

**INTERNATIONAL JOURNAL OF
INNOVATIVE RESEARCH AND KNOWLEDGE**

ISSN-2213-1356

www.ijirk.com

**Exclusive Breastfeeding and Work: An Assessment of the
Symbiotic Effects in the Wa Municipality**

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Abstract

Among the many roles performed by women, the reproductive role is probably the most important and unique to womanhood. Women's caregiving role, especially breastfeeding stems from the fact that, they carry the pregnancy to term and are biologically prepared to start the caregiving process. Breast milk has been proven to be the ideal food for infants for up to six months and mothers all over the world are being encouraged to feed their babies with only breast milk, direct from the breast for at least six months because of the many benefits associated with the practice. The mothers are failing to exclusively breastfeed their babies. Globally, exclusive breastfeeding rates are falling and 60% Exclusive Breast Feeding (EBF) rate by 2015 was missed as the world recorded a 38% EBF coverage in 2015. Many factors account for this, but maternal work schedules are expected to be one key obstacle to exclusive breastfeeding. This mixed method study explored the symbiotic effects of exclusive breastfeeding and maternal work with 582 participants sampled from different segments of the society

and established that, only 48% of mothers practice exclusive breastfeeding; work affects the mother's ability to exclusively breastfeed just as exclusive breastfeeding affects the mothers work output.

Keywords: *Exclusive breastfeeding, occupation*

Introduction

Breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infants. The World Health Organization (WHO) and UNICEF classified appropriate breastfeeding as the first step in childcare. Exclusive breastfeeding is said to be one of the main ways of ensuring healthy development of children. As a global public health recommendation, infants should be exclusively breastfed for the first six months of life, with continued breastfeeding along with appropriate complementary foods up to two years of age or beyond. In the year 2000, the World Health Organization declared that by the year 2015, at least 60% of infants in their first six months should be exclusively breastfed. The period has since elapsed and many countries, including Ghana, have not met the target. In 2015, only 38% of infants (0 – 6 months) were exclusively breastfed globally (WHO 2015).

Following this declaration, there has been an increasing interest in promoting exclusive breastfeeding as the 'best' feeding method for new-borns. This, to a large extent, has been inspired by mounting scientific evidence of the importance of exclusive breastfeeding in reducing infant morbidity and mortality. Apart from providing the right nutrition, exclusive breast feeding strengthens the immune system due to the wide variety of antibodies, enzymes and hormones (bioactive human secretory immunoglobulin "A" (sIgA), lactoferrin, lysozyme, oligosaccharides) contained in human milk, produced within the first few months after a baby is born (Shah and Khanna, 1990). The short-term benefits include protection from infections, for example, respiratory infections including pneumonia otitis media and diarrheal diseases (Chantry et al., 2006). In the long term, exclusively breastfed babies were reported to have reduced chances of developing type 1 diabetes mellitus than in their peers with shorter duration of breastfeeding, along with an earlier exposure to cow milk and solid foods. It also reduced the risk of extreme obesity in children aged 39 to 42 months (Rosenbauer et al., 2008).

For the mother, exclusive breastfeeding ensures decreased risks of type 2 diabetes, breast cancer, ovarian cancer and maternal postpartum depression (Arenz et al. 2004). Exclusive Breastfeeding tends to delay return of ovulation and post-partum menses in mothers, thus providing natural protection against further pregnancies (Kramer & Kakuma, 2002). Frequent suckling by the baby increases secretion of prolactin, which in turn leads to increased production of breast milk and suppresses ovulation. Indirectly the next pregnancy will be delayed, resulting in a better chance for the mother to recover. The contraceptive role of EBF is especially important in areas where artificial contraception is not widely used for a variety of reasons.

In addition to the specific health advantages for infants and mothers, exclusive breastfeeding also benefits society by reducing health care costs, parental employee absenteeism and associated loss of family income (Labbok, 1989). Women play an important role in family upkeep, especially childcare. Beecher and Beecher (1996), described women as housekeepers and mothers. Across different cultures of the world, this role of women is well acknowledged. In a fast changing world, this role of homemaker and mother is now compounded with challenges of being a wage earner and in some cases a single head of the household. Despite this changing role of women in the family, and not discounting men's contributions to childcare and household chores, this primary responsibility of caring for children and other dependent household members, preparing meals and doing other housework has been maintained for women, regardless of whether the working woman is married or single (Connelly, et al

1996).

Globally, women's participation in the labour market remained steady in the two decades from 1990 to 2010, hovering around 52 per cent, with the United States recording fourteen (14) percentage points increase (68% to 82%) in women employment over the same period. In sub-Saharan Africa, women participation in the labour force is pegged at 62% with most of them in the agriculture sector (UN, 2010). In Ghana, it is estimated that more men (71%) than women (29%), are employed. Majority of these women (78.4%) are in self-employment compared to 68.7% for men (Agyman-Duah et al. 2006). Interestingly, the Upper West Region is the only region that recorded considerable differences in male/female employment ratios. Female employment rate in the region is 98% compared to 94% for male (*GLSS, 2005 in FAO 2012*). This state of affairs calls for an investigation on how it may be affecting childcare, specifically, breastfeeding.

The World Health Organization (WHO, 2010) estimates that at least 80% of women in their reproductive ages understand or are aware of the benefits of exclusive breastfeeding, yet only 38% of children are exclusively breastfed globally, despite the many interventions to promote the practice. Several researches have confirmed that, almost all mothers interviewed demonstrated a clear understanding of the benefits of EBF. This suggests there must be some other hidden factors beyond the mothers' appreciation of the benefits of the concept. This study explored the relationship between mothers' income earning activities and exclusive breastfeeding.

Research Questions

How does maternal occupation and exclusive breastfeeding affect each other?

1. What is the exclusive breastfeeding rate in the Wa Municipality?
2. How does the work of the mother hinder her ability to practice exclusive breastfeeding?
3. How does the practice of exclusive breastfeeding affect the mother's output at work?

Literature

Many researchers have unearthed some reasons why mothers are not exclusively breastfeeding their babies. Leslie, (1985), cited in June Neff, (1995) hypothesized that maternal income generating activities is linked to child nutrition by two opposing mechanisms. First, it increases household food availability directly, when women work in food production, and indirectly, by increasing household income and consequently, expenditures on food. Household food availability has been proven to have a positive relationship with child nutritional status. Second, maternal income generation activities may decrease the amount of time that mothers spend taking care of and feeding their children, which may negatively impact on the child's nutritional status. The dilemma women face in combining breastfeeding and work has been identified as a confounding factor when it comes to infant feeding methods. This section explores literature that finds maternal employment to be negatively or positively related to effective Breastfeeding

Chen, Weiqi (2010), found that many factors are associated with the practice of exclusive breastfeeding. Psychosocial factors (maternal knowledge, attitude and self-efficacy towards breastfeeding), maternal socio-demographic characteristics (age, level of education, family income), hospital practices (early initiation of breastfeeding), environmental support (receiving formula as gift, maternal employment after delivery) and biomedical factors (health status of mother and mode of delivery) were found to be the major factors associated with breastfeeding among mothers in Guangzhou, China. In a related study on factors affecting breastfeeding in the Philippines, Aye Kyi Kyi (2000), observed that, mother's age was found as a major determinant of breastfeeding in the Philippines. Other important factors were residence, household economic level and place of delivery. The analysis indicated that young mothers, urban women, women from households with high economic

level and women who delivered the babies at private health facility breastfed the shortest duration.

Chinofunga & Matiashe (2013), in an assessment of hindrances to exclusive breastfeeding among mothers in Vungu (Zimbabwe) found that cultural / traditional beliefs (the first milk is dirty so it cannot be given to the baby, breast milk alone does not satisfy the baby), working conditions (time is not given to breastfeed, there is no facility for privacy when breastfeeding) and maternal attitude (EBF affect my sexual life negatively) were some of the hindrances uncovered in that study.

In a study on family influence on exclusive breastfeeding in Moglaa, a rural community in the Savelugu-Nanton Municipality, in the Northern Region of Ghana, Iddrisu (2013), confirmed that the family, especially mothers-in-law and other elderly women in the family, play a critical role in the decision to exclusively breastfeed or not. In a discussion, mothers revealed that if elderly women of the family are those with the most experience and are normally consulted on problems of the child; it will be wrong for the mother to disobey, if a mother-in-law recommends that food or drink be introduced to supplement breastfeeding.

In a study on child malnutrition in Nandom, in the Upper West Region of Ghana, Baataar, (2005), argued that traditional beliefs, heavy workload and hunger were the main reasons why exclusive breastfeeding was a daydream for many mothers. Traditionally, a mother cannot refuse her baby water or food when she is drinking or eating and the baby raises its hands to grab it. 'It is an indication that the baby is interested in the food or drink and the mother's refusal could lead to the return of the baby to the ancestors, because the mother does not love the baby (Baataar, 2005). Mothers' and grandmothers therefore do not hesitate to give what they drink to their babies, including pito (local brewed beer). It is also a commonly held believe that, because the environment is mostly dry, the baby will dehydrate if water is not added to breastfeeding. Again as a result of climatic conditions, many families harvest less, which is unable to feed the family all year round. This food gap and the related nutritional status of mothers, limit their ability to produce enough milk to feed the babies. In their words, the participants said, "that is why our breast always look like papers (P 50)." In this case it is expedient to supplement even at an early age.

Women participation in the labour market has changed in the recent past. Increased urbanization, industrialization, poverty and migrations have caused greater numbers of women to seek income-generating employment away from home (Oppong, 1993). According to The World's Women 2010, women participation in the labour market remained steady in the two decades from 1990 to 2010, hovering around 52 per cent. Employment levels in the services sector continue to grow for women; accounting for at least three quarters of women's employment in most of the more developed regions. This shift to wage and more formal work settings has implications on mothers' time for childcare. Again, support mechanisms available within the work centers, how mothers access these support mechanisms and what improvements are required, remain grey areas.

The increased participation of women in the market economy per se is not the issue, but the increasing number of working mothers, for whom employment and family responsibilities are distinctly separated. The incompatibility of the two roles of mother and worker and the resultant conflicts between the two aspects often tend to disfavour proper childcare practices. This study seeks to investigate how maternal employment and exclusive breastfeeding affect each other, and what work place support mechanisms exists to promote exclusive breastfeeding.

Significance of the Study

Goal four of the eight Millennium Development Goals was entirely devoted to reducing child mortality by two-thirds between 1990 and 2015. Though many countries, especially in Africa did not entirely achieve this, some significant progress was made. Goal three of the new Sustainable Development Goals (SDGs) calls for concerted

efforts to, among other health indicators, end preventable deaths of new-borns and children under five by 2030. Poor feeding practices such as sub-optimal breastfeeding is still widespread and often leads to malnutrition, which is a major cause of childhood deaths (Sokol et al., 2007). By studying and bringing to the fore the impacts of a mother's occupation on her ability to practice exclusive breastfeeding, this study will be salutary; as it will contribute to a better understanding of how EBF can be promoted as a way of reducing child mortality as well as ensuring a healthier future society. It is also hoped that this study's outcome will contribute to the growing body of scientific knowledge on infant feeding practices and could help employers, gender advocates, child welfare agents and health worker to identify the challenges of mothers as they develop interventions and education programmes. Moreover, this research will in no doubt serve as a basis for future research.

Methodology

This was a mixed method study imploring concurrent triangulation model to explore the variables. Structured questionnaire was used to collect quantitative data while focus group discussions, key informant interviews and observations were used to collect qualitative data. Upper West Region was purposively sampled. This is largely due to the researchers' location, their understanding and experiences of infant feeding practices in the region. Again, the Wa Municipal Assembly was purposefully sampled because it is the only district in the region that has proportional representation of rural and urban communities, a vibrant formal and informal sector setting and has interesting statistics on male/female employment records.

Quantitative data was collected from mothers as they attend post-natal sessions in the various clinics and health centres within the municipality. Systematic sampling was applied to select 50% of health facilities, where child welfare clinic (CWC) is an integral part of their daily operations.

Smith (2013) and Dessel (2013), recommend a 95% confidence level, a $\pm 5\%$ margin of error and 370 respondents for a population not exceeding 10,000. Considering that the municipality recorded an average of 4,635 post-natal registrants in the last three years, the researchers settled on 400 as the sample size for the quantitative segment of this study. 12% of the average attendance in each health facility in the two months preceding data collection produced the 400 participants. The first mothers arriving at the facility who met the selection criteria and willing were recruited until the required number of respondents was obtained. All participants were taken through a structured interview.

For the qualitative data, focus group discussions were conducted with six mothers who were not previously recruited for the structured interview and at least six men from each of the communities where the health facility is located. The District Nutrition Officer, six employers (three each from the public and private sector institutions), four working mothers (two each from private and public sectors institutions) and co-workers were purposively sampled as key informants.

After thorough cleaning of the quantitative data, eighty-eight (88) quantitative instruments failed to meet the credibility criteria and were dropped. This reduced the quantitative instruments to three hundred and twelve (312) for analysis. SPSS version 20 was used to analyse the quantitative data. Frequencies and cross tabulations analysis were conducted on the data to determine the relationship between occupation and EBF practices. Qualitative data was analysed in themes using constant comparative analysis, which allows different views to be compared.

Findings

Exclusive Breastfeeding Rate

In the quantitative survey, 36.5% of mothers had babies younger than three months of age, 49.7% had children aged between four (4) and six (6) months and 13.8% had children aged seven (7) to twelve months old. In exploring infant feeding practices, the data revealed that 2.5% of mothers usually introduce supplementary feeding within the first two months of the child's life. Another 7.7% acknowledged they normally introduce supplementary feeding between two and three months, while 25% (more than twice the number that introduce supplementation before three months of age) usually introduce supplementary feeding between four to five months of age. The majority of mothers (64.7%) reported that they normally introduce supplementation only when the child has attained six months of age. However, this assertion by the mothers clearly contradicts their own statement on the feeding practices of the child being breastfed at the time of data collection. At the time of data collection, only 48% of mothers confirmed practicing exclusive breastfeeding; compared to 64.7% who said they usually do.

An analysis of feeding practice with current child indicated that 3.2% of mothers introduced supplementary feeding within the first two months of the child life, a one percent increase from what they said was usually done. Another 6.1% introduced other foods or drinks before the child turned three months. The most worrying trend is the high number of mothers introducing supplementary feeding between four and five months. As much as 42.3% of respondents introduced supplementary foods between four and five months as indicated in table 1. It is worth noting that this is the period just after the mother's return to work. Bonet et al., (2002), established that time of return to work was a major predictor for stopping breastfeeding: the sooner the mothers returned to work, the less they breastfed their babies irrespective of full-time or part-time employment. The association between mothers' return to work and minimal breastfeeding was stronger for exclusive breastfeeding mothers than for any other breastfeeding option.

Table 1: Age of Supplementation

| Age of Supplementation | | |
|------------------------|-----------|------------|
| Age category | Frequency | Percentage |
| Below 2 months | 10 | 3.2 |
| 2 to 3 months | 19 | 6.1 |
| 4 to 5 months | 132 | 42.3 |
| Above 6 months | 151 | 48.4 |
| Total | 312 | 100 |

Source: Field data (2015)

A cross tabulation of mothers' work category and length of exclusive breastfeeding shows that almost equivalent percentages of salaried-employed mothers (51.8%); self-employed mothers (51.4%) and farmers (50%), are introducing supplementation before six months, as indicated in table 2. Wood et al (1998), and Ryan et al., (2006), concluded that the difficulties of urban living, characterized by outdoor activities and less favourable working conditions were the main reasons for the abysmal performance in exclusive breastfeeding among urban mothers. This can be said to be the case with these mothers. Sub-optimal breastfeeding is not peculiar to any work category. All mothers are caught up in the same difficulties. Babies of the self-employed mothers are suffering from insufficient care just as their counterparts whose mothers are in salaried employment. This is a pointer to the fact that work schedules are more related to their difficulties than poverty or knowledge levels.

Table 2: Work Category versus Length of Breastfeeding

| Work Category versus Length of Breastfeeding | | | | | | |
|--|-----------|------|-----------|------|--------|-----|
| Work Category | >6 months | % | <6 months | % | Totals | % |
| Farmer | 3 | 50.0 | 3 | 50.0 | 6 | 100 |
| Self Employed | 55 | 51.4 | 52 | 48.6 | 107 | 100 |
| Salary worker | 103 | 51.8 | 96 | 48.2 | 199 | 100 |
| Total | 161 | 51.6 | 151 | 48.4 | 312 | 100 |

Source: Field data (2015)

Overall, only 48.4% of mothers are responding to the global call to exclusively breastfeed infants for at least six months. This confirms available literature: Ghana Statistical Service and ICF Macro, (2009), that points to a 49% EBF coverage in Ghana and 36% for Sub-Saharan Africa (UNICEF 2007); but also contradicts sharply, the Regional Health Directorate's claim that, 98% children in the upper West Region are exclusively breastfed. It is unclear how the Regional Health Directorate sampled participants for the nutrition survey, which produced the 98% EBF coverage, but the same report captured a worrying nutritional status for children younger than 23 months. The 2012 annual report indicated that 13.5% of children 23 months and younger are underweight, 22.3% stunting and 7.2% are wasting. This means that 43% children below 23 months old in the region are malnourished, some beyond repair. If feeding practice is the greatest influencer of nutritional status (Muchina & Waithaka, 2010), the nutritional status of these children calls to question the feeding practices and general care systems being practiced. The 98% EBF coverage presents the Upper West Region as an outlier at a time the Ghana Health Service and the Ministry of Health are worried about a looming danger in health outcomes if child malnutrition continues to increase and EBF practice continues its decline (GNA; 23rd July, 2014).

The reasons for introducing supplementation early were varied. Of the 161 mothers who responded admitted to using supplementation before six month, 57.1% of them indicated work as the reason for introducing supplementation. This deviates from Winikoff and Baer's (1980); conclusion that women seldom give employment or work schedules as a reason for termination of breastfeeding or introduction of supplementation. It also disagrees with Wendel, (1992) and Engel (1989), who concluded that mothers' workload has no association with weight for age and dietary intake of children. However, Christine Oppong (2001), cited in Research Review (2001), is firm in believe that persistent increases in child malnutrition in Sub-Saharan Africa can not only be attributed to rising food scarcity, as it is high even in countries where food production is increasing and household food sufficiency is high; neither can it be attributable only to low political will, as it is widespread in countries that have signed up to international protocols and declaration. Furthermore, civil strife, poverty, poor sanitation or poor medical care cannot be blamed entirely for this trend as it is recorded in even the most peaceful countries and in affluent homes with proper water and sanitary facilities. Age or mothers level of education, rurality or urbanization or family size cannot entirely be blamed. Inadequate child care – not enough time and attention from over-worked, tired mothers allocated to the crucial process of baby nursing and weaning is the main reason, yet it does not feature prominently in current explanatory frameworks.

The other reasons for introducing supplementation before the required six months included insufficient breast milk and baby's desire to want to eat. These reason also have close relationship with mother's availability. According Paediatrics in Review (2011), insufficient suckling and scheduled feeding can greatly reduce breast milk production. Nursing is a supply and demand process; the more the baby suckles, the more the breast responds to milk production. Again, when the baby does not get a good supply of milk, natural responses to

hunger would make the baby express a desire to want other foods.

Exploring whether the mothers level of education influences time of supplementation, both quantitative and qualitative data suggest that the mother's level of education, type of work, and by extension the level of exposure to urbanization did not have much influence in determining time of supplementation as both literate and illiterate mothers, rural and town dwellers, as well as all work categories were caught up in the same web. From table 3, three times more women with secondary or tertiary education introduced supplementation within the first two months than mothers who have never been to school. This disagrees with Shirima, et al., (2001); when they found that urban mothers and educated mothers breast-fed exclusively for a longer period and delayed the introduction of solid foods longer than their rural illiterate counterparts. However, it can be observed that, more mothers, especially those with significant level of education, are introducing supplementation at four months. Coincidentally, this is the time the mother is returning to work.

Table 3: Level of Education * Length of Breastfeeding

| Level of Education versus Length of Breastfeeding | | | | | | | | | | |
|---|-----------|-----|---------------|-----|---------------|-----|------------|-----|-------|-----|
| Level of Education | >2 months | % | 2 to 3 months | % | 4 to 5 months | % | < 6 months | % | Total | % |
| Never been to school | 1 | 10 | 4 | 21 | 9 | 7 | 23 | 15 | 37 | 12 |
| Primary | 1 | 10 | 3 | 16 | 17 | 13 | 21 | 14 | 42 | 13 |
| Secondary | 4 | 40 | 2 | 11 | 27 | 20 | 25 | 17 | 58 | 19 |
| Tertiary | 4 | 40 | 10 | 53 | 79 | 60 | 82 | 54 | 175 | 56 |
| Total | 10 | 100 | 19 | 100 | 132 | 100 | 151 | 100 | 312 | 100 |

Source: field data (2015)

Effects of work on Breastfeeding

Many breastfeeding consultants and global institutions interested in child survival have recommended demand feeding (breastfeeding anytime the child expresses a desire) because it is one of the sure ways to ensuring exclusive breastfeeding. As exposed by Gwen (2008), breastfeeding on demand is the ideal way to keep the balance between the mother's milk production and her baby's needs as breast milk production is keyed to the frequency of suckling. The more a baby nurses, the more milk a breast produces. If a baby suckles less frequently, milk production slows. Breastfeeding on demand enables the baby to cope with the peculiarities of their particular situation. When babies are forced to adapt to a rigid, timed schedule feeding, some babies have difficulty getting enough to eat. In addition, lactation consultants often note that babies who are left to cry for access to the breast; even for a few minutes; may become upset and unsettled. This makes it difficult for them to latch on correctly, decreasing the efficiency of their feeds (Gwen 2008). Therefore the mother's availability is of prime essence for demand feeding to be successful. Yet most mothers (88.8%) who participated in the study; worked outside the home and are not expected or not willing to carry their babies to work.

Assessing mothers' availability for demand feeding revealed that all (100%) of the mothers in wage employment are not expected to take their babies to their work places; though 47% of them manage their babies within the work premises. The self-employed mothers, who are expected to have better control of their work schedules, are unhappy keeping their babies around their work environment, largely due to safety and low productivity concerns;

however up to sixty-nine percent (69%) of them keep their babies within the work environment. Fifty percent (50%) of the farmers leave their babies at home during working hours. This implies that, on average, some 45% of mothers have very minimal connection with their babies for effective feeding during their first year of life; and as such, missing out on the emotional and health benefits of demand feeding and by extension, exclusive breastfeeding.

Gwen (2008) in exploring the effects of scheduled feeding compared the composition of human milk to those of evolutionary spaced-feeders and continual-feeders. He concluded that spaced-feeders (rabbit, dogs) produce milk that has high fat (18.3%) and protein (13.9%) content, that enables their infants to cope (Jeness 1974 cited in Gwen 2008), compared to continual-feeder (Primates, cattle, humans) who produce milk that is high in water (75%), but low in fat (3.7%) and protein (2.4%). Brown and Lee (2012) concludes that babies who are fed on schedule are more susceptible to under-nutrition due to insufficient feeding or over-nutrition due to increased volumes consumed at each feed. Again mothers who practice scheduled feeding are more likely to bottle-feed or introduce supplementary feeding earlier than those who feed on demand.

From the data, 166 (53%) mothers reported taking their babies to their work sites while the remaining 47% (146 mothers) acknowledged they are not able to send their babies to their work premises as shown in table 4 below. Among the 166 mothers who reported taking their babies to their work sites, 52% (86 mothers) acknowledge they are still unable to breastfeed on demand. By implication, these 86 mothers like their colleagues who do not take their babies to work, are practicing scheduled feeding rather than demand feeding. It also means that only 80 mothers, that is 25.6% of the sample, breastfeed on demand.

Table 4: A Cross tabulation of mother ability to breastfeed on demand versus where the child is during working hours

| | | Are you able to breastfeed your child on demand (anytime the child wants) | | | | Total |
|---|-----|---|----|-----|----|-------|
| | | No | % | Yes | % | |
| Do you take your baby with you to work? | No | 87 | 60 | 59 | 40 | 146 |
| | Yes | 86 | 52 | 80 | 48 | 166 |
| Total | | 173 | 56 | 139 | 44 | 312 |

Source: field data (2015)

Interestingly, 59 mothers (40% of 146) who reported they do not take their babies with them to work said they are able to breastfeed on demand. It is unclear how they are able to achieve this, but their absence makes demand feeding impossible. Such mothers are probably feeding through the bottle. The World Health Organization, UNICEF, AAP and many other breastfeeding consultants hesitate recommending bottle-feeding, even for expressed breast milk in developing country settings largely on the basis of poor hygiene practices and limited access to clean water. Also, the revelation of mothers in the focus group that they are shy to tell the truth about feeding practices is probably reflecting in such responses.

Mothers assigned many reasons when the researcher explored their inability to breastfeed on demand. As shown in table 5 below, amongst the 173 (55.4% of sample) who reported they do not breastfeed on demand, many of the reasons were centred on minimal time spent with the child during the day. 55% of mothers assigned staying away from child for many hours and their inability to keep the child at work as their reasons, 27% (46) believed their work schedules do not allow for frequent pauses, so even if the child is around the work environment, she is still

unable to breastfeed on demand, and 19% think the child demands too frequent feeds. A cross tabulation indicates that mothers in all work categories suffer the same fate. Interruptions during feeding according to Rinehart, (2009) is one of the main barriers to quality feeding. Babies who are frequently interrupted during feeds would most likely not get enough and would return to the breast within a short time. This suggests that mother's absence owing to work, is a huge burden for breastfeeding mothers. As expressed by a key informant: *no woman is happy to see her child hungry. The mother would therefore not idle around while her baby is hungry for the breast. One of the most frustrating things in my life is to return from work and notice my baby has been hungry. But it is the reality most times.*

Table 5: Reasons mothers do not breastfeed on demand

| Why are mothers unable to breastfeed on demand | | |
|---|-----------|------------|
| Reason | Frequency | Percentage |
| Minimal time spent with child during the day | 95 | 54.9 |
| Child demand breast milk too frequently | 32 | 18.5 |
| Mothers work does not allow for frequent pauses | 46 | 26.6 |
| Total | 173 | 100 |

Source: field data (2015)

The data also showed that allowing the mother to be with child at work contributes greatly to the mother's ability to feed on demand. Among the 139 mothers who reported being able to breastfeed on demand, 57.6% (80) were mostly with the babies, even at work. Another 12% are allowed to pause to attend to their babies and 14.4% indicated their work was relaxed enough and allowed time for breastfeeding. 16% reported they are able to breastfeed on demand because they control the work and decide when to stop to breastfeed.

At the time of data collection, 76.6% of the study participants were still breastfeeding. This confirms the global report on breastfeeding (UNICEF 2007) that mothers in Ghana usually breastfeed longer than one year. 70 mothers (24.4%) were found to have stopped breastfeeding before their children's first birthday. Mothers in wage employment were the most (83% i.e., 58 mother) and sited going to work as the reason for weaning before one year. When asked whether they would have preferred to breastfeed longer, 96% of the mothers would have loved to breastfeed longer but for the difficulties of work and insufficient milk flow. This agrees with Bentley and colleagues' conclusion that, low income mothers in precarious employment tend to wean their babies early. Such mothers suffer from milk insufficiency and have a high chance of introducing supplementation early in order that the baby can cope with mother's non-availability (Bentley et al, 2003).

In all the focus group discussions and key informant interviews, mothers clearly communicated their daily stress in responding to the demands of work and the needs of the baby. They generally acknowledged that the baby is usually at the receiving end of an overburdened mother. They think no work category gets it easier. Salaried employee mothers are suffering just as much as those in self-employment. Baby sitters are no longer available, mother-in-laws are out themselves working and household sizes have become smaller; therefore the period when working mothers got other older girls or mothers-in-law to help with child care is over. The mother is left alone to manage. Similarly, the self-employed mother has lost family support. Society expects the self-employed mother to have better control of her time and thus better care for her baby. However, participants in the focus groups explained that self-employed mothers are worried about safety of the baby as well as reduced output. Many self-employed mothers work in quite hazardous environment such as food vending, sales of goods in the open market

or door-to-door sales. Besides many have taken loans from financial institutions and other informal lending group and must meet their daily or weekly repayments schedules.

Again, mothers clearly understood the impacts of poor feeding on both mother and child. They were able to clearly explain some medical and development conditions that are associated with poor feeding. A participant narrates her experience: *“We are what we eat. Children especially are unable to cope with poor feeding for long. My first child is far healthier than my second child. I exclusively breastfed my first child because I had just left school and had no job. For my second child, I introduced supplementation at four months. Though he looks plump, he is very susceptible to diarrhoea and malaria”* - a mother at Charia.

Another participant narrates her experience:

“I sell grains in the market. Shortly after accessing a loan to expand my business, I got pregnant. When the bank agent noticed I was pregnant, she openly confessed that if she knew I was pregnant, she would not have facilitated the loan process, because my period of recuperation can affect her portfolio quality. She encouraged me to increase my daily repayment so that a bigger part of the loan can be paid before I give birth. I did but when I delivered, my baby was less than two months old when a team visited to remind me about my indebtedness to the bank. I had no choice but to resume work so I can pay off the loan. My baby was uncomfortable in the market, but I had to continue”.

A key informant narrates her experience:

“Carrying the pregnancy to full term was not as stressful as returning to work. I spent two weeks preparing to return to work, but it was really difficult; especially knowing that my institution frowns upon mothers keeping their babies in the work environment. Eventually when I resumed work, I spent a lot of time running to and from work to feed my baby, but after three weeks my baby lost significant amount of weight. I was constantly worried about leaving my baby in the care of someone I did not know very well. I ate poorly and milk supply was greatly reduced; I could no longer express three bottles in the morning like I used to do. I knew my baby was not eating enough and started showing a desire to eat anytime am eating. Though I warned the care taker never to give any other food, I was never sure what she does when am away. By the end of my first month at work, the baby tested positive for malaria and I was suffering from high blood pressure. My plight was worsened when my boss was furious that I had missed two days in a week shortly after returning from a four-month leave. I was dying slowly and wished I had another source of income; I would have stopped working. When I could no longer take it, I walked to my boss and asked for an opportunity to keep my baby at work, otherwise I may have to quit the job. Though he agreed, it was only a temporal relief. I increasingly felt he had done me a favour and I must work hard, to meet my targets to merit the favour. Oh! Motherhood and work can sometimes feel like a curse”.

The views of these mothers couldn't have done any better justice to Oppong's work on Globalization and the Disruption in Childcare in which she exposed how maternal work schedules affect childcare and nutritional status. In her view, since fathers' earning alone cannot meet the cost of living and mothers have to work so hard and cannot respond to their children's need for frequent feeding and loving care, infants and toddlers will continue to pay the price with their nutritional status (Christine Oppong in Research Review 2001).

In both the quantitative and quality segments of this study, mothers were unanimous in their view that maternal work schedules negatively affects the mothers' ability to exclusively breastfeed and provide adequate care for their babies. Mothers clearly understand that work schedule; especially income generating work; is one of the main obstacles to exclusive breastfeeding. Yet they keep to such work schedules. In the focus groups, mothers communicated an understanding of the precarious nature of some forms of employment; yet appear helpless in

preventing such from affecting the development of their children. Among those who participated in the quantitative segment of this study, it was clear that people do not change jobs. Only 6.7% (21 out of 312 mothers) have ever changed a job. Even so only 38% (8 out of the 21) of them assigned poor quality family time as a reason for leaving previous jobs. This again confirms the conclusion Bonet et al., (2002) that low income employees in very precarious working conditions are more likely to stay longer in employment because of their poor skills and fear that they might not get any better jobs.

Effects of Breastfeeding on Work Output

Just as work schedules abstract exclusive breastfeeding, the practice has been proven to lower the mothers work output. In the quantitative segment, only 14.7% of mother indicated they are able to breastfeed effectively while achieving their daily output target. Another 26.9% revealed they meet their daily output targets with a lot of struggle, owing to the nature of their work schedule. The largest group of mothers (58.3%) acknowledged productivity lowers when they are breastfeeding as indicated in table 6. There is a great possibility that mothers who meet their output targets and those who must meet output targets are compromising effective feeding in their effort to meet such targets.

Table 6: Impact of demand feeding on work output

| Impact of demand feeding on work output | | |
|--|-----------|------------|
| Impact area | Frequency | Percentage |
| I am able to meet daily targets but with a lot of struggle | 84 | 26.9 |
| Output is lower at the time I am breastfeeding | 182 | 58.3 |
| Output is balanced | 46 | 14.7 |
| Total | 312 | 100.0 |

Source: field data

Subjecting the data to further analysis to determine which work category recorded the lowest work output as a result of breastfeeding, it was clear that all mothers have similar problems. 60% of self-employed mothers and 58% of salaried workers recorded lower outputs during breastfeeding. Another 27% and 26% of self-employed and salaried workers respectively reported achieving their daily output targets with a lot of struggle. Though the variation is not much in both cases, the self-employed mothers have slightly higher chances of lower productivity compared to the salaried employed mothers. The farmers think there can be no balance in work output and effective breastfeeding. Only 14% of self-employed and 16% of salaried workers reported being able to feed properly while achieving output targets. Overall, many mothers (85%) are recording low output during the time they are breastfeeding.

A cross tabulation between work output and mother's ability to breastfeed on demand confirmed that mothers who breastfed on demand also recorded lower output. 75% of the mothers who reported breastfeeding on demand also recorded low work output compared to mothers (15%) who did not. Only 16.5% of mothers who breastfed on demand also achieved their work output compared to 48% for mothers who did not breastfeed on demand and only 8.6% were able to balance output. Table 7 depicts this. As confirmed by Chen et al, (2006), the provision of lactation rooms and breastfeeding breaks; though useful; did not appear to have encouraged mothers enough to continue breastfeeding after return to work as only 10% of mothers were breastfeeding after their return to work. Most mothers who worked in the factory plant and in leadership roles found it difficult to use the breastfeeding breaks and lactation rooms; therefore the provision of lactation rooms and breaks alone is not sufficient to

promote breastfeeding. As long as the mother must necessarily achieve her daily target, the pressure to excel and stay in job would affect breastfeeding. It also implies that, mothers are conscious of the effect of utilizing the breastfeeding breaks on their output and would sacrifice breastfeeding in an effort to achieve targets.

Table 7: Impact of breastfeeding on work output

| Cross tabulation between mothers output level and ability to breastfeed on demand | | | | |
|--|--|----------|------------|----------|
| Impact area | Ability to breastfeed on demand | | | |
| | No | % | Yes | % |
| I am still able to meet my daily targets | 83 | 48.0 | 23 | 16.5 |
| Output is lower at the time am breastfeeding | 25 | 14.5 | 104 | 74.8 |
| Output is balanced | 65 | 37.6 | 12 | 8.6 |
| Total | 173 | 100 | 139 | 100.0 |

Source: field data (2015)

In the focus group discussions, mothers did not mince words in describing how childcare especially exclusive breastfeeding reduces their daily productivity. Mothers displayed in-depth knowledge on how long each efficient feed should last and the frequency of feeds. From their calculation, at least a quarter of the mother's day is spent on just breastfeeding. Especially when the mother chooses to exclusively breastfeed, chances of not feeding on demand are limited. This confirmed the conclusions of Inayati et al, (2012) and Brown et al, (2012) that, mothers who do not breastfeed on demand have 98% likelihood of introducing supplementation early. Therefore, it is normal to expect low output among breastfeeding mothers especially those who choose to exclusively breastfeed. In their view, exclusive breastfeeding is very good, but many women find it exclusively difficult to practice. This again agrees with Chen et al, (2006), when they observed that breastfeeding support goes beyond breastfeeding breaks and provision of lactation rooms to cover a conscious effort to reduce the mother's workload.

The plight of the mother is worsened by poor family support. A mother in one of the focus laments: *People must understand that, caring for the needs of the baby goes beyond breastfeeding. The baby needs lots of attention. The public must therefore stop believing that apart from the breast, which the mother has, other people can help in doing other things. This is because the family support that people of old enjoyed, mothers of today have lost entirely*. Oppong (2000) and Baataar (2005) explored dwindling kin support for childcare and concluded it is partly the reason for poor feeding and nutritional status of children.

The key informants give a much deeper insight on how exclusive breastfeeding affects work output. According to the mothers, leaving the baby at home places a big strain on time. Shuffling between home and work to feed the baby is time consuming and affects concentration. Similarly, managing the baby within the work environment requires several feeds and without proper lactation facilities, the baby's noise can distract other workers. Either way, precious working hours are lost to baby care. Though the mother might be at work for the required number of hours, productivity is low. The employers nailed the point when they all stated that, nursing mothers are usually late to work and have to pause work in order to attend to their babies. This not only affects the flow of work, but also greatly reduces how much work the employee is able to achieve daily. It is even worse when they take days off work to attend to a sick baby.

Ghana's labour law (Act 651) does not require employers to have workplace breastfeeding policies or the provision of lactation facilities within the working environment. It is therefore not surprising none of the workplaces visited and the employers interviewed had any lactation facilities or policies. The mother is entitled to

a one-hour breastfeeding break each day and employers are using their discretion to support breastfeeding mothers. From the estimations of the mothers in the focus group, this is woefully inadequate to ensure exclusive breastfeeding. As confirmed by the key informants, such mothers adapt bottle-feeding from expressed milk or formula. The World Health Organization and UNICEF have strongly resisted bottle-feeding even from expressed milk in developing countries because of the sanitary conditions and poor access to clean water.

It is clear that mothers in both the qualitative and quantitative segments of this study believed and actually experienced reduced work output during breastfeeding. Output is even lower if the mother exclusively breastfeeds. Mothers in all work categories experienced reduced work output and consequently reduced income; especially for the self-employed mothers. In this era when women are increasingly becoming breadwinners of their families, or contribute significantly to family income (Bell 2004) it will be injurious to allow reduced incomes. Since the effects of reduce output and consequently reduced income is felt by the family immediately and that of poor feeding may be experienced in the future, mothers are more likely to compromise quality feeding to balance output. Indeed, it is clear that many of the mothers are using supplementation as a strategy to balance output.

Conclusions

Following the revelations from this study, the researcher concludes that:

- Only 48% of mothers exclusively breastfeed their babies for six months.
- The mothers' work (income generation work) is one of the main reasons why mothers are not exclusively breastfeeding.
- Mothers generally record low work output during breastfeeding
- Mothers are not deriving the benefits of multiple roles. They may succeed in one, and fail in the other. The conditions that are required to support effective multiple rolling are almost non-existent in the study area.

Recommendations

Breastfeeding support at the workplace protects investment, increase productivity and builds a healthy nation. Breastfeeding support from colleagues and employer boosts staff morale and builds a stronger and result oriented workforce. Therefore, all, including the breastfeeding mother, must work to support breastfeeding mothers provide quality breastfeeding for our future leaders. In that regard, the researcher recommends the following.

1. Mothers need to design appropriate techniques to ensure efficiency so that they can make the best use of the limited time to achieve more. Learning task dove-tailing, especially before the mothers resumes work can help prepare the mother for the task ahead. Technology could be explored in this direction to design on-line, phone based tutorial models to prepare mothers to cope better with balancing work and breastfeeding.
2. Employers and employees need to constantly dialogue over their needs and how such needs translate into a better company. Mothers and their employers appear to have different understanding of the same issue.

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