

# **Breastfeeding Knowledge, Attitude, and Practice and Related Determinants Among Maternal in Gondar, Ethiopia: Cross-Sectional Study**

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**Abstract:** Breastfeeding has always been the ideal feeding practice for infants because of that it is one of the components of Primary Health Care and considered as natural practices in Ethiopia even though it remains a challenging due to lack of knowledge of mothers. The objective of this study was to assess the breastfeeding knowledge, attitude, practice and related Determinants among Maternal in Gondar; Northwest Ethiopia. A cross sectional community based study was carried out from September to December, 2015 in Gondar City. A total of 543 women who had a child aged less than 24 months from five different villages. The sample size determination was calculated using the single proportion formula. Households that have lactating mothers who had child less than 24 months were selected by multistage random sampling technique. The questionnaire was distributed according to the proportion of the selected village population Data were analyzed using SPSS v21. Binary logistic regressions were used to see the strength of association between independent and dependent variables using odds ratios and 95% of confidence intervals. Finally a multivariate logistic regression analysis was made to identify the predictors of maternal knowledge about optimal breastfeeding practices. Full breastfeeding was reported by 59.3%, mixed feeding was reported by 31.3% and infant formula feeding was reported by 12.4%. Almost one third of the full breastfeeding group did so for 7–12 months, and almost two thirds did continue breastfeeding for more than one year. Employed women were more likely not to practice full breastfeeding compared to unemployed women (odds ratio 3.34, 96% CI 1.60, 6.98), and women who had caesarian delivery were more likely not to repetition full breastfeeding compared to those who had vaginal delivery (odds ratio 2.36, 97% CI 1.17, 4.78). The women had a positive attitude but short maternity leaves had a negative impact on breastfeeding. This study showed that a majority of mothers has known the importance of Exclusive Breast Feeding and have good attitude, knowledge in order that strongly agree that Exclusive Breast Feeding is advantageous for infant aged less than six months. Though, poor practice to exclusive breastfeeding for the first six months postpartum among urban mothers. It is speculated health care providers and decision makers should be comprehensively addressed on adverse work related issues to improve exclusively breast feeding practices in the study community.

**Keywords:** Optimal, Exclusive Breast Feeding, Attitude, Knowledge, Practices, Factors, Gondar, Ethiopia

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## **1. Introduction**

Breastfeeding has always been the ideal feeding practice for infants. There is extensive evidence of short-term and long-term health benefits of breastfeeding for infants and mothers [1-4]. In addition to specific health advantages for infants and mothers, breastfeeding also benefits the society by reducing health care cost, parental employee absenteeism and associated loss of family income [5] after birth the health

of the baby depends upon the nurturing practice adopted by the family. The ideal food for the young infant is human milk which has the specific characteristics that match the growing infants' nutritional requirements. Breastfeeding is a socially constructed and controlled practice. It is often presented as a natural practice. As a global goal for optimal maternal and child health and nutrition, all women should be enabled to practice exclusive breastfeeding, and all infants should be fed exclusively on breast milk, from birth to 6 month of age. [22] According to world health organization (WHO), breast milk

has the complete nutritional requirements that a baby needs for health development. Furthermore, it is safe and contains anti bodies that help protect infants and boost immunity. Consequently, breast feeding contributes to reduced infant morbidity and mortality due to diarrhea, respiratory or ear infections and other infectious diseases. The WHO recommends that for the first six months of life, infants should be exclusively breast feed to achieve optimal growth, development and health. Thereafter, infants should receive nutritionally adequate and safe complementary foods, while continuing to breast for up to two years or more [9] the overall concepts of Primary Health Care and the implementation of the Ethiopian Health Extension Programmer, and find out about some of the successes that the country has achieved in improving the health service and the health of its communities. Ethiopia is dedicated to working towards the Millennium Development Goals (MDG) and this study will include some information about the way that the MDG health-related goals are being focused on. The 2011 Ethiopian DHS shows, 52 percent of children fewer than six months (aged 0-5 months) are exclusively breastfed [11, 13]. In addition to breast milk, 19 percent of infants under six months are given plain water only, while 14 percent are given milk other than breast milk and 4 percent are given non-milk liquids and juice. Furthermore, 10 percent of infants fewer than six months are given complementary foods. By age 6-9 months, 51 percent of infants are given complementary foods. Sixteen percent of infants under six months are fed using a bottle with a nipple, a practice that is discouraged because of the risk of illness to the child [9]. This may be due to the barriers of translating the message of exclusive breast feeding into practice. Therefore, this study was designed to investigate the different aspect of lactating mothers of Gondar city to assess their knowledge, attitude and practice on exclusive breast feeding. In addition to that, this study also used to collect base line information about current knowledge, attitude and practice related to feeding of infants with special focus on exclusive breast feeding. The information generated from this study will be provided to the concerned bodies and can be useful for designing appropriate strategies for exclusive breast feeding [4, 10, 29].

## 2. Materials and Methods

A cross sectional community based study was carried out from September to December, 2015 in Gondar City. A total of 543 women who had a child aged less than 24 months from five different villages. The sample size determination was calculated using the single proportion formula. Households that have lactating mothers who had child less than 24 months were selected by multistage random sampling technique. The questionnaire was distributed according to the proportion of the selected village population Data were analyzed using SPSS v21. Binary logistic regressions were used to see the strength of

association between independent and dependent variables using odds ratios and 95% of confidence intervals. Finally a multivariate logistic regression analysis was made to identify the predictors of maternal knowledge about optimal breastfeeding practices.

Gondar is the biggest and most populous city in Amhara Regional State, is located 750 km Northwest of Addis Ababa, the capital of Ethiopia. In Gondar, there are 21 kebeles (the smallest administrative units). Based on the 2007 National population census, the city has a total of 213,673 (104,769 male and 108,904 female) population. Out of these, 108,904 were females in the re-productive age groups (15-49 years). In the city, the expected number of pregnancies in a year is 7,843 with the expected live births of 7,483. Number of households in the city are 37,519 [19]. Number of households in the city are 37,519 The source population of this study was lactating mothers that currently resides in Gondar city and that have a child less than 24 months [19, 26].

The sample size determination was calculated using the single proportion formula. Households that have lactating mothers who had child less than 24 months were selected using a multistage random sampling technique. In the first stage, three out of 12 kebeles (25% of the total area) were selected by simple random sampling technique. In the second stage, a total of 543 households were selected using a systematic random sampling method. In this process samples were proportionally allocated to each selected kebeles. Total number of households was obtained from the respective administrative areas and used to calculate the sampling fraction the questionnaire was distributed according to the proportion of the selected village population. Data was collected with structured questionnaire that was adapted from standard questioners and relevant literature reviews by using face to face interview. Five percent of the questionnaire was pretested before data collection relevance and applicability of the questioners. The data collectors were trained on how to collect the data and conduct the interview.

Ethical clearance was obtained from research committee at University of Calabria and then data were collected after getting permission from Gondar city administration. Informed consent was read to the respondent before the interview. All information was kept private and confidential. All mothers were told about the purpose of study.

## 3. Results and Conclusions

### 3.1. Demographic Characteristics

In total 543 mothers who had children less than 24 months were successfully interviewed and participated in the study, yielding a response rate of 100%. The majority 498(91.71%) mothers were in the age group of  $\leq 30$  years (Table 1).

**Table 1.** Socio-demographic characteristics of study participants.

Variables	Number	Percent
Age of mothers in year		
<30	498	91.71
>30	45	8.29
Age of child in months		
0-6	184	33.88
7-12	183	33.70
13-24	176	32.42
Sex of child		
Mal	245	45.12
Female	298	54.88
Religion of others		
Orthodox	312	57.46
Muslim	152	27.99
Protestant	65	11.97
Others	14	2.58
Maternal Education level		
Illiterate	115	21.18
<Grade4	59	10.86
Grade5-8	124	22.84
>Grade8	245	45.12
Maternal employment		
Employed	190	34.99
Unemployed*	353	65.01

\*Mothers have no formal job; they are mostly self-employed subsistence farmers.

### 3.2. Factors Influencing Breast Feeding

All mothers in the study 532(97.8%) were ever practiced breast feeding and were got health information about breast feeding. Their main source of information was health institutions 341(62.8%), health institutions and mass media

152(27.9%), books 45(8.29%) and others 5(0.92%). From the total 543 mothers who were participated in the study, 229(42.17%) mothers had good health status with fertility determinants showed that 54(24.5%) long birth interval greater than 04 years (Table 2).

**Table 2.** Influencing factors of breast feeding of respondents in study area.

Variables	Number	Percent
Have you ever practiced breast Feeding		
Yes	532	97.8
No	11	2.02
Have you ever get any health information breastfeeding		
Yes	533	98.16
No	10	1.84
If yes can you mention the sources of information		
Health institution	341	62.8
Books	45	8.29
Health institution and media	152	27.9
Other	5	0.92
How you evaluate your general health status		
Very good	246	45.3
Good	229	42.17
Bad	35	6.44
Very bad	33	6.07
What is the Interval between this child and one just before		
1-2 Years	108	19.89
3 Years	135	24.86
>4 Years	162	29.83
Not applicable	138	25.41

### 3.3. Knowledge of Respondents About Exclusive Breast Feeding

Regarding women's knowledge, all mothers 543(100%) knew the importance of breast feeding/EBF and 498(91.71%)

were reported breast milk alone is important for new born infant. 494(90.97%) mothers reported frequent breast feeding needed for less than 6 months of infant and 245(45.12%) mothers were reported between 6-8 times breast fed per day. From study participants, 192(87.3%) had knowledge about

EBF and 28(12.7%) mothers hadn't the knowledge about EBF and were started complementary feeding before 4 months of age due to the reason they didn't think breast milk alone is sufficient for the baby 12(5.45%), their breast milk is not sufficient 10(4.55%), 6(2.73%) were due to work related

problems. Of study subjects, only 136(61.8%) mothers had knowledge about the danger of bottle feeding and said that it is not safe for the child, it can cause child hood infections like diarrhea, vomiting, respiratory infections and other infectious diseases (Table 3).

**Table 3.** Knowledge of lactating mothers towards exclusive breastfeeding in study area.

Variables	Number	Percent
Do you know the importance of breast feeding		
Yes	543	100
No	0	0.00
Which one of the following do you think is/ are important for the new born		
Breast Milk only	498	91.71
Breast milk with plain water	29	5.34
Breast milk with Butter	11	2.02
Breast milk with Honey	5	0.92
For how long should infant EBF only		
<4 months	11	2.02
4-6 months	494	90.97
>6months	38	6.99
Do you think breast feeding harms the child		
No	543	100
Do you think bottle feeding dangerous for the baby		
Yes	325	59.85
No	218	40.14
Did you start complementary feeding before 4 months of age		
Yes	58	10.68
No	485	89.31
If yes what is your possible reason		
MY breast milk is not sufficient	22	4.05
I don't think as breast milk alone is sufficient for baby	27	4.97
Other	9	1.65
If the infant is less than 6 months how frequent he/she gets breast feeding		
<4 times	17	3.13
4-5 times	98	18.04
6-8 times	245	45.12
>8 times	183	33.70

**Table 4.** Attitudes of lactating mothers towards exclusive breastfeeding in study area.

Variables	Number	Percent
What do you prefer to feed your baby for the first 6 Months		
Breast milk alone	414	76.24
Breast milk with formula	54	9.94
Breast milk with cow milk	54	9.94
Others	11	2.05
Do you feel the EBF for 6 months infant has advantageous?		
Agree	483	88.85
Disagree	60	11.05
Do you believe that the first milk (colostrum) should be discarded?		
Agree	162	29.83
Neutral	27	4.97
Disagree	357	65.74
What is your opinion about EBF in the first 6 months?		
It is useful and sufficient	483	88.95

### 3.4. Attitudes of Respondents Towards Exclusive Breast Feeding

Regarding the community's attitude towards breast feeding, majority of mothers 483(88.95%) had good attitude and strongly agree that the EBF is advantageous for infants aged less than 6 months. In contrary, 60(11.05%) were disagree and had negative attitude on EBF. Furthermore, 165(29.83%) agree that colostrum should be discarded,

357(65.74%) agree that colostrum should not be discarded and the rest 27(4.97%) were neutral. A large majority of mothers, 483(88.95%) were suggested that EBF is useful and sufficient for infants aged less than 6 months and 60(11.05%) were forwarded their opinion that EBF is useful but not sufficient for infants aged less than 6 months. 202(91.9%) mothers believed that the infant should be breast fed as frequently as he/she needs. 82(37.3%) mothers were considered bottle feeding is dangerous and should not be

used at all. Majority of mothers in this study were familiar with concept of breast feeding, 214(97.3%) had perception that breast feeding is natural and appropriate today, 4(1.82%) believed that it makes them old and 2(0.91%) were suggested breast feeding is outmoded (Table 4).

### 3.5. Practice of Study Subjects Towards Exclusive Breast Feeding

352(64.82%) mothers were started breast feeding immediately after delivery, but 191(35.17%) were started breast feeding after few hours of delivery. The study have shown that 434(79.92%) practiced optimal breast feeding. Of this only 266(48.97%) mothers were exclusively breast fed their child. However, 109(20.07%) were not practiced EBF.

They initiated pre lacteal feeding for their child such as 21(3.86%) plain water and 10(1.84%) butter in the first six months. Out of 109(20.07%) mothers who were not practiced optimal BF/EBF, 10(1.84%) were preferred to feed their infant/young child by breast milk with formula, 50(22.7%) breast milk with cow milk, 10(1.84%) breast milk with other semi solid food stuffs because of work related issues. About 423(77.90%) mothers did give colostrum for their infants. But 120(22.09%) did not gave colostrum to their infants. The major reasons cited for not giving colostrum are believe that first milk is dirty like pus 81(14.91%), everybody says it should not be given 12(2.20%), and it had no white milk 27(4.97%) (Table 5).

Table 5. Practice of lactating mothers towards exclusive breastfeeding.

Variables	Number	Percent
When did you start breast feeding After delivery?		
Immediately	352	64.82
After few hours	191	35.17
Daily frequency of breast feeding		
<4 times a day	27	4.97
>4 times a day	516	95.02
Do you breast feed your baby Exclusively?		
Yes	434	79.92
No	109	20.07
If yes how long EBF?		
2 months	21	3.86
3 months	22	4.05
4 months	125	23.01
>4 months	266	48.97
Did you give colostrum to your Baby?		
Yes	423	77.90
No	120	22.09
If your answer is no what is your Reason not giving colostrum?		
It had no white milk	27	4.97
First milk is dirty like pus	81	14.91
Everybody say it is shouldn't be given	12	2.20
What was the first nutrient given for The infant?		
Plain water	21	3.86
Breast milk	512	94.29
Butter	10	1.84

## 4. Results

Full breastfeeding was described by 59.3%, mixed feeding was described by 31.3% and infant formula feeding was described by 12.4%. Almost one third of the full breastfeeding group did so for 7–12 months, and almost two thirds did continue breastfeeding for more than one year. Employed women were more likely not to practice full breastfeeding compared to unemployed women (odds ratio 3.34, 96% CI 1.60, 6.98), and women who had caesarian delivery were more likely not to repetition full breastfeeding compared to those who had vaginal delivery (odds ratio 2.36, 97% CI 1.17, 4.78).

## 5. Conclusions

This study showed that a majority of mothers has known the importance of Exclusive Breast Feeding and have good

attitude, knowledge in order that strongly agree that Exclusive Breast Feeding is advantageous for infant aged less than six months. Though, poor practice to exclusive breastfeeding for the first six months postpartum among urban mothers. It is speculated health care providers and decision makers should be comprehensively addressed on adverse work related issues to improve exclusively breast feeding practices in the study community.

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## References

- [1] Chua S, Arulkumaran S, Lim I, Selamat N, Ratnam SS. Influence of breastfeeding and nipple stimulation on postpartum uterine activity. *Br J Obstet Gynaecol.* 1994 Sep; 101 (9): 804-5.
- [2] Dewey KG, Heinig MJ, Nommsen LA. Maternal weight-loss patterns during prolonged lactation. *Am J Clin Nutr.* 1993 Aug; 58 (2): 162-6.
- [3] Breast cancer and breastfeeding: collaborative reanalysis of individual data from 47 epidemiological studies in 30 countries, including 50302 women with breast cancer and 96973 women without the disease. *Lancet.* 2002 Jul 20; 360 (9328): 187-95.
- [4] Rosenblatt KA, Thomas DB. Lactation and the risk of epithelial ovarian cancer. The WHO Collaborative Study of Neoplasia and Steroid Contraceptives. *Int J Epidemiol.* 1993 Apr; 22 (2): 192-7.
- [5] Ball TM, Bennett DM. The Economic Impact of Breastfeeding. *Pediatric Clinics of North America.* 2001; 48 (1): 253-62.
- [6] World Health Organization, UNICEF. Global strategy for infant and young child feeding. Geneva: World Health Organization; 2003 [cited 2010 02/02]; Available [http://www.unicef.org/progressforchildren/2007n6/index\\_41511.htm](http://www.unicef.org/progressforchildren/2007n6/index_41511.htm).
- [7] WHO. Indicators for assessing breastfeeding practices. Geneva: World Health Organization 1991 Contract No.: (WHO/CDD/SER/91.14).
- [8] Binns CW, Fraser ML, Lee AH, Scott J. Defining exclusive breastfeeding in Australia. *J Paediatr Child Health.* 2009 Apr; 45(4): 174-80.
- [9] World Health Organization. Indicators for assessing infant and young child feeding practices. Washington D. C., USA: World Health Organization 2008.
- [10] National Program of Action for Child Development in Ethiopia (1991-2000).
- [11] National Program of Action for Child Development in Ethiopia (2001-2010). 81 Ministry of health of the people's Federal democratic republic of Ethiopia; 2001.
- [12] Family Health Department National guideline on the prevention of Mother -to - child Transmission of HIV in Ethiopia, Ministry of Health, Addis Ababa, Ethiopia, November 2001.
- [13] Family Health Department National Strategy for infant & young child feeding Federal ministry of health, Ethiopia, April 2004.
- [14] Nduati R., et al. Effects of breastfeeding and formula feeding on transmission of HIV-1: a randomized clinical trial. *JAMA* March 1 2000; 283(9): 1167-1174.
- [15] UNAIDS. WHO, UNICEF, UNAIDS Statement on current status of WHO/UNAIDS/UNICEF Policy guidelines September 1999. Geneva.
- [16] Kesela T., Kebede D. pattern of feeding of infants in Addis Ababa, Ethiopia. *Ethiop. J. Health Dev.* 1996; 10 (1): 57-65.
- [17] Rogers, E. M. Communication strategies for Family Planning, Free press, USA. 1973
- [18] Piotrow et al. Behavior change Model: knowledge Approval, Intention, practice and Advocacy in communication framework, JHU. Ccp. 1997
- [19] CSA. Population and housing census of Ethiopia. Result for Amhara Region, November 1998 Vol. 2: 1-328.
- [20] Asefa M., Drewette R., Hewison J. An Ethiopian birth cohort study: the study design, *Ethiop. J. Health Dev.* 2002; 16 (special Issue): p. 21-36.
- [21] Tekle Silassie B. K. The status of breast feeding among mothers of children aged less than two years and implications for the occurrence of acute diarrhea, Jimma, Southwest of Ethiopia. (Unpublished thesis submitted to Department of Community Health, AAU) 2002.
- [22] UNICEF. The States of the World's Children, Focus on Nutrition, Oxford University Press, 1998: p. 28.
- [23] Semprini AE et al. 1995. The incidence of complications after cesarean section in 156 women. *AIDS* 9: 913 917.
- [24] Dewey KG, Brown KH. Update on Technical Issues Concerning Complementary Feeding of Young Children in Developing Countries and Implications for Intervention Programs. *Food and Nutrition Bulletin.* Washington, DC, USA: Pan American Health Organization. 2003: 24 (1): 5-28.
- [25] Health System - Center for National Health Development in Ethiopia <http://cnhde.ei.columbia.edu/healthsystem/>
- [26] Federal Democratic Republic of Ethiopia: Census Commission: Summary and statistical report of the 2007 population and housing census. Addis Ababa, Ethiopia; 2008.
- [27] 54th World Health Assembly: Infant and Young Child Nutrition (Resolution WHA54.2). Geneva: World Health Organization; 2001.
- [28] Ulak M, Chandyo RK, Mellander L, Shrestha PS, Strand TA: Infant feeding practices in Bhaktapur, Nepal: a cross-sectional, health facility based survey. *Int Breastfeed J* 2012, 7: 1.
- [29] Lauer JA, Betrán AP, Victora CG, de Onís M, Barros AJD: Breast feeding patterns and exposure to suboptimal breastfeeding among children in developing countries: review and analysis of national.