

EXCLUSIVE BREAST-FEEDING PRACTICES, KNOWLEDGE AND CHALLENGES AMONGST MOTHERS WITH CHILDREN 0-6 MONTHS IN THE BAMENDA II MUNICIPALITY OF THE NORTHWEST REGION OF CAMEROON

Abstract

The prevalence of exclusive breast-feeding for the first six months of life has remained low worldwide and in Cameroon, despite strong evidence in supporting its practice. This study was aimed at assessing the practice, knowledge and challenges of exclusive breast-feeding among mothers in the Bamenda II municipality of the Northwest Region of Cameroon. A cross-sectional study design was used involving one hundred participants. A structured item questionnaire was used to collect data on sociodemographic characteristics of the participants, their knowledge on exclusive breast-feeding, level of practice and what could possibly be the factors that could hinder its uptake. Results were presented on tables and pie charts and inferences were made using descriptive statistics and bivariate logistic regression. P values were set at $p < 0.05$ at a 95% confidence level. Results showed that, 43% of participants practiced exclusive breast-feeding for up to 6 months of life while 57% did not practice exclusive breast-feeding. 95% had heard about exclusive breast-feeding, about 97% knew the effects of not exclusively breast feeding. Meanwhile 83% had a good knowledge on exclusive breast-feeding. Results also showed that single or divorced participants were 4 times more likely (95% CI = 1.3-12.5; $P = 0.02$) to breastfeed exclusively than married participants. Participants who were multipara, were 0.1 time less likely (95% CI = 0.1-0.95; $P = 0.045$) to breastfeed compared to those who were primipara. Participants who faced difficulties were 0.4 times less likely (95% CI = 0.2-0.96; $P = 0.04$) to practice exclusive breast-feeding compared to those that faced no difficulties. Those who had a good knowledge on EBF were 1.1 times (95% CI = 0.4 – 3.2; $P = 0.86$) more likely to practice exclusive breast-feeding, but it was not significant. Also participants who lived in rural areas were 3.1 times (95% CI = 1.6– 3.7; $P = 0.002$) more likely to practice exclusive breast feeding compared to those that were from urban settings. Although most of the participants had a good knowledge of exclusive breast-feeding, the practice was low; 43.0% (below WHO standards) in the study community. Thus, we suggest that facilities, programs and reminders be put in place to monitor and encourage the practice. More campaigns be organized more often to encourage and boost up the habit of exclusively breast feeding.

Key words: Exclusive breastfeeding, prevalence, mothers, knowledge, Bamenda II Municipality.

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1. Introduction

Breast feeding is also known as nursing and it involves the feeding of babies and young children with milk from mother's breasts (WHO, 2014). Breast feeding begins with the first hours of a baby's life and continues often as much as the baby wants, as recommended by health professionals. (American Academy, 2012). The duration of breast feeding is usually 10-15 minutes on each breast and older children feed less often. Mothers may pump milk so that it can be used later when breast feeding is not possible.

Exclusive breast feeding involves the feeding of an infant with breast milk only. No other liquids or solids are given, not even water with the exception of oral rehydration solution, or drops/syrups of vitamins, minerals or medicines (WHO, 2019). Exclusive breastfeeding can be assisted, facilitated or promoted by breast feeding on demand; that is, as often as the child wants, day and night. No use of bottles, teats or pacifiers. Exclusive breastfeeding is the optimal way of feeding infants and thereafter should receive complementary foods with continued breastfeeding up to two years of age or beyond. Exclusive breastfeeding reduces infant mortality due to common childhood illnesses such as diarrhea and pneumonia and helps for a quicker recovery during illness. (WHO, 2014). While exclusive breastfeeding is a natural act, it is also a learned behavior and therefore some mothers require active support for establishing and sustaining appropriate breastfeeding practices. WHO and UNICEF launched the baby friendly hospital initiative (BFHI) in 1992, to strengthen maternity practices to support breastfeeding. The foundation for the BFHI are the ten steps to successful breast feeding described in protecting, promoting and supporting breast feeding and is used effectively up to today to support exclusive breastfeeding (http://www.who.int/nutrition/topics/exclusive_breast_feeding/en/). Deaths of an estimated eight hundred thousand children under the age of 5 could be prevented globally every year with increased breastfeeding since it has a number of benefits to both mother and baby which infant formulae lacks (Victoria *et al.*, 2016). Breastfeeding to babies decreases the risk of respiratory tract infections and diarrhea, lowers risk of asthma, food allergies type 1 diabetes and leukemia, improves sensory and cognitive development and decreases risk of obesity both in developed and developing countries (American Academy, 2012; WHO, 2014). Breastfeeding benefits mothers in that, less blood is lost following delivery, better uterus shrinkage and decrease postpartum depression, delays the return of menstruation and fertility (lactational amenorrhea). Long term benefits of breast feeding, includes; decrease the risk of breast cancer, cardiovascular diseases and rheumatoid arthritis (Victoria *et al.*, 2016). WHO recommends exclusive breast feeding up to six months and continue while giving other supplementary foods but in most developing countries and some developed countries about 38% of infants are only breast fed during their first six months of their life. Although medical conditions that do not allow breastfeeding are rare (mothers taking certain recreational drugs),

smoking, limited amount of alcohol or coffee are not reasons to avoid breastfeeding (CDC, 2016).

Infants and children in developing countries are inexplicably affected by life threatening diseases, poor health care, and lack of potable water, malnutrition, poverty, and war. In an endeavor to give these children a chance at survival, it is imperative that breastfeeding be promoted and supported by government organizations and the medical establishment. (Colenet *al.*, 2014).

WHO and UNICEF lunched the baby friendly hospital initiative (BFHI) in 1992, to strengthen maternity practices and to support breastfeeding. The foundation for the BFHI are the ten steps to successful breast feeding described in protecting, promoting and supporting breastfeeding and is used effectively up to today to reduce child mortality by two-thirds. But steps forward in a lot of Africa countries is deficient in accomplishing this goal. Poor feeding practices such as sub-optimal breastfeeding is still pervasive and frequently leads to undernourishment which is a foremost cause of more than half of all child deaths (Sokolet *al.*, 2007). Through this research, which is to determine the prevalence and assessing the level of knowledge of exclusive breast feeding as well as to determine the factors that hinder its uptake, results obtained will help develop effective interventions to improve rate of exclusive breastfeeding and thus reduce infant mortality, in this chosen locality. Again, it is believed that this research's findings will add to the rising body of scientific understanding and knowledge on newborn feeding practices and how to plan and position health interventions among mothers. Additionally, this research will certainly provide a basis for future research.

2. METHODOLOGY

2.1. Study design and population

The research was a descriptive cross-sectional study which consisted of 100 mothers. This research was carried out in Mankon located in Bamenda 11 municipality in Mezam division of the North West Region of Cameroon. The communities and the participants involved in the research were randomly selected and a convenient sample size was obtained. Fifty women were targeted from urban area and fifty from the rural area. These two environments were different and could influence their breast feeding habits.

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2.3 . Sample size determination

The number of mothers-sampled from each community was determined using the at 95% confidence interval and the subjects were chosen randomly from the quarters.

$$n = \left(\frac{r+1}{r} \right) \frac{\sigma^2 (Z_{\beta} + Z_{\alpha/2})^2}{(\text{difference})^2}$$

For 80% power, Z_{β} = Desired power = 0.84, for 0.05 significance level, $Z_{\alpha} = 1.96$, r = ratio of case control = 1, σ = standard deviation, Difference = Expected mean difference between the urban and rural participants

$$n = (2) \frac{10^2 (7.84)}{(5)^2} = (2) 2^2 (7.84) = 100$$

2.4. Sampling technique

A Multistage sampling technique was used for the study. One hundred mothers were involved in this study, fifty mothers were targeted from urban area and fifty from the rural area. Using a convenient sampling method, 10 mothers each were targeted from five quarters in the urban area (Commercial avenue, City Chemist /longer end of tar street, Mulang, Ntarinkon and Mile 6) and another 10 mothers each were targeted from 5 quarters of the Rural area (Alachu, Ntabeng, Ntinkag, Ntamafe and Alabukam) of Mankon.

2.5. Inclusion and exclusion criteria

Mothers who have children (0-6months) at the time of the research.

Mothers who signed the informed consent form

Exclusion criteria

Critically ill breast feeding mothers

Mentally unstable mothers

2.6. Data collection

A Semi- structured questionnaire was designed and administered in the course of the study, and was partitioned in to the four parts.

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Part A: Consisted of sociodemographic characteristics of study participants such as their age, income status, etc. Part B consisted of the dietary assessment of breast feeding mothers. Part C consisted of questions related to knowledge mothers had on exclusive breast feeding and knowledge on the consequences of not exclusively breastfeeding. Part D Consisted of questions related to factors that could hinder the uptake of exclusive breast feeding.

This questionnaire was administered together with an informed consent form, in every house hold visited in Mankon.

2.7. Data analysis

Data was analysed using Microsoft Excel for descriptive analysis and inferential statistics was done using Statistical package for social Sciences(SPSS) version 20.0.

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3. RESULTS AND DISCUSSION

RESULTS

3.1. Demographic characteristics

This study included 100 participants. The highest proportion of participants were aged between 26 and 35 years (57%), followed by those aged between 36 – 45 years and 17 – 25 years, with proportions of 23% and 17% respectively. Most of our participants had at least a secondary or high school education (50%), were Christians (98%) and were married (83%) (Table 1)

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Table 1: Demographic characteristics

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Characteristics		Frequency N= 100	Percentage (%)
Age	17-25	7	7
	26 – 35	57	57
	36 – 45	36	36
Occupation	Business	37	37

	Farmer	6	6
	Others	45	45
	Student	12	12
Level of education			
	Primary	22	22
	Secondary/High	50	50
	University	28	28
Religion			
	Christian	98	98
	Others	2	2
Parity			
	Primipara	7	7
	Multipara	93	93
Marital status			
	Married	83	83
	Single/Divorced	17	17

3.2. Objective 1: To determine the level of EBF practice

Participants practice towards EBF

In this study, a majority of the participants did not practice EBF (57%) and only (43%) gave their baby only breast milk during the first 6 months. Most of them practiced EBF for more than 6 months (51%), but started giving other sources of food to the baby before 6 months (55%) (Table 2)

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Table 2: Participants practice towards EBF

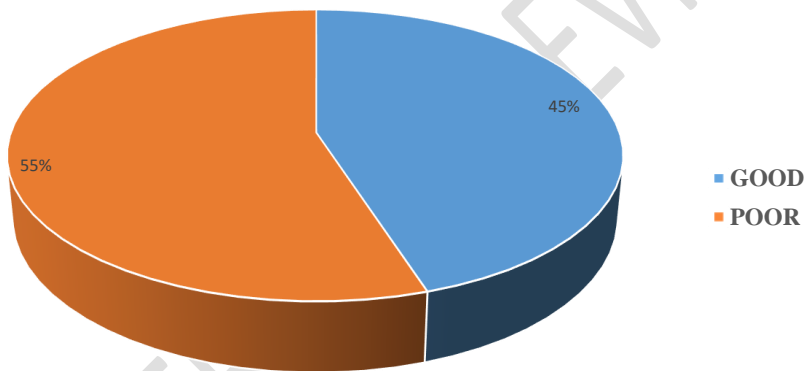
Characteristics	Frequency N=100	Percentage (%)
Did you practice EBF		
	Yes	43
	No	57
Food given to the baby during the 1 st six months		
	Breast milk	43
	Artificial milk	25
	Breast milk/others	32
For how long did you practice exclusive breast feeding		
	<6 months	13
	6 months	43
	>6 months	08

	Don't practice	36	36
When did you start giving your baby water and other food	<6 months	55	55
	>6 months	45	45

Level of EBF practice

Only 45% (95%CI=35% - 55.3%) of our participants had good practice of EBF, while 55% (95%CI= 44.7% -

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65%) of them had poor practice of EBF (figure 2)

Figure 2: Level of EBF practice

3.3. Objective 2: To determine the level of knowledge of participants about EBF

Knowledge of participants about EBF

In this study, most of the participants (95%) had heard of EBF, and knew what EBF was (97%). Most the participants (96%) knew that EBF had advantages, and also knew the effects of not practicing EBF (87%) (Table 3)

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Table 3: Knowledge of participants on EBF

Characteristics	Frequency N=100	Percentage (%)
Have you ever heard of EBF		
No	5	5
Yes	95	95
What is EBF		
Only breast milk for 6 months	97	97
Breast/Artificial milk	2	2
Breast milk/other food	1	1
Are there any advantages of EBF		
No	4	4
Yes	96	96
Do you know the effects of not exclusively breastfeeding your baby		
No	13	13
Yes	87	87

Level of knowledge of EBF

Using descriptive statistics, most of our participants 83% (95%CI=74.2% - 89.8%) had a good knowledge on EBF, while only 17% (95%CI= 10.2% - 25.8%) of them had a poor knowledge on EBF (figure 3)

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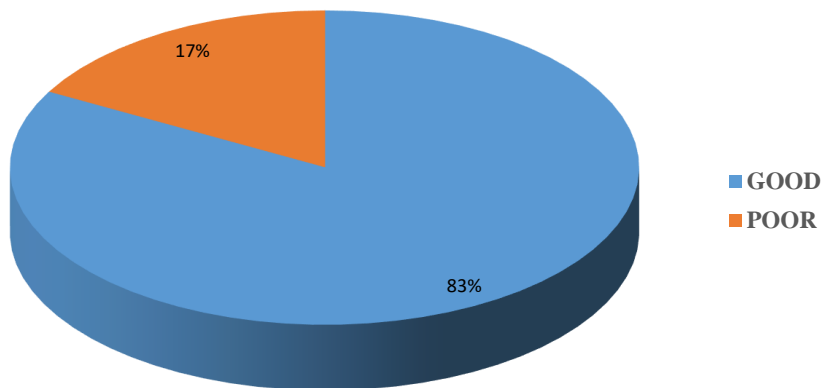


Figure 3: Level of knowledge of EBF

3.4.Objective 3: Factors influencing the uptake of EBF

After bivariate logistic regression analysis, factors such as marital status, parity, food type, face difficulties during EBF and setting were significantly associated with exclusive breast feeding uptake.

Participants that were single or divorced were 4 times (95%CI= 1.3-12.5; P=0.02) more likely to practice EBF, compared to those that were married. Participants who faced difficulties practicing EBF were 0.4 times less likely (95%CI=0.2 – 0.96; P=0.04) to practice EBF, compared to those who did not. Participants who had given birth more than once were 0.1 times less likely (95%CI=0.01 - 0.95; P=0.045) to practice EBF come to those who had done so only once, while participants who mostly ate proteins were 4 times more likely (95%CI=1.1 – 15.2; P=0.04) to practice EBF compared to those who mostly consumed other types of food. In this study, those who had a good knowledge on EBF were 1.1 times (95%CI=0.4 – 3.2; P=0.86) more likely to practice EBF, but it was not significant. Also participants who lived in rural areas

were 3.1 times likely to more practice exclusive breast feeding compared to those that were from urban settings (Table 4)

Table 4: Factors influencing the uptake of EBF

Variables	Good practice of EBF Bivariate analysis		
		COR (95%CI)	P-value
Age	36 - 45	reference	
	26 – 35	2.2 (0.9 – 5.3)	0.9
	17 – 25	14.5 (0.4 – 4)	0.96
Marital status	Married	reference	
	Single/Divorced	4 (1.3-12.5)	0.02
Level of education	Primary	reference	
	Secondary/High	1.8 (0.6 – 4.9)	0.3
	University	1 (0.3 - 3.1)	0.96
Occupation	Business	reference	
	Farmer	0.1 (0 – 3)	0.96
	Others	0.7 (0.3 – 1.6)	0.4
	Student	0.3 (0.1 – 1.2)	0.1

Parity	Primipara	reference	
	Multipara	0.1(0.01 - 0.95)	0.045
Food type	Others	reference	
	Carbohydrate	2 (0.8 - 4.9)	0.13
	Protein	4 (1.1 – 15.2)	0.04
	Fatty foods	1 (0.1 – 11.8)	1
Frequency of breastfeeding	3-10 times/ a day	reference	
	Often as demanded	1.5 (0.1–17.4)	0.73
Knowledge on EBF	Poor	reference	
	Good	1.1 (0.4 – 3.2)	0.86
Face difficulties in BF	No	reference	
	Sometimes	0.6 (0.1 – 3.9)	0.58
	Yes	0.4 (0.2 – 0.96)	0.04
Child ever sick before 6 months	No	reference	
	Yes	1.2 (0.6 – 2.7)	0.62
Setting	Urban	1	
	Rural	3.1(1.6-3-7)	0.002

COR: Crude Odd Ratio, CI: Confidence Interval.

3.5. DISCUSSION

Exclusive breastfeeding practice is the most effective intervention for providing balance nutrition and prevent child mortality. Infants when exclusively breastfed for the optimal duration of six months are considerably protected against the major childhood diseases conditions like, diarrhea, gastrointestinal tract infection, allergic diseases, diabetes, obesity, childhood leukemia and lymphoma, inflammatory and bowel disease (WHO, 2012; American Academy of Pediatrics,2012).Despite all the scientific evidence supporting the superiority of breastfeeding over other forms of infant feeding, most children in the world are not breastfed for two years or more and do not receive exclusive breast milk in the first six months, as recommended by the World Health Organization (WHO).In an attempt to reduce infant mortality rates through EBF, the 10 steps of the Baby-Friendly Hospital Strategy, with certification, be put into practice. Thus initiatives of this nature result in the improvement of health indicators of its users.

In this study, we observed that the overall prevalence of EBF practice among Mankon mothers was 43.0%. Thus a majority of mothers did not practice EBF (57%). Studies carried out in West Africa and Central Africa showed prevalence of EBF to be 32.64% (65%CL 25.85-39.43) and 23.7% (95%CL 5.37-

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42.03). In West Africa, Cote d'ivoire, reported the lowest prevalence of 13.15%. South Africa showed 13.45%. This showed that, the prevalence of EBF from 2020-2015 in sub-Saharan African countries is low (Issaka *et al.*, 2017). From this we can see that the rate of EBF practices were higher in our study than in these reports. Similar studies carried out by Nukpeza *et al.*, 2018 showed that mothers who were practicing EBF was 43% (57% did not practice EBF) which was far below the WHO recommendation of 90% (WHO, 2009) studies carried out at Tuna, a rural co-district capital of the sawla-Tuna-Kabla district in the Northern Region of Ghana showed a slightly lower rate of 42% (Perez, 2003). Hossain *et al.*, in 2018 carried out a study on EBF practices in Bangladesh and the prevalence was 35.9%.

These differences in prevalence of EBF rates in these different areas could be due to cultural, economic and sociodemographic differences. Another possible reason, could be due to the different methods used in measuring EBF practices. Comparing our findings with other studies in African countries showed that, the overall prevalence of EBF of this study is low. This shows that a majority of others did not practice EBF (57%) possibly because their spouses and family members do not allow them to do so. Mothers use infant formula feed as either complements or substitute for breast milk because they are based on the perception that their breast milk may not be sufficient for the babies despite the high cost of artificial milk (Mensah *et al.*, 2017).

Our study showed that mothers between the age of 35 and above did not practice EBF compared to their younger counterparts (17-30 years). This is similar to studies carried out by Ferreira *et al.*, (2018) who showed that adolescent mothers were less likely not to breastfeed their children exclusively. This could be due to the fact that older mothers were already so experienced in providing complimentary feeding and so neglected the aspect of EBF because it requires so much attention and time.

As concerns educational levels, a majority of participants in this study were secondary school drop outs which makes a greater proportion of those who did not practice EBF. This similar to other findings which showed that, early weaning is associated with low maternal schooling (Caminha *et al.*, 2010). Binary Multivariable logistic regression demonstrated that less educated mothers were more likely (95%CI 1.05-4.93; $P < 0.05$) to exclusively breastfeed their children than highly educated mothers (Hossain *et al.*, 2018) which is similar to the findings in our study. Mother's education and occupation were found to be inversely proportional to her EBF practice (Issaka *et al.*, 2017). Educated employed mothers may not have the time to manage EBF especially during working hours. Not practicing EBF could also be due to

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maternal fatigue, pressure of fulfilling the demands of work, and weaning as part of preparation to get back to work.

With regards to marital status, participants who were single or divorced were 4 times (95%CI= 1.3-12.5; P=0.02) more likely to practice EBF, compared to those that were married. This is contrary to what was carried out by Hossain *et al.*, (2018) where he showed that, house wives were more likely (95%CL 1.02-1.42: P<0.05) to breastfeed exclusively than their single mothers. Another study carried out in the united states also contradicts our findings which showed that, children living with both parents, were more likely to have been breast fed exclusively (80%) than children from single homes (Pereira *et al.*, 2010).

Our study also showed that mothers who had more than 1 child were less likely to exclusively breastfeed. This is contrary to what was observed by Hossain who showed that, higher rates of EBF was especially found among mothers who had more than 4 children (Hossain *et al.*, 2018). Also, in contrast to our findings, the experience of previous gestation is described as a protective factor against adherence to breastfeeding exclusively i.e. the greater the number of pregnancies, the greater the experience of mothers and therefore the longer the duration of breast feeding for the next child (Roig *et al.*, 2010).

The lower chance of exclusively breast feeding, could possibly be because as mother give birth and nurse each baby, they gain experience in feeding them, experience in nurturing and experience in keeping the feeding equipment clean. So they can easily switch to complimentary feeding without fear of contamination. Also with many children mother's responsibility in taking care of them increases so no time to seat always to follow up EBF since they have to take care of the other children.

It was also observed in this study that, participants who lived in rural areas were 3.1 times more likely to practice exclusive breast feeding compared to those that were from urban settings. This is similar to studies carried out in Ghana by Nkrumah, 2014 who showed that a majority of mothers working in and informal sector (mostly from rural areas) of employment, practiced EBF compared to mothers who work in the fulltime sector of employment (mothers from urban areas). Another study carried in UK similar to our findings showed that, most of the part-time and self-employed mothers of the rural areas were more likely to breastfeed for longer periods than those in fulltime employments (Hawkins *et al.*, 2006). A contrary study carried out by Ashwini *et al.*, 2014 showed that EBF rates at 6months was low in mothers from both urban (16.25%) and rural (15.26%) areas and that a majority of mothers practiced predominant breast feeding in both areas.

The significant difference in EBF between mothers of rural and urban setting could be explained by the fact that, mothers from rural areas do not have full-time jobs, they are self-employed, like farmers, small businesses etc. the nature of their job makes them flexible and therefore can breast feed their children exclusively for longer periods. Most mothers from the urban areas have formal full-time jobs. Thus are not flexible enough to breast feed for longer periods. Also, they are educated and have higher incomes thus can afford to buy artificial foods for their children compared to rural mothers who have low incomes. So they depend more on the breast milk to nourish their children.

In our study, descriptive statistics showed that 83% of participants had a good knowledge on EBF while only 17% had a poor knowledge on EBF. Similar studies carried out by Nukpeza *et al.*, (2018) showed that, 84% of mothers had a good knowledge on EBF and 70.5% had heard about it. He also observed that a majority of participants who had a good knowledge (84%) on EBF, actually practiced it. This is contrary the findings in our study which showed many participants had a good knowledge but only few participants actually practiced it. Another study carried out in Kware town of Sokoto state of Nigeria showed that only 31% of mothers had adequate knowledge on EBF (Perez, 2003). This quite lower (contrary) than what we observed in our study.

This could be due to negligence, no time especially for working class mothers (urban) than their counterparts (rural), sociocultural background, sex of the child; they say the males turn to eat a lot and so breast milk alone is not satisfying compared to the female infants. The knowledge about EBF and practice may depend on the hospital facilities and their policies in caring for pregnant and lactating mothers after delivery. These are policies to educate pregnant mothers, on EBF before and after delivery at various hospitals and this reflect on the higher prevalence we had in our study (83%).

Even though the knowledge on breastfeeding was high (83%) the practice of EBF was low as confirmed by the prevalence (43%). Therefore, it is obvious that having a good knowledge of EBF does not suggest that mothers would breastfeed for the first 6 months even though knowledge is important in improving EBF practices. This finding is similar to studies carried out in Ghana, Tanzania and Nigeria. For instance, in a study carried out in Nigeria showed that 91.2% of study participants, had a good knowledge on EBF but only 37.3% actually practiced it (Ukegbu *et al.*, 2011). Possible reasons could be due to the fact that mothers face challenges while practicing EBF couple with inadequate support and inappropriate information they receive as a solution to overcome those challenges (Ukegbu *et al.*, 2011). The use of media like TV advertisements as a communication tool has been proven successful in changing the

attitudes towards infant feeding practices. Educating and sensitizing care givers, father, grandmothers and other family members through TV to understand that, well-nourished mothers can produce adequate amounts of breast milk to feed their infant until six months, could contribute to higher rates of EBF in the future (Ghana statistical service, 2011).

3.6.CONCLUSION

We therefore conclude that in Bamenda II Municipality,

The prevalence of exclusive breast feeding in mothers with children 0-6 months was low i.e. below the recommended WHO standard.A majority of mothers who breastfed did not practice exclusive breast feeding.A majority of participants had a good knowledge about EBF but only a few practiced it. Therefore, the uptake of EBF was low. This brings about the need to set up programs and facilities to encourage and monitor EBF practices as well as reminders after the Knowledge has been passed on Most of the factors that hindered the uptake of exclusive breast feeding were, marital status, educational levels and settings. Mothers with more than one child were less likely to breastfeed exclusively than their counterparts.Lastly, mothers in the urban areas were less likely to breastfeed their children exclusively compared to mothers in the rural areas.

3.7. RECOMMENDATIONS

1. Increase media coverage regarding the awareness programs of breastfeeding.
2. Establish breastfeeding friendly working environment for working mothers and work site day care centers for infant.
3. Strengthen infant feeding counselling, both at community and institutional level
4. Extend maternity leave up to the first six months after delivery and introduce paternity leave for the first two months of infant delivery.
5. Initiatives should be taken for proper execution of the recommended interventions which will be able to significantly increase EBF practice among mothers in Mankon.

CONSENT

As per international standards or university standards,written consent was collected and preserved by the author(s).

ETHICAL APPROVAL

This study included the use of human participants. Ethical approval was obtained from the Regional Delegation of the North West, Bamenda.

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