Time to Early Cessation of Exclusive Breast Feeding and Associated Factors among 6-12 months old children in Lanfuro Woreda, Silte Zone, 2017

By

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Thesis submitted to Jimma University institute of Health, Faculty of public health, Department of population and Family Health in partial fulfillment of the requirements for Master of Science (MSc) in Human Nutrition

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Jimma, Ethiopia

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Abstract

Background: WHO and UNICEF (1990) have recommended EBF for six months, followed by introduction of complementary foods at the age of six months with continued breastfeeding for the first 24 months or more. Exclusive breastfeeding (EBF) during the first 6 months of life reduces infant morbidity and mortality. Acording to Ethiopian, DHS only 58% of children were exclusively breastfed during the first 6 months of age.

Objective: The study aimed to identify time to early cessation of EBF and associated factors among 6-12 months old children in Lanfuro Woreda, Silte Zone.

Methods: A community based cross-sectional study was conducted in Lanfuro Woreda, Silte Zone, from March to April 2017. A total of 636 mothers with 6-12 months old infants from ten randomly selected kebeles were included. Both quantitative and qualitative data collection methods were employed. The Kaplan-Meier curve with log rank test was used to compare the survival difference by the selected covariates. Both bivariate ($P<0.25$) and multivariable ($P<0.05$) Cox Proportional Hazards model was fitted to identify factors predicting time to early cessation of EBF.

Results: The median duration of exclusive breastfeeding was 6.22 months. The highest proportion of cessation of exclusive breast feeding occurred during the first four to five months. Early cessation of exclusive breast-feeding was observed in 295 (47.97%). Place of residence (AHR: 1.6; 95% CI = 1.14-2.20), knowledge on EBF (AHR = 1.31; 95% CI = 1.02-1.68), type of delivery (AHR: 2.41; 95% CI = 2.24-3.68), pre-lacteal feeding (AHR = 1.8; 95% CI = 1.32-2.36) and household food insecurity (AHR = 5.02; 95% CI = 3.89-6.50) were significant independent factors which were associated with time to early cessation of exclusive breast-feeding.

Conclusion and Recommendation: There are still sizable proportions of children not enjoying exclusive breastfeeding for the first fully six months. Being urban resident and coming from food insecure households, giving birth by CS, having low knowledge on EBF and giving pre-lacteal feeding were factors associated with time to early cessation of EBF. Action should be taken for respective pridictors of time to early cessation of EBF.

Keywords: Exclusive breastfeeding, time, early cessation, median duration, Lanfuro Woreda

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List of Abbreviations and Acronyms

ANC- Antenatal care

CSA- Central Statistical Agency

CI-Confidence Interval

EBF-Exclusive Breast Feeding

EDHS - Ethiopian Demographic Health Survey

EPI-Expanded Program Immunization

EFY-Ethiopian fiscal Year

FGD-Focused Group Discussion

FANTA- Food and Nutrition Technical Assistance

GMP-Growth Monitoring and Promotion

HH-Household

ORS-Oral Rehydration Salt

PNC-Postnatal Care

PI-Principal Investigator

PLF-Pre lacteal feeding

SSA-Sub-Saharan Africa

SNNPR-Southern Nation's Nationality Peoples Region

SPSS-Statistical Package for Social Science

TBA-Traditional Birth Attendants

UNICEF-United Nations Children's Fund

WHO- World Health Organization

CHAPTER ONE

INTRODUCTION

1.1 Background

Exclusive breastfeeding is defind as Fed only on breast milk (including milk expressed) allows ORS, drops, syrups (vitamins, medicine and minerals), do not allow anything else until children exacly six months of age. Breast feeding is the best way through which newborns are offered essential nutrients considered necessary for optimal growth and intellectual development (1). When exclusive breastfeeding (EBF) compared with other types breast feeding have been found to be associated with 14 times lower risk of death due to any cause in infants under 6 months of age (2). In addition, 13% of child deaths could be easily prevented by simple, cheap , and accessible EBF (3). Earlier findings have also shown that exclusively breastfed infants are less likely to develop high blood pressure, some diet-related chronic diseases, or gastrointestinal and respiratory tract infections later in life (1, 4). Besides, women who practice EBF have better chance to have improved health benefits include: reducing the risk of breast and ovarian cancer, reducing bleeding, preventing anemia by helping the uterus to return to its normal size and decreasing risks of new pregnancies by delaying the return of fertility (5).

Exclusive breast feeding is also found to be preventive against single and frequent incidences of otitis media. Infants who were given supplementary foods before the age of 6 months had 40% more episodes of otitis media than their counterparts. In addition breastfeeding also benefits society by reducing health care costs and associated loss of family income (6). The longer breastfeeding is delayed, the higher the risk of death for children in their first month of life (7). Global data from 2011 report indicated that 11.6 % of total deaths of children under five were associated with suboptimal breastfeeding (8).

Nutrition sensitive and specific indicators are essential to track improvement and guide investment to improve nutrition and health during the first 1000 days of life of infants. Of the indicators, exclusive breastfeeding grades first; being estimated as having the potential to prevent 13% of all deaths. Out of the 6.9 million under five children who were reported dead globally in 2011, around one million lives could have been saved by simple, cheap, and accessible practices such as EBF (10). Additionally, a 10 percent increase in exclusive

breastfeeding was associated with a reduction of 5 child deaths per 1,000 live births. Consequently, the WHO and UNICEF (1990) have recommended EBF for six months, followed by introduction of complementary foods exactly at the age of 6 months and continued breastfeeding for 24 months and above (11).

Although the duration of ever breastfeeding in Ethiopia is long, EBF is not widely practiced such that- only 58 % mothers exclusively breastfeed according to EDHS 2016 (12). Among children less than six months, the median and mean duration of EBF was 2.3 and 4.2 months, respectively (13). One out of 17 Ethiopian children dies before the first birthday, and one in every 11 children dies before the fifth birthday. Extensive regional differences in infant and under-five mortality are observed, as well as mortality rates ranging from as low as 53 per 1,000 live births in Addis Ababa to as high as 169 per 1,000 live births in Benishangul-Gumuz and 116 per 1,000 live births SNNPR (13).

The problem of malnutrition begins early in life, primarily during the first 12 months when growth faltering takes hold due to sub-optimal infant feeding practices (14-16). Studies showed that breast-feeding is a time-dependent practice influenced by different factors, making initiation and termination of EBF different among lactating mothers across countries of the world variable (17, 18). Generally, EBF is first order indicator in child survival interventions owing to high quality, feasibility and cost effectiveness in low-income settings (3).

1.2 Statement of the Problem

There is sound scientific evidence (19) that exclusive breastfeeding of infants under six months of age could prevent around a million deaths of children under-five in the developing world. Conversely, global rates of exclusive breastfeeding rates have remained static since 1990 with only 38 per cent of children less than six months exclusively breastfed in 2013 (9).

Breastfeeding practice varies by country, region, and in different cultures. In developing countries, of approximately 56 million infants less than six months of age, approximately 22 million were exclusively breastfed, while over 34 million children were not. Eighty percent 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 (20). The overall prevalence of EBF in SSA was 36.0% (21).

Ethiopian government has deployed two health extension workers in each Kebele for doing the promotion of optimal breastfeeding practices among households in their respective kebeles. On the contrary, Ethiopian, DHS 2016 showed that only 58% of children were exclusively breastfed during the first 6 months. This number will decline to 36% among 4-5 month aged infants (12).

The SNNPR accounts 38.2% and 6% of Ethiopia regarding having the highest number of stunted and wasted children, respectively (12). According to the EDHS 2011 the SNNPR region has the lowest exclusive breastfeeding median duration which is 2.2 months (13) still below from 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, typically perform poorly in school. The problem of malnutrition begins early in life, primarily during the first 12 months when growth faltering takes hold due to sub-optimal exclusive breast feeding practices which contributes on increment of prevalence of stunting (14-16, 22) .

To make the country free of malnutrition by 2030 Ethiopian government designed nutrition sensitive and specific interventions under its national nutrition program I and II and Seqota declaration. Realizing the importance of exclusive breastfeeding, the Ethiopian government had developed infant and young child feeding guidelines giving appropriate emphasis to key messages on exclusive breastfeeding in 2004 (16). Since then, different interventions like breastfeeding promotions have been given at health institutions and at the community level by community health extension workers, health development army and other health care providers.

However, these efforts are not based on enough evidence on the level of existing practice which might be due to the scarcity of data from studies on time to early cessation of exclusive breast feeding and associated factors. Therefore, Investigation of the time to early cessation and associated factors of the EBF may provide insight into the current burden and nature of the problem and help on how to direct prevention strategies. Additionally, there is no study on

associated factors of early cessation of EBF in the study area in particular. The present study is intended to identify the time to early cessation of EBF and its associated factors.

1.3 Literature Review

1.3.1 **Early cessation of exclusive breast feeding**

WHO and UNCEF recommend Exclusive breast feeding for the first six months, the rate remains low throughout the world. Globally, 38% of children less than six months of age were exclusively breastfed in the period of 2005–2012. This rate was lower in the European Region (25%), with intermediate values for the African and Eastern Mediterranean regions (35% each) and the Region of the Americas (30%) (13).

In developing countries 39% of infants younger than six months were exclusive breastfed in 2010 (16). A study conducted in Hamdard College of Medicine and Dentistry Karachi, Pakistan found that only 40% of mothers were exclusively breastfed whereas 60% of women used exclusive bottle feeding or mixed feeding during the first 6 months (23). However, the place and the time of study, method of analysis is different from our study. Cohort study conducted in Nova Scotia shows that the prevalence of exclusive breastfeeding was 10.4%, which was the largest drop in exclusive breastfeeding that occurred within the first 6 weeks after birth among the mothers who initiated breastfeeding (24). Although, their study design is strong for prediction of EBF the geo-economic difference has its own effect.

A cross-national analysis of 57 Low- and-middle income countries on exclusive breastfeeding and under-five mortality from 2006-2014 reported that exclusive breastfeeding rates varied among the 57 countries, with an average of 34.0% (25). However, the study used secondary data and the method of analysis is not appropriate for identifying the predictors of early cessation of exclusive breastfeeding before six months.

According to the study conducted in Muheza District Tanga Northeastern Tanzania, the prevalence of EBF was 24.1 %. The perception that mothers' breast milk is insufficient for child's growth, child being thirsty and the need to introduce herbal medicine for cultural purposes were among the important factors for early mixed feeding (26). However, the sample size is smaller, the data analysis method is different from our study and differences in the study areas have its own effect on the estimates.

A cross sectional community based study done in Debre Berhan District, Central Ethiopia showed that two thirds of mothers 435 (68.6 %) reported practicing EBF for their index infants. Out of 169 mothers who initiated early weaning, the food they provided for their infants before 6 months included cow's milk (45.0 %), and formula milk (21.3 %). The reason for cessation of EBF was the need to return back to work after completing two months of maternity leave (30.5 %), belief that their breast had insufficient milk (23.9 %), they introduction of complementary food to correct poor infant growth for age (13.2 %), maternal health problem (12.2 %), thought that they had fed for recommended period (9.1 %) and the rest 8.1 % reported desire of infant for additional meal (27). However, this study was conduct on urban area, socio-demographic and the time related factors are different.

Cross-sectional study which is done in Ankesha Guagusa Woreda, Awi Zone, and Northwest Ethiopia showed that early cessation of exclusive breast feeding before six month was 69.6% which is 37.7% from urban fllowed by 31.9% for rural dwellers (28). However, it has been a long time since the study was conducted which could lead to socio-economic differences and secure changes. The study participants were below the age of one year and so the event (cessation of exclusive breast feeding) which occurred after six months was also included in the past 24 hour, which may inflate the results.

1.3.2 Socio demographic factors

Cross-sectional study done in Ankesha Guagusa Woreda, Northwest Ethiopia identified major socio-economic factors which affect cessation of EBF to be significantly associated with age of mother, educational status of mother and partner, occupation of the mother and partner, place of residence mothers below the age of 20′s were 1.5 times more likely to cease EBF early than those who were in second half of 30′s and above. Mothers with educational status of college and above were 2.34 times more likely to cease EBF early compared with none educated mothers (28).

The hazard of early cessation of EBF was 1.7 times more in mothers whose partner's educational status is college and above compared to the mothers with none educated partner, although this was insignificant in adjusted Cox Proportional Hazards model. Mothers who were engaged in different jobs (including daily laborer, house servant and pottery) were over two times more

likely to terminate EBF early compared to housewife mothers and civil servant mothers were 1.7 times likely cease EBF early compared to housewives (28).

According to the study conducted in Karachi, Pakistan maternal factors for termination of breast feeding were insufficient milk secretion (57%), insufficient rest during first six weeks of post-partum(43%) , breast engorgement (25%), working mothers (13%) and cesarean section (19%). Child factors which cause termination of breast feeding were formula feed (41%), disruption or interruption during breast feeding (36%), difficulty in latching on to the breast (27%), premature and low birth weight (24.5%) and twin pregnancy (6%)(23).

1.3.3 Obstetrics factors

A study conducted in SSA showed that mothers who had 4 and above ANC visits had 18% higher odds of EBF compared to mothers who had no visits. Mothers who had vaginal delivery and caesarean section in a health facility had 41% higher odds of EBF compared to mothers who delivered at home with unskilled assistance. In addition, mothers who had multiple births had 54% lower odds of being exclusively breastfeed compared to mothers who had single births. The findings with regard to age of the child showed that children within the age group 0–1.9 and 2–3.9 months had 6.29 and 2.79 times higher odds of EBF, respectively, as compared to children aged 4–5.9 months (21).

1.3.4 Infant Factors

According to the study conducted in Azezo District, Northwest Ethiopia, infant's younger than 3 months were 2.12 times more likely to be exclusively breastfed than infants aged between 4–6 months, indicating that infants' age was inversely related with EBF(29). According to a study conducted in SSA female infants had 7% higher odds of being exclusively breastfed compared to male infants (21). According to a study conducted in Muheza District Tanga Northeastern Tanzania, Infant's characteristics like birth weight, birth order or sex were not associated with EBF (26). However, both studies Azezo and Muheza districts had smaller sample size, method of analysis and socio-economic and cultural factors are different from our study.

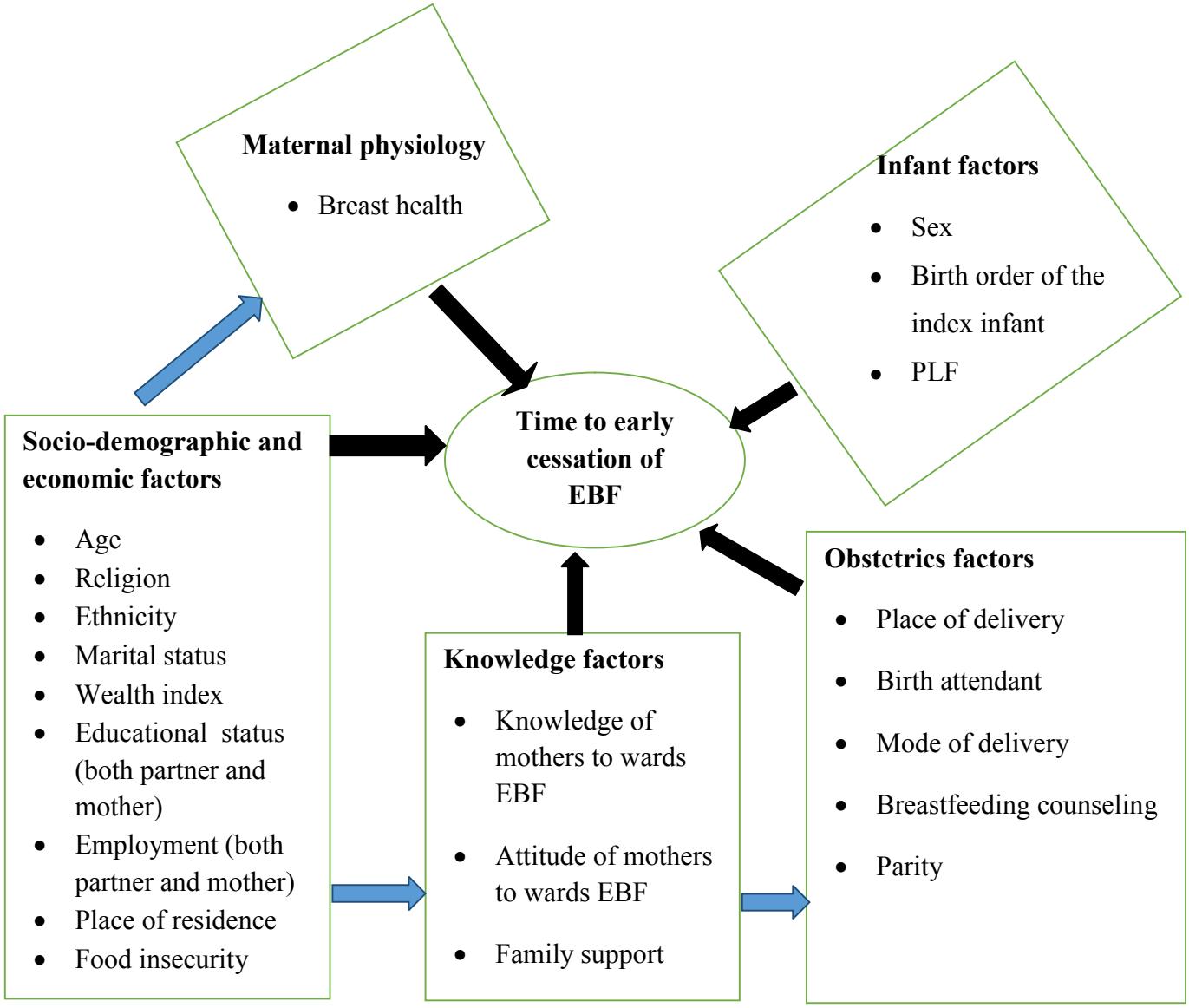

Figure 1 conceptual framework developed by the author based on various literatures

1.5 Significance of the study

Even though several efforts are deployed to improve EBF status at national level, still almost half of under 6 month infants are not getting the benefits of exclusive breast feeding. This figure declined to 36% for children 4–5 months old and also the number decreases with higher age of infants. Based on scientific evidence studying the time to early cessation and associated factors of EBF is sensible to improve maternal and child health.

There is limited evidence to show the gap for policy makers. Though, our study will have a significant input as baseline data for the formulation of appropriate strategies, policy and program planners in identifying areas of potential intervention that will provide concrete benefits for the lives of infants and mothers, and also increase utilization of exclusive breastfeeding. Also provide important evidence on time to early cessation of EBF and its associated factors to local administrators, Silte Zone Health Department, SNNPR Health Bureau, FMOH, NGOs and the other researchers interested in breastfeeding

CHAPTER TWO

Objectives of the study

2.1 General objective

-To determine time to early cessation of exclusive breast feeding and associated factors among 6-12 months old children in Lanfuro Woreda, Silte Zone.

2.2 Specific objectives

- To determine time to early cessation of exclusive breast feeding among 6-12 months old children.
- To identify factors associated with time to early cessation of exclusive breast feeding among 6-12 months old children**.**

CHAPTER THREE

Methods and materials

3.1 Study area and period

The study was conducted in Lanfuro Woreda Silte Zone in 2017 (2009 EFY) and data collection time was from March to April, 2017. Lanfuro Woreda is one of the nine Woredas of Silte Zone , located in the southern region of the country. The total area of Lanfuro Woreda is 54,040 hectares. Geographically, the woreda is located between (1668- 2400) meters above sea level with temperature range of (19-25) degree Celsius and climate condition of dry woinadaga. It is 182 k.ms away from the capital city Addis Ababa and 32 k.ms from the capital town of Silte Zone, Worabe.

According to the 2007 Ethiopian population and housing census, the total population of Lanfuro Woreda is 148,962, whereas the total population of under 5 year , under one year and 6-12 month was 23,253 , 5,154 and 2577, respectively and a total household of 30,401. About 23,344 (16%) of population lives in urban areas the rest 125,618 (84%) lives in rural areas. Agricultural system and livestock keeping are the dominant livelihood sources. The main agricultural products are red pepper (Berberre), wheat and maize. Lanfuro Woreda is one of hot spot (priority) woreda for food insecurity, which is nationally selected in 2015/2016, also it was greatly affected by “El Niño” in 2015/2016. The woreda has one primary hospital, four health centers, twenty five health posts, and 06 private clinics. There are a total of 142 technical and 91 supportive staffs serving in the health facilities. There are a total of 41 health extension workers in the woreda, 37 working in the rural and 04 urban health extension workers.

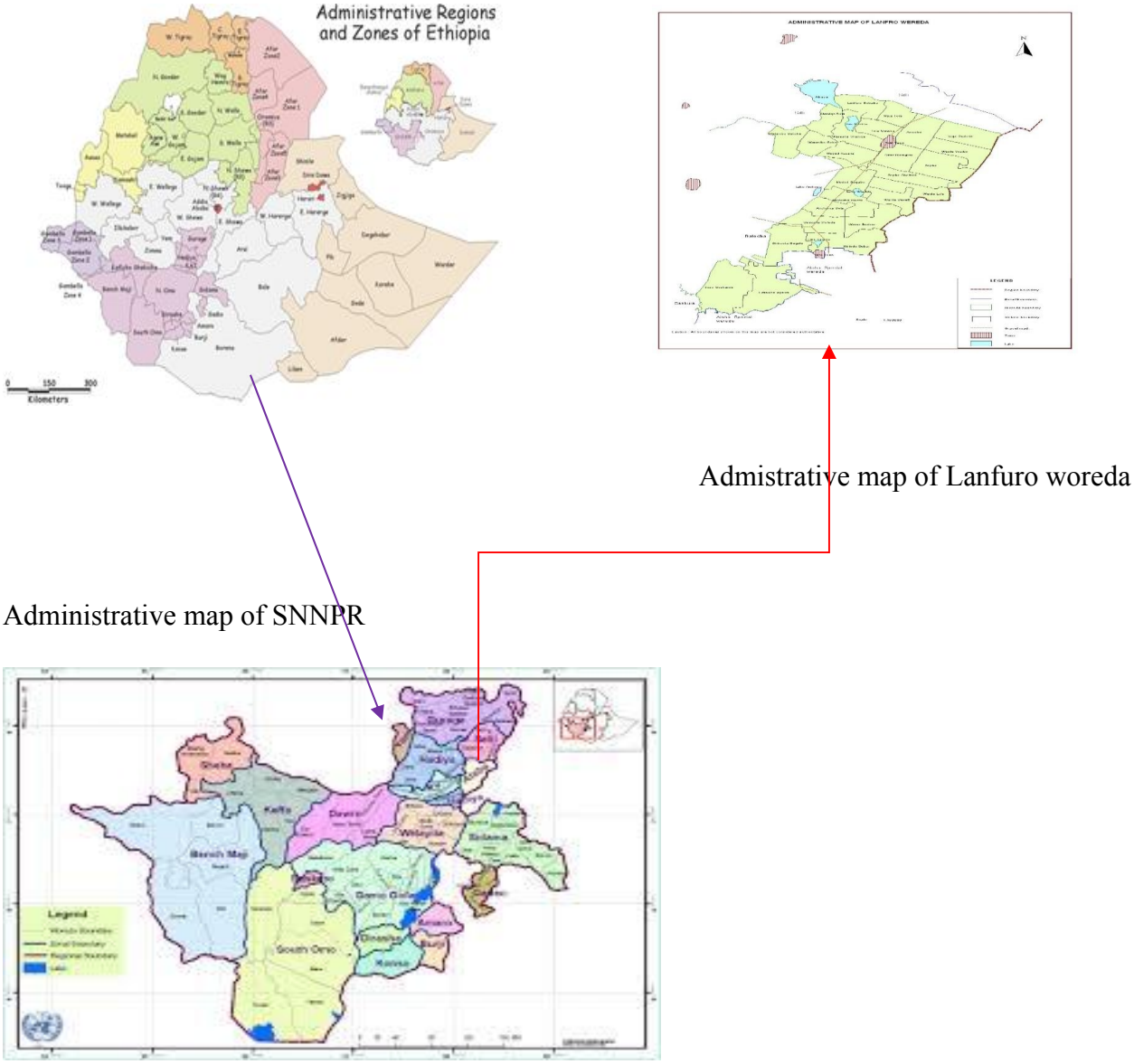

Figure 2: Admistrative map of Lanfuro Woreda (Source: from internate and Lanfuro Woreda agriculture office)

3.2. **Study design**: community based cross -sectional survey was used

3.3. Population

3.3.1. Source population: Mother who have 6-12 months of age children in the Woreda.

3.3.2. Study population: Mothers who have 6-12 months of age children living in the randomly selected Kebeles of the Woreda.

3.3.3. Study unit: Households which have mother child pair from 6-12 months old children.

3.4. Inclusion and exclusion criteria

3.4.1. Inclusion criteria: Mothers who lived in Lanfuro Woreda at least for six months preceding the survey and with a child 6-12 months of age.

3.4.2. Exclusion criteria: Child 6-12 months of age who are not living with their mother in first six months of age, mothers with mentally ill, difficulty in verbal communication.

3.5. Sample Size Determination and Sampling Technique

3.5.1. Sample size determination

Specific objective 1: determine time to early cessation of exclusive breastfeeding

Epi Info 7 was used to calculate the sample size using a single population proportion formula assuming an expected prevalence of early cessation of exclusive breastfeeding 69.6 %, 95% confidence level, 5% margin of error, multiplying by 2 for the design effect and adding a non-response rate of 10%.

$n = (Z\alpha/2)^2 P (1-P)/ d2$

Where;

P= 69.6 % cessation of exclusive breastfeeding before recommended time (28)

Z= Standard normal variable at 95% level (1.96).

d= 5% margin of error

Non-response rate, 10%

The calculated sample size using the above formula became 325. Since the total numbers of mothers with infants aged 6–12 months in Lanfuro Woreda less than < 10,000, (n= 2577) using correction formula for finite population:

$$nf = \frac{n}{1+\frac{n}{N}}$$

nf = 289

Considering 10% non-response rate, the overall Sample is multiplying by the design effect of 2 as the sampling procedure multistage sampling; we got a total sample size of 636

Specific objective 2: Identify factors associated with time to early cessation of exclusive breastfeeding

For the second specific objective by using explanatory variables of cessation of EBF practice. The study conducted in Addis Ababa, Ethiopia report that maternal income, ANC counseling on EBF, PNC counseling on EBF and mode of delivery were significantly associated with the dependent factor(30). Final sample size is presented on the table below after adding 10% for none response and multiplying the sample by a design effect of 2 for the multi-stage sampling.

Table 1: sample size presentation

Associated factors	Power	95% CI	P1	P2	Ratio	AOR	n_1	n_{total}	Design eff.	Final sample size
Mode of delivery	**80%**	**95%**	**19.3**	**80.7**	**1:1**	**2.40**	**236**	**259.6**	**2**	**520**
PNC counselling about EBF	**80%**	**95%**	**37.7**	**62.3**	**1:1**	**2.12**	**248**	**272.8**	**2**	**546**
ANC counselling about EBF	**80%**	**95%**	**31**	**69**	**1:1**	**2.5**	**176**	**193.6**	**2**	**388**
Maternal income	**80%**	**95%**	**50**	**50**	**1:1**	**2.49**	**182**	**200.2**	**2**	**401**

As the total sample size 636 can include all, we decided on sample size of 636 and so that a total number of 636 mother-child pairs were identified using the simple random sampling technique from the selected kebeles.

3.5.2 Sampling technique

Multi-stage sampling technique was employed. From a total of 27 Kebeles found in the Woreda ten kebeles were selected randomly. The required sample size was drawn proportional to the number of population in each kebele. At each study center, ten kebeles' census was conducted to identify households with eligible mother child pairs (those households having index infant's age of 6-12 months). Households which have eligible mother child pair from each Kebeles were selected using simple random sampling technique through computer generated number specifically emergency nutrition assessment (ENA for SMART).

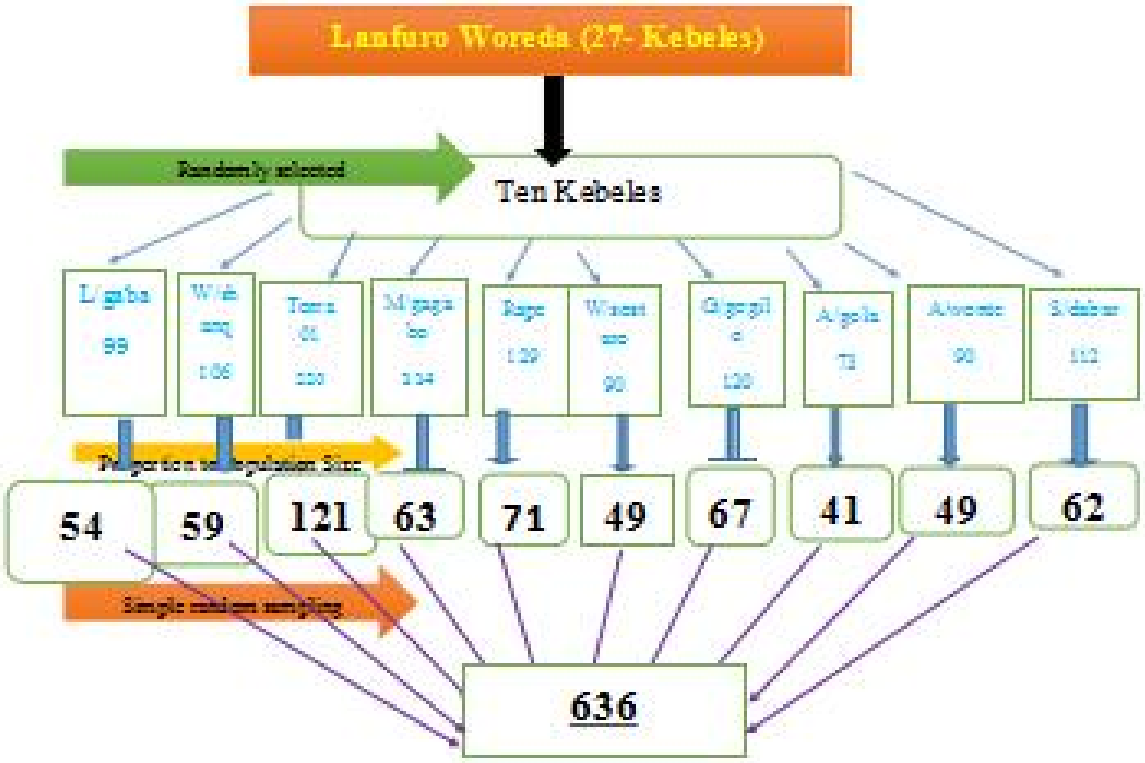

Figure 3 : Schematic presentation of sampling procedure

3.6. Data collection and measurement:

3.6.1. Quantitative:

Data were collected by the interviewer who administered the pretested structured questionnaire. The questionnaire was used to collect information on infant factors (sex and birth order of index infant), maternal and social-demographic factors (age, education and marital status , occupation, wealth index and household food insecurity status) maternal knowledge related factors on breastfeeding (knowledge ,attitude and family support), obstetric factors(parity, place of delivery, mode of delivery, birth attendant and breast feeding counseling's) maternal physiologic factors (breast health). Questionnaire for quantitative data was adapted from Ethiopian Demographic health survey, 2011 and literature reviews (12, 28, 31). Questionnaire was first translated from English to local language "Siltighna'' through independent translators then back to English. Pre-test was done on 5% of the sample in setting with similar status to the study community and internal consistency was checked (crombach alpha > 0.7). Training was given for quantitative data collectors on the tools and methods of data collection.

3.6.2 Qualitative data

Guidelines for qualitative data were developed after literature review. Qualitative data are important mainly to have in-depth understanding into the factors associated with early cessation of EBF with special focus on infant feeding information in the community, exclusive breastfeeding a common practice in the community, factors that encourage mothers to practice exclusive breastfeeding for six months, reason some mothers cease exclusive breastfeeding practice, cultural practices that contributes to cease EBF in the community, activities to be done to encourage mothers to practice exclusive breastfeeding for six months in the community and finally summarized in their respective themes. Focus group Discussion (FGD) included mothers/caregivers, fathers, grandparents (grandmothers), health care providers, religious leaders, elderly and health development army.

FGDs was conducted in Kebeles which have the same socio –demographic factors with 6 to 12 participants in each group parallel to quantitative data collection. Four FGDs having a range of 6 – 12 participants were conducted. Each FGD took one to one and half hours. The PI moderated the discussion. Every pre conditions as double recorders and cameras were prepared and fixed. The audio was transcribed immediately after the discussions.

3.7. Study variables:

3.7.1. Dependent variable:

Time to early cessation of exclusive breastfeeding

3.7.2. Independent variables:

- **Socio-demographic and economic factors:**
    - Maternal socio-demographic factors (age, religion, education, employment, wealth index, marital status, place of residence, household food insecurity)
    - Partners factors (education and occupation)
- **Knowledge and Attitude related factors**
    - Maternal Knowledge
    - Maternal Attitude
    - Family support
- **Infants factors**:
    - Sex and birth order of the index infant
- **Obstetric Factors:**
    - provision counseling's on breastfeeding experiences (ANC, PNC, EPI or GMP)
    - Delivery place (Health institution, Home or TBA)
    - Birth attendant
    - Delivery type (Spontaneous/vaginal, Cesarean)
    - Parity
- **Maternal physiologic factors**
    - Breast health

3.8. Standard and Operational definitions:

- ✓ **Time to early cessation of exclusive breastfeeding**: Time to feeding anything else other than breast milk (including milk expressed) allows ORS, drops, syrups (vitamins, medicine and minerals) before infants six months of age.
- ✓ **Exclusive breastfeeding**: Fed only on breast milk (including milk expressed) allows ORS, drops, syrups (vitamins, medicine and minerals), do not allow anything else.
- ✓ **Non-breastfed**: Not fed on breast milk during their first six months of age.
- ✓ **Knowledge**: Nine questions were asked about knowledge of exclusive breast feeding. The response given for each question was coded '1' for correct answer and '0' for incorrect answer or 'I do not know'. The responses were summed and knowledge score was generated. Then, The Knowledge score was ranked and divided into tertiles and the highest tertile was used as knowledgeable.
- ✓ **Attitude**: Four point likert scale was used to measure the opinions of mothers towards EBF. The response given for each question coded '1' for agree or strongly agree and '0' for disagree or strongly disagree, for positive statements and the vice versa for negative statements. The responses were summed and attitude score was generated. Then, the score was ranked and divided into tertiles and the highest tertile was defined as having favorable attitude.
- ✓ **Parity :** Number of live births a mother have
- ✓ **Event cases:** children stopped exclusively breastfeeding at some point before the six months after initiating the breastfeeding.
- ✓ **Censored cases**: children exclusive breastfed in the first six months or beyond were censored.
- ✓ **Support**: on mothers persuption who got support in the first six moths of their index child.

3.9. **Data quality control**

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

Before data collection:- Adapting the questionnaire from pretested questionnaires, preparation of data collectors training manual, experience based selection of data collectors and finally training of data collectors(10 in number) and two supervisor were accomplished. Training was given on sampling procedures, techniques of interviews and data collection process. In addition the data collectors and supervisors were participated in pre-testing of the questionnaire for its understandability on 5% of sample on volunteer individuals in Kebeles which were not included in the actual data collection.

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

3.10 Data Analysis procedures

After completion of editing and coding data was entered to Epi-Data version 3.1 with double entry verification. After cleaning analysis was done using SPSS for windows version 21. The median age of infants at termination of EBF was estimated. Survival analysis using Kaplan-Meier survival curve was employed to assess survival status of EBF. The Log rank test ($P < 0.05$) was used to assess presence of significant difference in survival status of EBF among study subjects. Cox proportional hazards assumption test was checked using log (−log) tests and the assumption was satisfied.

The likelihood of giving complementary food at each month and the cumulative risk of giving complementary food was estimated by the life table survival analysis. Both bivariate and multivariable Cox Proportional Hazards model was fitted to identify factors that affect duration of EBF (time to early cessation of EBF). Those variables with $P < 0.25$ in bivariate Cox regression model was entered simultaneously in multivariable Cox Proportional Hazards model to measure the effect of each category of each variable on the hazard function, after adjusting for the effects of other variables were included in the model. Variables with $P < 0.05$ in multivariable Cox regression analysis were declared as significant.

To assess association of time to early cessation of EBF with, household wealth index was calculated based on ownership of fixed assets. Ownership of each fixed asset was given a value one and non-ownership a value of zero (i.e., television, radio or car) and dwelling characteristics such as main floor materials, main roof material and sources of drinking water was assigned a weight or factor score generated through principal component analysis with a factors loading based on the Eigen values ≥ 1 finally five components were retained then the first factors was taken and rank ordered into tertiles (low, medium and high).

To assess association of time to early cessation of EBF with, food insecurity was performed using FANTA household food insecurity accesses scale score which is a continuous measure of the degree of food insecurity (access) in the household in the past four weeks (30 days). First, a household food insecurity accesses scale score variable was calculated for each household by summing the codes for each frequency-of-occurrence question. Household food insecurity accesses scale Score (0-27), for each HH sum of the frequency-of-occurrence during the past four weeks for the 9 food insecurity-related conditions, by coding 0=no occurrence, 1=rarely, 2=sometimes, 3=often. Household food insecurity access category for each household was used as household food insecurity accesses category, 1= food secure and category 2, 3 and 4=food insecure(32).

Qualitative data were transcribed verbatim into English language and thematic areas were identified based on the objective of the study. Ideas were organized under the themes using an open color coding and presented in narratives using well-said verbatim of the study participants as illustrations. The results were triangulated with the quantitative finding.

3.11. Ethical consideration

Formal written letter of Ethical approval was obtained from Jimma University Ethical Review Board and official letter of cooperation was obtained and secured to the selected Kebeles from Lanfuro Woreda Health Office. Informed verbal consent was secured from study participants after assuring about the confidentiality of the data. The purpose, potential risks and benefits of participating, and the right to with draw from the study at any time was explained to the study participants. Counsling was given for mothers who cease EBF before the recommended time.

3.12. Dissemination plan

The final report of this study will be defended and presented on Jimma University annual research conference. It will also be sent to SNNPR Regional Health Bureau, Silte Zone Health Department, Lanfuro Woreda Health Office and the document will also be submitted to governmental and non-governmental stakeholders and policy makers. Finally, it will be submitted for publication on a peer reviewed journal.

Chapter four

Results

4.1 Socio- demographic and economic factors

Out of 636 mothers who were approached and invited to participate, 615 agreed, and were included in the analysis giving a response rate of 96.6%. The mean (±SD) age of mothers were 28.40 (±5.56) years. Ninety eight point seven percent of the respondents were Muslims followed by 1.3% Orthodox. Almost all of the respondents were married 610(99.2%). Three hundred thirty four (54.3%) of mothers were not able to read and write. Three hundred sixty three (59%) of mothers were housewives. Three hundred two (49.1%) of mothers were with in medium tertile of wealth. as showed by Table2 below.

Table 2: Socio-economic and demographic characteristics of the respondents in Lanfuro Woreda, Silte Zone, South Ethiopia, 2017

Variables	Categories	Frequency	Percent
Age of the mother	15-20	62	10.1
	21-25	143	23.3
	26-30	223	36.3
	31 -35	106	17.3
	≥36	80	13.0
Place of residence	Rural	467	75.9
	Urban	148	24.1
Religion	Muslim	607	98.7
	Orthodox	8	1.3
Educational status of the mother	Not read and write	334	54.3
	Read and write only	87	14.1
	Primary education	137	23.3
	Secondary education	31	5.0
	College and above	26	4.2
Educational status of the partner	Not read and write	176	28.6
	Read and write only	138	22.4
	Primary education	215	35.0

	Secondary education	39	6.3
	College and above	47	7.6
Ethnicity	Silte	598	97.2
	Amhara	7	1.1
	Oromo	10	1.6
Occupation of the mother	Housewife	363	59.0
	Farmer	157	25.5
	Merchant	59	9.6
	Civil servant	26	4.2
	Student	10	1.6
Occupation of the partner	Farmer	419	68.1
	Merchant	119	19.3
	Civil servant	54	8.8
	Student	11	1.8
	Others*	12	2.0
Marital status	Married	610	99.2
	Others**	5	0.8
Wealth index	Low	160	26.0
	Medium	302	49.1
	High	153	24.9

*Others = Carpenter and daily laborer
** Others= single, divorce and widow

4.2 Knowledge related factors

Three hundred eighty nine (63.3%) of mothers were knowledgeable towards EBF. Three hundred seventy seven (61.3%) of mothers had favorable attitude towards EBF. Majority 386(62.8%) of mothers had support during their time of motherhood. Most of mothers who got support got it from their husband 152(39.4%) followed by their mothers 102(26.4%), and the rest from as showed by graph below. (Figure 4)

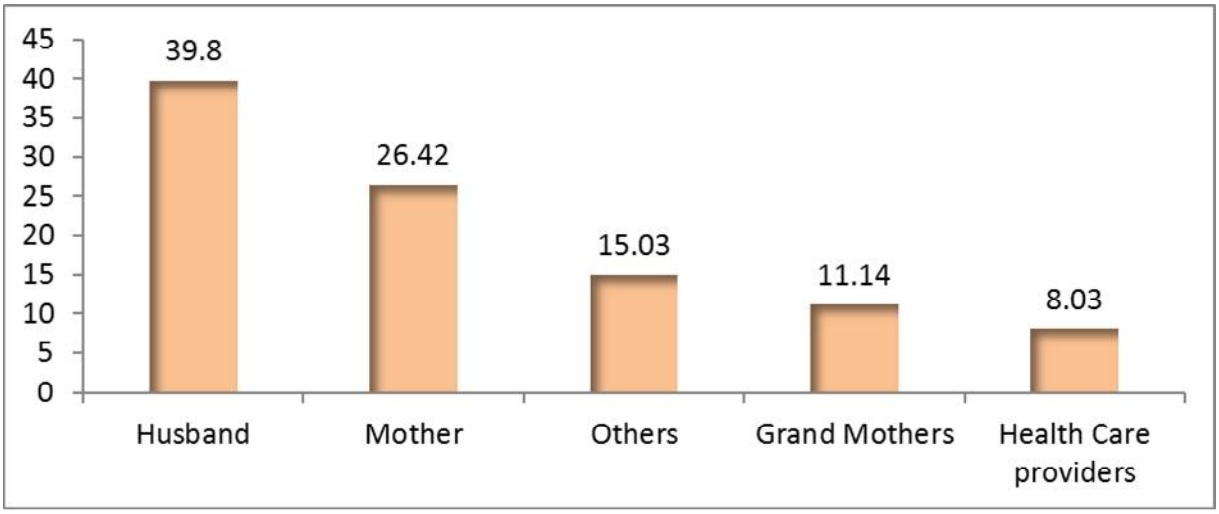

Figure 4 : Support during time of exclusive breast feeding among mothers having index child age 6-12 months of age in Lanfuro Woreda, Silte Zone, South Ethiopia, 2017

4.3 Infant Related Factors

Among 615 respondents birth order of infants 102 (16.6%) were first, 92 (15.1%) second, 102(16.6%) third, 103(16.7%) fourth and the rest 215(35.0%) were fifth and above birth order. A little over half of index infants were males (51.54%).

4.4 Obstetric Factors

Majority of mothers were multipara 596(84.4%). Five hundred ninety seven (97.1%) had spontaneous delivery. Five hundred forty one (88.0%) of mothers delivered at health facilities and 74(12.0%) of mothers delivered at home. From those who delivered at home, 50(8.8%) were attended by TBA, while the rest were attended by others (neighbors, husband and their mothers).

4.5 Maternal physiologic factors

Out of 615 mothers, 122(19.9%) experienced breast problem during first six months of age of their index child. Eighty four (68.9%) had mastitis, 26(21.3%) abscess and 12(9.8%) sore/cracked nipples. Majority, 72(59.02%) of mothers went to hospital for advice on the problem followed by applying local herbs on it 42(34.43%) to manage the problem.

4.6 Child feeding practice

Majority of respondents gave the first milk for their index child (85.5%). Almost all 614(99.8%) of mothers ever breastfed their index child. Qualitative report also support this finding, all of the participants echoed that mothers are obliged to breast fed their child up to at least 2 years and it's our culture. "*... One of the participant also added an idea that breast milk is a natural gift, so we fed our child."*

Pre-lacteal feeding was practiced by (12.5%) study participants. Fresh butter was the most common food given for the infants at pre lacteal feeding which accounting 41 (52.6%) followed by plain water 30 (38.5%). The main reason for pre lacteal feeding was infant perceived un wellness in 31 (40.8%), delayed milk production of the mother in 30 (39.5%) followed by mother unwell in 14 (18.4%) the study mothers. This finding was again supported by FGD. Among participants, 25 years old mother code 04 stated," *... after birth I fed my child fresh butter until my breast started to pump milk… My grandmother also told me that to soften the new born stomach it very important… "*

Around three quarter of respondents (78.4%) initiated breastfeeding within the first hour after birth and 18.1% of respondents initiated breastfeeding within 2-3 h after birth while the rest few (1.6%) respondents initiated breastfeeding within days after of birth and 1.6% of the study mothers did not remember exact time of breast feeding initiation.

The most common complementary foods given to children before the age of six months were: plain boiled water (30.3%), formula milk (18%), glucose water (39.7%) and others non maternal milk (11.9%). The main reasons for introduction of complementary food before six months of age were: Baby gets hungry (34.5%) to sooth stomach pain (24.6%), mother does not produce enough milk (20.8%) followed by mother returned to work (10.6%). Qualitative findings also support that inadequacy of breast milk especially four up to five months were raised by most of participants, and this was one of the cause for the child to cease EBF before six months.

A 33 years old cod 10 participant stated, "*...my breast decrease its volume due to this my child was not get enough milk and become weak..... To satisfy the need of the child, I gave him non maternal milk and thin porridge (cereals based) around four months of child age*."

A35 years old participant from rural residents code 06 also stated, "*...there is great problem on water access in our Kebele due to this we stay 3-5 hour to get water and return to home ...frequently our babies became sick with abdominal cramp when we fed warmed breast,...for instance I gave my child Plain boiled water to ease from abdominal cramp*".

4.7 Cessation of exclusive breast feeding

Among 615 mother-child pairs, 320 (52.03%) were exclusively breastfed for exactly six months and after six months of their index child, they were considered as censored cases, while in 295 (47.97%) infants event of interest had occurred i.e. cessation of EBF had happened out of which 214(34.80%) and 81(13.17%) were from rural and urban areas, respectively.

According to finding of this study proportion of censored cases were more in rural 253(41.14%) than urban 67 (10.89%). Among mothers who ceased to breast-feed exclusively, 295(47.97%) occurred before six months, 257(41.79%) occurred at six months and 63(10.24%) occurred after six months of age of the index infant. This finding was also supported by qualitative study in which, significant number of participants stated that early cessation of exclusive breastfeeding is happening in their community, and their own practices. There was active description by participants about the early cessation of exclusive breast feeding, as early as three months of child age.

Another 27 years old participant said, "…*Health development army and health extension workers told us strongly to feed only breast milk up to six months, but when I go to market and other place far away from home, I leave my child with my sister to feed him heated cow's milk*."

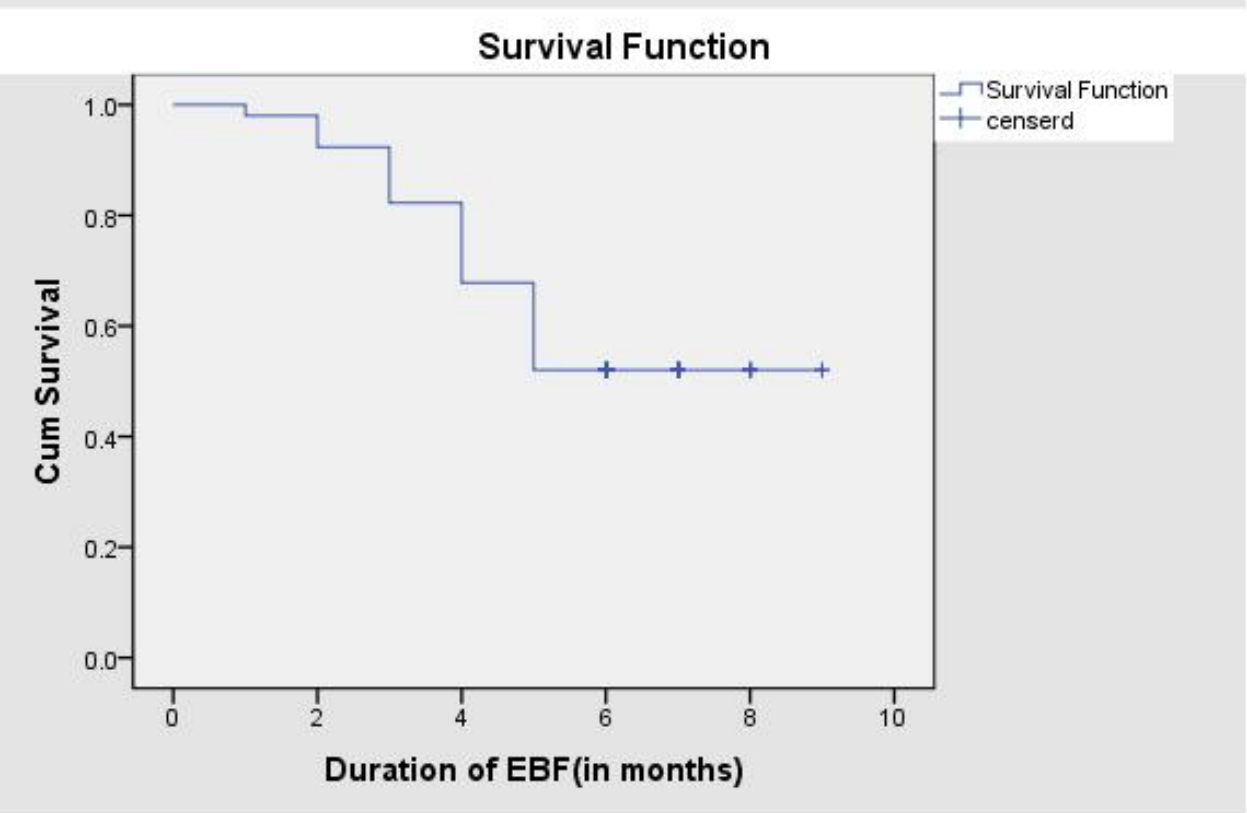

Figure 5: Kaplan Meier survival estimates for duration of exclusive breast feeding among mothers having index child 6-12 months of age in Lanfuro Woreda, Silte Zone, South Ethiopia, 2017

The cumulative proportion of survival probability in life table indicated that the percentage of infants that remained on EBF for the first 5 months was 52%. Proportion of cessation of EBF before the age of six months was higher in rural than urban. The median duration of EBF was estimated to be 6.22 months for the entire subjects, 6.94 months in rural and 5.65 months in urban. Majority of cessation of exclusive breast feeding happened on the first fourth and fifth months of age of the index child. The minimum and maximum duration of exclusive breastfeeding was one month and nine months respectively. The cumulative proportion of survival probability up to six months on exclusive breastfeeding was 57% as showed in the life Table 3.

Table 3: Life table for exclusive breastfeeding duration to the first six months of child age among mothers who had 6–12 months old child in in Lanfuro Woreda, Silte zone, South Ethiopia, 2017.

Life table					
Interval Start Time	Number Entering Interval	Number of Terminal Events	Proportion Surviving	Cumulative Proportion Surviving at End of Interval	Hazard Rate
0	615	0	1.00	1.00	0.00
1	615	12	0.98	0.98	0.02
2	603	35	0.94	0.92	0.06
3	568	62	0.89	0.82	0.12
4	506	89	0.82	0.68	0.19
5	417	97	0.77	0.52	0.26
6	320	37	0.82	0.43	0.19
7	63	4	0.89	0.38	0.11
8	9	0	1.00	0.38	0.00
9	2	1	0.33	0.13	1.00
The median survival time is 6.22					

On figure below Kaplan-Meir survival curve shows that survival curve for rural residence in the first 6 months was constantly above the curve for urban residence. This difference was statistically significant on a Log rank test ($P < 0.032$)

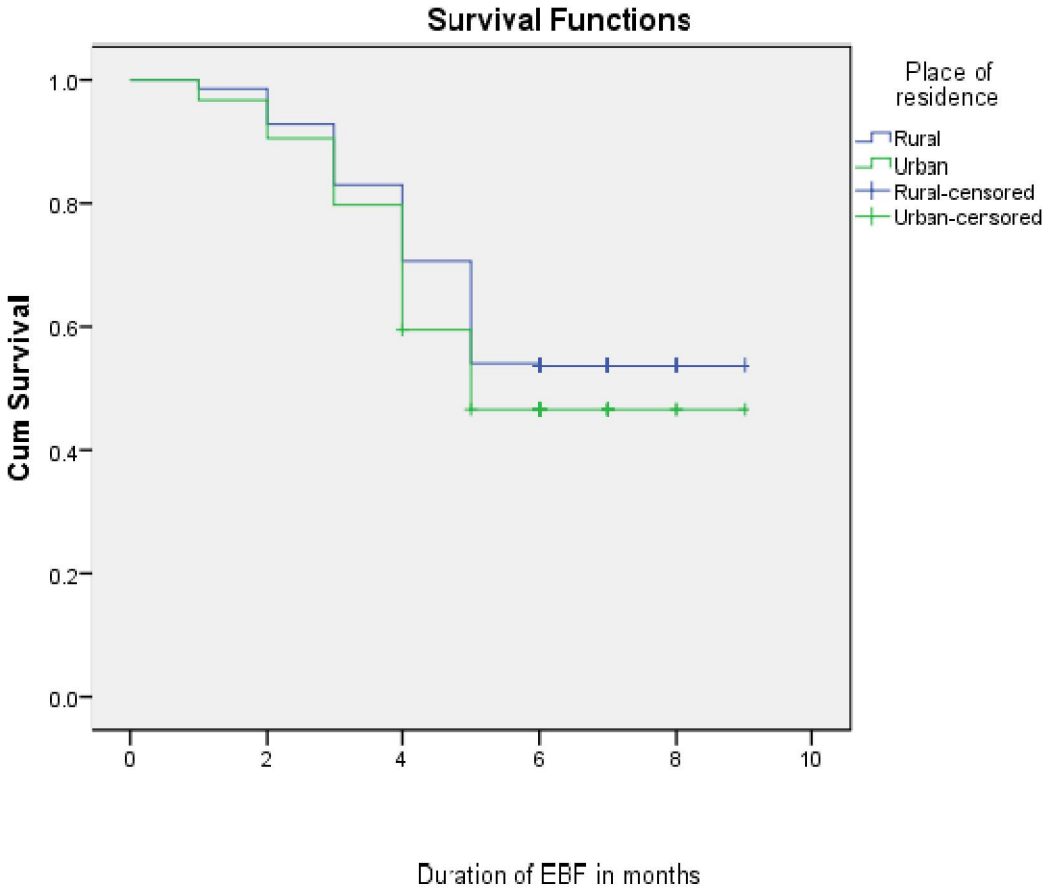

Figure 6 : Kaplan-Meier cumulative survival probability functions of EBF for rural and urban areas, Lanfuro Woreda, Silte zone, South Ethiopia, 2017.(log rank test<0.05)

4.6.1 Bivariate cox regression analysis

In bivariate cox regression analysis, a statistical significance was observed in Place of residence, Educational status of the mother, Educational status of the partner, Occupation of the mother , Occupation of the partner, ANC visit, Counseling during ANC visit on EBF, Counseling during PNC visit on EBF , Counseling during GMP program on EBF, Place of delivery, Type of delivery, Birth attendant, Parity , Feed colostrum (yellowish milk), Attitude towards EBF, Knowledge to wards EBF, Pre lacteal feeding, Wealth index, Household food insecurity.

4.6.1.1 Socio-demographic factors associated with time to early cessation of exclusive breast feeding

Table 4: Bivariate cox PH model predicting time to early cessation of exclusive breastfeeding among mothers who had index child of 6-12 months of age in Lanfuro Woreda, Silte Zone, South Ethiopia, 2017

Variables	Categories	Time to early cessation of EBF		CHR,(95%CI)	P
		Event	Censored		
		n(%)	n (%)		
Age of the mother	15-20	32(5.2)	30(4.9)	1.3(0.79-2.05)	0.326
	21-25	68(11.1)	75(12.2)	1.13(0.75-1.7)	0.559
	26-30	96(15.6)	127(20.7)	1.02(0.69-1.5)	0.936
	31 -35	63(10.3)	43(7.0)	1.50(1.00-2.27)	0.054*
	≥36	35(5.7)	45(7.3)	1	1
Place of residence	Rural	214(34.8)	253(41.1)	1	1
	Urban	81(13.2)	67(10.9)	1.29(1.00-1.67)	0.049*
Educational status of the mother	Not read and write	146(23.7)	188(30.6)	0.54(0.34-0.86)	0.010*
	Read and write only	48(7.8)	39(6.3)	0.70(0.42-1.19)	0.186*
	Primary education‡	62(10.1)	75(12.2)	0.57(0.35-0.95)	0.029*
	Secondary	19(3.1)	12(2.0)	0.88(0.470-1.65)	0.692
	education†	20(3.3)	6(1.0)	1	1
	College and above¥				
Educational status of the partner	Not read and write	72(11.7)	104(16.9)	0.58(0.38-0.90)	0.011*
	Read and write only	66(10.7)	72(11.7)	0.69(0.45-1.06)	0.092*
	Primary education	101(16.9)	114(18.5)	0.70(0.46-1.02)	0.063*
	Secondary education	25(4.1)	14(2.3)	1.06(0.62-1.80)	0.839
	College and above	31(5.0)	16(2.6)	1	1
Occupation of the mother	Housewife	125(20.3)	238(38.7)	1	1
	Farmer	104(16.9)	53(8.6)	0.25(0.13-0.48)	0.000*
	Merchant	36(5.9)	23(3.7)	0.6(0.30-1.01)	0.088*
	Civil servant	20(3.3)	6(1.0)	0.51(0.25-1.03)	0.061*
	Student	10(1.6)	0(0.0)	0.62(0.29-13)	0.213*
Occupation of the partner	Farmer	174(28.3)	245(39.8)	1	1
	Merchant	78(12.7)	41(6.7)	1.7(0.53-5.2)	0.386
	Civil servant	36(5.9)	18(2.9)	3.19(1.01-10.12)	0.048*
	Student	4(0.7)	7(1.1)	2.88(0.89-9.36)	0.078*
	Others Ψ	3(0.5)	9(1.5)	1.42(0.32-6.34)	0.647
Wealth index	Low	107(17.4)	53(8.6)	2.07(1.51-2.85)	0.000*
	Medium	128(20.8)	174(28..3)	1.06(0.78-1.44)	0.710
	High	60(9.8)	93(15.1)	1	1
Household food insecurity	Yes	174(28.3	4(0.6)	5.56(4.39-7.03)	0.000*
	No	121(19.7)	316(51.4)	1	1

‡Those who had completed grade 1-8. * =P-value<0.25 others Ψ =daily laborer, carpenter
† Those who had completed grade 9-12 CHR= crude hazard ratio
¥ Those who had college and above

4.6.1.2 Obstetric Factors

Table 5: Bivariate cox PH model predicting time to early cessation of exclusive breastfeeding among mothers who have 6-12 months of index child in Lanfuro Woreda, Silte Zone, South Ethiopia, 2017

Variables	Categories	Time to early cessation of EBF		CHR,(95%CI)	P
		Event	Censored		
		n(%)	n(%)		
ANC visit	No visit	4(0.7)	4(0.7)	1.2(0.44-3.25)	0.725
	1-3 visit	185(30.1)	145(23.6)	1.6(1.24-2.01)	0.000*
	≥4 visit	106(17.2)	171(27.8)	1	1
Counselling during ANC visit on EBF	Yes	158(25.7)	233(37.9)	1	1
	No	137(22.3)	87(14.1)	0. 57(0.46-0.79)	0.000*
Counselling during PNC visit on EBF	Yes	91(14.8)	176(28.6)	1	1
	No	204(33.2)	144(23.4)	1.9(1.51-2.47)	0.000*
counselling during GMP program on EBF	Yes	104(16.9)	169(27.5)	1	1
	No	191(31.1)	151(24.6)	0.62(0.49-79)	0.000*
Place of delivery	Home	62(10.1)	12(2.0)	2.34(1.77-3.10)	0.000*
	Health facility	233(37.9)	308(50.1)	1	1
Type of delivery	Normal/vaginal	279(45.4)	318(51.7)	1	1
	Caesarean	16(2.6)	2(0.3)	0.37(0.22-0.61)	0.000*
Birth attendant	H/ professional	233(37.9)	308(50.1)	1	1
	TBA	44(7.2)	10(1.6)	0.42(0.26-0.67)	0.000*
	Others ©	18(2.9)	2(0.3)	0.96(0.556-1.67)	0.891
Parity	Primipara	52(8.5)	44(7.2)	0.83(0.62-1.13)	0.224*
	Multipara	243(39.5)	276(44.9)	1	1

Others © =delivery attendant by mother, neighbor and husband

*p-value<0.25 CHR= crude hazard ratio

4.6.1.3 Knowledge, Infant and Child feeding related factors

Table 6: Bivariate cox PH model predicting time to early cessation of exclusive breastfeeding among mothers who have 6-12 months of index child in Lanfuro Woreda, Silte Zone, South Ethiopia, 2017

Variables	Categories	Time to early cessation of EBF		CHR,(95%CI)	P
		Event	Censored		
		n(%)	n(%)		
Knowledge	Knowledgeable	193(31.4)	196(31.9)	1	1
	Not knowledge	102(16.6)	124(20.2)	2,(0.94-1.52)	0.144*
Attitude	Favorable attitude	208(33.8)	169(27.5)	1	1
	Not favorable attitude	87(14.1)	!51(24.6)	0.8,(0.71-0.91)	0.001*
support during EBF	Had support	163(26.5)	223(36.3)	1	1
	Had not support	132(21.5)	97(15.8)	0.66,(0.53-0.83)	0.001*
pre lacteal feeding	No	231(37.6)	306(49.8)	1	1
	Yes	64(10.8)	13(2.1)	2.6, (1.96-3.42)	0.001*
Birth order of the child	First	56(9.1)	46(7.5)	1.22, (0.88-1.68)	0.237*
	Second	36(5.9)	57(9.3)	0.82,(0.561-1.198)	0.305
	Third	53(8.6)	49(8.0)	1.078,(0.774-1.500)	0.657
	Fourth	46(7.5)	57(9.3)	0.927,(0.655-1.311)	0.667
	Fifth and above	104(16.9)	111(18.04)	1	1

* p<0.25 CHR= crude hazard ratio

On bivariate cox regression marital status, sex of child, maternal physiologic factors, ethnicity and religion were not significant.

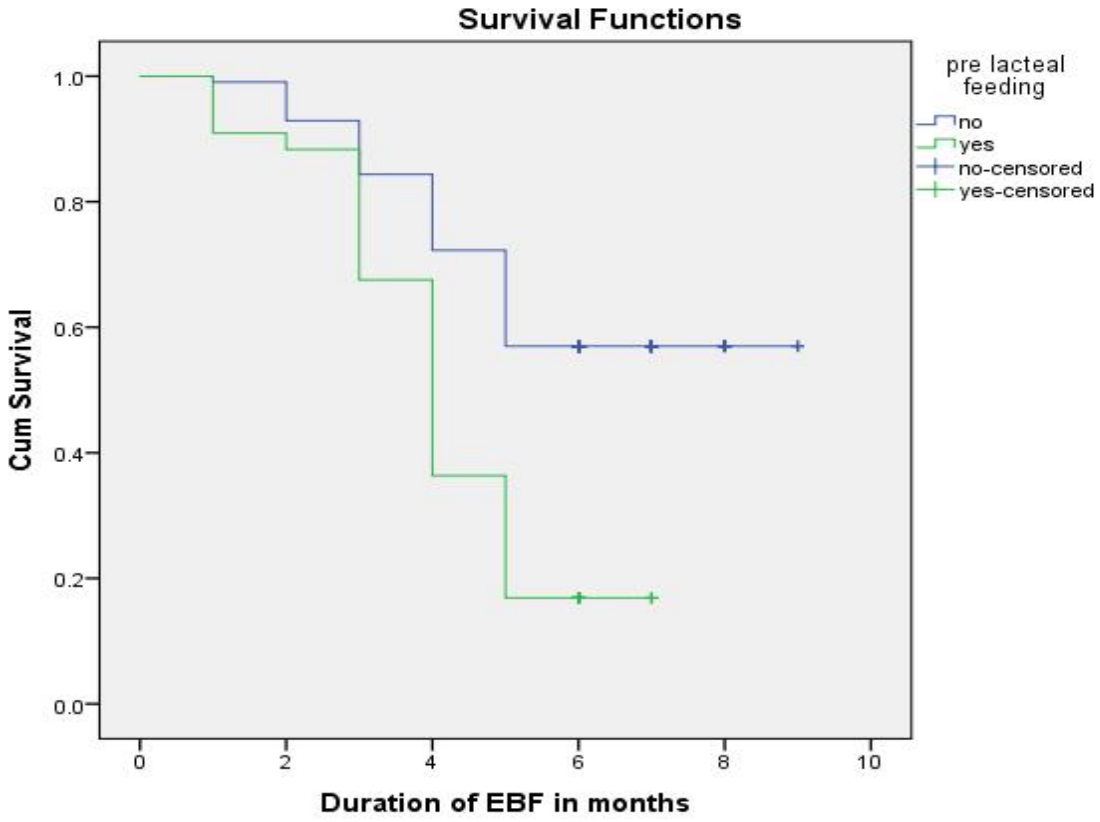

Figure 7: Cumulative survival probability functions of exclusive breast feeding for mothers who had and had not pre lacteal feeding, Lanfuro Woreda, Silte Zone, South Ethiopia, 2017(log rank test <0.05).

4.6.2 Multivariable Analysis

The final model was fitted using backward LR cox PH regression method. All variables which had shown statistically significant association during the bivariate analysis were included in the final model to control the effect of confounder. Finally, place of residence, household food insecurity, type of delivery, pre lacteal feeding, and knowledge of mothers about EBF, were found to be factors associated with early cessation of EBF. The hazard of early cessation of EBF was 1.6 times more in urban compared to rural mothers (AHR: 1.6; 95% CI = 1.14-2.20; P = 0.006). The hazard of early cessation of EBF was 5.02 times more on those mothers who had food insecurity than those who had food secured (AHR = 5.02; 95% CI = 3.89-6.50; P < 0.001).

The hazard of early cessation of EBF was 1.8 times more on those mothers who were gave pre lacteal feeding than those who were not gave pre lacteal feeding (AHR = 1.8; 95% CI = 1.32-2.36; P < 0.001). The hazard of early cessation of EBF was 2.41 higher in those mothers who

gave birth by CS compared those mothers who gave birth by vaginal/normal delivery (AHR: 2.41; 95% CI = 2.24-3.68; P = 0.001). The hazard of early cessation of EBF was 1.31 times more on those mothers who were not knowledgeable about EBF than those who were knowledgeable mothers about EBF (AHR = 1.31; 95% CI = 1.02-1.68; P < 0.036). The overall model fitness were checked with -2log likely hood (p<0.001)

Table 7: Multivariable cox PH model predicting time to early cessation of exclusive breastfeeding among mothers who have 6-12 months of index child in Lanfuro Woreda, Silte Zone, South Ethiopia 2017

Variables	Categories	Time to early cessation of EBF		AHR,(95%CI)	P-value
		Event	**Censored**		
		n (%)	**n(%)**		
Place of residence	Rural	214(34.8)	253(41.1)	1	1
	Urban	81(13.2)	67(10.9)	1.6(1.14-2.20)	0.006**
Food insecurity	Yes	174(28.3)	4(0.7)	5.02(3.89-6.50)	0.001*
	No	121(19.7)	316(51.4)	1	1
Type of delivery	vaginal /normal	279(45.4)	318(51.7)	1	1
	CS	16(2.6)	2(0.3)	2.41(2.24-3.68)	0.001**
Pre lacteal feeding	Yes	64(10.4)	13(2.1)	1.8(1.32-2.36)	0.001**
	No	231(37.6)	306(49.8)	1	1
Knowledge about EBF	Knowledgeable	193(31.4)	196(31.9)	1	1
	Not knowledgeable	102(16.6)	124(20.2)	1.31(1.02-1.68)	0.036**

**p-value<0.05 AHR=adjusted hazard ratio

*After adjusting covariates: *Place of residence, Educational status of the mother, Educational status of the partner, Occupation of the mother, Occupation of the partner, ANC visit, Counseling during ANC visit on EBF, Counseling during PNC visit on EBF, Counseling during GMP program on EBF, Place of delivery, Type of delivery, Birth attendant, Parity, Feed colostrum (yellowish milk), Attitude towards EBF, Knowledge to wards EBF, Pre lacteal feeding, Wealth index, Household food insecurity.*

Chapter five

Discussion

The median duration of EBF practices in this study was 6.22 months ranging from, which was higher in rural (6.94 months) as compared to urban (5.65 months). In the final model, being in the urban residence, being not knowledgeable about EBF, CS delivery, giving pre-lacteal feeding and being member of a food insecure household were independent factors associated with early cessation of exclusive breastfeeding among children 6-12 months of age.

Almost all 614(99.8%) of mothers ever breastfed their index child. The percentage of infants that continued to EBF for the first 5 months in this study was 52.03%. The life table showed that the highest proportion of cessation of EBF before the age of six months was occurred during the 4-5 months of age of index child.

Mothers who ever breastfed their index child in this study constitute 614(99.8%). This result is higher than the EDHS 2011 (13) report which showed that ever breastfeeding rate of the country was 97.5% and 97.9% for SNNPR region. The qualitative study also support the finding. The percentage of infants that stayed on EBF for the first 5 months in this study was 52.03% and this figure is consistent with Ethiopian, DHS 2011 report (52%) (13). However, lower than Ethiopian, DHS 2016 report. The difference might be due to the methods of data collection in which Ethiopian, DHS use 24 hour recall this might inflate the result whereas in this study used recall 'since birth'.

In this study the highest proportion of cessation of exclusive breast feeding before the age of six months was observed during the 4-5 months of age of index child. The finding was in line with the study done in Ethiopia, Northern Tanzania, China (33-35), but this result is inconsistent with the study conducted elsewhere in Ethiopia and Bangladesh in which probability of terminating exclusive breast feeding was highest during the first month (28, 36). This might be due to the reason that most lactating mothers in the study area had begun to involve in usual work after two months of their child delivery. This was also substantiated by the FGD participants.

The finding of this study indicated that the median duration of EBF practices was 6.22 months. The result was consistent with the studies done in the northeast and southern part of Ethiopia accounting 6.06 and 6 months respectively (28, 34). However, the finding of this study is higher than the median duration of exclusive breastfeeding in India, Sri Lanka, Kinshasa (37-39). This difference could be as a result of the difference in the study settings. In this study participants were mainly from rural and urban areas; while participants in the above-mentioned studies were mainly urban residents and institution based. and The problem of institution based study is that employed due to this may not have no enough time to breast feed their child exclusively because of early return to work.

In this study the median duration of EBF was higher in rural (6.94 months) compared to urban (5.65 months) similar with the study conducted in northern part of Ethiopia report that 6.36 months in rural and 5.13 months in urban(28). The finding of this study shows that the cumulative probability of terminating exclusive breastfeeding at 6 months was 57%. This finding was lower compared with the retrospective study conducted in South Gujarat, India (40), Bangladesh (69.9%), community based cross sectional study conducted in northern part of Ethiopia (81%) and Sichuan Province Australia(>90%) (28, 34, 35). Also higher than the study done elsewhere in Ethiopia (21.9%)(34) This discrepancy might be due to types of data, scio-demographic and economic difference, time of study period and the strength of health information and utilization on EBF and making EBF agenda for HDA to be more utilized to reduce maternal and child mortality respectively.

Place of residence is significantly associated with duration of exclusive breast feeding. Mothers who are urban residence 1.6 times more likely to cease EBF earlier as compared to rural residents (AHR: 1.6; 95% CI = 1.14-2.20) which is similar to the findings of study conducted in Northwest Ethiopia, and Malaysia (AHR:2.175; 95% CI = 1.054-4.489) (28, 41).This finding was also corroborated by qualitative result as a 29 years old mother from urban resident code 02 told , "*...most of us mothers are engaging jobs like market or daily labor after two months our child because of this we give for our child non maternal milks,... I make for him thin porridge from different cereals in local language (inkache) and also I gave heated goat milk for him"*.

In this study type of delivery is significant predictors of duration of exclusive breast feeding. Mothers who gave birth by cesarean section are 2.41 times more likely to cease exclusive breastfeeding earlier as compared to mothers with normal/vaginal delivery (AHR: 2.41; 95% CI = 2.24-3.68). This finding is supported by other studies in Ethiopia, Eastern Lancashire and Saudi Arabia (AHR: 3.8; 95% CI = 2.0 -7.2) (28, 34, 42, 43). Possible reason for increased hazard of early cessation of EBF in case of cesarean section could be the pain the mother experiences and that may delay giving of breast milk and this might be forced them to start other non-maternal milk in the first few days to the baby. This also might be affect later confidence of exclusive breast feeding.

Pre lacteal feeding is a significantly associated with time to early cessation of exclusive breast feeding. Mothers who had practice pre-lacteal feeding were 1.8 times likely hood of shorter duration of exclusive breastfeeding as compared to mothers who had not practice pre-lacteal feeding (AHR = 1.8; 95% CI = 1.32-2.36). This finding is supported by other studies Nigeria and Ethiopia (44, 45) .In this study most of mothers reason were delaying of milk production, mother perceived unwell, child perceive unwell and to smooth their throat .When looked at the given reason, it seems that the habit harms the newborn and exposes him/her to various types of disease and therefore, the behavior needs to be improved based on different approaches at the ground level. This finding was also corroborated by FGD.

Knowledge about exclusive breast feeding is positively associated with early termination of EBF. Mothers who had not knowledge about EBF were 1.31 times more likely to cease exclusive breast feeding earlier as compared to mothers who had knowledge on EBF (AHR = 1.31; 95% CI = 1.02-1.68). This finding was also supported by the study done in rural Indonesia (46, 47). Household Food insecurity significantly association of early cessation of exclusive breast feeding. Mothers with members of food insecured house hold are 5.02 times at higher risk of terminating exclusive breast feeding earlier as compared to their counterparts. However, this finding was in contrary with the study done in rural Bangladesh in which those food secured households are shorter duration of exclusive breast feeding as compared to those food insecure households (AHR = 5.02; 95% CI = 3.89-6.50). This difference might be scio-demographic difference and time of study period(48). This area need special attention because mothers who

had food insecure spend more time to cope their food insecurity. This share their time giving care for child.

Alarmingly not one factor is associated with early cessation of exclusive breast feeding before the recommended time, by identifying the strongest associated factors and the shared impact of the risk factors on cessation provides strong evidence for policy-level changes in the way we understand and try to promote exclusive breast feeding. The greatest public health impact is likely to be achieved when multiple risk factors are modified or prevented. Although the infant and young child feeding guideline has been in operation since 2005 and the NNP I and II haven crafted with deployment of community level actors such as urban and rural health extension workers and health development army. There are still sizable proportions of children not enjoying exclusive breastfeeding for the first fully six months. This indicates gap between policy and practice. The results imply the need for galvanizing efforts to fortify the implementation of the public health intervention to improve exclusive breastfeeding for the first six months.

Strength and limitation of the study

As strength using of both quantitative and qualitative method used might be taken as the strength and analysis was done by Cox proportional hazards model, this change the usual practices of logistic regression,respose rate of this study(96.6%),Using children age 6-12 months of age show the full outcome of the event this could be one of the strength. Large sample size, which increases the power of the study, and makes the result more generalizable and it was community based. EBF practice was determined retrospectively recalling 'since birth' this provides more accurate estimate of EBF practice than single 24-hr recall.

However, this study is not without limitations, since the information on EBF based on recall 'since birth' and some mothers might not remember when they specifically introduced other liquids or solids. However, the most common events for Muslim and orthodox (including christening or Christina for orthodox) respondents were used as a reference and child birth by itself is an event so mothers can remember easily. Including mothers with children aged 6–12 months is believed to minimize the bias as recall period is shorter compared to using older children. Additionally, full month when introduction of complementary feeding is recorded as the time to cessation of EBF in this study than using of the specific date which made the respondents easy to remember that month in reference to different events.

Chapter six

Conclusion and Recommendation

6.1 Conclusion

According to this study 295 (%) cases ceased exclusive breast feeding before recommended time six months. The median duration of EBF was 6.22 range, whereas the median time was shorter in urban residents than rural residents and the difference was statistically significant in log rank test (p=0.032). Living in urban resident, being member of food insecure households, giving birth by CS, not being knowledgeable about EBF and giving prelacteal feeding were factors associated with time to early cessation of EBF before recommended time.

6.2 Recommendation

- **For programe planers and decision makers**

- Coming with practical implication of this study finding proper planning and results based programs through the existing system is needed with close monitoring and timely evaluation to transform policy recommendations to action at a field level.

- **For Lanfuro Woreda Health Office**

- Engaging and supporting mothers and other influential persons to understand the importance of exclusive breast feeding is essential if we are going to reduce the high proportion of mother's cessation of exclusive breast feeding within the first six month..

- Since household food insecurity associated with time to early cessation of EBF, participating those mothers on productive safety net, income generating activities and household asset building program to cope their food insecurity.

- Special focus should be given particularly in case of cesarean section, by critical follow up and strong support to practice EBF for the first six months and strong referral linkage with health post to have home visits by health extension workers.

- All health centers and primary hospital of the woreda should use maternity waiting room as opportunity for counseling mothers on EBF.

- Community based EBF education and support programs where possible to disseminate EBF awareness and knowledge. Especially at school adolescent girls because they are tomorrow's mothers and by using HDA as primary tool for education and information dissemination on EBF.

- There should be plan to implement Baby-friendly Hospital Initiative (BFHI) and strengthening Infant and Young Child Feeding strategies in the Woreda.

➢ **For health extension workers**

- Health extension workers should bring close monitoring and follow-up care of mothers having infants and home delivered mothers to avoid pre lacteal feeding

- Urban health extension program and women's affair should give priority on every precondition to mothers who have children less than six months to solve their socio-economic problems and strengthening women's empowerment

➢ **For other researchers**

- Further research should be done prospectively

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Annexes

Annex I: Consent Form (English Version)

Informed Consent Form

Jimma University Institute of Health

Questionnaires ID _____

My name is …….. I am here on behalf of **Shiecho Kedir** student of **Jimma University Institute of Health**. He is conducting a research on "**Time to early cessation of exclusive breast feeding and associated factors among 6-12 months old children**" in Lanfuro Woreda, for the partial fulfillment of masters in human nutrition. He received permission from Jimma University Institute of health and Woreda health office for administrators to conduct this study. You are selected to participate in this study because you are a mother with a child age 6-12 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 30-40 minutes. The study will help you 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.

Could I have your Permission to continue?

1. If yes, continue the interview. 2. If no, say thank you and skip to the next participant

Annex II The questionnaire

Kebele Name……..... Code of the Interviewer…….. Date of Interview……

Section A: Now I will ask you about children's bio data

No	Question		Skip
A.1	Name of baby		
A.2	Sex	1- Male [ ] 2- Female [ ]	
A.3	Date of birth		
A.4	Birth order of the child	[ ]	

Section B: Now I will ask you about maternal characteristics and socio-demographic characteristics of the households

No	Question		
B.1	Age of mother in completed years	[ ]	
B.2	Place of residence	1- Urban 2- Rural	
B.3	Religion	1) Muslim 2) Orthodox 3) Protestant 4) Others----------	
B.4	Ethnicity	1- Silte 2- Amhara 3- Oromo 4- Others----------	
B.5	Occupation of the mother	1- Housewife 2- farmer 3- Merchant	

		4- Civil servant 5- Student 6- Others----------	
B.6	Occupation of the partner	1- Housewife 2- Farmer 3- Merchant 4- Civil servant 5- Student 6- Others----------	
B.7	Marital status	1- Married [ ] 2- Single [ ] 3- Divorced [ ] 4- Widow [ ]	
B.8	Education of the mother	1- Not read and write 2- Read and write only 3- Primary(1-8 grad) 4- Secondary(9-12 grad) 5- College and above	
B.9	Education of the partner	1- Not read and write 2- Read and write only 3- Primary(1-8 grad) 4- Secondary(9-12 grad) 5- College and above	
B.10	Now I will ask about Wealth Index of the household		
B.10.1	Does your household have electricity?	1- Yes 0- No	
B.10.2	A mobile telephone?	1- Yes 0- No	
B.10.3	A bed with mattress	1- Yes 0- No	
B.10.4	Chair	1- Yes 0- No	

B.10.5	Table	1- Yes 0- No	
B.10.6	Television	1- Yes 0- No	
B.10.7	Radio/Functioning G-bass	1- Yes 0- No	
B.10.8	Refrigerator(fridge)	1- Yes 0- No	
B.10.9	Electric stove	1- Yes 0- No	
B.10.10	biffe/ comadienno	1- Yes 0- No	
B.10.11	Bicycle	1- Yes 0- No	
B.10.12	Motor Cycle/Bajaj	1- Yes 0- No	
B.10.13	Cart/Gari	1- Yes 0- No	
B.10.14	Car	1- Yes 0- No	
B.10.15	Does any member of this household have a bank or microfinance saving account?	1- Yes 0- No	
B.10.16	What type of fuel does your household mainly use for cooking?	1-Wood 2-Other	
B.10.17	main construction material used for the floor:	1-Natural floor earth /sand/ dung 2-Other	
B.10.18	What is main construction material used for the roof?	1-thatch 2-iron	
B.10.19	main sources of drinking water	1-pip water 2-others	
B.10.20	Will you please describe your family's household living structure?	1-rent 2-own	
B.10.21	Does the household own any Livestock, herds, other farm animals, or poultry?	1- Yes 0- No	If No, Go question B.10.23
B.10.22	How many of the following animals do you	1- milk cows, oxen or bulls _	

	keep? **(Interviewer: if household does not own a particular item, record "00" against that item.)**	2- Chickens..... 3- Goats..... 4- Sheep..... 5- Horses, donkey, or mule..... 6- Beehives.....	
B.10.23	Does any member of this household own any agricultural land?	1- Yes 0- No	
B.10.24	How many (local units) of agricultural land do members of this household own? **local units:- hectare (100m*100m)**	_____local unit	
B.11	Do you have any support during in the first six months of your index child (Name) to have more time to exclusively breast feed?	1- Yes 0- No	If yes go to B.12

B.12	Who does support?	1- Husband 2- Mother 3- grand mother 4- health care provider 5- Others-------	

Section C: Now I will ask you about Obstetric Factors (place of deliveries, mode of deliveries, birth attendant and, parities)

No	Question		
C.1	Where was your child born?	1- Home [ ] 2- Health facility [ ]	
C.2	What kind of delivery?	1- Normal/vaginal [ ] 2- Caesarean [ ]	

c.3	Who did attend delivery your index child birth (Name)?	1-Health professional 2-Trianed birth attendant 3-Others----------	
C.4	How many times did you visits antenatal care during your child(Name) pregnancy	1)----------times 2) did not visits ANC	
C.5	Provision of counselling on exclusive breast feeding during antenatal care visits?	1- Yes [ ] 0- No [ ]	
C.6	Provision of counselling on exclusive breast feeding during postnatal care visits?	1- Yes [ ] 0- No [ ]	
C.7	Provision of counselling on exclusive breast feeding during growth monitoring and promotion session?	1- Yes [ ] 0- No [ ]	
C.8	Provision of counselling on exclusive breast feeding during immunization session?	1- Yes [ ] 0- No [ ]	
C.9	How many pregnancies did you have in your whole life?	---------- pregnancies	

Section D: Now I will ask about infant feeding practices

No	Question		
D.1	Have you ever breastfed this child (name)?	1- Yes [ ] 0- No [ ]	If yes D.3
D.2	If No, Why not		
D.3	When did you initiate breastfeeding your child for the first time after delivery?	1- Immediately after delivery [ ] 2- Within 1 hour [ ] 3- 2-3 hours [ ] 4- Days (mention) [ ] 5- Do not remember[ ]	
D.4	If delayed more than one hour, what were the reasons for the delayed	1- Caesarean section [ ]	

	initiation of the breast feeding?	2- Baby was sick [ ] 3- Mother was sick [ ] 4- Delayed milk secretion [ ] 5- Others (mention)……	
D.5	Did you give the first (colostrum) milk?	1- Yes [ ] (specifiy) 0- No [ ] (go to next question)	
D.6	Did your baby receive anything to drink before he/she was first put to the breast?	1- Yes [ ] 0- No [ ]	If yes D.7
D.7	What liquid was given?	1- plain water [ ] 2- sugar or glucose water [ ] 3- honey [ ] 4- thin porridge [ ] 5- fresh butter [ ] 6- other [ ]----------	
D.8	Who advised you to provide your child with such type of food/ fluid?	1- My own decision [ ] 2- Grandparents [ ] 3- Friends [ ] 4- Others [ ]----------	
D.9	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	
D.10	Has the infant received anything else other than breast milk, since breast feeding was initiated?	1- Yes [ ] 0- No [ ]	If yes D.11
D.11	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)	
D.12	Why did you give the baby these liquids/solids?	1- Baby gets hungry [ ] 2- Mother not producing enough milk [3- Advised by relatives/friends [ ] 4- Advised by health care providers [ ] 5- Mother return to work [ ] 6- To sooth stomach pain [ ] 7- Other (specify)---------	
D.13	When did you start introducing extra foods/drinks including water to your child?	---------- Months	
D.14	When did you stop exclusive breast feeding	---------- Months	
D.15	Do you currently breast feed your child?	1- Yes 0- No	If not D.16
D.16	When did you stop breastfeeding?	---------- Months	

Section E: Now I will ask you about maternal physiologic factors (breast health)

No	Question		
E.1	Did you experience any breastfeeding problems?	1- Yes 0- No	If yes E.2
E.2	What was the problem	1- Abscess 2- Mastitis 3- Sore/cracked nipples 4- Others (mention)……..	

E.3	How did you manage the Problem?	1- Express breast milk 2- Went to hospital for advice 3- Rub local herbs on it 4- Others (mention)…….	

Section F: Now I Will Ask You about Maternal Knowledge, Attitudes and Beliefs on Exclusive Breastfeeding

No	Knowledge Question		
F.1	Ever heard about exclusive breastfeeding	1- Yes 0- No	If Yes F.2
F.2	If you have heard about exclusive breastfeeding, from whom?	1- Health Extension Workers / Health Workers 2- Mass media (radio or television) Husband 3- Friends/colleagues 4- Health Development Army	
F.3	What is the importance of yellowish milk (colostrum)	1- Nutritious 2- Protection against diseases 3- I don't know 4-Other (mention)……	
F.4	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	

F.5	Do you think breast milk alone is sufficient for the baby for 0-6 months?	1- Yes 0- No	
F.6	If no, for how long is breast milk sufficient for the baby?	1) 1 month 2) 2 months 3) 3 months 4) 4 months 5) 5 months	
F.7	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	
F.8	How many times per day should the baby be breastfed	1- Specified number--------times 2- On demand 3- Other (mention)…….	
F.9	Which foods and or fluids are Recommended to give a child under 6 months?	1- Only breast milk 2- Plain water……. 3- Infant formula or milk, tinned, powder, or fresh animal milk? 4- Juice or juice drinks 5- Yoghurt/ ……... 6- Thinned porridge? 7- Any other fluids……	

No	NOW I AM ASK YOU ABOUT Attitude Questions		Skip
F.10	Some mothers say giving breastfeeding immediately after birth is important	1- strongly agree 2- agree 3- disagree 4- strongly disagree	
F.11	Some mothers say 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	
F.12	Some mothers say starting complementary food a child at six months is important while continuing breastfeeding	1- strongly agree 2- agree 3- disagree 4- strongly disagree	

Section G: Now I will ask you about household food insecurity

No	Questions	Response options	COD
1	In the past four weeks, did you worry that your household would not have enough food?	0 = No (skip to Q2) 1=Yes	|___|
1.a	How often did this happen?	1 - Rarely 2 -Sometimes 3 -Often	|___|
2	In the past four weeks, were you or any household member not able to eat the kinds of foods you Preferred because of a lack of resources?	0 = No (skip to Q3) 1=Yes	|___|

2.a	How often did this happen?	1 - Rarely 2 -Sometimes 3 -Often	|___|
3	In the past four weeks, did you or any household member have to eat a limited variety of foods due to a lack of resources?	0 = No (skip to Q4) 1 = Yes	|___|
3.a	How often did this happen?	1 - Rarely 2 -Sometimes 3 -Often	|___|
4	In the past four weeks, did you or any household member have to eat some foods that you really did not want to eat because of a lack of resources to obtain other types of food?	0 = No (skip to Q5) 1 = Yes	|___|
4.a	How often did this happen?	1 - Rarely 2 -Sometimes 3 -Often	|___|
5	In the past four weeks, did you or any household member have to eat a smaller meal than you felt you needed because there was not enough food?	0 = No (skip to Q6) 1 = Yes	|___|
5.a	How often did this happen?	1 Rarely(1 or 2 time in past 1 month) 2 -Sometimes (3 to 10 times in the past 1 month) 3 -Often (> 10 times in the past 1 month)	|___|

6	In the past four weeks, did you or any other household member have to eat fewer meals in a day because there was not enough food?	0 = No (skip to Q6) 1 = Yes	|___|
6.a	How often did this happen?	1 Rarely(1 or 2 time in past 1 month) 2 -Sometimes (3 to 10 times in the past 1 month) 3 -Often (> 10 times in the past 1 month)	|___|
7	In the past four weeks, was there ever no food to eat of any kind in your household because of lack of resources to get food?	0 = No (skip to Q6) 1 = Yes	|___|
7.a	How often did this happen?	1 Rarely(1 or 2 time in past 1 month) 2 -Sometimes (3 to 10 times in the past 1 month) 3 -Often (> 10 times in the past 1 month)	|___|
8	In the past four weeks, did you or any household member go to sleep at night hungry because there was not enough food?	0 = No (skip to Q6) 1 = Yes	|___|
8.a	How often did this happen?	1 Rarely 2 - Sometimes 1 month) 3 -Often	|___|

9	In the past four weeks, did you or any household member go a whole day and night without eating anything because there was not enough food?	0 = No (skip to Q6) 1 = Yes	|___|
9.a	How often did this happen?	1 Rarely(1 or 2 time in past 1 month) 2 -Sometimes (3 to 10 times in the past 1 month) 3 -Often (> 10 times in the past 1 month)	|___|

Thank You for your time!!

Annex II: Consent Form (Siltighna Version)

ጅማ ዩኒቨርስቲ

ጤና ኢንስቲቱት

እልቅ----------

የጀወብ ቅፅ

ፈያ አንደሬ/ዋሴን::ሱሚ----------ይሱኛን::የመጠዊ የጅማ ዩንቨርስቲ ጤና ኢንስቲቱት የሆሽትስኔ ዲግሪ ደረሰ የሆነይ የክድርነይ ሸይችን ወክልኮኔን:: የሆሽትሴኛ ዲግሪ አሸራ ስርክቦት የሆነን መረጃ ሰብሰቢሶንኩ :: የሆሽትስኔ ድግሪከ ስቅሮት በስልጤ ዞን ሳንፋሮ ወረዳ በእደት ጡበ አጥቦትዋ ትንዘዘኔ በስይ ምክት ጥናት ስጥኖትዋ ስትምረመሮትን ተጅማ ዩኒቨርስቲዋ ተሳንፉሮ ወረዳ ፈይናት ክትበት ጋር ፈቀዱኒየኔ ብስይ ጀመረን:: አቱምነ የሚጠረሙይ ተ6-12 ወሬ የሆነ ወልድ ስስሙኮ ቲሆን:: በጥነቲ ስሰተፎት ፈቃደኛ በሆኩም ዞፍ በክሼሙ ወቅት አቆናት ተቀትሱም:: በጥነቲ በልትሰተፎተሙ ሀድም ይመጮብመን ደውስ ሴሳ:: በጥነቲ ስሰተፎት ፍቀደኛ በሆንኩም ጥነቲ 30-40 ደቂቂ ኢፈጀን:: በጥነቲ በሰተፎተሙ በእንደት ጡበ አጥቦት ሀስት ፈያ አሸረ ትረክቦሙ:: ተትተሚ ደበስኔ በጥነቲ በሰተፎተሙ የጥነቲ ውጠት ስገነም ስብ ጀንገ ፍይደከይ ወደልን::

በደሪ ሱል ሀስት በጥነቲ ስሰተፎት ፈቀደኛንኩም

1) አው በሆና ሱስይ ጀምር/ጀምሪ)

2) በይ (አሹክር/አሹክሪ ስምን የልክሼኮ ምክተክ ተሰሱ)----------

Annex II ሱል

የቀበሌይ ሱም…… የመረጃ ሰብሰቢ ኮድ…….. የስብሰቡይ አይም……

ንልገ ሌ: የጨሎይ መረጃ

ሊልቅ	ሱል	ጀዋብ	ሊዞት
ሌ.1	የጨሎይ ሱም		
ሌ.2	ልጂ/ገረድ	1- ልጅ [ ] 2. ገረድ [ ]	
ሌ.3	ጨሎይ የጨኘቢ አየም		
ሌ.4	ምስትሰኜን		

ንልገ ቢ: የቤተሰቢ ሀሰት

አልቅ	ሱል		
ቢ.1	የአንደት አምር	[ ]	
ቢ.2	ትነብሪቢየሙይ ሌት	1. ከተማ 2. ገጠር	
ቢ.3	ሀይሞኖትሻ	1. ሙስሊም 2. ኦርቶዶክ 3. ጴንጤ 4. ገና ገነም----------	
ቢ.4	ቤሄር	1. ስልጤ 2. አማረ 3. ኦሮሞ 4. ገና ገነም----------	
ቢ.5	የአንደት የብል ወጥ	1. የገር አንደት 2. ገበሬ 3. ነገዲ 4. የመንግስት ብስታኝ 5. ደረሳ 6. ገና ገነም----------	

ቢ.6	የአቦት የብል ወፕ	1. ገበረ 2. ነገዲ 3. የመንግስት ብልተኛ 4. ደረሳ 5. ገና ገም----------	
ቢ.7	የትደር ሀለት	1. የገበት [ ] 2. ቦሰርችት[ ] 3. የትፈታት [ ] 4. ሚሸሻ የሞታቤት [ ]	
ቢ.8	የእንደት የአሸር ቅጫ	1. አንብቦትዋ ጠፎት አችሰት 2. አብቦትዋ ጠፎት ብቻ ተቀትልተ 3. ሀድልኜ ደረጃ (1-8 ጎልጌ) 4. ሆሸትሌ ደረጃ(9-12 ጎልጌ) 5. ኮሌጅዋ ተቲ ደር	
ቢ.9	የአቦት የአሸር ቅጫ	1. አንብቦትዋ ጠፎት አችሰት 2. አብቦትዋ ጠፎት ብቻ ተቀትልተ 3. ሀድልኜ ደረጃ (1-8 ጎልጌ) 4. ሆሸትሌ ደረጃ(9-12 ጎልጌ) 5. ኮሌጅዋ ተቲ ደር	
ቢ.10	የንብረት ሀለት		
ቢ.10.1	መብረት አለሙ?	1- አው 0- በደ	
ቢ.10.2	ሞበደል አለሙ?	1- አው 0- በደ	
ቢ.10.3	አልጋ ተፍረከ አለሙ	1- አው 0- በደ	
ቢ.10.4	ወንበር አለሙ	1- አው 0- በደ	
ቢ.10.5	ጠረጴዛ አለሙ	1- አው 0- በደ	
ቢ.10.6	ቴሌቭዠን አለሙ	1- አው 0- በደ	
ቢ.10.7	የሚሰራ ሬድዮ/ ጂፓስ አለሙ	1- አው 0- በደ	
ቢ.10.8	ፊሪጅ አለሙ	1- አው 0- በደ	
ቢ.10.9	በመብረት የሸን ምድጃ አለሙ	1- አው 0- በደ	
ቢ.10.10	ቢፌ/ኮሞዲና አለሙ	1- አው 0- በደ	
ቢ.10.11	ብሽክሊት አለሙ	1- አው 0- በደ	
ቢ.10.12	የሞቶር ብሽክሊት አለሙ	1- አው 0- በደ	
ቢ.10.13	አማር/ ፈረዝ ጋሪ አለሙ	1- አው 0- በደ	

ቢ.10.14	መኪና አለሙ	1- አው 0- በይ	
ቢ.10.15	ተጋሪ አበርስ በኦሞ/በንክ አከውንት የሳይ አለ	1- አው 0- በይ	
ቢ.10.16	ይመግዴ ምጊዘን	1-እንጩ 0-ገና	
ቢ.10.17	ጋሪ ዯቼክይ ምንጊዚን	1-አፈር 0-ገና	
ቢ.10.18	የገሪ ቁሪት ምንጊዘን	1-ሰር 0-ቆርቆሮ	
ቢ.10.19	መዬ በይሸን ትቀዶሙ	1-ቧንባ 0-ገና ገነ	
ቢ.10.20	ጋሪ የመኒ?	1-የክረይ 0-የገጊና	
ቢ.10.21	በጋረሙ ድኒት አለ ?	1- አው 0- በይ	በይ ቦና ሱ ቢ.10.23
ቢ.10.22	እልቅይ ምን የለን? (ተሰሉይ ጊዝቻ ሀድም ቤል 00 ክተቡ)	1. የይብ ለም/ከረብ/ሞፈን 2. እንጨቆ..... 3. ፌቅ..... 4. ጠይ..... 5. ፈረዝ/ሉማር/ቦቅሎ..... 6. እንዝት.....	
ቢ.10.23	ተጋሪ አበርስ ይርሰት ዯች የለይ ሰብ አለ?	1- አው 0- በይ	
ቢ.10.24	ምን የል ሄክተር/ጥምድ? 1 ሄክተር:- (100m*100m) 1ጥምድ :- (50m*50m)	_____ሄክተር/ጥምድ	
ቢ.11	ጩሎይ (ሱም) በፍቴይ 6 ወር ቢዜ ወከወታ ረከብሼኔ ጡባ ብች ሊጣጦቢ የግዘሸን ነራ?	1- አው 1- በይ	አዎ ከሆና ጥ ቢ.12 እስፍ
ቢ.12	ማኒ ነር የግዘሸኝይ?	1. የጋር አምበቴ 2. አዴ 3. ኢቤረ/አመቴ 4. የጤና በለሙየዮ 5. ገና ገነም----------	

ንልገ ሲ: ጪናትዋ ተንዘዘነ የሳይ ሀለት

አልቅ	ሱል	ጀዋብ	ኪዞት
ሲ.1	ጨሎይ በዊት ጩኜሺ(ሱም)?	0. በጋር [ ] 1. በአፊያ ጋር [ ]	
ሲ.2	በም ሀስትነተግስገልሺ?	1. በፈያ ኡንጋ [ ] 0. ቦፕሬሽን [ ]	
ሲ.3	ሂነይ ጨስሽ (ሱም) ማኒ የግልገስሽ?	1-የአፊያ በስያሙ 2-በስስጠና የልምድ አወስጅ 3-በገና----------	
ሲ.4	ቢጺታይ ጨስሽ (ሱም) ምን የይልን የኦሽታ ፎል ታክተታልሺ ነር?	1)----------ጊን 0) ሀደም	
ሲ.5	በኦሽት ፎል ወክታ በፍቴይ 6 ወሪ ስጨስሽ ጡባ ብች ሲታጦቢ ምክር ወቡሽ ነር?	0. አው [ ] 0. በይ [ ]	
ሲ.6	ሂነይ ጨሎ በትግስገልሺ ዞፍ በፍቴይ 6 ወሪ ስጨስሽ ጡባ ብች ሲታጦቢ ምክር ወቡሽ ነር?	1. አው [ ] 0. በይ [ ]	
ሲ.7	በአድገት ክትትል ወቅታ በፍቴይ 6 ወሪ ስጨስሽ ጡባ ብች ሲታጦቢ ምክር ወቡሽ ነር?	0- አው [ ] 0-በይ [ ]	
ሲ.8	በክትበት ወቅታ በፍቴይ 6 ወሪ ስጨስሽ ጡባ ብች ሲታጦቢ ምክር ወቡሽ ነር?	0. አው [ ] 1- በይ [ ]	
ሲ.9	በሀየታሽ ምን የስን ኦሽታ ፎል ሆንሺሽ?	----------ኦሽታፎል	

ንልገ ዲ: የጨሎይ ስንቃ በትመስከታ

አልቅ	ሱል	ጀወብ	ኪዞት
ዲ.1	ሂነይ ጨሎ ጡባ አጦቤ ትሸሌሽ?	1- አው [ ] 0. በይ [ ]	አው ቦና ሱል ዲ.3 ሂዱ
ዲ.2	በይ በሆና ምክታሽ ተሰሱ		
ዲ.3	ጨሎይ በትግስገልሽ ዞፍ በምን የስን ሰት ጡባ አጦቤሽ	1. ኮሞ ተጩኜኮ[ ] 2. በአድ ሰት ውስጥ [ ] 3. 2-3 ሰት [ ] 4. በአይም ውስጥ [ ] 5. አልቴከሰኛን [ ]	
ዲ.4	ጨሎይ በአድ ሰት ኡስጥ ጡባ በልጀማሪ ምክትከ	1. ኦፖሬሽን [ ]	

	ምንግዚን ነር ?	2. ጨሶይ አንጨየኔ [ ] 3. አሄን አንጨኛኔ [ ] 4. ጡቤ ኮሞ አይባ አስመጠን [ ] 5. ገነ ገነም	
ዲ.5	የፍቴይ አይባ ስጨስሽ አጦቤሺየሽ (አንጂረይ)?	0. አው [ ] 0. በይ [ ]	
	በይ በሆና ምክታሽ ተሰሱ ?		
ዲ.6	ጨስሽ ተጠብ ቀዳ ሱሴ ጊዝ ቀመሰ ነር ?	1. አው [ ] 0. በይ[ ]	አው በሆነ ሱል ዲ.7 ሂዱ
ዲ.7	ምንጊዘ ወብሺ ነር ?	1. ጠሲል መይ [ ] 2. ስኩር በመይ [ ] 3. ፕጋይ[ ] 4. ቀጭን አንቀቼ [ ] 5. ፉስፍሳ ኢሴቼ [ ] 7- ገና ገነም ----------	
ዲ.8	ሂነይ ሲታሺ መኒ ዬወደሽ ?	1. በገጌ [ ] 2. አበርሴ [ ] 3. መረርቼ[ ] 4. ገነ ሰብ [ክትቡይ]----------	
ዲ.9	ሂነይ ሲቶቢ ምክታሽ ሚንጊዘን ነር ?	1. ጨሶይ አንጨየኔ [ ] 2. ኢሄ አንጨየን ነር [ ] 3. ጡቤ ኮሞ አይበ ለመጣ ነር [ ] 4. ገና (ክተቡ)----------	
ዲ.10	ጨሶይ ጡበ በጀመረ ዞፍ ገና ጊዝ /ሲንቃ ወሰዳ ነር ?	1. አው[ ] 0.በይ [ ]	አው ቦነ ሱል ዲ.11 ሂዱ
ዲ.11	ሚንጊዝ ወብሺ ነር ?	1. ፈስኔ የበረዳ መይ [ ] 2. ሱከር በማይ ቢጠበጤ [ ] 3. የዱቄታይ አይበ [ ] 4. ሸዬ [ ] 5. ቲንይት አይብ ገና [ ] 6. ለስለስ የበሳ አይብ [ ] 7. የፈጢ አተክልታ አተክልት [ ] 8. ገና ገነም	
ዲ.12	ሂናይ ሲንቃ ለምንጊዝን የብሺ?	1. ጨሶይ ሲሪበየነኮ [ ]	

		2. ጡቤ አደባ ኮሞ አስመጣ ር [ ] 3. ቦሴ// በመረርቼ/ በዘመዴ ምክር ወቡን ነር [ ] 4. በጤና በስሙየዎች ምክር ወቡን [ ] 5. እሄ ስብል ሲሴደውኮ [ ] 6. ስቃ ሲትረራሮሽ [ ] 7. ጋና ገነም---------	
ዲ.13	ስጨስሽ (ሱም) ድበያ/ሱሴ ስነቃ በምስት ወሪክ ጀመርሽኒ?	---------- ወሪካ	
ዲ.14	ጨሎነሽ ጡበ ብች አጥቦት የቅሺ በምስት ወሪንካ ነር?	---------- ወሪካ	
ዲ.15	አኩ ጨሎይ ጡባ ተጦቤሽ ?	1. አው 0. በይ	በይ ቦሆና ሱስ ዲ.16 ሂዱ
ዲ.16	ጡባ አጥቦት በምስት ወሪካ አቅነንሽ ?	---------- ወሪክ	

ንልገ ሲ: ይንደት ፈይነት

እልቅ	ሱል	ጀወብ	ሺዞት
ሺ.1	ጨሎሽ (ስም) ቲታጦቢ መነም ክሴ የትብ እንጭነ አገጠመሽ ነር ?	1- አው 0- በይ	አው በሆና ሱል ሺ.2 ሂዱ
ሺ.2	አይነክሴን ምክት የገጠሚ	1. መመርቀዝ 2. እበጭ 3. መግደት/ተሰደቆት 4. ገና ገም ……	
ሺ.3	ሚና አሺሽኒ ?	1. አይበይ አስብኩ 2. አፍያ ጋር ሄድኩ 3. በቀጠለቀጠል አጠብኩይ 4. ገና ገነም…….	

ንልገ ሐፍ: የሺንደት ጡባ አጥቦት ቸሎት

አልቅ	ሱል	ጀዋብ	ኢዞት
ኤፍ.1	6 ወሪ ጀንን ጡባ ብቻ አጥቦት ሰመሸ ትሸሌሸ	1- አው 0- በይ	አው በሆ ሱል F.2 ሂዱ
ኤፍ.2	በመኒ የሰመሺ ?	1. ተበስሙያ 2. ተሪድዮ 3. ተመረርቼ 4. ተጤና ልማት ሰረዊት	
ኤፍ.3	የፍቴይ አይብ ፈይደከይ ምንግዚነን ?	1. ስንቅን 2. ተነቶ አትቅረቀረን 3. አስውችል 4. 4ገና ገነም.....	
ኤፍ.4	ጨሎ በጩኒ በምን የልን ወቅት ጡበ ወቦት የስቢ ?	1. ተጩኑይኮ 2. በአንድ ሰዓት ውስጥ 3. ተ1-3 ሰዓት ውስጥ 4. ተ4-6 ሰዓት ውስጥ 5. ተ7-24 ሰዓት ውስጥ 6. ከተ1 አይም እሰከ 1 ሰምታ ውስጥ 7. ተ1 ሰምት ሬር 8. ሀድም ኢሎቢ 9. አልውችል	
ኤፍ.5	ተ0-6 ወሪ ስሆነ ጨሎ ጡበ ብች ኢከታን ትዪሽ?	1. አው 0. በይ	አው ቦና ሱል ኤፍ.6 ሂዱ
ኤፍ.6	በይ ቦና ስምን የስን ወቅትን ጡብ ብች ኢከታን?	1. 1 ወር 2. 2 ወረት 3. 3 ወረት 4. 4 ወረት 5. 5 ወረት	
ኤፍ.7	ትንደት ጡብ ድበያ ሎልድ አንቃ ይጀምርቡያን ትክክልኔ ወቀት መቼን?	1. በ3 ወሪ ዋ ተቲ ኮሎ 2. በ4 ወሪ 3. በ5 ወሪ 4. በ6 ወሪ 5. በ7 ወሪዋ ተቲ ደር ቲሆነይሙ	
ኤፍ.8	ጨሎይ በአየም ምነ የስን ጊና ጡቦት አስቢ?	1. --------ጊና 2. በከሼ ሰት	

		3. ገና ገናም…….	
ኤፍ.9	ተ6 ወር ኮሎ ለሆና ወልድ አይነከሴን ስንቅ አትመከረነይ?	1. የአንደት ጡብ ብች 2. ኑጡ የፈስ መይ 3. የዱቄት አይብ 4. ሞመቂ 5. ሩጊ አይብ 6. ለስለስ የበለ እንቀቼ 7. መንም ፉሲ ጊዘ	

እልቅ	የአመለከከት ሱል		ሲዞት
ኤፍ.10	ሀድ ሀድ እንደቻ ጨሎይ ተጩንይኮ ጡበ ወቦት ፈያ አሎን ይሎን አሽ መን ትዬሽ?	1. በጠም አስመማው 2. አስመማው 3. አስውትስመማ 4. በጠም አስውትስመማ	
ኤፍ.11	ሀድ ሀድ እንደቻ የፍቴይ ጡበ ድፎት ፈያ አሎን ኢሎን አሽ ሚና ቲዬሽ	1. በጠም አስመማው 2. አስመማው 3. አስውትስመማ 4. በጠም አስውትስመማ	
ኤፍ.12	ሀድ ሀድ እንደቻ ጨሎይ 6 ወሬ ቲሜለይ ተጡቢ ሉሴ የትምጠጣና ስንቃ የትኬሽን ይሎን	1. በጠም አስመማው 2. አስመማው 3. አስውትስመማ 4. በጠም አስውትስመማ	

ንልገ ጂ : የቢተሰብ የምግብ መስትና

እልቅ	ሱል	ጀዋብ	ኮድ
1	በለፈይ 4 ሰምት የአበሮሰሙ የስንቅ ሀስት አስጨነሙ አሽለን?	0 = በይ (ቦና ፕ2 ሂድ) 1 = አው	|___|
1.ኤ	ሂታይ የሆነይ ለምን የልን ወቅት ነር?	1 ኡንስ (1/2 ጊን በለፈይ 1 ወሪ ኡስፕ) 2 -ለለፈ ለለፌ (3 እለከ 10 ጊን በለፈይ 1 ወሪ ኡስፕ) 3 -ሁለም ጊን (> 10 ጊን በለፈይ 1 ወሪ ኡስፕ)	|___|
2	በለፈይ 4 ሰምት የአበሮሰሙ አበል ኡስፕ ብሎት ቲከሽየን ስንቅ ሉሴ ስንቃ ተቅበጦት የነቃ ተይበለ የቀሬ ነራ?	0 = በይ (ቦና ፕ 3 ሂዱ) 1=አው	|___|

2.ሴ	ሂታይ የሆነይ ስምን የልን ወቅት ነር?	1 ሉንስ (1/2 ጊን በስፈይ 1 ወሪ ሉስፕ) 2 -ሰስፈ ሰስፌ (3 እስከ 10 ጊን በስፈይ 1 ወሪ ሉስፕ) 3 -ሁስም ጊን (> 10 ጊን በስፈይ 1 ወሪ ሉስፕ)	|___|
3	በስፈይ 4 ሰምት ሉስፕ ሰቱም ወይም ተበሮሰም ሰበል ሉሰፕ በቄ ስንቃ ቢንጠሮት የነቃ ሉንሳ የስንቃ ከሴ የበስ ነራ?	0 = ሰይ (ከሆነ ፕ 4 እስፍ) 1 = ሰም	|___|
3.ሴ	ሂታይ የሆነይ ስምን የልን ወቅት ነር?	1 ሉንስ (1/2 ጊን በስፈይ 1 ወሪ ሉስፕ) 2 -ሰስፈ ሰስፌ (3 እስከ 10 ጊን በስፈይ 1 ወሪ ሉስፕ) 3 -ሁስም ጊን (> 10 ጊን በስፈይ 1 ወሪ ሉስፕ)	|___|
4	በስፈይ 4 ሰምት ሉስፕ ሰቱም ወይም ተበሮሰም ሰበል ሉሰፕ በቄ ስንቃ በቅበጦት ብሎት ቲትከሱየሙ ስንቅ ሉሴ የበስ ነራ?	0 = በይ (ቦና ፕ 5 ሂዱ) 1=ሰው	|___|
4.ሴ	ሂታይ የሆነይ ስምን የልን ወቅት ነር?	1 ሉንስ (1/2 ጊን በስፈይ 1 ወሪ ሉስፕ) 2 -ሰስፈ ሰስፌ (3 እስከ 10 ጊን በስፈይ 1 ወሪ ሉስፕ) 3 -ሁስም ጊን (> 10 ጊን በስፈይ 1 ወሪ ሉስፕ)	|___|
5	በስፈይ 4 ሰምት ሉስፕ ሰቱም ወይም ተበሮሰም ሰበል ሉሰፕ በቄ ስንቃ በቅበጦት ብሎት ቲትከሱየሙ ስንቅ ሉሴ የበስ ነራ?	0 = በይ (ቦና ፕ 6 ሂዱ) 1=ሰው	|___|
5.ሴ	ሂታይ የሆነይ ስምን የልን ወቅት ነር?	1 ሉንስ (1/2 ጊን በስፈይ 1 ወሪ ሉስፕ) 2 -ሰስፈ ሰስፌ (3 እስከ 10 ጊን በስፈይ 1 ወሪ ሉስፕ) 3 -ሁስም ጊን (> 10 ጊን በስፈይ 1 ወሪ ሉስፕ)	|___|
6	በሰስፈው 4 ሰምንታት ውስፕ እርሶ ወይም ከቤተሰቦ ሰበል ውሰፕ በቂ ምግብ በስመኖሩ በቀን ውስፕ ውስን ምግብ የተመገበ ነበር?	0 = ሰይ (ከሆነ ፕ 7 እስፍ) 1= ሰም	|___|
6.ሴ	ሂታይ የሆነይ ስምን የልን ወቅት ነር?	1 ሉንስ (1/2 ጊን በስፈይ 1 ወሪ ሉስፕ) 2 -ሰስፈ ሰስፌ (3 እስከ 10 ጊን በስፈይ 1 ወሪ ሉስፕ) 3 -ሁስም ጊን (> 10 ጊን በስፈይ 1	|___|

		ወሪ ሱስፕ)	
7	በስፈይ 4 ሰምት ሱስፕ ፈረንከ/ ገና ጊዛ በልንበሮትካ መነም ከሌ ስንቅ ቀበጤ እሸሌን?	0 = በይ (ቦና ሱል 8 ሂዱ) 1=አው	|___|
7.ኤ	ሂታይ የሆነይ ስምን የልን ወቅት ነር?	1 ሹንስ (1/2 ጊን በስፈይ 1 ወሪ ሱስፕ) 2 -አስፈ አስፌ (3 እስከ 10 ጊን በስፈይ 1 ወሪ ሱስፕ) 3 -ሁስም ጊን (> 10 ጊን በስፈይ 1 ወሪ ሱስፕ)	|___|
8	በስፈይ 4 ሰምት ሱስፕ አቱም ወይም ተበሮሰም አበል ሱሰፕ በቄ ስንቃ በልንበሮት አሮታይ ስንቃ ተይበስ ይኜ ነራ	0 = በይ (ቦና ፕ 9 ሂዱ) 1= አው	|___|
8.ኤ	ሂታይ የሆነይ ስምን የልን ወቅት ነር?	1 ሹንስ (1/2 ጊን በስፈይ 1 ወሪ ሱስፕ) 2 -አስፈ አስፌ (3 እስከ 10 ጊን በስፈይ 1 ወሪ ሱስፕ) 3 -ሁስም ጊን (> 10 ጊን በስፈይ 1 ወሪ ሱስፕ)	|___|
9	በስፈይ 4 ሰምት ሱስፕ አቱም ወይም ተበሮሰም አበል ሱሰፕ በቄ ስንቃ በልንበሮት መልታይ ወይም አሮታይ ሙሱ ስንቃ ተይበስ የቀሬ ነራ?	0 = በይ 1= አው	|___|
9.ኤ	ሂታይ የሆነይ ስምን የልን ወቅት ነር?	1 ሹንስ (1/2 ጊን በስፈይ 1 ወሪ ሱስፕ) 2 -አስፈ አስፌ (3 እስከ 10 ጊን በስፈይ 1 ወሪ ሱስፕ) 3 -ሁስም ጊን (> 10 ጊን በስፈይ 1 ወሪ ሱስፕ)	|___|

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Annex III: Focus group discussion guide

Introduction

A Focus Group Discussion (FGD) is a qualitative research technique consisting of a structured discussion and used to obtain in-depth information (qualitative data) from a group of people about a particular topic. The purpose of the discussion is to use the social dynamics of the group, with the help of a moderator/facilitator, to stimulate participants to reveal essential information about people's opinions, beliefs, perceptions and attitudes. Focus groups are often conducted among homogeneous target populations, who usually share a common characteristic such as age, sex, or socio-economic status, which encourages a group to speak more freely about the subject without fear of being judged by others.

Key Steps in Conducting a FGD was:

STEP 1: field team selection was performed

Moderator: principal investigator was the moderator

Observer/recorder: was selected from the study area and orientation was given on the way of recording

STEP 2: types and number of groups was determined

Group size was 8-12 persons. Every effort was employed to ensure that non-participants are not present.

STEP 3: Prepare for FGD was ensured

Location for FGD was organized to conduct the meeting in a private, safe and comfortable environment (e.g. not direct under the sun), and that it is accessible (especially to persons with disabilities, older persons, and women).

Date and time for the FGD was informed to ensure mobilization of participants before the meeting as far as possible, and inform community leaders and heath extension workers in advance of the discussion so they are aware of it.

STEP 4: FGD was conducted

The FGD was conducted by explaining the reason for the visit, the rationale to avoid raising expectations. Explain what was done with the information. Participants were cleared free to answer or not, or to leave at any point. Explanation was done about taking notes during the interview to help you remember what was said, but that these are for our own personal use and was not shared with others.

Step 5: Tips for the facilitator and observer was taken notice body language and expressions as relevant and was also under take tape recording process.

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. What cultural practices that contributes to cease EBF in this community?

6. Do you have suggestions on what can be done to encourage mothers to practice exclusive Breastfeeding for six months in this community?

Annex v: Declaration

DECLARATION

Assurance of principal investigator:

I, the undersigned, agree to accept responsibility for the scientific Ethical and technical conduct the research project and for provision of required progress report as per terms and conditions the health sciences in effect at the time of grant are forwarded the result of this application.

Name of the student: _____

Date _____Signature _____

Approval of the advisors:

This thesis has been submitted with my approval as University advisor.

Name of the first advisor: _____

Signature _____ Date_____

Name of the second advisor: _____

Signature _____ Date_____

Date of submission_____