 2001; Dunn et al., 2004; Witters-

Green, 2003), which revealed that the majority of workplaces in their studies did not have policies on breastfeeding for their employees. Few (5.1%) of the working mothers in our study indicated the availability of policies. Similarly in Colorado, Only 4.4% employers provided workplace breastfeeding policy (Dunn et al, 2004). Such policy allows working mother to have access to her baby for breastfeeding. It also enables breastfeeding working mothers to have flexible work schedules, reduce workload and adequate maternity leave. (Sample Appendix 2)

With regards to workplace facility to support breastfeeding, Dunn et al. (2004) reported that, only a handful of employers (8.8%) provided onsite child care or nursery facilities for working breast feeding mothers. Our study, indicated a higher figure, as 28.9% of breastfeeding working mothers having accesses to workplace nursery either at onsite or nearby, in supporting breastfeeding and child care. Thompson and Bell (1997) justified that, the availability of workplace nursery has been reported to increase breastfeeding success among working mothers.

Moreover, there has been an indication that, the importance of having private space, flexible timetable, breastfeeding breaks, and child care facilities will enhance breastfeeding practices of working mothers (Yimyam, et al, 1999). Since there is evidence that an availability of workplace nursery help the breastfeeding mother to continue with breastfeeding practice as recommended by the policy, absence could affect exclusive breastfeeding rate.

The above finding accepted the fact that, logistic arrangements could facilitate breastfeeding promotion as a primary outcome and lowers illness rates among breastfed babies, as a secondary outcome. (Seijts GH, 2002). In identifying the kind of support for

working mothers to breastfeed, the findings from other studies reported that an arrangement of a private room for breastfeeding is the cheaper and easier aspect of support system. (Seijts, Yip, 2008). As part of the strategy to promote and facilitate workplace breastfeeding, a number of corporate organizations instituted lactation management promotion programmes for working mothers. For example, about 97.5% mothers who were enrolled in corporate lactation program, 57.8% of them initiated breastfeeding (Ortiz, 2004). In a related evidence by Amin, et al, (2011) indicated that, 97.5% of mothers initiated breastfeeding and were supported to continue after they had received corporate sponsored lactation support programme. Contrary to our findings, only 2.9% of mothers said they have a breastfeeding promotion programme at their workplace. Furthermore, a study from New Jersey revealed that out of 38 working mothers who were part of a workplace breastfeeding support programme. It was realized that 22 continued breastfeeding for a longer duration, While 16 only breastfed during maternity leaves period (Katcher, Lanese, 1985).

Further revelations reaffirmed the importance of workplace breastfeeding promotion program, as Amin, et al.(2011) indicated that, 97.5% of mothers initiated breastfeeding and were supported to continue after receiving corporate sponsored lactation support programme. Duration of maternity leave is found to be a key determinant of the duration of breastfeeding practice of a working mother. Several study have associated the duration of breastfeeding to mothers maternity leave duration. Current maternity leave of 12 weeks does not enhance the ability of working mother to exclusively breastfeed before returning to work (Labour Act, Act 651, 2003). The mean leave duration in our study was 3.64 (SD=0.9) months. Even though the majority of study respondent 90.2% are entitled

to leave, the duration is not enough to support exclusive breastfeeding duration of first six months. Our study established a very strong relationship between exclusive breastfeeding duration of a working mother with duration of maternity leave ( $P < 0.001$ ). This revelation is consistent with a similar study by Authur, et al (2003), who reported that, longer maternity leave increased duration of exclusive breastfeeding practice. Visness, et al. (1997) also established a similar relationship between breastfeeding duration and maternity leave period. Sika-bright (2011) also realized that, mothers with short maternity leave will find it difficult to maintain breastfeeding.

On the contrary, a study by Amin, et al. (2011) did not support this assertion that longer maternity leave results in a better opportunity for working mother to breastfeed optimally. The difference in findings with Amin could be attributed to the type of study design or sample size which could introduce certain biases.

Meanwhile, with the current 3 months duration, most mothers are likely to introduce other food early, as 92.5% of mothers in this study introduced solid food between the ages 4 -7 months. This agreed with. Bick, et al. (1988) who found that, early mixed feeding by working mothers occurred after 3 months of maternity leave.

Maternal workload after returning to work could make breastfeeding practice difficult. This Rojjanasrirat, (2004) agreed that, the unpredicted workload will make breastfeeding difficult. To reduce this difficulties from working mother who are breastfeeding, most mothers (74.6%) in our study said, their employers reduced their workload in terms of working hours. (i.e. close earlier than the usual time)

Another key determinant in breastfeeding practice of a working mother is the mode of child care when mother resumes work or person who takes care of child when maternity leave expires, is very critical in maintaining adequate duration of breastfeeding practice and continuation. Our study revealed that, 32% working mothers take their children to work, about the same number also live the child under the care of their mothers or mother-in-laws. Nearly 14% are being cared by nannies. All these means of child care after the mother has resumed work were found to be significantly associated with breastfeeding duration of a working mother ( $p=0.02$ ).

### **5.3 Health Service Support to Working Mothers Practicing Breastfeeding.**

Intensive support is necessary for the early stages of establishing the breastfeeding. A study found that women were four times more likely to breastfeed if they were encouraged to do so by a nurse or physician (Lu, Lange, Slusser, Hamilton, & Halfon, 2001). Ortiz, (2004) also indicated that, provision of prenatal breastfeeding education and frequent lactation counseling increases breastfeeding practice and duration.

Even though our study did not statistically indicate any association between breastfeeding practice and receiving of breastfeeding information or education, majority 94.9% of mothers said they ever received education on breastfeeding from health care providers. In relation to the support given to the mothers, 92.7% of the mothers noted that, the support they got from the health providers was basically counseling service, which is based on infant and young child feeding for growth and development. This has been agreed upon by several researchers like, Arora et al. (2000); Philipp, et al. (2001), and Ortiz, (2004) that counseling and support of health care providers has been shown to be an essential tool in a mother's decision to practice breastfeeding. Still on mother's education on

breastfeeding, Ipekci & Ertem, (2012) believe that, if a mother is given prior information about breastfeeding and she is convinced she is more likely to give only breast milk for the first 6 months than those who had not. Other similar study could not agree with this association probably due to difference in study type or some bias.

Home visit is a follow up support service, which health providers conduct to support mothers with breastfeeding difficulties. It is also use to reinforce agreed counseling actions. In our study it was found out that 83% of the breastfeeding mothers said they have never been visited at home by a health worker. However, only 17% reported that they ever been visited by a health workers at home. Competency and skills is a key in providing quality health services. To this end, the knowledge and skills of health providers such as midwives, community health nurses and nutrition officers who usual provider lactation management service to breastfeeding mothers were assessed at two health facility in the study area. All the health providers who were assessed have had training in lactation management, either through pre-service training or in-service training. Majority of the providers have adequate knowledge and skills to support breastfeeding mothers, however, quite a number need further in-service training especially how to demonstrate position and attachment. The study revealed that although all the staff responded that they knew how to position and attach a child to breast taking into consideration the key factors, only 37% were able to demonstrate accurately and appropriately as recommended.

#### **5.4 Mother's Perceived Barriers to Breastfeeding Practice**

On the issue of mother's perception about breastfeeding barriers, Majority of the mothers in our study cited fear of distorting breast shape (58.3%), embarrassment from lactation

in public places 70.7%, and busy work schedule 63.4%. These were what they perceived as the main reasons why some mothers would not like to breastfeed. Others, more than half, also think that, when they have a particular disease and breastfeed, the child would be infected, hence refusal to breastfeed. Few others also think that, inadequate knowledge on the importance of breastfeeding could prevent them from breastfeeding (Table: 11). These perceptions were equally cited by women in a study conducted in Saudi Arabia (Saied, Mohamed, Suliman, & Anazi, 2013)



## CHAPTER SIX

### CONCLUSION AND RECOMMENDATIONS

#### 6.1 Conclusion

This study sought to describe breastfeeding practice of working mothers with children 4-23 months in Accra. It further sought to identify workplace support and health service support that are available to working mothers who are breastfeeding (Working mother in this context is defined as any mother who is engaged in an income earning activity outside her home, that normally takes her away from her child).

Generally, Breastfeeding practice among working mothers was suboptimal as, Eighty nine percent started water and complementary feeding earlier than the recommended age of 6 months, couple with high pre-lacteal feeding (30.8%). This practice is likely to affect exclusive breastfeeding rate as well as child's growth and health. However, early initiation and colostrum consumption practices were encouraging.

Mother's occupation was found to have a significant association with duration of exclusive breastfeeding practices ( $p= 0.004$ ). Additionally, Duration of maternity leave was also found to be a key determinant of breastfeeding practice of working mothers and therefore, significantly associated with breastfeeding practice ( $P<0.001$ ). Currently, there is minimal support being giving to working mothers who are breastfeeding (i.e. absence of workplace policy, nursery, lack of or insufficient maternity leave and non-flexible work schedules) and this is likely to contribute to the suboptimal breastfeeding practice of working mothers.

With regards to health service support, majority of mothers (94.9%) received education on breastfeeding through counseling services during ANC, CWC and PNC sessions. This

implies that mothers are aware of importance of breastfeeding and its benefits. Despite more than half (54.2%) of health providers receiving trainings on breastfeeding, their knowledge and skills need to be updated to be able to offer quality service to breastfeeding mothers. Besides, Home visiting as a follow up strategy to support mothers was not being done well.

In addition, Mother's breast feeding practice could be influenced by certain perceptions such as fear of distorting breast shape, embarrassment from lactation in public places by exposing breast, busy work schedules and fear of disease transfer to kid among others.

In view of these findings, there is the need for review of existing labour laws and policies to enable working mothers to breastfeed optimally. It is also expected that multiple interventions will be implemented such as trainings and awareness creation and resource allocation by all key stakeholders.

## **6.2 Recommendations**

Following the above findings, the study therefore, recommends the following to various stakeholders concerned.

### **6.2.1 Government**

- Since the study has established that the duration of maternity leave is a key determinant of breastfeeding practice of working mothers. It is therefore, recommended that the ministry of employment and labour relations should urgently review the labour law which currently prescribes 12 weeks maternity leave to Ghanaian working mothers to six months. The upward review will enable working mothers to practice 6-month exclusive breastfeeding and subsequently continue till 2 years as recommended.

- Due to inadequate workplace support given to working mothers who breastfeed, such as unavailability of breastfeeding rooms, nursery, lack of breastfeeding promotion programs, as well as workplace breastfeeding policy, it is therefore, recommended that the ministry of health and ministry of employment and labour relation should institute a policy and guideline that will compel all organizations and institutions both public and private to put in place breastfeeding facilities at their workplaces.

### **6.2.2 Ministry Of Health /Ghana Health Service**

- Due to inadequate skills exhibited by some health providers on lactation management, Ghana Health Services and its partners should identify and trained frontline health providers (CHNs) on a regular basis, in order to improve their competencies.
- The institutional heads of various health facilities should conduct a training need assessment to identify staff who really need training, and train them.
- Public health unit In-charges at the facilities, should regularly supervise and mentor their subordinates.
- Nutrition Unit of Ghana Health Services should engage in a sensitization campaign on the need for workplace breastfeeding support program.

### **6.2.3 Non-Governmental Organizations**

- Non- Governmental Organizations in health should streamline their training programs towards engaging employers who are not supporting working place breastfeeding.
- Labour unions should engage the employers to enforce labour laws and policies on maternal and child health issues, particularly on breastfeeding.

#### **6.2.4 Private Sector Employers**

- Private employers who are not granting maternity leave to their employees should be reoriented on the need to support workplace breastfeeding practice.

#### **6.2.5 Mothers**

- Working mothers should plan with their employers on the modality of maternity leave and flexible work schedules by adding their annual leave to the maternity leave.

#### **6.3 Further Research Areas**

Based on the finding of this study, the following study areas are, proposed for further research:

- To investigate why some workplace does not grant their employees maternity leave.
- Investigate the impact of home visit to health delivery system
- Why mothers perceived fear of distorting breast shape as barriers to breastfeeding.
- Factors associated with introduction of pre-lacteal feeds in Accra
- Pre-lacteal rate in hospital delivery in Accra
- Colostrum and pre-lacteal feed practice in Accra

## REFERENCE

- Akbar, S., Hirani, A., & Karmaliani, R. (2013). Evidence based workplace interventions to promote breastfeeding practices among Pakistani working mothers. *Women and Birth*, 26(1), 10–16. doi:10.1016/j.wombi.2011.12.005
- Amin, R. M., Said, Z. M., Sutan, R., Shah, S. A., & Darus, A. (2011). Work related determinants of breastfeeding discontinuation among employed mothers in. *International Breastfeeding Journal*, 6(1), 4. doi:10.1186/1746-4358-6-4
- Anderson, D, Shapiro D. (1996). Racial differences in access to high-paying jobs and the wage gap between black and white women. *Industrial and Labor Relations Review*; 49(2)273286. Arora, S. et al. (2000) Major factors influencing breastfeeding rates: mother's perception of father's attitude and milk supply. *Pediatrics*; 106(5):e67.
- Authur, C. R., Saenz, R. B., & Replogle, W. H. (2003). The employment-related breastfeeding decisions of physician mothers. *Journal of Mississippi State Medical Association*, 44, 383 - 38
- Basnet, S., Gauchan, E., & Malla, K. (2012). Infant Feeding Practices in Kaski District Pokhara, 32(1), 23,27.
- Betrán ,AP, de Onís M, Lauer JA, Villar J. (2001) Ecological study of effect of breast feeding on infant mortality in Latin America. *BMJ*;323:303–6
- Bick, D. E., MacArthur, C., & Lancashire, R. J. (1998). What influences the uptake and early cessation of breastfeeding? *Midwifery*, 14(4), 242-24
- Black, R.E., Allen L.H., Bhutta Z.A., Caulfield L.E., de Onis M., Ezzati M. et al. (2008) Maternal and child undernutrition: global and regional exposures and health consequences. *Lancet* 371, 243–260.
- Brenda, M.H., Mary, E. O'Connor. (1996). Evaluation of the 'best start' breast-feeding education program. *Archives Pediatrics and Adolescent Medicine* 150, 868–871
- Brown, C. A., Poag, S., & Kasprzycki, C. (2001). Exploring Large employers' and small employers' knowledge, attitudes, and practices breastfeeding support in the workplace. *Journal of Human Lactation: Official Journal of International Lactation Consultant Association*, 17, 39 - 46.
- Burgess, J. (1998) Support must continue beyond hospital [Letter to the editor]. *British*

Medical Journal; 317(14):1385.

- Chen, Y. C., Wu, Y., & Chie, W. (2006). Effects of work-related factors on the breastfeeding behavior of working mothers in a Taiwanese semiconductor manufacturer : a cross-sectional survey, 8, 1–8. doi:10.1186/1471-2458-6-160
- Chien LY, Chu KH, Tai CJ& Lin CY. (2005). National prevalence of breast- feeding in Taiwan. *J Hum Lact*, 21(3):338-344.
- Cohen R, Mrtek MB, Mrtek RG. (1995) Comparison of maternal absen- teeism and infant illness rates ding women in two corporations. *American Journal of Health Promotion*;10(2):148-53
- Collaborative Group, on Hormonal Factors in Breast cancer. (2002)Breast cancer and Breastfeeding: collaborative reanalysis of individual data from 47 epidemiological studies in 30countries, including 50302 women with breast cancer and 96973 women without disease. *Lancet*; 360:187 - 95.
- Corbett-Dick P, Bezek SK. (1997) Breastfeeding promotion for the employed mother. *J Pediatr Health Care*. Jan-Feb; 11(1):12-9. 26.
- De La Mora, A., Russell, D. W., Dungy, C. I., Losch, M., & Dusdieker, L. (1999). The Iowa Infant feeding attitude scale: Analysis of reliability and validity. *Journal of Applied Social Psychology*, 29(11), 2362-2380.
- Dunn, B. F., Zavela, K. J., Cline, A. D., & Cost , P. A . (2004). Breastfeeding practices in Colorado businesses. *Journal of Human Lactation: Official Journal of International Lactation Consultant Association*, 20, 170 - 177 .
- Effect of breastfeeding on infant and child mortality due to infectious diseases in less developed countries :( 2000) A pooled analysis. WHO Collaborative Study Team on the Role of Breastfeeding on the Prevention of Infant Mortality. ;355:451–5.
- Eslami Z et al. [The relationship between types of delivery on breastfeeding success]. *Journal of Pediatrics of Iran*, 2009, 18 1(winter special issue):47–52 [in Farsi].
- Fein SB, Roe B. (1998) The effect of work status on initiation and duration of breast-feeding. *Am J Public Health*.;88(7):1042-1046. 15.
- Forster, DA, McLanchlan HL. (2007)Breastfeeding initiation and birth setting practices: A review of the literature. *J Midwifery Womens Health*;52:273–280
- Galhotra A, Abrol A, Agarwal N, Goel NK, Swami HM. Impact of community based awareness campaign on breastfeeding among lactating women in Chandigarh.

*Internet J Health* 2008;7.

- Galtry, J. (1997) Lactation and the labor market: breastfeeding, labor market changes, and public policy in the United States. *Health Care Women Int.* Sep-Oct;18(5):467-80.
- Gatrell, CJ. (2007) Secrets and lies: breastfeeding and professional paid work. *Social Science & Medicine*;65:393—404.
- Gillman, MW, Rifas-Shiman SL, Camargo Jr CA, Berkey CS, Frazier AL, Rockett HR, et al. (2001) Risk of overweight among adolescents who were breastfed as infants. *JAMA* ;285(19):2461- 7.
- GDHS, H. (2008). *Ghana*. Demographic and Health Survey
- Global strategy for infant and young child feeding. Geneva, World Health Organization, 2003
- Glover, j Sandilands M, (1990). *Supplementation of Breastfeeding infant and weight loss in Hospital Hum Lact* 6(4):163-6
- GNA Story, (<http://www.ghananewsagency.org/features/six-months-maternity-leave-is-a-must-62212>) Published: 2013-07-15 00:59:39© Ghana News Agency
- Goldberg, NM, Adam E. (1983). *Supplementary water for Breast-fed babies in a hot and dry climate-not really a necessity* .*Arach Dis Child* 58:73-74.
- Gupta A, Gupta YP. Status of infant and young child feeding in 49 districts (98 blocks) of India. New Delhi: Breastfeeding Promotion Network of India (BPNI); 2003.
- Gun I, Yılmaz M, Sahin H, et al. Kayseri Melikgazi Eg̃itimve Arasxtırma Bõlgesi'nde 0–36 aylık ocuklarda annesu alma durumu. *Cocuk SagligiHastalıkları Derg* 2009; 52:tu176-182.
- Hacettepe, Nufus Etutleri Enstitusu. [Turkish National Health Survey 2008]. (Forster DA, McLanchlan HL. 2007p273–280)
- Haider, R, Begum S. (1995) Working women, maternity entitlements, and breastfeeding: a report from Bangladesh. *Journal of Human Lactation*;11(4):273—7.
- Hediger ,ML, Overpeck MD, Kuczumarski RJ, Ruan WJ. (2001) Association between infant <http://www.who.int/features/factfiles/breastfeeding/en/> breastfeeding and overweight in young children. *JAMA*;285(19):2453 - 60.
- Hammer LD, Bryson S, Agras WS. (1999) Development of feeding practices during the

first 5 years of life. Archives of Pediatrics & Adolescent Medicine  
153(2):189-194.

Ipekci, M. M., & Ertem, M. (2012). Infant Feeding Knowledge and Practices of Mothers of Diyarbakir, 7(6). doi:10.1089/bfm. 2011.0115

International Breastfeeding Food Action Network. (2000.) Ghana Law - Breastfeeding promotion regulation. Accra: International Breastfeeding Food Action Network;  
Johnston, M. L., & Esposito, N. (2007). Barriers and Facilitators for Breastfeeding Among Working Women in the United States. doi:10.1111/J.1552-6909.2006.00109.

Jones, G, Steketee RW, Black RE, Bhutta ZA, Morris SS. (2003) Bellagio Child Survival Study Group. How many child deaths can we prevent this year? Lancet; 362:65–71.

Kang, N.M., Kim, K.N., Hyun, T.S. (2000). Breastfeeding encouragement and support of health professionals in the hospitals. Korean Journal of Women Health Nursing 6 (3), 348–357

Katcher, AL, Lanese MG. (1985) Breast-feeding by employed mothers: a reasonable accommodation in the workplace. Pediatrics;75(4):644—7. Kurinu, N., Shiono, P. H., &

Ezine, S. F. (1989). Does Maternal Employment Affect Breast-Feeding ?, 79(9).

Lewallen ,LP, Dick MJ, Flower J, Powell W, Zickefoose KT, Wall YG, et al. (2006) Breastfeeding support and early cessation. Journal of Obstetric Gynecologic and Neonatal Nursing;35(2): 166—72.

Laxmaiah, A., Venkaiah, K., & Brahman, G. N. V. (2012). Impact of feeding and breastfeeding practices on the nutritional status of infants in a district of Andhra Pradesh , India, 201–206.

Manandhar K, Manandhar DS, Baral MR et al. One year follow up study of term babies born at Kathmandu medical college teaching hospital. Kathmandu Univ Med J 2004; 2:286- 90.12.

McIntyre, E, Pisaniello D, Gun R, Sanders C, Frith D. (2002) Balancing breastfeeding and paid employment: a project targeting employers, women and workplaces. Health Promotion International; 17(3):215

MICS, 2011. (2011). Multiple Indicator Cluster Survey with an enhanced Malaria Module and Biomarker.

Nakao Y et al. Initiation of breastfeeding within 120 minutes after birth is associated with

breastfeeding at four month among Japanese women: A self-administered question- naire survey. *International Breastfeeding Journal*, 2008, 3:1. doi:10.1186/1746-4358-3-1.

Narayanan I, Prakash K, Murthy NS, Gujral VV. Randomised controlled trial of effect of raw and holder pasteurised human milk and of formula supplements on incidence of neonatal infection. *Lancet* 1984;2:1111–13

*National guidelines on infant and young child feeding*. New Delhi:Ministry of Women and Child Development (Food and Nutrition Board) and Ministry of Human Resource Development, Government of India; 2006.

Noughabi, Z. S., Tehrani, S. G., Foroushani, A. R., Nayeri, F., & Baheiraei, A. (2014). Prevalence and factors associated with exclusive breastfeeding at 6 months of life in Tehran : a population- based study, *20*(1), 24–32. OrganizationIL: Maternity Protection Convention183.

Ortiz, J. (2004). Duration of Breast Milk Expression among Working Mothers Enrolled in an Employer- Sponsored Lactation Program, *30*(2).

Ortiz, J., McGilligan, K., & Kelly, P. (2004). Duration of breast milk expression among working mothers enrolled in an employer-sponsored lactation programme. *Pediatric Nursing* 30,111-119

Otoo ,GE, Lartey AA, Perez-Escamilla R. (2009)Perceived incentives and barriers to exclusive breastfeeding among peri-urban Ghanaian women. *J Hum Lact.* ;25(1):34–41. doi: 0.1177/0890334408325072. [PMC free article] [PubMed] [Cross Ref]

Paine P, Dorea J.G. Gender role attitudes and other determinants of breast feeding intentions in Brazilian women. *Child: Care, Health and Development* 2001;27:27-61.

Rowe-Murray HJ, Fisher JRW. Baby friendly hospital practices: cesarean section is a persistent barrier to early initiation of breastfeeding. *Birth*, 2002, 292:124–131.

Ruhm C. (2000) Parental leave and child health. *Journal of Health Economics*;19(6):931-960 Sachdev, HPS,Krishna AJ,Puri RK satyanarayan L, Kummar S, (1991).Water Supplementation

Exclusive Breastfed infant during summerin the Tropics .*Lancet* 337:929-33

Seijts ,GH. (2002)Milking the organization? The effect of breastfeeding accommodation on Perceived fairness and organizational attractiveness. *Journal of Business Ethics*;40:1—13.

- Seijts, GH, Yip J.(2008) The effect of knowledge accumulation on support for workplace accommodation. *Journal of Business and Psychology*;22:311—21.
- Scott, J. A., & Binns, C. W. (1999). Factors associated with the initiation and duration of breastfeeding: A review of the literature. *Breastfeeding Review*, 7(1), 5-16.
- Sika-bright, S. (2011). Paper title: Infant feeding practices in Cape Coast: A sociological approach, 1–28.
- Singh, S. (2013). *Indian Journal of Maternal and Child*, 15(1), 1–7.
- Sachdev ,HPS,Krishna AJ,Puri RK satyanarayan L, Kummar S. (1991).Water Supplementation Exclusive Breastfed infant during summerin the Tropics .*Lancet* 337:929-33
- Saied, H., Mohamed, A., Suliman, A., & Anazi, W. Al. (2013). Breastfeeding knowledge , Attitude and Barriers among Saudi Women in Riyadh, 3(12), 6–14.
- Seijts, GH.( 2002) Milking the organization? The effect of breastfeeding accommodation on perceived fairness and organizational attractiveness. *Journal of Business Ethics*;40:113.
- Scott, J. A., & Binns, C. W. (1999). Factors associated with the initiation and duration of breastfeeding: A review of the literature. *Breastfeeding Review*, 7(1), 5-16.
- Thompson PE, Bell P. Breast-feeding in the workplace: how to succeed. *Issues in Comprehensive Pediatric Nursing* 1997; 20(1): 1—9.
- The World Alliance for Breastfeeding Action: Status of Maternity Protection by Country. Breastfeeding, women and work.
- Turkish Ministry of Health. 2009. [www.saglik.gov.tr/TR/ Genel/BelgeGoster](http://www.saglik.gov.tr/TR/Genel/BelgeGoster) (accessed November 22,
- Visness, C. M., & Kennedy, K. I. (1997). Maternal employment and breast-feeding: Findings from the 1988 national maternal and infant health survey *American Journal of Public Health*, 87, 945 - 950.
- Volpe, E. M., & Bear, M. (2000). Enhancing breastfeeding initiation in adolescent mothers through the Breastfeeding Educated and Supported Teen (BEST) Club. *Journal of Human Lactation*, 16(3), 196-200.
- WHO, (1997), *Breast feeding and the use of water and tears, Division of child health development Update*, No, 9
- [www.hips.hacettepe.edu.tr/tnsa2008/ index.html](http://www.hips.hacettepe.edu.tr/tnsa2008/index.html) (accessed September 27, 2009).

WHO Fact sheet February (2014) <http://www.who.int/mediacentre/factsheets/fs342/en/>

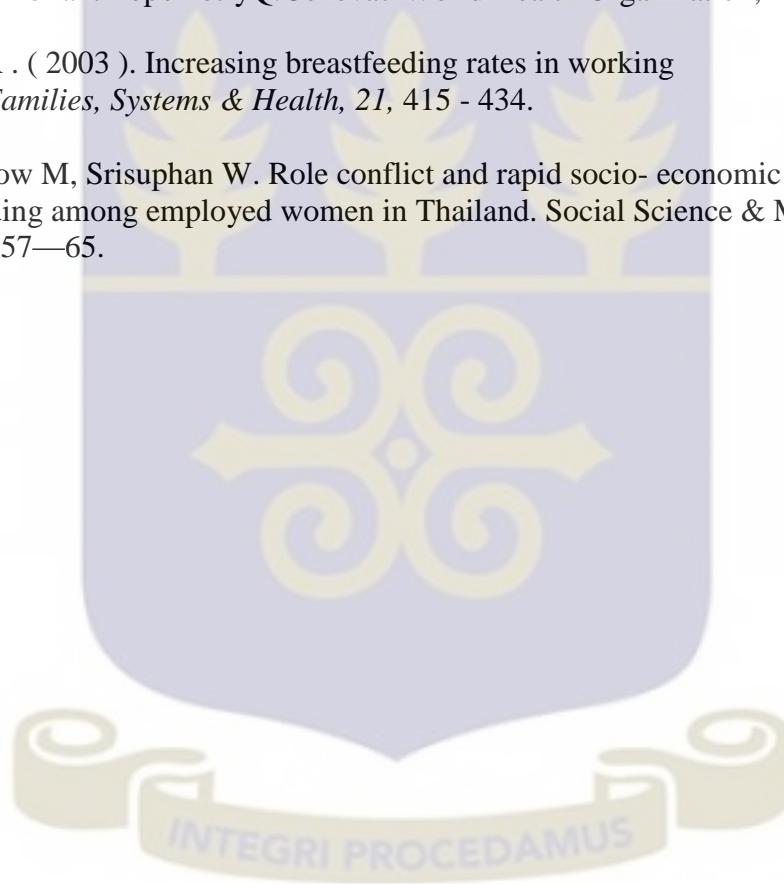
WHO: The World health report. (2005): make every mother and child count.

WHO/UNICEF.2008. (2008). Report report of of proceedings proceedings.

WHO Working Group on Infant Growth, Nutrition Unit. A summary of analyses performed in preparation for the WHO Expert Committee on Physical Status (1994); The use and interpretation of anthropometry. Geneva: World Health Organization;

Witters-Green , R . ( 2003 ). Increasing breastfeeding rates in working mothers. *Families, Systems & Health*, 21, 415 - 434.

Yimyam S, Morrow M, Srisuphan W. Role conflict and rapid socio- economic change: breastfeeding among employed women in Thailand. *Social Science & Medicine* 1999;49:957—65.



**Appendix 1: Consent form**

**SCHOOL OF PUBLIC HEALTH –UNIVERSITY OF GHANA-LEGON  
DETERMINANTS OF BREASTFEEDING PRACTICES OF WORKING  
MOTHERS IN ACCRA. GHANA**

Hello my name is **AMIN ABDUL MUTTALIB** and I am a student at the **School of Public Health, University of Ghana, Legon**. We are conducting a research on breast feeding practices among working mothers in Accra .We will be very much appreciated if you could grant us a few minute of your time to answer this questions. It will take just about 10 to 15 minutes to complete. The exercise is for academic purpose, all your answers will be treated as much as possible private and confidential. Your Name will not be put on the questionnaire .We further want to stress that participation is voluntary. Any question that you are not sure of or you do not understand, you can decide not to respond. Additionally, at any time you feel not to participate, you can do so. The information will basically be used to improve infant feeding practice among working mothers. So at this time would you like to take part? Can you sign this consent form for me? Signature /thumbprint ..... Thank you

Please in case of any further clarification on the study kindly contact the Principal Investigator (PI) Amin Abdul Muttalib on 0243287148 [amin2gh@yahoo.com](mailto:amin2gh@yahoo.com)

You can also contact the Administrator of Ghana Health Service Ethical Review Committee (Ms. Hannah Frimpong) on 0243 235 225/050 704 1223 for further enquiry

Please Note [Name of child] means your child's name

Name of Crèche _____	Date of Interview [____ ____ ____]
<b>SECTION A : MOTHERS BACKGROUND AND EMPLOYMENT INFORMATION</b>	
<b>A1.</b> How old were you on your last birthday?..... years	<b>A2.</b> Did you ever attend formal school? Yes.....1 No.....2 <b>if no Skip to 4</b>
<b>A3.</b> If yes, what is the highest level you completed? Primary-----1 JHS-----2 Middle school-----3 SHS-----4 Tertiary -----5	<b>A4.</b> What is your current marital status? Single-----1 Married -----2 Divorced-----3 Separated -----4 Widow-----5
<b>A5.</b> How many children do you have?  -----Number	<b>A6.</b> How old is your youngest child?  -----month/s
<b>A7.</b> Are you currently engaged in any income generating activities?  Yes-----1 No -----2                               IF no skip toA9	<b>A8.</b> If yes, what is your main occupation (that is what kind of work do you do for a living?) Public sector.....1 Private sector.....2 Self-employed .....3
<b>SECTION B: BREAST FEEDING BEHAVIOR AND AWARENESS</b>	
<b>B1.</b> Did you ever breast feed your child?  Yes-----1  No -----2	<b>B2</b> How long after birth did you first put (NAME of child) to the breast?  Immediately .....1 .....Hour/s .....Minutes .....Day/s after

<p><b>B3.</b>During the first three days After delivery, before breast milk began flowing, did you give (NAME of child) anything else to eat or drink other than breast milk?</p> <p>Yes.....1</p> <p>No .....2</p>	<p><b>B4.</b>if yes, What did you give (Name) other than the breast milk?</p> <p>Milk .....1</p> <p>Plain water.....2</p> <p>Water with sugar.....3</p> <p>Gripe water.....4</p> <p>Fruit .....5</p> <p>Tea /semi-liquids.....6</p> <p>Infant formula.....7</p> <p>Honey .....8</p> <p>Others.....9</p>
<p><b>B5.</b> Are you currently breastfeeding (NAME of child)?</p> <p>Yes.....1                      No.....2</p>	<p><b>B6.</b>In the first three days after delivery, was (NAME) given anything to drink other than breast milk?</p> <p>Yes.....1                      No .....2</p>
<p><b>B7.</b>Did you express out and throw away the first yellowish milk (colostrum)?</p> <p>Yes.....1                      No .....2</p>	<p><b>B8.</b>Did ( NAME of child) drink anything from bottle with nipple yesterday or last night</p> <p>Yes .....1                      No.....2</p>
<p><b>B9.</b> Did you ever feed (NAME of child) with any processed infant food?</p> <p>Yes .....1</p> <p>No .....2</p>	<p><b>B10.</b>If yes, which one</p> <p>Cereal .....1</p> <p>Cow gate cereals.....2</p> <p>Wean mix.....3</p> <p>Other (specified).....4</p>
<p><b>B11.</b>Tell me at what age did you first give water to the (NAME of child?)</p> <p>-----Month/s</p>	<p><b>B12</b> Tell me at what age did you first give (NAME) semisolid, solid food?</p> <p>-----Month/s</p>
<p><b>B13.</b>Tell me at what age did you first give (NAME) non milk fluid?</p> <p>-----Month/s</p>	<p><b>B14.</b> Tell me in the last 24 hours, (i.e. from <b>time</b> yesterday to <b>current time</b> today whether any of the food listed below were eaten/drunk by (child NAME)?</p> <p>porridge or koko?.....1</p> <p>did (name) eat any bread, rice, noodles, or other foods made from grains?.....2</p> <p>eat carrots, orange-flesh sweet potatoes, colored</p>

	<p>yams, or any other vegetables that are yellow or orange?.....3</p> <p>any foods made with red palm oil or pulp of red palm nuts such as palmnut soup, mpotompoto, beans, kontonmire stew, apapransa, ertor, or any other?.....4</p> <p>White yams, cassava, gari, cocoyam, or any other foods made from roots, tubers, and plantains?.....5</p> <p>dark green leafy vegetables such as kontommire, alefu, bokoboko, gboma, ayoyo (ademi), cassava, or sweet potato leaves?.....6</p> <p>Ripe mangoes, or ripe pawpaw?.....7</p> <p>Orange, pineapple, sour sop, or guava?.....8</p> <p>Any other fruits or vegetables not mentioned already?.....9</p> <p>Liver, kidney, heart, gizzard, or other organ meats?.....10</p> <p>any meat such as beef, pork, lamb, goat, or bush meats such as grass cutters .....11</p> <p>Any poultry meat such as chicken, duck, or guinea fowl?.....12</p> <p>Any eggs? .....13</p> <p>any smoked, fried, dried, or cooked fish; shellfish;</p>
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	<p>or other Seafood excluding powdered fish?.....14</p> <p>any food made from beans, peas, lentils, nuts, or seeds including agushi, soybean, groundnut, or groundnut paste?.....15</p> <p>any cheese, yogurt, or other milk products including milk drinks or local cheese such as wagashi?.....16</p> <p><b>Other (specified).....17</b></p>
<p><b>B15.</b>Tell me how many time did (NAME) eat solid food in the last 24 hours?</p> <p>-----number of times</p>	<p><b>B16.</b>Have you ever received information on how to breast feed your baby?</p> <p>Yes .....1</p> <p>No.....2</p>
<p><b>B17 .</b>If yes, where did you received the information?</p> <p>Health facility .....1</p> <p>Media.....2</p> <p>Friend .....3</p> <p>Work place .....4</p> <p>support groups .....5</p> <p>Relative .....6</p> <p><u>Other specify .....7</u></p>	<p><b>B18.</b>During the first few days after delivery, did anyone show you how to put the baby to the breast?</p> <p>Yes .....1</p> <p>No-----2</p>
<p><b>B19.</b> If yes, who was it?</p> <p>Midwife.....1</p> <p>Nurse.....2</p> <p>Midwifery student.....3</p> <p>Friend / relative.....4</p> <p>Doctor.....5</p> <p>Maternity care assistant.....6</p> <p><u>Other (pls specify).....7</u></p>	<p><b>B20</b> Any time you have difficulties with breast feeding who do you See for help?</p> <p>Health professionals .....1</p> <p>Relative.....2</p> <p>TBA.....3</p> <p>Friends .....4</p> <p>Co -worker .....5</p> <p>I have not had this difficulties.....6</p>
<p><b>B21.</b> What support do you get from health staff that help you to breast feed your child?</p> <p>.....</p> <p>.....</p>	<p><b>B22</b> Can you tell me whether a health work ever visited you at home after your delivery?</p> <p>Yes .....2 No.....3</p>
<p><b>B23.</b>Who took care of (Name of child) when you resumed work?.....this is for children less than</p>	<p><b>B24.</b> Where was the (Name child) cared for while you went to work, (i e If child is not</p>

<p>12 mo</p> <p>Spouse.....1</p> <p>Mother/mother in-law..... 2</p> <p>Other relative ..... 3</p> <p>Neighbor ..... 4</p> <p>day care center ..... 5</p> <p>Household help/nanny ..... 6</p> <p>Took child to work.....7</p>	<p>sent to day care or sent to work?)</p> <p>My home.....1.</p> <p>Neighbor’s home .....2.</p> <p>family member’s home .....3</p> <p>other.....4</p>
<p><b>B25.</b> If someone other than yourself was taking care of the (Name of child), how would you rate their knowledge about the recommended child feeding practices (including exclusive breastfeeding for first six months)?</p> <p>Very knowledgeable about child feeding practices.....1</p> <p>Neither knowledgeable nor ignorant about child feeding practices.....2</p> <p>Not knowledgeable about child feeding practices..... 3</p>	<p><b>B26.</b> If someone other than yourself was taking care of (Name of child) to what extent were they in agreement with the practice of exclusive breastfeeding for first six months?</p> <p>Agreed completely .....1</p> <p>Neither agreed nor disagreed .....2</p> <p>Disagreed completely.....3</p>
<p><b>B27.</b> Since you delivered [Name of child], how would you rate yourself regarding breastmilk production for [name of child]?</p> <p>I produce enough breastmilk ...1</p> <p>I do not produce as much breastmilk as I want .....2</p>	<p><b>B28</b> [Name of child] does not like breast milk compared to other children I know in his/her age group. Is this true for [child name ]</p> <p>Yes.....1 No.....2</p>
<p><b>B29.</b> Did you express and store breast milk for [Name of child]?</p> <p>Yes.....1 No.....2</p>	<p><b>B30.</b> If yes, would you recommend it to others?</p> <p>Yes.....1 No.....2</p>
<p><b>SECTION C WORKPLACE BREASTFEEDING SUPPORT</b></p>	
<p><b>C1.</b> Do you have breastfeeding policy/guideline that support breastfeeding women at your workplace?</p> <p>Yes.....1 No .....2</p>	<p><b>C 2.</b> Do you have nursery at or near your work place?</p> <p>Yes .....1 No .....2</p>

<p><b>C3.</b> Did you go on maternity leave when you gave birth to (NAME of child)?                  Yes .....1                      No .....2                  If no, why.....</p>	<p><b>C4.</b> If yes, how long was your leave?                  -----months</p>
<p><b>C5.</b> After your leave period has expired, were you allowed to take along your child to work?                  Yes .....1                      No .....2                  If no, why? .....</p>	<p><b>C6.</b> Did your work load reduce after you returned to work during the first year of delivery?                  Yes .....1                      No .....2</p>
<p><b>C7.</b> Are you allowed for a break to breastfeed your child at work?                  Yes .....1                      No .....2</p>	<p><b>C8</b> If yes, for how long?                  .....Hour/s    ..... Minute/s</p>
<p><b>C9.</b> Do you have breast feeding promotion program at your workplace?                  Yes .....1                      No.....2</p>	

**C10.** Tell me your view about what you perceived as barriers to breast feeding? (please tick all if agree, disagree or stay neutral)

Perceived Barriers to breast feeding	Agree	Neutral	Disagree
Pain			
Fear of distorted breast shape by breastfeeding			
Poor prenatal and postpartum support			
Perception of insufficient milk production			
Husband not encourages breast feeding			
Embarrassed from lactation in public places			
Embarrassed form lactation in front of family member			
Too busy to breastfeed the baby			
Housekeeper availability encourage me to give bottle feeding			
Taking contraceptives			

Tiredness				
Disease could transfer to the kids through breast feeding				
Bad smell of the nursing mom				
Depressed because my child refused breast feeding				
I don't have enough knowledge				

**THANK YOU FOR YOUR SUPPORT**



**SCHOOL OF PUBLIC HEALTH –UNIVERSITY OF GHANA-LEGON**  
**DETERMINANTS OF BREASTFEEDING PRACTICES OF WORKING**  
**MOTHERS IN ACCRA. GHANA**

Hello my name is **AMIN ABDUL MUTTALIB** and I am a student at the **School of Public Health, University of Ghana, Legon**. We are conducting a research on breast feeding practices among working mothers in Accra .We will be very much appreciated if you could grant us a few minute of your time to answer this questions. It will take just about 10 to 15 minutes to complete. The exercise is for academic purpose, all your answers will be treated as much as possible private and confidential. Your Name will not be put on the questionnaire .We further want to stress that participation is voluntary. Any question that you are not sure of or you do not understand, you can decide not to respond. Additionally, at any time you feel not to participate, you can do so. The information will basically be used to improve infant feeding practice among working mothers. So at this time would you like to take part? Can you sign this consent form for me? Signature /thumbprint ..... Thank you

Please in case of any further clarification on the study kindly contact the Principal Investigator (PI) Amin Abdul Muttalib on 0243287148 [amin2gh@yahoo.com](mailto:amin2gh@yahoo.com)

You can also contact the Administrator of Ghana Health Service Ethical Review Committee (Ms. Hannah Frimpong) on 0243 235 225/050 704 1223 for further enquiry.

Name of sub Metro .....	Date of Interview [____ ____ ____]	
Name of facility.....	Interviewer Name.....	
Category of provider.....		
<b>SECTION D</b>		
D1. Have you ever been trained in lactation/breastfeeding management? Yes ..... 1 No..... 2	D2. If yes, what was the duration of the training? -----days	
D3. Enumerate why breast milk/breast feeding is important for a baby and her mother? a. Protects baby from diseases b. Contains adequate nutrients and water up to 6 months ... c. It's easily digested d. It's readily available e. It's less expensive other _____ <b>( 4or more correct answers , very good = 1; 3-2, good = 2; &lt;2, fair = 3)</b>	D4. Can you demonstrate how to position a child to breast feed? Yes ..... No .....	
D5. If yes, can you explain the 4 key points of Positioning and attachment  4 key points attachment: 1. More areola seen above baby's top lip 2. Baby's mouth open wide 3. Lower lip turned outwards 4. Baby's chin touches breast 4 key points of positioning: 1. Baby's head and body in line 2. Baby held close to mother's body 3. Baby supported by head and neck 4. Baby approaches breast, nose to nipple <b>( 7 or more correct answers , very good = 1; 6-5, good = 2; &lt;4, fair = 3)</b>	D6. What factors influence the production of breast milk? a. Frequency of breastfeeding b. Emptying of the breast c. Correct positioning and attachment d. Reduction of discomfort through burping e. Change of wet soiled napkins before and during breast feeding appropriate dressing g. Maternal environment/psychological well being h. Other, specify..... <b>( 5 or more correct answers , very good = 1; 4-3, good = 2; 2 or less, fair = 3)</b>	
D7. What are the advantages of cup feeding as	D8. Mention any of the Ten Steps to	

<p>compared to bottle feeding?</p> <ul style="list-style-type: none"><li>a. Readily available in all homes</li><li>b. Easier to clean than cup</li><li>c. Less risk of diarrhea, ear infection and tooth decay</li><li>d. Other, specify</li></ul> <p><b>( 3 or more correct answers , very good = 1; 2, good = 2; &lt;2, fair = 3)</b></p>	<p><b>Successful Breastfeeding:</b></p> <ul style="list-style-type: none"><li>a. Have a written breastfeeding policy that is routinely communicated to all health care staff</li><li>b. Train all health care staff in skills necessary to implement this policy</li><li>c. Inform all pregnant women about the benefits and management of breastfeeding</li><li>d. Help mothers initiate breastfeeding within half an hour after delivery</li><li>e. Show mothers how to breastfeed and how to maintain lactation, even if they should be separated from their infants</li><li>f. Give new born infants no food or drink other than breast milk, unless medically indicated</li><li>g. Encourage breastfeeding on demand</li><li>h. Practice rooming in i.e. help mothers and infants to remain together 24 hours a day</li><li>i. Give no artificial teats or pacifiers to breastfed infants</li><li>j. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospitals</li></ul> <p><b>( 5 or more correct answers , very good = 1; 4, good = 2; &lt;4, fair = 3)</b></p>
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Thank you

**Appendix 2: Sample of Workplace Breast Feeding Policy**

