

Factors Influencing the Practice of Exclusive Breastfeeding among Lactating Mothers Attending the IWC in District Hospital Mbengwi in the North West Region of Cameroon

Article by Christina Asoh

Contract Development and Verification Agency, PBF North West, Cameroon

Email: tinaasoh@yahoo.com

Citation: Christina Asoh (2019). Factors influencing the practice of exclusive breastfeeding among lactating mothers attending IWC at the Mbengwi District Hospital in the North West Region of Cameroon.

Abstract

Breastfeeding is an unequalled way of providing ideal nutrition for the healthy growth and development of infants. The global public health recommendation is that infants should be exclusively breastfed for the first six months of life to achieve optimal growth, development and health (WHO, 2003). Exclusive breastfeeding in the first six months of life stimulates babies' immune systems and protects them from diarrhea and acute respiratory infections, two of the major causes of infant mortality in the developing world and improves their responses to vaccination (UNICEF, 2006). Approximately 1.5 million young infants die each year as a result of lack of knowledge about exclusive breastfeeding benefits and improper infant and young child feeding practices (Nguyen, 2009). The World Health Organization (WHO), United Nations Children's Fund (UNICEF) and other organizations promote exclusive breastfeeding as one of the key effective low-cost interventions to enhance child survival. It is therefore for these reasons that we sort to find out the factors influencing the practice of exclusive breastfeeding among lactating mothers attending infant welfare clinic (IWC) at the Mbengwi District Hospital.

A cross-sectional survey was used where the convenient sampling technique was used. Data collection tool was a structured questionnaire with open and closed ended questions to give a snapshot of the factors influencing the practice of breast feeding among lactating mothers attending IWC. Data analysis was done using Microsoft Excel tables and figures.

The rate of exclusive breastfeeding among lactating mothers attending IWC in district hospital Mbengwi was found to be 26.6% which is relatively higher compared to those reported in other studies 13.3%, 16%, in Tanzania, Kenya, respectively (Maru et al, 2009). This observed difference may be due to the strengthened MCH services. Despite the improvement in the percentage as compared to other African countries, there is still a need for strengthened MCH services to improve the percentage of mothers adhering to exclusive breastfeeding.

Keywords: *exclusive breast feeding, lactating mother, infant welfare clinic, Mbengwi District hospital*

Introduction

Statement of the problem

Approximately 1.5 million young infants die each year as a result of lack of knowledge about exclusive breastfeeding benefits and improper infant and young child feeding practices (Nguyen, 2009). The World Health Organization (WHO), United Nations Children's Fund (UNICEF) and other organizations promote exclusive breastfeeding as one of the key effective low-cost interventions to enhance child survival. Numerous awareness campaigns have been launched by national governments, multilateral organizations, and non-governmental and private sector organizations across the globe to educate mothers and families about the benefits of exclusive breastfeeding and with aim to encourage the practice (Nguyen, 2009). Such initiatives include Baby Friendly Hospital Initiatives (BFHI) and establishment of work place breast feeding facilities. These efforts have achieved different levels of

success. The BFHI for example, does promote exclusive breastfeeding in the health facility but does not sustain it at community level. In reality many mothers are unable to practice exclusive breastfeeding as advocated (Dhandapany *et al*, 2008) and there is Paucity of scientific data on reasons why exclusive breastfeeding is not practiced optimally.

In many Sub-Saharan Africa societies, exclusive breastfeeding is considered by far the best feeding option for women of unknown HIV status and for most HIV positive mothers, although it is challenged by low acceptability and feasibility (Cames *et al*, 2009). The rates of exclusive breastfeeding have improved over the recent past, with the global rate at 37% (UNICEF, 2009c and UNICEF, 2011a). However, in all regions the percentage of infants under six months receiving the benefits of exclusive breastfeeding is less than 50% (UNICEF, 2011b). In the developing world, less than 40 % of infants under 6 months old receive the benefits of exclusive breastfeeding. The rate is particularly low in Africa, where less than one third of infants under 6 months old are exclusively breastfed (UNICEF, 2009a). There has been a major increase in exclusive breastfeeding in 19 African countries including Rwanda (88%), Tanzania (41%) and Malawi (57%) among others (UNICEF, 2011c and UNICEF, 2009b). In Kenya however, rates of exclusive breastfeeding remain low with only 32% of infants below six months being exclusively breastfed (KNBS and ICF Macro, 2010). Studies have identified various factors that influence breastfeeding practices such as inadequate knowledge of the health benefits of breastfeeding (Ochola, 2008; LINKAGES, 2004); inadequate antenatal counseling on breastfeeding (Dhandapany *et al*, 2008) and belief that breast milk is insufficient (Savage *et al*, 2004). A range of maternal and child health attributes such as marital status, economic status and child age also influence the practice of exclusive breastfeeding (Alemayehu *et al*, 2009). To make better feeding choices, mothers need specific, culturally appropriate, information that responds to their constraints and concerns (LINKAGES, 2004).

In Cameroon breastfeeding remains a culturally accepted practice with 99% of women practicing breastfeeding initially breastfeeding rates remain low in the country. According to the Uganda demographic and health survey 2000-2001, 62% of children under six of age exclusively breastfeed as compared to 74% of those aged less than four months. Similar values in Cameroon are yet to be documented. The challenge is how to scale up exclusive breastfeeding to universal levels. Breastfeeding in Cameroon is normative but exclusive breastfeeding is not customary. National statistics from WBTI Cameroon shows that 45% of newborns initiate breastfeeding within 30minutes to 2hour as stipulated in the 10 steps to increase full breastfeeding but only 21% breastfeed till 6months without giving water, other fluids and food. Breastfeeding practices, including initiation and duration, are influenced by multiple interwoven factors which include health, psychosocial, cultural, political, and economic factors (Cripe *et al*, 2008.; Schmied V, Barclay L, 1999). Among these factors, decisions regarding initiation and duration of breastfeeding in low-income countries are influenced by education, employment, place of delivery, family pressure, and cultural values (WHO, 2010; Gartner LM *et al*, 2005.; Otoo *et al*, 2009). While there is a large body of published material on the factors affecting Breastfeeding, there are few studies documenting factors influencing exclusive Breastfeeding. To improve exclusive breastfeeding, factors influencing its practice have to be identified in order to target these in programmed implementation. In the Northwest Region of Cameroon, determinants of exclusive breastfeeding practices have not been documented. This study therefore shall obtain information which would lead to a 4better understanding of factors influencing exclusive breastfeeding practice among LM attending IWC in the Mbengwi DH.

Study objectives

To assess factors influencing EBF practices among lactating mothers attending the IWC in the district hospital Mbengwi Cameroon.

Specific objectives

- 1) To find out how the practice of exclusive breastfeeding was been carried out among LM attending IWC in the Mbengwi DH.
- 2) To find out or explore whether or not lactating mothers have the knowledge and understanding about the concept of EBF.

3) To find out the factors associated with the practice of EBF among lactating mothers attending IWC in the Mbengwi district hospital.

Research question

What are the factors influencing exclusive breast-feeding practices among lactating mothers attending IWC at the Mbengwi District Hospital?

Hypothesis

Exclusive breast feeding can positively influence if mothers are well educated about its benefits at IWC.

Methodology

Description of the study setting

Mbengwi is a rural community located some 22km away from Bamenda. It is the headquarter of Momo Division and comprises of the following Villages; Mungen, Mbo, Mbengwi, Gonoku, Fonam, nyen, Djimbi, Acha Tugui, bome, bome, Kopi Yang and Ngembo. Its indigenous people are the Meta people. The Health District has one district hospital, one integrated health center and many health unites including private hospitals, clinics, there is also the availability of schools ranging from pre-nursery to higher institutes, markets, banks, Hotels, Motels and site of interest include the Abbi Water fall located in the heart of the town and the Catholic monastery.

The study population were lactating mothers attending the IWC with infants of age 0-6months during the period of data collection.

Eligibility criteria.

Inclusion criteria

- All lactating mothers attending the IWC
- All lactating mothers with infants of age 0-6months
- All lactating mothers who gave in their consent

Exclusion criteria

- Non-lactating mothers
- Lactating mothers with infants above the age of 6months
- Lactating mothers who refused giving their consent

Study design

The study was a descriptive cross-sectional study.

Sample size

The sample size for this study was 30 lactating mothers randomly chosen from all lactating mothers attending the IWC with infants aged from 0-6 months.

Sampling technique

A convenient random sampling was used for this research. All women attending IWC during the study period were randomly sampled using the convenient sampling technique.

Data collection tool and method

The instruments for data collection was a self-administered structured questionnaire which were used to achieve the objectives of the study. The questionnaires were developed following the flow of information for this study.

The questionnaires were self-administered to respondents and those who could neither read nor write were assisted by the researcher who read and explain the contents of the questionnaire for better understanding. Information from respondents was collected using the questionnaire. Mothers were first asked for their consent to participate in the study. Upon agreeing to participate in the study, a research

self-administered a questionnaire on current infant feeding practices and responses were recorded. Questionnaires were being administered to 30 LM; where each took about 15 to 25minutes depending on mother's speed of replying and calmness of the infant to answer the questions.

Data analysis

Data was analyzed with the use of Microsoft Excel where pie charts, bar charts, percentages and frequency tables were generated.

Study limitations

This study had a number of limitations. The study subjects were those attending IWC in DH Mbengwi, which may not be a representative of the general population of lactating mothers with infants aged 0-6 months. Moreover, there is possibility that the responses of the study subjects were biased. This was overcome by explaining the purpose of the study clearly to the study participants and by assuring them that no matter the type of feeding a mother practiced, no negative consequences will befall her as a result of her practice.

Results

Socio- demographic characteristics of study participants (n=30)

Table 1. Age distribution of respondents

AGE (GROUPED IN YEARS)	RESPONDENTS(n)	PERCENTAGE
15- 20	13	43.3
21-25	8	26.7
26-30	7	23.3
31 +	2	6.7

Among the 30 participants 13(43.3%) were of aged group 15-20years, 8(26.7%) were of age group 21-25years, 7(23.3%) were of range 26-30years and 2(6.7%) were of age above 30years. Infants were of 0-6 months; their mean infant age at the time of interview was Out of these 10 (33.3%) were boys and 20 (66.7%) girls and they had an average weight of 3.2kg.

Table 2. Distribution according to marital status

MARITAL STATUS	RESPONDENTS(n)	PERCENTAGE OF RESPONDENTS
Married	13	43.3
Single	17	56.7
Co-habiting	0	0
Divorced	0	0
Widow	0	0

Among these 13 (43.3%) were married, 17(56.7%) were single mothers, 0 (0%) were cohabiting 0 (0%) divorced and 0(0%) widows.

Table 3. Parity of respondents

PARITY	RESPONDENTS	PERCENTAGE OF RESPONDENT
Primiparous	17	56.7
Multiparous	13	43.3

The parity of the respondents: 56.7% were primiparous while 43.3% were multiparous as summarized in table above.

Table 4. Educational level of respondents

LEVEL OF EDUCATION	RESPONDENTS	PERCENTAGE OF RESPONDENTS
Primary	7	23.3
Secondary	19	63.3
College and above	4	13.4
No formal education	0	0

Most of the LM 7(23.3%) had finished primary school, 19(63.3%) were Secondary school students, 4 (13.3%) had finished college while 0(0%) had no formal education.

Table 5. Occupation of respondents

Occupation	Respondents(n)	Percentage of respondents
Student	10	33.3
Seamstress	6	20
Hair stylist	3	10
Business	2	6.7
Farmer	2	6.7
Teacher	4	13.3
House wife	3	10
House wife	3	10

Majority 10 (33.3%) were students,4(13.3%) teachers, 6(20%) seamstress, 3(10%) hair stylist, 3(10%) house wives, 2(6.7%), businesswomen, and 2 (6.7%) farmers. In all 28(93.3%) were Christians while only 2(6.7%)

Exclusive breastfeeding

Mothers were categorized in two groups: first, as practicing exclusive breastfeeding if the infant was fed on breast milk only for the first six months of life, and second not practicing exclusive breastfeeding if the mother gave infant breast milk and other foods/liquids, or did not breastfeed exclusively for the first six months of life. Data shows that exclusive breastfeeding (EBF) was practiced by 8(26.7%) of the mothers, the remaining mothers 22(73.3%) did not breastfeed exclusively

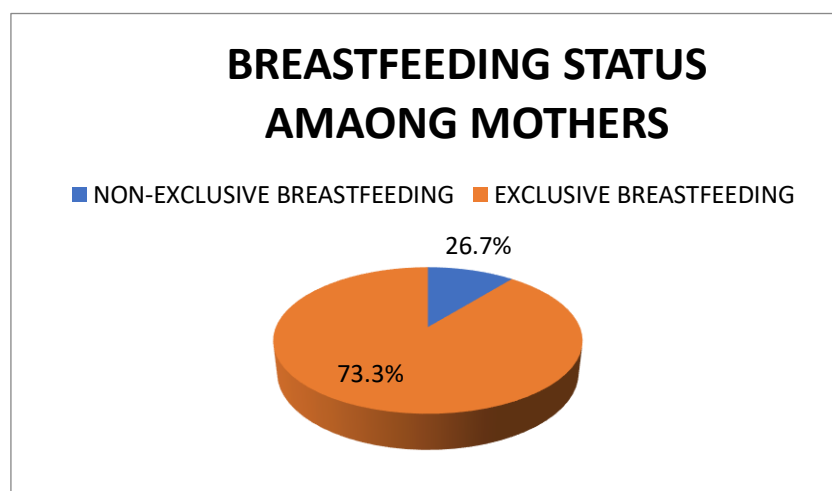


Figure 1. Breastfeeding status among lactating mothers

The rates of exclusive breastfeeding were high at the beginning of the baby’s life after birth, data shows that most of infants (100%) were exclusively breastfed during first month, however; these rates started to decline as the age of infant increases

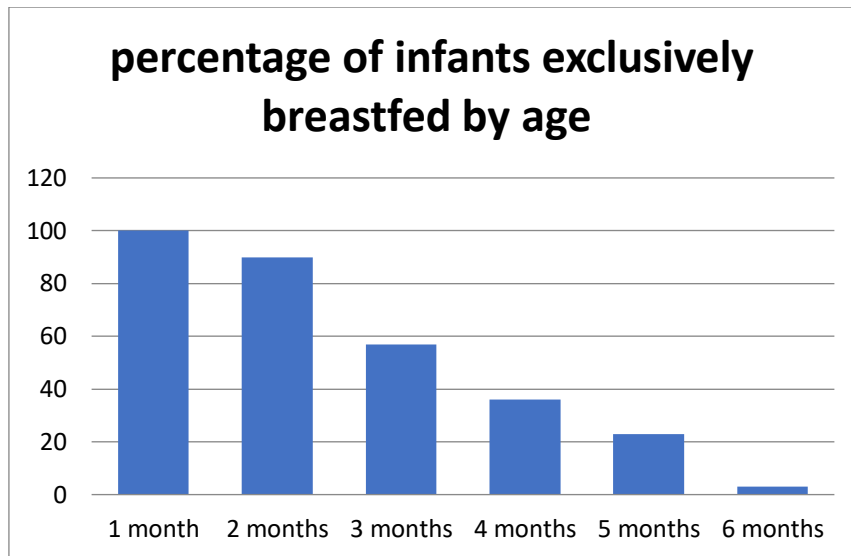


Figure 2. Percentage of infants exclusively breastfed by age

Other feeding practices

Table 6. Distribution of feeding practices among lactating mothers (n=30)

Feeding practice	Number	Percent
Exclusive breastfeeding	08	26.7%
Exclusive replacement feeding	0	0
Mixed feeding	16	53.3%
Other feeding	6	20%
Total	30	100

As seen on the table above 53.3% of respondents revealed that they practiced mixed feeding while 26.7% practiced exclusive breast feeding and another 20% practiced other types of feeding.

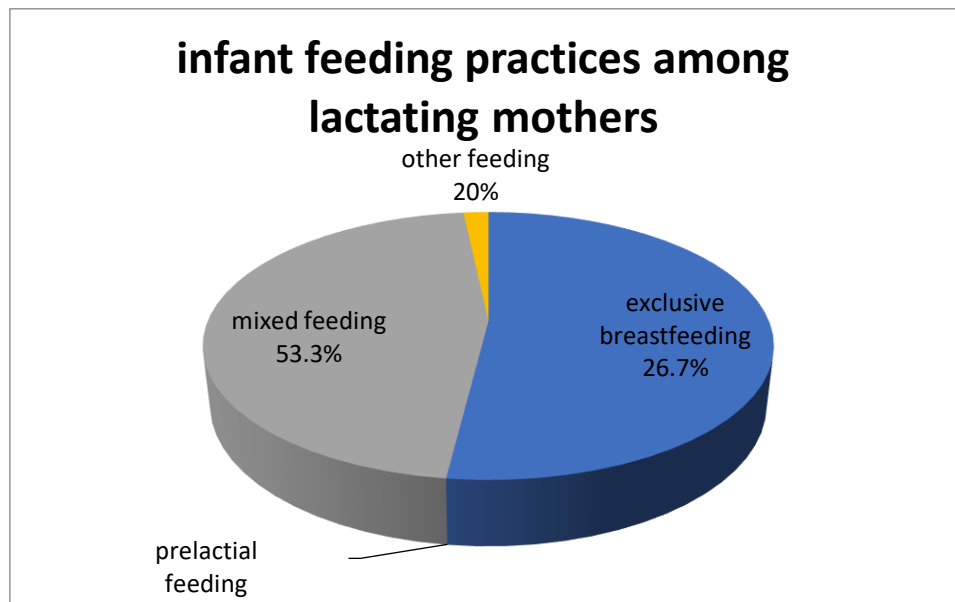


Figure 4. showing infant feeding practices

Rate of exclusive breastfeeding and non-exclusive breastfeeding practice by socio-demographic characteristics

It was discovered that age and occupation had an influence to extend to which LM practiced exclusive breastfeeding.

Table 7. Distribution by maternal age

Age	Exclusive breastfeeding (%)	Nonexclusive breastfeeding (%)
15-20years	4(50%)	9(40.9%)
21-25years	3(37.5%)	5(22.7%)
26-30years	1(12.5%)	6(27.3%)
30 and above	0	2(9.1%)

The socio-demographic data were analyzed, where findings showed that exclusive breastfeeding was practiced more by mothers who were at age group of 19-29 by 23.3%, as compared to other age groups.

Table 8. Distribution by occupation

Occupation	Exclusive breastfeeding (%)	Nonexclusive breastfeeding (%)
Student	2(25%)	6(27.3%)
Seamstress	1(12.5%)	5(22.7%)
Hair stylist	1(12.5%)	2(9.1%)
Business	0	2(9.1%)
Farmer	1(12.5%)	2(9.1%)
Teacher	1(12.5%)	5(22.7%)
House wife	3(37.5%)	0

Out of the number of respondents who practiced EBF that is 8(26.7%), Majority were house wives 3(37.5%), followed by students 2(25%), seamstress 1(12.5%), hair stylist 1(12.5%), farmers 1(12.5%), teachers 1(12.5%) and business 0(0%) as shown in table 9 above. As regards to those who didn't practice EBF, a great number of them were students with 27.3%, seamstress 22.7%, teachers 22.7%, hair stylist 9.1%, business 9.1%, farmers 9.1% as shown on table 9 above.

1 Finding out Knowledge and understanding of LM on the concept of EBF

Table 9. what do you understand by exclusive breastfeeding?

Response	Number	Percentage
Breastfeeding infant from birth up till 6months at any time the baby is in need of breast milk without giving any food/ Fluid.	30	100

All mothers had a good knowledge of exclusive breastfeeding and its duration but not all had the awareness on the importance of colostrum

Table 10. what is the importance of the yellow colored milk that comes out the breast within the first week after birth?

RESPONSE	NUMBER	PERCENTAGE
Nutritious	16	53.4
Protection against diseases	4	13.3
Nutritious and protection against diseases	4	13.3
I don't know	6	20

In this regard, majority of them had a knowledge of colostrum as being nutritive that is 16(53.3%), others knew it as giving protection against diseases 4(13.3%), 6(20%) didn't know the function of colostrum and 4(13.3%) knew its functions is for the protection against diseases and nutrition. The results of this are represented on table 11 above.

However, from the results it indicates that all of these mothers had a good knowledge on exclusive breastfeeding but most of them fail to put it into practice as presented on the table below.

Table 11. Knowledge of mothers who ever breastfed their children on EBF

Response	Number	Percentage
Breastfeeding infant from birth up till 6months at any time the baby is in need of breast milk without giving any food/ Fluid.	08	100
Breastfeeding the child without food and or fluid for 3 months	0	0
I don't know	0	0
Others	0	0

Table 12. Knowledge of mothers who do not practice exclusive breastfeeding

Response	Number	Percentage
Breastfeeding infant from birth up till 6months at any time the baby is in need of breast milk without giving any food/ Fluid.	22	100
Breastfeeding the child without food and or fluid for 3 months	0	0
I don't know	0	0
Others	0	0

Barriers to the practice of exclusive breastfeeding

Most mothers faced difficulties in exclusively breastfeeding their children such as; work related issues, studies and inadequate flow of breast milk.

Table 13. percentage of LM practicing non-exclusive breastfeeding who are workers.

Work	Respondents(n)	percentage
Teachers	5	22.7
Business	2	9.1
Total	7	31.8

Out of the 22 (73.3%) respondents who didn't feed their infants exclusively on breast milk 7(31.8%) were workers that is, teachers 22.7% and business 9.1% and this was because they work away from home and are not allowed to carry their infants to their place of work.

Table 14. percentage of LM practicing non-exclusive breastfeeding who are students

Students	Respondents(n)	percentage
Secondary school	5	22.7
College and above	1	4.5

Others were not able to breastfeed their children exclusively because they were students, that is 6(27.3%), 5(22.7%) and 1(4.5%) for secondary school students and higher education respectively.

Other reasons

Table 15. Percentage of LM practicing non EBF due to other reasons

Variables	Respondents(n)	Percentage
Insufficient flow of breast milk	1	4.5%
Friends	2	9.1%
Parents and grand parents	4	18.2%

Some did not exclusively breastfeed their children because of other reasons such as insufficient flow of breast milk 1(4.5%), influence from friends 2(9.1%) and influence from parents and grandparents 6(8.2%) as indicated on table above.

Mothers decision

Table 16. Percentage of LM practicing non EBF as result of mother’s decision

Who advised you to give your child such foods or fluids?

My own decision	2	9.1
Parents/ grand parents	4	18.2
Friends	2	9.1
Others	0	0

Among respondents who didn’t exclusively breastfeed their infants it was discovered that some of them did it just out of self will either because they felt breast milk alone didn’t adequately satisfy the baby and or because the baby ought to drink water after feeding to ease digestion just like every other human being 2(9.1%).

Discussion on findings

The findings of this study highlighted the proportion of EBF among lactating mothers, identified factors that are associated with EBF and explored barriers and motivators to EBF simultaneously. The findings suggest a need of more support and strengthened counseling for mothers to be able to breastfeed exclusively for the recommended 6 months. It has been shown that EBF is more influenced by health workers, mothers of lactating mothers’ own decision to practice EBF, and proper knowledge about EBF than informed choice of individual mothers.

The results of this study are similar to other previous studies in African countries and elsewhere that have showed that breastfeeding is the culture and well accepted practice where most of the infants are breastfed at one point in time (Leshabari *et al*, 2007) .In this study it was found that most mothers (100%) breastfed their babies, the finding which is consistent with that of study by de Paoli et al and the demographic health survey where it was noted that, almost all (98%) babies in Tanzania are breastfed for some period of time regardless of mothers HIV status (Paoli *et al*, 2001). It was found in this study that most mothers (71%) initiated breastfeeding within one hour after birth, which is the recommended time. The rate of exclusive breastfeeding among lactating mothers attending IWC in district hospital Mbengwi was found to be 26.6% which is relatively higher compared to those reported in other studies 13.3%, 16%, in Tanzania, Kenya, respectively (Maru *et al*, 2009). This observed difference may be due to the strengthened MCH services. However, the duration of exclusive breastfeeding decreased as the age of the infant increase, being higher in the first months of life and going down as the child grow. This could be a result of mothers being unsure whether their breast milk is sufficient to meet infant’s body requirement for the first six months as well as other factors.

Moreover, it was discovered that all of the mothers in this study 100% had a good understanding of the concept of exclusive breastfeeding but failed to practice exclusively breastfeed their children because they didn’t believe EBF was enough for their infants. It was also discovered that though they had a good mastery as to what EBF is some did not know the importance of colostrum.

Furthermore, the place of delivery, specifically health facilities was a strong predictor of early initiation of breastfeeding, though it did not influence exclusive breastfeeding. This differs from other studies that reported place of delivery (health facility) to be a predictor of exclusive breastfeeding (Shirima *et al*, 2001). The difference could be attributed to the fact that though all of the mothers (100%) delivered in health facilities most of them did not put to practice what they were been taught in the ANC and IWC because of certain factors such as work 7(31.8%), studies 23.3%, insufficient breast milk flow 4.5%. others included influence from family and friends as well as mother’s self-will. While some of the mothers were being encouraged on their EBF practice through support from family and significant others, that is 25% by their mothers, 62.5% by nurses and 12.5% by their husbands.

The study findings have limitation that they cannot be generalized due to the small sample size and also due to the fact that it was health facility based. The study participants may have answered questions easily and accurately because they received infant feeding counseling. This bias may have

overestimated the rates of exclusive breastfeeding practices while at the same time underestimate the rates of mixed and other feeding. Regardless of these limitations, study findings provide vital input on infant feeding decision.

Conclusion

This study highlights the factors that contributed to adherence to EBF among lactating mothers as: mother's age, support from family and health workers facilitate immediate initiation of breastfeeding. However, barriers were found to be, friends and family pressure to mix feed as it is a norm, insufficient breast milk flow, work, studies and mothers' decision. These findings suggest a need for a more extensive and comprehensive approach of breastfeeding education and especially of exclusive breastfeeding. These important issues that are related to factors influencing the practice of EBF that are brought up by this study, needs to be taken into account by implementers and policy makers for the purpose of accelerating exclusive breastfeeding practice among lactating mothers. However, since health workers are the sole supporters of infant feeding practices, in particular exclusive breastfeeding, capacity building should be done to ensure that they have current information and positive attitude towards EBF.

References

- [1]. Aidam, B. A., Perez-Escamilla, R., Lartey, A and Aidam, J. (2005). Factors associated with exclusive breastfeeding in Accra Ghana. *European journal of Clinical Nutrition*; 59(6), 789-796.
- [2]. Agho, K.E., Dibley, M. J., Odiase, J. I., and Ogbonmwan, S. M (2011). Determinants of exclusive breastfeeding in Nigeria. *BMC Pregnancy and Childbirth*, 11:2. <http://www.biomedcentral.com/1471-2393/11/2>.
- [3]. Al-Sahab, B., Lanes, A., Feldman, M and Tamim, H. (2010). Prevalence and predictors of 6-month exclusive breastfeeding among Canadian women: a national survey. *BMC Pediatrics*, 10:20. doi: 10.1186/1471-2431-1020
- [4]. Alemayehu, T., Haidar J. and Habte D. (2009). Determinants of exclusive breastfeeding practices in Ethiopia. *Ethiop. J. Health Dev.* 23(1):12-18
- [5]. Amosu, A. M., Degun, A.M.; Thomas, A. M. and Babalola, A. O. (2011).
- [6]. A study of the knowledge and support level of breast-feeding among the workers in formal employment in South-Western Nigeria. *Archives of Applied Science Research*, 3(2):237-2 (<http://scholarsresearchlibrary.com/archive.html>)
- [7]. Bahl, R., Frost, C., Kirkwood, B. R., Edmond, K., Martines, J., Bhandari, N. and Arthur, P. (2005). Infant feeding patterns and risks of death and hospitalization in the first half of infancy: multi-centre cohort study. *Bulletin of the World Health Organisation*, 83: 418-426.
- [8]. Ballard, K. I. (2009). Breastfeeding and HIV-protecting babies (heat treated breast milk) <http://www.waba.org.my/whatwedo/HIV/7heatreatedbreastmilk.html>. Accessed on 2/10/2009.
- [9]. Bandyopadhyay, M. (2009). Impact of ritual pollution on lactation and breastfeeding practices in rural west Bengal, India. *International Breastfeeding Journal*, vol 4: 2. doi:10.1186/1746-4358-4-2.
- [11]. Braun, M.L.G., Giugliani E.R.G., Soares M.E.M., Giugliani C., de Oliveria A.P and Danelon C.M.M (2003).
- [12]. Evaluation of the impact of Baby-Friendly Hospital 100 Initiative on Rates of Breastfeeding. *American Journal of Public Health*; 93 (8): 1277-1279.
- [13]. Brown, K. Cames, C., Saher, A., Ayassou, K A., Cournil A., Meda, N. and Simondon, K. B. (2009).
- [14]. Acceptability and feasibility of infant-feeding options: Experiences of HIV- infected mothers in the World Health Organization Kesho Bora mother-to-child transmission prevention (PMTCT) trial iBurkina Faso. *Maternal and Child Nutrition*. DOI: 10.1111/j.1740-8709.2009.00201.
- [15]. Chandrashekar, T.S., Joshi, H.S., Binu, V.S., Shankar, P.R., Rana, M.S. and Ramachandran, U. (2007).
- [16]. Breast-feeding initiation and determinants of exclusive breast-feeding – a questionnaire survey in an urban population of western Nepal. *Public Health Nutrition*: 10(2), 192–197. DOI: 10.1017/S1368980007248475
- [17]. Cherop, C.E., Kaverenge-Ettsyang A.G., Mbagaya, G.M. (2009). Barriers to exclusive breastfeeding among infants aged 0-6 months in Eldoret municipality, Kenya. *East Africa journal of Public health* 6 (1): 69-72.
- [18]. Chisenga, M., Kasonka, L., Mkasa, M., Sinkala, M., Chintu, C., Kaseba, C., Tompkins, A., Murray, S. and Filteau, S. (2005).
- [19]. Factors affecting the duration of exclusive breastfeeding among HIV-infected and uninfected women in Lusaka Zambia. *Journal of Human lactation*, vol 21 No. 3 pp 226-275. doi:10.1177/0890334405279251.

- [20]. Diallo, F. B., Bell, L., Moutquin, J. and Garant, M.T (2009). The effects of exclusive versus non-exclusive breastfeeding on specific infant morbidities in Conakry (Guinea). *Pan African Medical Journal*, Volume 2: Issue 2.
- [21]. Duijts, L., Ramadhani M K, and. Moll, H A. (2009). Breastfeeding protects against infectious diseases during infancy in industrialized countries. A systematic review. *Blackwell Publishing Ltd Maternal and Child Nutrition* 5, pp. 199–210. DOI: 10.1111/j.1740-8709.2008.00176.x
- [22]. Esterik, P. E., and Buttler, S. Breastfeeding and wellbeing of the families. *World Alliance for Breastfeeding Action (WABA)*. <http://www.waba.org.my/index.htm>. Accessed on 14/09/2009.
- [23]. Fadnes, L. T., Engebretsen, I.M.S., Wamani, H., Wangisi, J., Tumwine, J. K and Tylleskar, T (2009).
- [24]. Need to optimise infant feeding counselling: A cross sectional survey among HIV-positive mothers in Eastern Uganda *BMC Pediatrics*, 9:2 doi: 10.1186/1471-2431-9-2
- [25]. Fisk, C .M, Crozier S.R., Inskip H M., Godfrey K.M., Cooper, C., Roberts G. C., Robinson, S.M. and the Southampton Women’s Survey Study Group (2010).
- [26]. Breastfeeding and reported morbidity during infancy: findings from the Southampton Women’s Survey. *Blackwell Publishing Ltd Maternal and Child Nutrition*.
- [27]. Fjeld, E., Siziya, S., Bwalya, M. K., Kankasa, C., Moland, K. M., and Tylleskar, T. (2008). ‘No, sister, the breast alone is not enough for my baby.’ A qualitative assessment of potentials and barriers in the promotion of exclusive breastfeeding in Southern Zambia. *International Breastfeeding Journal*, vol 3: 26. doi:10.1186/1746-4358-3-26.
- [28]. Gijbbers, B., Mesters, I. Knotnerus, J. A. and Van Schayck, C. P. (2008). Factors associated with the duration of exclusive breast-feeding in asthmatic families *Oxford University Press. Health Education Research Vol .23 no.1* Pages 158–169 doi:10.1093/her/cym013
- [29]. Hatsu, I. E., McDoougald, D. M., and Anderson, A. K. (2008). Effect of infant feeding on maternal body composition. *International Breastfeeding Journal*, vol 3: 18. doi: 10.1186/1746-4358-3-18.
- [30]. Hector, D., King, L. and Web, K. (2005). Factors affecting breastfeeding practices applying a conceptual framework. *NSW Public Health Bulletin*. Vol 16 No.3-4.
- [31]. Henry, B.A., Nicolau, A.I.O., Americo, C.F., Ximenes, L.B., Bernheim, R.G., Oria, M.O.B. (2010).
- [32]. Socio-cultural factors influencing breastfeeding practices among low-income women in Fortaleza-caera-Brazil: a Leininger’s Sunrise model perspective. *Enfermeria Global* No. 19. 102.
- [33]. Iliff, P. J., Piwoz, E. G., Tavengwa, N. V., Zunguza, C. D., Marinda, E. T., Nathoo, K. J., Moulton, L. H., Ward, B. J., ZVITAMBO study group and Humphrey, J. H. (2005).
- [34]. Exclusive breastfeeding reduces the risk of postnatal HIV-1 transmission and increases HIV-free survival. *AIDS* vol 19 no. 7. Islam, A., Naila, U. and Khan, N. A. (2011).
- [35]. Breastfeeding; factors involved in avoidance. *Professional Medicine Journal*; 18(1): 18-23. Ismail, T.A.T. and Sulaiman, Z. (2010). Reliability and validity of a Malay-version questionnaire assessing knowledge of breastfeeding. *Malaysian Journal of Medical Science*. 17(3): 32-39. www.usm.my/mjmsIsrael, G.D. (1992). Determining sample size. *PEOD6*. University of Florida, IFAS Extension.
- [36]. Jahangeer C., Khan N. M and Khan M.H. (2009).
- [37]. Analyzing the factors influencing exclusive breastfeeding using the Generalized Poisson Regression model *International Journal of Mathematical and Statistical Sciences* 1:2.
- [38]. Katzenellenbogen, J.M., Joubert, G and Abdool Karim, S.S. (2002). *Epidemiology. A manual for South Africa*. Oxford University Press Southern Africa.
- [39]. Kenya National Bureau of Statistics (KNBS) and ICF Macro (2010). *Kenya Demographic and Health Survey 2008-09*. Calverton Maryland: KNBS and ICF Macro.
- [40]. Kenya Demographic and Health Survey (2003). Preliminary Report. Kenya Central Bureau of Statistics. Nairobi, Kenya. LINKAGES (2004).
- [41]. Facts for feeding: Recommended practices to improve infant nutrition during the first six months. LINKAGES project, Academy for Educational Development www.linkagesproject.org.103 INKAGES (2001).
- [42]. Lactational Amenorrhoea Method: Frequently Asked Questions. LINKAGES project, Academy for Educational Development www.linkagesproject.org Accessed on 12/10/2009
- [43]. Mihrshahi, S., Oddy, W. H., Peat, J. K. and Kabir, I. (2008). Association between infant feeding patterns and diarrhoeal and respiratory illness: A cohort study in Chittagong, Bangladesh. *International Breastfeeding Journal*, vol 3: 28. doi: 10.1186/1746-4358-3-28.

- [44]. Naanyu, V. (2008). Young Mothers, First Time Parenthood and Exclusive Breastfeeding in Kenya.
- [45]. African Journal of Reproductive Health Vol 12 No 3 Naser, M. H. Hamed, A.T., and. Kanoa, B. J. (2011).
- [46]. Breast Feeding in Relation to Health Outcomes at Nine Months Infants in Gaza Strip. Pakistan Journal of Nutrition 10 (6): 500-504, Nkala, T.S. and Msuya, S.E. (2011).
- [47]. Prevalence and predictors of exclusive breastfeeding in Kigoma region, Western Tanzania: a community based cross-sectional study. International breastfeeding journal 6:17
- [48]. Nguyen, K. (2009). Nutrition spectrum backgrounder: select interventions and country snapshots.
- [49]. The National Bureau of Asian Research: Centre for Health and Aging. Obermeyer, C. M. and Castle S. (1997).
- [50]. Back to nature? Historical and cross-cultural perspectives on barriers to optimal breastfeeding. Med Athropol; 17:39-63 Ochola, S. A. (2008).
- [51]. Evaluation of two counseling strategies promoting exclusive breastfeeding among HIV-negative mothers in Kibera slum, Nairobi, Kenya: A randomized controlled trial. PhD Thesis. Stellenbosch University, Cape Town.
- [52]. UNICEF-Press centre (2008). Press release: Supporting mothers to breastfeed will improve children's chances of survival, says UNICEF. UNICEF Media, New York, USA.
- [53]. UNICEF. (2008). The state of the world's children 2009: Maternal and Newborn health. United Nations Children's Fund. New York, USA.
- [54]. UNICEF. (2009a). Tracking progress in child and maternal nutrition. A survival and development priority. United Nations Children's Fund. New York, USA.
- [55]. UNICEF (2009b). Progress in intervention coverage: Maternal, Newborn and Child Survival in Africa. United Nations Children's Fund. New York, USA.
- [56]. UNICEF. (2009e). The state of the world's children 2010.Special Edition. Celebrating 20 Years of the Convention on the Rights of the Child. Statistical Tables. United Nations Children's Fund. New York, USA.
- [57]. UNICEF. (2009d). The state of the world's children 2010.Special Edition. Celebrating 20 Years of the Convention on the Rights of the Child. United Nations Children's Fund. New York, USA.
- [58]. Venancio S. I and Monteiro CA (2006). Individual and contextual determinants of exclusive breast-feeding in Saõ Paulo, Brazil: a multilevel analysis. Public Health Nutrition: 9(1), 40-46 DOI: 10.1079/PHN2005760106
- [59]. Webb-Girard, A., Cherobon, A., Mbugua, S., Kamau-Mbuthia, E., Amin, A. and Sellen, D.W. (2010). Food insecurity is associated with attitudes towards exclusive breastfeeding among women in urban Kenya. Blackwell Publishing Ltd. Maternal and Child Nutrition. DOI: 10.1111/j.1740-8709.2010.00272.x.
- [60]. WHO, (2003). Global strategy for infants and young child feeding. World Health Organization, Geneva.
- [61]. WHO, (2008). indicators for assessing infant and young child feeding practices: conclusions of a consensus meeting held 6-8 November 2007 in Washington D.C, USA.
- [62]. WHO, (2008a). Learning from large-scale community-based programmes to improve breastfeeding practices. World Health Organization, Geneva.
- [63]. World Bank. (2008). Kenya poverty and inequality assessment. Vol 1: Synthesis report. Poverty reduction and economic management unit, Africa Region.
- [64]. World Breastfeeding Week (2009). Press release: In Emergencies, breastfeeding is a Lifeline. <http://www.worldbreastfeedingweek.org>.