

Infant and Young Child Feeding Practices Among Mothers Living in Harar, Ethiopia

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Abstract

Background: Breastfeeding for infants and young children provides the ideal food for healthy growth and development. Infants should be exclusively breastfed for the first six months and thereafter, the infants should receive nutritionally adequate and safe complementary foods while breastfeeding continues. Breastfeeding should continue for two years and beyond.

Objective: To assess infant and young child feeding practices among mothers of children less than two years of age.

Methods: A community-based, cross-sectional study design was used.

Results: Exclusive breastfeeding practice in this study was 51.8% and was associated with an average monthly income of less than ETB1000 (AOR=3.106 (1.395, 6.915)). Mothers who delivered in a health institution had 3.9 times more practice with exclusive breastfeeding than those who delivered at home (AOR=3.944(1.715, 9.071)). The complementary feeding practice was 54.4% and was associated with a monthly income of less than ETB1000 ($p=0.003$) and ETB1000-1999 ($p=0.007$). Mothers who followed antenatal care (ANC) were 2.8 times more likely to practice timely complementary feeding than those who did not follow the ANC service (AOR=2.815(1.313, 6.035)).

Conclusions and Recommendations: Timely exclusive breastfeeding and complementary feeding practices in the town of Harar were low. A number of maternal and child health attributes including ANC

follow-up, exclusive breastfeeding (EBF) advice provided to expectant mothers during pregnancy, economic status and age of the child were found to influence the practices. Breastfeeding education should be conducted in clinical and community settings to increase the prevalence of EBF and appropriate complementary feeding for the benefit of the child.

Introduction

Background: Breast milk is recognized as the optimum form of nutrition for infants. The advantages of breastfeeding are that it is protective and nutritious. It also has psychosocial benefits. Breastfeeding has a contraceptive effect on the mother. Infant formula cannot replace all its characteristics and especially its immunogenic characteristics.

All children should exclusively breastfeed for the first 6 months and continue for as long as the mother and child wish. After six months of life, both appropriate and sufficient complementary food should be added to the breast milk. (1)

Statement of the Problem: Breastfeeding is declining in almost all parts of the world despite its nutritional and immunological benefits. Death rates in third world countries are lower among breastfed babies and breastfed babies have fewer infections than formula fed babies. Every day, between 3000 and 4000 infants die in the developing world from diarrhea and acute respiratory infections because they are given inadequate amounts of breast milk. Infants who are not breastfed have a six fold greater risk of dying from infectious diseases. (2, 3, 4)

More than 10 million children die each year. Forty-one percent of these deaths occur in sub-Saharan Africa and 34% in South Asia. In

Madagascar, one in ten children dies in the first year of life. A major contributor to their deaths is poor breastfeeding practices. (5)

Breastfeeding is universal in Africa, but there are ethnic-specific practices which tend to deprive infants of this nourishment. Among certain groups, for example, the newborn infant is denied the rich colostrum for the first few days because of the belief that the yellowish milk is not only dirty but also causes the baby's head to be big or ugly. This practice deprives the child of the immunity against disease and infections that can lead to death. (6)

In Ethiopia, one in three children aged 4-5 months is exclusively breastfed. At 6-8 months of age, 14% of children continue to be exclusively breast fed, 9% receive plain water in addition to breast milk, 6% consume water-based liquids, and 20% consume cow milk. (7) In the Tigray region, a high proportion of mothers (80%) initiate feeding of newborns with pre-lacteal feeds including butter or water. (5, 7, 8)

In Ethiopia, exclusive breastfeeding until the infant is six months of age is 49%, and timely complementary feeding is at 54%. Continued breastfeeding in Ethiopia for two years and beyond is currently well below the WHO recommended standards. (1, 3, 7)

Objectives

General Objective:

To assess infant and young child feeding practices among mothers of children less than two years of age.

Specific Objectives:

1. To assess exclusive breastfeeding practices in the town of Harar.
2. To assess complementary feeding practices.
3. To identify those factors associated with child feeding practices.

Methods

Study Area and Period: The town of Harar is located 525 km east of Addis Ababa. It is an old and historic tourist destination and the capital city of the Harari National Regional State. The study was conducted in February, 2011.

Study Design: A cross-sectional, community-based was conducted.

Source Population: All mothers of children aged less than two years in Harar.

Study Population: Mothers of children less than two years of age living in randomly selected kebeles.

Sample Size Determination: The sample size required for the study was calculated using the formula to estimate a single population proportion.

$$\begin{aligned}n &= \frac{[(Z_{\alpha}/2)^2 p (1-p)] D}{d^2} \\&= \frac{[(1.96)^2 0.50 (1-0.50)]}{(0.05)^2} \\&= \frac{3.8416*0.50*0.50*1.5}{0.0025} \\&= 576 + 5\% \text{ contingency} \\&= 604\end{aligned}$$

Sampling Technique: A multi-stage sampling technique was used.

Data Collection Methods and Instruments Used: The data were collected at the house-to-house level using a pre-tested questionnaire. The questionnaire was first prepared in English and then translated into Amharic and Afan Oromo.

Data Analysis: The data were entered into EPI-data Version 3.02 and was exported to SPSS Version 16 for analysis. Crude and adjusted odds ratios from bivariate and multivariate logistic regression were used to measure associations.

Ethical Considerations: The research protocol was approved by the Institutional Research Ethics Review Committee on the Harar campus of Haramaya University.

Results

A total of 583 mothers with children under two years of age voluntarily responded for a response rate of 97%. Mothers in the study were between the ages of 15-49 years. The mean age of the mothers was 28 years. The mean age of the children was 10.8 months.

A total of 207 (51.9%) mothers practiced exclusive breastfeeding for a period of six months. Families with an average monthly income of less than ETB1000 practiced exclusive breastfeeding three times more than those who earned more than ETB4000 per month. Mothers who delivered in health facilities were 3.9 times more likely to practice exclusive breastfeeding than those who delivered in the home (AOR =3.944).

Table 1. Association of Exclusive Breastfeeding Practices Among Children Aged Six Months and Above but Less than 24 months of Age by Socio-demographic and Health Services-related Variables, Harar, 2011

Exclusive Breastfeeding Practices (N=399)

Variables	Yes N(%)	No N(%)	Adj. OR(95% CI)	P-value
Maternal Age				
15-19	6(60.0)	4(40.0)	1.0	
20-24	43(61.4)	27(38.6)	1.190(0.281,5.033)	0.993
25-29	81(54.0)	69(46.0)	0.898(0.223,3.615)	0.631
30-34	41(42.3)	56(57.7)	0.594(0.145,2.440)	0.756
≥ 35	36(50.0)	36(50.0)	0.993(0.235,4.318)	0.135
Religion				
Christian	142(51.8)	132(48.2)	0.744(0.447,1.239)	0.255
Muslim	65(52.0)	60(48.0)	1.00	

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Educational Status				
Not educated	39(47.6)	43(52.4)	1.188(0.670,2.108)	0.555
Formal education	168(53.0)	149(47.0)	1.00	
Occupation				
All workers	85(45.0)	104(55.0)	0.698(0.433,1.127)	0.141
Housewives	122(58.1)	88(41.9)	1.00	
Marital Status				
Married	196(52.1)	179(47.9)	0.823(0.334,2.029)	0.673
Other	11(45.8)	13(54.2)	1.00	
Monthly Income (ETB)				
0-999	128(57.1)	96(42.9)	3.106(1.395,6.915)*	0.006
1000-1999	42(57.5)	31(42.5)	2.977(1.254,7.070)*	0.013
2000-2999	18(38.3)	29(61.7)		
3000-3999	18(38.3)	29(61.7)	2.158(0.624,7.466)	0.224
4000 and above	12(30.8)	27(69.2)	1.00	
ANC Follow-up				
Yes	194(54.3)	163(45.7)	2.052(0.874,4.819)	0.099
No	13(30.9)	29(69.1)	1.00	
PNC Follow-up				
Yes	29(48.3)	31(51.7)	0.856(0.473,1.550)	0.609
No	178(52.5)	161(47.5)	1.00	
Place of Delivery				
Health facilities	196(55.1)	160(44.9)	3.944(1.715,9.071)*	0.001
At home	11(25.6)	32(74.4)	1.00	

Significant at * $p < 0.05$

A total of 368 (63.6%) of the mothers initiated breastfeeding for their children within one hour of giving birth while 211 (36.4%) started breastfeeding after one hour after birth.

During this survey, 500 (85.8%) of the mothers were breastfeeding. A higher percentage of mothers who delivered at home (79.6%) stopped breastfeeding compared to those who delivered in public or private health facilities.

Out of all of the children aged ≥ 12 months, 201 (73.9%) had been breastfed for one year and more. The remaining 26.1% had been breastfed for less than one year.

Mothers mentioned different reasons for early cessation of breastfeeding before 24 months. A total of 34.2% stated that they did not have enough milk, 32.9% of the mothers had returned to work and, 4% stopped breastfeeding because of a pregnancy.

A total of 217 (54.4%) started complementary feeding at the appropriate time. Mothers with a monthly family income between ETB0-999 and ETB1000-1999 were three times more likely to practice complementary feeding compared to those with a monthly family income of ETB4000 and above. Similarly, mothers who followed antenatal care service were 2.8 times more likely to breastfeed when compared to those who did not follow the service.

Table 2. Association of Complementary Feeding Practices Among Children Aged Six Months and Above but less than 24 Months of Age, by Socio-demographic and Health Service Related Variables, Harar, 2011

Complementary Feeding Practices (N=399)				
Variables	<6Mo N(%)	6-9Mo N(%)	Adj OR(95% CI)	P-Value
Maternal Age				
15-19	4(40.0)	6(60.0)	1.00	1.00
20-24	27(38.6)	43(61.4)	1.200(0.296,4.876)	0.798
25-29	63(42.0)	87(58.0)	1.113(0.287,4.316)	0.877
30-34	55(56.7)	42(43.3)	0.617(0.156,2.437)	0.491
>35	33(45.8)	39(54.2)	1.050(0.256,4.314)	0.946
Religion				

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Christian	124(45.3)	150(54.7)	0.921(0.564, 1.506)	0.744
Muslim	58(64.4)	67(35.6)	1.00	
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School Attendance				
Formal	141(45.5)	176(55.5)	1.212(0.693, 2.119)	0.501
No schooling	41(50.0)	41(50.0)	1.00	
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Occupation				
Workers (all type)	97(51.3)	92(48.7)	0.814(0.507,1.306)	0.393
Housewives	85(40.5)	125(59.5)	1.00	
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Marital Status				
Married	169(45.1)	206(54.9)	0.789(0.322,1.935)	0.605
Other	13(54.2)	11(45.8)	1.00	
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Monthly Income (ETB)				
0-999	91(40.6)	133(59.4)	3.431(1.541, 7.640)*	0.003
1000-1999	29(39.7)	44(60.3)	3,273(1.383,7.748)*	0.007
2000-2999	26(55.3)	21(44.7)	1.804(0.724,4.494)	0.205
3000-3999	9(56.2)	7(43.8)	1.879(0.549,6.433)	0.315
4000 and above	27(69.2)	12(30.8)	1.00	
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ANC Follow-up				
Yes	155(43.4)	202(56.5)	2.815(1.313,6.035)*	0.008
No	27(64.3)	15(35.7)	1.00	
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PNC Follow-up				
Yes	29(48.3)	31(51.7)	0.906(0.504, 1.632)	0.743
No	153(45.1)	186(54.9)	1.00	

Significant at * $p < 0.05$

Among the mothers studied, 90.2% followed ANC. A total of 15% of the mothers followed postnatal care services.

A total of 379 (65.0%) of the mothers had sufficient knowledge of breastfeeding whereas 204 (35.0%) did not have sufficient knowledge. Mothers who had attended formal schooling (69.3%) and attended PNC (77%) had sufficient knowledge of the benefits of breastfeeding.

Mothers who received health education about EBF were 2.7 times more knowledgeable than those who did not receive health education.

Discussion

The percentage of children exclusively breastfed in this study area of Harar was 51.8%. This was high when compared with another study in Ethiopia (49.0%) and in Benin 20%. (4, 5, 7) The percentage in this study was lower when compared to a study conducted in Amhara (81%), SNNPR (64%) and Oromiya (62%). (8)

After statistical adjustments were made using a logistical regression model, mothers whose income was ETB0-999 were three times more likely to practice exclusive breastfeeding when compared with those with incomes of ETB4000 and greater (AOR= 3.106 (1.395, 6.915)).

Mothers who delivered their babies in a health facility were four times more likely to EBF than those who delivered at home (AOR =3.944(1.715, 9.071)).

In this study, the proportion of mothers who started timely complementary feeding at six months was 54.4%. This is comparable to other findings in Ethiopia with a national level of 54%. (1, 9) In another study in Ethiopia, 50% of the children did not receive complementary food at the age of six months. (10) In the current study, mothers who had a monthly family income of more than ETB2000 did not practice complementary feeding before six months because of the availability and affordability of formula milk in the town.

Statistical analyses using logistic regression showed statistically significant associations of complementary feeding with other maternal socio-demographic and economic characteristics. Mothers with a

monthly income between ETB0-999 and those mothers whose average family monthly income was between ETB1000-1999 were more likely to practice complementary feeding when compared with those who earned more than or equal to ETB4000 per month (AOR= 3.431(1.541, 7.640)) and (AOR = 3.273(1.383, 7.748)). Mothers who followed ANC were 2.8 times more likely to start complementary feeding at the recommended age when compared to those mothers who did not follow antenatal clinic (AOR 2.815(1.313, 6.035)).

A total of 90.2% of the mothers followed ANC. This was higher when compared with 88.3% in Addis Ababa and throughout the nation. (7) One hundred eighty-nine (32.4%) had received health education which was comparable with national levels of 31%. In this study, 92% of the mothers delivered at a health institution while 8% delivered at home. This was higher than 78.5% in Addis Ababa and the Harari Region at 31.5%. (7) In this survey, 65% were found to have adequate knowledge about the benefits of breastfeeding. This study revealed a lower percentage of knowledgeable mothers when compared with a study conducted in Gaza (68.7%) (11) but higher when compared with a study conducted in Pakistan (44.6%). (12)

Conclusions and Recommendations

The percentage of exclusive breastfeeding was found to be low in Harar when compared with other cities, regions, Ethiopia and other countries. The percentage of mothers who complimentary fed their children at six months was also low. Mothers should be encouraged to attend ANC services and PNC services. Health education should be provided to all expectant mothers and mothers currently

breastfeeding their babies. This health education should be conducted in the clinics and community settings.

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