

**Timely Initiation and Exclusive Breastfeeding Practices and associated factors among children under two years of age in Adama Town, Oromia Region Ethiopia**



**Getinet Worku Mengistu**

**(BSc in PH)**

**A research submitted to the Department of Population and Family Health,  
Jimma University in Partial Fulfillment for the Requirement for Master of  
Public Health/Reproductive Health**

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**Getinet Worku Mengistu**

**(BSc in PH)**

**ADVISORS;**

**Mrs. Tizta Tilahun (Assistant Professor)**

**Mr. Gurmesa Tura (MPH, PhD candidate)**

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**Jimma, Ethiopia**

## Declaration

I, the undersigned, declare that this thesis is my original work, has not been presented for a degree in this or another university and that all sources of materials used for this thesis have been fully acknowledged.

Name: Getinet Worku Mengistu

Signature: \_\_\_\_\_

Date: February, 2014

This thesis work had been submitted to Jimma University, School of Graduate Studies, College of Public Health and Medical Science, Department of Population and Family Health with my approval as university advisor.

## First Advisor

1. Name: Mrs. Tizta Tilahun

Signature\_\_\_\_\_ Date\_\_\_\_\_

## Second Advisor

2. Name: Mr. Gurmesa Tura

Signature\_\_\_\_\_ Date\_\_\_\_\_

## Abstract

**BACKGROUND:** Timely initiations of breastfeeding and exclusive breastfeeding till six month of age are the key interventions to reduce child malnutrition and mortality. Even though breastfeeding is a universal practice in Ethiopia, the optimal breastfeeding is not widely practiced (1). This study was carried out to assess optimal breastfeeding practice and associated factors among children under two years old in Adama town, Oromia, Ethiopia.

**METHODS:** A cross-sectional community-based study was conducted using a quantitative method of data collection with structured questionnaire. A total of 628 mothers paired with children under two years old and living within six randomly selected kebeles were included in the study by employing systematic random sampling method. The data was entered into Epi data version 3.1 and exported to SPSS version 16.0 for cleaning and analysis. Bivariate logistic regression was used to identify the independent predictors of timely initiation of breastfeeding and exclusive breastfeeding practices with P-value less than 0.05 were taken as statistically significant.

**RESULTS:** About 81.8% of respondents initiated breastfeeding within an hour of delivery and 65% reported exclusive breastfeeding. A multivariate logistic regression analysis showed mothers who delivered a female child were about 1.7 times more likely not to initiate timely breastfeeding within an hour of delivery than those delivered male child. Mothers gave birth through vagina were about 14 times more likely to initiate of breastfeeding timely than those gave birth through caesarian section. Employed mothers were about 2 times more likely not to exclusively breastfeed their children. Mothers who gave birth with vaginal delivery were about 2 times more likely to exclusively breastfeed their child. Those mothers who got breastfeeding advice during the post natal follow up were about 2.3 times more likely to breastfed exclusively.

**CONCLUSION:** The prevalence of optimal breastfeeding practice was low looking for the WHO recommendation and the national IYCF guidelines. Mode of delivery was the strongest independent predictor factor for both timely initiation and exclusive breastfeeding practices. It's recommended that health providers should assist and help those mothers who delivered via cesarean section for timely initiation and exclusive breastfeeding practices.

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## Acronyms

AIDS-----	Acquired Immune Deficiency Syndrome
ANC-----	Ante Natal Care
BF-----	Breast Feeding
CSA-----	Central Statistics Agency
DHS-----	Demographic and Health Survey
EBF-----	Exclusive Breast Feeding
EDHS---	Ethiopian Demographic and Health Survey
HIV-----	Human Immune-deficiency Virus
HSDP-----	Health System Development Program
IYCF----	Infant and Young Child Feeding
MDG-----	Millennium Development Goal
NGOs---	Non Governmental Organizations
ORS-----	Oral Rehydration Salt
PNC-----	Post Natal Care
WBTI -----	World Breastfeeding Trends Initiative
WHO----	World Health Organization
UAE-----	United Arab Emirates
UHEPs----	Urban Health Extension Professionals
UNICEF---	United Nations Children's Emergency Fund

## Chapter One: Introduction

### 1.1 Background

Optimal breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infants and as well integral part of the reproductive process with important implications for the health of mothers (1, 2). The period between a woman's pregnancy and her child's 2<sup>nd</sup> birthday with focus on nutrition for mothers and children offers a unique window of opportunity which is bound to have a profound impact on the child's growth and development (1). In order to achieve the millennium development goal-4 (MDG-4) there is a high global interest to increase the rates of optimal breastfeeding practices especially timely initiation of breastfeeding within an hour of delivery and exclusive breast feeding for the first six months(2).

Timely initiation of breastfeeding (within the first hour) provides benefits for both the infant and mother. Early suckling stimulates the release of prolactin, which helps in the production of milk and oxytocin, which is responsible for the ejection of milk and stimulates the contraction of the uterus after childbirth and it ensures that a newborn receives the "first milk"- colostrum. It is often considered the baby's first immunization because of its high levels of vitamin A, antibodies, and other protective factors. Colostrum is clean, pure, and protects against infection. Early and frequent breastfeeding, especially if accompanied by maternal-infant skin-to-skin contact, stabilizes the baby's temperature, respiratory rate, and blood sugar level and continue to be exclusively breastfed even if the regular breast milk has not yet let down(3).

As a global public health recommendation, infants should be exclusively breastfed for the first six months of life to achieve optimal growth, development and health thereafter, to meet their evolving nutritional requirements. Exclusive breastfeeding from birth is possible except for a few medical conditions, and unrestricted exclusive breastfeeding results in ample milk production (4). Infants should receive nutritionally adequate and safe complementary foods while breastfeeding continues for up to two years of age or beyond.

Even though it is a natural act, breastfeeding is also a learned behavior. All mothers can breastfeed if they get accurate information, support within their families and communities

and from the health care system. They should also have access to skilled practical help from trained health workers, lay and peer counselors, and certified lactation consultants, who can help to build mothers' confidence, improve feeding technique, and prevent or resolve breastfeeding problems. Women in paid employment can be helped to continue breastfeeding by being provided with minimum enabling conditions, for example paid maternity leave, part-time work arrangements, on-site crèches, facilities for expressing and storing breast milk, and breastfeeding break (1, 4).

As WHO-Lancet Child Survival Series 2003 mentioned, breastfed children have at least six times greater chance of survival in the early months than non-breastfed children and it drastically reduces deaths from acute respiratory infection and diarrhea, two major child killers, as well as from other infectious diseases and 13% of child deaths in the world can be prevented by exclusive breastfeeding up to six month and continued breastfeeding to 12 month (3).

The potential impact of optimal breastfeeding practices is especially important in developing country situations with a high burden of disease and low access to clean water and sanitation. But non-breastfed children in industrialized countries are also at greater risk of dying - a recent study of post-neonatal mortality in the United States found a 25% increase in mortality among non-breastfed infants. In the UK Millennium Cohort Survey, six months of exclusive breastfeeding was associated with a 53% decrease in hospital admissions for diarrhea and a 27% decrease in respiratory tract infections (4, 6).

Examining the trend in malnutrition, national nutrition status data indicate that at birth, infants in Ethiopia are at normal nutrition status but their growth declines rapidly during the first year of life and stunting (low height-for-age) continues during the second year. This shows the importance of addressing feeding practices during the critical period of the first two years of life (7). Because of the high prevalence of inappropriate child feeding practices and the importance of timely initiation and exclusive breastfeeding practices, the Ethiopian government developed the Infant and Young Child Feeding (IYCF) guideline in 2004

## 1.2 Statement of problem

Out of 136 million babies born each year, around 90 million are not breastfed exclusively for the first six months. No more than 35% of infants worldwide are exclusively breastfed during the first four months of life and only 38% of children less than six months of age in the developing world are exclusively breastfed and just 39% of 20-23 month olds benefit from the practice of continued breastfeeding. Complementary feeding frequently begins too early or too late, and foods are often nutritionally inadequate and unsafe. Because poor feeding practices are a major threat to social and economic development, they are among the most serious obstacles to attaining and maintaining health that face this age group (1-4).

The magnitude of Exclusive breastfeeding practice among children under five months are almost stagnant in Ethiopia, having increased only three percent from 49 to 52 from EDHS 2005 to EDHS 2011 and only half (52%) of mothers practice timely initiation of breastfeeding(1,5). The introduction of complementary foods occurs at different times in different communities and can occur any time from birth to six months. Bottle-feeding is common especially in urban areas. It is seen as an easy way to feed a child, in order that the mothers can have more time to attend to other tasks (7).

This may be an indicator for the reason why infant and neonatal mortality are still high in Ethiopia, 59 and 37 deaths per 1000 live births respectively(1). Different scholars showed that the most causes of infant deaths are diarrhea and respiratory tract infections. It is possible and cost effective to prevent 13% of these deaths by improving the optimal breast feeding practices especially exclusively breastfeeding up to six months because breast milk is uncontaminated and contains all recommended nutrients for the first six months.

Breastfeeding is universal in Ethiopia but the national report showed that the problem of optimal breastfeeding practices in urban areas is low while it's better as compared to the rural areas.

According the EDHS 2011, the proportion of urban mothers who initiate breast feeding within one hour after delivery is 57% and median duration of exclusive breastfeeding is less than one month (0.6 month). Study in Mekele showed 60.8% (19) but this study was facility based which only include those mothers who had information access and in Harar also show

that the prevalence of exclusive breastfeeding was 51.8% (22). For women working outside of the home, exposure to breast milk substitute advertising, available income to purchase these products, and possibly less support from extended family members are potential reasons for the lower EBF found in urban areas.

Adama is one of the Ethiopian fast growing towns which have a limited study to show the prevalence of optimal breastfeeding practices and its associated factors. This study was aimed to determine the magnitude of timely initiation and exclusive breastfeeding practices and its associated factors in Adama town which bridging the information gap.

## Chapter Two: Literature Review

### 2.1 The prevalence of early initiation of breastfeeding practices

Timely initiation of breastfeeding within an hour of birth has great importance for both the mother and her infant but different literatures show that the practice of it is low in the world especially in developing countries and has shown great variation.

A cross-sectional study in the United Arab Emirates (UAE) which was done at health facility level showed 80.6% (8) of mothers put their infants on their breast within an hour after delivery. A facility based study in India, East Delhi and a cross sectional descriptive study that was carried out in 2010 in Nepal showed similarity, 37.2% and 37%(9,10) respectively but the study within the same country, India, Bankura district, West Bengal indicated 13.6% (11).

The African Population and Health Research Center (APHRC) longitudinal study conducted from 2007 to 2010 in the two slum areas of Nairobi, Kenya showed that 63% (12) of infants started breastfeeding within an hour. A cross-sectional study using data from the Pakistan Demographic and Health Survey 2006-2007 showed that the prevalence of timely initiation of breastfeeding 27.3% (13). The situational review of IYCF practice and interventions in Vietnam in 2006 indicates that early initiation of breastfeeding were 57.8%(14) which is better than the national prevalence of Ethiopia 52% (1), and a secondary analysis of the 2010 Tanzanian DHS reported that the national prevalence of early initiation was 46.1%(15).

In Ethiopia there are different studies in different regions which show the variation of early initiation of breastfeeding practices. Studies in Goba district South East Ethiopia, in Jimma, Arjio Woreda, South West and in Arba Minch Zuria indicated that 52.4%, 62.6% and 57.2% of mothers initiated timely breastfeeding within an hour, respectively (16, 17 and 18). Whereas a study conducted at facility level in Mekele showed 78 % (19) almost similar with that of UAE (80%) (8).The difference may be due to the study sites, because the first three was community based that may have low information about the use of timely initiation of breastfeeding.

## 2.2 The prevalence of exclusive breastfeeding practices

Exclusive breastfeeding is the single most effective intervention for preventing child deaths, yet less than 40% (3) of infants under 6 months old receive the benefits of it in the world. Different literatures indicate that the practice of exclusive breastfeeding varies in different countries and regions. The study conducted on mothers attended an urban health center in East Delhi showed 57% (9). There is also a study in Chepang community in Nepal which showed that exclusive breast feeding up to 6 month is 81% (10). The study in Bankura district, West Bengal, India the proportion of exclusive breastfeeding under six months showed 57.1% (11). A longitudinal study conducted in two Nairobi slums reported that exclusive breastfeeding for the first six months was rare at only about 2% (12). A cross-sectional study using data from the Pakistan Demographic and Health Survey 2006-2007 showed that the prevalence of exclusive breastfeeding 37.1% (13). The 2006 DHS of Vietnam showed that only 16.9 % (14) of mothers breastfed exclusively their infants up to six month of age while Ethiopia DHS 2011 and Tanzanian DHS 2010 showed 54% and 50% respectively (1,15). There is great variation between Nairobi Kenya 2% (12), in Guatemala City 21% (20) and in Nepal Chepang community 81% (10) but others shows that the experience of exclusive breast feeding showed around half.

There are also many literatures in Ethiopia that indicate the variation of the prevalence of exclusive breastfeeding in different regions. A cross-sectional community based study in Goba south East Ethiopia showed that the prevalence of exclusive breastfeeding for infants' aged less than six months 71.3% (21) while in Jimma Arjio Woreda south West of Ethiopia 47.91% (17). There are also a cross-sectional study in Arba Minch Zuria (community based), Mekele (facility based) and Harar (community based) 55.6 %, 60.8% and 51.8% (18, 19, 22) respectively. Almost all literatures in Ethiopia indicate that exclusive breast feeding practice is slightly better than the world's prevalence which is less than 40% (3).



## **2.3 Factors associated to time of initiation of breast feeding practices**

Breast feeding practice has been found to be influenced by many factors but when the researcher tried to review different literatures, these factors can be grouped into three different levels such as individual-level, household-level and community-level.

### **2.3.1 Socio-demographic and economic characteristics**

Age of the mother is one of the important socio-demographic factors that affect initiation of breastfeeding. A secondary analysis of the 2010 Tanzania Demographic and Health Survey showed that the risk of delayed initiation of breastfeeding within an hour after birth was significantly higher among young mothers aged under 24 years (15) whereas there was no significant difference in the cross-sectional facility based study conducted in UAE, in community based cross-sectional study conducted in Ethiopia, Goba district and in Jimma Arjio (8, 16, 17).

Maternal level of education is another factor that affects timely initiation of breastfeeding practices. A study in UAE reported that illiterate mothers were almost 2 times more likely to timely initiate breastfeeding than those with higher education (8). In Nepal, 52.8% of illiterate mothers initiated timely compared to 47% among the literate, whereas in a Guatemala City study there was no difference (10, 20). A secondary analysis of the 2010 Tanzania Demographic and Health Survey showed the risk of delayed initiation of breastfeeding after birth was significantly higher among uneducated mothers (15).

According to EDHS 2011, 52% of infants started breastfeeding within one hour but this increases with the mother's educational status, 50.7% for no education and 65.5% for more than secondary school. Again in Goba district, Mothers who had formal education were 1.4 times as likely to initiate breastfeeding with in the first hour after delivery as compared to those mothers who had no formal educations (16). A similar finding was reported by study in Jimma Arjio where delayed initiation of breastfeeding was more common among mothers who had no education compared with mothers who attended formal education (17).

Another important factor was the mother employment status.

A secondary analysis of the 2010 Tanzania Demographic and Health Survey showed the risk of delayed initiation of breastfeeding within one hour after birth was significantly higher among employed mothers (15).

Parity: Multiparous mothers reported 2 times more initiated breastfeeding timely than primiparous in UAE (8) but no significant difference seen in other literatures on timely initiation of breastfeeding practices.

EDHS 2011 showed that mothers who gave birth to a female child were more likely to initiate timely breastfeeding than those with a male child (54.3% vs. 49.0%). In studies conducted in Goba district and Jimma Arjo, sex difference was not significantly associated with optimal breastfeeding practices (16, 17).

Household level factors also affect infant feeding practices. EDHS 2011 showed that early initiation of breast feeding varies with wealth quintile, 48.5% for lowest and 57.8% for highest.

### **2.3.2 Health service Utilization**

Some studies have shown the positive influence of health service utilization on BF practices. Those mothers who got any type of health service had a better experience on optimal breastfeeding practices.

In Vietnam mothers who delivered at a district or commune health center had a higher rate of early initiation of BF (14). A cross-sectional study in Nepal also showed mothers who delivered at a health facility were found to initiate breastfeeding within one hour after birth 3 times higher than those delivering at home or in workplaces (OR=3.58, 1.79- 7.17)(10). The community based cross-sectional study in Goba district showed Mothers who delivered in health institutions were twice as likely to initiate breastfeeding timely as compared to those delivered at their home [OR = 1.9(95% C.I:1.30-2.71)](16). The Ethiopian DHS 2011 showed that the proportion of children who breastfed within one hour of birth does not vary significantly by type of assistance at delivery.

Mode of delivery is another health service factors which affect time of breastfeeding initiation. A secondary analysis of the Tanzanian DHS 2010 (15) and a community based cross-sectional study taken place in Goba district, South East Ethiopia (21) showed mothers

who delivered through cesarean section more likely delayed to initiate breastfeeding of their child.

Breastfeeding advice is one of the important health service related factors to affect positively in time breast feeding initiation. In the study showed in Goba district South East Ethiopia, mothers who were counseled/advised on breastfeeding at postnatal visits were about 52% more likely to initiate breastfeeding within the first hour of delivery [OR: 0.52(95% C.I:0.38-0.72)] (16).

## **2.4 Factors associated to exclusive breast feeding practices**

### **2.4.1 Socio-demographic and economic characteristics**

Studies showed that maternal education affects the practice of exclusive breastfeeding. The odds of exclusive breastfeeding infants by mothers who completed either primary or high school education was about two times as frequent compared to mothers with higher education in UAE(8) whereas in Chepang community, Nepal (10) and in Goba district Ethiopia(21), education level didn't show any significance difference.

The employment status of the mother is also one of the individual level factors which affect infant feeding practices. A facility based cross-sectional study in UAE indicated that housewives were about two times more likely exclusively breastfeeding of their infants than working mothers (OR= 1.89; 95% CI 1.17-3.07), and also in Guatemala city women who did not work outside the home were 3.2 times as likely (95% CI: 1.6–6.4) to exclusively breastfeed as were women who worked outside the home (20). The study in Goba district indicated a significant difference among employed and unemployed mothers with regard to exclusive breastfeeding (33% vs. 73%, respectively) (21).

Multiparous mothers reported twice as much exclusive breastfeeding compared to primiparous women in UAE (8).

Age of infant is one of the factors which showed significant association with exclusive breastfeeding practices in different literatures. A cross-sectional community based study in Goba, Bale Zone, showed that the prevalence of exclusive breastfeeding for infants' aged less than six months was 71.3% but varies with infant's age from 89% for less than two months dropping to 17% in the age between 4 to 5 months (21). The EDHS 2011 reported that 70.3% mothers exclusively fed their breast milk only until one month after delivery and

drops to 30.8% in 4-5 month of age. Another cross-sectional study in Jimma Arjio reported that non-exclusive breastfeeding was positively associated with child's age. The older the child, the more likely that he/she is non-exclusive breastfed (17). This may be related with the working status of the mother. In Ethiopia, maternity leave is allowed for only two months after delivery.

Theoretically most Ethiopian parents select the sex of a child to become male during birth; so this intention may affect the optimal breastfeeding practices but the EDHS 2011 showed that average month of EBF male and female child is 1.8 and 2.9 respectively.

Household level factors also affect infant feeding practices. A community based study in Harar shows that the incomes of mothers has inverse relationship with mothers whose income below 1000 Eth birr were three times more likely to practice exclusive breastfeeding than those who got more than 4000 Eth birr (AOR= 3.106 (1.395, 6.915)) (22). Family size, family type and birth order were not found statistically associated with infant and young child feeding practices in Chepang community Nepal (10).

#### **2.4.1 Health service Utilization**

In Vietnam mothers who delivered at a district or commune health center were more likely to exclusively breastfeed. Mothers who delivered normally were more likely to exclusively breastfeed their infants than did those who delivered by cesarean section (OR= 2.20; 95% CI 1.40-3.48) in United Arab Emirates (UAE) (8). In a study conducted in Chepang community, antenatal care services were found significantly associated with initiation of breastfeeding (AOR=5.39, CI: 3.15- 9.23) (10).

## 2.5 Conceptual frame work

The framework shows the socio-demographic factors, socio-economic, health service and infant characters in relation to optimal breastfeeding.

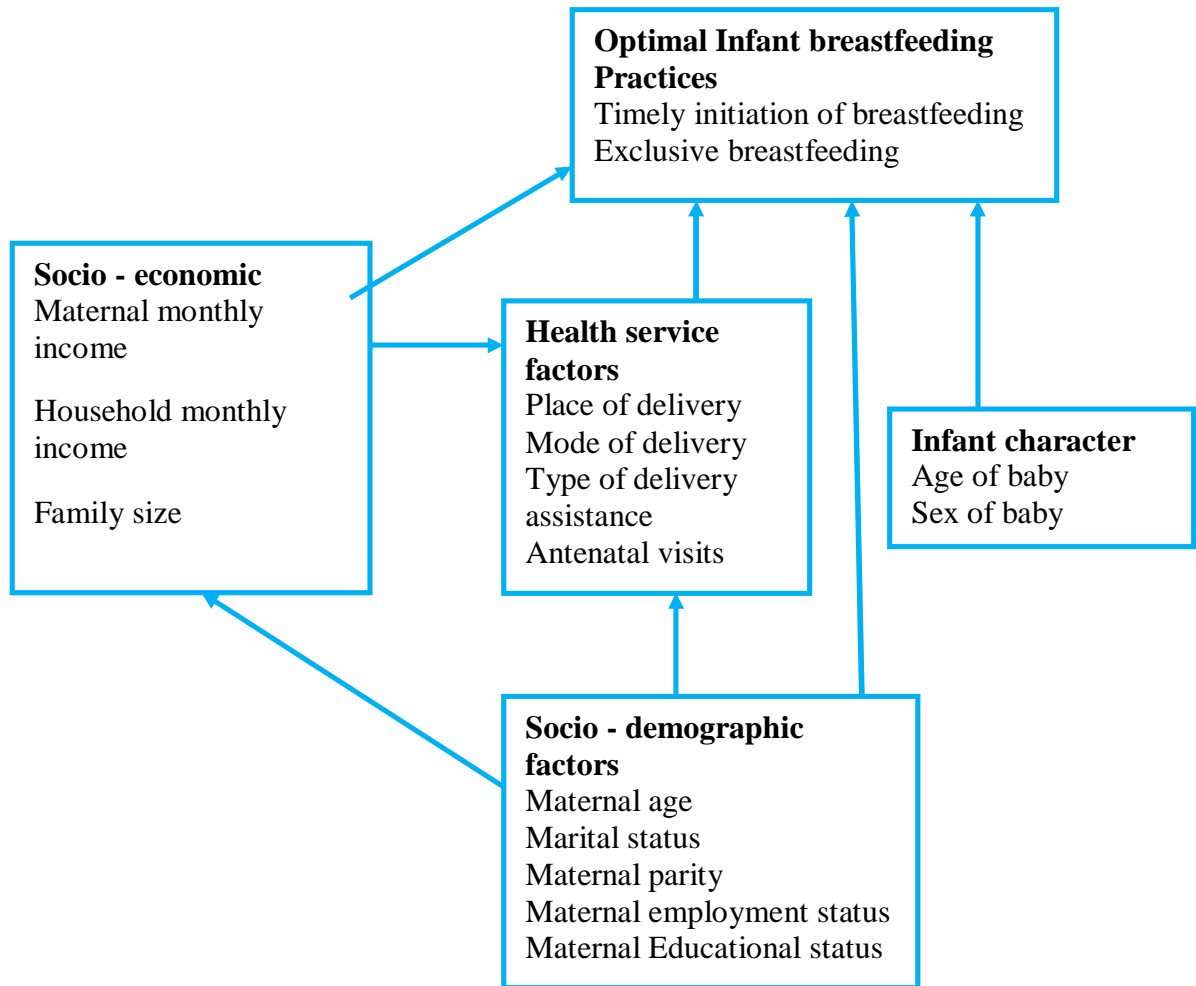


Fig.1 conceptual frame work that influence under two years old children breastfeeding practices *Source: adapted from different literatures*

## 2.6 Significance of the study

According to the EDHS 2011, breastfeeding is universal in Ethiopia but the timely initiation and the exclusive breastfeeding practices were low. Only around half of mothers who initiate breastfeeding timely and the average age of exclusive breastfeeding were less than one month in the urban areas even though the educational status and health service coverage is better as compared to the rural areas. Despite Ethiopia has developed health service development program (HSDP IV) and targets to improve timely initiation of breastfeeding practices to 92% and exclusive breastfeeding up to six months of age to 70% by 2015, there is paucity of community based studies which are very relevant to understand the factors that hinder the optimal breastfeeding practices.

There are some studies in breastfeeding practices but they are either on facility based or in combination with the rural areas. For example studies in Mekele which focused only on those mothers who attend health institutions, Arbaminch Zuria and Jimma Arjio Woreda in South West Ethiopia which was comprised more rural mothers. Study done in Arbaminch Zuria was focused on knowledge and attitude not assessed other factors and also the study done in Jimma Arjio was unable to assess factors like working status.

Therefore this study is significant since it contributes to the identification of factors that affect optimal breastfeeding practices in the study area. The finding is intended to illustrate the current prevalence at the study area and describe the factors with recommendations and communicated to concerned bodies. It will be submitted to Oromia Regional Health Bureau and the Adama town administrative health office to enable them aware the gap so that they will give priority in their programs focusing towards the factors associated to optimal breastfeeding practices.

## **Chapter Three: Objectives**

### **3.1 General objective**

To assess timely initiation and exclusive breastfeeding practices with associated factors among children less than two years old in Adama town, Oromia, Ethiopia.

### **3.2 Specific objective**

1. To determine the prevalence of timely initiation of breastfeeding practices among women with children less than two years old.
2. To determine the prevalence of exclusive breastfeeding practices among women with children under two years old.
3. To identify factors associated with the timely initiation and exclusive breast feeding practices

## Chapter Four: Methods and Materials

### 4.1 Study setting and sampling technic

#### 4.1.1. Study area and design

A community-based cross-sectional study design using quantitative methods of data collection was conducted in Oromia Region, Adama town from October 10-15/2013. The town is located at about 100km East of Addis Ababa with the total population of 299,216 as indicated in the 2007 CSA report. Of this population, males are 148,061(49.4%) and females are 151,155(50.6%). Adama is divided into 18 local administrative units called kebeles. The total land area is estimated at about 13,000 hectares and has diverse topographic features that range from one which is part of the rift valley areas with the altitude 1590-1700 meters, and temperature ranges between 14 and 30°C with mean temperature of 22°C. Health infrastructures available in the town are, one hospital and four health centers, which are owned by the government and has three hospitals and 73 clinics of different levels owned by private and in addition one health center and one clinic owned by NGOs.

#### 4.1.2. Sample size determination

The sample size for this study was determined using a formula for estimation of single population proportion with the prevalence of exclusive breastfeeding practice 51.8% which is taken from the study conducted in Harar, East Ethiopia (22) with 95% power, 5% margin of error, with a design effect of 1.5 and a non-response rate of 10% ,

$$\begin{aligned}n &= \frac{(Z_{\alpha/2})^2 p (1-p) *D}{d^2} \\&= \frac{(1.96)^2 (0.518 (1-0.518)) *1.5}{(0.05)^2} \\&= \frac{3.8416*0.518*0.482}{0.0025} *1.5 = 575.49 +10\% \text{ non-response rate} \approx 633\end{aligned}$$

A total of 633 mothers who had children under two years old were included in the study. From the total of 18 Adama town kebeles one third or six Kebeles were taken by lottery method. Census was conducted using 32 health extension professionals working in the sampled kebeles to get the sampling frame. Then, the sample was allocated proportional to population size.



#### **4.1.3 Inclusion criteria**

Mothers/care givers who had children less than two years old and lived in the sampled kebeles were included in the study.

#### **4.1.4 Exclusion criteria**

Mothers/care givers severely sick and unable to communicate were excluded in the study. Those mothers who were lived less than six month in Adama town were also excluded in the study.

#### **4.1.3. Source population**

All mothers/care givers who had children less than two years old and living in Adama town, Oromia Ethiopia.

#### **4.1.4. Study Population**

Mothers/care givers who had children less than two years old and living within randomly selected kebeles were included in the study.

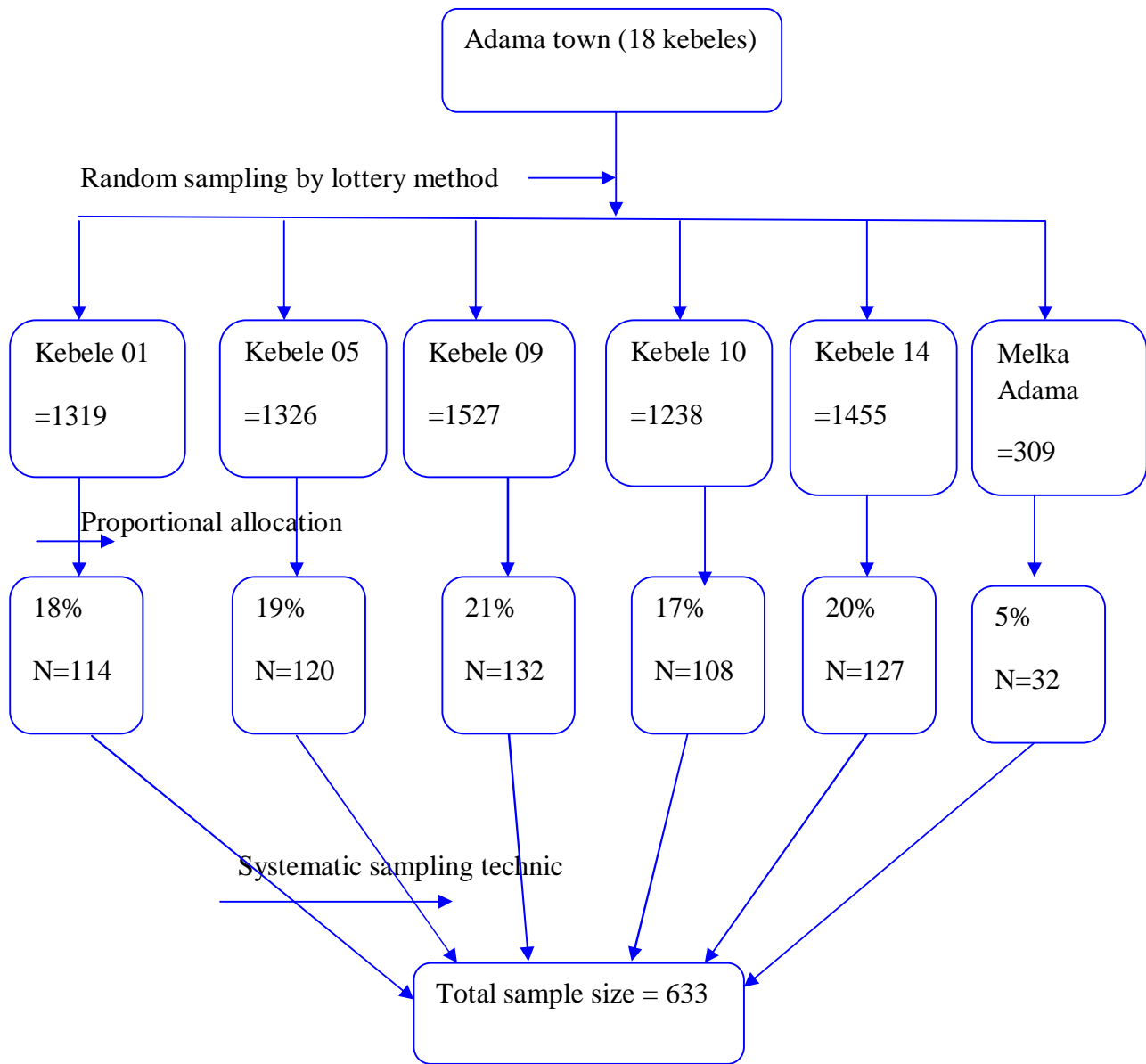


Fig. 2 Schematic presentation of sampling procedure for the selection of study units

## 4.2 Data Collection technique and Instruments:

Quantitative data was collected using a questionnaire which adapted from the Ethiopian Health and Demographic Survey (EDHS 2011) and WHO 2008 indicators for assessing infant and young child feeding practices. The data were collected at the house-to-house level using 16 female and 2 male data collectors. They were completed grade 10 and above. Four female and five male health professionals was involved as a supervisor. The questionnaire was first prepared in English and then it was translated into Amharic by expert. The back translation was taken place to check the consistency.

## 4.3 Data quality control

In order to control the data quality, the data collectors were taken intensive training for two days and paired with Amharic and Oromifa speakers during the data collection to avoid any communication barrier. and 10% or 64 questionnaires were pre-tested in kebele 13 which was out of the sampled kebeles. There was an ongoing supervision. The questionnaire was checked for completeness manually and entered to the Epi data software version 3.1.

## 4.4 Study variables

### 4.4.1 Dependent variables

Timely Initiation of breastfeeding and Exclusive breast feeding practices

### 4.4.2 Independent variables

Socio-demographic and economic variables were Age of the mother, Religion, Ethnicity, Marital status of mother, Educational status of the mother, Family size, Maternal monthly income and Household monthly income.

Health service variables were Antenatal visit, Place of delivery, Mode of delivery and post natal care visit. Infant related variables were Age of the child and Sex of the child.

## 4.5 Operational definition:

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**Timely initiation of breastfeeding:** initiating breastfeeding within an hour after delivery.

**Exclusive breastfeeding:** under two years old children who were fed only breast milk within the age of 0- 6 months.

#### **4.6 Data Analysis:**

The data was entered into Epi data version 3.1 and exported to SPSS Version 16.0 for cleaning and analysis. Descriptive statistics was used to compute the frequencies of characteristics, and determine the prevalence of timely initiation and exclusive breast feeding practices. To identify the associated factors, first a bivariate logistic regression analysis was performed for each independent variable with the timely initiation and exclusive breastfeeding practices and those with p-value less than 0.25 were taken and entered to a multivariable logistic regression analysis to determine the independent predictors. Those variables with p-value less than 0.05 were taken as statistically significant.

#### **4.7 Ethical Considerations:**

The research protocol was approved by the Institutional Research Ethics Review Committee of Jimma University. Written approval was obtained from Oromia Regional Health Bureau and Adama Town Administrative Health Office. Verbal consent mothers/guardian who participated in the study was taken first to confirm their permission and willingness. They were informed of the right to discontinue or withdraw from the study during the data collection if not interested. The mothers were also assured that the information they give would be kept confidential and not used for other purpose.

#### **4.8 Dissemination of the study findings**

The result of the research will be presented to Jimma University academic community; it will also be submitted to the Faculty of Medicine and Public Health, Department of Population and Family Health. In addition, a copy will be disseminated to the Federal Ministry of Health, Oromia Regional Health Bureau and Adama Town Administrative Health Office, hospitals, and NGOs who work on children's health and nutrition. Finally, the researcher will try to publish in scientific journals.

## Chapter Five: Results

### 5.1 Socio-demographic and health service utilization patterns

Out of six hundred thirty three (633) mothers sampled, a complete response was obtained from 628 respondents with 99.2% response rate. The mean age of mothers was 26.9 ( $\pm$  5.6) years the range being from 14 to 45 years old and 62.9% of the mothers were in the age group 20-29 years. Majority of the mothers (79.3%) were married and 59.6% were Orthodox Christian. The main ethnic groups were Oromo (33%) followed by Amhara (29%). Most (67.6%) of the mothers are literate with 39.3% having completed elementary (grades 1-8) education, and 28.3% completed secondary school (grades 9-12). Three hundred-and-one (48%) of respondents were housewives. Two hundred and ninety four (46.8%) mothers were paired with male child whereas the other 53.2% were with female child (Table 1).

Among 628 respondents, 88.2% had a history of antenatal care (ANC) visit at least once during their pregnancy. Five hundred thirty seven (85.5%) respondents delivered in health institutions assisted by health professionals. Eighty five (13.5%) respondents delivered through cesarean section and 69.7% of mothers had post natal care (PNC) visit. Among four hundred thirty six mothers who attended PNC, 71% had received breastfeeding (BF) advice or information. Five hundred and five (80.4%) of the respondents had ever used modern family planning methods (Table 2).

Table 1 Socio-demographic and economic characteristics in Adama town

<b>Variables</b>	Frequency (N)	Percent (%)
<b>Age group of mother</b>		
14-19	41	6.5
20-29	395	62.9
30-39	179	28.5
40-49	13	2.1
<b>Marital status</b>		
Single	33	5.3
Married	498	79.3
Divorced	39	6.2
Widowed	28	4.5
Separated	30	4.8
<b>Ethnic</b>		
Oromo	207	33.0
Amhara	185	29.5
Guragie	139	22.1
Tigre	58	9.2
Others**	39	6.2
<b>Education</b>		
No education**	118	18.8
Elementary 1-8	247	39.3
Secondary 9-12	178	28.3
Technic & higher	85	13.5
<b>Working status</b>		
Housewives	304	48.4
Working mothers***	324	51.6
<b>Sex of child</b>		
Male	294	46.8
Female	334	53.2

\*Silte, Wolayta, Hadiya, Argoba \*\*No formal education attendance

\*\*\*student, employed, merchant, daily laborers

Table 2 Health service related factors of respondents in Adama town

<b>Variables</b>	<b>Frequency (N)</b>	<b>Percent (%)</b>
<b>ANC visit</b>		
No	74	11.8
Yes	554	88.2
<b>Place of delivery</b>		
Home	91	14.5
Institutional	537	85.5
<b>Delivery assistant</b>		
Health professionals	539	85.8
TBAs and relatives	89	14.2
<b>Mode of delivery</b>		
Normal/vaginal	543	86.5
Operation or C/S	85	13.5
<b>PNC visit</b>		
Yes	438	69.7
No	190	30.3
<b>BF advice</b>		
Yes	311	71.0
No	127	29.0
<b>FP use</b>		
Yes	505	80.4
No	122	19.4

## 5.2 Breast feeding practice of mothers in Adama town, Oromia Ethiopia

Out of 628 respondents, 98.4% of them were ever breastfed their children but only 50.3% optimally breastfed their children. Among mothers who ever breastfed, 514(81.8%) initiated breastfeeding within an hour after delivery (Table 3). Five hundred eighty five (93.2%) respondents fed the first breast milk (colostrum); however 25.8% of the mothers used prelacteal food within the first three days after delivery. Any milk other than breast milk (46%) and clean water (39.3%) were the common prelacteal foods (Table 3).

Five hundred fifty five (88.4%) respondents had information or knowledge that the child should be feed only breast milk till six months of age. Regardless of the information, around 408(65%) of mothers were exclusively breastfed their children (Table 3). About half (51.3%) mothers used bottle with nipple feeding. Five hundred twenty six (83.8%) mothers were breastfeeding during the study. The mean duration of breastfeeding was 7.98( $\pm$ 5.76) months, the range being from 0 to 22 months (Table 3).



Table 3 Patterns of breastfeeding experiences among respondents in Adama town, Oromia, East Ethiopia

<b>Variables</b>	<b>Frequency (N)</b>	<b>Percent(%)</b>
<b>Ever breastfeed</b>		
Yes	618	98.4
No	10	1.6
<b>Time of breastfeeding initiation</b>		
Timely	514	81.8
Not timely	114	18.2
<b>Exclusive breastfeeding practice</b>		
Exclusive	408	65
Not exclusive	220	35
<b>Feed colostrum</b>		
Yes	585	93.2
No	42	6.7
<b>Prelacteal fed</b>		
Yes	162	25.8
No	465	74.0
<b>Information of mother about age of EBF</b>		
Has information	555	88.4
Has no information	73	11.6
<b>current breastfeeding status</b>		
Yes	526	83.8
No	102	16.1
<b>Bottle feeding</b>		
Yes	322	51.3
No	306	48.7

The result of age specific exclusive breastfeeding analysis showed that the majority 81.3% mothers who had children less than 2 months exclusively breastfed their infants while 74.5% and 63% at the age 2-3 months and 4-5 months respectively (Fig 3).

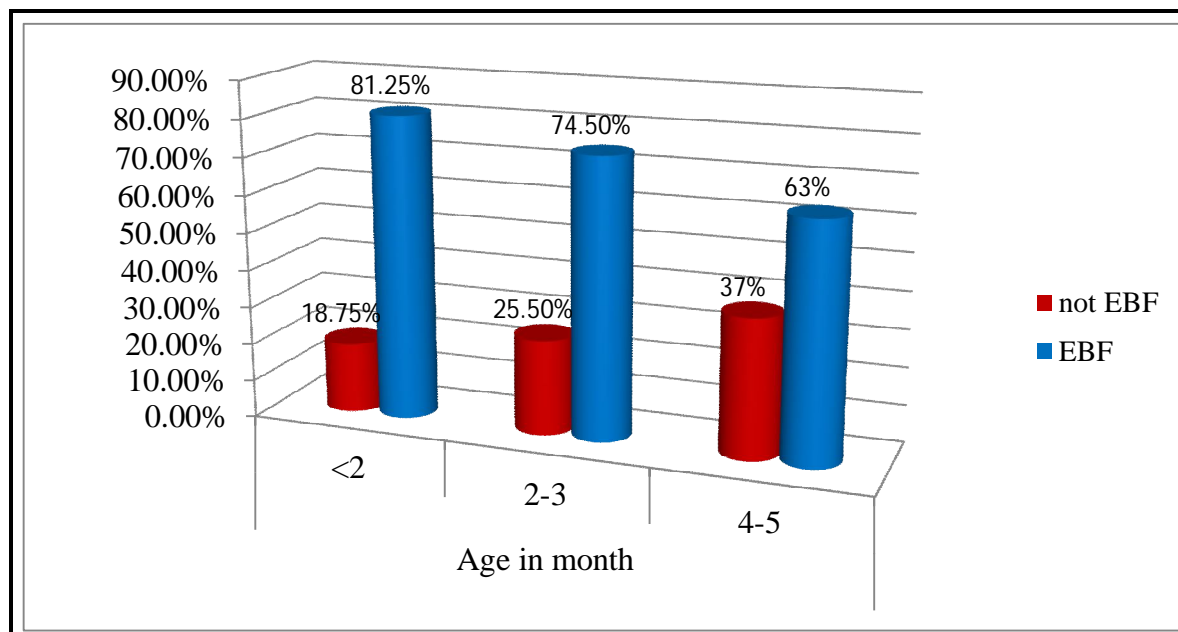


Fig 3 Age-specific lifetime exclusive breastfeeding among mothers in Adama town

### 5.3 Factors associated with timely initiation of breastfeeding

Factors associated with timely initiation of breastfeeding were explored using bivariate logistic regression analysis and the independent predictors were identified using multivariate logistic regression analysis. The binary logistic regression analysis showed no significant association between the timely initiation of breastfeeding and the socio- demographic characteristics like age of mother, educational status, working status, and income of the mother. Instead, health service related characteristics like antenatal care (ANC) visit, mode of delivery and postnatal care (PNC) had significant association with timely initiation of breastfeeding.

In order to identify the most predictive and independent factors in timely initiation of breastfeeding practices in this study, those variables with p-value less than 0.25 in the bivariate logistic regression were analyzed for further analysis using multivariate logistic regression. Marital status of the mother, sex of child, ANC visit and mode of delivery were isolated to be independent predictors of timely initiation breastfeeding practices (Table 4). Mothers who were married about 3.4 times more likely to timely initiate breastfeeding than those mothers were widowed and separated [AOR: 3.402 (95% CI: 1.312-8.826)]. Mothers who delivered male child were about 1.7 times more likely to initiate breastfeeding timely [AOR: 1.709(95%CI: 1.047-2.792)]. ANC visit and mode of delivery are the most independent health service related factors in timely initiation of breastfeeding practices. Mothers who had not have ANC visit were about 56% less likely to initiate breastfeeding within an hour of delivery than those mothers had ANC visit [AOR: 0.440(95%CI: 0.196-0.987)]. Mothers who delivered through vagina were about 14 times more likely to initiate breastfeed timely than those delivered through cesarean section [AOR: 13.850(95%CI: 7.623-25.123)] (Table 4).

Table 4 Logistic analysis of time of breastfeeding initiation and associated factors among mothers in Adam town, Oromia East Ethiopia

<b>Initiation of breastfeeding</b>				
Variable	Not timely N (%)	Timely N (%)	COR(95%CI)	AOR(95%CI)
<b>Marital status</b>				
Single	7(21.2)	26(78.8)	1.592(0.508-4.992)	2.330(0.637-8.515)
Married	84(16.9)	414(83.1)	2.112(0.935-4.774)	*3.402(1.312-8.824)
Divorced	6(15.4)	33(84.6)	2.357(0.732-7.587)	*4.061(1.048-15.745)
Widowed	8(28.6)	20(71.4)	1.071(0.345-3.324)	1.732(0.475-6.309)
Separated	9(30.0)	21(70.0)	1.00	1.00
<b>family size</b>				
2-4	60(16.5)	303(83.5)	1.292(0.860-1.943)	1.160(0.678-1.985)
>=5	54(20.4)	211(79.6)	1.00	1.0
<b>Sex of child</b>				
Male	46(15.6)	248(84.4)	0.726(0.480-1.096)	*1.709(1.047-2.792)
Female	68(20.4)	266(79.6)	1.00	1.00
<b>ANC visit</b>				
No	21(28.4)	53(71.6)	*0.509(0.293-0.895)	*0.440(0.196-0.987)
Yes	93(16.8)	461(83.2)	1.00	1.00
<b>Mode of delivery</b>				
Vaginal	65(12.0)	478(88.0)	*10.009(6.057-16.540)	*13.850(7.623-25.163)
C/S	49(57.6)	36(42.4)	1.00	1.00
<b>PNC visit</b>				
Yes	88(20.2)	348(79.8)	*0.619(0.385-0.996)	0.776(0.414-1.456)
No	26 (13.5)	166(86.5)	1.00	1.00

#### 5.4 Factors associated with exclusive breastfeeding practices

Factors influencing the exclusive breastfeeding practice were explored by using the bivariate logistic regression analysis. The bivariate logistic regression analysis showed that marital status, parity level, working status, household income and family size were socio-demographic and economic factors that had significant association with exclusive breastfeeding practices. Whereas ANC visit, number of ANC visits, mode of delivery, place of delivery, type of assistant of delivery, breastfeeding advice during PNC were health service related factors which had significant association with exclusive breastfeeding practices.

In order to identify the independent predictors of exclusive breastfeeding practices, those factors with P-value less than 0.25 in the bivariate analysis were entered and analyzed with multivariable logistic regression. Working status of the mother, mode of delivery and breastfeeding advice during the postnatal care were found to be the independent predictors of exclusive breastfeeding practices. Housewife mothers or mothers who worked inside their home were about 2 times more likely to breast feed exclusively than those who work outside their home [AOR: 1.897(95%CI: 1.195-3.010)]. Mothers who delivered normally through vagina were about 2.4 times more likely to exclusively breastfeed their child compared to those mothers who delivered through cesarean section [AOR: 2.423 (95%CI: 1.404-4.181)]; and also those mothers who got breastfeeding advice during the post natal care follow up were about 2.3 times more likely to breastfeed exclusively compared to those who didn't get advice [AOR: 2.281(95%CI: 1.399-3.717)]. Marital status, house hold monthly income, family size, parity level, ANC visit, place of delivery and type of delivery assistants were not significant in the multivariable logistic regression analysis (Table 5).

Table 5 Logistic regression analysis of factors associated with EBF practices among mothers in Adama town, Oromia, East Ethiopia.

Variable	Exclusive breastfeeding practices			
	Not EBF N (%)	EBF N (%)	COR (95% CI)	AOR (95% CI)
<b>Ethnic group</b>				
Oromo	73(35.3)	134(64.7)	0.721(0.339-1.532)	0.520(0.179-1.509)
Amhara	55(29.7)	130(70.3)	0.929(0.432-1.996)	0.515(0.176-1.507)
Guragie	57(41.0)	82(59.0)	0.565(0.260-1.227)	0.348(0.116-1.039)
Tigre	24(41.4)	34(58.6)	0.557(0.233-1.330)	*0.253(0.074-0.872)
Other+	11(28.2)	28(71.8)	1.00	1.00
<b>Occupational status</b>				
Housewives	79(26.0)	225(74.0)	2.194(1.566-3.076)	*1.897(1.195-3.010)
Working mothers**	141(43.5)	183(56.5)	1.00	1.00
<b>Parity level</b>				
Premiparous	70(30.0)	163(70.0)	*1.429(1.009-2.015)	1.304(0.740-2.296)
Multiparous	150(38.0)	245(62.0)	1.00	1.00
<b>Family size</b>				
2-4	112(30.9)	251(69.1)	*1.542(1.107-2.147)	1.273(0.748-2.167)
>=5	108(40.8)	157(59.2)	1.00	1.00
<b>ANC visit</b>				
No	38(51.4)	36(48.6)	*0.463(0.284-0.756)	0.600(0.055-6.538)
Yes	182(32.9)	372(67.1)		1.00
<b>Mode of delivery</b>				
Vaginal	178(32.8)	365(67.2)	*2.003(1.263-3.177)	*2.423(1.404-4.181)
C/S	42(49.4)	43(50.6)	1.00	1.00
<b>BF advice at PNC</b>				
Yes	95(30.5)	216(69.5)	1.973(1.291-3.015)	*2.281(1.399-3.717)
No	59(46.5)	68(53.5)	1.00	1.00

+Silte, Wolayta, Hadiya, Argoba \*p-value <0.05 \*\*student, merchant, employed, daily laborer

## Chapter Six: Discussion

Timely initiations of breastfeeding and exclusive breastfeeding until six month of age are the key interventions to achieve the MDG 1 and 4 which address child malnutrition component of the targets and mortality, respectively. This study attempted to assess and determine the prevalence of timely initiation and exclusive breastfeeding practice with the associated factors even though the actual result may be affected by recall bias due to the retrospective nature of data collection. The study showed that 98.4% of mothers ever breastfed which was similar with the EDHS 2011 98% (1), but only 50.3% of them optimally breastfed their children. This was very low but seemed better compared with the findings of a cross-sectional community based study conducted in Jimma Arjio West Ethiopia that reported optimal breast feeding practice was 24.6% (17). The difference might be due to the two study areas found in better level of urbanization. This might be explained by their exposure to various sources of information and better knowledge about appropriate infant and young child feeding.

The study showed 51.3% of mothers used bottle with nipple feeding. The result was high as compared with the study reported in India, East Delhi 26.5% (9) but which was about 20% much lower than the study reported in Guatemala City which was reported 70% (20). This might have been as the result of working status of mothers which considered easy to feed a child by every member of the household

### 6.1 Timely initiation of breastfeeding

Timely initiation of breastfeeding within an hour after delivery is important for mother-infant bonding and helps in the establishment of longer and more successful breastfeeding practices. The study showed that the prevalence of timely initiation of breastfeeding was 81.8% which was similar with the studies done in UAE 80% (8) and Mekele, Ethiopia 78% (19). However, the two studies were facility based. The finding showed 10% lower with the National Health Service development program (HSDP IV) target to improve timely initiation of breastfeeding practices to 92% by 2015. Although WHO and the national IYCF guide-line recommend that all newborns should start breastfeeding within one hour after delivery, the prevalence of timely initiation of breastfeeding in this study was shown to be

relatively better compared with the findings of studies in India, East Delhi 37.2% (9), Nepal 37%(10), Nairobi, Kenya 63%(12), Pakistan 27.3% (13), Vietnam 57.8%(14) and Tanzania46%(15).

The prevalence of timely initiation in this study was also better compared to the Ethiopian national and Oromia prevalence of 52% and 52.6% respectively (1). And the studies showed in different parts of the country, Goba district south east of Ethiopia, Jimma Arjio South west Ethiopia and Arba Minch Zuria, 52.4%, 62.6% and 57.2% respectively (16-18). The difference might be as a result of high health service utilization. In this study about 88.2% respondents had history of ANC visit during their pregnancy and 85.5% mothers were delivered in the health institutions.

Marital status, sex of child, ANC visits and mode of delivery were the most significant predictors in time of breastfeeding initiation in this study. Mothers who were married were about 3 times more likely to initiate breastfeeding timely within the first hour of delivery than those widowed and separated mothers but no significant association seen in the study conducted in Harar, East Ethiopia (22). Mothers who delivered male child were about 2 times more likely initiate breastfeeding timely within an hour of delivery than those mothers delivered female child. This result was contrary to the report shown by the national EDHS 2011 mothers who had female child were more initiated breastfeeding timely than those with male child (54.3% vs. 49.0%).

ANC visit and mode of delivery were the most independent predictors of health service related factors in time of breastfeeding initiation. Mothers who had ANC visit were about 56% less likely to not timely initiate breastfeeding within an hour after delivery than mothers who had no ANC visit. Consistent with the study done in Nepal Chepang community found that mothers who had ANC visit were more likely initiate breastfeeding timely than those who had no ANC visit (10). This might be due to the short time period between ANC service utilization and delivery of the child so that the mother could remember and practice what she was advised during the visits.

Mothers who delivered normally through vagina were about 14 times more likely breastfeeding timely than those mothers who delivered through cesarean section. A



secondary analysis of the Tanzania EDHS 2010 (15) and a community based cross-sectional study taken place in Goba district, South East Ethiopia (21) showed mothers who delivered through cesarean section were more likely delayed to initiate breastfeeding of their child than mothers who delivered normally through vagina. This association may be linked to the effects of anesthesia delaying the onset of lactation and some baby-unfriendly postoperative-care practices. Appropriate guidelines for caesarean deliveries are needed to minimize delays in initiation of breastfeeding

## **6.2 Exclusive breastfeeding**

This study attempted again to determine the prevalence of exclusive breastfeeding with associated factors. The study showed the prevalence of exclusive breast feeding for infants 6 months old was 65.0% which lower than the WHO recommendation. It also lower than the studies showed in Nepal Chepang community 81%, Goba south East Ethiopia 71.3% (10, 21) but 5% lower to the National Health Service development program (HSDP IV) target to improve exclusively breastfeeding practices to 70% by 2015. Whereas the finding was better than with those of the studies done and reported in India, East Delhi 57% (9), India, West Bengal 57.1% (11), Pakistan 37.1% (13), Tanzania 50% (15), Guatemala City 21% (20). And also better than the studies reported in Ethiopia like the national prevalence 54% (1), Jimma Arjio South West Ethiopia 47.91%(17), Arba Minch Zuria 55.6% (18), Mekele North Ethiopia 60.8% (19) and Harar East Ethiopia 51.8%(22).

Working status, mode of delivery and breast feeding advice during the PNC visit were the independent predictors of exclusive breastfeeding practices. Housewife mothers or mothers who were worked inside their house were about 2 times more likely breastfeeding exclusively than employed mothers. This finding were similar with the studies showed in UAE indicated that housewives were two times more likely to provide exclusive breastfeeding of their infants than working mothers and also the study in Guatemala city showed women who did not work outside home were 3.2 times more likely to exclusively breastfeed than women who worked outside the home (20) and the study in Goba district indicated a significant difference among employed and unemployed mothers with regard to exclusive breastfeeding (33% vs. 73%) (21). Mothers who work within their home may have got long time contact with their child while those who employee away may have left their

child within the house. This might be an indicator to improve the working mothers' birth leave amount and prepare maternity corners in the working place

Mothers who were delivered normally through vagina were about 2.4 times more likely exclusively breastfed their child as compared to those mothers who delivered normally through cesarean section. This was similar with the finding shown in United Arab Emirates (UAE) mothers who delivered normally were more likely to exclusively breastfeed their infants than did those who delivered by cesarean section (8).

Those mothers who got breast feeding advise during the post natal follow up were about 2.3 times more likely breastfed exclusively as compared to those didn't get. It's consistent with the study reported in Goba district, Bale Zone, South East Ethiopia. This might have been an indicator to strengthen the postnatal follow up and breast feeding message to exclusive breastfeeding practices.

## **Chapter seven: Limitations**

The study had a limitation to assess the actual prevalence of timely initiation of breast feeding and exclusive breastfeeding practices because of a retrospective nature of data collection. It had also a limitation of not triangulating quantitative results with qualitative finding. This study didn't assess individual factors like knowledge and attitudes of mothers as well as variables of partners and peers were the limitation of this study.

## **Chapter Eight: Conclusion**

The study showed that the prevalence of optimal breastfeeding practice was low. It's almost about half lower than the WHO recommendation and the national IYCF guidelines. Optimal breastfeeding like timely initiation of breastfeeding was independently associated with marital status, sex of child, ANC visit and mode of delivery. Exclusive breastfeeding up to six month is another most important optimal breastfeeding practices which also independently associated with working status of the mother, mode of delivery and breastfeeding advice during PNC visit. Mode of delivery was the strongest independent predictor factor for both timely initiation and exclusive breastfeeding practices. The prevalence of mothers who start milk other than breast milk and clean water within three days of delivery was not simple and was reported a quarter of respondents did that. Bottle with nipple feeding practice were also very common in the study area. The study showed one out of two mothers who less than two years old children were had used bottle feeding.

## Chapter Nine: Recommendations

Mode of delivery was a very important factor affecting both timely initiation of breastfeeding and exclusive breastfeeding practices. So, health service providers in the hospitals should assist and help those mothers who delivered via cesarean section for timely initiation and exclusive breastfeeding practices. The study showed again breastfeeding advice during PNC visit was an important factor to increase the prevalence of exclusive breastfeeding practices; hence, increasing the number of PNC followers and giving attention on providing advice about breastfeeding is recommended. Thus, the health providers should be recommended to strengthen the PNC services and BF advices to improve the exclusive breastfeeding practices.

Occupational status was another independent predictor for exclusive breastfeeding practice; thus, working mothers should get extended maternity leave and breastfeeding corners introduced at work places. The policy makers should revise the maternity leave day. The health service providers should advice mothers to milk their breast and put aside for their child if they have to be away.

Bottle feeding was indicated to be a common practice in the study with almost half of the respondents using bottle with nipple to feed their child; it's another recommendation that the urban health extension professionals (UHEPs) should work strongly to reduce bottle feeding practices because it is known that bottle feeding is the risk factors for diarrhea and respiratory infection.

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**Annexes: English and Amharic version of questionnaires**

JIMMA UNIVERSITY COLLEGE OF PUBLIC HEALTH AND MEDICAL SCIENCE  
DEPARTMENT OF POPULATION AND FAMILY HEALTH, October 2013

A questionnaire prepared to assess optimal breastfeeding and associated factors among under two years old children in Adama town, Oromia Ethiopia

**Date of interview**

**Id of the mother**

DD		MM		YEAR			

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Dear Madam;

Hello, my name is \_\_\_\_\_ and I am working in research team from Jimma University College of public health and Medical sciences, Department of population and family health. We are collecting information on breast feeding practices and factors affecting it in your kebele. The information will help us to know the trends of breast feeding practices and factors affecting it in Adama town and which helps how it can be improve to reduce child morbidity and mortality. You are one of the mothers in this kebele that have been randomly chosen to participate in this study. Your cooperation and willingness for the interview is helpful. Therefore, I would like to ask you some questions. The questions may take up to 15 minutes on average. The answers you give will not be shown to anyone and your name will not be written. Your participation will not harm you and your family.

We especially want your answers because if everyone who is selected participates, our information will be more valid and useful So You are kindly requested to participate voluntary .Are you willing to continue?

1. **Yes,** please arrange for a private setting to conduct interview
2. **No,** end the interview;

Demographic and socio-economic information

1.	How old are you?			
2.	Marital status	1 Single, never married 2 Married 3 Divorced 4 Widowed 5 Separated		
3.	Ethnic group	1 Oromo 2 Amhara 3 Gurage 4 Tigre 5 Others mention-----		
4.	Religion	1 Orthodox 2 Muslim 3 Protestant 4 Others -----		
5.	Education status	1 No education 2 Primary(1-8) 3 Secondary(9-12) 4 Technical/vocational 5 Higher(diploma & above)		
6.	occupational status	1 Housewife 2 Student 3 Private employed 4 Government employed 5 Merchant 6 Farmer 7 Daily laborer 8 Others -----		
7.	How many times you gave birth?			
8.	How many of them did you give live during birth?	Total _____ 1. Son _____ 2. Daughter _____		
9.	How many of them did you born not breathe during birth?	Total _____ 1. Son _____ 2. Daught _____		

10.	How many children do you have now?	Total _____ 1 _____ sons 2 _____ daughters		
11.	Have you ever given birth to a boy or girl who was born alive but later died?	Total _____ 1 _____ sons 2 _____ daughters		
12.	How much your monthly income?	_____ Eth Birr		
13.	How much the monthly income of the household?	_____ Eth Birr		
14.	How many people are living in the house hold?	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="width: 50px; height: 20px;"></td> <td style="width: 50px; height: 20px;"></td> </tr> </table>		

Obstetric and health service utilization

15.	When you got pregnant, did you want to get pregnant at that time?	1 Yes 2 No
16.	Did you face un wanted pregnancy before?	1 Yes 2 No
17.	Have you used family planning methods?	1 Yes 2 No
18.	If "YES" for Q17 what type of method do you use now?	1 Pills 2 Depo every three month injection 3 Implant 4 IUCD 5 Others _____
19.	Did you want a baby later more?	1 Yes 2 No More
20.	Did you see antenatal care for this pregnancy?	1 Yes 2 No
21.	If yes whom did you see?	1 Gyn-Obs specialist 2 Doctor/Health officer 3 Nurses/midwife 4 Health extension professional 5 Other _____
22.	How many months pregnant were you when you first received antenatal care?	1 _____ months 2 Not known

23.	How many times did you receive antenatal care?	1 ____ number of times 2 Not Known
24.	Where did you give birth?	1 Home 2 Gov't hospital 3 Gov't health center/clinic 4 NGO health Facility 5 Private hospital 6 Private clinic 7 Others _____
25.	In what way you gave birth?	1 Normal/through vagina 2 Operation/cesarean section
26.	Who assisted with the delivery?	1 Gyn-Obs specialist 2 Doctor/health officer 3 Nurse/Midwife 4 Health extension professional 5 Traditional birth attendant 6 Relatives/friends 7 Other _____
27.	After you gave birth did any one check your health?	1 Yes 2 No
28.	Who checked?	1. Gyn-Obs specialist 2. Doctor/health officer 3. Nurse/Midwife 4. Health extension professional 5. Traditional birth attendant 6. Other _____
29.	How long after delivery did the first check take place?	1 After ____ hours 2 After ____ days 3 After ____ weeks 4 Not known
30.	Did you get an advice/information about breastfeeding at the time of check?	1. Yes 2. No
31.	How old your child now?	_____ month
32.	Is your child male or female?	1. Male 2. Female

### Access to media

33.	Do you read newspaper?	<ol style="list-style-type: none"> <li>1. At least once a week</li> <li>2. Less than once a week</li> <li>3. Not at all</li> </ol>
34.	Do you listen radio?	<ol style="list-style-type: none"> <li>1. At least once a week</li> <li>2. Less than once a week</li> <li>3. Not at all</li> </ol>
35.	Do you watch television?	<ol style="list-style-type: none"> <li>1. At least once a week</li> <li>2. Less than once a week</li> <li>3. Not at all</li> </ol>

### Breastfeeding practices

36.	Did you ever breastfeed?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>
37.	If the answer of Q36 is “Yes” How long after birth did you first put to the breast?	<ol style="list-style-type: none"> <li>1. Immediately/less than one hour</li> <li>2. _____ hours</li> <li>3. _____ days</li> </ol>
38.	If the answer of Q36 is “No” why you didn’t breast feed?	_____
39.	Did you feed the first breast milk/colostrum?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>
40.	If “NO” for Q39 why you didn’t feed the first breast milk?	_____
41.	In the first three days after delivery was given anything other than breast milk?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>
42.	If the answer of Q41 is “Yes” what did you give to drink?	<ol style="list-style-type: none"> <li>1. Milk other than breast milk</li> <li>2. Plain water</li> <li>3. Sugar or glucose water</li> <li>4. Fruit juice</li> <li>5. Fresh butter</li> <li>6. Infant formula</li> <li>7. Tea</li> <li>8. Honey</li> <li>9. ‘Tena adam’</li> <li>10. Others _____</li> </ol>
43.	For how many months the child should be fed	_____ month

	breast milk only even without water?	
44.	Ask only If the age of child is less than 6 month. Did you give anything liquid or solid foods in the last 24 hours?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>
45.	If "YES" for Q44 what did you give?	<ol style="list-style-type: none"> <li>1. Milk other than breast milk</li> <li>2. Plain water</li> <li>3. Sugar or glucose water</li> <li>4. Fruit juice</li> <li>5. Fresh butter</li> <li>6. Infant formula</li> <li>7. Tea</li> <li>8. Honey</li> <li>9. Other _____</li> </ol>
46.	Ask if the child is greater than 6 month  For how many months you fed only your breast milk?	_____
47.	At what age of your child was you start any liquid or solid foods including water?	_____month
48.	Are you still breastfeeding?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>
49.	If "NO" for Q48 at what age of your child did you stop breastfeeding?	_____month
50.	Did drink anything from a bottle with a nipple yesterday or last night?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>

**ጅም ዩኒቨርሲቲ የህብረተሰብ ጤና እና የህክምና ሳይንስ ኮሌጅ የሰነ-ህዝብ እና ቤተሰብ ጤና ትምህርት ክፍል በኦሮሚያ ክልል በአዳማ ከተማ የሚገኙ እና ከሁለት ዓመት ዕድሜ ያልበለጠ ልጅ ያላቸውን እናቶች የጡት ማጥባት ልምድ እና ጡት ለማጥባት ተፅዕኖ የሚፈጥሩ ሁኔታዎችን ለማጥናት የተዘጋጁ ጥያቄዎች፣ መሰከረም 2006**

የቃለ-መጠይቁ የተካሄደበት ቀን

የእናት መለያ ቁጥር

ቀን	ወር	ዓ.ም

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ጤና ይስጥልኝ! ስሜ \_\_\_\_\_ እባላለሁ። በጅም ዩኒቨርሲቲ የህብረተሰብ ጤና እና የህክምና ሳይንስ ኮሌጅ የሰነ-ህዝብ እና ቤተሰብ ጤና ትምህርት ክፍል በጡት ማጥባት ዙሪያ በአዳማ ከተማ ለሚያደረገው ጥናት መረጃ እንዲሰበሰቡ ከተመደቡት አንዷ ነኝ። መረጃው የአዳማ ከተማ እናቶችን የጡት ማጥባት ልምድና ጡት ለማጥባት ተፅዕኖ የሚፈጥሩ ሁኔታዎችን ለማወቅ እንዲሁም ልምዱን ለማሻሻልና የጨቅላ ህጻናትን ህመምና ሞት ለመቀነስ ይረዳል።

እርሶም በዚህ ቀበሌ በጥናቱ እንዲካተቱ በአጋጣሚ ከተመረጡ እናቶች አንዷ በመሆኖ ለቃለ-መጠይቁ የእርሶ ፍላጎት ና ትብብር ያስፈልገናል። ቃለ-መጠይቁ ከ30 ደቂቃ የማይበልጥ ጊዜ የሚወስድ ሲሆን የሚሰጡትም መልስ ለማንም አይገለጽም፤ ስምም አይፃፍም። በቃለ-መጠይቁ በመሳተፍ በእርሶ ላይም ይሁን በቤተሰብ ምንም አይነት ጉዳት አያመጣም። ጥናቱ የተሟላ እንዲሆን የእርሶና የሁሉም የተመረጡ እናቶች መልስ ያስፈልገናል። በመሆኑም በጥናቱ ላይ በፍላጎት ተሳታፊ እንዲሆኑ በትኩረት እንጠይቃለን።

ፈቃደኛ ነዎት?

- አዎ - ለቃለ-መጠይቁ የሚያስፈልጉ ሁኔታዎችን በማመቻቸት ጥያቄወን ይቀጥሉ።
- አይደለሁም - ወደ ተረኛዋ እናት ይለፉ።

**1. ጠቅላላ የግል፤ የማህበራዊ እና ኢኮኖሚያዊ መረጃዎች/ጥያቄዎች**

1.	ዕድሜሽ ስንት ነው?		
2.	የጋብቻ ሁኔታ	1 አግብታ የማታወቅ	
		2 ያገባች	
		3 የተፋታች	
		4 ባል የሞተባት	
		5 የተለያየች	
3.	ብሔር	1 አሮሞ	
		2 አማራ	
		3 ጉራጌ	
		4 ትግሬ	
		5 ሌላ ይገለጽ-----	

4.	ሀይማኖት	1 ኦርቶዶክስ 2 እስላም 3 ፕሮቴስታንት 4 ሌላ ይገለጽ-----
5.	የትምህርት ደረጃ	1 ምንም የመደበኛ ት/ት ተሳትፎ የሌላት 2 የመጀመሪያ ደረጃ (1-8) 3 ሁለተኛ ደረጃ (9-12) 4 ቴክኒክና ሙያ ት/ት 5 ከፍተኛ ት/ት
6.	የሥራ ሁኔታ	1 የቤት እመቤት 2 ተማሪ 3 የግል ሠራተኛ 4 የመንግስት ሠራተኛ 5 ነጋዴ 6 ግብርና 7 የቀን ሠራተኛ 8 ሌላ _____
7.	አጠቃላይ እስካሁን ስንት ልጅ ወልደሻል?	ድምር _____  1. ወንድ _____  2. ሴት _____
8.	በወሊድ ወቅት በህይወት የተወለዱት ስንት ናቸው?	ድምር _____  1 ወንድ _____  2 ሴት _____
9.	በወሊድ ወቅት ህይወት ሳይኖራቸው የተወለዱ ካሉ ስንት ናቸው?	ድምር _____  1. ወንድ _____  2. ሴት _____
10.	በህይወት ከተወለዱ በኋላ ህይወቱ/ቷ ያለፈ/ች ልጅ አለሽ?	ድምር _____  1. ወንድ _____  2. ሴት _____
11.	አሁን ስንት ልጅ አለሽ?	ድምር _____  1. ወንድ _____  2. ሴት _____
12.		



	የወር ገቢሽ ስንት ይሆናል?	_____ ብር		
13.	አጠቃላይ የቤታችሁ ገቢ ስንት ይሆናል?	_____ ብር		
14.	ከእርሶ ጋር በቤት ውስጥ ምን ያህል ሰው ይኖራል?	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="width: 40px; height: 20px;"></td> <td style="width: 40px; height: 20px;"></td> </tr> </table>		

**2. የእርግዝና፣ የወሊድና የጤና አገልግሎት ተጠቃሚነት**

15.	ከመሠረታዊ ስራት እርግዚናዉ ሲከሰት ፈልገሽዉ ነበር?	<ol style="list-style-type: none"> <li>1. አዎ</li> <li>2. አልነበረም</li> </ol>
16.	ያልተፈለገ ዕርግዝና አጋጥሞሽ ያዉቃል?	<ol style="list-style-type: none"> <li>1. አዎ</li> <li>2. አያዉቅም</li> </ol>
17.	የቤተሰብ ምጣኔ ዘዴ ትጠቀሚያለሽ?	<ol style="list-style-type: none"> <li>1. አዎ</li> <li>2. አላዉቅም</li> </ol>
18.	የጥያቄ 17 መልስ አዎ ከሆነ ብቻ የሚጠየቅ ምን አይነት ዘዴ ነዉ የምትጠቀሚዉ?	<ol style="list-style-type: none"> <li>1 የሚዋጥ ኪኒን</li> <li>2 መርፌ</li> <li>3 በክንድ የሚቀበር</li> <li>4 ሉፕ</li> <li>5 ሌላ _____</li> </ol>
19.	ከዚህ በኋላ ልጅ መወለድ ትፈልጊያለሽ?	<ol style="list-style-type: none"> <li>1. አዎ</li> <li>2. አልፈልግም</li> </ol>
20.	ነፍሱ-ጡር እያለሽ የቅድመ-ወሊድ ክትትል አድርገሻል?	<ol style="list-style-type: none"> <li>1. አዎ</li> <li>2. አላደረግሁም</li> </ol>
21.	የጥያቄ 20 መልስ አዎ ከሆነ ማን ነበር የተከታተለሽ?	<ol style="list-style-type: none"> <li>1. የፅንሰና የማህፀን ሃኪም</li> <li>2. ጠቅላላ ሀኪም/ጤና መኮንን</li> <li>3. ነርስ/አዋላጅ ነርስ</li> <li>4. የጤና ኤክስቴንሽን ባለሙያ</li> <li>5. ሌላ _____</li> </ol>
22.	የመጀመሪያ ክትትልሽን ስትጀምሪ የስንት ወር ነፍሱ-ጡር ነበርሽ?	<ol style="list-style-type: none"> <li>1. _____ ወር</li> <li>2. አላስታወስም</li> </ol>
23.	ስንት ጊዜ ክትትል አደረግሽ?	<ol style="list-style-type: none"> <li>1. _____ ጊዜ</li> <li>2. አላስታወስም</li> </ol>

24.	የት ነዉ የወለድሽዉ?	<ol style="list-style-type: none"> <li>1. ቤት ዉስጥ</li> <li>2. የመንግስት ሆስፒታል</li> <li>3. የመንግስት ጤና ጣቢያ/ክሊኒክ</li> <li>4. የግብረሰናይ ጤና ተቋም</li> <li>5. የግል ሆስፒታል</li> <li>6. የግል ክሊኒክ</li> <li>7. ሌላ _____</li> </ol>
25.	በምን መንገድ ነዉ የወለድሽዉ?	<ol style="list-style-type: none"> <li>1. በሰላም (በብልት)</li> <li>2. በቀዶ ጥገና/ሆድ ተከፍቶ</li> </ol>
26.	ስትወልጄ ማነዉ የማዋለድ እርዳታ ያደረገልሽ?	<ol style="list-style-type: none"> <li>1. የማህፀንና ፅንሰ ሀኪም</li> <li>2. ጠቅላላ ሃኪም/ጤና መኮንን</li> <li>3. ነርስ/አዋላጅ ነርስ</li> <li>4. የጤና ኤክስቴንሽን ባለሙያ</li> <li>5. የልምድ አዋላጅ</li> <li>6. ዘመድ/ጌደኛ</li> <li>7. ሌላ _____</li> </ol>
27.	ከወለድሽ በኋላ ክትትል ያደረገልሽ አለ?	<ol style="list-style-type: none"> <li>1. አዎ</li> <li>2. የለም</li> </ol>
28.	የጥያቄ ቁጥር 27 መልስ አዎ ከሆነ ማን ነበር ክትትል ያደረገልሽ?	<ol style="list-style-type: none"> <li>1 የማህፀንና ፅንሰ ሀኪም</li> <li>2 ጠቅላላ ሃኪም/ጤና መኮንን</li> <li>3 ነርስ/አዋላጅ ነርስ</li> <li>4 የጤና ኤክስቴንሽን ባለሙያ</li> <li>5 የልምድ አዋላጅ</li> <li>6 ሌላ _____</li> </ol>
29.	ከወለድሽ ከስንት ጊዜ በኋላ ነዉ የመጀመሪያዉን ምርመራ ወይም ክትትል ያደረግሽዉ?	<ol style="list-style-type: none"> <li>1 _____ ሥዓት</li> <li>2 _____ ቀን</li> <li>3 _____ ሳምንት</li> <li>4 አላስታወስም</li> </ol>
30.	ስለ ጡት ማጥባት የምክር አገልግሎት ተሰጥቶሽ ነበር?	<ol style="list-style-type: none"> <li>1 አዎ</li> <li>2 አልተሰጠኝም</li> </ol>
31.	የልጅሽ ዕድሜ ስንት ነዉ?	_____ ወር
32.	የልጅሽ ፆታ?	<ol style="list-style-type: none"> <li>1 ወንድ</li> <li>2 ሴት</li> </ol>

**3 የሚዲያ ተጠቃሚነት የሚለኩ ጥያቄዎች**

33.	ጋዜጣ ታነቢያለሽ?	<ol style="list-style-type: none"> <li>1. ቢያንስ በሳምንት አንድ ጊዜ</li> <li>2. አልፎ አልፎ</li> <li>3. አላወቅም</li> </ol>
34.	ሬዲዮ ታዳምጫለሽ?	<ol style="list-style-type: none"> <li>1 ቢያንስ በሳምንት አንድ ጊዜ</li> <li>2 አልፎ አልፎ</li> <li>3 አላወቅም</li> </ol>

35.	ቴሌቪዥን ትከታተያለሽ?	1 ቢያንስ በሳምንት አንድ ጊዜ 2 አልፎ አልፎ 3 አላወቅም
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**4. የጡት ማጥባት ልምድን የሚዳስሱ ጥያቄዎች**

36.	ጡት አጥብተሽ ታወቂያለሽ?	1 አዎ 2 አላወቅም
37.	የጥያቄ ቁጥር 36 መልስ አዎ ከሆነ በወለድሽ በምን ያህል ጊዜ ዉስጥ ነዉ ጡት ማጥባት የጀመርሽዉ?	1 ወዲያዉ/አንድ ሰዓት ባልሞላ ጊዜ ዉስጥ 2 _____ ሰዓት በኋላ (ከ24 ሰዓት በታች ከሆነ የሰዓቱን መጠን ይጻፍ) 3 _____ ቀን በኋላ
38.	የጥያቄ ቁጥር 36 መልስ አላወቅም ከሆነ ለምን?	_____
39.	የመጀመሪያዉን የጡትሽን ወተት ወይም እንገር አጥብተሻል?	1 አዎ 2 አላጠባሁም
40.	የጥያቄ ቁጥር 39 መልስ አላጠባሁም ከሆነ ለምን ነበር ያላጠባሽዉ/ሻት?	_____ _____
41.	በወለድሽ በሦስት ቀን ዉስጥ ከጡት ወተት ዉጭ ሌላ ነገር ሰጠሻል ?	1 አዎ 2 አልሰጠሁም
42.	የጥያቄ ቁጥር 41 መልስ አዎ ከሆነ ምን ነበር የሰጠሽዉ?	1. ማነኛዉንም ወተት ከጡት ወተት ዉጭ 2. ንፁሕ ዉሃ 3. ስኳርና የግሉኮስ ዉሃ 4. የፍራፍሪ ጭማቂ 5. ለጋ ቅቤ 6. ሰዉ ሰራሽ የህፃናት ምግብ 7. ሻይ 8. ማር 9. ጤና አዳም 10. ሌላ _____
43.	ልጅ ከተወለደ/ች እስከ ስንት ወር ድረስ ነዉ የእናት ጡት ወተት ብቻ መጥባት ያለበት/ባት ዉሆንም ቢሆን ሳትሰጭ?	_____ ወር
44.	ከ6 ወር በታች የሆነ ልጅ ላላቸዉ ብቻ የሚጠየቅ ትላንት ማታ ወይም ቀን ፈሳሽ ወይም ደረቅ ምግብ ሰጠሽ ነበር?	1 አዎ 2 አልሰጠሁም/አልመገብሁም
		1 ወተት (ከጡት ወተት ዉጭ) 2 ንፁህ ወሃ

45.	የጥያቄ ቁጥር 44 መልስ አዎ ከሆነ ምን ነበር የሰጠሻት/የሰጠሽዉ?	3 ስኳርና የግሉኮስ ዉሃ 4 የፍራፍሪ ጭማቂ 5 ለጋ ቅቤ 6 ሰዉ ሰራሽ የህፃናት ምግብ 7 ሻይ 8 ማር 9 ጤና አዳም 10 ሌላ _____
46.	6 ወርና ከዚያ በላይ የሆነ ልጅ ላላት እናት የሚጠየቅ ልጅሽን የጡት ወተት ብቻ ያጠባሽዉ/ሻት እስከ ስንት ወር ነበር?	----- ወር
47.	ለልጅሽ ፈሳሽ ወይም ደረቅ ምግብ (ተጨማሪ ምግብ) መስጠት የጀመርሽዉ ስንተኛ ወር ዕድሜ ሲሞላዉ/ት ነዉ?	_____ ወር
48.	እስካሁን ጡት እያጠባሽ ነዉ?	1 አዎ 2 አላጠባም
49.	የጥያቄ ቁጥር 48 መልስ አላጠባም ከሆነ ጡት ማጥባት ያቆምሽዉ ስንት ወር ዕድሜዉ/ዋ ላይ ነዉ?	_____ ወር
50.	ፈሳሽ ምግብ ለመስጠት ጡጦ ትጠቀሚለሽ?	1 አዎ 2 አልጠቀምም