

**JIMMA UNIVERSITY**

**COLLEGE OF HEALTH SCIENCES**

**DEPARTMENT OF EPIDEMIOLOGY**



**EXCLUSIVE BREAST FEEDING AND ASSOCIATED FACTORS AMONG  
RURAL MOTHERS IN AMURU DISTRICT OROMIA REGIONAL  
STATE, ETHIOPIA, 2015.**

**By: BEDASA NEMERA**

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**EXCLUSIVE BREAST FEEDING AND ASSOCIATED FACTORS AMONG  
RURAL MOTHERS WITH CHILDREN 6-12MONTHS IN AMURU  
DISTRICT OROMIA REGIONAL STATE, ETHIOPIA, 2015.**

**BY: BEDASA NEMERA (BSC.)**

**ADVISORS:**

- 1.Fasil Tessema (Assoc. Professor)**
- 2.Tsegaye Tewelde (MPH)**

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## ABSTRACT

**Back ground:** To achieve optimal growth, development and health, WHO recommends that infants should be exclusively breastfed for the first six months of life. Breast-feeding reduces the prevalence of diarrhea and pneumonia, partly which can reduce infant mortality. Poor breastfeeding practices are still common, both in developing and developed countries. In Ethiopia exclusively breastfeed practice was approximately half of children under six months.

**Objective:** The objective of this study was to assess exclusive breastfeeding practices and associated factors among mothers with infants during the first 6 months.

**Method and materials:** A community-based cross-sectional study was conducted among a sample of 391 mothers with children 6-12 months of age and mothers were selected using simple random sampling from each rural kebeles in Amuru district from February to March. Data was collected using designed questionnaire and it was checked manually for completeness and consistencies, and after completion of editing, coding, and cleaning, data was entered to Epi-Data version 3.1 and exported in to SPSS window version 21 software for analysis. Bivariate logistic regression was performed to each independent variable with exclusive breastfeeding practices and variables with a p value < 0.25 was candidated for multivariable logistic regression analysis. P-value less than 0.05 was considered statistically significant.

**Result:** About 48% of mothers exclusively breastfed their child for six months. Mothers age (AOR= 5.1, 95%CI=1.5,17.4), husbands education (AOR=2.8, 95% CI=1.2 , 6.7), Ownership of radio (AOR=2.8, 95%CI= 1.2,6.7), ANC follow up (AOR=9.2, 95% C.I= 8.2, 44.9),Place of delivery (AOR=4.3, 95%CI=1.8, 9.7) and time to initiate breastfeeding (AOR= 4.2, 95%CI=1.3, 13.4) were independent predictors of exclusive breastfeeding practice.

**Conclusion and recommendation:** In this study, Practice of exclusive breastfeeding was below the WHO recommendation. Maternal ages, husband education, owner of radio, ANC visit, place of delivery and time to initiate breastfeeding were significantly associated with EBF practice. Therefore, there should be an emphasis on the breastfeeding intervention programs during antenatal check-ups, as well as promoting and strengthening institutional delivery in order to increase the proportion of women practicing EBF.

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## Acronym

**ANC** -----Ante Natal Care

**AOR**----- Adjusted Odds Ratio

**CI**----- Confidence Interval

**COR**----- Crude Odds Ratio

**EBF** -----Exclusive Breast Feeding

**HSDG** -----Health Sector Development Goal

**IYCF**-----Infant and Young Child Feeding

**MDG**-----Millennium Development Goal

**Mo FED**-----Ministry of Finance and Economic Development

**MOH**-----Ministry of Health

**PNC**-----post natal care

**UNICEF**-----United Nations Children's Fund

**WHO**-----World Health Organization

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# Chapter one

## 1. Introduction

### 1.1 Back Ground

To achieve optimal growth, development and health, WHO recommends that infants should be exclusively breastfed for the first six months of life. Poor breastfeeding practices are still common, both in developing and developed countries(1). In Ethiopia exclusively breastfeed practice was approximately half of children under six months (2). If every baby was exclusively breastfed from birth, an estimated 1.5 million lives would be saved each year(3).

Breast milk is the natural food for newborns(4). The protection, promotion and support of breastfeeding rank among the most effective interventions to improve child survival. The superiority of breast milk over any other food nourishment for the human newborn and infant can hardly be challenged, and it has become more and more apparent over the years that it is the most ideal, safe, and complete food that a mother can provide for her newborn at very little cost(5). Breast milk has the perfect combination of proteins, fats, vitamins, and carbohydrates. There is nothing better for the health of your baby. Leukocytes are living cells that are only found in breast milk. They help fight infection. It is the antibodies, living cells, enzymes, and hormones that make breast milk ideal. These cannot be added to formula(6).

Human milk contains several major protein components, which are obviously aimed at defense rather than nutrition. Breast-feeding reduces the prevalence of diarrhea and pneumonia, which partly explains how breast-feeding can reduce infant mortality(7). Human milk contains two types of proteins: whey and casein. Approximately 60% is whey, while 40% is casein. This balance of the proteins allows for quick and easy digestion. If artificial milk, also called formula, has a greater percentage of casein, it will be more difficult for the baby to digest. Approximately 60-80% of all protein in human milk is whey protein. These proteins have great infection-protection properties(6).

The infant's immune system is not fully mature until about 2 years of age. Human milk contains an abundance of white blood cells that are transferred to the child, acting to fight infections from viruses, bacteria, and intestinal parasites(8).

Several components of breast milk are anti-inflammatory(9). Human milk also contains many hundreds to thousands of distinct bioactive molecules that protect against infection and inflammation and contribute to immune maturation, organ development, and healthy microbial colonization(10).

Breastfeeding reinforces immunization. Breastfeeding provides the baby with anti-bacterial, anti-viral and anti-parasitic agents and strengthens the infant's developing immune system. The complex components of breast milk which are uniquely human are irreproducible and include lactoferrin, a single polypeptide chain glycoprotein which forms two lobes, both of which bind iron. Special receptors in the baby's gut uptake lactoferrin and the large lactoferrin fragments. Lactoferrin is bactericidal for many gram-negative and gram-positive bacteria and it also has anti-viral and anti- fungal properties (11).

Colostrum is 'the first milk secreted at the time of parturition, differing from the milk secreted later, by containing more lactalbumin and lacto protein, and also being rich in antibodies that confer passive immunity to the newborn, also called "foremilk". It is used for the treatment of a wide variety of gastrointestinal conditions, including non-steroidal anti-inflammatory drug-induced gut injury, H pylori infection; immune deficiency related diarrhea as well as infective diarrhea(12).

In Ethiopia it is important that the national nutrition program, health facility nutrition intervention, community-based nutrition, micronutrient interventions, and integrated community-based management of common childhood illnesses are all scaled-up and implemented more effectively to reduce early child mortality and morbidity(13).

The poor nutritional status of children and women has been a serious problem in Ethiopia for many years. Therefore, the health sector has increased its efforts to enhance good nutritional practices through health education, treatment of extremely malnourished children, and provision of micronutrients to the most vulnerable group of the population, that is, mothers and children(2).

Albeit it is a natural act, breastfeeding is also a learned behavior. In effect all mothers can breastfeed provided they have accurate information and support within their families and communities, and from the health care system. They should also have access to skilled practical

help from, for example, trained health workers, and lay and peer counselors, and who can help to build mothers' confidence, improve feeding techniques, and prevent or resolve breastfeeding problems(14).

Early initiation of breastfeeding is important for both the mother and the child. 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(2).

Breastfeeding involves mostly primary and, to a lesser extent, secondary prevention. Primary prevention is any activity that prevents a disease from ever starting. Secondary prevention is any activity that cures or reduces the severity of a disease(15).

Although many women have an understanding of the benefits associated with breastfeeding, most new mothers do not have information or knowledge about the actual act of breastfeeding an infant. Educating pregnant women and new mothers about breastfeeding is one of the most effective ways to increase initiation of this practice and its duration in the short term(16).

Exclusive breastfeeding from birth is possible for most women who choose to do so. It is recommended for all children except for a few medical conditions, such as maternal medication with radioactive substances. Exclusive breastfeeding as often and as long as the baby wants results in ample milk production(17).

To achieve optimal growth, development and health, WHO recommends that infants should be exclusively breastfed for the first six months of life? Thereafter, to meet their nutritional requirements, infants should receive adequate and safe complementary foods while breastfeeding continues up to two years of age and beyond (4,17,18).

Early and exclusive breastfeeding is now recognized as one of the most effective interventions for child survival particularly to address morbidity and mortality related to three major conditions i.e. neonatal infections, diarrhea and pneumonia(19).

## **1.2 Statement of problem**

The prevalence of breastfeeding differs from one country to another and from one society to another, this of course is due to cultural and religious believes. Delayed breastfeeding initiation, colostrums deprivation, supplementary feeding of breast milk substitutes, early introduction of complementary feeding, and incorrect weaning from breast milk are commonly found practices in communities around the world.

Despite the many benefits of exclusive breast feeding (EBF), sound breastfeeding practices are not the norm in many countries, and large differences exist in the EBF rates between regions and among countries. The promotion, support and protection of optimum breastfeeding take a different type of engagement from the health system, because breastfeeding is a social behavior and not a medical practice(1).

The protection, promotion and support of breastfeeding rank among the most effective interventions to improve child survival. It is estimated that high coverage of optimal breastfeeding practices could avert 13% of the 10.6 million deaths of children under five years occurring globally every year(17).

If every baby were exclusively breastfed from birth, an estimated 1.5 million lives would be saved each year. And not just saved, but enhanced, because breast milk is the perfect food for a baby's first six months of life – no manufactured product can equal it(3). Poor breastfeeding practices are still common, both in developing and developed countries. Only about 39% of children globally are exclusively breastfed for four months and a considerably smaller proportion for the full recommended six months. In addition to the risks posed by not having breast milk's protective qualities, breast- milk substitutes and feeding bottles in particular carry a high risk of contamination that can lead to life-threatening infections in young infants(17).

In spite of the well-recognized importance of exclusive breastfeeding, the practice is not widespread in the developing world. Others have estimated that suboptimal breastfeeding practices are responsible for more than 1 million child deaths annually and even more striking levels of childhood morbidity(20).

Exclusive breastfeeding during the first six months after birth is not widely practiced in Ethiopia. Currently, mothers exclusively breastfeed approximately half of children under six months

(52%). Among sub-groups the percentage of young children who are exclusively breastfed decreases sharply from 70 percent of infants age 0-1 month to 55 percent of those age 2-3 months and, further, to 32 percent among infants 4-5 months(2).

Breastfeeding is an extremely time-sensitive relationship. Experiences with breastfeeding in the first hours and days of life significantly influence an infant's later feeding(21).

In Ethiopia initiation of breastfeeding in the first hour and in the first 24 hours after birth varies by background characteristics. Breastfeeding within one hour after birth was more common in urban areas (57 percent) than in rural areas (51 percent). There was also considerable variation by region. Overall, nearly three children in every ten (27 percent) are given pre-lacteal feeds within the first three days of life. The median duration and the mean duration of any breastfeeding in Ethiopia are 25 months. The median duration of exclusive breastfeeding was 2.3 and 1.8 months in Ethiopia and Oromia respectively (2).

The woman's partner is the primary influencing factor in the infant feeding decision and practice. Fathers' degrees of support are informed by their level of knowledge and cultural influences, which in turn affect their attitudes and practices. A woman also bases her decisions on her perception rather than actual knowledge of her partner's preference. One attitude that many fathers share, however, is opprobrium for women breastfeeding in public(22).

The maternity care experience exerts unique influence on both breastfeeding initiation and later infant feeding behavior(23). The quality of care provided in the first 24 hours after birth is critical to the successful initiation and continuation of breastfeeding(8).

Breastfeeding practices can have substantial effects on infant's health & mortality in developing countries(24). The poor nutritional status of children and women has been a serious problem in Ethiopia for many years. Infant feeding affects both the mother and the child. Feeding practices affect the child's nutritional status, which in turn affects the risk of death(2).

The most critical period of intervention is from pregnancy through two years of age(25). Breastfeeding practice is a fundamental component of Primary Health Care. Even though, different studies were conducted on EBF in Ethiopia breastfeeding practice differs from region to region, even among society (26–31).

Related to the gap for exclusive breast feeding (EBF), programs should focus on addressing the socio-cultural environment so that mothers see that these practices are normative. Therefore, this study will identify factors associated with exclusive breastfeeding practices among infants during the first 6 months in rural communities of Amuru district and will be hoped to serve in designing and planning health interventions.

## Chapter Two

### 2. Literature Review

#### 2.1.2 Exclusive Breast Feeding Practice

Breastfeeding is natural and babies are born to breastfeed. During the early days after birth, some babies and mothers need time to learn and get it right. What other people say or believe may affect breastfeeding experience(4). Early and often! Breastfeed as soon as possible after birth, then breastfeed at least 8 to 12 times every 24 hours to make plenty of milk for baby(32).

Breastfeeding awareness will not necessarily be translated into practice without strengthening breastfeeding support and minimizing barriers. To reduce the awareness-practice gap in early initiation of breastfeeding, programs should focus on strengthening support by health staff, minimizing unnecessary cesarean deliveries, and ensuring infant-friendly health facilities. Related to the gap for exclusive breast feeding (EBF), programs should focus on addressing the socio-cultural environment so that mothers see that these practices are normative. Breastfeeding counseling and support should be mandatory in all prenatal checkups at birth for mothers and should be available for mothers/caregivers of children <2 y old(33).

Early Initiation of Breastfeeding means breastfeeding all normal newborns as early as possible after birth, ideally within first hour. Colostrums, the milk secreted in the first 2-3 days, must not be discarded but should be fed to newborn as it contains high concentration of protective immunoglobulin and cells. No pre-lacteal fluid should be given to the newborn. Exclusive breastfeeding for the first 6 months means that an infant receives only breast milk from his or her mother or a wet nurse, or expressed breast milk, and no other liquids or solids, not even water(19).

Comparative cross-sectional study conducted in Belgium indicates that, only 65 (16.25%) urban and 58 (15.26%) rural mothers had practiced exclusive breast feeding till 6 months of age. Complementary feeds were initiated by 69.20% urban mothers before the infant was 6 months old and 42.11% rural mothers had initiated at recommended 6 months(34).

A longitudinal study carried out in Manoel Gonçalves Hospital, in Itaúna indicates that the prevalence of exclusive breastfeeding at 6 months was 5.3%, and for breastfeeding at 12 months

it was 33.7%. The median duration of exclusive breastfeeding was 40days, and median breastfeeding duration was 237 days(35).

The research conducted in Chandigarh village shows that the rate of exclusive breast feeding among the lactating mothers is found to be 22.7% and 46% of the mothers have some prior knowledge of breastfeeding. Periodic feeding was found to be very common among the lactating mothers. 55% of the lactating mothers gave Pre-lacteal feeds to their children. There are various kinds of Pre-lacteal feeds which are given to the children such as animal milk, honey, sweet water, plain water and jaggery and 56% discarded the colostrums. It was found that 71% of the respondents started complementary feeding at the age of 4-5 months(19).

Cross sectional study on the determinants of exclusive breast feeding in Lebanon indicates that the exclusive breastfeeding rate was 27.4%(36).

Prospective study conducted in rural area of Sichuan Province, China reveal that 9.1 percent of women began breastfeeding within 1 hour postpartum. Mothers who initiated breastfeeding early were more likely to be fully breastfeeding at discharge (OR 2.10, 95% CI 1.23–3.60)(37).

The study achieved in rural eastern Uttar Pradesh India revealed that, 45 percent mothers initiated breast feeding within 24 hrs of birth and exclusive breastfeeding for 6 months was only 21 percent(24).

The study conducted in rural field practice area (Shivanagi) showed that, 91.25% of the mothers gave pre lacteal feeds & only 35% mothers gave colostrum(38).

Study conducted in Nigeria, reveal that the average EBF rate among infants younger than 6 months of age was 16.4% (95%CI: 12.6%-21.1%) and Antenatal care was strongly associated with an increased rate of EBF(39). A cross-sectional and analytical study carried out in Nnewi South-East Nigeria, also indicates that awareness (95.3%) and knowledge (82.0%) of EBF was high among surveyed mother but the practice of EBF (33.5%) was very low(40).

In Ethiopia, overall rates of exclusive and full breastfeeding were 49.0% and 68.2% respectively(41). In Ankesha Guagusa Woreda, Awi Zone, Northwest Ethiopia cessation of exclusive breast-feeding occurred in 69.63% cases. Among these, 57.1% happened before six months, while 37.0% and 5.9% occurred at six months and after six months of age of the index



infant respectively. The median time for infants to stay on exclusive breast-feeding was 6.36 months in rural and 5.13 months in urban, and this difference was statistically significant on a Log rank (Cox-mantel) test(42).

Comparative study conducted in Bahi Dar achieves that the prevalence of exclusive breastfeeding was 44% and 65% among employed and unemployed mothers respectively. Employed mothers were 32% times less likely to exclusively breast feed than the unemployed mothers(30).

A study conducted in Goba, South East Ethiopia shows the median duration of exclusive breastfeeding was three months and mean frequency of breastfeeding was six times per day (27). The study conducted in Bahir Dar city indicates that, prevalence of exclusive breastfeeding was 49.1%(29).Community based cross sectional study conducted in rural area of Jimma Arjo worda indicates that thirty-seven percent of mothers initiated breastfeeding later than one hour after delivery, which was significantly associated with not attending formal education. The majority (67.02%) of mothers had no knowledge about exclusive breastfeeding (26).

### **2.1.3 Factors Affecting Exclusive Breastfeeding Practices**

There is a definite need for community involvement in the provision of appropriate support, with community support groups and community- based counselors being identified as options. Encouraging the formation of mother-to-mother support groups is highly beneficial. Family members should also be educated and encouraged to provide the BF mother with support(40).

Shorter breastfeeding duration was associated ( $p < 0.05$ ) with maternal age ( $<20$ years),number of prenatal consultations( $<5$ and $>9$ consultations),use of alcohol or tobacco, delay before first feed ( $> 6$  hours) and use of a pacifier(35).

Cohort study conducted in Brazil confirmed that the factors associated with EBF duration are multiple, variable, and dependent on the population being evaluated. Mother partner's appreciation for breastfeeding, limiting the number of night time feeds at the breast, presence of cracked nipples and prenatal care provided by public services were described as determinants of discontinuation of EBF(exclusive breastfeeding(43).

Maternal work, planned pregnancy, intention to breastfeed, source of maternal emotional support and the use of the postpartum support video, the hotline service or both were associated with exclusive breastfeeding(36).

A comparative study in Pakistan on the effect of antenatal counseling on exclusive breastfeeding shows that as compared to the not counseled group, the mothers who initiated breastfeeding immediately after birth were statistically significantly higher ( $p < 0.046$ ) in the counseled group (84% and 96% respectively). Similarly the number of counseled mothers who practiced exclusive breastfeeding was statistically very highly significantly more ( $p < 0.001$ ) than the not counseled group (68% and 16% respectively). Antenatal counseling helps in motivating the mothers for initiation of breastfeeding immediately after birth and practicing exclusive breastfeeding for first six months of infant's life(44).

Giving birth at a health center was associated with delayed breastfeeding initiation whereas attending antenatal classes and receiving encouragement from hospital staff to initiate breastfeeding were correlated with putting the baby to the breast soon after delivery(37).

Literate women were more likely to initiate breastfeeding early in comparison to illiterates. Significant association was also found between the time of initiation of breastfeeding and duration of exclusive breastfeeding(24).

Beliefs, customs and socio-cultural factors influence the mothers' knowledge and practice of Breastfeeding. Literacy status had little effect on continuation of breast feeding for more than six months. 81.19% mothers had no knowledge regarding exclusive breast feeding and only 13.36% of mothers practiced almost exclusive breast feeding up to 4 months, which is a disheartening scenario(38).

Exclusive breastfeeding (EBF) practice decreased with increasing infant age. Maternal education, socioeconomic class, mode of delivery and infants first feed were retained as important maternal predictors of EBF practice(18).

A range of maternal and child health attributes such as marital status, economical status and child age were found to influence the practice of EBF in Ethiopia(41).

The study conducted in Bahir Dar reveal that, Being a housewife, a young infant age, having a prenatal EBF plan, delivering at a health institution, delivering vaginally and receiving counseling/advice on infant feeding were influence EBF practice(28).

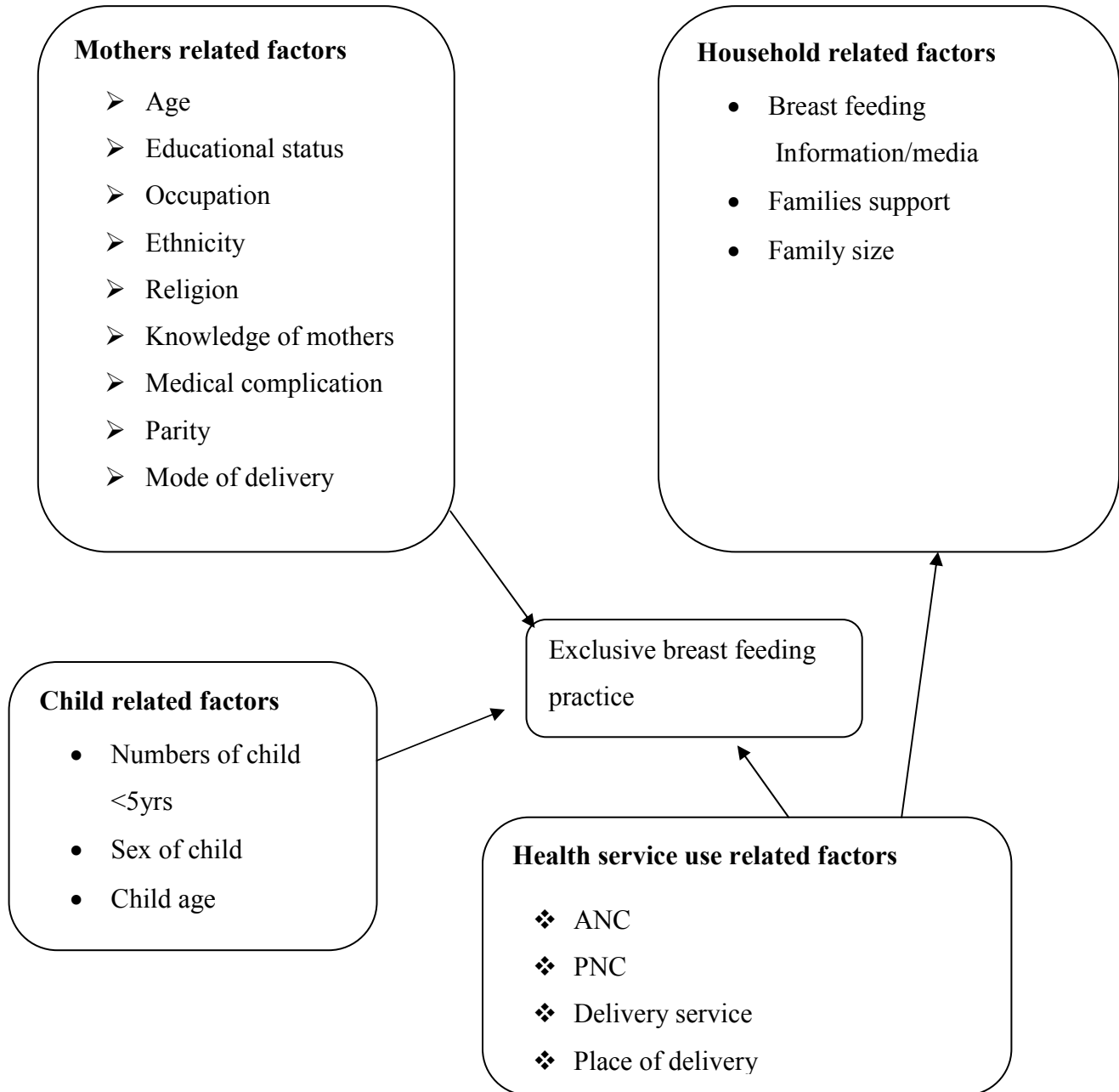
Maternal and paternal occupation, place of residence, postnatal counseling on exclusive breast-feeding, mode of delivery, and birth order of the index infant were significant predictors of cessation of exclusive breast-feeding.(42)

Professionals described a range of influences on maternal decisions to breastfeed or formula feed including lack of knowledge, support and help with difficulties(45).

Place of birth, belief of breast milk sufficiency, religious fathers support of exclusive breastfeeding and maternal age of 18-23 were independently predictors of exclusive breastfeeding among employed mothers. Whereas, husbands' support of exclusive breastfeeding knowledge on duration of exclusive breastfeeding, timely initiation of breastfeeding Awareness of exclusive breastfeeding and delivery attendance were independently predictors of exclusive breastfeeding among unemployed mothers(30). Being unemployed and age of infants of less than two months were independently associated with exclusive breastfeeding(27).

Mother education level child sex, Parity, family size, and time of postnatal care were independent predictors of exclusive breastfeeding practice in the study area.(29) Non-exclusive breastfeeding was negatively associated with child's age of 0-2 months and 3-4 months and ownership of radio but positively associated with the practice of discarding colostrum'(26)

## 1.2 Conceptual frame work



*Figure 1 Conceptual frame works on factors associated with exclusive breast feeding*

### **2.3 Significance of the study**

The prevalence of breastfeeding differs from one country to another and from one society to another, this of course is due to cultural and religious beliefs. The interventions protection, promotion and support of breastfeeding rank among the most effective to improve child survival

A more detailed understanding of the factors associated with EBF is needed to develop effective interventions to improve the rates of EBF and thus reduce infant mortality.

Related to the gap for exclusive breast feeding (EBF), programs should focus on addressing the socio-cultural environment so that mothers see that these practices are normative. Therefore, this study was tried to identify factors associated with exclusive breastfeeding practices among infants during the first 6 months in rural communities of Amuru district. It will contribute to a better understanding of how essential health interventions with proven practical efficacy such as EBF can be promoted. It is also hoped that this study's outcome will contribute to how to design and set health interventions in rural communities. Based on this in turn stakeholders will take actions thus to improve child health status in the study area. It may also serve as a baseline data for further study.

## **Chapter Three**

### **3. Objective**

#### **3.1 General Objective**

- To determine prevalence of exclusive breast feeding and identify associated factors among rural mothers with children age 6-12months in Amuru District, H/G/Wollega Zone, Oromia Regional state, North West Ethiopia, 2015.

#### **3.2 Specific objectives**

- a) To determine the magnitude of exclusive breast feeding practice among rural mothers with children 6-12 months in Amuru district Oromia Regional state
- b) To determine factors influencing exclusive breast feeding among rural mothers with children 6-12 months in Amuru district Oromia Regional state

## **Chapter Four**

### **4. Method and material**

#### **4.1 Study area and period:**

The study was conducted in Amuru district, Oromia regional state, North West Ethiopia, which is 404 km away from Addis Ababa from February 15 - March 30, 2015. The district had a population of 67,155 (33,795 female and 33,360 male) of which 10,734 (16%) were children aged under five years. The District had three agro-climatic zones, low land, midland and high land, with two semi-urban and 20 rural 'kebeles'. In the district, there were four health Centers and 20 health posts with the health service coverage of 86% in 2013 (46). Agriculture is the main means of livelihood of the population.

#### **4.2 Study design:-**

A community based cross-sectional study.

#### **4.3 Population**

##### **4.3.1 Source populations:**

All mothers who lived in the woreda at least 6 months prior to the survey.

##### **4.3.2 Study population:**

All mothers who had a child age 6-12 months at the time of the survey.

#### **4.4 Eligibility criteria:**

##### **4.4.1 Exclusion Criteria:**

Mothers who were not able to communicate due to serious illness at the time of data collection were excluded.

#### **4.5 Sample size and Sampling Technique:**

##### **4.5.1 Sample size determination:-**

A sample of 391 mothers with children aged 6-12 months, who were already registered in Health extension workers' documents were taken from February to March 2015. Sample size was calculated for each expected factor influencing exclusive breast feeding and factors with the maximum sample size was taken. Epi Info version 7.1 was used to calculate sample size using the two population proportion formula for mothers who attend formal education and do not

attend formal education (illiterate) estimating equal size allocation. The proportion of EBF among mothers who attend formal education and did not attend formal education were 60% and 38% respectively(28). The value of  $Z = 1.96$  at  $\alpha=0.05$  and  $\beta=0.2$  with two sided confidence level of 95% and 80% power were used. Finally, 10% of the sample size was added for non-respondents and a total of **391** samples were taken.

#### 4.5.2 Sampling techniques:

From 20 rural kebeles, mothers-infant pairs were randomly selected and proportional to size allocation was done to get the required sample from each Kebele.

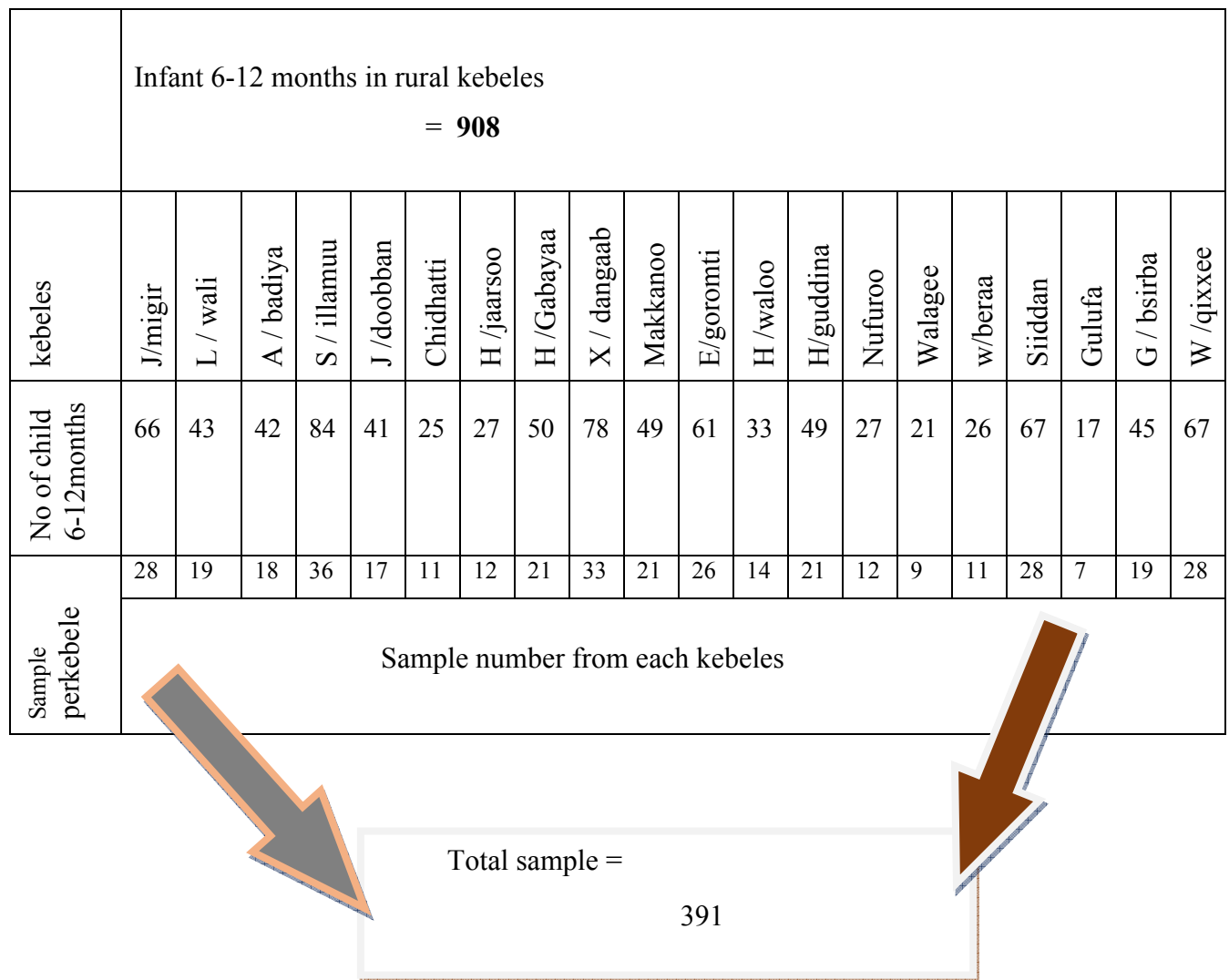


Figure 2 Schematic presentation of samplin



## 4.6 Variables

### Dependent variable:

- ❖ Exclusive Breastfeeding practices

### In dependent variables:-

- Socio-demographic factors
  - Educational status
  - Occupation
  - Age of mothers
  - Religion
  - Ethnicity
  - Marital status
  - Sex of child
  - Age of child
- Knowledge of mothers on breastfeeding
- ANC
- PNC
- Place of delivery
- Family support
- Mode of delivery
- Parity
- Family size
- Medical complication of mothers
- Media or information on breastfeeding

#### **4.7 Data Collection Technique and Tool:**

Data was collected by using designed well-structured questionnaire completed during face-to-face interviews with the mothers. The questionnaire adapted from the Ethiopian Health and Demographic Survey (EDHS), and after referring different literatures(2,4,14,39,41,). It was initially prepared in English and then translated into the local language, Afan Oromo, by fluent speakers of both languages, and it was translated back into English to check its consistency. This questionnaire also was tested on 5% of eligible mothers as a pre-test to check the consistence of the questions and the time needed to conduct an interview with a mother. Then, proper corrections and adjustment was done.

Mothers knowledge on the EBF practices was assessed using twelve closed ended questions with cronbach's  $\alpha$  (0.806) and then after these variables were reduced to five items using PCA (Principal component analysis) and their internal consistence were checked with (cronbach's  $\alpha$  = 0.837). These variables which were left in the final model after principal component analysis was used during further analysis and only one factor with Eigen-value greater than one were identified. This item ("colostrum is nutritious") explained 60.92% of the overall variance. Then using the SPSS transform command cases ranked and those who scored above the mean rank were considered as had good knowledge about EBF and below mean rank as poor knowledge.

Data on breastfeeding practices was asked retrospectively; mothers were asked to report previous breastfeeding experience, and the initiation of breast-feeding after delivery, the frequency of breast-feeding in the 24 hours was also asked, duration of exclusive breastfeeding, and reasons for stopping exclusive breastfeeding during the first 6 months following delivery. Breastfeeding support was assessed among husband, and other family members.

#### **4.8 Data Quality Assurance**

Training was given for five diploma nurse data collectors and one BSc. holder supervisor .The questionnaires were checked every day during data collection for completeness and consistencies by supervisor and data collectors. Then proper correction and adjustment was taken.

#### **4.9 Data processing and Analysis:-**

The questionnaire was checked manually for completeness and consistencies, and after editing, coding, and cleaning, data was entered in to Epi-Data version 3.1 database. Then, data was exported in to SPSS for window version 21 for analysis. Prevalence of exclusive breastfeeding practice was computed. To identify factors associated with exclusive breastfeeding practice, binary logistic regression analysis was carried at two levels, first bivariate logistic regression was performed to each independent variable with the outcome variable and variables with a p value < 0.25 was included in the final model (multivariate analysis). Strength of association was measured using odds ratio, and with 95% confidence intervals. The finding was presented in text and table. P-value less than 0.05 was considered statistically significant

#### **4.10 Operational Definition:**

**Exclusive breastfeeding:** Infant feeding only breast milk, and no other liquids or solids with the exception of oral rehydration solution, supplements or medicines to the child age less than 6 month since birth.

**Predominant breastfeeding** – an infant receives breast milk (including milk expressed from a wet nurse) as the predominant source of nourishment and allows water and water based drinks, fruit juice, ritual fluids, oral rehydration salts, drops or syrups (vitamins, minerals and medicine).

**Pre-lacteal foods** – non-breast milk feeds given before breastfeeding is initiated.

**Maternity care practices:** - refer to the events immediately before, during, and after labor and delivery that take place in the hospital or other birthing facility

**Knowledge** : mothers were asked on the advantage of breast feeding using twelve items, then PCA (principal component analysis) method used and scores of cases ranked and those who scored above the mean rank were considered as had good knowledge about EBF and below mean rank as poor knowledge.

#### **4.11 Ethical Clearance:-**

Ethical clearance was obtained from ethical review board committee of Jimma University, College of Public Health and Medical Sciences. Permission paper was obtained from different concerned authorities and offices. Official letter of co-operation was also obtained from Oromia Health Bureau, Zonal Health Desk & Woreda Health Office. Official cooperation letter was obtained from Amuru woreda health office for rural kebeles to be cooperative for this study

before entering to data collection. Then, Verbal consent was obtained after the participants informed about the study objectives.

#### **4.12 Dissemination of the Study**

The findings of this study to be presented to Jimma University, College of Health Science and distributed to Oromia Health Bureau, H/G/Wollega Zone Health Department, Amuru woreda health office and Stakeholders who were interested in maternal and child health related activities in H/G/Wollega Zone. Finally, efforts will be made to publish it in a journal.

## Chapter Five

### Result

#### 5.1 Socio-Demographic and Economic Characteristics

From the total 391 mother-infant pairs, 387 were included in the analysis, making the response rate about 99%. The mean age of the mothers was 26.3 years (SD  $\pm$  6.6 years) whereas the median age of the infants was 9 months. A majority 370 (95.6%) of the mothers were married, 190(49.1%) were protestant, followed by Orthodox Christian 131(33.9%) by religion. Three hundred one (77.8%) were Oromo by ethnicity and 241 (62.3%) were farmers by occupation. Two hundred fifteen (55.6%) and 152 (39.3%) of the mothers and fathers did not attend formal education respectively. In addition to this, 168(43.3%) of households had greater than five family members. In this study, 241(62.3%) of the respondent child were male.

*Table 1 Socio-demographic characteristics of the mothers (n=387), with children age 6-12months in Amuru District Oromia Regional state, Northwest Ethiopia, Feb-Mar. 2015*

Variables	Frequency	Percent	Exclusive breast feeding	
			Yes, (%)	No, (%)
<b>Age of mothers</b>				
15-20	105	27.1	19 (18.1)	86 (81.9)
21-25	74	19.1	36 (48.6)	38 (51.4)
26-30	105	27.1	72 (68.6)	33 (31.4)
31-35	60	15.5	34 (56.7)	26 (43.3)
>35	43	11.1	25 (58.1)	18 (41.9)
<b>Ethnicity</b>				
Oromo	301	77.8	156(51.8)	145(48.2)
Amhara	59	15.2	20(33.9)	39 (66.1)
Other*	27	7.0	10(37.0)	17(63.0)
<b>Marital status</b>				
Married	370	95.6	178 (48.1)	192(51.9)
Unmarried <sup>++</sup>	17	4.4	9(52.9)	8(47.1)

<b>Mothers Educational status</b>				
Illiterate	215	55.6	65 (30.2)	150 (69.8)
Literate ***	172	44.4	121(70.3)	51(29.7)
<b>Religion</b>				
Orthodox	131	33.9	67 (51.1)	64 (48.9)
Muslim	66	17.1	15 (22.7)	51 (77.3)
Protestant	190	49.1	104 (22.7)	86 (77.3)
<b>Mothers Occupation</b>				
Farmer	241	62.3	108(44.8)	133 (55.2)
House wife	131	33.9	66(50.4)	65(49.6)
Others**	15	3.9	12(80.0)	3 (20.0)
<b>Husband's Educational status</b>				
Illiterate	152	39.3	43(28.3)	109 (71.7)
Literate	235	60.7	135(61.9)	83 (38.1)
<b>No. of children &lt; 5 years</b>				
One	172	44.4	98 (57.0)	74 (43.0)
Two and above	215	55.6	88 (40.9)	127 (59.1)

\* = Tigre, Gumuz, and Gurage, \*\*= Gov't employee, merchant ++ = widowed, divorced, single

\*\*\*= primary school (1-8), secondary school (9-12) and college and above

## 5.2 Breastfeeding practices

All mothers breastfed their child at some point in the past and only 48.1% of mothers exclusively breastfed their child. Majorities of mothers 299(77.3%) initiated breastfeeding within the first hour of delivery and 333(86%) gave colostrums to their infants, and 75(19.4%) of mothers practiced prelacteal feeding.

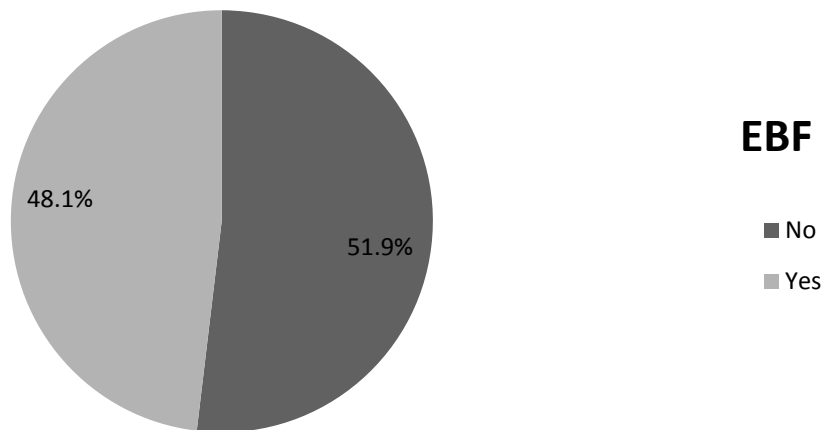


Figure 3 Exclusive breast feeding practices

Table 2 patterns of breastfeeding practices among rural mothers (n=387) in Amuru District  
Oromia Regional state, Northwest Ethiopia, Feb. 2015

Characteristic	Frequency	Percent	Exclusive breast feeding	
			Yes, (%)	No, (%)
<b>Initiate BF</b>				
Within one hour	299	77.3	172 (57.5)	127 (42.5)
After one hour	88	22.7	14 (15.9)	74 (84.1)
<b>Giving colostrums</b>				
Yes	333	86.0	184 (55.3)	149 (44.7)
No	54	14.0	2 (3.7)	52 (96.3)
<b>Frequency of BF within 24hrs</b>				
< 8 times	269	69.5	129 (48.0)	140(52.0)
≥ 8 times	118	30.5	57(48.3)	61(51.7)

### **Factors associated with exclusive breastfeeding practice**

Most of the participants, 315 (81.4%) were multiparous. One hundred Eighty three (47.3%) of the respondents had ANC follow up and 125(68.3%) of them visits three times and above. Concerning the place of delivery, more than half of the participants 197 (50.9%) delivered their index child at health institutions. Three hundred and fifty two (91.0%) of the mothers had normal vaginal delivery and only 126 (32.6%) followed PNC services.

One hundred seventy six (45.5%) of the participants have radio or television in their house. Almost half 195 (50.4%) of the participants had poor knowledge on breastfeeding practice. Two hundred and thirty nine (62.1%) of the participants received infant feeding counseling/advice from different sources such as health professionals 215 (55.6%), media (TV/radio) 112 (28.9%), and friends or neighbors 43 (11.1%).

In bivariate analysis; maternal age, educational status of the mother, husband's educational status, ethnicity, mothers occupation, ANC visit during last pregnancy, PNC visit, place of delivery, parity, colostrum feeding, owner of TV/radio and mothers knowledge about BF were significantly associated with EBF.



Table 3 Bivariate analysis of factors on EBF among rural mothers with their infants (n=387) in Amuru District Oromia Regional state, Northwest Ethiopia, Feb. 2015

Characters	Exclusive breastfeeding		COR (95% C.I.)
	Yes, (%)	No, (%)	
<b>Mother age (N=387)</b>			
15-20	19 (18.1)	86 (81.9)	1
21-25	36 (48.6)	38 (51.4)	4.3 (2.2 ,8.4)**
26-30	72 (68.6)	33 (31.4)	9.8 (5.2 , 18.8)**
31-35	34 (56.7)	26 (43.3)	5.9 (2.9, 12.1)**
>35	25 (58.1)	18 (41.9)	6.3(2.8, 13.7)**
<b>Ethnicity (N=387)</b>			
Oromo	156(51.8)	145(48.2)	1
Amhara	20(33.9)	39 (66.1)	.5(.3 , .8)*
Others	10(37.0)	17(63.0)	.5 (.2 , 1.2)
<b>Mothers Education</b>			
Illiterate	65 (30.2)	150 (69.8)	1
Literate	121(70.3)	51(29.7)	5.5 (3.5 ,8.5)**
<b>Occupation</b>			
Farmer	108(44.8)	133 (55.2)	1
House wife	66(50.4)	65(49.6)	1.3 (.8 ,1.9)
Others	12(80.0)	3 (20.0)	4.9(1.4 ,17.9)*
<b>Husbands Education</b>			
Illiterate	43(28.3)	109 (71.7)	1
Literate	135(61.9)	83 (38.1)	4.1(2.6 ,6.4)*
<b>Own TV/ radio</b>			
Yes	136(77.3)	40 (22.7)	10.9 (6.8,17.6)*
No	50 (23.7)	161 (76.3)	1
<b>Parity</b>			
The first	30(39.0)	47(61.0)	.5 (.3 , .81)*
The second	130(54.6)	108( 45.4)	.5 (.3 ,.8)*

The third and above	26(36.1)	46 (63.9)	1
<b>ANC follow up</b>			
Yes	163(89.1)	20 (10.9)	64 (33.9,121.1)*
No	23(11.3)	181 (88.7)	1
<b>Place of delivery</b>			
Health facility	146(74.1)	51 (25.9)	10.7 (6.7,17.2)**
Home	40 (21.1)	150 (78.9)	1
<b>PNC visit</b>			
<b>Yes</b>	104(82.5)	22 (17.5)	10.3 (6.1 ,17.5)**
<b>No</b>	82 (31.4)	179 (68.6)	1
<b>Initiate BF</b>			
Within one hour	172(57.5)	127 (42.5)	7.2(3.8 ,13.2)**
Above one hour	14 (15.9)	74 (84.1)	1
<b>Giving colostrums</b>			
Yes	184(55.3)	149 (44.7)	32.1(7.7,133.9)*
No	2 (3.7)	52 (96.3)	1
<b>Knowledge (n=387)</b>			
Poor	44 (22.6)	151 (77.4)	1
Good	142(74.0)	50 (26.0)	9.7(6.1 ,15.5)**

\*= p < 0.05 \*\*= p < 0.01

In this study, maternal age, husband education, owner of TV/radio, ANC visit, place of delivery and, time to initiate BF, was significant and independently associated with EBF practice in multiple logistic regression analysis.

Mothers who were in the age group of 21-25, were 5 times, (AOR=5.1, 95%CI=1.5, 17.4) more likely exclusively breastfeed their child when compared with mother in age group of 15-20 years. Mothers whose husband Attend formal education(literate) were about3 times more

likely to exclusively breastfeed their child than those who did not attend formal education(illiterate) (AOR=2.8, 95% CI=1.2 , 6.7).

Ownership of radio was significantly predictor of EBF practices and those who had radio were more likely exclusively breast feed their child than those who had not (AOR=2.8, 95%CI= 1.2, 6.7).

ANC follow up was strongly associated with EBF practices and mothers who follow up ANC service were (AOR=9.2, 95% C.I= 8.2, 44.9) more likely EBF their child than those who did not attend ANC services. Place of delivery was significantly associated with EBF and mothers who gave birth their index child at health institution (AOR=4.3, 95%CI=1.8, 9.7) were more likely practice EBF.

Mothers who initiated breastfeeding within one hour of birth were 4 times More likely to practice exclusive breastfeeding than mothers who did not initiated within hour (AOR=4.2, 95%CI=1.4, 13.4)

Table 4 Multivariate analysis of factors influencing EBF among rural mothers (n=387) in Amuru District Oromia Regional state, Northwest Ethiopia, Feb. 2015

Characters	Exclusive breast feeding		COR (95% C.I)	AOR (95% C.I)
	Yes, (%)	No, (%)		
<b>Age of mothers</b>				
15-20	19 (18.1)	86 (81.9)	1	1
21-25	36 (48.6)	38 (51.4)	4.3 (2.2 ,8.4)	5.1 (1.5 , 17.4)**
26-30	72 (68.6)	33 (31.4)	9.8(5.2 , 18.8)	3.2 (.9 , 10.5)
31-35	34 (56.7)	26 (43.3)	5.9 (2.9, 12.1)	.8 (.2 , 3.3)
>35	25 (58.1)	18 (41.9)	6.3(2.8, 13.7)	1.8 (.5 , 7.0)
<b>Husband's educational status</b>				
Illiterate	43(28.3)	109(71.7)	1	1
Literate	135(61.9)	83 (38.1)	4.1(2.6 ,6.4)*	2.8(1.2 , 6.7)*
<b>Own TV/ radio</b>				
Yes	136(77.3)	40 (22.7)	10.9 (6.8,17.6)*	2.8(1.2, 6.7)*
No	50 (23.7)	161(76.3)	1	1
<b>ANC Follow up</b>				
Yes	163 (89.1)	20 (10.9)	64 (33.9,121.1)*	9.2 (8.2 , 44.9)**
No	23(11.3)	181(88.7)	1	1
<b>Place of Delivery</b>				
Health facilities	146 (74.1)	51 (25.9)	10.7(6.7,17.2)**	4.3 (1.8, 9.7)**
Home	40 (21.1)	150(78.9)	1	1
<b>Initiate BF</b>				
Within one hour	172 (57.5)	127(42.5)	7.2(3.8 ,13.2)**	4.2(1.4, 13.4)*
Above one hour	14 (15.9)	74 (84.1)	1	1

\*= p < 0.05, \*\* = p < 0.01

## Chapter six

### Discussion

The superiority of breast milk over any other food nourishment for the human newborn and infant can hardly be challenged, and it has become more and more apparent over the years that it is the most ideal, safe, and complete food that a mother can provide for her newborn at very little cost(5). This study attempted to determine the prevalence and associated factors of exclusive breastfeeding practice. The prevalence of exclusive breastfeeding was similar with the study conducted in Bahir dar city (29) but, lower than the EDHS 2011 report and much higher than the study result from Nigeria, and rural eastern Uttar Pradesh India, (2,24,39). The difference might be due to, the difference in sample size and place of the study. But, rate of EBF was almost about two fold lower than the WHO/UNICEF recommended level of 90% for EBF in children less than six months of age.

The proportion of the mothers initiated breastfeeding within one hour was much higher than the EDHS 2011 report and the study conducted in rural area of Jimma Arjo Woreda(26). In addition, the proportion of mothers with knowledge on exclusive breastfeeding was higher compared with the study conducted in Jimma Arjo Woreda (26). This might be due to the fact that rural health extension worker effort to enhance health of community, disseminate health education and encourage the community may increase awareness of mother on the value of breastfeeding.

Mothers who were in the age group of 21-25years, were 5 times, (AOR= 5.2, 95%CI=1.5, 17.4) more likely to EBF than those who found in adolescent age groups (15-20years). The research conducted in Brazil also reveal that, Shorter breastfeeding duration was associated with maternal age (<20years) (35).This might be, adult mothers may more confident in their ability to nourish their children through breastfeeding and knew the value of breastfeeding. That adult women breastfeed for longer might be due to greater experience and knowledge of breastfeeding. Comprehensive dissemination of sexual education, information could contribute to a reduction in the frequency of adolescent pregnancies.

In this finding, paternal educational level was positively associated with maternal exclusive breastfeeding practices. Mother whose husband attend formal education were about 3times more likely to practice exclusive breastfeed compared with illiterates (AOR=2.8, 95% CI=1.2, 6.7).

The study conducted in Arba Minch area also indicated that, Women whose husbands did not attend any formal education had less knowledge about optimal breastfeeding practices (AOR= 2.92 [1.28, 6.63]) compared to whose husbands attended primary school and above(31). This might be due to paternal influences to feed a child as he learnt along with different courses. Support received during the practice of exclusive breastfeeding included help with house chores, verbal encouragement and assistance in the care of the older child may enhance EBF.

Mothers who follow up ANC service were more likely to EBF their child than those who did not attend ANC services (AOR= 9.2, 95% C.I= 8.2, 44.9). This result consisted with the study conducted in Brazil(35), and Bangladesh(48). The study conducted in Pakistan on the effect of antenatal counseling on exclusive breastfeeding shows that counseled mothers practiced exclusive breastfeeding significantly more than the group not counseled. This is true since, mothers who attend ANC services counseled and supported by health care workers to breastfeed their children exclusively. Antenatal counseling helps in motivating the mothers for initiation of breastfeeding immediately after birth and practicing exclusive breastfeeding for first six months of infant's life (44). Health professional can work to foster confidence in mothers through encouragement, and teaching about breastfeeding.

The result from this study indicated that, place of delivery was one of the predictors of EBF practice. Mothers who delivered their last child at health facility were 4 times more likely to practice EBF compared to those who delivered at home (AOR=4.3, 95%CI=1.8, 9.7). This result was much higher than the finding from Nigeria(AOR=0.93)(5). This might be due to the difference of sample size and in Nigeria the study was conducted as nation. This result was also consisted with other studies from India, (34) and Bahir Dar city(AOR=3.02)(28), reveal that ,mothers who delivered their child at health facility were more likely to practice EBF compared to those who delivered at home. This might be due to the postpartum breastfeeding counseling and support provided at the health facility as part of discharge practices.

This study showed that availability of radio had significant contribution in promoting exclusive breastfeeding practices. Mothers those who had radio were (AOR=2.8, 95%CI= 1.2, 6.7) about 3 times more likely to exclusively breastfeed when compared with those who did not have radio. The study conducted in Jimma Arjo also reveal that ownership of radio had positive significant association with EBF practices (26). This could be due to the nutrition education messages given

through the radio. Media campaigns can improve attitudes toward breastfeeding and increase duration of exclusive breast feeding.

This study reveals that, there was a significant association between early initiations of breastfeeding and exclusive breast-feeding. Mothers who initiate breast-feeding within one hour were 4 times more likely to EBF their child (AOR= 4.2, 95%CI=1.4, 13.4) than those who did not initiate within an hour. It is line with the study conducted in Ethiopia, Injibara Town (31)and India (24). The importance of early contact has also been linked to strengthening the emotional bond between mother and child, which may also be responsible for increased breastfeeding duration. This fact can be explained by the beneficial effect of this first contact for the mother, leading to increased liberation of oxytocin, favorable to milk ejection, in addition to the lactogenic effect of the baby's suction(35).

## **Chapter Seven**

### **7.1 Conclusion**

Prevalence of exclusive breastfeeding was low in Amuru woreda. Mothers' age, husbands' education, having ANC visit, place of delivery, early initiation of BF and ownership of radio were the independent predictors of exclusive breast feeding in the studied community. Therefore, an emphasis needed on the breastfeeding intervention programs during antenatal and postnatal check-ups in order to increase the proportion of women practicing EBF

Educating pregnant women and new mothers about breastfeeding is one of the most effective ways to increase exclusive breast feeding practices. Promoting and strengthening institutional delivery may also enhance exclusive breast feeding practices

Since mothers were asked to report about their past breast feeding experience; there might be recall bias on breastfeeding practices as the mothers could forget when they introduced an additional food. Despite the limitations, this study has its strengths. Women with infants who participated in the study were randomly selected from the whole rural kebeles of the woreda and participation rate was high. Therefore, the results on breastfeeding practices observed in this study can be generalized for the woreda.



## 7.2 Recommendation

- ✓ It is better if, infant feeding advice/counseling at both the community and institutional levels Strengthened.
- ✓ Health professionals should consider health education as an important aspect in promotion of exclusive breastfeeding promotion and support of appropriate feeding practices
- ✓ Woreda health office should focus on educating mothers about optimal child feeding practices at different occasion like a meeting, coffee ceremony and Idirs which is good opportunity to enhance mothers' knowledge of child feeding practices.
- ✓ Health facilities in the woreda (health center, health post, and private clinics) should be emphasis on breastfeeding counseling and support in all prenatal checkups and at birth for others.
- ✓ Strong community based behavior change communication on the importance of exclusive breastfeeding practices is recommended to be instituted using Health Extension Workers and local community as key actors in order to enhance exclusive breast feeding practices in the study community.
- ✓ Health information on breastfeeding practices should be provided through schools and other educational channels to promote greater awareness in the study area.
- ✓ Encouraging the formation of mother-to-mother support groups is highly beneficial in the woreda.
- ✓ Government and non-government organizations working on the promotion of exclusive breastfeeding should involve husbands and family members so that mothers are helped to adhere to exclusive breastfeeding

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## Appendix

### Questionnaires

# JIMMA UNIVERSITY

COLLEGE OF HEALTH SCIENCES

DEPARTMENT OF EPIDEMIOLOGY

Hello!

I am \_\_\_\_\_; I came from Jimma University, College of Public Health and Medical Sciences, Department of Epidemiology. I am interviewing mothers of 6-12 months to assess the practice of breastfeeding and associated factors. I am going to ask you some questions that are very important for the programmers in infant/child feeding service to plan improved Intervention.

I would like to ask your opinion of breastfeeding practices and factors influencing the practices, in general. All comments, both positive and negative, are welcome. Therefore, your honest and genuine participation by responding to the questions prepared is highly appreciated and helpful to attain the objective of the study. Your name will not be written on this form and no individual response will be reported to anybody. Hence, your answers are completely confidential. If you are unable to continue an interview, I may stop the interview process at any time. I greatly appreciate your taking time to speak with me.

Are you willing to participate in the interview? If yes, proceed; if no, thanks and stop here.

#### ***Consent Form***

I am informed all about the purpose and benefit of the study and I have understood that no information about me will be exposed to other party. After taking all the above into consideration, I the undersigned have:

1. Agreed to participate in the study.  If so, continue
2. Disagreed to participate in the study.  If so, Say “Thank you” and discontinue.

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

Data collector's: Signature \_\_\_\_\_ date \_\_\_\_\_

001 Record number. \_\_\_\_\_ 002 House number \_\_\_\_\_ 003 Keble \_\_\_\_\_

Note: Encircle from the given option and write if any other idea or answer as mothers response

**Section-1: Socio-Demographic characteristics of all eligible mothers**

S. No	Questions	Response categories	Skip
Q001	How old are you? Ages in years	Year-----	
Q1002	Family size	a. Female _____ b. Male _____ c .Total _____	
Q1003	Ethnicity	a) Oromo b).Amhara c)Tigre d).Gumuze e). Other specify-----	
Q1004	What is your marital status?	a. Married b. Single c. Separated d. Widow e. Divorced	
Q1005	What is your Educational status?	a) illiterate b)Primary school(1-8) c) Secondary school (9-12) d) College and above	
Q1006	What is your religion?	a. Orthodox b. Muslim c. .Protestant d. Other specify-----	
Q1007	Husband's educational status	a) illiterate b)Primary school(1-8) c) Secondary school (9-12) d) College and above	
Q1008	What is your occupation?	a) Employed b)Farmer c) House wife d) merchant e) Others specify.....	
	Do you have radio /TV?	a) Yes b) No	
Q1009	What is the average monthly income of the house hold?(in birr) *Probe for approximate Number	-----Birr	

## Section-2: Questions on Mothers Experience Exclusive Breastfeeding of the Youngest Child

Now I would like to ask you some questions about your maternity experiences.

	Questions	Response categories	Skip
Q2001	How many children are born Alive? (parity)	a) The 1 <sup>st</sup> b) the 2 <sup>nd</sup> c) 3 <sup>rd</sup> and above	
Q2002	How many children $\leq$ 5years do you have now?	a. One b. Two c. >two	
Q2003	How old is your youngest child?	( in Months)-----	
Q2004	Sex of your child?	a) Male b) Female	
Q2005	Have you attended Antenatal care in any health facility while you were pregnant with the last child?	a. Yes b. No	
Q2006	If the answer of Q-2005 is yes, how many times you have visits ANC in that specific health facility?	a. 1 time b. 2 times____ c. $\geq$ 3 times d. Don't know_____	
Q2007	Where did you deliver this child?	a) Health facility b) Home c) Others specify-----	
Q2008	Who assisted you during delivery	a) Health worker b) TBA c) Relatives d) Others specify-----	
Q2009	What was the mode of delivery?	a) Normal delivery b) Caesarean section c) Assisted delivery	
Q2010	Following your last delivery have you attend postnatal care?	a. Yes b. No	
Q2011	Have you ever breastfed this child? <b>(if no. go to qn. 2012 )</b>	a. Yes b. No	
Q2012	When did you initiate breastfeeding your child for the first time after delivery?	a. Within 1 hour b. 2-3 hours c. Days (mention) .....	



Q2013	If delayed more than one hour, what were reasons that made you delay in breastfeeding initiation?	a)Caesarian section b) Baby was sick c) Mother was sick d) Delayed milk secretion e) Others (mention).....	
Q2014	Within the first three days after delivery, before your milk began flowing regularly, did you feed the child the liquid (colostrums) that came from your breast?	a. Yes b. No. c. Don't know	
Q2015	If the answer for No.2014 is no, what is the reason?	a. It is useless b. It is not good for child c. It is dirty d. I don't know e .Other specify-----	
Q2016	Do you currently breast feed your child?	a. Yes b. No	
Q2017	How many times did you breast-feed within 24 hours (day & night)?	a. < 6 times b. 6-8 times c. > 8times d. None	
Q2018	When did you start introducing extra foods/ drinks including water to your child?	a) Less than 1 month b) 1 to 3 months c) 4 to 5 months d) 6 months	
Q2019	If the baby is still breastfeeding do you give your child any other food or liquid like water/juice apart from breast milk?	a. Yes b. No	
Q2020	After delivery, did you give your baby anything to eat/drink before starting breastfeeding?	a. Yes b. No	
Q2021	Why did you give the baby these liquids/solids? (Tick all applicable responses)	a)Baby gets hungry b) Mother not producing enough milk c)Advised by relatives/friends/ neighbors d) Advised by health care providers	

		e) Advised by TBA f) To sooth stomach pain g) Other (specify).....	
Q2022	Who advised you to provide your child with such type of food/ fluid?	a) My own decision      b) Grand parents c) Friends                      d) Others (specify)----	
Q2023	Why did you stop breastfeeding for the youngest child? *This question belongs only to a child who is not on breast feeding (stopped breast feeding)	a) Not enough milk b) Mother sick/weak c) Child sick/ weak d) Nipple/Breast problem e) Mother return to work f) Child refused g) Weaning age/age to stop h) Become pregnant Started using i) Other(Specify)___	

**Section 3-Knowledge of Mother on Exclusive Breastfeeding**

**Read the statement to the mother and indicate her response in the appropriate box.**

Q3001	What is the importance of yellowish milk (colostrums)	a. Nutritious b. Protection against diseases c. I don't know d. Other (mention).....		
Q3002	Do you think breast milk alone is Sufficient for the baby for 0-6 Months?	a. Yes      b. No		
Q3003	If no, for how long is breast milk Sufficient for the baby?	a) One month    b. two months c. three months    d. four months e. five months    g. six and above		
Q3004	How many times per day should the baby be breastfed	a. 3-6 times      b. 6-8 times c. On demand d. Other (mention).....		
Q3005	What is the appropriate time to start complementary foods?	a. Less than 1 month    b.1 to 3 months c. 4 to 5 months    d. 6 months		
Q3006	In your opinion what is the advantage of breastfeeding for a child?	a. Grows best b. Prevents disease c. Provide complete and perfect nutrition d. Bonds mother & child e. Don't know f. Other(specify)-----	Y	N
Q3007	In your opinion what is the advantage of breastfeeding for a mothers?	a. Prevents disease b. Prevents pregnancy c. Saves money d. Bonds mother and child e. Don't know f. Other(specify)-----		

**Section-4: Questions on Advice and Support of Breast Feeding Practice**

	<b>Questions</b>	<b>Response categories</b>	<b>Skip</b>
Q4001	When you were pregnant or in the period after delivery of the last child, have you ever been informed /advised about breast feeding?	a. Yes    b. No c. Don't know	
Q4002	If Q 401 is yes, whoever gave you help or advice how to start and continue breast feeding your child?	a. Health worker    b. Husband c. Mothers/Grandmother d. Friends/Neighbors e. Mass media(TV/Radio) f. Other(specify)-----	
Q4003	In your opinion what should be the role of husband in breast feeding?	a. Know the advantage of breast feeding and give advice b. Give economic support and Involve on home activities c. Has no role d. Others (specify)-----	
Q4004	Does your husband support exclusive breast feeding?	a. Yes b. No	
Q4005	Do your families support exclusive breast feeding?	a. Yes b. No	
Q4006	Who influenced your decision on your breastfeeding practice?	a) Husband/spouse    b) My mother c) Mother in law    d) Health worker e) My own decision f) Others mention .....	

Thank You!!!!!!!!!!!!!!

Name of Interviewer-----

Signature----- Date -----//-----//-----

**GAAFANNOO AFAAN OROMOO**  
**YUNIVARSIITII JIMMAA**

**KOLLEEJJII SAAYINSII FAYYAA**

**MUUMMEE BARNOOTA IPPIDIMOOLAJII**

Ani \_\_\_\_\_ Jedhama.Kanan dhufe Yunivarsiitii Jimmaa Kolleejjii Saayinsii Fayyaa Muummee barnoota Ippidimoolajii ti. Ani amma kanan as jiru haadholii daa'ima ji'a 6-12 qaban, waa'ee harma hoosisuu fi rakkolee harma hoosisuu wajjin wal qabatan irratti qorannoo gaggeessuu barbaadeni. Yaada keessan walii gala waa'ee harma hoosisuu irratti qabdan isin gaafachuun barbaada. Gaaffileen amma ani isin gaafannu Kun qaaama kunuunsaa fi tajaaajila daa'immanii irratti hojjetuuf kan gargaarudha. Yaadni keessan kamiyyuu ni keessummeeffama. Kanaaf ,hirmaannaa fi amanamummaan gaafannoo kana deebisuun keessan kaaayyoo qorannoo kanaa galmaan ga'uu keessatti ga'ee olaanaa taphata. Maqaan keessan hin barreeffamu akkasumas deebiin nama dhuunfaa kamiyyuu qaama birootti dabarfamee hin kennamu. Kanaaf deebiin keessan iccitiidhaan kan kaa'amuu ta'a. Gaaffiilee kanaaf deebii kennuu fi dhiisuun akkasuams yeroo barbaaddanitti addaan kutuuf mirgi keessan eegamaadha.

Gaafannoo kana keessatti hirmaachuuf eeyyamamaadhaa? Eyyee yoo ta'e itti fufaa; Yoo lakki ta'e galatoomaa ,asumatti dhaabaa!

Gucha walii galtee

Faayidaa fi kaayyoo qorannoo kanaa hubadheera akkasumas ragaaleen ani kennu qaama biraa kamittuu akka hin kennamne hubadheera. Waantota armaan olii kana yaada keessa ergan galchee booda akka armaan gadiitti

1. Irratti hirmaachuuf walii galeera \_\_\_\_\_ yoo ta'e itti fufaa
2. Irratti hirmaachuuf itti walii hin galle  Yoo ta'e "galatoomaa" , addaan kutaa Mallattoo deebii kennaa \_\_\_\_\_ Guyyaa \_\_\_\_\_

Mallattoo Ragaa Funaanaa \_\_\_\_\_ Guyyaa \_\_\_\_\_

Gaaffilee sirriitti dubbisuun deebii haadholii dhaggeffachuun kan tarreeffaman keessa jala muri.

001. Lakk. Galmee \_\_\_\_\_ 002. lakk. Manaa \_\_\_\_\_ 003. Ganda \_\_\_\_\_

**Kutaa-1 Gaaffilee Hawaasa-Dinagdee haadholii harma hoosisan**

<b>lakk.</b>	<b>Gaaffii</b>	<b>Deebii</b>	<b>Tari</b>
Q001	Umurii (waggaadhaan)?	Waggaa -----	
Q1002	Baay'ina maatii	a) dhalaa b) dhiira __ c) waliigala__	
Q1003	Sabummaa	a)Oromoo b) Ahmaara c)Tigree d) Gumuuz e) Kan biro (ibsi)	
Q1004	Haala gaa'ilaa?	a) kan heerumte b) kan hin heerumiin c) kan adda baate d) gaalamootaa e) kan hiikte	
Q1005	Sadarkaa barnootaa?	a) kan hin baranne b) barumsa sadarkaa 1ffaa c) sadarkaa 2ffaa(9-12) d) koollejji fi isaa ol	
Q1006	Amantii	1.Ortoodoxi 2.Musiliima 3.Protestant 4.kan biro (ibsi)-----	
Q1007	Gahee hojii	a) hojjetaa mootummaa 2)qote –bulaa 3) haadha manaa 4) daldalaa 5) kan biro (ibsi).....	
Q1008	Sadarkaa barnootaa abbaa warraa	a) kan hin baranne b) barumsa sadarkaa 1ffaa c) sadarkaa 2ffaa(9-12) d) koollejji fi isaa ol	
Q1009	Radiyoo /TV ni qabdu?	a) Eeyyee b) Miti	
Q1010	G /galeessaan galii maatiin ji'aan argatu? (birriin)	-----birr	

**Kutaa -2: Gaaffilee raawwii harma qofaa hoosissuu itti xiinxallu**

	Gaaffilee	Deebii	Tari
Q2001	Daa'ima meeqaaffaa deessan?	a. 1ffaa b. 2 <sup>ffaa</sup> c. 3 <sup>ffaa</sup> fi isaa ol	
Q2002	Baay'ina daa'imman waggaa 5 gadii?	a.Tokko b.Lama c. Kan biroo (Ibsi)-----	
Q2003	Umurii daa'ima xiqqaa	-----Ji'aan	
Q2004	Saala	a) Dhiira b) Dhalaa	
Q2005	Yeroo ulfaa kee hordoffii da'umsa duraa taasifteetta?	a) Eeyyee b) Miti	
Q2006	Yoo deebiin gaaffii lakk. Q2005 eeyyee ta'e yeroo meeqaaf hordofte?	a) Yeroo 1 b) Yeroo 2 c) Yeroo $\geq 3$ d)Hin beeku _____	
Q2007	Daa'ima kee kana eessatti deesse?	a) Dhaabbata fayyaatti (HC, Hospital , Hp ) b) Mana c) Kan biro( Ibsi)-----	
Q2008	Da'umsa kee eenyu si gargaare?	a) Ogeessaa fayyaa b) .Deessistuu aada c) Fira d) Kan biroo Ibsi ---	
Q2009	Haalli da'umsa kee akkam ture ?	a) Normaalii b) Baqaqsuun c) Gargaarsaan (Assisted )	
Q2010	Hordoffii da'umsa boodaa taasifteettaa?	a) Eeyyee b) Miti	
Q2011	Daa'ima kee harma hoosiftee beektaa? <b>(yoo miti ta.e gara lakk. Q2022)</b>	a) Eeyyee b) Miti	
Q2012	Da'umsa kee booda yeroo hangamii keessatti daa'imaaf harma kennite ?	a) Battalumatti b) Sa'aa tokko keessatti c) Sa'aa 2-3 Keesaatti d) Guyyaa (Ibsi) .....	
Q2013	Harma hoosisuu kan eegalte sa'aatii tokko ol yoo ta'e sababni isaa maali?	a) Baqaqsuun waan deessef b) Daa'imni waan dhukkubsattef c) Haati waan dhukkubsatteef d) Aannan waan hin baaneef e) Kan biroo (Ibsi).....	

Q2014	Guyyaa jalqabaa sadan, aannan duraa ykn silga haadhaa daaa'imaaf kenniteetta?	a) Eeyyee b) Miti c) Hin beeku	
Q2015	Yoo deebiin gaaffii lakk. Q2014 miti ta'e sababni isaa maali?	a) Faayidaa hin qabu b) Daa'imaaf gaarii miti c) Xura'aadha d) Hin beeku e) Kan biroo (Ibsi) -----	
Q2016	Amma daa'ima kee harma hoosisaa jirtaa?	a) Eeyyee b) Miti	
Q2017	Guyyaatti (halkanii fi guyyaatti) yeroo meeqa harma hoosifta?	a) Si'a saddeeti gadi b) <u>Si'a saddetiif fi isaa ol</u> c) hin jiru	
Q2018	Ji'a meeqaaf daa'ima kee harma qofaa hoosifte?	a) Ji'a 1 gadi    b) Ji'a 1-3 tti c) Ji'a 4-5tti    d) Ji'a 5-6tti e) Ji.a 6 ol	
Q2019	Daa'imni harma hodhaa jira yoo ta'e ,harmaa ala nyaata dabalataa ni kenitaaf?	a) Eeyyee b) Miti	
Q2020	Yeroo deesse osoo daa'imaaf harma hin kenninwanti daa'imni akka dhuguuf ykn nyaatuuf kenniteef ni jiraa?	a) Eeyyee b) Miti	
Q2021	Yoo deebiin lakk, Q2020 eeyyee ta'e sababni isaaa maali?	a) Daa'imni waan beela'eef b) Aannan harmaa waan bahuu dideef c) Dhukkubbii garaa akka ittisuuf d) Gorsa maatii,ykn ollaa waan ta'eef e) Garsa deessistuu aadaati f) Kan biroo (Ibsin ).....	
Q2022	Nyaata akkanaa daa'imaaf akka kannitu eenyu si gorse?	a) Murtoo ofii kooti b) Maanguddoota c) Hiriyyaa koo d) Kan biroo(Inbsi)-----	



Q2023	Daa'ima harma hodhuu dhaabeef, Daa'ima keef harma kennuu maalif dhaabde?	j) Aannan harmaa waan bahuu didee k) Haati waan dhukkubsatteef l) Daa'imni waan dhukkubsateef m) Rakkoo harmaa (Fiixeen harmaa waan babbaqaqeeff) n) Haati Hojiitti Waan Deebiteef o) Yeroon nyaata dabalataa eegalu waan ga'eef p) Haati waan ulfoofteef q) Kan biroo ( Ibsi ) ____	
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**Kutaa 3-Bekumsa Haadhooliin Harma Qofa Hoosisuu Irratti Qaban**

**Deebii Haadhooliin Deebisan Dhaggeeffadhuu Hima Tarreeffame Keessaa Dubbisii Kan**

**Ta'uu Danda'u Itti Mari Ykn Jala Muri.**

Lakk.	Gaaffilee	Deebii	Tari	
Q3001	Faayidaan silga harmaa maal jettee yaadda?	a) Nyaata Madaalamaadha b) Dhukkuba Ittisa c) Hin beeku d) Kan biroo (Ibsi).....		
Q3002	Hang ji'a 6tti Daa'imaaf harmi qofti ga'aadha jettee ni yaaddaa?	a) Eeyyee b) Miti		
Q3003	yoo deebiin lakk q3002 miti ta'ee ,daa'imman yeroo hangamiif aannan harma qofa hodhuu qabu?	a) Ji;A 1'f b) Ji'a 2'f c) Ji'a 3'f d) Ji'a 4'f e).Ji'a 5'f f)Ji'a 6 Fi Is Ol		
Q3004	Daa'imman guyyaatti si'a meeqa harma hodhuu qabu?	a) Yeroo3-6 b) Yeroo 6-8 c) Yeroo 8-12tti d) Akka daa'imni fedhetti e) Kan biroo (Ibsi).....		
Q3005	Daa'imni yeroo kam soorata dabalataa eegaluu qana jettee yaadda?	a) Ji'a Tokko Gadi b) Ji'a 1 – 3ttis c) Ji'a 4 - 5 d) Ji'a 6tti		
Q3006	Faayidaa harma hoosisuun daa'imaaf qabu maali?	a) Guddina Daa'imaaf Gargaara b) Dhukkuba Ittisa c) Nyaata madaalamaa akka argatu taasisa d) Jaalala haadhaa fi daa'ima cimsa e) Hin beeku f) Kan biro ( Ibsi)-----	E	M
Q3007	Faayidaa harma hoosisuun haadhaaf qabu maali?	a) Dhukkuba Ittisa b) Ulfa Ittisa c) Qarshii Qusata d) Jaalala Haadhaa Fi Daa'ima Cimsa e) Kan Biro ( Ibsi)-----		

E= eeyyee, M= miti

**Kutaa-4: Gaaffilee gorsaa fi deeggarsa hadholii harma hoosisaniif taasifamu itti xiinxalamu**

	<b>Gaaffii</b>	<b>Deebii ta'uu danda'u</b>	<b>Tari</b>
Q4001	Yeroo ulfaa ykn da'umsa kee booda odeeffannoo yookiin gorsa harma hoosisuu dhageessettaa ?	a) Eeyyee b) Miti c) Hin beeku	
Q4002	Yoo deebiin gaaffii lakk. Q4001 eeyyee ta'e odeeffannoo ykn garsa kana eessaa argatte?	a) Ogeessa fayyaa irraa b) abbaa warraa c) Haadha / Akkoo irraa d) Hiriyyaa /Olla irraa e) Miidiyaa (TV/Radio) irraa f) Okan biroo(ibsi)-----	
Q4003	Maatiin kee daa'ima hanga ji'a jahaatti harma qofa hoosisuu ni deeggaruu?	a) Eeyyee b) Miti	
Q4004	Abbaan warraa kee daa'ima hanga ji'a 6tti harma qofa hoosisuu nideegaraa?	a) Eeyyee b) miti	
Q4005	Harma hoosisuu keessatti gaheen abbaa warraa maal ta'uu qaba jettee yaadda?	a. Faayidaa harma hoosisuu beekke gorsa kennuu b. Dinagdeen gargaaruu fi hojii mana keessatti qooda fudhachuu c. Gahee hin qabu d. Kan biroo (ibsi)-----	
Q4006	Harma hoosisuuf kan simurteessu eenyuu?	a. Abbaa warraa b. Haadha tiyyaa c. akkoo tiyyaa d. Ogeessaa fayyaa e. Ofiinan murteessa f. Kan biroon (ibsi) -----	

Galatoomaa!!!!!!!!!!!!!!

Maqaa nama gaafatee -----

Mallattoo----- Guyyaa -----//-----//-----