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WORKPLACE SUPPORT FOR EXCLUSIVE BREASTFEEDING IN TAMALE CENTRAL SUB-METROPOLITAN OF THE REPUBLIC OF GHANA: PERSPECTIVES OF EMPLOYEES, COWORKERS AND MANAGEMENT

BY

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DECLARATION

I, KUNAMSI IDDRISU declare that except for other people's investigations/ work 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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(DATE)	(DATE)

DEDICATION

I dedicate this dissertation to my caring father; Mr. Kunamsi Gumah, my mom; Rachia Kombat Kunamsi and the entire Gumah family.

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ABSTRACT

Background: Breastfeeding has been established as the gold standard of infant feeding, and exclusive breastfeeding is recommended for the first six months of a child's life. According to the World Health Organization (WHO) less than 40% of children globally are exclusively breastfed up to six months. The practice of exclusive breastfeeding in Ghana is estimated at 52% and that of professional working mothers is about 10.3%. This study therefore sought to find out the support professional working mothers in schools, health facilities and banks are exposed to in relation to exclusive breastfeeding at workplaces in Tamale Central Sub-Metropolitan of the Northern Region.

Methods: A mixed method study comprising quantitative technique using a structured questionnaire and a qualitative method using an in-depth interview were employed among professional working mothers, coworkers and management members between June and July 2017. Multi-stage random sampling method was used to select respondents from the various departments using the registers of employees as the sampling frame. A total sample size of 170 professional working mothers (made up of 79 teachers, 69 nurses and 22 banking staffs), 15 coworkers and 15 management members were studied. Basic descriptive statistics was run (frequencies and percentages) and association between variables was analyzed using bivariate and multivariate analysis.

Results: There was high level of knowledge of breastfeeding policies by management members and employees (professional working mothers) in this study. Despite the fact that early initiation of breastfeeding within the first hour of birth was high (88.2%), the rate of exclusive breastfeeding (EBF) was low (14.7%). The support for exclusive breastfeeding and coworkers support at the workplace was found to be inadequate, about 94.7% of respondents did not have a clean room for breastfeeding at the workplace and only 15.9% of respondents had a breastfeeding support policy at their place of work. Mothers in the

highest wealth quintile were 6 time more likely to initiate breastfeeding within the first hour of birth as compared to their counterparts in the lowest wealth quintile (AOR=5.725 95% CI, 2.037 - 16.088,)

Conclusion: The proportion of professional working mothers who practiced exclusive breastfeeding was found to be very low compared to the national figure of 52%. However, initiation of breastfeeding within the first hour of birth was high among respondents. Workplace support and coworkers support were found to be inadequate across all the study sites visited. Early return to work and inadequate support structures at the workplace such as lack of table and chair for breastfeeding, refrigerator for breastmilk storage, tasked adjustment and paid nursing breaks were reasons for low practice of exclusive breastfeeding among this group of working mothers.

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LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
BMBR	Breastfeeding Mother's Break Room
EBF	Exclusive Breastfeeding
GDHS	Ghana Demographic and Health Survey
GHS	Ghana Health Service
GNAT	Ghana National Association of Teachers
GSS	Ghana Statistical Service
HIV	Human Immune Virus
IYCF	Infant and Young Child Feeding
NAGRAT	Ghana National Association of Graduate Teachers
NMC	Nursing and Midwifery Council
UNICEF	The United Nations Children's Fund
WHA	World Health Assembly
WHO	World Health Organization

DEFINITION OF TERMS

Exclusive breastfeeding: This refers to the feeding of an infant with only breast milk for the first six months of life without the addition of any food, water, herbal preparations unless medically indicated. This will be the dependent/outcome variable for this study.

Workplace: The physical environment where an employee works like a bank, school or hospital for the purpose of this study.

Support: Physical facilities such as refrigerator, breastfeeding room or nursery and non-physical support such as task adjustment, extension of leave or break time or reduce workload which is given to a lactating mother to ease her burden at work.

Breastfeeding Policy/Guideline: Any document or statement made by experts in the field of nutrition and health outlining how breastfeeding should be practiced and protected in a state, country or globally.

Professional Working Mother: A mother formally certified by a professional body of belonging to a specific profession by virtue of having completed a required course of studies and whose competence can usually be measured against an established set of standards.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

Breastfeeding is beneficial to both mothers and infants and reduces maternal and infant mortalities and morbidities globally by preventing childhood diseases including diarrhea, dysentery and cholera outbreaks (Lamberti, Walker, Noiman, Victora, & Black, 2011). It is recommended that breastfeeding should be initiated within the first hour of birth (WHO, 2014). A study in Ghana has established that breastfeeding initiation within the first one hour of life could reduce infant mortality by 22% and if it starts within the first day of life, could reduce infant mortality by 16% (Edmond, Zandoh, Quigley, Amenga-etego, & Owusu-agyei, 2006). A study in Nepal has also found that, the longer it takes for initiation of breastfeeding, the higher the chances of infant mortality after birth (Mullany & Li, 2007). Despite these benefits of exclusive breastfeeding, the proportion of children exclusively breastfed worldwide is only 37% (Victora *et al.*, 2016).

Exclusive breastfeeding prevalence in Ghana as at 2014 was 52% which is a decline from the 63% reported during the 2008 GDHS (Ghana Statisical Service, Ghana Health Service, 2014). This is far from the national target of exclusive breastfeeding. Several factors affect the practice of exclusive breastfeeding among mothers, among them incudes poor support, poor knowledge, myths and misconceptions, poverty, livelihoods issues, HIV status and early or single motherhood (Agunbiade & Ogunleye, 2012).

Workplace support for breastfeeding can vary from physical structures such as a breastfeeding room, a separate refrigerator for the storage of human milk, baby nursery and non-physical structures such as task adjustments, lactation breaks, and co-workers support to breastfeeding mothers (Soomro *et al.*, 2016)

Breastfeeding is the right of mothers to give their children breastmilk and also the right of every child to receive the best form of nutrition for starters (Haight & Ortiz, 2014). Education of women and communities in developing countries and worldwide about good practices such as early initiation of breastfeeding, the dangers of pre-lacteal feeds and bottle-feeding of infants will contribute to improve maternal and child health (Modupe Rebekah Akinyinka, Foluke Adenike Olatona, & Esther Oluwakemi Oluwole, 2016).

The practice of exclusive breastfeeding is even very low among professional working mothers. Literacy rate has increased in Ghana over the years. The literate population for people 15 years and above increased from 54.1% to 71.5% between the years 2000 to 2010. The change occurred more in females (19.6%) than in males (15.4%) and this is associated with increase in employment by mothers (Ghana Statistical Service, 2012).

Early return to work after delivery is associated with early cessation of breastfeeding (Dagher, McGovern, Schold, & Randall, 2016). With changes in the working pattern, where many women are educated and employed in full time Jobs, the workplace environment could have an impact on the practice of exclusive breastfeeding in Ghana because if women have challenges with breastfeeding at workplace it could lead to a reduction in the practice of exclusive breastfeeding and worsen the malnutrition burden. The decision to breastfeed is influenced by the knowledge of the mother, social norms, family and social support systems available, employer and individual support given to mothers to breastfeed (Surgeon Generals Report, 2017)

1.2 Statement of the problem

There is a low practice of practice exclusive breastfeeding among professional working mothers in Ghana. Dun-Dery and Laar (2016) in their study of exclusive breastfeeding practices among working mothers in Ghana reported exclusive breastfeeding rate of 10.3%. The Ghana Labour law of 2003, stipulates that all working mothers should be given three twelve (12) weeks maternity leave after delivery, this is not adequate for the practices of exclusive breastfeeding because the National and International recommendations indicate that exclusive breastfeeding should be done up to the age of six months. To the best of the researcher's knowledge, no study has been conducted to assess workplace support in terms of task adjustment, breastfeeding breaks and extension of maternity leave for exclusive breastfeeding in Ghana. A search conducted on PubMed, Google scholar and African Journals online using the key works 'workplace support' 'exclusive breastfeeding', 'Ghana' indicated no results. Thus the support from co-workers and management as well as the workplace environment's contribution to the practice of exclusive breastfeeding in Ghana is not widely known.

The effect of returning to work after the expiration of the maternity leave is widely known. A study conducted in Brazil reported that returning to work by working mothers is a major obstacle to the practice of exclusive breastfeeding (Scienti, 2011). Exclusive breastfeeding starting within the first hour of life substantially reduce neonatal and infant morbidity and mortality (Amanda *et al*, 2013).

This study therefore explored the support professional working mothers are exposed to at the workplaces and whether it has an impact on the practice of exclusive breastfeeding among this group of women

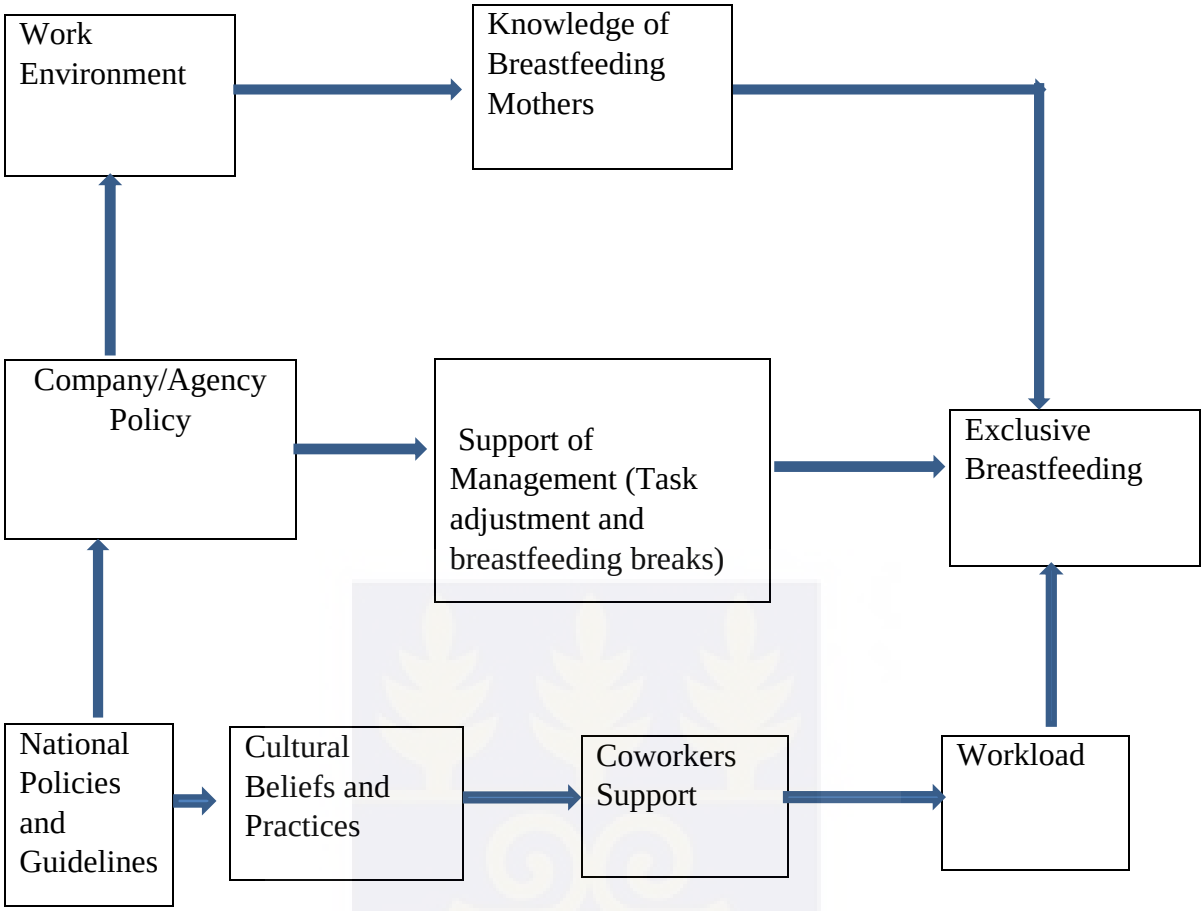

Figure 1: Conceptual framework of factors that influence exclusive breastfeeding practice among professional working mothers.

International policies and guidelines such as the Baby Friendly Hospital Initiative (BFHI) and the International Labour Organization's (ILO) policies on maternity leave have effects on the national policies of countries that are signatories to these international organizations (Sokol, Aquago, & Clark, 2007). These national policies also affect the workplace environment such as the facilities to support breastfeed at the workplace, maternity leave and breastfeeding breaks (International Labour Organization, 2012). Workplace environments such as hospitals may have more information regarding the practice of exclusive breastfeeding which will increase the knowledge of mothers working there. Increase knowledge of mothers will influence the practice of exclusive breastfeeding

(Utoo, Ochejele, Obulu, & Utoo, 2012). A study in Ethiopia reported that that mothers who were more educated and informed were found to practice exclusive breastfeeding compared to mothers with less education (Asemahagn, 2016). The international policies also affect the decisions made by management at the workplace and this could lead to improvement in the workplace environment and subsequently improve exclusive breastfeeding practice. International policies might subsequently bring about attitudinal changes which could lead to adoption of some cultural beliefs and practices. Cultural beliefs and practices of co-workers would have a direct relationship with their support for working mothers at the workplace and this could influence the practice of exclusive breastfeeding among professional working mothers. A study in Pakistan revealed that some coworkers found it absurd for working mothers to breastfeed openly at the workplace (Soomro *et al.*, 2016).

1.3 Main Objective

To describe the support professional working mothers receive – in relation to exclusive breastfeeding at workplaces in Tamale metropolis.

1.4 Specific Objectives

1. To determine the rate of exclusive breastfeeding among professional working mothers in Tamale.
2. To assess the knowledge of employees in management positions and professional working mothers on breastfeeding policies and guidelines.
3. To assess co-workers support to breastfeeding mothers at the workplace
4. To determine if the workplace environment supports exclusive breastfeeding.

1.5 Research questions

2. What is the rate of exclusive breastfeeding among professional working mothers?
3. What is the knowledge of employees and employees in management positions on breastfeeding policies and guidelines?
4. What support exists at the workplace for breastfeeding mothers?

1.6 Justification of the study

Breastfeeding has been found to be the most appropriate source of nutrition for infants. It is acknowledged that the promotion, protection and support of breastfeeding is the single most effective and critical strategy to achieve child survival and healthy growth. Yet, the global target for universal breastfeeding is far from being attained. In order to help identify emerging sources of barriers to breastfeeding, there is a need to conduct studies on the workplace support for breastfeeding. With the increasing involvement of women in the work taskforce, a challenge with breastfeeding in the workplace may affect breastfeeding in its exclusivity, duration and optimal practice. The findings will serve as a useful source of knowledge on breastfeeding support currently available to working mothers and the knowledge of management in breastfeeding policies and guidelines in developing countries. Data from this study will inform policy makers and stakeholders of infant and young child nutrition such as the WHO, UNICEF and other local and international organizations who support and promote breastfeeding, on the need to develop interventions and policies that safeguard breastfeeding everywhere in the country especially at the workplace.

1.7 Expected outcome

It was envisaged that this study will provide information on the workplace support currently available in Tamale and will inform policy makers and development partners on strategies that will help improve exclusive breastfeeding practices among professional working mothers.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Benefits of Exclusive Breastfeeding

Breastfeeding is the optimal feeding practice for children within the first 6 months of life. Timely and appropriate complementary feeding should be introduced from six months of life while breastfeeding continues up to the age of two years or more. The composition of human milk is influenced by a host of factors including; the gestational age of the infant (preterm milk is not the same as full-term milk), period of lactation (colostrum is different from transitional and mature milk, which changes continuously as with time), and duration of feeding (foremilk is lighter and more watery as compared to hind milk which has more fat content) (Course & Maternity, 2009). A study in Nigeria reported that 97.2% of study participants indicated that breastmilk to be the best mode of food for young children than formula foods and gave reasons why breastfeeding is preferred as less exposure of infants to diseases, not expensive and less time consuming (Utoo *et al.*, 2012). Exclusive breastfeeding is recommended to all mothers including HIV positive mothers who cannot cope with stigmatization, supporting women to exclusively breastfeed is a prerequisite for HIV-infected women in settings where replacement feeding is not affordable, feasible, acceptable, sustainable or safe (AFASS) and lowers the risk of mother to child transmission compared to mixed feeding (Central *et al.*, 2007). Exclusive breastfeeding practices substantially decreases the risk of diarrhea incidence, prevalence, hospitalization and all- cause mortality (Lamberti *et al.*, 2011).

The benefits of exclusive breastfeeding begin from birth, the first yellowish milk known as the liquid gold, colostrum, is very rich in antibodies, breastmilk change composition to meet the demands of the child (W. Breastfeeding, 2012.). Exclusive breastfeeding helps in

establishing bond between mothers and babies, and also assist the uterus to contract after delivery by initiating the release of oxytocin (Kunwar, Faridi, Singh, Zahra, & Alizaidi, 2010). It is in the light of these benefits that this study was conducted to find out the support working mothers receive so that interventions can be put in place to help increase the rate of breastfeeding among professional working mothers.

Breastfeeding is the best life-style approach to prevent diabetes (Balasubramanyam & Balasubramanyam, 2017). Breastfeeding contributes to child survival by spacing births, and although this is not a reliable method of contraception, it extends the period of post-partum anovulation and thus longer birth intervals. This leads to improve quality of care, income, improve nutrition and subsequently improve maternal health outcomes in the population (Society & Quarterly, 2017). Breastfeeding mothers have low risk of developing ovarian cancer (Danforth *et al.*, 2017)

2.2 Breastfeeding Policies and Guidelines

According to the WHO/UNICEF global strategy on infant and young child feeding, it is recommended that every child should be breastfed within the first hour of delivery, breastfeed on demand day and night, breastfeed exclusively for the first six months of life and continue with timely and recommended complementary foods up to two years or more (WHO/UNICEF, 2012). The international Labour organization's maternity leave and other types of leave document has mandated all organizations within its member states to guarantee a minimum of twelve weeks maternity leave to working mothers to help them recover and care for their children (International Labour Organization, 2012). The Child Health policy of Ghana states that children less than 180 days should be breastfed exclusively from birth up to the age of six months (Ghana Child Health Policy, 2015). This would help mothers to breastfeed optimally and care for their infants.

The Innocenti Declaration which was a set up to protect, promote and support breastfeeding has resulted in improvement in the rates of exclusive breastfeeding from 34% in 1990 to 41% in 2004 in the developing world indicating the significant role strong policy can play in promoting exclusive breastfeeding (Gupta *et al.*, 2005). Article 24 of the Convention on the rights of the child is meant to ensure that all aspects of society, especially parents and children, are educated, have access livelihoods and are assisted in the use of basic knowledge of pediatrics and child care, the knowledge of breastfeeding, water, sanitation and hygiene and the prevention of injuries (Convention on the rights of the Child,1990). The Protection, promotion and support of exclusive breastfeeding of infants up to six months of life and continues breastfeeding with appropriate and adequate complementary foods up to two years or more and the provision of counseling on infant and young child feeding for mothers living with HIV/AIDS for them to make the right and informed choices is one of the main targets of Children for fit (United Nations, 2002).

2.3 Breastfeeding Support Services at the Workplace

Support for exclusive breastfeeding usually varies, from providing space or logistics to developing and implementing a comprehensive lactation program. In establishments which support breastfeeding partially, mothers are allowed to bring their own equipment for expression of breastmilk in a room that is also used for other purposes. Though this first stage may reduce the challenge of finding a place to express milk, clearly, this initiative is limited in its benefits considering the strain-based conflicts associated with lack of privacy and adequate storage for expressed milk. Ideally, a private room is designated for breastfeeding and milk expression, establishments with a comprehensive lactation program usually have a comfortable table and chair, breast milk pumps, a sink, a refrigerator, soft lighting, and a footstool (Cardenas, Major, & Major, 2017). A comfortable environment that is suitable for relaxation and reduces strain-based conflict,

which helps the woman breastfeed or express milk more quickly, reducing time based conflict. Management members with the desire to assist mothers breastfeed and work concurrently should provide equipment including breastmilk pumps, tubing required to use breast pumps, collection bottles, ice packs, and a functional refrigerator (Cardenas *et al*., 2017*)*.

Breastfeeding is not a decision of only professional working women but involves structural and organizational support in the workplace. This will involve equity consideration between men and women as well as between women groups (Gender, Apr, & Galtry, 2017).

Penrose et al., 2017 reported that women with peer counselor support have high exclusive breastfeeding rates compared to women without peer counselors and thus recommended that students from colleges and universities should be recruited and orientated to provide counselling to lactating women in their communities, and working mothers should also be educated on both electronic and manual expression of breastmilk in order to support breastfeeding at the workplace (Penrose *et al*., 2017)

Supporting breastfeeding at the workplace also involve protecting employees from breastmilk substitute manufacturers who undermine regulations that protect breastfeeding. These manufacturers establish relationships with heads of departments to market their products or to cause managers to remain silent when something goes wrong, they also sponsor training and other professional development activities of health workers there by gaining access to some health facilities to market their products. These aggressive marketing strategies undermine the international code of marketing of breastmilk substitutes (Gupta, 2017)

Table 1: Components of a workplace breastfeeding support program

Minimum	Medium	Comprehensive
	Facilities	
A clean, comfortable space with an electrical outlet in order to pump milk or to breastfeed. Employee provides her own breast pump. Table and comfortable chair. Sink, soap, water, and paper towels. If these are very far from BMBR, extra time is allowed for cleaning hands and equipment. Employee provides cold packs for storage of milk.	A separate room for breastfeeding during working hours. Management provides one breast pump, and mothers provide their own accessories Breastfeeding mothers provided with aesthetics for relaxation. Items listed in "Adequate" column are available near the BMBR. Management provides a refrigerator near breastfeeding room	A Breastfeeding Mothers' Break Room (or rooms) is located close to mothers' place of work. Management provides all equipment. Additional electric pumps are provided if needed. Room large enough to accommodate several users comfortably. All items required in a breastfeeding room including refrigerator, table and chair are provided. Management provides a refrigerator in the breastfeeding room for breastmilk storage.
	Written Company Policy	
Minimum	**Medium**	**Comprehensive**
Management grants 6 weeks maternity leave without pay. Employer allows creative use of accrued vacation days, personal time, sick days, and holiday pay after childbirth. Employer allows two breaks and a lunch period during an 8-hour work day for expressing milk or breastfeeding the child.	Management grants 12-week maternity leave without pay In addition, management allows tasked adjustment, job sharing, individualized scheduling of work hours, compressed work week, or telecommuting. Management accept break period during working hours that are not paid for breastfeeding or milk expression	Management provides between 6 to 14 weeks paid maternity leave (ILO). Additionally, mother or caregiver r can bring child to the workplace, or nursery care if is available. Mothers are given breaks to breastfeed and these breaks are paid.
Minimum	**Medium**	**Comprehensive**
	Workplace Education	
Breastfeeding support policy of an organization is communicated to all expectant mothers. Management provides a list of community resources for breastfeeding support	All staffs are trained on breastfeeding support policy. Management hires a professional lactation as and when the need arises.	Sensitization on breastfeeding is provided to all employees. Management contracts a skilled lactation care provider to coordinate a breastfeeding support program.

2.4 Benefits of Exclusive Breastfeeding to Management

The benefits of breastfeeding do not only come to the mother and infant but could benefit management and the nation at large. Skipping a needed breastfeeding or pumping session can have several negative consequences to the employee: Full breasts stress mothers up, and the milk leaks sometime; this is sometimes embarrassing to the mother, and unconducive for a successful completion of one's task. Also, milk retained as a results mother's inability to breastfeed or pump breastmilk can cause painful swelling and inflammation of the breasts (mastitis) (Silvey, 2010). This exposes the mother to breast infection, which demands frequent hospital visits, drugs, and time off the job for recovery. Breast abscess, a consequence of unresolved breast infection, requires surgical treatment. Most critically, for all women, retention of milk due to inability of the mother to breastfeed or express breastmilk leads to reduction in milk production output. If a mother's milk production drops, compelling her to resort to infant formula to meet her baby's nutritional needs, it places the infant at higher risk for a number of diseases and conditions. A sick baby increases health expenditure and can cause the mother to be absent from work in order to care for her child. All these situations are expensive and undesirable for management of department (Chow, Fulmer, & Olson, 2008).

Support for lactation generally improves the profit margins of an organization. Company lactation support interventions has been found to reduce employee absenteeism close to 28% and 36% decrease in sick child health care claims (States, Services, & Force, 2008). A comprehensive lactation program can result in a $3:1 (GH©13.2) return on investment (Cardenas et al., 2017). The absence of an employee for one day to care for sick children occurs more often for mothers of formula fed infants. Absenteeism has been estimated to cost close to 15% of the payroll of an establishment and close to $775 (GH©3,293.75) per employee. Management can arrange in advance for lactation breaks; however, absence of

an employee to care for sick child cannot be arranged and negotiated. Businesses with breastfeeding support interventions have experienced higher growth, staff job satisfaction, morale, and improve employee commitment to the company. Companies with breastfeeding support interventions benefits from about 80-90% retention rate of their women in reproductive ages. A breastfeeding support program is an additional recruitment incentive for female staffs and improves the establishment's image in society (States, 2010).

An establishment that adopts a breastfeeding support policy will receive positive attention as a model for the contribution it is making towards the promotion of maternal and child health (Seijts et al., 2017)

Because of the strong economic competition in market places and the fact to some management members profits come first before people. And this will increase as globalization and urbanization continue to increase. It is unfortunate that the protective effect of exclusive breastfeeding on infant health is greatest during the precise period when women are most likely to abandon this behavior. In this increasingly globalized world, it is important for businesses in both the public and private sector to provide adequate leave, safe working conditions before and after childbirth, freedom from discrimination and eliminate the fear and panic of losing her job (Henry, 2005). Breastfeeding reduces absenteeism of mothers as a results of sickness of the child resulting from infections and undernutrition and workplace accommodation promote breastfeeding (Seijts *et al.*, 2017)

2.5 Coworkers support for Exclusive Breastfeeding at the Workplace

Coworkers support plays a crucial role in influencing the decision of professional working mothers to breastfeed after returning to work. Coworkers reception and attitudes towards lactating mothers if very welcoming and supportive will motivate them to continue breastfeeding after returning to work from maternity leave (Soomro *et al.*, 2016). There are obvious shortcomings in breastfeeding practices among professional working mothers attributable to work schedule, poor family support and lack of knowledge. Professional working mothers need to be empowered and supported to practice breastfeeding and in turn promote and support breastfeeding among their patients in particular and society in general (Anyanwu, Ezeonu, Ezeanosike, & Okike, 2014).

A study in Tanzania concluded that all mothers including HIV positive mothers should be supported by their partners, health professionals and the larger society in general to choose between breastfeeding and replacement feeding in order to promote infant growth and development and also, to support the mother physically and psychologically to attain her goal (Lazaro Mnongya Md, 2011).

CHAPTER THREE

3.0 METHODOLOGY

3.1 Study Design

The study design was a descriptive cross-sectional design and employed both qualitative and quantitative methods to gather information. The quantitative strand was a descriptive cross-sectional survey using structured questionnaire, and the qualitative strand was an in-depth interview to explore the knowledge of management on breastfeeding policies, and the support lactating mothers receive at the workplace from coworkers.

3.2 Study Site

The study was done in Tamale Central Sub-Metropolitan. Tamale is the Northern Regional Capital and one of the six metropolitans in Ghana and the only metropolitan in the Northern Part of the country. Tamale is a cosmopolitan city and is among the fastest growing cities in West Africa and thus made the city the ideal place for the study. The population of the region according to the 2010 Population and Housing Census with a projected growth rate of 2.9% is 2,479,461 (Ghana Statistical Service, 2012). The city has twenty three (25) health facilities comprising Government, private and mission hospitals, Health Centres and CHPS compounds, the city also has 29 public schools in the sub-metropolitan is about 29 and the number of banks and other financial institutions is 8.

3.3 Study Variables

- Exclusive breastfeeding: This refers to the feeding of an infant with only breast milk for the first six months of life without the addition of any food, water, herbal preparations unless medically indicated
- Workplace: The physical environment where an employee works like a bank, school or hospital for the purpose of this study.

- Support: Physical facilities such as refrigerator, comfortable table and chair, breastfeeding room or nursery and non-physical support such as task adjustment, extension of leave or break time or reduce workload which is given to a lactating mother to ease her burden at work.
- Breastfeeding policy/guideline: Any document/statement which has been prepared by experts in the field of nutrition and health outlining how breastfeeding should be practiced and protected in a state, country or globally.
- Professional working mother: A mother formally certified by a professional body of belonging to a specific profession by virtue of having completed a required course of studies and whose competence can usually be measured against an established set of standards.

3.4 Study population

The target population for the study was lactating mothers working in Health facilities, schools and Banks in Tamale central sub-metropolitan. These categories of staff were selected because they make over 80% of all professional working mothers in the Tamale central Metropolitan Area. All cadres of staff who were working and were registered with their professional bodies were eligible for this study. For the health facilities, nurses who were registered with the Nursing and Midwifery Council (N&MC) of Ghana were qualified to take part in the study, Physicians and other paramedics who were also registered with their respective bodies were interviewed. In the schools, mothers who met the inclusion criteria and were registered with the Ghana National Association of Teachers (GNAT) or the Ghana National Association of Graduate Teachers (NAGRATS) were interviewed and for the banks and other financial institutions, a lactating mother who was working on full time basis and paid by Controller and Accountant General's Department of Ghana were also eligible for this study.

3.5 Sample size

The sample size for the employees (breastfeeding mothers) in the study was calculated based on the prevalence of exclusive breastfeeding among professional working mothers and others. The sample size for the study was calculated as shown below:

N=Z2*pq/d2, where n represent the desired sample size, Z is the normal standard deviate, whose value at 95% confidence level is 1.96, p= current EBR rate among professional working mothers; 0.103 (Dun-Dery & Laar, 2016), q= 1-p=0.897 and d = The set margin of error; 5% (0.05). The sample size n=141.97=142. This was adjusted by 15% to cater for non-response to specific questions; therefore the total sample for employees in the study was 164. Thus the total sample size for employees in this study was 170 professional working mothers.

Fifteen (15) employees in management positions and fifteen coworkers (15) were interviewed; five (5) employees in management positions and five (5) coworker were each selected from the health facilities, schools and banks respectively, for both the coworkers' interview and the management's interview. They were selected purposively and this information informed the research team of policies about breastfeeding in the department and the support lactating mothers received at the workplace. A management member for the purpose of this study was a person leading the organization or in a management position with not less than five years' experience in that position. The management member in the organization was first identified and orientated on the research project and permission was sought for the administration of the questionnaire. In the event that the head of the organization was not available, the deputy was made to partake in the study.

3.6 Sampling method

Multi-stage random sampling was used to select professional working mothers who were lactating in to the study. The total sample size of 170 was divided for the public Health Facilities (25), public Banks (8) and the public Schools based on the number of schools (29) in the Tamale central sub-metropolitan, number of public Health facilities (25) in the sub-metropolitan and the number of public Banks (8). Per the ratios, 69 professional health workers who were lactating were interviewed (25/62*170), 79 teachers were interviewed (29/62*170) and 22 professional bank workers were interviewed (8/62*170). After getting the number to be interviewed for each department, the list of schools and their staff strengths was obtained from the Tamale Metropolitan Education Directorate. A systematic random sampling technique was used with the register of teachers in the education sector (1,030), health sector (872) and the banking sector (189) in Tamale sub-central metropolitan as the sampling frame. The sampling frame was obtained from the Tamale Metropolitan education directorate, Tamale metropolitan health directorate and the banks. The total population in the education sector (1,030) was divided by the estimated sample side for teachers (79). A number between 1 and 13 was generated using random integer generator at www.random.org (5) to serve as a random start point. After a random start, every 13th person was chosen and her corresponding school identified and she was interviewed. This was repeated until the estimated number of teachers (79) was reached. . Also, the total population in the health sector (872) was divided by the estimated sample side for teachers (69). A number between 1 and 12 was generated using random integer generator at www.random.org (3) to serve as a random start point. After a random start, every 12th person was picked and her corresponding health facility identified and she was interviewed. This was repeated until the estimated number of health staff (69) was reached. The total population in the banking sector (189) was divided by the estimated

sample side for banking staff (22). A number between 1 and 8 was generated using random integer generator at www.random.org (5) to serve as a random start point. After a random start, every 5th person was picked and her corresponding bank identified and she was interviewed. This was repeated until the estimated number of banking staff (22) was reached. All respondents agreed and completed the study. In the event that a mother was not available at the time of visit, a separate visit was done and if she was not available again, the next mother on the list was considered for the interview. All selected respondents agreed and completed the study.

Fifteen (15) Management members and coworkers respectively were selected purposively, that is Management members with the longest working experience in the department were considered to others with less experience in the department this was obtained from the human resource unit of the department. Coworkers who had children in the last five years or whose partners have had a child or children in the last five years were eligible for the in-depth interview. This was done to ensure that those coworkers would have fresh memories of their experience or the experience of their partners during their period of lactation

In-depth interview is a qualitative research technique that involves the process of conducting intensive individual interviews with a small number of participants to explore their opinions on a particular idea, intervention, or an occurrences (Boyce & Associate, 2006). All participants in the In-Depth interview were given unique codes for confidentiality of respondents.

3.7 Data Collection Techniques and Tools

Information was obtained from respondents using a structured interviewer administered questionnaire. The consent of the mothers was sought before the commencement of the

questionnaire administration. Mothers who were identified to be eligible (working mothers with children 6 to 24 months) were invited orally, to partake in the study. For the management, consent was sought prior to the commencement, and an appropriate time and venue scheduled for the interview using an in-depth interview guide and a tape recorder. Coworkers were also interviewed at their own place and time of convenience. All participants met the inclusion criteria for this study. Some of the questions used for the interview of mothers were adopted from the 2012 Global Infant and Young Child Feeding document (WHO/UNICEF, 2012)

Before commencement of the data collection, research assistants were recruited and orientated. They were sensitized on the purpose of the research, the focus of the research, the administration of completing questionnaires, and handling of unresponsive interviewees during the process. The structured questionnaires were then distributed to the research assistants for administration over a period of one month. The questionnaires consisted of three sections. The first part included questions on socio-demographic characteristics of respondents and breastfeeding; the second part assessed mother's knowledge of policies and guidelines on optimal breastfeeding practices. The final section included support for exclusive breastfeeding practices at the workplace and the workplace environment. All variables presented were coded with numeric values.

The in-depth interview was done with the aid of an in-depth interview guide. The session was recorded after permission was obtained from of respondents. Field notes were also transformed in to data document within a day of the IDI. The notes and transcriptions were anonymized, and no identification information was included in the notes. Each participant was assigned a unique number instead of their names. This component of the study was to explore knowledge of management on breastfeeding policies, and coworker support for

breastfeeding at the workplace. For this reason, a framework analysis (Cripe & Cripe, 2017) was adopted. The steps in the analysis included; familiarization, identifying a thematic framework, indexing, charting, mapping and interpretation. Responses were then coded manually and themes which run through were categorized.

3.8 Quality Assurance

Questionnaires were pretested on women with similar characteristics as those who were recruited in the study to ensure that questions were well framed and easily understood. The questionnaires were then updated and retested to ensure that the needed information was captured. There was a pretesting session done in workplaces of Savelugu town which was not included in our study settings. The necessary changes were made in language and style of the questionnaire to improve comprehensibility.

3.9 Date Processing and Analysis

The data entry and analysis was performed using Stata version 14. Administered questionnaires were collated at the end of each day. Data was edited and coded manually before entering in to computer software. The data was then analyzed on Stata version 14. Breastfeeding practices and workplace variables were presented with frequencies and percentages using tables. Stata version 14 was used to compare the proportion- differences of breastfeeding practices by type of demographic factors such as type of age of respondents, level of education, marital status, wealth quintile and the employment sector (health sector/education sector/banking) with 95 % confidence interval. Statistically significant was considered when $p<0.05$. The qualitative data was analyzed using trends in responses. Patterns and themes which run through were grouped and a note was taken of responses which were completely different from the view point of majority of the respondents. Similar findings were then triangulated and reported accordingly. The wealth

quintiles were generated using the demographic and health survey wealth indexing methodology which ranges participants from poorest to richest through lowest, second middle, fourth and highest wealth bracket and participants are made to select which bracket they belong (www.dhsprogram.com/topic/wealth-index/index.cfm).

3.10 Ethical Consideration

Ethical clearance to carry out this study was sought from the Ghana Health Service Ethical Review committee (Ethical Approval ID≈ for the study is GHS – ERC: 73/02/17). Permission was also obtained from the Tamale Metropolitan Health Directorate, Tamale Metropolitan Education Directorate and heads of the various banks and financial institutions. Informed consent was obtained from all participants after the objectives and the methodology of the study was explained to them. Participation in the study was completely voluntary, no financial or material benefits were given and participants were told they could choose to withdraw from the study at will and at any time even if administration of questionnaire has started. The privacy and confidentiality of every participant was ensured throughout the study period. The privacy of each participant was assured by ensuring that their names were not included in the questionnaire (anonymity). Participants were also assured that where signatures appeared on the consent forms will be separated from the questionnaire and will be kept under lock and key, and after two years of the study, the data will be discarded and no records of the data both electronically or hard copy will be available. The privacy of participants was ensured by interviewing only one respondent at a time and at a venue that was convenient to the respondent. Permission was also obtained from respondents for recording of the interview proceedings of the in-depth interview.

The participants in the study were told of the potential risk and benefits of taking part in the study. The benefits of taking part in this study is that the results of this study could be used to influence policy decisions which could results in increase support for working mothers to practices exclusive breastfeeding at the workplace for instance increase the duration of maternity leave currently prevailing in Ghana or enforce agencies to make workplaces baby friendly. Also the risk of taking part in this study is the time was that it could be time consuming and the discomfort of answering some of the questions.

CHAPTER FOUR

4.0 RESULTS

This chapter deals with the key findings of the study. It represents the views and opinions of respondents of the study population.

4.1 Characteristics of the Sample

Table 2 depicts the major characteristics of mothers sampled from the schools, banks and health facilities. A few (8.2%) of respondents were below the age of 25 years whilst (47.1%) were 25-29 years, 27.6% were between 30 – 34 years and 17% were above 34 years. Majority (40%) of children were in the age group (12-17 months), 21.7% (6-8), 16.5% (9-11), and 21.2% (18-24) months of age. A significant proportion of mothers (84.1%) were married whilst 15.9% were single, divorced, cohabiting or widowed. Close to forty percent (38.2%) of mothers had at least one child, about thirty percent (28.8%) had two children, and almost one-in-every five women (18.8%) had 3 children. Women who had 4 or more children were few (14.1%).

The major religious denomination was Islam (70.0%), whilst 28.8% of the respondents were Christians and 1.2% of respondents practiced African Tradition religion. The data show that 56.5% of respondents' children were females with 43.5% being males.

Table 2 also shows the socio-demographic characteristics of mothers during the survey, majority (97.1%) of mothers had Tertiary education whilst 2.9% had secondary education. Majority (55.3%) of the respondents belonged to the lowest wealth quintile whilst 19.4% belonged to the highest wealth quintile.

Fifteen (15) employees in management positions and fifteen coworkers (15) were interviewed using an in-depth Interview technique; five (5) came from the health facilities,

5 from schools and 5 from the banks for both the coworkers' interview and the management's interview.

Table 2: Background and socio-demographic characteristics of respondents

Attribute	Frequency	Percent
Age of respondents (in years)		
20-24	14	8.2
25-29	80	47.1
30-34	47	27.6
35-39	24	14.1
40-44	5	2.9
Total	170	100.0
Religion		
Christianity	49	28.8
Islam	119	70.0
Traditionalist	2	1.2
Total	170	100.0
Marital Status		
Single	7	4.1
Married	143	84.1
Cohabiting	9	5.3
Divorced	7	4.1
Widowed	4	2.4
Total	170	100.0
Ethnicity		
Dagomba	80	47.1
Gonja	42	24.7
Mamprusi	19	11.2
Akan	15	8.8
Other	14	8.2
Total	170	100.0
Level of Education Completed		
Senior High School	5	2.9
University/Polytechnic/Training College	165	97.1
Total	170	100.0
Sex of last Child		
Male	74	43.5
Female	96	56.5
Total	170	100.0

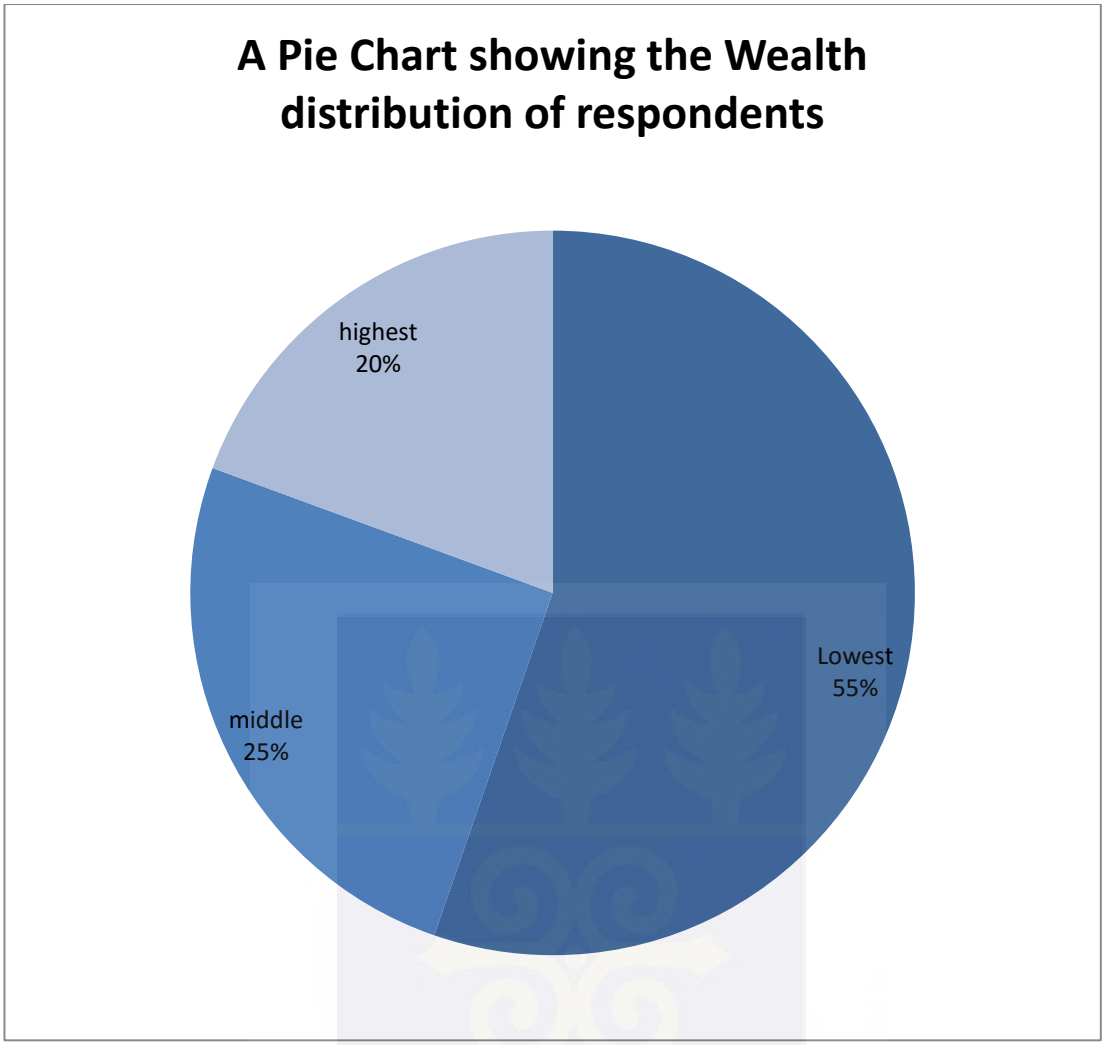

Figure 2: A pie chart showing the wealth distribution of respondents

4.2 Breastfeeding Practices

Table 3 shows the breastfeeding practices among women in the study. All (100%) mothers in the study breastfed their last child. Majority of respondents (88.2%) initiated breastfeeding within the first 1 hour of birth and 11.8% initiated breastfeeding after the first hour of birth. The practice of exclusive breastfeeding for the first 6 months of life was 14.7%. Most of the respondents (85.9%) were still breastfeeding their children as at the time the study was conducted and most (78.8%) of the children were below 18 months of age.

Determining the frequency of breastfeeding during the day, 2.4% of children were breastfed 1-4 times, 15.2% were breastfed 5-7 times, 2.4% did not know the number of times they breastfed their children, whilst majority (80.0%) admitted breastfeeding on demand. Determining the frequency of breastfeeding during the night, 5.9% of children were breastfed 1-4 times, 8.8% were breastfed 5-7 times, 5.9% did not know the number of times they breastfed whilst majority (79.4%) breastfed their children on demand. Majority of the respondents (81.2%) breastfed their children at the workplace.

Table 3: Breastfeeding Practices

Breastfeeding Practices	Frequency	Percentage
Breastfeeding Initiation		
Within 1 hour of birth	150	88.2
After 1 hour after birth	20	11.8
Total	170	100.0
Breastfeeding frequency (during night)		
1-4 times	10	5.9
5-7 times	15	8.8
On demand	135	79.4
I don't know	10	5.9
Breastfeeding frequency (during day light hours)		
1-4 times	4	2.4
5-7 times	26	15.2
On demand	136	80.0
I don't know	4	2.4
Total	170	100.0
Initiation of foods/liquids (other than breastmilk)		
Within one month of birth	2	1.2
Within two months of birth	5	2.9
Within three months of birth	23	13.5
Within 4-5 months of birth	115	67.6
At six months after birth	25	14.7
Total	170	100.0
Frequency of breastfeeding at the work place		
As long as the child wants to	41	24.1
Three times	30	17.6
Four time	54	31.8
Five times	10	5.9
Six times	4	2.4
Not allowed to bring child to work	31	18.2
Total	170	100.0

4.3 Knowledge of Breastfeeding policies

4.3.1 Knowledge of employees on Breastfeeding Policies

Table 4 shows the mothers knowledge/opinion on breastfeeding policies. The results shows that 92.9% of mothers knew that breastfeeding should last up to 24 months or more,

5.9% thought breastfeeding should last between 6-11 months, 0.6% thought breastfeeding should last between 12-18 months whilst another 0.6% also thought breastfeeding should last between 19-23 months. Majority of respondents (98.8%) indicated that breastfeeding should be initiated within the first hour of birth.

Table 4: Knowledge of employees on Breastfeeding Policies

Variable	Frequency	Percentage
Breastfeeding Duration		
6-11 months	10	5.9
12-18 months	1	0.6
19 – 23 months	1	0.6
24 months or more	158	92.9
Total	170	100.0
Breastfeeding Initiation		
Immediately after birth	89	52.3
30 minutes after birth	38	22.4
One hour after birth	41	24.1
One day after birth	2	1.2
Total	170	100.0
Breastfeeding Frequency		
3-5 times daily	8	4.7
6-7 times daily	3	1.8
8-10 times daily	6	3.5
On demand	152	89.4
Other	1	0.6
Total	170	100.0
Exclusive Breastfeeding		
0-3 months	5	2.9
4-5 months	6	3.5
6 months	154	90.6
7-9 months	4	2.4
Other	1	0.6
Total	170	100.0

4.3.2 Knowledge of Management Members on breastfeeding Policies

The study revealed a high level of knowledge on breastfeeding duration; this is because many respondents mentioned explained that breastfeeding should be exclusive for the first six months of life and should continue along with complementary feeding to two years or more.. Also, knowledge of exclusive breastfeeding by management was high. Respondents

were able to explain the breastfeeding pattern from delivery up to two years of age or more. These findings cut across the education, financial and health sectors visited as evident by the quotes from respondents:

"*You start breastfeeding soon after a child is born and the mother is ok, then you continue with only breast for six months and introduce supporting foods whilst you continue breastfeeding until two years or more"* (IDI, Management, B-01/Male /43years)

"*Breastfeeding should last for two years we are told, but should start with only breastmilk for 6 months and other foods added"* (IDI, Management, E-04/Female /38years)

"Initiate breastfeeding within the first hour of birth and continue with only breastmilk for the first six months, thereafter introduce complementary feeding" (IDI, Management, Ho3/Female /47years)

"*Exclusive breastfeeding for six months and continue with complementary foods for up to two years"* (IDI, Management, E05/Male /49years))

There was also a high level of knowledge on the labour law of Ghana which mandates organizations to provide maternity leave to mothers prior to delivery. Respondents were able to describe the duration of maternity leave and other support services available to mothers in their establishments as evident by the quotes from respondents:

"*Nursing mothers are given twelve weeks maternity leave and thereafter, they are given two hours break to breastfeed their children during working hours*" (IDI, Management, H02/Male /47 years)

"*Mothers are given twelve weeks maternity leave to cater for their children and are also exempted from extra curricula activities"* (IDI, Management, E01/Female/53 years)

4.4 Support for Exclusive Breastfeeding

4.4.1 Workplace Support for Exclusive Breastfeeding (Work environment and breastfeeding facilities)

Table 5 shows the support lactating mothers receive at the workplace. The results shows that most respondents (94.7%) did not have a clean room for breastfeeding at the workplace, 1.8% had a clean room designated for breastfeeding, 0.6% had a room that was not comfortable whist 2.9% did not know whether their place of work had a room designated for breastfeeding. Almost all respondents (98.2%) indicated that that their place of work has an established maternity leave. Also, majority of the respondents (85.9%) did not have a comfortable table and chair for breastfeeding, 1.2% had a table and chair for breastfeeding, 7.6% indicated that their establishment has a table and chair for breastfeeding but they were not comfortable whilst 5.3% did not know whether their place of work had a comfortable table and chair for breastfeeding. The results also show that 15.3% of respondents had a breastfeeding support policy at their place of work. Also 15.9% of respondents benefited from tasked adjustment from their employers during their period of lactation. It is also worth mentioning that, no establishment had a breastmilk pump to ease the burden of manually expressing breast milk. 60.3% of respondents indicated that their break periods were extended to cater for breastfeeding. Almost all mothers (98.8%) in the study were given three months maternity leave.

Table 5: Women's report of Workplace Support for exclusive breastfeeding

Variable	Frequency	Percentage
Clean room purposely for breastfeeding		
Exist	3	1.8
Exist but not clean	1	0.6
Does not exist	161	94.7
Don't know	5	2.9
Total	170	100.0
Table and chair for breastfeeding		
Exist	2	1.2
Exist but not comfortable	13	7.6
Does not exist	146	85.9
Don't know	9	5.3
Total	170	100
Refrigerator designated for breastmilk		
Exist	3	1.8
Exist but not completed	2	1.2
Does not exist	164	96.4
Don't know	1	0.6
Duration of maternity leave		
1 months	2	1.2
3 months	161	94.7
Other	7	4.1
Total	170	100.0

4.4.2 Coworkers support for breastfeeding

The study revealed a low level of coworkers support for breastfeeding at the workplace. Also, coworkers felt they had no control over the affairs of the organizations and hence could not influence any major decision. These findings permeated the schools, banks and hospitals visited as evident by the quotes from respondents:

"*I am just an ordinary employee, what I can influence here is less*" (IDI, Coworker, H-04/Female/43 years)

"*The support services available to working mothers here is that they are allowed to report to work one hour late and close one hour early and they enjoy their three months maternity leave, quite apart from that, personally, I do not give them any support because am not the Boss and do not decide what to do"* (IDI, Coworker, H-01/female/ 32years)

"The only thing I am able to do is that, I understand them and sometimes take their lessons when they have to breastfeed or when they are stressed up" (IDI, Coworker, Eo3/Male/37 years)

"I personally do understand them and take some of their responsibilities if I am less busy but when am stressed, I do not just try. I also think the three months maternity leave is woefully inadequate" (IDI, Coworker, E04/Female/33 years)

There was also a perception by most of the respondents that the maternity leave affects productivity in the organization and disrupts the smooth flow of activities. These findings permeated all the study sites visited as evident by the quotes from respondents:

"*The support in the form of maternity leave has a negative effect on service delivery. This is because the efforts that will be required to complete the day's work will be lowered any*

time the mother leaves the facility and even her attention is mostly on the baby, in effect productivity is lowered" (IDI, Coworker, E05/Female/39 years)

"*These support systems possess a great challenge but we need children too. So despite the negative implications on productivity, we assist as much as we can"* (Coworker, B02/Male/29 years)

"*Mothers are given three months of maternity leave to cater for their children and are also exempted from extra curricula activities*" (IDI, Coworker, H01/Male/34 years)

4.5 Association between breastfeeding initiation and background characteristics of respondents

Bivariate and multiple logistic regression analysis in table 6, indicate that, there were no associations between breastfeeding initiation and background characteristics such as age of respondents, marital status, sex of child, number of children and educational status. There was, however, an association between breastfeeding initiation and wealth quintile of respondents with $P<0.01$. Further analysis using multiple regression also reveal that wealth quintile of respondents was significantly associated with breastfeeding initiation with AOR=5.725 95% CI, 2.037 - 16.088, this implies that women in the highest wealth quintile were 5.7 times more likely to initiate breastfeeding within the first hour as compared to their counterparts in the lowest wealth quintile.

Table 6: Association between breastfeeding initiation and background characteristics of respondents

Breastfeeding initiation					
	Initiated breastfeeding within 1 hour of birth	**Initiated BF after 1 hour of birth**	**Chi-square**	**P-value**	**AOR (95% CI)**
Variable	**Frequency (%)**	**Frequency (%)**			
Age of respondents					
15-29	82(87.2)	12(12.8)			
31 and above	68(89.5)	8(12.8)	0.203[a]	0.652 (a)	**0.862(0.309-2.402)**
Marital status					
Married	124 (86.7)	19 (13.3)	2.009[a]	0.156 (a)	**0.231 (0.270-1.949)**
Not married	26 (96.3)	1 (3.7)			
Educational status					
Senior High school	4(80.0)	1(20.0)			
University/Polytechnic/Training College	146 (88.5)	19 (11.5)	0.337[a]	0.562(F)	**0.362(0.036-3.671)**
Wealth quintile					
Low income	127 (92.7)	10 (7.3)			
High income	23 (69.7)	10 (30.3)	13.557[a]	P<0.0a)	**5.725(2.037-16.088)**
Sex of last child					
Male	68(91.9)	6(8.1)			**2.159(0.740-6.301)**
Female	82(85.4)	20(11.8)	1.688[a]	0.194(F)	**1.161(0.414-3.260)**
Number of children					
1-2 children	102(89.5)	12(10.5)	0.511[a]	0.475(F)	
3-4 or more children	48(85.7)	8(14.3)			

OR ─ Odds ratio from multiple logistic regression. Variables in the model were age of respondents, marital status, educational status, sex of child, number of children and wealth quintiles of respondents.

R^2= 0.177─the model was able to explain about 17.7% of the variability in the outcome variable (breastfeeding initiation)

F─P-value from the Fisher's exact Test

a ─P - value from Chi square

4. 6. Association between complementary feeding initiation and background characteristics of mothers

Table 7 shows the bivariate and multiple logistic regression analysis of initiation of complementary feeding together with other background characteristics of respondents (mothers). Bivariate analysis revealed that, there was no significant association existing between initiation of complementary feeding and other background characteristics such as age of respondents, marital status, wealth quintile, sex of child and number of children of respondents since their P>0.05, However, bivariate analysis revealed that there was significant association between age introduction of complementary feeding and educational status of respondents with P<01. Further multiple logistic regression analysis also revealed that there was an significant association between age introduction of complementary feeding and educational status of respondents with AOR = 0.100, 95% CI (0.014-0.689).

Table 7: Association between introduction of complementary feeding and background characteristics

Complementary feeding					
	Child given food/liquids before 6 months	**Child given foods/liquids at 6 months**	**Chi-square**	**p-value**	**OR (95% CI)**
Variable	**Frequency (%)**	**Frequency (%)**			
Age of respondents					
19-29	78(93.0)	16(17.0)			
30-49	12(18.5)	53(81.5)	0.899[a]	0.343(F)	**0.682 (0.274-1.694)**
Wealth quintile					
Low income	117(84.5)	20(14.6)			
High income	28(84.8)	5(15.2)	0.006[a]	0.936(F)	**1.254(0.417-3.767)**
Marriage					
Married	121(84.6)	22(15.4)	0.331[a]	0.565(F)	**0.947(0.252-3.564)**
Not married	24(88.9)	3(11.1)			
Educational status					
Senior high school	2(40.0)	3(60.0)	8.426[a]	P<0.01a	**0.100(0.014-0.689)**
University/Polytechnic/Training College	145(86.7)	22(13.3)			
Number of children of respondents					
1-2 children	98(96.0)	16(14.0)	0.124[a]	0.725(F)	**1.128(0.444-2.864)**
3-4 or more children	47(83.9)	9(16.1)			
Sex of child					
Male	60(81.1)	14(18.9)	1.854[a]	0.173(F)	**0.514(0.209-1.264)**
Female	85(88.5)	11(11.5)			

OR ─ Odds ratio from multiple logistic regression. Variables in the model were age of respondents, marital status, educational status, sex of child, number of children of respondents and wealth quintile of respondents.

R^2=0.087 ─the model was able to explain about 8.7% of the variability in the outcome variable (complementary feeding)

F─P-value from the Fisher's exact Test

a ─P - value from Chi square

4.7 Association between knowledge of exclusive breastfeeding duration and background characteristics of mothers

Table 8 shows the bivariate and multiple logistic regression analysis of knowledge on breastfeeding duration together with other background characteristics of respondents (mothers). Bivariate analysis revealed that, there was no significant association existing between knowledge of breastfeeding duration and other background characteristics such as age of respondents, educational status, marital status, income, complementary feeding and number of children of respondents since their P>0.05. Further multiple logistic regression analysis also revealed that there was no significant association between knowledge of breastfeeding duration and other background characteristics such as age of respondents, educational status, marital status, income, complementary feeding and number of children of respondents.

Table 8: Association between knowledge of exclusive breastfeeding duration and background characteristics

Breastfeeding duration					
	Less than 24 months	**24 months or more**	**Chi-square**	**p-value**	**OR (95% CI)**
Variable	**Frequency (%)**	**Frequency (%)**			
Age					
15-29	3(3.2)	91(96.8)			
30-49	2(2.6)	74(97.4)	0.046[a]	0.830 (F)	**0.640 (0.190 – 2.162)**
Wealth quintile					
Low income	4(2.9)	133(97.1)			
High income	1(3.0)	32(97.0)	0.001[a]	0.973(F)	**0.486 (0.130 – 1.824)**
Educational status					
Senior high school	1 (20.0)	4(80.0)			
University/Polytechnic/Training college	4 (2.4)	161(97.6)	5.251[a]	0.022 (F)	--
Complementary feeding					
Before 6 months	3(2.1)	142(97.9)			
At 6 months	2(8.2)	23(92.0)	2.628[a]	0.105(F)	**1.597(0.191-13.348)**
Number of children of respondents					
1-2 children	7 (6.1)	107 (93.9)			
3-4 or more children	5 (8.9)	51 (91.1)	0.445[a]	0.505 (F)	**0.674(0.197-2.312)**
Marital status					
Married	5(2.5)	138(96.5)	0.973[a]	0.324(a.)	**0.0.334(0.090-1.241)**
Not married	0(0.0)	27(100.0)			

OR ─ Odds ratio from multiple logistic regression. Variables in the model were age of respondents, marital status, educational status, sex of child, number of children of respondents, complementary feeding and wealth quintiles of respondents.

R^2= 0.083─the model was able to explain about 8.3% of the variability in the outcome variable (Knowledge of breastfeeding duration)

F─P-value from the Fisher's exact Test

a ─P - value from Chi square

--- The statistic could not be computed due to few numbers in one of the compirators

4.8 Association between Knowledge of exclusive breastfeeding and background characteristics of respondents

Bivariate and multiple logistic regression analysis in table 9 indicated that, there were no significant association between knowledge of exclusive breastfeeding and background characteristics such as age of respondents, marital status, income, complementary feeding and number of children of respondents since their $P>0.05$, however, bivariate analysis indicated that, there was an association between knowledge of exclusive breastfeeding and educational status of respondents with $P<0.05$. Further analysis using multiple regression however, revealed that knowledge of exclusive breastfeeding was not significantly associated with educational status.

Table 9: Association between Knowledge of exclusive breastfeeding and background characteristics of respondents

Exclusive breastfeeding knowledge					
	Other	**6 months exclusive Breastfeeding**	**Chi-square**	**p-value**	**OR (95% CI)**
Variable	**Frequency (%)**	**Frequency (%)**			
Educational status					
Senior high school	1 (20.0)	4 (80.0)			
University/Polytechnic/Training College	4 (2.4)	161 (97.6)	5.251[a]	0.022(F)	**5.219(0.336-81.18)**
Marriage					
Married	5 (3.5)	138 (96.5)	0.973[a]	0.324 (a)	--
Not married	0 (0.0)	27 (100.0)			
Wealth quintile					
Low income	4 (2.9)	133 (97.1)			
High income	1 (3.0)	32 (97.0)	0.001[a]	0.973 (F)	**0.857 (0.84 – 8.733)**
Age of respondents					
15-29	4 (3.8)	101 (96.2)			
30-49	1 (1.5)	64 (98.5)	0.725[a]	0.394 (a)	**0.972(0.149-6.359)**
Complementary feeding					
Before six months	1 (3.3)	29 (96.7)			
At 6 months	4 (2.9)	136 (97.1)	0.20[a]	0.889(F)	**0.353(0.046-2.690)**
Number of children					
1-2 children	3(2.6)	111 (97.4)			
3 -4 or more children	2(3.6)	54(96.4)	0.116	0.733 (F)	**0.835(0.126-5.535)**

OR ─ Odds ratio from multiple logistic regression. Variables in the model were age of respondents, marital status, educational status, number of children of respondents, complementary feeding and income bracket of respondents.

R^2= 0.0122─the model was able to explain about 12.2 % of the variability in the outcome variable (breastfeeding initiation)

F─P-value from the Fisher's exact Test

a ─P - value from Chi square

--- The statistic could not be computed due to few numbers in one of the compirators

4.9 Association between workplace support and introduction of complementary feeding

Table 10 shows the bivariate and multiple logistic regression analysis of workplace support together with complementary feeding practices of respondents. Bivariate analysis revealed that, there was no significant association existing between introduction of complementary feeding and support provided to lactating mothers at the workplace such as maternity leave, tasked adjustment, break extension and the presents of comfortable table and chair for breastfeeding. Further multiple logistic regression analysis also revealed that there was no significant association between introduction of complementary feeding and workplace support such as introduction of complementary feeding and support provided to lactating mothers at the workplace such as maternity leave, tasked adjustment, break extension and the presents of comfortable table and chair for breastfeeding

Table 10: Association between workplace support and knowledge of introduction of complementary feeding

Complementary feeding					
	Before 6 months	**At 6 months**	**Chi-square**	**p-value**	**OR (95% CI)**
Variable	**Frequency (%)**	**Frequency (%)**			
Maternity leave					
Given maternity leave	30 (17.9)	138 (82.1)	0.434[a]	0.510 (F)	--
Not given maternity leave	0 (0.0)	2(100.0)			
Tasked adjustment					
Yes	8 (29.6)	19 (70.4)	3.171[a]	0.075(F)	**1.708 (0.357 – 8.159)**
No	22 (15.4)	121 (84.6)			
Break extension					
Yes	17 (16.5)	86 (83.5)	0.235[a]	0.628(F)	**2.763 (1.057 – 7.222)**
No	13 (19.4)	54 (80.6)			
Table and chair					
Exist	1 (50.0)	1 (50.1)	1.458[a]	--	--
Does not exist	29 (17.3)	139 (82.7)			

OR ─ Odds ratio from multiple logistic regression. Variables in the model were age of respondents, marital status, educational status, number of children of respondents, complementary feeding and income bracket of respondents.

F─P-value from the Fisher's exact Test

a ─P - value from Chi square

R^2=0.088 ─the model was able to explain about 8.8% of the variability in the outcome variable (introduction of complementary feeding)

--- The statistic could not be computed due to few numbers in one of the compirators

CHAPTER FIVE

5.0 DISCUSSION

5.1 Breastfeeding Practices

This study revealed that the proportion of mothers who practiced exclusive breastfeeding for six months were 14.7%, as compared to the 2014 GDHS which reported an exclusive breastfeeding rate of 52.0% (GSS *et al.*, 2014). However , this differences could have been attributed to the different sample selection in the two studies, whereas the 2014 GDHS included all mothers in the general population, this study was limited to working mothers who were entitled to only twelve weeks of maternity leave given by their employers with no supporting environment to enable them breastfeed at the workplace. A similar study among professional working mothers in Wa, reported an exclusive breastfeeding rate of 10.3% (Dun-Dery & Laar, 2016) which is not quite different from what was obtained in this current study. The exclusive breastfeeding rate of 14.7% reported by this study was also lower than the 2011 Multiple Indicator Survey of Ghana which reported an exclusive breastfeeding rate 63.6% for the Northern Region, and a national rate of 43% (MICS, 2011.). This rate was also found to be lower than the global exclusive breastfeeding rate of 37% (Victora *et al.*, 2016). Al-binali (2012) also reported that the practice of exclusive breastfeeding among professional teachers in Saudi Arabia was 8.3% and initiation of breastfeeding within the first hour of birth was 31% which are substantially lower than the rates reported in this current study. All this could still be attributed to the differences in the sample selection between the studies. A similar study among health care workers in Nigeria also reported an exclusive breastfeeding rate of 25.0% and reasons cited for their inability to practice exclusive breastfeeding included busy work schedule (61.8%) and exclusive breastfeeding been too stressful (18.4%) among others (Anyanwu *et al.*, 2014).

This study also revealed that initiation of breastfeeding within the first hour of birth was 98.8% which is much higher than the 55.6% reported by the 2014 GDHS. This differences could also be due to the fact that this current study was done among working mothers mostly with tertiary education (97.1) and also 69 (40.59%) of respondents were health workers with in-depth knowledge on benefits of early initiation and also the fact that many of the respondents were more likely to have delivered in health facilities where early initiation of breastfeeding is promoted and supported.

5.2 Knowledge of Breastfeeding Policies

5.2.1 Employees Knowledge of Breastfeeding Policies

The study revealed a high level of knowledge on breastfeeding policies. Most respondents (90.6%) indicated that excusive breastfeeding should last up to the first six months of a child's life and knowledge of initiation of breastfeeding within the first hour of birth was 74.7%. This finding was consistent with a recent finding in neighboring country where knowledge on the duration of exclusive breastfeeding was 83.4% (Utoo et al., 2012). Also, this study reported that 92.9% of respondents knew that breastfeeding should last for two years or more if the mother and child so desire, this however does not concur with the findings of Utoo et al., where knowledge on the duration of breastfeeding was reported to be 36.1% among health workers in Southern Nigeria. A similar study among female teachers in Abha education district of Saudi Arabia however, reported an exclusive breastfeeding knowledge of 28.1% %) and knowledge of breastfeeding initiation within the first hour of birth was also reported as 28.9%, which is far lower than the level of knowledge recorded by this current study (Al-binali, 2012). The finding of this study were found to be inconsistent with the work of Al-binali who observed that knowledge of mothers was associated to the practices of exclusive breastfeeding (Al-binali, 2012).

The high level of knowledge reported by this study could be due to the fact that all respondents were females and it is one of the cardinal role of the African women and also, because most of the respondents had attained tertiary education.

5.2.2 Knowledge of Management on Breastfeeding Policies

The general knowledge about breastfeeding policies among management in this study was very high and every management member in this study had heard about exclusive breastfeeding for the first six months after birth. Specific knowledge on initiation of breastfeeding, duration of breastfeeding and breastfeeding frequency per day were also high. Initiation of breastfeeding within the first hour of birth was mentioned spontaneously in all IDIs. The Labour law recommendation for maternity leave to given to mothers was widely known and emerged as an unprompted response.

Findings from this study revealed that participants (employees and management) clearly mentioned the duration of exclusive breastfeeding and breastfeeding which were 6 months and 24 months or more respectively. As observed in several settings, knowledge of negative behavioral practices do not necessarily translate in to positive behavior change ("The role of theory in HIV prevention," 2000). Studies have also shown that that communication knowledge about why people should adopt a positive behavior is not sufficient to induce behavior change especially in situations where alternative health priorities exist (Haq, Hassali, Shafie, Saleem, & Farooqui, 2012).

5.3 Support for Breastfeeding

5.3.1 Workplace Support for Breastfeeding (Environment and breastfeeding facilities)

This study aimed among other things, to assess the workplace breastfeeding facilities. To the best of the researchers' knowledge this is the first mixed method study exploring

workplace support for breastfeeding in the country. The study revealed that support for breastfeeding at the workplace was inadequate. Most of the respondents (94.7%) did not have a clean room designated for breastfeeding and 85.9% did not have a comfortable table and chair for breastfeeding. Policies supporting breastfeeding at the workplace in terms of tasked adjustment among respondents was also found to be low (15.9%). Findings from this current study is consistent with other studies done elsewhere where all workplace provides three months maternity leave according to the ILO specification (Soomro *et al.*, 2016). The findings of this study are also consistent with studies done in the United States where it is well established that mothers stop breastfeeding before resuming work due to inadequate workplace support and where many women identify employment as an obstacle to breastfeeding, they also reported employer attitude towards breastfeeding to be discouraging (Education & Stewart-glenn, 2008). The higher the workplace support, the higher the breastfeeding initiation and sustainability (Dinour & Szaro, 2017). With the limited support for breastfeeding revealed by this study coupled with the short duration of the maternity leave (12 weeks), mothers have no option than to resort to other forms of feeding other than exclusive breastfeeding and this finding is consistent with the works of somro et al., and Dun-Dery, 2016 (Soomro *et al.*, 2016). Working women are less likely to practice exclusive breastfeeding if the maternity leave is not comprehensive enough to cater for the six months duration of exclusive breastfeeding, if there are inadequate facilities to support breastfeeding mothers at the workplace, no separate room for breastfeeding and lack of breastfeeding breaks (Al-binali, 2012)

5.3.2 Coworkers Support for Breastfeeding

The support from coworkers in this study was found to be inadequate and that could partly explain the low rate of exclusive breastfeeding recorded by this study. Coworkers were generally of the view that, support for breastfeeding should come from management; also

many felt the need for breastfeeding was solely a woman and personal affair which cannot be influenced by a third party. Some coworkers were also of the view that support systems for breastfeeding mothers could affect production at their places of work. These findings were consistent with the work of Emily T. Cripe (2017) which reported that coworkers support at workplaces were inadequate and affects exclusive breastfeeding negatively among professional working mothers. The paper also indicated that the support by management and coworkers is crucial if a mother must maintain lactation after the expiration of her maternity leave (Cripe & Cripe, 2017)

5.4 Association between early breastfeeding initiation and background characteristics

The study revealed that there was an association between the wealth quintile of respondents and early breastfeeding initiation. The results revealed that (30.3%) of respondents in the highest wealth quintile initiated breastfeeding within one hour of birth as compared to 7.3% of their counterparts in the lower wealth quintile. This may be due to the fact that, mothers in the highest wealth quintile delivered in health facilities and were encouraged by health staff to initiate breastfeeding within an hour of delivery. The findings of this study however, were not consistent with the work of Dubois *et al.*, 2017 which reported that women with high income were less likely to initiate breastfeeding within the first hour of birth

Mothers' educational status is the most critical element in the initiation of breastfeeding at birth. A study conducted in Canada reveled that educated mothers were more likely to initiate breastfeeding compared to their counterparts with less education (Dubois & Girard, 2017) and the findings of this current study was consistent with this finding,

because this study recorded a breastfeeding initiation of 88.2%, and 97.1% of the respondents had attained tertiary education.

5.5 Limitations of the Study

- The study dealt with only professional working mothers and management members which could have resulted in the high level of knowledge recorded by this study since all respondents had attained at least secondary education. This was considered a limitation because educated people are more informed and can assess information more readily than uneducated people. However, the effect of this limitation was minimized through randomization in sample selection and also, the combination of respondents from non-health backgrounds who were more likely not to be privy to information on breastfeeding.
- There was also the possibility of recall bias since mothers had already experienced the exclusive breastfeeding period and might not have remembered all their experiences. However, this was minimized by providing respondents with sufficient time to reflect on their experience during the first six months of breastfeeding their children, also mothers were allowed to make changes to their earlier responses.
- The study was also limited to only Tamale Central Sub-Metropolitan area, which is a small part of the region. This limit the generalizability of the findings.

The limitation of this study, however, does not invalidate the findings of the study. This is because the selection of respondents were done randomly, also participants were drawn from different workplaces including health facilities, banks and schools in a cosmopolitan city comprising people with different backgrounds and ethnic orientations.

CHAPTER SIX

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

The study presents findings on breastfeeding practices, workplace and coworkers support for breastfeeding and knowledge of employees and management members in health facilities, schools and banks in Tamale Central Sub-Metropolitan. The study revealed that the rate of exclusive breastfeeding among professional working mothers was 14.7%. Eighty eight percent (88.2%) of mothers initiated breastfeeding within an hour of birth. Further analysis using multiple logistic regression indicated a significant association between breastfeeding initiation and wealth quintile of respondents, AOR=5.725, 95% CI, 2.037 – 16.088. This analysis also revealed an association between level of education and the practice of exclusive breastfeeding, AOR=0.100, 95% CI, 0.014 – 0.689.

There was high level of knowledge on breastfeeding policies among respondents. Ninety eight percent (98.8%) of them knew that breastfeeding should be initiated within the first hour of birth, whilst 92.9% knew that breastfeeding should last up to two years or more. Also, 90.6% of respondents knew that exclusive breastfeeding should last up to six months before the introduction of complementary feeding.

The support for breastfeeding in terms of coworker support, workplace breastfeeding policy and equipment's such as refrigerator for storing breastmilk, breastmilk milk pumps, as well as tasked adjustment and extension of break periods for breastfeeding were inadequate. For instance, 85.9% of respondents did not have a comfortable table and chair for breastfeeding at the workplace, whilst 5.3% of respondents had a separate room for breastfeeding at their places of work. The three months maternity leave was also found to

be inadequate for six month exclusive breastfeeding recommended by the WHO. Finally, 15.3% of respondents had a workplace breastfeeding support policy.

6.2 Recommendations

In order to improve exclusive breastfeeding rate among professional working mothers in the study sites, the following interventions and recommendations have been suggested:

- Government should consider extending the maternity leave to six months, where the last three of this could be on half pay to assist mothers to breastfeed exclusively
- Health facilities, schools and banks should provide paid breastfeeding break up to two hours, access to private locations for expression breastmilk and breastfeeding; access to a clean, safe water source, a sink and hygienic breastmilk storage facilities should be certified as "mother friendly" and they should be prioritized in Government interventions.
- The Ghana Health Service, Christian Health Association of Ghana and Non-Governmental should continue with community sensitization at all levels in order to sustain the gains made on breastfeeding knowledge dissemination. This would involve community durbars on breastfeeding, the formation and reactivation of mother-to-mother support groups (MTMSGs) for breastfeeding, the decentralization of the breastfeeding week celebration to community levels, orientation of health staff on lactation management, IYCF and Baby Friendly Hospital Initiative (BFHI) and regular breastfeeding education at child welfare clinics across Tamale Central-Sub Metropolitan among others.

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APPENDICES

Appendix 1: Participant Consent Form

Research title – Workplace support for exclusive breastfeeding in Tamale: Perspectives of employees and management.

Name of Researcher: Mr. Kunamsi Iddrisu

Research Supervisor: Dr. Amos k. Laar, Senior Lecturer, University of Ghana School of Public Health, Legon

PART I: Information Sheet

Introduction

My name is Kunamsi Iddrisu a Masters of public health student of the University of Ghana. As part of the academic requirements I am conducting a research on workplace support for exclusive breastfeeding in Tamale and will like to invite you to participate but you do not need to decide immediately to participate.

I will explain the details of this consent form to you so you understand what the study entails.

Purpose and Nature of the Study

This study will require that you answer some questions about the support for exclusive breastfeeding at your workplace. It has been found that many working mothers resort to bottle-feeding and complete cessation of breastfeeding because they have to return to work after delivery. The information you will provide will help us to determine the support available for lactating mothers at the workplace so that interventions that can help mothers

to breastfeed no matter their occupations can be put in place for more women to practice exclusive breastfeeding as is recommended.

Potential Risks and Discomforts

In participating in this study, I will be asking you to share some personal views and experiences concerning breastfeeding at your workplace with me and you may feel uncomfortable talking about some of the topics. You do not have to answer every question or take part in the research if you don't wish to do so. Also, you may withdraw from the study at any time that you wish. I will give you an opportunity at the end of the interview to review your responses, and you can ask to change any responses that you want. You do not have to give me any reason for withdrawing.

Additional Costs and Compensation

You will not have to spend money in partaking in this study and you will not be compensated for participating. If you will partake in the study, I will visit you at home or any place that you think is comfortable for you. You will only have to spare 30 minutes of your time to answer the questions I will ask

Confidentiality

All information shared with me will be not disclosed to any of your co-workers or to anyone who is not part of the study team and I will not need your name in this study. The information that I will collect from this study will be used only for academic purposes.

Contacts for Additional Information

If you have any questions, you can ask them now or later. If you wish to ask questions later, you may contact me Kunamsi Iddrisu, School of Public Health, Legon on the following numbers 0248671495/0203263902 or **kunamsiiiddrisu@yahoo.com** or Dr. Amos K. Laar, School of Public Health, Legon on 0244982176 or **laarkamos@ug.edu.gh**

GHS–ERC Administrator: HANNAH FRIMPONG: 0243235225 Email: Hannah_frimpong@ghsmail.org

Part II: Certificate of Consent

I have been invited to participate in a study on workplace support for exclusive breastfeeding in Tamale. The document describing the nature and purpose as well as risks and benefits of the study has been read and explained to me.

I have been given an opportunity to have any questions about the study answered to my satisfaction. I agree voluntarily to participate in this study.

_____	_____		_____
Full name of participant	Signature or	Thumb print	Date

Declaration by witness

I was present while the benefits, risks and nature and purpose of the study were read to the participant. All questions were answered and the participant has agreed voluntarily to take part in the study.

_____	_____		_____
Full name of witness	Signature of witness or	Thumb print	Date

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this study have been explained to the above individual to the best of my ability. I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability. I confirm that the consent has been given freely and voluntarily

_____	_____	_____
Name of researcher	Signature	Date

Appendix II: Questionnaire s for mothers in the Study

All questions are to be addressed to mothers/caregivers with a child 06-24 months of age

A. BACKGROUND AND SOCIODEMOGRAPHIC INFORMATION

1. Respondent ID ……..
2. Interviewer Name……..
3. How old are you? _____(Completed years)
4. What is your current marital status?

   [ ] Single [ ] Married [ ] Cohabiting [ ] Divorced [ ] Widowed

5. What religion does respondent practice?
   [ ] Christianity [ ] Islam [ ] Traditionalist [ ] other (specify)……
6. What is the ethnicity of respondent?
   [ ] Dagomba [ ] Gonja [ ] Mamprusi [ ] Akan [ ] other (specify)……..

7. Highest level of educational completed?

   [ ] No Formal Education [ ] Primary Education [ ] Junior High Education [ ] Senior High/Vocational/Technical [ ] University/ Polytechnic/ Training College

8. What is your designation in this Establishment……
9. What is the age of your last child in months……..
10. Sex of the child?
    Male…….female……
11. How many children do you have……..
12. Wealth quintile……Low……. Middle……Higher

B. BREASTFEEDING

13. Did you breastfeed your last child? [ ] Yes [ ] No [ ] Don't know
14. If yes, what time interval after birth did you introduce your child to breast milk? ……

    Within 1 hour after birth…….2-6 hours after birth…….after the first day of birth……
15. Are you still breastfeeding? [ ] Yes [ ] No
16. If YES in Q16, How many times did you breastfeed last night between sunset and sunrise? ……. I don't know……..…. On Demand……..
17. If YES in Q16, How many times did you breastfeed yesterday during the day light hours?..... I don't know……On demand…….
18. At what age was child given foods/liquids?

    [ ] Within one month of birth

    [ ] Within two months of birth

    [ ] Within three months of birth

    [ ] Within 4-5 months of birth

    [ ] At six months after birth
19. How old was your child when you introduced him/her to other foods/liquids.....
20. Was child given anything to eat or drink before six months? [ ] Yes [ ] No

C. BREASTFEEDING POLICIES

21. In your opinion, how long should a child be breastfed in addition to complementary foods before weaning…….
22. How soon should a child be put on to the breast to breastfeed after delivery? [ ] Immediately after birth [ ] 30 minutes after birth [ ] one hour after birth [ ] one day after birth [ ] Other (Specify)
23. How often should a mother breastfeed her child after birth……..

24. How many months/years should a mother breastfeed exclusively after birth…….

25. Does your company have a breastfeeding support policy?

[ ] Yes [ ] No if No skip to Q29

D. BREASTFEEDING AND THE WORK ENVIRONMENT

26. Do/did you breastfeed your last child at the workplace?

[ ] Yes [ ] No

27. How often are/were you breastfeeding your last child at the workplace?

[ ] as long as the child wants to

[ ] three times during working hours or less

[ ] four times during working hours

[ ] five times during working hours

[ ] six times during working hours

[ ] Not allowed to bring child to the workplace

28. Do you have a clean private comfortable/multipurpose spaced room designated for breastfeeding?

[ ] Exist [ ] Exist without pump [ ] Does not exist [ ] Don't know

29. Do you have a table and comfortable chair for breastfeeding?

[ ] Exist [ ] Exist but not comfortable [ ] Does not exist [ ] Don't know

30. Employer makes available refrigerator designated for storing breastmilk

[ ] Exist [ ] Exist but not functional [ ] Does not exist [ ] Don't know

31. Does your establishment have a maternity leave? [ ] Yes [ ] No

32. If yes in Q. 33 above how long……

33. Breaks for breastfeeding are paid and considered as working time as working time

[ ] Yes [ ] No [ ] Don't know

34. How many hours do you work per day during this period of lactation?

[ ] five hours [ ] six hours [ ] seven hours [ ] eight hours [ ] other (Specify)……

SUPPORT FOR EXCUSIVE BREASTFEEDING AT THE WORKPLACE.

(Indicate which of the following is applicable in your situation)

35. I am provided with separate room for breastfeeding during breastfeeding breaks.

[ ] Yes [ ] No

36. Break periods are extended to cater for breastfeeding during working periods.

[ ] Yes [ ] No

37. Management adjusted my tasks to enable me breastfeed comfortably at the workplace.

[ ] Yes [ ] No

38. A separate refrigerator is provided / exists for the storage of human breastmilk.

[ ] Yes [ ] No

39. Breastmilk pumps are provided by my company to ease the burden of manually expressing breastmilk.

[ ] Yes [ ] No

40. Nursing breaks are paid and are counted as working time

[ ] Strongly agree [ ] Agree [ ] Neutral [ ] Disagree [ ] Strongly Disagree [ ] Undecided

Appendix 3: Questions for In-depth interview for Management Members

1. How long should a baby be breastfed per the guidelines of Ghana? Please explain.

2. What policies do you have to support lactating mothers in your organization? Please list.

3. To what extend do(es) this policy/policies influence service delivery output (positively or negatively)? Please explain.

4. Which policy works well for you? Kindly explain.

5. What would you do differently next time? Please explain why.

6. What strategies, interventions, policies, tools should be discontinued? Why?

7. What support services are available for working lactating mothers in your organization? (Breastfeeding breaks, task adjustment, presence of breastfeeding room, refrigerator for storing breastmilk and maternity leave extension)

8. What effect, if any, do you have in relation to supporting lactating mothers in your organization?

9. What recommendations do you have for future efforts at policy making?

Is there anything more you would like to add?

I'll be analyzing the information you and others gave me and confidentially will be ensured at all stages of this research work.

Thank you for your time.

Appendix 4: Questions for In-Depth interview for Coworkers Support

1. What are some of the support services available to lactating mothers in your organization?.

2. To what extend does this support service influence service delivery output (positively or negatively)? Please explain.

3. What kind of support do you give to lactating mothers in your organization?

4. Are they any challenges with regards to supporting lactating mothers at your workplace? Please explain why.

5. What strategies, interventions, tools, etc., would you recommend be sustained and/or scaled up? Please provide a justification for your response.

6. How do you feel associating with lactating mothers at the workplace? Why?

7. What are/were some barriers, if any, that you encountered in supporting lactating mothers at your place of work?

8. How do/did you overcome the barrier(s)?

9. What effect, if any, do you have in relation to supporting lactating mothers in your organization?

10. What recommendations do you have for future efforts at policy making?

Is there anything more you would like to add?

I'll be analyzing the information you and others gave me and confidentially will be ensured at all stages of this research work.

Thank you for your time.