ADDIS ABABA UNIVERSITY

COLLEGE OF HEALTH SCIENCES

SCHOOL OF PUBLIC HEALTH

Assessment of the prevalence and associated factors of exclusive breastfeeding practice in Afar. A community based cross sectional survey, Aysaita wereda, Afar, Ethiopia.

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ABBREVIATIONS

AAU	Addis Ababa University
AOR	Adjusted Odds Ratio
ARHB	Afar regional health bureau
BF	Breastfeeding
CI	Confidence interval
COR	Crude Odds Ratio
CSA	Central statistics agency
DC	Data collector
EA	Enumeration Aria
EBF	Exclusive breastfeeding
EDHS	Ethiopian demographic and health survey
EPI	Extended program on immunization
FGD	Focus group discussion
HH	House holds
IYCF	Infant and young child feeding
MDG	Millennium development goal
OR	Odds ratio
PI	Primary investigator
PPS	Probability proportion to size
SPH	School of public health
SPSS	Statistical Package for Social Sciences
UNICEF	United Nations Children‟s Fund
WHO	World Health organization

ABSTRACT

Background: Breastfeeding is an important public health strategy for improving child and maternal health conditions. However, the prevalence of exclusive breastfeeding is very low in many developing countries including Ethiopia. Therefore, this study was conducted to determine the prevalence of exclusive breastfeeding and associated factors among infants aged six months in Asaita wereda, Afar Ethiopia.

Objective: To measure the prevalence and identify determinant factors of exclusive breastfeeding practice in Afar.

Materials and methods: A community based cross-sectional study was conducted with qualitative inquiry from March to April 2015. Quantitative data were collected from 631 mother infant-pairs residing in Aysaita wereda with pretested structured questionnaire using the modified EPI cluster sampling procedure. Seven clusters were selected using the PPS (probability proportional to size) after selecting the clusters, households were divided and distributed equally for each enumeration areas. Dividing 1958 HHs (estimated HHs to be visited) equal to the 7 EAs, 280 households in each selected clusters or enumeration areas were visited. The qualitative data were generated through focus group discussions among purposely selected discussants. Odds ratio with 95% confidence interval was estimated using bivariate and multivariable analysis with binary logistic regression model to identify independent predictors of exclusive breastfeeding while thematic framework analysis was employed for the qualitative data

Results: The majority (97.9%) of the mothers have ever breastfed their infants. The prevalence of exclusive breastfeeding was 55% with a median duration of 0.5 months. Residing in Urban AOR: 5.7, 95%CI(3.5-9.2), having good knowledge on exclusive breastfeeding AOR: 2.3, 95%CI (1.6-3.5), lower parity (1 & 2-4) AOR: 2.2 95%CI(1.2,4.2) & AOR: 1.9, 95%CI(1.1,3.5) respectively, delivering at health facility AOR: 1.7, 95%CI (1.1,2.7) unemployment AOR: 1.8, 95%CI(1.1,2.9) and primary education AOR: 0.6, 95%CI (0.4,0.9) were found to be a predictor of exclusive breast feeding.

Conclusion: The prevalence and median duration of exclusive breastfeeding was found to be low compared to the WHO recommendation. In the current study, however half of the mothers had good knowledge on exclusive breastfeeding, knowledge of mothers about the right time to initiate breastfeeding after birth, and knowledge on foods/liquids recommended to infants less than 6 months was far lower from many studies done in developing countries. Most of the study population had positive/favorable attitudes towards exclusive breastfeeding practice during the first six months. Urban residence, being unemployed, being knowledgeable on EBF practices, low parity and delivering at health facilities were the independent predictors of exclusive breastfeeding practice in the studied community. Thus Strengthening efforts on availability of basic services and promoting education on the cultural malpractices on rural areas, promoting knowledge on exclusive breast feeding using accessible means such as medias and public meetings, revising policies on maternity leaves and creating a baby friendly working environment, encouraging the mothers to deliver at health facilities and promoting its importance and encouraging further researches on the topic of area are recommended

1. INTRODUCTION

1.1. Background

Breast milk is regarded as perfect, natural and protective food for newborns [1]. Infants when exclusively breastfed for the optimal duration of six months are significantly protected against the major childhood diseases conditions, diarrhoea, gastrointestinal tract infection, allergic diseases, diabetes, obesity, childhood leukaemia and lymphoma, inflammatory and bowel disease [2,3]. In particular, the risk of hospitalization for lower respiratory tract infections during the first year of life is reduced by 72%. EBF is also found to be protective against single and recurrent incidences of otitis media. Infants who were given supplementary foods prior to 4 months had 40% more episodes of otitis media than their counterparts. Mothers who exclusively breastfeed their children enjoy an advantage of prolong lactational amenorrhoea and the risk of breast and ovarian cancer is found to be decreased [4]. In addition breastfeeding also benefits society by reducing health care costs, parental employee absenteeism and associated loss of family income [5].

Nutrition interventions have been acknowledged as being among the most effective preventive actions for reducing mortality among children under the age of five years [6]. Simple, valid, and reliable indicators are essential to track progress and guide investment to improve nutrition and health during the first two years of life. Of the indicators, exclusive breastfeeding ranks first; being estimated as having the potential to prevent 13% of all deaths. Indeed of the 6.9 million under five children who were reported dead globally in 2011, an estimated 1 million lives could have been saved by simple and accessible practices such as EBF [4]. Consequently, the WHO and UNICEF (1990) have recommended EBF for six months, followed by introduction of complementary foods and continued breastfeeding for 24 months or more[7].

Breastfeeding practice varies by region, country and in different cultures. The duration of ever breastfeeding in Ethiopia is long. Unlike the EBF which is not widely practiced. Currently, mothers exclusively breastfeed approximately half of children under six months (52%) with a median duration of 2.3 months and mean duration of 4.2 months [1].

One in every 17 Ethiopian children dies before the first birthday, and one in every 11 children dies before the fifth birthday. Wide regional differences in infant and under-five mortality are observed, as well. Mortality rates ranging from a low of 53 per 1,000 live births in Addis Ababa to a high of 169 per 1,000 live births in Benishangul-Gumuz and 127 per 1,000 live births Afar[1].

1.2. Statement of the problem

There is compelling scientific evidence [8] that exclusive breastfeeding of infants under one year could prevent around a million deaths of children under-five in the developing world. Yet global rates of exclusive breastfeeding rates have remained stagnant since 1990 with only 36 per cent of children less than six months exclusively breastfed in 2012[9]

In developing countries, of approximately 56 million infants less than six months of age, approximately 22 million are exclusively breastfed, while over 34 million children are not. Eighty per cent of these children who do not benefit from exclusive breastfeeding in developing countries live only in 29 countries. From these 29 countries, the 10 large countries including Ethiopia have two-thirds (over 21 million) of the approximate numbers of non-exclusively breastfed children in developing countries. [10]

In pastoralist areas such as Afar, one in five children suffers from acute malnutrition. The high rate of malnutrition contributes to the country‟s elevated under-five mortality rate of 88 deaths per 1000 live births, with malnourishment accounting for over half of all under-five deaths. Pre-lacteal feeding, bottle feeding, discarding of the colostrum, and other cultural taboos play a significant role in poor caring and feeding practices. Health service coverage is limited while antenatal care in Afar (19.2%) is well below the national average (52.1%). [11]

The Afar region accounts top among all regions of Ethiopia regarding having the highest number of stunted and wasted children. According to the EDHS 2011 the Afar region has the lowest exclusive breastfeeding median duration which is 0.6 months [1] next to Somali 0.5 which is again far beyond the national median duration of 2.3 months.

Children who are not exclusively breastfed have lower life expectancy, are more vulnerable to disease, have decreased cognitive development, are less productive, and typically perform poorly in school. On top of that seasonal variances in food consumption, water availability, and sanitation practices are poorly understood but contribute greatly to the prevalence of malnutrition in Ethiopia and particularly in Pastoralist areas such as Afar. [11]

Investigation of the prevalence and determinant factors of the EBF may provide insight into the current burden and nature of the problem and help on how to direct prevention strategies. Although several studies have been conducted on EBF in many regions of Ethiopia, there is a research gap on the study area as the EDHS with limited factors remains to be the only study on the specific area.

1.3 Significance of the study

The EDHS shows that exclusive breast feeding practice is very low in Afar. To the investigators best knowledge there are no published researches concerning the EBF except for the national EDHS which is only limited to certain indicators.

This specific research on the factors contributing to the low EBF practice that influence the outcome exploring both qualitative and quantitave possible factors is useful as a base line information, for the appropriate implementation of programs, to devise new strategies to promote optimal infant feeding and improve children health and what applies in Afar could also work for other more or less similar populations in Ethiopia.

2. LITRATURE REVIEW

2.1. Determinants of exclusive breastfeeding

There are many factors associated with the practice of breastfeeding including maternal socio demographic characteristics, psychosocial factors, and early exclusive breastfeeding experiences. These factors vary from country to country, reflecting different influences due to the differences in various circumstances. It is important to understand all influential factors in order to educate, promote, and protect the act of exclusive breastfeeding effectively. Determinants of EBF are the factors or conditions that might lead to some changes in the practice by for instance encourage or impede it. The extent to which these determinants or factors affect EBF is fairly complex and varies from one country to another and/or between different groups in the same country. Some are biological and beyond women‟s control (e.g. Breast engorgement, nipple problems etc.) while others are combinations of economic, environmental, cultural, social etc. Albeit with quantitative approaches, several of these determinants have been extensively studied and documented in recent years.

2.1.2. Socio demographic and economic characteristics

In developed countries, maternal age is a key determinant of exclusive breastfeeding practice. A study conducted in Canada [12] found a positive association between EBF & maternal age. There is a strong and consistent association between EBF duration and maternal age in developed countries [13]. There is consistent evidence indicating that older mothers are more likely to exclusively breastfeed their infants than younger mothers. Leung et al reported that maternal age was significantly associated with initial BF and showed clear dose-response gradients with older ages in Hong Kong [14] However, there are limited studies focused on this topic in developing countries. A study conducted in Beijing reported contrary findings that younger mothers were more likely to exclusively breastfeed their infants during the first 6 weeks of life.

Level of education of mothers had significant associations with EBF in developed countries. More recently, a US population-based prospective birth cohort study [16] which, along with previous results, suggested that a higher education level was related to initial BF and continuation of BF for two months. Although an inverse relation was reported in less developed countries. A study conducted in rural China [17] reported that mothers with education level above senior middle school were less likely to exclusively breastfeed their infants.

Family income is another determinant related to EBF. A study in Canada [12] showed that low-income mothers had lower incidence and duration of exclusive breastfeeding compared with high-income mothers. Low-income women were more likely to stop exclusive breastfeeding early, however this association was not as consistent as it was with maternal age and education level. A large, random-sample study including 10,519 mothers conducted in the US[18] indicated that women with higher family income level were more likely than their lower income counterparts to exclusively breastfeed their infants, but after adjusting for potential confounders, family income was no longer a significant predictor. Likewise,

there is an inverse relation between family income and exclusive breastfeeding in developing countries. Studies from Saudi Arabia, Peru and the Philippines [19, 20] all found that higher family income was associated with a reduced probability of initiation and duration of breastfeeding. In China, a survey[14] also found that mothers with a family income lower than 2000 RMB were more likely to exclusively breastfeed their infants for more than four months than higher income mothers. In other study the 2011 EDHS finds that the likelihood that a child is breastfed in the first hour after birth increases with the mother‟s educational status and wealth quintile.

Researchers have found associations between EBF and marital status. For instance, results of a secondary data analysis involving 556 women in Perth, Western Australia, indicate that married women are more likely to be EBF than single mothers [21].

Maternal employment has been found to have a negative association with BF initiation & exclusiveness. While some researchers have found maternal employment outside the home to be negatively associated with duration of exclusive breastfeeding, others have found type of employment to be a risk factor for not EBF [22]. Although maternal employment has been reported to generally affect the duration and exclusivity of breastfeeding, Rea et al. Report that in Brazil employed mothers who had access to and utilized work-related day care and breast milk expression facilities had a longer mean duration of exclusive breastfeeding than their counterparts with no access to these facilities [23]

2.1.3. Psychosocial factors

EBF practice has been reported to be influenced by different psychosocial factors. Partner and maternal grandmother support have been consistently identified as being positively associated. Support from health care workers such as doctors, nurses/lactation consultants and breastfeeding counselors have all been found to impact breastfeeding. [24]

2.1.4. Early breastfeeding experiences

Parity is another important maternal characteristic reported to influence EBF practice. Studies have found higher rates of BF initiation among primiparous mothers (mean" 74%) than among their multiparous counterparts (mean" 65%). Conversely, multiparous mothers have been found to breastfeed for longer than first time mothers. For example, Ahluwalia et al. have reported that a greater proportion of multiparous mothers continue exclusive breastfeeding after hospital discharge compared to primiparous mothers [25]. Similarly, Ryan et al have found a higher percent of multiparous women exclusively breastfeeding at 6 months (mean" 36%) compared to their primiparous counterparts (mean" 34%) across the different regions of the United States [26].

Delivery type, i.e. whether spontaneous or by cesarean section and infant‟s birth weight have been found to influence both EBF initiation and duration. While one group of researchers has reported positive associations between delivery type (vaginal delivery) and EBF others have found an inverse association. In Western Australia, Scott et al found mothers who had a vaginal delivery to be about twice as likely to exclusively breastfeed at hospital discharge compared to mothers who had cesarean delivery [15].

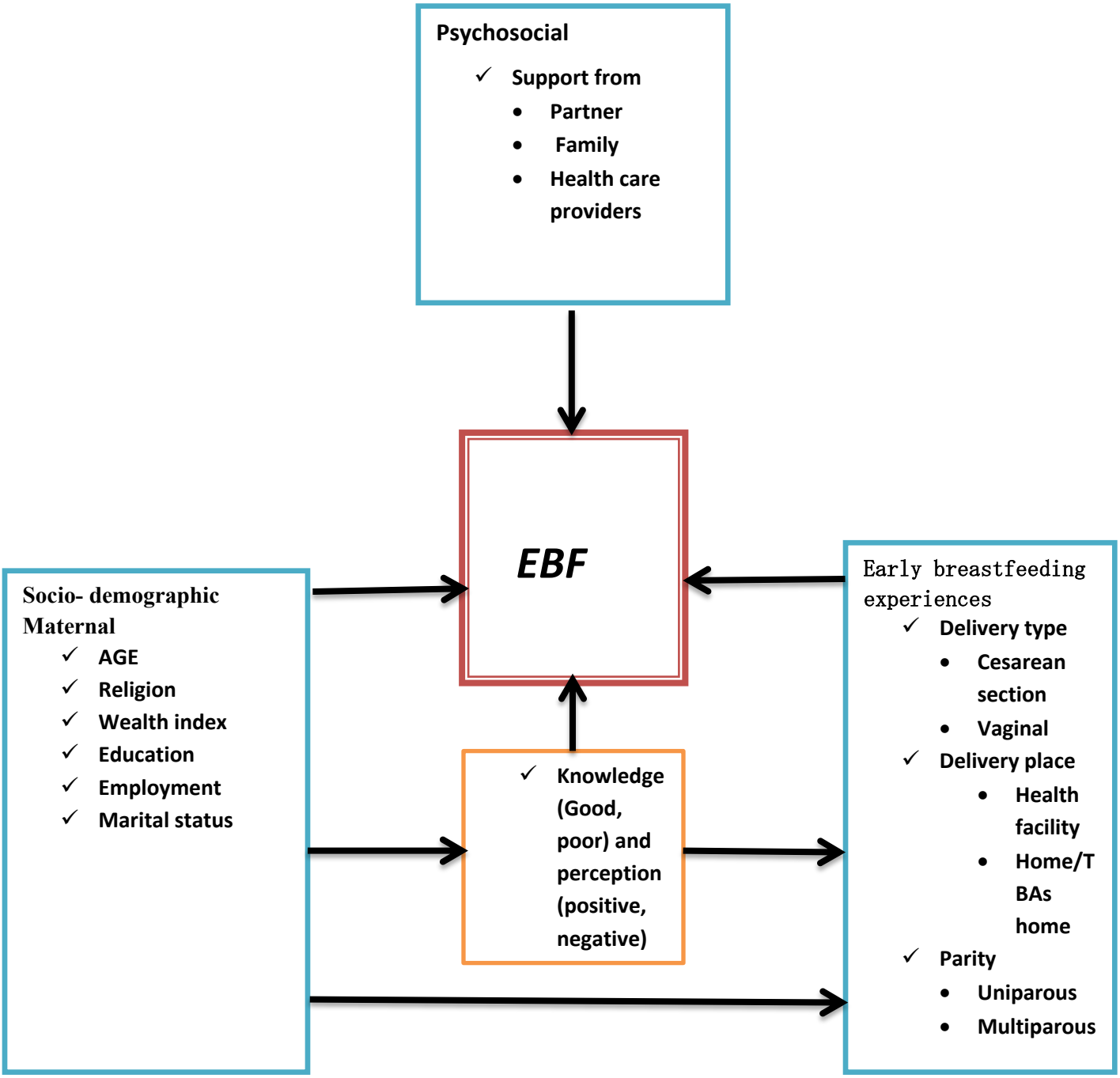
2.2 Knowledge and Attitude

In a study done by Seifu et al [27] results showed that among the study participants, 220(53.7%) (95% CI: 0.451-0.572) had good knowledge while 190 (46.3%) (0.234-0.672) had poor knowledge about breastfeeding practice. Among mothers who had ever breastfed, most 312(76.1%) of them mentioned that breastfeeding should be initiated within one hour after delivery and 98(23.9%) initiated breastfeeding within the period of one hour to one day. Fifty two (12.6%) of the study participants were mentioned that 4 month as the cut off point for exclusive breastfeeding. In Another research done on IYCF by AED LINKAGES [28] findings from formative research in selected communities says that mothers commonly give their babies other substances such as water with sugar, butter or yeast, in addition to breast milk. Other recommended infant feeding practices, such as early initiation of breastfeeding, feeding the colostrums and breastfeeding on demand were not faithfully adhered to by most mothers. For example, in South Wello, breastfeeding can be delayed for up to three days [28].

Again the research by Seifu, et al finds out that the majority of the study participants 303 (73.9%) (95% CI: 0.651-0.784) had positive attitudes towards breastfeeding practice. Majority (34.9%) of the respondents strongly disagree to provide breast milk to their infants at public places whereas 128 (31.2%) were neither support nor oppose public place feeding of breast milk for infants. Even though the majority of the respondents 396(96.6%) (95% CI: 0.861-0.972) fed their infant‟s breast milk, the prevalence of exclusive breastfeeding was 60.0% (95% CI: 0.553-0.649) of the mothers. Exclusive breastfeeding was a norm at younger age where by 160(67.2%) infants below 2 and 58(24.3%) infants between 2-4 months were exclusively breastfeed. However, as the age of the infants increases, above 4 months only 20(8.4%) of the infants have been exclusively breastfed.

2.3. Conceptual frame work

The factors that contribute to either high or low EBF practices can be summarized as maternal socio economic and demographic characters, early breastfeeding, psychosocial and knowledge and perception towards the EBF practice. While each influence the EBF practice they are not necessarily dependent to each other as shown in the fig.



3. OBJECTIVES

3.1 General objective

To measure the prevalence and identify determinant factors contributing to the low exclusive breastfeeding practice in Afar.

3.2 Specific objectives

1. To measure the prevalence of exclusive breastfeeding.
2. Determine mothers Knowledge and perception towards exclusive breast feeding.
3. Identify factors influencing exclusive breastfeeding.

4. MATERIALS AND METHODS

4.1. Study area and period:

The study was conducted in Aysaita wereda zone one Afar Ethiopia from March, 2015 to April, 2015. The Afar people are pastoral and agro-pastorals that live in the arid and semi-arid areas of Ethiopia, Eritrea and Djibouti. The Ethiopian Afar inhabits the middle, the lower and part of the upper Awash valley. Afar national regional state is one of the nine regional states of Ethiopia, located in the Northeastern part of the country. The size of Afar national regional State is 278,000 sq. k/ms. Geographically, the region is located between 9°N - 12°N latitude and 40°E - 42°E longitude at the northern tip of the Great East African Rift Valley

Administrative Zone one (since May 2006 known as Awsi Rasu) is one of five Zones of the Afar Region of Ethiopia. Asayita is the largest town in the Zone. Based on the 2007 Census conducted by CSA of Ethiopia, this Zone has a total population of 410,790, of whom 186,134 women; with an area of 30,242.10 square kilometers, it has a population density of 13.58. While 82,886 or 20.18% are urban inhabitants, a further 178,557 or 43.47% were pastoralists. A total of 75,735 households were counted in this Zone.

Aysaita district is one of 32 woredas in Afar. It is 655 k/ms far away from the capital city Addis Ababa and 65 k/ms far from the capital city of Afar , Samara. According to the 2007 Ethiopian population and housing census, the total population of Aysaita is 55,519, whereas the total population of under 5 and under one is 7645 and 1654 respectively and a total house hold of 9,740.

About 91.7% of population lives in rural area and pastorals and pastoral and agro-pastoral system of livestock production is the dominant livelihood source. As of the report from the ARHB the district has one hospital, one health center, 10 health posts, and 4 private clinics. Employees in the health centers are a total of 87, 32 technical and the rest 55 supportive. There are a total of 20 health extension workers in the wereda, all the 20 working in the rural.

4.2. Study design: Cross sectional study design

4.2.1. Qualitative: Focus group discussion

4.2.2. Quantitative: Community based cross sectional survey

4.3. Population

4.3.1. Source population: Mother of children under 6 months of age who resided in Afar.

4.3.2. Study population: Mother of children under 6 months of age in the selected kebelle of Aysaita.

4.3.3. Study unit: Mothers of children under 6months of age from sampled households.

4.4. Inclusion and exclusion criteria

4.4.1. Inclusion criteria: Mothers who lived in Afar at least for the six months preceding the survey and with a child less than 6 months of age.

4.4.2. Exclusion criteria: Infant less than 6 months of age who were considered as pre- or post-term and unhealthy (by their mothers) at delivery.

4.5. Sample size determination and sampling technique

4.5.1. Sample size determination

Specific objective 1 Measure the current prevalence of exclusive breastfeeding

The sample size was estimated using a the single population proportion formula assuming an expected prevalence for exclusive breastfeeding 52%, 95% confidence level, 5% margin of error, multiplying by 1.5 for the design effect and adding a non-response rate of 10%.

$$\mathbf{n = (Z_{\alpha/2})^2\ P\ (1\text{-}P)/\ d^2}$$

Where;
P= 52% prevalence of exclusive breastfeeding (from the national EDHS)
Z= level of confidence at 95% certainty (1.96)
d= 5% marginal error
Non-response rate, 10%

The calculated sample size using the above formula became 383. Considering 10% non-response rate, the overall Sample was 421. Multiplying by the design effect as the sampling procedure were the EPI cluster sampling, we got a total sample size of 631.

Specific objective 2 (Determine mothers Knowledge and perception about exclusive breast feeding.)

The sample size was estimated using a the single population proportion formula assuming an expected proportion of women with good knowledge and positive attitude and good EBF practice 65.1% from a research by Mtiku Gelaw, 95% confidence level, 5% margin of error, multiplying by 1.5 for the design effect and adding a non-response rate of 10%.

$$\mathbf{n = (Z_{\alpha/2})^2\ P\ (1\text{-}P)/\ d^2}$$

Where;
P= 65.1% proportion of women with good knowledge and positive attitude and good EBF practice
Z= level of confidence at 95% certainty (1.96)
d= 5% marginal error
Non-response rate, 10%

The calculated sample size was 349; adding 10% for non-response and multiplying by 1.5 total calculated sample size was 576

Specific objective 3 (Identify factors influencing exclusive breastfeeding)

Sample size for the last specific objective was calculated by using different parameters considering proportion of explanatory variables of EBF practice. From studies conducted in Bahirdar administration we took maternal education and maternal employment which founds to be significantly associated with the dependent factor, EBF practice. And the main assumption was comparing of proportions of exposed and unexposed in one study population. So the respective sample size for each explanatory variable was calculated by using the formula for comparisons of proportions and discussed as follows.

$$n1= \frac{\{Z\alpha/2\sqrt{(1+1/r)p(1-p)}-Z\beta\sqrt{P1(1-P1)+[P2(1-P2)]/r}\}^2}{P1-P2}$$

Where, 95%CI =the Z score at 95 % confidence interval, 1.96

p1=the proportion of exclusive breastfeeding practice among non-exposed

p2= the proportion of exclusive breastfeeding practice among exposed

r=the ratio between exposed and non-exposed

n_1=sample size before addition of non-response rate

Relevant factors	**$Z_{\alpha/2}$ of 1-B(power)**	**$Z_{\alpha/2}$ of 95% certainty**	**P_1**	**P_2**	**Ratio**	**n_1**	**n_{total}**
Maternal education	0.84	1.96	0.62	0.38	1:1	166	182
Maternal Employment	0.84	1.96	0.35	0.65	1:1	108	118

As the total sample size 631 can include all, we decide on sample size of 631 and so that a total number of 631 mother-infant pairs were identified using the modified EPI cluster sampling technique from the urban and rural residences.

4.5.2. Sampling procedure

Asayta wereda has a total of 9740 households, 13 kebeles, 2 urban and the rest 11 rural kebeles. The kebelle names with their respective alive infant population are kebele 02(265), kebele 01(297), Kerebuda(100), Berga(79), Keredura(67), Mamula(109),Henele (99), Henedegi(111) Gaharetu (69), Galefagi (143),Romayity (81), galealo (69), Ehahile(164). To select the representative data this study aimed using modified EPI cluster sampling.

Selection of HHs within a community should ideally be at random. And in practice this is most closely achieved by systematic selection from numbered list of HHs. In many situations like this specific research however there is no list or map for HHs available. And we didn't have a resource to completely enumerate or map all the HHs in the community, some compromise must be used. As up to date information on the total estimated population was found very difficult to obtain and as simple random sampling was almost impossible to accommodate due to unavailability of list of all the HHs, and a resource limitation, the investigator found the modified EPI cluster sampling [29] scheme as common alternative approach. The modified EPI cluster sampling method is a type of cluster sampling developed by the WHO expanded program for immunization basically to estimate vaccination coverage. This procedure is experimented and approved to be as useful as its basic purpose and can be used on other same sectors too. This procedure led in to selection of clusters and HHs.

4.5.2.1. First stage sampling

Cluster selection

PPS: The PPS led to clusters/kebelles being selected with probability proportion to size and allowed a proportional allocation to size so that each household had equal probability of being selected in the sample and that make the sampling procedure self-weighting.

Steps for applying PPS

- Listed the kebeles, with their respective population number, and then we calculated the respective cumulative population number.
- We aimed to select 7 clusters/kebeles
- First we divided the total population estimate (1654) by the number of clusters required (7).
- We found, 236 which was the sample interval.
- We randomly chose a number between 1 and 236 to get the random number
- We chose 150 as a random number
- 150 used to select the first HH, as it falls in 250 we selected kebelle 2 as the first cluster
- We added the sample interval with the random number (236+150= 386)
- As 386 fall between kebele 1 and kebelle 2 we chose kebele one as the second cluster.
- We added the sample interval and we followed same fashion till we acquired the 7 clusters

Selected clusters were ***02-kebele, 01-kebele, Kerebuda, Mamula, Henele, Galefagi and Ehahile***.

4.5.2.2. Second stage sampling

After selecting the seven clusters which after then were called enumeration areas (EA) the second stage to do was a method how much HHs to allocate for each EAs to acquire the calculated sample size of 631. As all the clusters are selected proportional to their size we found it ok if we divided and distributed equal number of HH for each EAs. Dividing 1958 HHs (estimated HHs to be visited) equal to the 7 EAs we found a number 280. So that we visited 280 HHs in each selected clusters or EAs. And 280 HHs in each selected clusters or EAs were visited.

Steps for second stage sampling

1. ***Calculating Estimated number of HHs to visit***

HH to be visited= calculated sample size * average HH size* proportion of < 5 children

HH to be visited = 631*5.6*0.55

HH to be visited=1958

2. ***HH in each cluster*** = HH to be visited / EAs
   = 1958/7
   = 280

TABLE 1: Tabular presentation of PPS cluster selection, Ayasita wereda, Afar, 2015

Kebele	Surviving Infants(index children)	Cumulative population	Cluster	Sample interval	Random #	Values
02-kebele	**265**	**265**	**1**	**236**	**150**	**386**
01-kebele	**297**	**562**	**1**	**236**		**622**
Kerebuda	**100**	**662**	**1**	**236**		**858**
Berega	**79**	**741**		**236**		**1094**
Keredura	**67**	**808**		**236**		**1330**
Mamula	**109**	**917**	**1**	**236**		**1566**
Henele	**99**	**1016**	**1**	**236**		**1802**
Hanedegi	**111**	**1127**		**236**		**2038**
Gaharetu	**68**	**1195**		**236**		**2274**
Galefagi	**143**	**1340**	**1**	**236**		**2510**
Romayitu	**81**	**1421**		**236**		**2746**
Gelealo	**69**	**1500**		**236**		**2982**
Ehahile	**164**	**1654**	**1**	**236**		**3218**
Total	**1654**		**7**			

Sample interval =Total population/#of clusters required,

=1653/7 =236

Random number= 150

Household selection

Selecting the first and the consecutive HHs

These involved 2 stages, a method of selecting the first household to be the starting point and a method of selecting the successive households after that.

To select the first household we used the EPI recommendation for selection of the first household. That was, we chose some central point in the community example market then chose random direction from that point, counted the number of households between the central point and the edge of the town and randomly selected one household to be the starting point.

The remaining households were selected in order of giving as wide spread coverage as possible of the community consistent with practicality. Using the EPI strategy we just went to the household whose door was nearest to the door of the household we stood up.

Fig 2 schematic presentation of the EPI household selection method

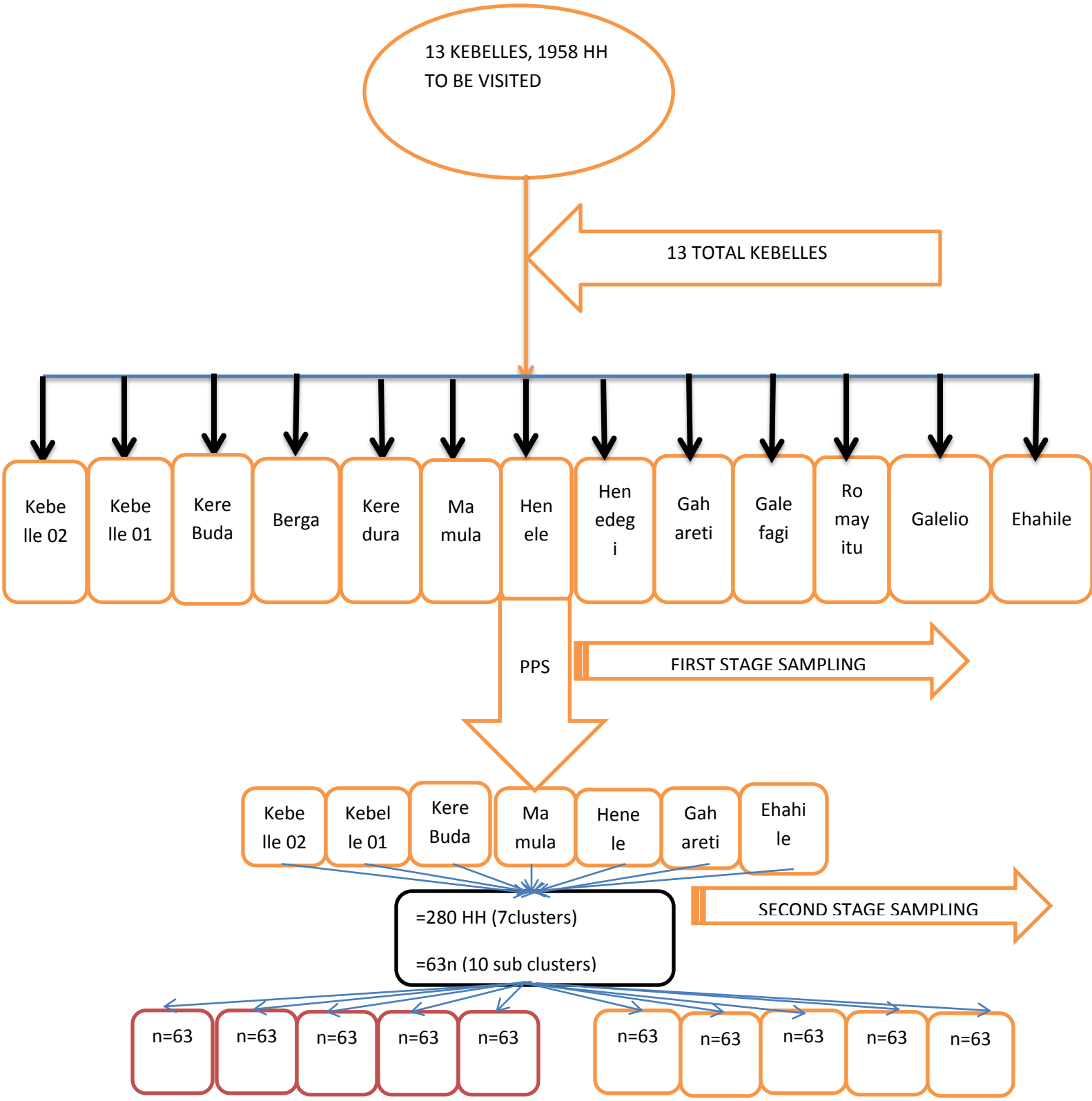


Fig3. Schematic presentation of the sampling procedure, Aysaita wereda, Afar, 2015

4.6. Data collection tool and procedure:

Data were collected using a structured interviewer administered questionnaire.

4.6.1. The questionnaire

A questionnaire with both closed and open ended questions was used to collect information on infant characteristics (sex and age), maternal demographic characteristics (age, education and marital status), maternal socio-economic characteristics (occupation income, and ownership of items), maternal knowledge on breastfeeding, sources of breastfeeding information, maternal delivery experience and infant feeding practices. The questionnaire was adopted from the EDHS and the WHO. The questionnaires were initially prepared in English and then translate into Amharic and Afar af. The Afar af version were again translated back into Amharic and English to check for any inconsistencies or distortion in the meaning of words and concepts.

4.6.2. Focus group discussion guide

A focus group discussion (FGD) guide was used to elicit information on infant feeding practices with special focus on attitudes and beliefs on exclusive breastfeeding and factors influencing the practice of exclusive breastfeeding. This information was intended to provide an in-depth understanding of infant feeding practices as well as offer an understanding or explanation of the quantitative findings.

The FGD included Mothers/caregivers, Fathers, Grandparents, health care providers and traditional birth attendants and the group included both rural and urban respondents using purposive sampling method. Two FGDs were conducted with 8 to 10 participants in each group. The PI together with a translator took the primary lead in eliciting the questions and modulating the discussion. Every pre conditions as double recorders, note takers and cameras were prepared and fixed.

4.7. Study variables:

4.7.1. Dependent variable:

- Exclusive breastfeeding (Yes , No)

4.7.2. Independent variables:

- Socio-economic/demographic factors:
  - ✓ Childs age & sex ,
  - ✓ Maternal socio-economic characteristics (age, religion, education, employment, wealth index, marital status, Residence)
- Knowledge & attitude towards EBF:
  - ✓ Knowledge of the mother on exclusive breastfeeding (Good knowledge , Poor knowledge)
  - ✓ Attitude of the mother towards exclusive breastfeeding (Positive, Negative)
- Psychosocial factors:
  - ✓ Partner and maternal grandmother support & Support from health care workers. (Yes, No)
- Early breastfeeding experiences
  - ✓ Delivery place (Health institution or Home)
  - ✓ Delivery type (Spontaneous, Cesarean)
  - ✓ Parity(1,2-4, >=5)

4.8. Operational definitions:

- Exclusive breastfeeding: Fed only on breast milk (including milk expressed or from a wet nurse) allows ORS, drops, syrups (vitamins, medicine and minerals), do not allow anything else.
- Predominant breastfeeding: Fed on breast milk (including milk expressed or from a wet nurse) certain liquids (water, water based drinks fruit juices), rituals and ORS, drops or syrups (vitamins, medicine and minerals) as the predominant source of nourishment.
- Complementary feeding: Breast milk (including milk expressed or from a wet nurse), any food or a liquid including non-human and solid or semi-solid foods milk and formula.
- Partly breastfed: Fed on breast milk and complementary foods (milk, porridge, semi-solids or solids).
- Non-breastfed: Not fed on breast milk.
- Knowledge score on EBF: An average of responses on knowledge variables was done by computing variables and mothers who scored less than the average are labeled to have poor knowledge and those scored above as having good knowledge.
- Attitude: Four scaled lickert scale was used to measure the opinions of mothers towards EBF. All attitude opinion variables was computed and averaged. Those scored below the average were considered with negative attitude and those scored above the average were considered with positive attitude.
- Parity : Number of live births a mother have
- Multi Para: A woman who has given to 2 or more live children.

4.9. Data quality management

The quality of data was assured before, during and after data collection process.

Data:

Before data collection: Objective based and standardized designing of questionnaire, preparation of data collectors training manual, experience based selection of data collectors and finally training of data collectors(10 in number) and one supervisor on sampling procedures, techniques of interviews and data collection process and giving of training manuals and actual training was performed. In addition the data collectors and supervisors were participated in pre-testing of the questionnaire for its understandability by 5% of sample on volunteer individuals in kebelles which were not included in the actual data collection. The purpose of the pre-test was to ensure that the respondents be able to understand the questions and to check the wording, logic and skip order of the questions in a sensible way to the respondents. Amendments were made accordingly after the pre-test.

During data collection: The supervisors and principal investigator were closely following the day-to-day data collection process and ensure completeness and consistency of questionnaire administered each day.

After data collection: The collected information was rechecked for its completeness and consistency by the supervisors and principal investigators before transferring in to computer software. Non over lapping numerical code was given for each questions and the coded data were entered and cleaned into SPSS software Version 21

4.10 Data Analysis procedures

The collected data was checked for completeness and entered to SPSS version 21 statistical software for each specific objectives step wise.

According to the specific objectives

- Descriptive statistic including Proportion, frequency distribution, Mean (SD) and Median was used to describe the data on the sample population in relation to relevant variables.

- Bivariate analysis; cross tabulations was done to see the association between the explanatory and outcome variables.
- Multivariate analysis; Binary logistic regression model was employed by selecting only variables that appeared to be statistically significant at (P<0.25) in the bivariate analysis.
- A thematic content analysis was used for analyzing the qualitative data‟s using Open code software application.
- Finally the data was presented with appropriate tables, diagrams and figures.

4.11. Ethical consideration

The ethical approval for this study was obtained from the SPH Ethical Review Committee of Addis Ababa University. Permission letter were written for Afar Regional Health Bureau and the informed verbal consent were obtained from the respondents, after the necessary explanation about the purpose, benefits and risks of the study and also their right on decision of participating in the study.

The assurance of confidentiality were performed by omitting name of the study participants from the questionnaire, by telling the safety of the place where the questionnaire was stored after data collection and also the analysis were not for individual it is for groups.

4.12. Dissemination of results

The final report of this study will be presented to College of Health Sciences School of Public health as partial fulfillment of master‟s degree in public health. It will also be sent to Afar regional health bureau, the Aysaita district health bureau and to other concerned governmental and non-governmental organizations. Effort will be made to disseminate through publication and presentation in scientific conferences.

5. RESULTS

5.1. Descriptive results

5.1.1. Socio economic and demographic determinants of the households

A total of 631 households were included in the study and 98% response was obtained from the respondents. With majority male 341(55.5%).The mean age of the children was 3.6(±1.6SD) months with the majority 128(20.7%) of 4 months. Almost all of the respondents were married 588(95.1%) and Muslims 524(84.80%). Three hundred seventy five (60.7%) of mothers were illiterate or with no formal education. Only (120, 19.4%) of mothers/care takers were employed. Two hundred and nine (33.9%) of mothers/care takers were high, 199(32.3%) were low and the rest 33.8% were found to be in the middle in wealth. (See table2).

Table 2: Demographic and Socio economic characteristics of the respondents, Asayta woreda, Afar ,2015.

Variables		N	%
Child sex	Male	341	55.2
	Female	277	44.8
Child age	Up to 1 month	78	12.6
	2 months	83	13.4
	3 months	119	19.3
	4 months	128	20.7
	5 months	116	18.8
	6 months	93	15
Mothers age	15-25	296	47.9
	26-35	288	46.6
	36-45 & ABOVE	34	5.5
Marital status	Married	588	95.1
	Divorced	30	4.9
Educational status	Illiterate	375	60.7
	primary	170	27.5
	secondary level & above	73	11.8
Religion	Muslim	524	84.8
	Christian	94	15.2
Maternal Employment	Employed	120	19.4
	Not employed	498	80.6
Wealth	low	199	32.3
	Middle	208	33.8
	high	209	33.9
Residence	Urban	309	50
	Rural	309	50

5.1. 2. Early breastfeeding experience of the respondents

Majority of mothers/ care takers 390(63.1%) had 2-4 pregnancies, 133(21.5%) had only 1 and the rest 95(15.4%) had above 5. Five hundred and ninety eight(96.8%) had spontaneous delivery and the rest cesarean. Three hundred ninety six (64.1%) of mothers/care takers delivered at health facilities and 222(35.9%) of mothers/care takers delivered at home/ TBAs home. Majority 571(92.4%) of mothers/care takers had support during their time of motherhood. Only 47(7.6%) were with no support.

Table 3: Early Breastfeeding experience of the respondents, Aysaita woreda, Afar region, 2015

Variables		n	%
Delivery place	Health facility	396	64.1
	Home /At a TBA‟s house	222	35.9
Delivery type	Spontaneous	598	96.8
	Cesarean	20	3.2
Parity	1	133	21.5
	2-4	390	63.1
	5+	95	15.4
Support	Yes	571	92.4
	No	47	7.6

5.1.3. Knowledge & Attitude of the respondents

Three hundred and ten (50.2%) of mothers/ care takers had good knowledge on EBF and 308(49.8%) had poor knowledge. 405(65.5%) of mothers were with positive attitude towards EBF and 207(33.5%) were with negative attitude.

5.1.3.1. Knowledge

Majority 393(63.6%) of mothers/care takers answered the right time to give breast milk after the child was immediately after delivery. Five hundred and forty one (87.5%) of mothers/care takers answered the right time to start complementary foods were at 6 months. Only 19(3.1%) of mothers/care takers answered liquids or foods recommended to child under 6 months as only breast milk. Majority 349(56.5) answered all options as correct.

Table4: Knowledge of respondents on exclusive breastfeeding Aysaita wereda, Afar region, 2015.

variables		n	%
Right time to give breast milk after the child is delivered	Immediately	393	63.6
	Within an hour	159	25.7
	Between 1 hour and 3 hours	64	10.4
	From 3 to 7 hours	1	.2
	From 1 day to a week	1	.2
Right thing to do with the colostrum	Discard	76	12.3
	Feed immediately	535	86.6
	Other (specify)	5	.8
	I don't know	2	.3
Right time to start complementary foods	3 months or less	4	.6
	4 months	25	4
	5 months	39	6.3
	6 months	541	87.5
	7 months or above	3	.5
	I don't know	4	.6
Liquids or foods recommended to child under 6 months	Plain Water	77	12.5
	Infant formula	105	17
	Tinned milk or other kind of animal milk	62	10
	Fruit juice/ Youghurt	5	.8
	Only breast milk	19	3.1
	All	349	56.5
	I Don't know	1	.2

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5.1.3.2. Attitude

Majority 458(74.1%) of mothers/ care takers strongly agreed that giving breast milk immediately after birth was important and 67(10.8%) of mothers/care takers agreed .Two hundred and thirty two(37.5%) of mothers/care takers strongly agreed that discarding the colostrum was not important and 148(23.9%) of them agreed. Majority 356(57.6%) of mothers/care takers strongly disagree that starting complementary foods at age 4 months was important and only 36(5.8%) of them agreed.

Table 5: Attitude of mothers towards exclusive breastfeeding, Aysaita wereda, Afar region , 2015.

Variables		n	%
Giving breast milk immediately after birth is important	Strongly agree	458	74.1
	Agree	88	14.2
	Disagree	67	10.8
	Strongly Disagree	5	.8
Discarding the colostrum before giving breast milk is not important	Strongly Agree	232	37.5
	Agree	219	35.4
	Disagree	148	23.9
	Strongly disagree	19	3.1
Starting complimentary food at age of 4 month or before is important	Strongly Agree	7	1.1
	Agree	36	5.8
	Disagree	218	35.3
	Strongly disagree	356	57.6

5.1.4. WHO IYCF Indicators

Almost all 605(97.9%) of mothers/ care takers were ever breast fed. Three hundred and fifty (55%) of children were exclusively breast fed and 278(45%) were not exclusively breast fed. One hundred and twenty (30.1%) of children were on predominant breastfeeding. Majority of mothers/care takers 496(80.3%) initiated breastfeeding immediately/within an hour after delivery. Two hundred and twenty five (36.4%) of mothers/care takers practiced pre lacteal feeding.

Table6 : IYCF indicators, Aysaita wereda, Afar region, 2015.

Variables			N	%
Exclusive breast feeding (% n)	< 6months	Yes	340	55.00
		No	278	45.00
	0-1months	Yes	49	62.80
		N0	29	37.20
	2-3 months	Yes	127	62.90
		No	75	37.10
	4-5 months	Yes	148	60.40
		No	97	39.60
	0-3months	Yes	176	62.90
		No	104	37.10
Predominant breastfeeding	Yes		120	70.1
Early initiation of breastfeeding	Yes		496	80.30
Children ever breastfeeding	Yes		605	97.90
Pre lacteal Feeding	Yes		225	36.40
	No		393	63.60

5.2 Bivariate analysis

5.2 Determinants of exclusive breastfeeding

In the bivariate analysis, residence, maternal educational status, maternal employment, marital status, religion, maternal age, parity and knowledge on EBF were found to be associated with practice of exclusive breastfeeding. Children of mothers/care takers who resides in the urban were 7 times more likely to be exclusively breast fed COR: 7.0, 95%CI [(4.9, 10.0)] compared to children of mothers/care takers who resides in the rural. Children‟s of mothers who are primary and secondary and above were more likely to be exclusively breastfed compared to children‟s of mothers who are illiterate/no education COR:1.7, 95%CI [(1.2, 2.5)] &COR: 2.4, 95%CI[(1.4,4.1)]respectively. Children‟s of mothers who are employed were less likely to be exclusively breastfed COR: 95%CI [(0.5, 1.2)] compared to children‟s of mothers who are not employed. Children‟s of mothers who delivered at health facilities were 4 times more likely to be exclusively breastfed COR: 4.4, 95% [(3.1, 6.2)] compared to children‟s of mothers who delivered at home/ TBAs home. Children‟s of mothers who have good knowledge on the practices of EBF were 3.6 times more likely to be exclusively breastfed COR: 3.6, 95%CI [(2.6, 5.0)] compared to children‟s of mothers who have poor knowledge on practices of EBF. Children‟s of mothers who have 1 and 2-4 pregnancies were around 4 times more likely to be exclusively breastfed COR:3.9,95%CI[(2.2, 6.9)] compared to children‟s of mothers who have above five pregnancies.

Table 7: Determinants of exclusive breastfeeding, Asayta woreda , Aafar region, Ethiopia, 2015: Bivariate analysis

Variables		EBF					
		Yes		No			
		N	%	N	%		
Total		340	55	278	45	P- value	COR (95%CI)
Residence	Urban	239	77.3	70	22.7	0.00	7.0(4.9,10.0)
	Rural	101	32.3	208	67.3		1
Educational status	Illiterate	183	48.8	192	51.2		1
	Primary	106	62.4	64	37.6	0.003	1.7(1.2,2.5)
	Secondary& Above	51	69.9	22	30.1	0.001	2.3(1.4,4.2)
Employment	Employed	61	50.8	59	49.2	0.305	0.8(0.5,1.2)
	Not employed	279	56	219	44		1
Knowledge	Good	212	70.3	92	29.7	0.00	3.6(2.6,5.0)
	Poor	122	39.6	186	60.4		1
Delivery place	Health facility	268	67.7	128	32.3	0.00	4.4(3.1,6.2)
	Home /At TBAs house	72	32.4	150	67.6		1
Parity	1	81	60.9	52	39.1	0.00	3.9(2.2,6.9)
	4-Feb	232	59.5	158	40.5	0.00	3.7(2.2,6.0)
	5+	27	28.4	68	71.6		1
Mather age	15-25	151	51	145	49	0.43	2.2(1.0,4.6)
	26-35	178	61.8	110	38.2	0.02	3.4(1.6,7.2)
	36-45 & above	11	32.4	23	67.6		1
Marital status	Married	318	54.1	270	45.9		1
	Divorced	22	73.3	8	26.7	0.44	2.3(1.0,5.3)
Religion	Muslim	273	52.1	251	47.9		1
	Christian	67	71.3	27	28.7	0.001	2.3(1.4,3.7)

5.3. Multivariate analysis: Determinants of exclusive breast feeding

In the bivariate analysis any possible confounders were not controlled and assessing the independent effects of the covariates was difficult. So, enter method of logistic regression technique was used to assess the independent effect of explanatory variables on exclusive breastfeeding. To avoid excessive number of variables and unstable estimate in the final model, only variables with P-value less than 0.25 in the bivariate analysis were taken in the multivariate analysis. Model fit was checked by Hosmer-Lemeshow goodness-of-fit test.

The multivariate logistic regression analysis identified urban residence, primary educational status of the mother, maternal employment, low parity, delivering at health facilities, being with good knowledge on EBF as an independent predictors of EBF.

Children of mothers/care takers who resides in the urban were around 6 times more likely to be exclusively breast fed AOR: 5.7, 95%CI [(3.5, 9.2)] compared to children of mothers/care takers who resides in the rural. Children‟s of mothers who are primary educated were less likely to be exclusively breastfed, AOR: 0.6, 95%CI [(0.3, 0.9)] compared to children‟s of mothers who are illiterate/no education. Children‟s of mothers who are not employed were around 2 times more likely to be exclusively breastfed AOR: 1.8(1.1, 2.9) compared to children‟s of mothers who are not employed. Children‟s of mothers who delivered at health facilities were 1.7 times more likely to be exclusively breastfed AOR: 1.7, 95%CI [(1.1, 2.7)] compared to children‟s of mothers who delivered at home/ TBAs home. Children‟s of mothers who have good knowledge on the practices of EBF were 2 times more likely to be exclusively breastfed AOR: 2.3, 95%CI [(1.6, 3.5)] compared to children‟s of mothers who have poor knowledge on practices of EBF. Children‟s of mothers who have 1 and 2-4 pregnancies were around 2 times more likely to be exclusively breastfed AOR: 2.2(1.2,4.2) & AOR: 1.9, 95%[(1.1,3.5)] respectively compared to children‟s of mothers who have above five pregnancies.

Table 8: Determinants of exclusive breastfeeding in Asayta woreda , Afar region, Ethiopia, 2015: Multivariate analysis

Variables		EBF				COR (95%CI)	AOR(95%CI)
		Yes		No			
		N	%	n	%		
Total		340	55	278	45		
Residence	Urban	239	77.3	70	22.7	7.0(4.9,10.0)**	5.7(3.5,9.2)
	Rural	101	32.3	208	67.3	1	-
Educational status	Illiterate	183	48.8	192	51.2	1	-
	Primary	106	62.4	64	37.6	1.7(1.2,2.5)*	0.6(0.4,0.9)*
	Secondary& Above	51	69.9	22	30.1	2.4(1.5,4.2)*	0.6(0.3,0.9)
Knowledge	Good	212	70.3	92	29.7	3.613(2.587,5.045)**	2.3(1.6-3.5)**
	Poor	122	39.6	186	60.4	1	-
Delivery place	Health facility	268	67.7	128	32.3	4.4(3.1,6.2)**	1.7(1.1,2.7)*
	Home /At TBAs house	72	32.4	150	67.6	1	-
Parity	1	81	60.9	52	39.1	3.9(2.3,6.9)**	2.2(1.2,4.2)*
	"2-4"	232	59.5	158	40.5	3.7(2.267,6.034)**	1.9((1.1,3.5)*
	5+	27	28.4	68	71.6	1	-
Employment	Employed	61	50.8	59	49.2	1	-
	Not employed	279	56	219	44	1.2(0.8,1.8)	1.8(1.1,2.9)*
Mather age	15-25	151	51	145	49	2.2(1.0,4.7)	1.3(0.6,3.5)
	26-35	178	61.8	110	38.2	3.1(1.6,7.2)	1.5(0.6,3.7)
	36-45 & above	11	32.4	23	67.6	1	-

* p- value < 0.25 ** p-value< 0.01

6. Discussion

This study attempted to determine the prevalence of EBF, knowledge on EBF practice, Attitude towards EBF and associated/determinants factors of exclusive breastfeeding practice. The prevalence of ever breastfeeding was 97.6% while the crude prevalence of exclusive breastfeeding was 55%. In the multivariate analysis, Urban residence, being educated, being unemployed, Good knowledge on EBF, delivering at health facilities and low parity were found to be independent predictors of exclusive breastfeeding among the infants aged less than six months.

Majority 605(97.6%) of mothers/caretakers breastfed their babies. And this result is comparable to the EDHS 2011 [1] whereby ever breastfed rate of the country was 97.5% and 97.7% for Afar region respectively. The prevalence of other regional states in Ethiopia ranges from 93.4% in Addis Ababa to 99.1% in Dire Dawa which was comparable with this study finding. The qualitative study also reveals that breast feeding is a common practice in the community, Yinah Fatuma, one of the TBAs stated that" a women is obliged to breast fed her baby until at least 2 years and it"s our culture"

Although World Health Organization (WHO), global and national infant and young child feeding guidelines recommend that all newborns should be exclusively breastfed their infants for the first six months[2], the crude prevalence of exclusive breastfeeding in this study was 55%. This was lower than studies done in Jimma town(60.1%), Goba district (71.3%), Ghana(64%),Nepal (66.6%)[27,30,31,32] and while higher than the finding from EDHS 2011, Arjo woreda Jimma, Bahirdar[1,33,34] whereby the prevalence of exclusive breast feeding were 47.9%, 52%,and 49.1% respectively. This difference is expected as our study place is a pastoralist community, a different setting from Bahirdar or Ghana where people are a lot cultural and in different value of living standards where it leaves people in Afar at low state in almost every aspect of modernization and its fruits, which at the same time contributed to the low prevalence of EBF. And the high numbers are attributed may be because it"s a norm and culture to breastfed the babies in the community of Afar and that might contribute to the relative high prevalence of EBF.

Month-specific prevalence of exclusive breastfeeding although decreases as the age of the babies increases62.8%,61.8% 60.6% at age <1month,3months& 4-5 months respectively, it"s not with a wide gap until it reach at six months where by it dramatically falls down from up to 1 months(62.8%) to 17% at 6months. This finding was more or less comparable with a study finding in Jima where by the prevalence was 67.2%, 24.3% and 8.4% at age ≤2 months, 3-4 months and >4 months, Nepal[32] which showed that the prevalence of exclusive breastfeeding were 74%, 24% and EDHS, 2011[1] 70%, 55%, and 32% at 1 month, 3 months and above 4 months respectively. As infants grew older and older, the prevalence of exclusive breastfeeding decreases significantly indicating the overall lower duration of exclusive breastfeeding in the study community. This is common in many developing countries as majority of mothers believe that breast milk alone was not sufficient as the age of infants grew older, mothers/care takers might have introduced complementary feeding for their infants due to the assumption that breast milk alone would not satisfy their needs as the infants are already older. Halima one of the mothers in the FGD said" I start to give my child a cow milk at age of 3 months because I believe that only my breast milk was not enough and I was afraid my baby will get hungry" . Additionally they might become pregnant and they started to wean the infant through formula and other substitutes accordingly. The possible explanation for the relative high number might be due to the fact that post-partum care is

traditionally given in the first few months after birth where mothers remain at home, creating a chance to exclusively breastfeed their infant.

Median duration of EBF was found to be 0.5 months which is comparable to EDHS 2011 where by the median duration for Afar region is 0.6 months. This result is very low compared to many regions median ranging 1 month Addis Ababa to Amhara region 4.6 months. These result calls the responsible bodies for a significant effort on the sector.

This study has indicated a significant difference among urban and rural resident mothers with regard to exclusive breastfeeding. Children of mothers who reside in urban were found to be a positive predictor of EBF AOR: 5.7 95% CI [(3.5, 9.2)]. This result is in line with studies done in Ghana, Awi, Malawi, Prague [31,35,36,37]. This result can be attributed of many reasons, one is probably due to the reason that mothers/care takers who resides in urban might be accessible to health facilities where by they get the appropriate counseling and care on EBF. Other is its known that mothers in Afar have a lot of cultural practices concerning child care as one of the TBA Kadiga witnessed " the moment the child is born we nourish him with a drop of water, we care his body through a smoke of different aromas according to our culture,…" and it is expected the cultural practices are practiced less in the urban as compared to the rural due to the different exposure of urbanization, hence mothers in the urban tend to be more likely practice EBF. Other possible reason would be, people in rural live a life characterized by greater hardship due to low infrastructures, harder physical work, and less access to basic services than the urbans [32]. This might leave mothers less time to exclusively breastfeed their child.

In the current study, knowledge of mothers on Exclusive breastfeeding was 50.2% which is comparable to the study done in Jimma town (53.7%) but lower than the study finding in Malaysia (74.8%) [38].This difference might be attributed due to the difference in awareness level about breastfeeding practice. Qualitative finding also indicted that even though health information dissemination is one of the targets of the ARB and a work in progress there are still mothers who don't have sufficient knowledge about EBF. Ahmed, nurse stated "the community has a lot cultural practice towards child nutrition "turufa" is one of it where by mothers/care takers select a good character relative or friend to give the infant fresh butter and other fluids in belief their child will get the good character". Being knowledgeable on the right time to initiate breastfeeding and complimentary fluids and foods was positively associated with EBF AOR: 2.3, 95%CI[(1.6-3.5)]. This finding was in line with many studies; Jimma, Taiwan, Tanzania [27, 39, 40]. This result is expected and the general explanation will be that the significance of knowledge is obviously predictable and the ARHB should continue to work on policies that encourage the availability of knowledge. Ahmed, Nurse one of the FGD discussant said "we are working on lots of educational packages alone and with NGOs with mothers and TBAs as we witnessed the benefit of knowledge"

This study found that 66.2%showed favorable/positive attitude towards exclusive breastfeeding which was consistent with the study finding in Jimma town (73.9%) had positive attitude towards breast feeding practice [27]. Although, in this study the attitude towards breastfeeding was generally favorable, >24% respondents agree on discarding the colostrum before giving the first breast milk. This is probably due to insufficient knowledge on the issue. And attitude towards EBF is not associated in the bivariate analysis.

Although employment of the mother/care taker was not found to be associated in the binary logistic regression the multivariate logistic regression revealed that unemployment of the mothers is a predictor of exclusive breastfeeding AOR: 1.8, 95%[(1.1,2.9)] , which is consistent with the findings of several

studies [32,33]. This might be explained by the fact of less maternity leave, which makes employed mothers have less opportunity to stay at home, compromising exclusive breastfeeding. Mothers also may have to leave their babies to search for a job.

Having One and two to four pregnancies was found to be a positive independent predictor of EBF AOR: 2.2,95%[(1.2,4.2)] & AOR: 1.9,95%[(1.1,3.5)] respectively, which is consistent with a study done in Jimma, whereby mothers having two and below children were more likely to practice exclusive breastfeeding practice. This might be due to mothers having few children were more concerned and worried about their infants. A focus group discussant mother stated that "we provide breast milk alone for six months at first delivery since I spent most of my time at home with my infants since I love him too much. But after the second child the responsibility to lead my family becomes too high and I began to work different activities to support my families and hence breastfeeding alone for the first six month is impossible and challenging".

Furthermore, the study found that mothers who delivered at a government health facility had a higher probability to practice exclusive breastfeeding compared to mothers who delivered at home/ TBAs home AOR: 1.7, 95%[(1.1,2.7)]. Place of delivery has been found in a number of studies to be associated with exclusive breastfeeding. In the present study, delivery at a government health facility was identified as a predictor of exclusive breastfeeding and this conforms to studies in Ghana [31]. Delivery at hospital as a predictor can be attributed to the call made by WHO and UNICEF [2, 41] for hospitals to be centers of breastfeeding. This initiative, undoubtedly, might have accounted for government health facility being a predictor of exclusive breastfeeding in the country. This study was in contrary with study done in Nepal [32], where by mothers who deliver at home are more likely to practice EBF. This is probably due to the fact that in Nepal according to study mothers who deliver are those that are rich and highly educated, where it suggests, living the knowledge and or awareness and other possible factors on the issue that health facilities are not accessible equally to all different kinds of economic and educational status where the situation is different in Afar context as public health facilities are relatively high accessible to all at their basic services regard of the wealth status.

Being educated in general was positively associated with EBF on the bivariate analysis and but surprisingly in the multivariate analysis being educated only at primary was found to be significantly associated and the association was negative. AOR: 95%CI [0.6(0.4, 0.9)]. The result is comparable to many studies [31, 32]. This might be due to the influences of cultural and traditional malpractices influencing the practice of exclusive breastfeeding negatively and lack of knowledge about the importance of appropriate breastfeeding.

7. Limitations and strengths

This study can be interpreted in light of its strengths and limitations. The use of validated questionnaires, both quantitative and qualitative methods of data collection and data triangulation, The fact that this study did assess individual factors, including knowledge and attitude of mothers/care takers, as well as variables related to families, and choosing and accommodating the study in Afar, rarely chosen place by researchers of any stream can be consider as a major strengths of this study.

However, the 24-hour recall to determine exclusive breastfeeding practice ,an assessment method in which some infants who were given other liquids regularly may not have received them in the last 24 hours before the survey, may cause overestimation of the proportion exclusively breastfed. Many studies have shown that a large proportion of infants who were exclusively breastfed in the previous 24 hours were either not exclusively breastfed during the previous seven days, and/or, not exclusively breastfed since birth[42, 43]. Median duration can also be affected by maternal recall, which might be prone to recall and social desirability bias. Therefore, it is recommended to take this into account during interpretation of these findings.

Other factors like child birth weight, ANC follow up, health status of the mother and the child and other unmentioned factors which might be associated with exclusive breast feeding were not addressed in this study. In addition, not using enough literatures on the pastoralist area in general and the study area in specific due to the unavailability of published journals on the topic of interest could be mentioned as a limitation. Furthermore, this study used a cross-sectional study design, which made it difficult to establish causal effect relationship.

8. Conclusion & Recommendations

Even though the crude prevalence of ever breast fed was high, the prevalence and median duration of exclusive breastfeeding was low compared to the WHO recommendation. In the current study, however half of the mothers had good knowledge on exclusive breastfeeding, knowledge of mothers about the right time to initiate breastfeeding after birth, and knowledge on foods/liquids recommended to infants less than 6 months was far lower from many studies done in developing countries. Most of the study population had positive/favorable attitudes towards exclusive breastfeeding practice during the first six months. Urban residence, being unemployed, being knowledgeable on EBF practices, low parity and delivering at health facilities were the independent predictors of exclusive breastfeeding practice in the studied community. Thus Strengthening efforts on availability of basic services and promoting education on the cultural malpractices on rural areas, promoting knowledge on EBF using accessible means such as medias and public meetings, revising policies on maternity leaves and creating a baby friendly working environment, encouraging the mothers to deliver at health facilities and promoting its importance and encouraging further researches on the topic of area are recommended.

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Annex I: Subject information sheet

Addis Ababa University

School of public health

My name is …….. I am here on behalf of Medhin Tsegaye student of Addis Ababa University School of public health. She is conducting a research on „‟Assessment of the contributing factors to the low exclusive breastfeeding in Afar" Aysaita wereda, for the partial fulfillment of master‟s in public health in Addis Ababa school of public health. She received permission from Addis Ababa university school of public health and the regional health bureau for administrators to conduct this study.

You are selected purposively to participate in this study because you are a mother with a child age less than 6 months. Your participation is purely based on your willingness. You have the right to choose not to take part in this study. If you choose to take part, you have the right to stop at any time. If you are willing to participate or refuse or decide to withdraw later, you will not be subjected to any ill-treatment.

If you agree to participate in the study, you will be asked to answer some questions about yourself, your household and your breastfeeding practice. The interview with you will take about 20 minutes.

The study will help u to practice the recommended breastfeeding practice for proper nutritional care of your child. It can also provide base line data for policy makers and other researchers for further improvements on exclusive breastfeeding. The information that you provide will be kept confidential by using only code numbers and locking the data. Do not give your name. No one will have access to the non-coded data except the principal investigator and the data will not be used for purposes other than the study. Your willingness and active participation is very important for the success of this study.

Questionnaires ID_____

Could I have your Permission to continue?
1. If yes, continue the interview.
2. If no, skip to the next participant by writing reasons for his/her refusal.

_____
Informed consent Certified by: Respondent‟s Name _____Signature_____
Interviewer: Code_____Name_____signature_____
Date of interview _____Time started _____Time completed_____

Result of interview:

1. Completed
2. Respondent not available
3. Refused
4. Partially completed

Checked by: Supervisor: Name _____ Signature_____

Annex II The questionnaire

NO……. kebelle name……..... Name of the interviewer…….. Name of Respondent…….. Date of interview……Time started……Time finished……. Questionnaire checked……...

SECTIONA: BABY'S BIODATA

No	Category /question		skip
101	Name of baby		
102	Sex	1- Male [ ] 2- Female [ ]	
103	Date of birth		

SECTION B: SECTION C: maternal characteristics, SOCIO-ECONOMIC & DEMOGRAPHIC CHARACTERISTICS OF THE HOUSEHOLDS

No	Category /question		
201	Age of mother in completed years		
202	Marital status	1- Married [ ] 2- Single [ ] 3- Divorced [ ] 4- Widow [ ]	
203	Level of education	1- No formal education [ ] 2- Completed primary [ ] 3- Not completed primary [ ] 4- secondary level education [ ] 5- 6-Certificate level training [ ] 6- Above [ ]	
204	How many pregnancies did you have in your whole life?	…….pregnancies	
205	Tell me please what your house has from this	1. Electricity 2. Television 3. Radio 4. Phone [ ] 5. Motorcycle Car/truck 6. Oxen/donkey cart [ ] 7. Land [ ] (how many acres?) ……. 8. Cows [ ] (how many?) …… 9. Goats [ ] (how	

		many?)…… …..... 10. Sheep [ ] how many?…… ..... 11. Camel [ ] how many?…… ..... 12. Chicken [ ] (how many?)…… …..... 14-Other	

SECTION C: DELIVERY EXPERIENCE AND EARLY BREASTFEEDING PRACTICES

No	Category/question		
301	Where was your child born?	1- Home [ ] 2- 2- Health facility [ ] 3- 3- At a TBA‟s house [ ]	
302	What kind of delivery?	1- Normal [ ] 2- Cesarean [ ] 3- Elective cesarean [ ]	
303	Did you breastfeed the baby?	1. Yes [ ] 2. No [ ]	**If yes go to 305**
304	If NO, Why not		
305	How soon after delivery did you first breastfeed?	1. Immediately/within first hour after birth [ ] 2. After the first hour [ ] 3. Don‟t remember/don‟t know [ ]	
306	Did you give the first yellowish milk to the child?	1. Yes 2. No	If no why please specify. If yes go to
307	During the first three days after delivery, did you give the baby the fluid/liquid that came from your breasts?	1. Yes [ ] 2. No [ ] 3. Not sure [ ]	
308	Did your baby receive anything to drink before he/she was first put to the breast?	1. Yes 2. No	If yes go to 309
309	What liquid was given?	1. PLAIN WATER[ ] 2. SUGAR OR GLUCOSE WATER[ ] 3. GRIPE WATER [ ] 4. SUGAR-SALT-WATER[ ] 5. FRUIT JUICE [ ] 6. INFANT FORMULA[ ] 7. TEA/INFUSIONS[ ] 8. HONEY [ ] 9. FRESH BUTTER[ ] 10. OTHER[ ]	
310	What was the reason for giving the baby this liquid?	1. Infant perceived unwell [ ] 2. Mother unwell [ ] 3. Delayed milk production from the mother [ ]	

		4. Other reason	
311	Has the infant received anything else other than breast milk, since breast feeding was initiated?	1. Yes [ ] 2. No [ ]	If yes go to 312
312	What liquids/solids were given?	1. Plain boiled water [ ] 2. Glucose water [ ] 3. Formula milk [ ] 4. Juice/tea [ ] 5. Other non-maternal milk [ ] 6. Cereals/porridge [ ] 7. Mashed vegetables/fruits [ ] 8. Other (specify	
313	Why did you give the baby these liquids/solids?	1. Baby gets hungry [ ] 2. Mother not producing enough milk [ ] 3. Advised by relatives/friends/neighbors [ ] 4. Advised by health care providers [ ] 5. Advised by TBA [ ] 6. To sooth stomach pain [ ] 7. Other (specify)	
315	Was the child breast fed yesterday during the day or at night?	1. Yes 2. No	
316	For how many months did you breastfeed	1. Months 2. Do not know	
317	How many times did you breastfeed last night between sunset and sunrise?	NUMBER OF NIGHT TIME FEEDINGS	
318	How many times did you breastfeed yesterday during the daylight hours?	NUMBER OF DAY TIME FEEDINGS	
319	Did (NAME) drink anything from a bottle with a nipple yesterday or last night?	1. Yes 2. No	
320	Was (NAME) given any other medicines like tablets yesterday?	1. No 2. Do not know	
321	Did (the child) drink:	1. Plain water 2. Commercially produced infant formula? 3. Any other milk such as powdered, or fresh animal milk 4. Fruit juice? 5. Tea or coffee? 6. Any other liquids?	Now I would like to ask you about liquids (the child) drank yesterday during the day or at night

322	Did (the child) eat:	1. Any porridge or gruel (made from grains other than teff)? 2. Any Cerifam, Fafa, Milupa, Babylac, Mother's Choice or other commercially fortified baby food? 3. Bread, pasta, rice, noodles, biscuits, cookies or any other food made from oats, maize, barley, wheat, sorghum,millet, or other grain? 4. Any food made from teff, like injera, kita or porridge? 5. Any white potatoes, white yams, bulla, kocho, cassava, or any other foods made from roots? 6. Any pumpkin, carrots, squash or sweet potatoes that are yellow or orange inside? 7. Any dark green, leafy vegetables like kale, spinach or amaranth leaves? 8. Any ripe mangoes, papayas? 9. Any other fruits or vegetables? 10. Any liver, kidney, heart or other organ meats? 11. Any beef, pork, lamb, goat, rabbit [or wild game meat such as antelope or deer]? 12. Any chicken, duck or other birds? 13. Any eggs? 14. Any fresh or dried fish or shellfish?	
323	E23How many times did (the child) eat solid, semisolid, or soft foods other than liquids yesterday during the day or at night?	NUMBER OF…….. DO NOT KNOW……	
324	Do you have any support during these times of your motherhood	1. Yes 2. No	If yes go to 325
325	Who do supports you	1. husband 2. mother 3. grand mother 4. health care provider	

SECTION D: MATERNAL KNOWLEDGE, ATTITUDES AND BELIEFS ON EXCLUSIVE BREASTFEEDING

Knowledge

No	Category/question		
400	What is the right time to give breast milk to a child after birth?	1. Immediately 2. Within an hour 3. Between 1 hour and 3 hours 4. From 4 to 6 hours 5. From 7 to 24 hour 6. From 1 day to a week 7. More than a week 8. Never 9. I do not know	
401	What is the right thing to do with the first milk or colostrum to anew born?	1. Discard 2. Feed immediately	
403	What is actually the right time to start complimentary foods in addition to the breast milk?	1. 3 months or less 2. 4 months 3. 5 months 4. 6 months 5. 7 months or above	
404	Which foods and or fluids are recommended to give a child under 6 months?	1. Only breast milk …….. 2. Plain water……. 3. Infant formula (local example) and or milk, tinned, powder, or fresh animal milk? ……. 4. Juice or juice drinks 5. Yoghurt/ …….. 6. Thinned porridge?…….. 7. Any other fluids……	

Attitude

No	Category/question		
500	Giving breastfeeding immediately after birth is important	1. strongly agree 2. agree 3. disagree 4. strongly disagree	
501	Discarding the first milk or colostrum is not important before giving breast milk to the new born	1. strongly agree 2. agree 3. disagree 4. strongly disagree	
502	Starting complementary food a child at six months is important while continuing breastfeeding.	1. strongly agree 2. agree 3. disagree 4. strongly disagree	

Annex III: Focus group discussion guide

1. What are the sources of infant feeding information in this community?
2. Is exclusive breastfeeding a common practice in this community?
3. What are the factors that encourage mothers to practice exclusive breastfeeding for six months?
4. Why do some mothers choose not to practice exclusive breastfeeding?
5. Do you have suggestions on what can be done to encourage mothers to practice exclusive breastfeeding for six months in this community?

Annex IV: Amharic version subject information sheet

<u>አዲስ አበባ ዩኒቨርስቲ</u>

<u>ህብረተሰብ ጤና ሳይንስ</u>

<u>የተጠያቂው / መላሾች የመረጃ ቅፅ</u>

እንደምን አደሩ/ዋሉ::ስሜ----------ይባላል::የመጣሁት የአዲስ አበባ ዩንቨርስቲ ህብረተሰብ ሳይንስ ጤና ሁለተኛ ዲግሪ ተማሪ የሆነችውን መድህን ጸጋዬን ወክዬ ነው:: የሁለተኛ ዲግሪዋ ት/ት ማሟያ ለሚሆን ጥናት መረጃ ሰብሳቢ ነኝ:: የሁለተኛ ዲግሪዋን ለመመረቅ በአፋር ክልል የእናት ጡት የማጥባት ልምድ አናሳ የሆነበትን ምክንያት እና ከእናት ጡት ማጥባት ጋር ተያያዥ በሆኑ ጉዳዮች ዙሪያ ጥናትና ምርምር ለማድረግ ከአዲስ አበባ ዩኒቨርስቲ እና ከአዲስ አበባ ጤና ቢሮ ፍቃድ አግኝታ እየሰራች ነው::
እርስዎ የተመረጡት በዚህ ክልል ነዋሪና እድሜዉ ከስድስት ወር በታች የሆነ የህጻን ልጅ እናት ስለሆኑ ነው:: የእርስዎ ተሳትፎ ሙሉ በሙሉ የእርስዎ ፈቃደኝነት ላይ የተመሰረተ ነው በጥናቱ የመሳተፍ እና ያለመሳተፍ ሙሉ መብት አለዎት:: ለመሳተፍ ፈቃደኛ ከሆኑ በኋላም በፈለጉት ጊዜ ማቋረጥ ወይም ማቆም ይችላሉ:: በጥናቱ ባለመሳተፍዎ የሚደርስብዎ አንዳች ጉዳት የለም::
በጥናቱ ለመሳተፍ ከተስማሙ ስለራስዎ የጡት ማጥባት ልምድ እስከ 30 ደቂቃ ሊወስድ የሚችሉ የተወሰኑ ጥያቄዎች እንጠይቆታለን::
ከጥናቱ ተገቢውን የጡት ማጥባት ልምድ ስርአቶች ይማራሉ ይህም ለልጅዎ የተማላ ጤንነት አጅጉን አስፈላጊና ጠቃሚ ነዉ:: ከዚህም በተጨማሪ የጥናቱ ውጤት የእናቶችን የጡት ማጥባት ልምድ ይበልጥ ለማሻሻል ለሌሎች ተመራማሪዎች በዚህ ዙሪያ ለሚሰሩ አካላት እንደመነሻ ያገለግላል::

የስምምነት መጠየቂያ/ማረጋገጫ ቅፅ

ከላይ በሰጠሆዎት መረጃ መሰረት በዚህ ጥናት ለመሳተፍ ፈቃደኛ ነዎት

1) አዎ (ቃለመጠይቁንቀጥል)

2) አይደለሁም (ምክንያቱን ፅፈህ ወደ ሚቀጥለዉ ተሳታፊ እለፍ)

ቁጥር----------

የቀበሌው ስም----------

የቃለ መጠይቁ አድራጊ ሰው ስም----------

የቃለ መጠይቁ ተሳታፊ ሰው ስም----------

ቃለ መጠይቁ የተካሄደበት ቀን---------- **የተጀመረበት ሰአት**---------- **ያለቀበት ሰአት**----------

መጠይቁ ታይቷልጸተፈትሿል----------

የቃለ መጠይቁ ዉጤት

1) ሙሉ በሙሉ የተሞላ

2)በከፊል የተሞላ

3) ምንም ያልተሞላ

በተቆጣጣሪዎች ተረጋግጧል፡፡ ስም _____ፊርማ _____

ትእዛዝ፤ተሳታፊዎቹ የሚሰጡትን ማንኛዉንም መልስ ከተሰጡት አማራጮች ዉስጥ ለይተህ አክብብ.

ክፍል 1ጽሰለ ሀጻኑ መረጃ

ቁጥር	ጥያቄ	ምላሽ	ትእዛዝ
101	የሀጻኑ ስም		
102	ጸታ	3- ወንድ 4- ሴት	
103	እድሜ በሳምንታትጸበወራት		

ክፍል 2ጽሰለ እናቲቱ እና አጠቃላይ ስለቤተሰበ ሁኔታ መኖሪያ፣የገቢ ምንጭ

ቁጥር	ጥያቄ	ምላሽ	ትእዛዝ
201	የእናቲተ ዕድሜ		
202	የጋብቻ ሁኔታ	5- ያገባች 6- ሌጣ 7- የተፋታች 8- ባሏ የሞተባት	
203	የትምህርት ሁኔታ	7- ያልተማረች 8- የመጀመሪያ ደረጃ ያጠናቀቀች 9- የመጀመሪያ ደረጃ ያላጠናቀቀች 10- ሁለተኛ ደረጃ 11- የሰርቲፊክትደረጃየሰለጠነች 12- ከተጠቀሱትበላይ	
204	ሃይማኖትሽ ምንድ ነውጽ	1. ሙስሊም 2. ኦርቶዶክስ 3. ፔንጤ 4. ሌላ	
205	እሰከ አሁንድረስ ምን ያክል እርግዝናዎች ነበሩሽ	---------- እርግዝናዎች	
206	ከሚከተሉት የትኞቸ ዕሉሽ	1. የኤሌትሪክ አገልግሎት 2. ሬዲዮ 3. ቴሌቪዥን 4. ስልክ 5. ሞተር ሳይክል መኪና 6. ጋሪ 7. መሬት (ምን ያክል ሄክታር) ..... 8. ከብቶች (ስንት)..... 9. ፍየሎች (ስንት)..... 10. ግመሎች (ስንት)..... 11. ሌላ	

ክፍል 3.ስለ የወሊድ ልምድ እና የጡት ማጥባት ልምድ ሁኔታ

ቁጥር	ጥያቄ	ምላሽ	ትእዛዝ
301	ልጅሽን የትነው የተገላገልሽውጽ	4- ቤት ውስጥ 5- በጤና ተቋም 6- በልምድ አዋላጅ	
302	እንዴት ነበር የተገላገልሽውጽ	4- በተፈጥሮ መንገድ 5- በቀዶ ጥገና	
303	ልጅሽን ጡት አጥብተሽው ነበርጽ	3. አዎ 4. አይ	አዎ ከሆነ ወደ ጥያቄ 405 እለፍ
304	ለምንድን ነው ያላጠባሽውጽ		
305	ከወለድሽ ቡሃላ በምን ያክል ቆይታ ውስጥ ነው ያጠባሽው	4. ውዲያውኑ በወለድኩ በመጀመሪያው አንድ ሰአት ውስጥ 5. ከወለድኩ ከአንደ ሰአት ቡሃላ 6. አላስታውስምአላውቅም	
306	የመጀመሪያውን ቢጫ ወተት (እንገር) ልጁ እንዲጠባ ሰጠሽውጽ	3. አዎ 4. አይ	አዎ ከሆነ ወደ ጥያቄ 408 እለፍ
307	ለምንድን ነው ያላጠባሽውጽ		
308	በወለድሽ እሰከ ሶስተኛው ቀን ባሉት ግዜያት ከጡትሽ የሚወጣውን ወተት ለልጅሽ አጥብተሽዋልጽ	4. አዎ 5. አይ 6. እርግጠኛ አይደለሁም	አዎ ከሆነ ወደ ጥያቄ 410 እለፍ
309	ለምንድን ነው ያላጠባሽውጽ		
310	ልጅሽን ጡት ከማጥባትሽ በፊት	3. አዎ	አዎ ከሆነ ወደ

	እንዲጠጣ የሰጠሽው ፈሳሽ አለጵ	4. አይ	ጥያቄ 411 እለፍ
311	የሰጠሽው ፈሳሽ ምን ነበርጵ	11. ውሃ 12. በስኳር የተበጠበጠ ውሃ 13. በስኳርና ጨው የተበጠበጠ ውሃ 14. የፍራፍሬ ጭማቂ 15. ፎርሙላ ወተት 16. ሻይ 17. ማር 18. ትኩስቅበ 19. ሌላ	
312	ለልጅሽ ፈሳሹን ለመስጠት ምክኒያትሽ ምን ነበርጵ	5. ልጄ ደህና አልነበረም 6. እኔ ደህና አልነበርኩም 7. የጡቴ ወተት ቶሎ አልፈሰሰም ነበር 8. ሌላ	
313	ልጭ የወሰደው መድሀኒት ወይም እንክብል አለጵ	1. አዎ 2. አላውቅም	
314	ህጻኑ ጡትሽን መጥባት ከጀመረ ቡሃላ የሰጠሽው ነገር አለጵ	3. አዎ 4. አይ	አዎ ከሆነ ወደ ጥያቄ 415 እለፍ
315	ምንድን ነበር የሰጠሽውጵ	9. ፈልቶየቀዘቀዘ ውሃ 10. በስኳርየተበጠበጠ ውሃ 11. ዱቄትወተት 12. ሻይጭማቂ 13. ከጡትወተትውጪ ሌላ አይነትወተት 14. ለስለስ ያለ ገንፎ 15. በደቃቁየተሰራ አትክልት እና ፍራፍሬ 16. ሌላ(ያብራሩ)	
316	እነዚህን ፈሳሽና ምግቦች ለምንድን ነበር የሰጠሽውጵ	8. ልጄ ስለሚርበው 9. በቂ ወተት ስላልነበረኝ 10. ዘመዶቼ ጓደኞቼ ጎረቤቶቼ ስለመከሩኝ 11. በጤና ባለሙያ ምክር 12. የልምድ አዋላጄ ስለመከረችኝ 13. ሌላ(ያብራሩ)	
317	ህጻኑ ከትናንት ማታ እስከ ዛሬ ቀን ድረስ ጡት ጠብቶአልጵ	3. አዎ 4. አይ	አዎ ከሆነ ወደ ጥያቄ 418 እለፍ
318	ለምን ያክል ወራትነው ያጠባሽው	3. ወራቶች..... 4. አላውቅም	
319	ትናንት ማታ ጸሀይጠልቃ	ማታ ያጠባችው ቁጥር	

	እስከምትወጣ ድረስ ባለው ጊዝለስንት ያክል ጊዜ አጠባሽጵ		
320	ትናንት ቀን ላይ ስንት ግዜ አጠባሽጵ	ቀን ያጠባችበት ቁጥር	
321	ህጻኑ ትናንትና ወይም ማታ የጠጣው ፈሳሽ ነገር አለጵ	3. አዎ 4. አይ	
322	ህጻኑ እነዚህን ጠጥቷል	7. ውሃ 8. ፎርሙላ ወተትጵ 9. ሌላ አይነት ወተት ማለት ፓውደር ወተት ወይም ትኩስ የእንስሳ ወተት 10. የፍራፍሬ ጭስጵ 11. ሻይወይም ቡናጵ 12. ሌላ አይነት ፈሳሽጵ	
423	ህጻኑ እነዚህን ተመግቧል	1.ገንፎጵ 2. ሴሪፋም፣ፋፋ፣ጵ 3. ዳቦ፣ፓስታ፣ሩዝ፣ብስኩት፣ ወይም ከአኛ በቆሎ ገብስ፣ስንደ፣ የተዘጋጁ ሌላ አይነት ምግቦችጵ 4. ከጤፍ የተዘጋጁ ምግቦች እንጀራ ቂጣ ገንፎጵ 5. ድንች ቡላ ቆጮጵ 6.ዱባ፣ካሮት ስኳርድንችጵ 7. ጎመን አትክልቶችጵ 8. ማንጎ ፓፓያጵ 9. ጉበት ኩላሊትጵ 10. ስጋጵ 12. ዶሮጵ 13. እንቁላልጵ 14. አሳጵ	
324	አጠገብሽ ሆኖ የሚያግዝሽ ሰው አለ	1. አለ 2. የለም	አዎ ከሆነ ወደ ጥያቄ 425 እለፍ
325	ማነው የሚያግዝሽ	1. ባለቤቴ 2. እናቴ 3. ጎደኛዬ 4. ዘመዴ 5. የጤና ባለሙያ	

ክፍል፡ 4 ስለጡት ማጥባት ግንዛቤ ወይም የእውቀት መረጃ

ቁጥር	ጥያቄ	ምላሽ	ትእዛዝ
400	ልጅ እንደተወለደ በምን ያክል ግዜ ውስጥ ጡት ማግኘት ይኖርበታል	10. ወዲያውኑ 11. በ 1 ሰአት ውስጥ 12. ከ 1 እስከ 3 ሰአት ባለ ጊዜ ውስጥ 13. ከ 3 አስከ 7 ሰአት ባለ ጊዜ ውስጥ 14. ከ 7 እስከ 24 ሰአት ባለ ጊዜ ውስጥ 15. ከ 1 ቀንእስከ 1 ሳምንት ባለ ጊዜ ውስጥ 16. ከ 1 ሳምንት በላይ 17. ጭራሽ መጥባት የለበትም 18. እላውቅም 19. ሌላ ካለ ይጠቀስ	
401	የጡት የመጀመሪያውን ወተት (እንገር) ምን ማድረግ ያስፈልጋልጽ	3. መድፋት ወይም ማስወገድ 4. ልጁ እንዲጠባ ማድረግ 5. ሌላ ካለ ይጠቀስ	
402	ልጁ ስንት ወር ሲሞላው ነው ተጨማሪ ምግብ የሚያስፈልገውጽ	6. 3 ወር ወይም ከዛ በታች 7. 4 ወር 8. 5 ወር 9. 6ወር 10. 7ወር ወይም ከዛ በላይ	
404	ስድስት ወር ላልሞላው ልጅ ከሚከተሉት የትኞቹን መስጠት ያስፈልጋልጽ	8. ንጹህ ውሃ 9. የህጻናት የዱቄትወተት 10. ወተት የታሸገ ዱቄት ወይም ትኩስ የላም ወተት 11. ጭማቂዎች ወይም እርጎ ወይምወተት	

ክፍል፡ 5 ጡትን ብቻ ስለማጥባት ስላለ አመለካከት

ቁጥር	ጥያቄ	ምላሽ			
		1.በጣም እስማማለሁ	2. እስማማለሁ	3. አልስማማም	4.በጣም አልስማማም
500	ልጃ ገወዲያው እንደተወለደ የጡት ወተት ወዲያው አንድ ስአት ባልሞላ ግዜ ውስጥ ማጥባት ጥሩ ንወ				
501	ልጁ እንደተወለደ የመጀመሪያውን ወተት ወይም እንገር መስጠት አያስፈልግም				
503	ልጃ እንተወለደ ልክ አራት ወር ሲሞላው ወይም ከዛ በፊት ተጨማሪ ምግብ ማስጀመር ያስፈልጋል.				

Annex V: Afar af version subject information sheet

Addis ababah jaamiqat

Ummatta qaafiyatih saynis

Esseran numih /gacsittih oyti

Mannah maacisseeh /mannah asseeh/

Yimigaq----------diqisita

Kah emeetem addis ababah university ummattah qaafiyatih saynis nammaya hayto xigiri barteynah tan Maxhin tsgasey awlisaka kinni nammay hayto xigiri barittoh buxah takkeh tan kusaqa oyti gaaboyse kiniyo .

Nammay hayto xigiri qafara raakayal inah angu exexi ixxiga daggowak kah yemeetemik sabab kee inaha anagu exexit axawa tannih tanniimil kusaqa abtuh addis ababah university kee addiis ababak qaafiyata biirok ruksat geyteh taamitak geytimta

atu akah doorimitem a rakaakyal gubuh geytimitam kee 6 alsak addah yan alqih ina kinnuk taama ku gabah assagoli dudda luk ku fayxil qikuh tan.Kusaqaata gabbah assoglla kee gabah assagolle waytih duddalla cakki lito.Gabaha saagola fayxi teelek isih faxxa waka taragiqem hinnamaya soolisama duddaha a kusaaqa gaba tassagallemih kot booda yan wali taqabi mayana

A kusaaqa gaba tassagalluh fayxi tellek anguh exexik taaaxigeh taniimi 30 minit beytama betama dudda esseroora koo esserono .

A kusaqata faxximaha yan anguh qarasi gittite bartetto woh kaadu ku baxah adudda leh yan qaafiyat kaxxam faxximam kee nafaqi kinni ,ahak ossitinah kaadu kusaaqa xali inah angu exex ixxxiga aysuk yaysiisenim kee acaagidil kusaaq abah yan marah ugutumaha edde antifiqqelon.

Itin gey essero/ diggosah yan gali

A dagal geytehb tan oyti a kusaaqat gab tassagalluh isi fayxik tani.

1.yey (esssero qimbis)

2 hinniyo (sabab akatabuk gersi numul taba)

Ixxima----------

Awada migaqa----------

Esser abe migaq----------

Esseran numih migaq----------

Esserit gaba yessegeli numih migaq----------

Esser edde yekke ayro----------edde qimibise saqata---------edde gaba kale saqata----------

Esseme tamabule/cubbuseenih

Essere kee gacasi xali

1 . inkih yemmege

2 .garab yemmeggeh

3. tu kak mammaginna

lowsiisitttet diggowte migaq----------sumqta----------

Amari: gaba yassaggaleh yan marih yaceh yan faxe gacsat maro hayis.

1hayto footima alqih oyti

Ixxima	Essero	Gacsa	Amri
101	Alqi migaq		
102	Nado	1.Labih 2.Sayih	
103	Karma ayyaamal /alsittel		

2hayto footima ina kee inkih yan buxa marih manoh caalat ,culenti raceyna.

Ixxima	Essero	Gacsa	Amri
201	Karma kok magidey		
	Ma diini kattattaah	1. Muslim 2. Ortoxos 3. Bente 4. kalah	
202	Qasaalah ceelo	1. -Digibteh 2. -Madigbinna 3. -Cabtintto 4. -Gubna	
203	Baritto ceelo	1. Mabartinna 2. Enek hayto caddok gabakaleh 3. Enek hayto caddok magabakalo 4. Nammey hayto caddo 5. Sartifikeeti 6. Roris neemik daga	
204	Ku baqlih taama macaay	1. Ayro taama 2. Maytani taameyna 3. Numtin amo taama	
207	Qaafiyat fanteena gexxuh maakina wakti kok beytaah	Miniitik/saqat beytah gid -----	
208	Ciggiltaamak maca litooh	1. Eletirik ayfaf 2. Radiyo 3. Tv 4. Silki 5. Moter saykil,makiina 6. Ardi (maakina HK)----	

		7. Laa (magid)----- 8. Wadar (magid)- 9. Gaala (magid)--- 10. kalah	

4hayto footima xalsiyyi abak rag kee angu qarsih abak rag ceelo

Ixxima	Essero	Gacsa	Amri
301	Alqi ankel xalteeh ?	1. Buxah adda 2. Qaafiyat fanteena 3. Abak ragle ullatina	
302	Anni gitak xalteeh ?	1. gino gita 2. operation	
303	Alqi angul qarisse ?	1. yey 2. baley	Gacsi yey tekkek 405 essero fan tatur
304	Macah qarse wayteeh ?		
305	Xaltek sa magide sugteh qarisseeh ?	1. Wo waqdiik edde xale saaqatih addat qarse 2. Inki saaqatih lakak qarse 3. Makasa /maaxiga	
306	Qimboh walqin can(caxugi) alqi teyseexe ?	1. yey 2. baley	Gacsi yey tekkek 408 essero fan tatur
307	Macah qarse wayteeh ?		
308	Xaltek ilaa sidiica ayro fan alqi angul qarisse ?	1. yey 2. baley 3. masmita	Gacsi yey tekkek 410 essero fan tatur
309	Macah qarse wayteeh ?		
310	Alqi angul qarissak naharat maqubuh kah teceem lito ?	1. yey 2. baley	Gacsi yey tekkek 411 essero fan tatur
311	Maca kah teceeh ?	1. lee 2. sukkar lee 3. sukkar kee qasbo le lee 4. caxah far le lee 5. alifut yan cana 6. shaahi 7. migin sabaca kalaha	
312	Alqi leeeyil kaha tacenim sababa macaya	1. Awaki muquk masugiina 2. Anu maquk massuginiyo 3. Angu can xehe yok 4. macaxato kalaha	

313	Alqih tace dayala hinna tabalet lito	Yey maaxga	Gacasi yey tekke essero alas fana tatur
314	Alqi anguh can yaaxem qimmisek sa kaah teceem may lito	1.yey 2. baley	Gacsi yey tekkek ciggilta(115) essero fan tatur
315	Macay kah taceniim	1. Tofooreh xabacate lee 2. Sukaara lee 3. Cokana can 4. Shaahi jucie 5. Angu cana 6. Kalaha yana cana 7. Sissik qassidi 8. Riyen caxa miru 9. Kee caxa faara 10. Kallah baxaqiisi	
316	A leeliyih tan maaqo macah kaah teceeh?	1. Baxi yok satqitaamak 2. Duddale anguh can luk masugiyyo 3. Ramad,kataysa ,cuggaane yoh warseenimi 4. Qaafiyat mehretlik obbeemi 5. Abak rag le ullatinak obbeemi 6. Kalah tenek baxxaqis	
317	Awaya qaarisa?	1. Yey 2. Baley	Gacasi yey tekkek 419 essero fanah taturuta
318	Maakina alasa fannaha qarisseh	------- alsa maaxiga	
319	Bir bara ayro korteme kee subuci ayro teweqmik fanata makina waka qariseh	- Bar qariiseh gide	
320	Kimmali ayro maakina waka qarise	- ayrol qariise gide	
321	Alaqi kimala ke biri fanata kaha tece leeliyyi maqo lito	1. yey 2. baley	Gacasi yey tekkek 421 essero fanah taturuta
322	Alaqi aha xaage yooqobe	1. lee 2. farmole cana 3. kalaha yana cana axace waka	

		boweder hinnnaya miqih 4. cana 5. caxa mixxiqise 6. shaahi hinnaya buna kalah	
323	Alaqi aha yookome	1. qqasid 2. saritama fafa 3. xabo, baste,ruz busukut gabsi buuru cabisi 4. bicite qasir 5. teefik bicite ejnerehe kita qasid 6. battata karroto, sukara bata, 7. gomana caxaha mixu 8. managoyo babayooy 9. tiro baxa 10. qasa baxa 11. qado daro 12. naala 13. kullumuta	
324	Xaqutu koo cata nummu lito	1. yey 2. baley	Gacasi yey tekek 425 fana taddure
325	Iyyi koo cataah	1. buxaha abba 2. yi ina 3. yi katayasa 4. y ramada 5. qaafiyyata mihiratali	

4hayto Footima angu qarsih hangi hinna immaya ixxiga oyti

Ixxima	Esssero	Gacasa	amari
400	Alaqi yoobekek lakal magidde suga waka anugu geyma faxximitah	1. Woo wakaka 1 saqata 2. addata saqat 1addat 3 3. saqata kee 7 saqata fanata 4. 7-24 5. 1 day to 1 week 6. 1 week and above innikinaha yaxem ma faxximit /maaxxiga 7. Kalah teeneke wariiisi	
401	Anguk naharasi anaka caxugi macaha abanama faxximita	1. Caxaanama hiannaya kalacaanama elle 2. Alaqi qarse waanama 3. Kalaha teneke 4. wariisi	
402	Alaqi maakina alasa suga waka osstina maqo faxaha	1. 3 aslaka addaha 2. 4 alsa 3. 5 alasa 4. 6 alasa 5. 7 alasa irol	
403	Lica alsa suge alaqi ciggilitamak maca yecemimi taysaeh	1. Saytun lee 2. Alaqaah can burrih yana can 3. Hinnaya buuri cana niqinih	

		laqqinh 4. Juscie hinnaya qitta,can	

5hayto Footima angu dubuku qarasanamal ma mabal litooh

ixxima	essero	Gacasa			
500		1. Kaxxam yoo beytah	2. Yoo beytah	3. Yoo mabeyta	4. Kaxxam yoo mabeyta
	Alaqi yobbeke kee woo waqadik inki saqata gufek kala angu yaaxem meqe				
501	Alqi yabbuke waka caxugi yaqubeme ma faxximita				
502	Alaqi yabukem kee affara alasa fan hinnay wohuk naharat ossotina maqo yakmem faxximta				