

Infant feeding practices and associated factors among HIV positive mothers attending ART services in Government Health institutions in Addis Ababa



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Declaration

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

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

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Abstract

Background: Studies have shown that in the absence of any intervention, between 25-45 % of HIV positive women living in resource poor settings transmit HIV to their babies during pregnancy, delivery, or through breastfeeding. The HIV transmission rate is estimated to be about 5-10 % during pregnancy, between 10-20 % during labor and delivery, and another 10-20 % during postnatal period through breastfeeding to 24 months. There is no study which assessed the practice of infant feeding among HIV sero-positive mothers in Addis Ababa after the recent WHO recommendation. This study aimed to determine infant feeding practices and associated factors among HIV positive mothers attending ART services in Addis Ababa.

Methods: Facility based cross-sectional study was conducted in all the 25 Health centers & 4 Hospitals ART service providing health centers in Addis Ababa to accomplish the sample size. A total of 334 mother-infant pairs attending ART clinics from October 7 to November 8, 2013 were recruited in the order of arrival. Structured interviewer administered questionnaire was used to gather data on feeding practices and socio-demographic and other explanatory variables from participant mothers. The data were coded, entered into Epi data version 3.1 and cleaned. The data were analyzed using SPSS for windows version 16.

RESULTS: The majority (77.8%) of the mothers experienced exclusive breast feeding, some practiced exclusive replacement feeding (14.4%) and small proportion (7.8%) used mixed feeding for their infants. In other words, substantial proportion (92.2%) of the HIV positive mothers experienced safe feeding, while the remainder (7.8%) used unsafe feeding options.

On Multivariable logistic regression model, AFASS score, attending ANC visit and PNC visit were significant positive predictors of safe infant feeding practice.

Conclusion: The results indicate behavioral change communications through ANC and PNC should be strengthened to prevent MTCT. The AFASS criteria should be assessed very stringently as it is very important to prevent unsafe feeding practices of infants born to HIV positive mothers.

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ACRONYMS AND ABBREVIATIONS

AIDS - Acquired immune deficiency syndrome

ART – anti retroviral therapy

EBF – exclusive breast feeding

ERF – exclusive replacement feeding

HAART - highly-active antiretroviral therapy

H.C – health center

HIV - human immunodeficiency virus

IYCF – Infant and young child feeding practice

MOH – Ministry of Health

MTCT - mother-to-child transmission

PMTCT – prevention of mother to child transmission

SNNPR – South nations and nationalities region

SVD – Spontaneous Vaginal delivery

UNAIDS- United States Agency for International Development

WHO – World health organization

CHAPTER 1: INTRODUCTION

1.1 BACKGROUND OF THE STUDY

HIV can cause (AIDS) Acquired immune deficiency syndrome. And by weakening the immune system, it will predispose our body to other secondary and opportunistic infections. Without treatment HIV infection will lead to AIDS and death. Sexual contact is the predominant means of HIV transmission. MTCT is the other mode of transmission where the virus will enter to the child' body throughout pregnancy, delivery and breastfeeding), and contaminated supplies during blood transfusions, and injections with contaminated needles or syringes are the other means [1].

The overall adult HIV prevalence in Ethiopia has remained low. With the HIV prevalence rate of adults age 15-49 is 1.4 in the 2005 EDHS with the confidence interval 1.1-1.8 percent and then 1.5 percent in the 2011 EDHS with the confidence interval of 1.2-1.7 percent) [1].

According to the Ethiopia MOH 2002 estimate, there were about 2.2 million people living with the virus, and among them 200,000 were children. The majority (9 in 10) of infected children are infected through mother-to-child transmission of HIV [2].

Studies have shown that without any intervention, about 25-45 % of HIV positive women living in poor resource settings will transmit HIV to their babies during pregnancy, delivery and breastfeeding. The HIV transmission rate is estimated to be about 5-10 % during pregnancy, and 10-20 % at the time of labor and delivery, and an additional 10-20% during the postnatal period through breastfeeding to 24 months. Maternal diseases like malnutrition, malaria and anemia have also been shown to increase disease progression in HIV-positive women by increasing the risk of MTCT [2].

The Federal Ministry of Health in Ethiopia has made considerable steps forward in support of IYCF in the last decade. National Strategy for Infant and Young Child Feeding was developed In 2004 which provides exhaustive feeding recommendations and guidelines. Then in 2005-06 a National Nutrition Strategy was developed, and also National Nutrition Program to put in to action this strategy was introduced on a national scale in July 2008 [3].

Since breastfeeding helps for optimal nutrition, by decreasing mortality considerably, it also helps for child-spacing; so promotion of breastfeeding has played a vital role in protecting infants and young children. Hence it is recommended to practice Exclusive breastfeeding until six months of age by WHO [4].

Transmission of HIV through breastfeeding can happen at any time during lactation. But still there is short of information to estimate the exact association between duration of breastfeeding and the timing of transmission. So far, there is some evidence that there exists an early postnatal risk within the first six to eight weeks. This still remains unclear, however; a late postnatal risk beyond six to eight weeks has been better described recently by the Breastfeeding and HIV International Transmission Study Group (BHITS) in 2004 [4].

World Health Organization (WHO) modifies its guidelines on HIV & infant feeding in 2010 based on the recent scientific findings. And the recent guideline recommends that mothers who are HIV positive breastfeed their baby exclusively for the first six months and continue breastfeeding up to the age of 12 months of the infant while initiating complementary food in settings where breastfeeding is judged to be the safest infant feeding option [5].

1.2 STATEMENT OF THE PROBLEM

HIV transmission from Mother-to-child (MTCT) happens rarely in well resourced settings where the widespread access to effective antiretroviral treatment is on hand. In 2008, about 370,000 children worldwide were newly HIV infected with 90% of these in sub-Saharan Africa. In 2010 the Ethiopian Adult (15-49 years) HIV Prevalence Based on single point estimate, was 2.4 % whereas HIV Positive Births were found to be 14,276 [1] .

Starting from the time of HIV pandemic to 2006, there were around 2.3 million children with age less than 15 years living with HIV worldwide and an estimated 530 000 children aged less than 15 years were newly infected with HIV in 2006 alone, There was an estimated 380 000 deaths due to AIDS among children. Africa has the highest HIV prevalence rate of Mother-to-child transmission (MTCT). Prior to the highly-active antiretroviral therapy era, child mortality because of HIV was about 35.2% by age one year and increased to 52.5% by two years of age. HIV/AIDS is increasingly more significant cause of mortality in those aged less than five years in Africa. [4].

According to the data of 2009 ANC-based HIV Sentinel Surveillance in Ethiopia, the countrywide HIV prevalence adjusted for the relative urban/ rural population size was 2.3%. Among the regions Gambella was the leading with HIV prevalence of 5.4% then after followed by Addis Ababa (5.3%) and then Dire Dawa (4.9%). Afar and Somali had also significant prevalence of HIV with 4.5% and 3.5%, respectively [27].

Despite the fact that breastfeeding brings considerable health benefits for infants and young children, HIV can be transmitted through breastfeeding from the infected mother to her child. The lessening of this transmission is one of the most critical public health problem tackling health-care professionals, researchers, health policy-makers and HIV-infected women in many areas of the world, particularly in developing countries [4].

Infant feeding in the context of HIV is complex because of the major influence that feeding practices may affect child's existence. The dilemma is to balance the threat of infants attaining HIV during breast feeding with the higher risk of death from other causes than HIV, mainly malnutrition and serious illnesses such as diarrhea among non-breastfed infants [6].

Replacing breastfeeding with formula milks, animal milks, and other foods for those not specifically HIV exposed, is attend by increased mortality, morbidity, poor growth, and development in both developing and developed countries [7].

World Health Organization (WHO) recommends that formula feeding should only be taken as an alternative to breastfeeding of HIV exposed infants when it is affordable, feasible, acceptable, sustainable and safe (AFASS). Unsafe (Mixed) feeding is dangerous to an infant's health and chances of survival combining the risk of HIV transmission through breastfeeding with the increased risk of morbidity associated with formula feeding. In addition, infants who receive mixed feeds are more likely to acquire HIV infection than their exclusively breastfed counterparts [8].

Infant feeding practices recommended to mothers known to be HIV-infected should support the greatest likelihood of HIV-free survival of their children without harming the health of mothers. To accomplish this, prioritization prevention of HIV transmission needs to be balanced with meeting the nutritional requirements and protection of infants against non-HIV morbidity and mortality [10].

Approximately 430,000 children of under 15 years of age in 2008 were newly infected with Human Immunodeficiency Virus (HIV), and more than 71% were from sub-Saharan Africa [10].

Addis Ababa is one of the regions in Ethiopia with a high rate of HIV prevalence, with 2.3% of adult HIV prevalence. Founded on the 2007 census Infant mortality rate in Addis Ababa was 45 infant deaths per 1,000 live births, this result is less than the nationwide average of 77; at least half of these deaths occurred in the infants' first month of life [22].

There is no study which assessed the issue after the development of new recommendation on infant feeding by WHO. This study was intended to assess infant feeding practices among HIV positive mothers attending ART services and identify associated factors.

In Ethiopia, there are few studies which address the challenges in fulfilling safe infant feeding practice of HIV positive mothers and counseling practice of health workers. Hence the anticipated study will help to fill an important information gap to PMTCT program which can be used to inform policy and practice in Ethiopia setting.

CHAPTER TWO: LITRATURE REVIEW

2.1 LITRATURE REVIEW

The WHO 2010 guideline recommends that, to reduce the risk of the infant being infected, mothers with their infants are advised to take antiretroviral drugs throughout breastfeeding. Mothers are also recommended to exclusively breastfeed their infant for 6 months and after 6 months complementary foods should be introduced while continuing to breastfeed for up to a year [9].

In order to prevent postnatal transmission of HIV infection WHO/UNAIDS guidance recommends averting of all breastfeeding by HIV infected mothers when replacement feeding is AFASS; otherwise, it is suggested to follow exclusive breast feeding during the first 6 months of the infant's life. The recommendation additionally states that HIV infected mothers should also be counseled on the risks and benefits of different infant feeding options and be given guidance and support to choose the most appropriate option for their circumstances [11].

Infant feeding practices

Rate of exclusive breastfeeding has increased across African Countries over the last few years but it still remains low at an average of 49 percent in 2010, with wide variations between and within countries ranging from 85 percent in Rwanda to 9 percent in South Africa [5].

Infant feeding in the context of HIV is difficult because of the major influence that feeding practices influence on child survival. So the problem is to balance the risk of infants acquiring HIV through breast milk with the higher risk of death from causes other than HIV, particularly malnutrition and other serious illnesses such as diarrhea among non-breastfed infants [6].

A cross-sectional study with sample size of 209 done in Gondar Town identified that 89.5% of the participants had followed EBF and ERF (safe feeding) practices while the rest (10.5%) practiced mixed feeding. In this study 32.1% of the participants answered availability of supply affected their infant feeding option [12].

In the study conducted in Ghana which used both qualitative and quantitative methods even if the sample size was too small (40) and the population under study were HIV positive mothers, fathers and grand mothers, out of the 40 respondents none practiced ERF because the cost of the infant formula is unaffordable [13].

In the other cross-sectional study conducted in Addis Ababa in the year 2008 on mothers attending ART clinics and mothers coming for PMTCT programs in 13 purposively selected health institutions showed that HIV positive mothers with household income between 501 to 1000 Birr were 2 times more likely to practice ERF than the referent group and those who disclosed their HIV status to their husbands were 3.8 times more likely to apply ERF than their counterparts and another interesting finding mentioned by one of the counselors was resistance of mothers to sticking to safer infant feeding options because of the counter information forwarded by some neighbors and from close family members [14].

Counseling practices of health workers on infant feeding options recommended to HIV Positive women

Mothers who are HIV-infected should be counseled and get complete information about the risks and benefits of various infant feeding options and specific direction in selecting the option most likely to be suitable for them. And the mother's decision must be valued. [15].

A study done in Kenya, Malawi, Botswana and Uganda, poor infant feeding counseling is a common finding across PMTCT programs even after training (13). So this and lack of consequent support for the infant feeding decision, contribute for the mixed feeding practice which increases the risk of MTCT [4].

Across sectional study done in South Africa designed to assess counseling practice of health workers showed that discussion about availability of different feeding option took place in about 85% of HIV positive mothers [16].

Knowledge and attitude towards the recommended feeding options and disclosure Status of HIV positive mothers

According to the study done in SNNP, Ethiopia, large proportion, (95.1%) of respondents heard about feeding options. Majority of them (93.6%) received from health professionals. And (89.6%) HIV positive mothers had awareness towards recommended feeding options. Majority, one hundred and seventy five (95.6%) of HIV positive mothers had disclosed their HIV-status, out of them, 131 (75%) had disclosed to their spouses. Concerning attitude of mothers towards recommended feeding options 94(51.4%) of them have favorable attitude [17].

Knowledge concerning breastfeeding and its initiation

Early and exclusive breastfeeding is one of the most effective interventions for infant's survival. Scientific verification shows that early initiation of breastfeeding can decrease neonatal death. Neonatal and post-neonatal mortality are less likely to occur in infants fed with colostrums [26].

On the study held in Kagera, Mbeya and Kilimanjaro districts in Tanzania was observed that 50% of mothers were able to recognize its nutritional role and 34% knew the importance of colostrums. Regarding breastfeeding initiation, 67.5 percent of mothers stated that it is recommended to start within an hour after delivery. However, a very small percent of mothers (2.5%) and (2.7%) valued the advantage of exclusive breastfeeding in relation to family planning and reducing the risk of mother to child transmission of HIV, respectively [18].

Knowledge about mother to child transmission of HIV/AIDS

There is a knowledge gap on MTCT of HIV/AIDS. The study conducted in Gurage Zone, SNNPR, Ethiopia which has sample size of 657 including both urban and rural population, reported that 49.2% of the study participants were aware of the fact that the virus can be transmitted from mother to child during pregnancy and delivery. And 24% of them knew that HIV can be transmitted through breastfeeding [19].

Feeding practice at birth

Feeding newborns with the first milk or colostrums is advised and other feeds excluding breast milk must be avoided. Colostrum when compared to the mature milk it is three times richer in vitamin A and ten times richer in beta-carotene. Colostrum having high level of antibodies and vitamin A, antibodies, and some protective factors, it is considered as the infant's first vaccine [20].

In the study conducted at South Africa the vast majority of babies (97%) received breast milk as their first feed; the rest (3%) were formula-fed. Of whom who breast fed two-thirds of the babies were fed in half an hour of birth. Most mothers (85%) gave colostrum to their babies while (13%) said they threw it away – many of the latter (40%) claiming it was “dirty milk.” There were some variables like Socio-economic and HIV status which were associated with feeding practice. Mothers who were relatively economically better off tended to formula feed their infants more often than those of poorer socioeconomic status [16].

Results of the Gurage zone, SNNPR study shows that the majority (60%) of the respondents mentioned exclusive replacement feeding as an option for feeding of infants below six months born to HIV positive mothers. And the rest 24% stated breast milk based options including: exclusive breast-feeding, wet nursing and expressed heat treated breast milk. Those who reported mixed feeding (breast milk plus home modified animal milk or commercial infant formula) and do not know what to feed accounted for 16% [19].

Growing evidence points to the impact of early initiation of breastfeeding on neonatal death. The 2006 study conducted in rural Ghana showed that early initiation within the first hours of birth could prevent 22% of neonatal mortality, and its initiation within the first day of life, prevents 16% of deaths, while a study in Nepal found that approximately 19.1% and 7.7% of all neo-natal deaths could be avoided with universal initiation of breastfeeding within the first hour and first day of life, respectively [21].

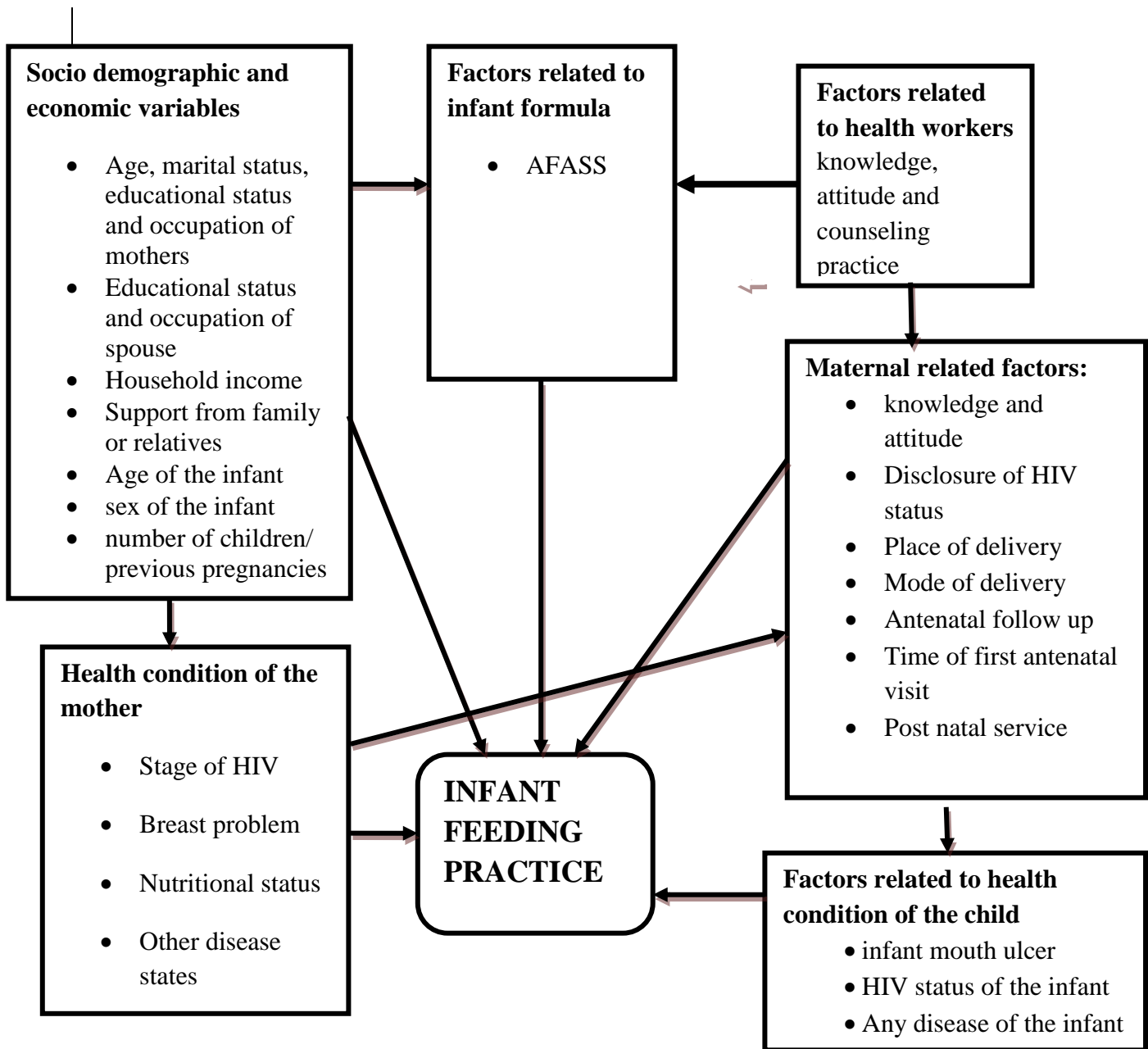


Figure 1. Conceptual framework on factors associated with infant feeding practice in the context of HIV/AIDS

2.1 Significance of the study

Infant and young child feeding practices are important determinants of the health and nutrition status of children below the age of five years. Poor breastfeeding practices especially lack of exclusive breastfeeding during the first 6 months of life and inadequate complementary feeding are important risk factors for infant and childhood morbidity and mortality [25].

Provision of adequate information on existing knowledge and practices on infant feeding for mothers, caretakers, families, communities and other key actors at different levels, especially in ART sites should be given priority. This is important if commitment at different levels has to be improved and affirmative action undertaken to improve the infant feeding practices in order to reduce the risk of MTCT of HIV through breastfeeding.

This study is initiated owing to the observation of the author on day to day practice in the health center that many infected children were attending ART service, which leads to the query of identifying factors contributing for this situation. Although there was a study conducted in Addis Ababa in 2008, the WHO recommendation on infant feeding practice have been revised after that. So, this research tried to identify factors associated with infant feeding practice of HIV positive mothers attending ART services and current status of infant feeding practices of HIV positive mothers.

The aim of this study is to assess the perspectives of HIV-positive mothers and family members of the infant feeding options for HIV infected mothers in Addis Ababa and to present an overview of current practices of infant feeding in the context of HIV and to highlight areas in which research is most urgently needed. Recommendations that we think could have the biggest effect on improving the health of HIV-exposed infants and provide evidence-based information that can be used in the future by the line ministries and NGO's for program initiatives.

CHAPTER 3: OBJECTIVES

3.1. General Objective

- To assess infant feeding practices and their associated factors among ART service attendants in Government Health institutions of Addis Ababa from October 7 to November 8, 2013.

3.2. SPECIFIC OBJECTIVES

1. To determine infant feeding practices of HIV positive mothers attending ART services.
2. To identify factors associated with infant feeding practice of HIV positive mothers attending ART services.

CHAPTER 4: METHODS AND MATERIALS

4.1. STUDY AREA AND PERIOD

The study was conducted from October 7 to November 8, in Addis Ababa, the capital city of Ethiopia. Addis Ababa has a population of over 3 million (3,038,096) in 2013 with annual growth rate of 2.1% (data obtained from central statistical agency of Ethiopia) and estimated HIV sero-positive total population of 125,990, of them 73,625 were women and 1699 were pregnant / mothers attending ART, 1960 exposed infants out of them only 1480 were under one infants data from 2011/12 annual report of Addis Ababa federal Health Bureau .

The city has 49 hospitals. Thirteen are public hospitals of which, 6 are under Addis Ababa Regional Health Bureau (AARHB) jurisdiction and 5 are specialized referral (central) hospitals. Furthermore, the city has 52 health centers under Addis Ababa Health Bureau among which 37 of them started giving ART service and 12 health centers have started the service currently with less amount of client flow. There are also two hospitals, three health centers and 31 clinics established by non-government organizations (NGOs), and 33 hospitals and more than 700 clinics that are privately owned [23].

4.2 STUDY DESIGN

Institution based cross-sectional study was conducted in ART service providing health institutions in Addis Ababa.

4.3 POPULATION

4.3.1. Source population

All mothers who have infants of age less than 12 months and attending ART services in Health Institutions of Addis Ababa City during the study period.

4.3.2. Study Population

Since the study populations are rare HIV positive mother with a child less than 1 year of age who had follow-up and present on the time of data collection in all (25) ART service providing health centers and 4 hospitals were considered as study population.

4.4. INCLUSION CRITERIA

- HIV positive mothers with less than one years old child who have follow up in the ART unit in the selected facilities between October 7 to November 8, 2013.
- Those who gave their informed consent to participate in the study.

4.5 Exclusion criteria

- Those who are severely ill and unable to respond.

4.6. SAMPLE SIZE AND SAMPLING TECHNIQUE

4.6.1 Sample size determination

To determine the number of mothers and index infants to be included in the study, the single population proportion formula was used with the following assumptions:

95% confidence level (1.96), Margin of error of (0.05)

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

Where: n = required sample size

$Z_{\alpha/2}$ = critical value for normal distribution at 95% confidence level which equals to 1.96

P = 46.8% (Prevalence of exclusive replacement feeding from the research done in Addis Ababa in 2008) [14],

d = an absolute precision (margin of error 5%)

Non-response rate = 10%

$$n = \frac{(1.96)^2(0.468)(1-0.468)}{(0.05)^2}$$

$$n = 383$$

Since the total population is less than 10,000, using the correction formula the sample size will be

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

$$= \frac{383}{1+383} = \frac{383}{1.259}$$

1480 (the number of exposed infants for the year 2011/12 based on reports from health institutions from Addis Ababa city administration [28]).

=304 by adding 10% of non response rate the sample will be 334.4

= 334

4.6.2. Sampling technique

From all the Government health institutions 25 Health Centers & four Hospitals were selected since they are actively providing ART service, then based on the data from the Addis Ababa City Health Bureau proportional allocation for each health facility was calculated. Then all mothers with less than one year infants attending ART at the selected Health institutions who came conveniently during the study period were included as a study unit.

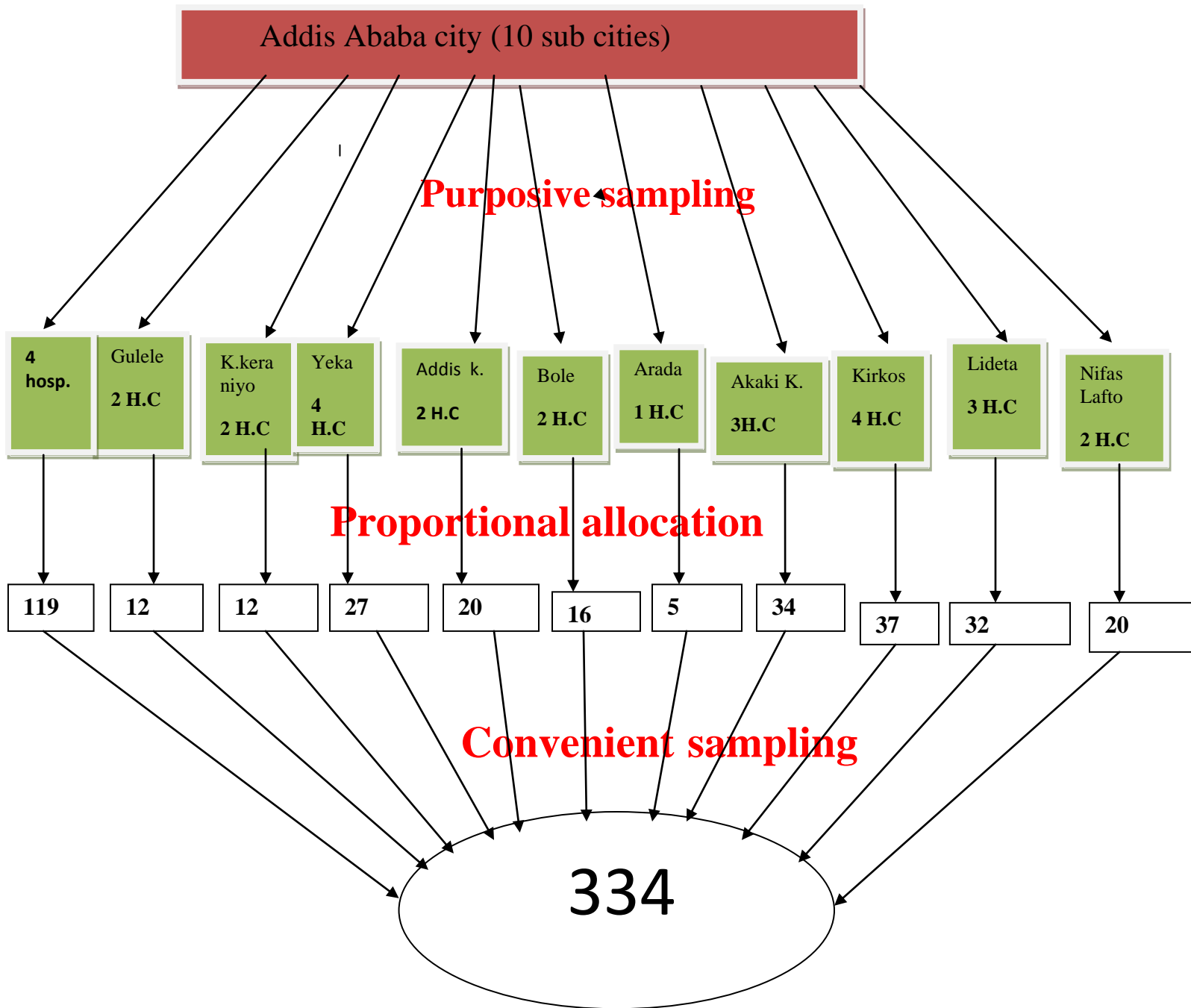


Figure 2: Schematic Presentation of Sampling Procedure for a study done on Infant feeding practices of HIV positive mothers attending ART services, in Addis Ababa, Ethiopia, 2013

4.7 DATA COLLECTION TECHNIQUES AND INSTRUMENT

4.7.1. Study Variables

Dependent variables

- Feeding practices
 - Safe (exclusive breastfeeding, exclusive replacement feeding) and unsafe(mixed feeding)

Independent variables

Socio demographic variables and economic factors:

- Age, marital status, education and occupation status of mothers + previous pregnancy/child?
- Education status and occupation of spouse
- household income
- support from family or relatives
- age & sex of the infant

Maternal related factors:

- knowledge and attitude towards PMTCT and infant feeding recommendations
- Disclosure of HIV status
- Place of delivery
- Mode of delivery
- Antenatal follow up
- Time of first antenatal visit
- Post-natal visit

Factors related to health workers

- Counseling practice

Factors related to health condition of the mother

- WHO stage of HIV
- Nutritional status of the mother
- Breast problem (full breast, engorged breast, mastitis, breast abscess, nipple fissure or crack, breast thrush)
- Any long term illness or disease condition

Factors related to health condition of the child

- mouth ulcer in the infant
- HIV status of the infant

Factors related to infant formula

- AFASS

4.7.2. Data Collection Instrument

Data were collected using pre-tested structured questionnaire adapted from different literatures after being modified to the local context and to the research objective by the investigator. The questionnaire was translated into Amharic language, then the Amharic version was back translated into English by another person, and consistency between the original and the back translated versions was checked by the investigator. Client's document review was also done to check and fill some of the data.

4.7.3. Data collection Process

Data were collected by trained health workers working at the health institutions at the ART unit. 1 data collector for each 29 Health Facilities and 14 supervisors, 1 for each Sub City Health Centers and One Supervisor for each Hospital were recruited. Supportive supervision was conducted during the entire data collection period by the investigator and supervisors. Both data collectors and supervisors were trained on the data collection tool by the principal investigator for one day.

4.8. DATA PROCESSING AND ANALYSIS

Data entry was performed using the Epi DataVersion 3.1. Software. Data cleaning was done by cross-checking with the hard-copy checklist. The data were then exported to SPSS version 16 for analyses. Frequency distributions, cross-tabulations and graphs were used to describe the variables of the study. Bivariate analyses of dependent and independent variables was done using proportions. Pearson's chi-square test was used for bivariate association between the independent variables and the different infant feeding indicators.

Logistic regression model with enter method was used to identify independent predictors of the different infant feeding indicators by including variables with significant or marginal ($P < 0.25$) association in the chi-square test. All associations were considered significant at P value < 0.05 .

4.9. DATA QUALITY CONTROL

To ensure the quality of data gathered from the study subjects, a range of mechanisms were employed to address major areas of bias introduction during the data collection process. First, the questionnaire was pre-tested in Bishoftu Hospital from September 16 to 27, 2013 by taking 5 percent of the sample size, the data were collected by the principal investigator & Staff nurses from the hospital working at the ART room & interview was conducted at the same room of service provision, then the pre-testing team compiled the comments and corrections which were later incorporated to the final study tool. Necessary modification in the questionnaire was made based on the nature of gaps identified. A one day training was given for 29 data collectors and 14 supervisors on how to gather the appropriate information, procedures of data collection techniques and the whole contents of the questionnaire. The data collectors were health professionals who have taken ART training by using a standard, structured and pre-tested questionnaire prepared in Amharic. A day today on site supervision was carried out during the whole period of data collection by fourteen supervisors. The supervisors have similar academic status or above than that of the data collectors. At the end of each day, the questionnaire was checked for completeness, and consistency by the supervisors and investigator and corrective discussion was under taken for the next day data collection with all the data collectors and the supervisors. Data was cleaned after it was entered in to Epi data Version 3.1 soft ware.

4.10. ETHICAL CONSIDERATION

Ethical clearance was obtained from Jimma University, College of Public Health and Medical Sciences; and a letter of cooperation was sent from Population and family Health Department to the study area (Addis Ababa Health Bureau). All interviewers were health workers who have taken ART training with an educational level of diploma or above were trained and practiced on how to interview. The importance of maintaining confidentiality was addressed with appropriate emphasis during training of data collectors and this was maintained by omitting their personal

identifications such as names. Informed consent was obtained from each study subjects prior to the administration of questionnaire after the purpose of the study was explained to respondents. And they were informed that they will have the right to refuse or discontinue participating in the research without any compromise in the service they are getting from the respective facilities.

4.11. DISSEMINATION PLAN

The findings will be presented to Jimma University scientific community and submitted to the Department of Population and Family Health and College of Public Health and Medical Sciences. The findings will also be communicated to Addis Ababa Health Bureau and to the different sub city health offices to enable them take recommendations in to consideration during their planning process. Publications in peer reviewed, national or international journal will also be considered.

4.12. OPERATIONAL DEFINITION

- **Infant feeding practices:** are set of recommendations for appropriate feeding of newborn and children to prevent mother to child transmission of HIV. The responses are categorized as Safe and unsafe.
- **Safe infant feeding practice:** proportion of mothers who practiced either exclusive breast feeding or exclusive replacement feeding to their infants up to six months and started complementary foods at 6 months.
- **Unsafe infant feeding practice:** proportion of mothers who practiced mixed feeding up to six months of age OR started complementary food below or above six months of the infant's age.
- **Early/Timely initiation of breastfeeding:** Proportion of children born in the last 11 months who were put to the breast within one hour of birth.
- **Exclusive breast feeding** - Giving the infant no other food or drink, not even water, apart from breast milk (including expressed breast milk), with the exception of drops or syrups consisting of vitamins, mineral supplements or prescribed medicines up to six months or if the infant is less than 6 months up to the day of the interview . And started complementary food at the age of six months.

Proportion of all infants who have been fed exclusively with breast milk for the first 6 months.

- **Exclusive replacement feeding** - The process of feeding a child who is not receiving breast milk with an infant commercial or home prepared milk, during the first six months until the child is fully fed on family foods or if the infant is less than 6 months up to the day of the interview. And this should be with a suitable breast-milk substitute – commercial formula or home prepared formula with micronutrient supplements. And started complementary food at the age of six months.
- **Mixed breast feeding** - Breastfeeding with the addition of fluids, water, solid feeds and non-human milks in the first 6 months of age or if the infant is less than 6 months up to the day of the interview. And started complementary food below or above six months of the infant's age.
- **Attitude of HIV positive mothers:** an opinion, outlook or idea towards recommended feeding options for HIV positive women. Six closed ended questions were applied and the responses were ranging from strongly agrees to strongly disagree. And given the value from 0 to 5 by computing the individual responses and then the final computed result was recorded by SPSS into percentile group and taking the above scored as having highest attitude and the rest as lowest attitude. Majority of the mothers 217(65.2%) had low attitude on infant feeding practices in the context of HIV/AIDS.
- **Complementary food** means any semi solid or solid food, whether manufactured or locally prepared, used as a complement to breast milk or to a breast-milk substitute. Proportion of infants 6–9 months of age who receive complementary foods.

CHAPTER five

RESULT

5.1. Socio-demographic characteristics

A total of 334 HIV positive mothers with infants aged 0-11.11months from 25 ART service providing health centers and four hospitals under Addis Ababa city Administration Health Bureau were included in the study making the response rate 100%. The mean age of the mothers and the children were 28.69(SD±4.633) years and 6.72(SD±3.337) months, respectively. One hundred and seventy eight (53.3%) of the mothers had male child and majority of mothers, 227(68%) were married. One hundred thirty three (39.8%) of the mothers were educated from grade 9-10+2completed followed by those who were 10+2 completed and above 121(36.2%). Two hundred and forty six (73.7%) of respondents were orthodox followers in religion and the predominant ethnic groups were Amhara and Oromo with 181(54.2%) and 82 (24.6%), respectively. More than half 174(52.1) mothers were daily laborers followed by those whose husbands were private employee 128 (38.3%). 104(31.1%) of the respondents have low family income.

Table 1 socio demographic characteristics of HIV positive mothers in 29 health facilities in Addis Ababa city, 2013, (n= 334)

Variable	Frequency	Percent
Age of the mother(n=334)		
15-24	67	20.1
25-34	226	67.7
35-49	41	12.3
Age of the child(n=334)		
≤ 6 months	155	46.4
7 – 11.9months	179	53.6
Sex of the child(n=334)		
Male	178	53.3
Female	156	46.7
Marital status(n=334)		
Single	50	15
Married	227	68
Separated	57	17.1
Mother's Education(n=334)		
Unable to read & write	50	15
Grade 1-8	30	9

Grade 9- 10+2	133	39.8
10+2 completed & above	121	36.2
Religion(n=334)		
Orthodox	247	74
Catholic	2	.6
Protestant	46	13.8
Muslim	39	11.7
Ethnic group(n=334)		
Amhara	181	54.2
Tigre	21	6.3
Oromo	82	24.6
Gurage	37	11.1
Others*	13	3.9
Occupation of mothers(n=334)		
Government employee	26	7.8
Private employee	62	18.6
Daily laborer	174	52.1
House wife	41	12.3
House maid/ servant	10	3
Merchant	14	4.2
Others**	7	2.1
Husband's education(n=291)		
Unable to read and write	13	3.9
Able to read & write	29	8.7
Grade 1-8	82	24.6
Grade 9 to 10+2	109	32.6
10+2 completed & above	58	17.4
Husband's occupation (n=291)		
Government employee	45	13.5
Private employee	128	38.3
Daily laborer	62	18.6
Merchant	32	9.6
Others***	24	7.2
Income(n=334)		
low	104	31.1
medium	119	35.6
high	111	33.2

*others= Gamo, Hadiya, Kembata, Silte, Welayita

**others= begger, jobless NGO, own business, prostitute

***others= driver, own business, jobless, living abroad

5.2 Obstetric histories

Out of 334 mothers, 146(43.7) and 118(35.3) had 1 and 2 children, respectively. Almost all 324(97%) of them attended ANC follow up in the last pregnancy and out of them 148(44.3%) mothers have four ANC visits. The majority 312(93.4) of the mothers were counseled on infant feeding options Out of the which, 312 mothers 257 (76.9%) ,137 (41%), 170 (50.9%) and 137 (41%) were counseled during ANC, Delivery, PNC and ART visits. Most of the mothers 323 (96.7%) delivered at the health institutions, with the mode of delivery being SVD was in the majority (76.9%) of the cases. Almost all 309 (92.5%) of the mothers attended PNC.

Table 2 obstetric history of HIV positive mothers attending ART services at 29 health institutions in Addis Ababa city, 2013, (n=333)

Variables	Frequency	Percent
Number of children m(\pms.d) (n=334)	1.85 \pm 0.942	
Attending ANC (n=334)		
Yes	324	97
No	10	3
ANC visits(n=324)	4.6 \pm 1.44	
Counseled on infant feeding(n=334)		
Yes	312	93.4
No	22	6.6
During ANC(n=312)		
Yes	257	76.9
No	55	16.5
During Delivery(n=312)		
Yes	137	41
No	175	52.4
During PNC(n=312)		
Yes	170	50.9
No	142	42.5
During ART visits(n=312)		
Yes	137	41
No	175	52.4
Place of birth(n=334)		
Health institution	323	96.7
home	11	3.3
Mode of delivery (n=334)		
SVD	306	91.6
CS	25	7.5
instrumental	3	.9
Attending PNC(n=334)		
Yes	309	92.5
No	25	7.5

5.3 HIV disclosure

Most of 199(59.6%) the mothers knew their HIV status before this pregnancy and 244(73.1%) of the respondents answered their husband were tested for HIV. However, 278(83.2%) of the mothers disclosed their HIV status out of which, 224(67.1%) disclosed to their husband, 72(21.6%) disclosed to their sister/brother, 54(16.2%) to their parents and 43(12.9%) to their friends.

Table 3 disclosure status of HIV positive mothers attending ART services at 29 health institutions in Addis Ababa city, 2013, (n=333)

Variables	Frequency	Percent
The time HIV status is known(n=334)		
Before pregnancy	199	59.6
During this pregnancy	124	37.1
After delivery	11	3.3
Husband tested for HIV (n=328)		
Yes	244	73.1
No	36	10.8
I don't know	48	14.4
Disclosed your HIV status(n=334)		
Yes	278	83.2
No	56	16.8
For whom your HIV status disclosed(n=278)		
Husband	224	67.1
Sister/brother	72	21.6
Parents	54	16.2
Friends	43	12.9
others*	7	2

*others= aunt, children, cousin, neighbors

5.4 Feeding practice of HIV positive mothers

Most of the mothers 285(85.3%) had given breast to their child, out of them 229(68.6%) gave breast with in first hour of the child's birth, while 14(4.2%) children receive food or drink before the first breast, some of the infants 28(8.4%) were given foods/fluids other than breast milk until six months of age.

From the mothers who practiced mixed (unsafe) feeding, the majority (65.4%) gave a reason that their breast is insufficient for the infant and 34.6% hnd stated that they practiced this method because of lack of knowledge.

The majority 259(77.8%) practiced exclusive breast feeding up to six months of age and 255(76.3%) practiced the feeding option they decided thinking it is safe for the baby, while 44 (14.4%) of the respondents practiced exclusive replacement feeding. The reason for making this feeding option for 42 (87.5%) of them is that fear of MTCT of HIV/AIDS. Thirty (62.5%) of the mothers gave commercial infant formula. Regarding the modality of feeding, the majority 38(79.2%) used bottle for feeding their babies. Although a total of 193(57.8%) of the mothers started complementary food for their child, 169(87.6%) of the mothers who started at the age of 6months, while the rest started it either before or after the age of 6 months.

Table 4 Infant feeding practice of HIV positive mothers attending ART services at 29 health institutions in Addis Ababa city, 2013, (n=333)

Variable	Frequency	Percent
Ever breast feed (n=333)		
Yes	285	85.6
No	48	14.4
Time of first initiation of breast milk (n=285)		
Within first hour	229	80.4
After first hour	56	19.6
Infant received any food or fluid before breast milk (n=285)		
Yes	14	4.9
No	271	95.1
Ever given foods/fluids until six months(n=285)		
Yes	26	9.8
No	257	90.2
Given foods/fluids yesterday/last night(n=94)		
Yes	10	10.6
No	84	89.4
Reason for giving mixed feeding (n= 26)		
Infant perceived unwell	3	11.5
Mother unwell	2	7.7
Advised by husband	4	15.4
Lack of knowledge	9	34.6
Breast is insufficient for the infant	17	65.4
Fear of stigma & discrimination	1	3.8

Ever given expressed milk(n=333)

Yes	25	7.5
No	308	92.5

Utensils used to(n=25)

Bottle	13	52
Cup with spoon	12	48

Feeding options practiced(n=334)

Exclusive breast feeding	260	77.8
Exclusive replacement feeding	48	14.4
Mixed feeding	26	7.8

Feeding practice (n= 334)

Safe feeding	308	92.2
Unsafe feeding	26	7.8

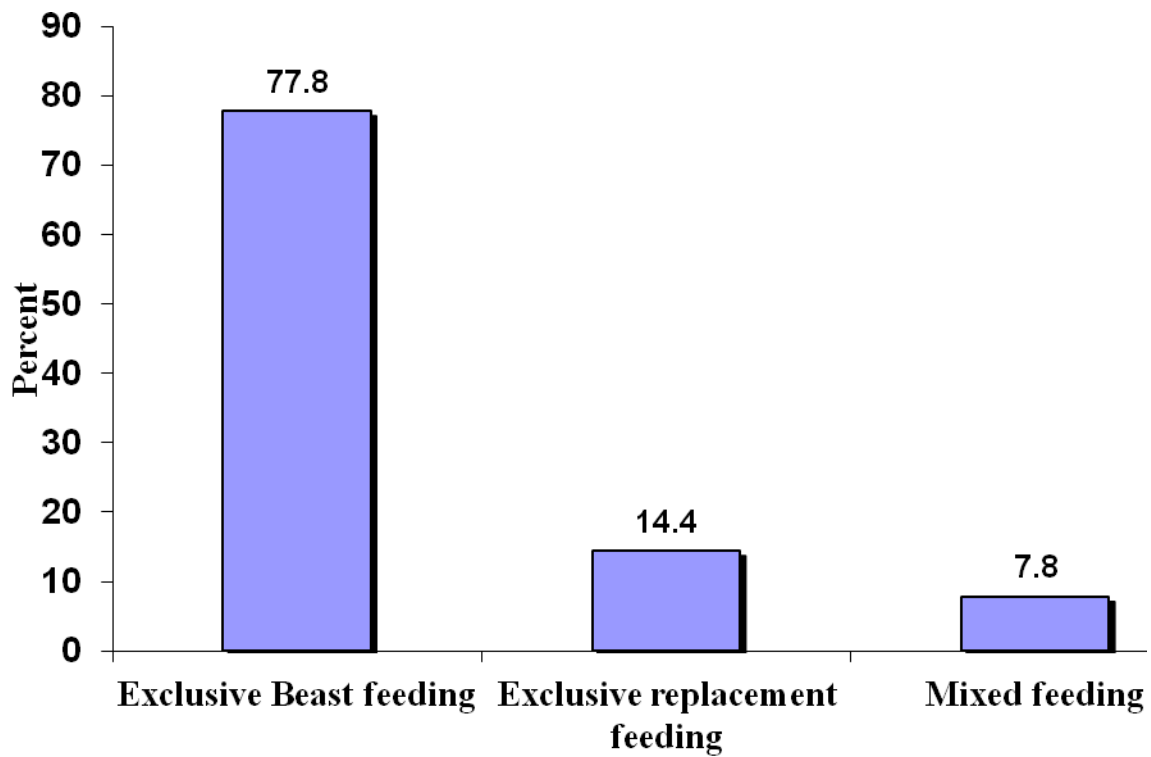
Reason for the feeding option(n=333)

Thinking it is safe for the baby	255	76.6
Thinking it is safe for the mother	49	14.7
Can't afford the cost of replacement feeding	124	37.2
Have no time and skill for the preparation	23	6.9
Fear of MTCT	90	27
Lack of knowledge on MTCT	11	3.3
No counseling was done	2	.6
Advised by husband	23	6.9
Advised by other person	12	3.6
Health professional counseling	119	35.7

Norm of the society	7	2.1
Lack of knowledge	7	2.1
Breast is insufficient	11	3.3
Fear of stigma and discrimination	9	2.7
Practiced replacement feeding(n=333)		
Yes	48	14.4
No	285	85.6
Reason for choosing replacement feeding(n=48)		
Fear of MTCT of HIV/AIDS	42	87.5
Breast is inadequate	4	8.3
Mother sick during delivery	4	8.3
Low CD4 count	0	0
Seen demonstration for preparation (48)		
Yes	22	45.8
No	26	54.2
Started complementary food(n=333)		
Yes	193	58
No	140	42
Age complementary food started m(±s.d) (n=193)	5.98 ±0.42	

As presented in figure 3, the majority of mothers practice exclusive breastfeeding (77.8%) followed by those who practice exclusive replacement feeding(14.4%) while those who practiced mixed feeding were 7.85.

According to the national guidelines for safe infant feeding in the context of HIV include: exclusive breastfeeding and exclusive replacement feeding accounting for 92.2% while unsafe feeding (mixed feeding) accounted for 7.8 % (Figure 3)



Feeding practice

Figure 3 Infant feeding practice of HIV positive mothers attending ART services, in Addis Ababa, Ethiopia, 2013

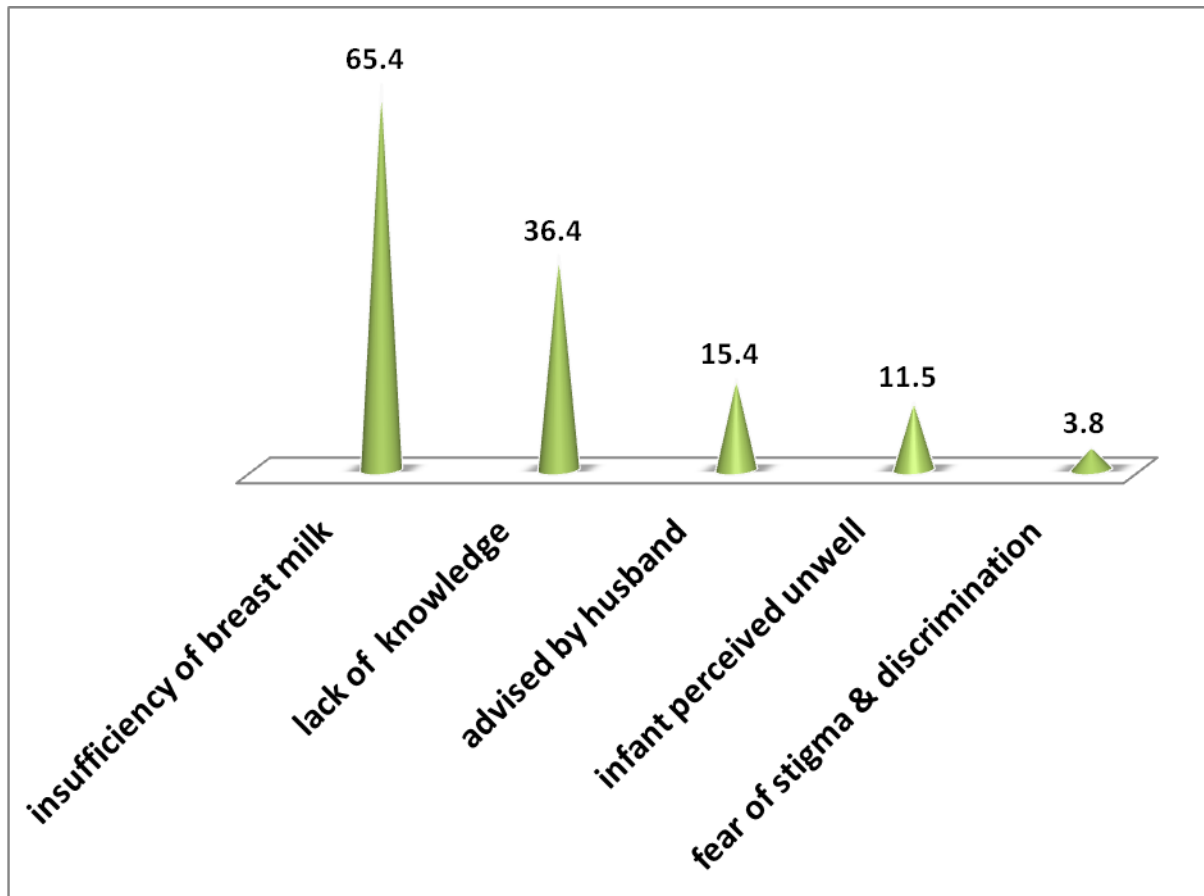


Figure 4 reasons for mixed feeding for the study done on infant feeding practice of HIV positive mothers attending ART in Addis Ababa, Ethiopia, 2013

5.5 Attitude of HIV positive mothers towards infant feeding options

Six closed ended questions were applied and the responses were ranging from strongly agrees to strongly disagree. And given the value from 0 to 5 by computing the individual responses and then the final computed result was recoded by SPSS into percentile group and taking the above scored as having highest attitude and the rest as lowest attitude. Majority of the mothers 217(65.2%) had low attitude on infant feeding practices in the context of HIV/AIDS.

5.6 knowledge HIV positive mothers towards infant feeding options

Almost all 328 (98.2%) of the mothers knew that HIV can be transmitted from mother to child. The majority 318 (95.2%) of them heard about infant feeding options recommended for HIV positive mothers of which, 278 (83.2%) heard from health professionals. Most of 330(99.1%) the mothers knew the recommended infant feeding practices and when asked the pacific type of

feeding option, 292(88.5%) mentioned exclusive breast feeding for the first 6months followed by complementary feeding.

Table 5 knowledge on recommended infant feeding options of HIV positive mothers attending ART services at 29 health institutions in Addis Ababa city, 2013

Variable	Frequency	Percent
Knowledge on MTCT(n=333)		
Yes	328	98.5
No	5	1.5
During when (328)		
Pregnancy	261	79.6
Delivery	286	87.5
Breast feeding	282	86
Heard about recommended infant options For HIV positive mothers(n=333)		
Yes	318	95.5
No	15	4.5
Heard from (318)		
Neighbors	55	17.3
Health professionals	278	88
Husband	17	5.3
Friend	1	.3
media	5	1.5
sister	1	.3
Knowledge on recommended infant feeding Option for HIV positive mothers(n=333)		
Exclusive breast feeding	292	88.5
Exclusive replacement feeding	186	56.4
Wet nursing	6	1.8
Expressed milk	10	3
Mixed feeding	9	2.7

5.7 Cessation of Breast Feeding

Almost half 183(54.8%) of the respondents were breast feeding their child at the time of the study, out of whom majority 111(33.2%) intended to stop breast feeding from 6- 12months. Nevertheless, 37.4% had completely stopped breast feeding at the time of the survey, of whom

63 (53.4%) stopped at around 6 months. The reason for ceasing for most of the mothers 103(85.1%) was fear of transmission of HIV. Asked about any problem they encountered due to cessation of breastfeeding, 73 (21.9%) stated that there was no problem while the rest encountered some problems.

Table 6 cessation of breast feeding of HIV positive mothers attending ART services at 29 health institutions in Addis Ababa city, 2013

Variable	Frequency	Percent
Stopped breast feeding(n=333)		
Yes	183	54.8
No	150	44.9
Intended to stopped breast feeding (n=182)		
6months	48	26.4
6-12 months	111	61
13- 18months	18	9.9
19- 24months	2	1.1
>12months	3	1.6
Completely stopped breast feeding(314)		
Yes	125	39.8
No	189	60.2
Age of the infant when breast feeding stopped m(<u>±</u>s.d) (n=119)		
5.87month <u>±</u> 2.374	9	7.6
Reason for stopping breast feeding(n=121)		
Infant no longer wanted	1	.8
To encourage infant to eat solid food	14	11.6
Pregnancy	0	0
Fear of transmission of HIV	103	85.1
Mother can afford replacement feeding	9	7.4
Advised by health providers	34	28.1
Infant too sick to breast feed	1	.8
Mother too sick to breast feed	3	2.5
Advised by husband	3	2.5
Advised by other person	0	0
For job purpose	4	1.2
Inadequate milk in breast	1	.3
Encounter any problem when stopped breast feeding(n=121)		
Yes	48	39.7
No	73	60.3

5.8 Mothers Health Condition

More than half of the mothers 220(67.1%) were on stage 1 of HIV disease progress, and most of them 302(92.4%) had not encounter any breast problem, and majority, 307(92.2%) answered that they had no any long term illness.

Table 7 health condition of HIV positive mothers attending ART services at 29 health institutions in Addis Ababa city, 2013

Variable	Frequency	Percent
HIV disease progress(n=328)		
Stage1	220	67.1
Stage2	79	24.1
Stage3	27	8.2
Stage4	2	.6
Ever encountered breast problem(n=333)		
Yes	43	12.9
No	290	87.1
Type of breast problem(n=43)		
Engorgement	25	7.6
Sore nipples	7	2.1
Cracked nipples	1	.3
Burning, tingling	11	3.4
Any long term illness(n=333)		
Yes	26	7.8
No	307	92.2
Type of long term illness(n=26)		
Tuberculosis	11	42.3
Diabetes mellitus	4	15.4
Cancer	0	0
Hypertension	8	30.8
Cardiac problem	3	11.5

5.9 Assessment of Health Condition of the Child

Almost all 323(97%) of the infant's had not encountered any oral ulcer and most of the mothers 268(80.5%) knew the HIV status of their child. Only 18(6.7%) of them were positive Out of which 37(11.1%) of the infants developed illness, which is mostly common cold 11(29.7%).

Table 8 health condition of the child of HIV positive mothers attending ART services at 29 health institutions in Addis Ababa city, 2013

Variable	Frequency	Percent
Infant's mouth ulcer(n=333)		
Yes	10	3
No	323	97
Do you know the HIV status of your child(n=333)		
Yes	268	80.5
No	65	19.5
What is the HIV status of your child(n=268)		
HIV positive	18	6.7
HIV negative	250	93.3
Child ever been diseased(n=333)		
Yes	37	11.1
No	296	88.9
What disease(n=37)		
Common cold	11	29.7
Cramp	2	5.4
Diarrhea	6	16.2
Pneumonia	5	13.5
Skin disease	8	21.6
URTI	5	13.5

5.10 Assessment of Infants Replacement Feeding

Out of 193 mothers who responded on AFASS criteria, 80(41.5%) did not perceive giving replacement feeding is barrier for social and cultural reasons, and 129(66.8%) of them stated that they had adequate time, knowledge, skills and other resources to prepare and feed the infant day and night.

Fifty three (27.5%) of the respondents stated that they could afford to buy formula or cow's milk each week with the price of minimum 150, and 61(31.6%) of them continuously supply for all the ingredients without interruption until the infant is 12 months old. Most of the mothers 126(65.3%) stated that they could get clean water and boil the water / milk each day and prepare the replacement food hygienically and nutritionally adequate way.

Table 9 assessment of AFASS criteria of HIV positive mothers attending ART services at 29 health institutions in Addis Ababa city, 2013

Variable	Frequency	Percent
Acceptable(n=193)		
Yes	80	41.5
No	113	58.5
Feasible (n=193)		
Yes	129	66.8
No	64	33.2
Affordable(n=193)		
Yes	53	27.5
No	140	72.5
Sustainable(n=193)		
Yes	61	31.6
No	132	68.4
Safe(n=193)		
Yes	126	65.3
No	67	34.7

The different AFASS indicators were converted into a score of continuous variable with mean 2.33 and standard deviation 1.37.

5.11 Counseling practice of health workers

Most of the health workers 295(89.1%) who gave counseling were females. Almost all 324(97.3%) of the mothers answered that the health worker explained to them the different feeding options, and 312(93.7%) of them answered the health care providers told them about advantages of breast feeding, and 305(91.6%) stated that they were counseled on disadvantages of breast feeding, while 307(92.2%) of the mothers were told about advantages of replacement feeding. Some 293(88%) of them had been told on disadvantages of replacement feeding.

Regarding the safety of the feeding options, 306(91.9%) of the mothers were informed about the risk of mixed feeding, and 309(92.8%) of the mothers stated that the health care provider explained about how to practice the chosen feeding choice.

5.12 Determinants of infant feeding practice

Bivariate logistic regression analysis revealed that counseling on infant feeding, attending ANC visit, attending PNC visit, attaining AFASS indicators, disclosure of HIV status, time of notification of sero status, heard about recommended infant feeding, were significantly associated with infant feeding practice. ($p < 0.25$) [Table 11].

Table 10 Results of bivariate logistic regression showing determinants of feeding practice of HIV positive mothers attending ART service at 29 health institutions in Addis Ababa city, 2013. N=333

Variables	Unsafe	Safe	P value	COR[95%CI]
Maternal age, m(±s.d)	28.04 (±4.8)	28.7 (±4.6)	0.478	.967[.886 – 1.056]
Child age, m(±s.d)	7.3 (±3.4)	6.7 (±3.3)	0.370	1.059[.937 – 1.197]
AFASS score, m(±s.d)	1.45 (±0.93)	2.38 (±1.38)	0.029*	.566[.332 - .965]
Marital status (%)				
Single	8.2	91.8	0.140	.544[.153 – 1.932]
Married	6.2	93.8		
Others (divorced, widowed, separated)	14	86		
Educational status (%)				
Unable to read and write	8	92	0.908	1.228[.353 – 4.279]
Grade 1-8	6.9	93.1		
Grade 9-10+2	9.0	91		
10+2 & above	6.6	93.4		
Income tertile (%)				
Low	9.7	90.3	0.281	2.280[.752 – 6.910]
Middle	92	90.8		
High	4.5	95.5		
Attending ANC visit (%)				
Yes	6.8	92.2	<0.001*	.110[.029 - .418]
No	40	93		
Attending PNC visit (%)				
Yes	7.1	92.9	0.093*	2.609[.820 – 8.304]
No	16.7	83.3		
Disclosure of HIV status				

(%)				
Yes	6.5	93.5	0.048*	.417[.172 – 1.013]
No	14.3	85.7		
Counseling on infant feeding (%)				
Yes	7.1	92.9	0.061*	.343[.107 – 1.100]
No	18.2	81.8		
Time of notification of sero-status (%)				
Before pregnancy	5.1	94.9		.093[.023 - .371]
After pregnancy	9.7	90.3	0.001*	.188[.048 - .734]
After delivery	36.4	63.6		
Know MTCT (%)				
Yes	2.6	92.4	0.306	.330[.036 – 3.066]
No	20	80		
Heard about recommended infant feeding (%)				
Yes	7.2	92.8	0.072*	.312[.082 – 1.184]
No	20	80		
Attitude on recommended infant feeding (%)				
Lowest attitude	9.7	90.3	0.090*	.420[.154 – 1.146]
Highest attitude	4.3	95.7		

* = P < 0.25

Hence on checking for multi-collinearity between variables some variables have found to have collinearity so the affecting variables are excluded from the final Model.

Table 11 factors associated with infant feeding practice of HIV positive mothers attending ART service at 29 health institutions in Addis Ababa city, 2013.N=333

Predictors	Safe feeding	UnSafe feeding	Crude OR [95%CI]	Adjusted OR [95%CI]
AFASS(Mean±SD)	2.38(±1.38)	1.45(±0.93)	.566[.332 - .965]	1.897[1.023-3.520] *
Attending ANC visit				
Yes	92.2	6.8	.110[.029 - .418]	10.984[1.072 – 112.601] *
No	93	40	1	1.000
Disclosure of HIV status				
Yes	93.5	6.5	.417[.172 –1.013]	1.009[.162 – 6.305]
No	85.7	14.3	1	1.000
Attending PNC visit				
Yes	92.9	7.1	2.609[.820–8.304]	6.330[1.159 – 34.578]
No	83.3	16.1	1	1.000

*P. value < 0.05

On multiple logistic regression models, after adjusting for various variables, AFASS score, attending ANC visit and PNC visit were found to be independently associated with infant feeding practice. It was observed that With a unit increase in AFASS score there the likely hood of practicing safe feeding increase nearly by 2 times [AOR = 1.897[1.023-3.520]]. Similarly, compared to index mothers those who had attended ANC were nearly 11 times more likely to practice safe feeding than those who did not attend ANC. [AOR=10.984 (95% CI = 1.072 – 112.601)]. Post natal care was also significantly associated with the feeding practices. Compared to mothers who did not attend PNC those who attend were more than 6 times as likely to practice safe feeding [AOR =6.33 (95%CI = 1.159 – 34.578)].

CHAPTER SIX: DISCUSSION

The present study investigated infant feeding practices in ART service providing health centers and hospitals in Addis Ababa city, which are governed by Addis Ababa city administration. The study revealed that majority (77.8%) of the mothers experienced exclusive breast feeding, some practiced exclusive replacement feeding (14.4%) and small proportion (7.8%) had undergone mixed feeding for their infants.

In another expression very great number of the HIV positive mothers experienced safe feeding (92.2%) and the rest unsafe feeding options (7.8%).

The Ethiopian Ministry of Health guideline on infant feeding recommendations of HIV exposed infants recommends EBF for the first 6 months and introducing complementary feeding at 6 months and keep on breastfeeding until 12-18 months [29]

In this study the proportion of mothers practicing EBF (77.8%) was comparatively higher than what was reported from most studies; Addis Ababa, Ethiopia (30.6%), South Africa (18%), Gurage, Ethiopia (16%), SNNPR, Ethiopia (56.3%), Ghana (60%) and EDHS 2011 (52%). This might result from mothers in this study have good knowledge (99.1%) on recommended infant feeding practice and attended ANC & PNC visits very well; counseling on EBF was also the most exhaustive reason for this and the two comparative study areas may relied on replacement feeding (rate of ERF for Gurage, Ethiopia 61% and Addis Ababa, 46.8%), the possible reason for the relatively low rate of EBF in the EDHS, 2011 may be b/c it is community based study so there might be great number of mothers not counseled on infant feeding practice in contrast to this study [1,12,13,14,16,17,19] .

Early breast feeding is very critical factor for improving child survival. Breastfeeding also presents many benefits other than reducing the risk of child mortality. So breast milk should be initiated in the first hours of birth, and it is considered as the first vaccine. (6) This study also identified, from those mothers who ever breast feed, 80.4% timely initiated the first breast milk. This finding is better than the figures from previous studies done in South Africa (66.6%). This might be due to high institutional delivery (96.7%) and most of the mothers delivered normal

SVD delivery (92.5%) so no delay of attachment with their babies might also be the possible explanation [16].

Mixed (unsafe) feeding will predispose the infants to increased risk of MTCT. When practiced it leads to some changes in the infants gut integrity and results in the absence of promotion of beneficial intestinal micro flora by breast milk so this will enhance the risk of HIV infection (31). The rate of (mixed feeding) in the present study was 7.8 % which is much lower than a study done in Addis Ababa, Ethiopia (15.3%), SNNPR (35.6%), Ghana (40%) and South Africa (73%). The main reason why mothers gave this fluids/ food before six month of the infant's life was due to insufficient breast milk (65.4%) and lack of knowledge (34.6%). The other studies in Addis Ababa and SNNPR, Ethiopia has identified infant sickness, people advice and custom as the reason for this feeding practice. In this study mixed feeding is practiced less than those comparative study reports and this might be b/c majority (93.4%) of this study participants had been counseled on recommended way of infant feeding practice and most of them (86%) knew HIV can be transmitted during breast feeding [13, 16, 17].

Mothers who use exclusive replacement feeding from this study were 14.4%. This finding was higher than compared to a study done in Ghana (0%), South Africa (1%). But much lower than the study done in Addis Ababa, Ethiopia (2008) (46.8%) and Gurage, Ethiopia (61%). The main reason why mothers practice exclusive replacement feeding was fear of MTCT (87.5%). The reason for a great decline from the 2008, Addis Ababa and the Gurage study might be the current WHO guide line on infant feeding practice on the context of HIV/AIDS had inclined to Exclusive breast feeding than Exclusive replacement feeding, so that the counselors also highly recommend EBF than ERF. Also the current cost inflation might have part for this minimal ERF practice b/c they cannot afford to buy formula food. The possible reason for the increased ERF from those mentioned studies might be difference in socio cultural norms, that is Ghana & South Africa has a strong breast feeding traditions [12, 13, 14, 16, 17, 19].

Timely complementary feeding is crucial for good nutrition status of children. This study showed that, majority of (97.4%) mothers started complementary food for child at age of 6 months, and the study on SNNPR, Ethiopia shows 79% started between the age of 6-9 months, the Tanzania

study finds 21.7% started complementary food less than 4 months [17, 20]. The possible explanation for this might be the well planned mother support groups peer counseling, in most of the Addis Ababa health facilities may contribute for this good achievement for on time complementary feeding introduction.

This study also showed, large proportion (83.2%) of HIV positive mothers had free discussion or disclosed their sero-status, of whom most (80.6%) of them disclosed to their spouse, which is comparatively less than the study done in Gondar, Ethiopia(87.6%), and study done in SNNPR, Ethiopia (95.6%) [12, 17]. The Possible reason for this might be b/c the study participants were well educated with 76% of them are above grade 9 as compared to those studies SNNPR, Ethiopia (65% of them below grade 9) and 74% of them were on primary education and no formal education in the Gondar study. And also the study participants were more urbanized people than those comparative studies.

And this variable was significant on bivariate analysis (with those mothers who disclosed their HIV status were 58% less likely to practice Unsafe feeding) unlike those studies in Addis Ababa, and Gondar, Ethiopia, it was found to be independent predictor for recommended way of infant feeding practice (EBF, ERF).

About cessation of breast feeding almost half 183(54.8%) of the respondents were breast feeding their child at the time of the study, out of who the majority 111(33.2%) intended to stop breast feeding from 6- 12months. Nevertheless, 37.4% had completely stopped breast feeding at the time of the survey, of whom 63 (53.4%) stopped at around 6 months. The reason for ceasing for most of the mothers 103(85.1%) was fear of transmission of HIV.

In the present study, 328(98.5%) of women knew MTCT of HIV virus can occur during pregnancy, delivery and breast milk feeding which is a higher percentage compared to the finding (70%) from a study done in South Africa [17]. This might be achieved due to the accessibility of mother support groups by preparing coffee ceremony for mothers in two weeks interval which is organized by NGO, so they will share experience on MTCT.

The other finding of this infant feeding in the context of HIV study is that majority (96.7%) of the mothers gave birth in the health institution whether it is health center or hospital which is in line with the study finding in SNNPR, Ethiopia (89.6%), the Gondar study (89%) and the study done in Dar es Selam (99%). This finding can be a positive factor for exclusivity of feeding practice and also helps for the timely initiation of breast feeding. And the possible justification might be b/c of the health expansion program to achieve MDG is been expanded so health facilities are available in nearby and free of charge for delivery service, except for hospitals and also TBAs are not currently assisting births b/c of fear of HIV and other transmittable diseases[17].

Appropriate and good quality of infant feeding counseling in the PMTCT would influence current recommended infant feeding practice among HIV positive mothers (30). According to the FMOH, in Ethiopia all HIV-infected mothers should receive counseling which includes provision of general information about the risks and benefits of various infant feeding options (15). In line with this recommendation, in the present study the percentage of women who received counseling on infant feeding options were 93.4% which is higher than study done in Ghana, SNNPR, Tanzania where 83%, 78.7% and 76.1%, respectively mothers received information about different feeding options [13, 17, 20] . This might be b/c in the current study there was high ANC (97%) & PNC (92.5%) follow up coverage as of the comparative studies. And in view of the fact that all the study participants were ART attendants, it is possible for them to get counseling on these visits also.

On multiple logistic regression model, after adjusting for various variables, AFASS score, attending ANC visit and PNC visit were found to be independently associated with Unsafe way (mixed) of infant feeding practice . It was observed that with a unit increase in AFASS score there the likely hood of practicing safe feeding increase by 2 times. Similarly, compared to index mothers those who had attended ANC were nearly 11 times more likely to practice safe feeding than those who did not attend ANC. Post natal care was also significantly associated with the feeding practices. Compared to mothers who did not attend PNC, those who attend were more than 6 times as likely to practice safe feeding.

However, International guidelines currently recommend replacement feeding only when it is acceptable, feasible, affordable, sustainable and safe (AFASS), otherwise, EBF is recommended due to the challenges that accompany exclusive replacement feeding [4].

It is reported that in Africa, replacement feeding is uncommon, and therefore HIV-positive women are reported to choose breastfeeding.

Most respondents reported having knowledge on recommended feeding, while few had poor or no knowledge. The knowledge was mainly gained from health facilities during antenatal and post natal clinic visits. Most of the infant feeding discussions which leads to knowledge is acquired from the health workers at health facilities.

Strength of the study

Regardless of having some limitations these study findings might have vital input on infant feeding practices in exposed infants in the study setting and other localities.

Limitation of the study

Using convenient sampling method to get the index mothers was one of the limitations of the study, but even if when using probability sampling method the study participants may not be differ b/c of less number of source populations.

The finding for unsafe feeding practice in the study was very small. As a result, it caused the wide Confidence interval.

The study findings are limited in terms of overall generalization b/c the study was institution based there might be a possibility of underestimating mixed (unsafe) feeding b/c mothers counseled on recommended infant feeding practice might answer the questions accurately.

Recall bias was also one of the limitations of the study as the mother is expected to remember feeding patterns of the child since birth.

Also mothers were expected to recall information given during antenatal, postnatal & ART follow up clinics.

Curtosy (social desirability) bias is also expected as the data collectors were service providers themselves.

CHAPTER SEVEN

7. Conclusion and recommendation

7.1 conclusion

The study revealed that majority of the mothers experienced exclusive breast feeding , some practiced exclusive replacement feeding and small proportion had underwent mixed feeding for their infants.

The results indicate behavioral change communications through ANC and PNC should be strengthened to prevent MTCT. The AFASS criteria should be assessed very stringently as it is very important to prevent unsafe feeding practices of infants born to HIV positive mothers.

7.2 Recommendation

- ❖ Therefore, to achieve success in exclusivity of feeding options & to promote safer infant feeding among HIV infected mothers in these settings

Health professionals

- Should communicate the risks involved in each infant feeding option to the mother/father during PMTCT, delivery, postnatal & ART visits to make informed safer choices.
- Continuing advocacy work on the options of feeding and involving spouses in every health and nutrition counseling sessions to help mothers choose safer infant feeding options is very important.
- Should only counsel on avoiding of all breast feeding only when it is acceptable, feasible, affordable, sustainable and safe (AFASS),
- Hence non disclosure to partners often encourages mixed feeding, counselors have to assure the clients and promote good adherence of exclusiveness of feeding practice
- The main reason why mothers mixed fed was because they believed their breast milk was insufficient and lack of knowledge. So the health care providers have to educate about the need to avoid feeds other than breast milk and support them to have faith that their milk is adequate for their babies, by doing so we can achieve even higher rates of exclusive breastfeeding.

The training provided to health care providers (Addis Ababa city health bureau)

- Have to update the councilors on current Guidelines.

- Ensure on the sustainability of mother support groups.
- Increase the ANC & PNC visits by reaching the communities and increasing awareness on safe infant feeding options using the urban health extension workers.
- Based on recent findings, early & abrupt breast feeding cessation is no longer recommended according to a WHO 2010 consensus statement [24]. But, in our study, the mean age of the infants when they stopped breast feeding was 5.87 ± 2.374 months. The main reason given by the mothers were fear of transmission of HIV & advised by health provider. So the Ministry of health have to update counselors on the new guideline very well to alter this attitude.

References

- 1 (CSA). ECSCA. Ethiopia Demographic and Health Survey. 2011:189. available from: www.unicef.org . /03/03/2013.
- 2 Kassahun Deneke JR, Nadra Franklin, Agnes Guyon. Prevention of Mother to Child Transimission(PMTCT) Baseline survey Ethiopia. 2004:11. www.aedlinkagesethiopia.org 03/03/2013.
- 3 Thrive A.IYCF Practices, Beliefs, and Influences in Tigray Region, Ethiopia.2010:4. Available from: [aliveandthrive@aed.org/](mailto:aliveandthrive@aed.org) www.aliveandthrive.org /03/03/2013.
- 4 WHO, UNAID. HIV Tranmission Through Breastfeeding A Review of Available Evidence an Update from 2001 to2007. available from: www.WHO.int/nutrition/topics/paper /08/03/2013.
- 5 UNICEF/NYHQ. Infant and young child feeding in the HIV context. 2009. available from: [http:// www.who.int/nutrition/publications](http://www.who.int/nutrition/publications) /11/03/2013.
- 6 WHO. HIV and Infant feeding Revised Principles and Recommendations Rapid Advice. 2009:5 available from:http://www.who.int/hiv/pub/paediatric/rapid_advice_infant.pdf /12/03/2013.
- 7 Sera L. Young MNNM, Caroline J. Chantry⁶, Eveline P. Geubbels⁷, Kiersten Israel-Ballard⁸, Deborah Cohan³, Stephen A. Vosti⁹, and Michael C. Latham. Current Knowledge and Future Research on Infant Feeding in the Context of HIV: Basic, Clinical, Behavioral, and Programmatic Perspectives. *Advances in Nutrition*. 2011; 2:5. available from: <http://advances.nutrition.org/content> /21/03/2013.
- 8 Chetty T, Naidu K, Newell M. Systematic review HIV FS by infant feeding practice. 30 January 2010:4. available from: [http:// www.who.int/maternal_child_adolescent/documents](http://www.who.int/maternal_child_adolescent/documents) /21/03/2013
- 9 WHO. Guidelines on HIV and Infant Feeding 2010: Principles and recommendations for infant feeding in the context of HIV and a summary of evidence. December 2009. available from <http://whqlibdoc.who.int/publications> /21/03/2013
- 10 UNAIDS. Global summary of the AIDS epidemic. AIDS epidemic update 2008. Available from: <http://www.slideshare.net/UNAIDS> /21/03/2013.
- 11 UNAIDS, WHO. AIDS epidemic update2004 . available from: <http://www.crin.org/resources> /21/03/2013.

- 12 Dagnachew Muluye DW, Gizachew M and Tiruneh M. Infant feeding Practice and associated factors of HIV positive mothers attending prevention of Mother to child transimission and antiretroviral therapy clinics in Gondar Town health institutions, Northwest Ethiopia. 2011:4. Available from: [http:// www.readcube.com](http://www.readcube.com) /23/03/2013.
- 13 Govender SALaV. Factors influencing the choices of infant feeding of HIV positive mothers in Southern Ghana: The role of counsellors, mothers, families and socio-economic status. Journal of AIDS and HIV Research. 2011;3:133.available from: www.academicjournals.org /23/03/2013.
- 14 Yetayesh Maru JH. Infant feeding practice of HIV positive mothers and its determinants in selected health institutions of Addis Ababa, Ethiopia. Ethiop J Health Dev. 2008:109.available from: <http://ejhd.uib.no/ejhd> -v23/23/03/2013.
- 15 FMOH. Guidelines For Prevention of Mother-to-Child Transmission of HIV in Ethiopia Federal HIV/AIDS Prevention and Control Office. 2005.available from: <http://www.etharc.org/amhara/Asset/Downloadables> /23/03/2013.
- 16 Ghuman MR M, MSc Med, Saloojee H,MBBCH, MScMed,FC Paeds(SA), Morris G,MBChB, DTM&H, MFamMed.Infant feeding practices in high HIV prevalence rural district of Kwazulu-Natal, South Africa. 2009:76.available from: www.ajol.info/index /24/03/2013.
- 17 Mengistie A. Assessment of factors associated with infant and young child feeding practices of HIV positive mothers in selected hospitals of SNNPR, Ethiopia. 2011:21.available from: <http://etd.aau.edu.et/dspace/bitstream> /23/03/2013.
- 18 Ethiopia FMOHFHD. National Strategy for Infant and Young Child Feeding. 2004:4. Available from: <http://motherchildnutrition.org> /23/03/2013.
- 19 Belachew T, Jira C. Awareness about feeding options for infants born to HIV positive mothers and mother to child transmission of HIV in Gurage Zone, South Ethiopia. Ethiop J Health Dev. 2007:42.available from: <http://ejhd.uib.no/ejhd> -v21/23/03/2013.
- 20 TFNC.A study report on Infant feeding practices in the context of HIV/AIDS, Final Report.2005:19. Available from: <http://www.tfnc.or.tz/doc/Infant> /23/03/2013.
- 21 UNICEF/NYHQ. Infant and Young child feeding Programming Guide. 2011:3. Available from: <http://www.unicef.org/nutrition/files> /23/03/201322.

- 22 Demissie T. city profile Addis Ababa. 2012.available from: www.addisababacity.gov.et 28/03/2013.
- 23 Engida Yisma BD, Ayalew Astatkie,Nebreeda Fesseha. Completion of the modified World Health Organization (WHO) partograph during labour in public health institutions of Addis Ababa, Ethiopia. april 2013.available from: <http://www.reproductive-health-journal.com> 28/03/2013.
- 24 WHO. Infant Feeding Options and the Prevention of Mother-to-Child Transmission of HIV. 2010.avaliabile from: [http:// www.avert.org/pmtct-guidelines.htm](http://www.avert.org/pmtct-guidelines.htm) /28/03/2013.
- 25 WHO/UNICEF. Infant and Young child feeding Programming Guide. 2002.
- 26 Ministry of Health and Family Welfare , Government of India.operational guide for promoting infant and young child feeding practices through the health system.february 2012:6.avaliabile from: <http://mohfw.nic.in/28/03/2013>.
- 27 Ethiopian Health and Nutrition Research Institute, Report on the 2009 Round Antenatal Care Sentinel HIV Surveillance in Ethiopia. August, 2011: 10.
- 28 Addis ababa city health bureau. Annual report of 2011/12.
29. Guidelines for prevention of Mother – to- child transmission of HIV in Ethiopia. Federal HIV/AIDS prevention and control office. Federal Ministry of health 2007.
30. Marie-Louise N. Current issues in the prevention of mother-to-child transmission of HIV-1 infection, *Transactions of the Royal Society of Tropical Medicine and Hygiene* V-1, P-100. 2005.
31. Florence Jairus Saka .Factors influencing Exclusive breastfeeding among HIV positive Mothers at Ilala Municipality Dar es Salaam. November, 2012.

Annex 1: proportional allocation of study subjects

Proportional allocation of study participants to each Health Facility based on number of exposed infants, for the study to assess Infant feeding practice & associated factors among HIV positive mothers in ART attendants in Addis Ababa, Ethiopia

	Health facilities	3 rd Quarter report of 2011/12 of exposed infants	Sample taken from each facility proportionally
1	Zewuditu hospital	35	27
2	Yekatit hospital	49	38
3	Gandi hospital	52	40
4	Tirunesh bejing hospital	18	14
5	Akaki health center	10	8
6	Kality health center	16	12
7	Saris health center	18	14
8	Arada health center	7	5
9	Nifas silk lafto woreda19 health center	14	11
10	Nifas silk lafto woreda23 health center	12	9
11	Kolfe health center	8	6
12	Kolfe woreda9 health center	8	6
13	Meshualekiya health center	13	10
14	Kotebe selam health center	8	6
15	Kasanchis health center	13	10
16	Kirkos health center	14	11
17	Kebena health center	8	6
18	Yeka health center	8	6
19	Kotebe health center	12	9
20	Entoto no1 health center	8	6
21	Gulele health center	8	6
22	Shiromeda health center	8	6
23	Beletshachew health center	13	10
24	Lideta health center	14	11
25	Tekle haymanot health center	14	11
26	Bole 17/20 health center	9	7
27	Bole 17 health center	12	9
28	Addis ketema health center	13	10
29	Addis ketema woreda 7 health center	13	10
Total		430	334

Annex 2: English version Data Collection Format

General Information for the Study Participants

Hello, my name is _____; I am a nurse and now I am collecting data from patients in ART clinic for the research being conducted on feeding practice of infant and young child in relation of the risk of maternal to child transmission of HIV by Tigist Daniel who is the Master of public Health student in Jimma University. The result of the study will be helpful to the study population by identifying the proper breast feeding practices and thereby provision of the right information accordingly. It may also be used as a base line data for intervention project in the same population and will be used for the planning and intervention on prevention of HIV transmission from mother to child in the local area as well as nationally. I am going to ask you questions to be responded by you. Some of the questions are very personal questions. Your answers are completely confidential. Your name will not be written on this form. Participation by answering the questions that I am going to provide you is strictly on voluntary base. However, your honest answer to this question will help me for better understanding of what people think, say and do about certain kinds of behaviors. I would greatly appreciate your cooperation and help in response to this study. The interview takes about 20-30 minutes.

If you have any questions about this study you may ask me or the principal investigator Tigist Daniel (Tel. 0911575729, E-mail- danieltigist212@yahoo.com).

Consent form for study subjects

I the undersigned have been informed about the purpose of this particular research project and I have been informed that the information I give will be used only to the purpose of the study. In addition I am also informed that my identity as well as the information I will be providing will be kept confidential. Based on this, I agree to participate in the research voluntarily.

Witnesses

Name and signature 1. _____, 2. _____

Data collection format for Jimma University, MPH research project on practice of infant and young child feeding practice of HIV positive mothers in Addis Ababa city

Part 1) Socio Demographic data

No	Questions	Coding categories	Skip to
101	How old are you (completed years)?	_____years	
102	What is the age of your child?	Date of Birth: _ _ / _ _ / _ _ (dd/mm/yy)----- days	
103	Sex of your child	Male -----1 Female-----2	
104	What is your current marital status?	Circle the response Single -----1 Married -----2 Divorced -----3 Widowed-----4 Separated -----5	
105	What is the highest educational level you completed	Unable to read & write -----1 Grade 1-8 -----2 Grade 9-10+2 -----3 10+2 completed & above ---4	
106	What is your religion?	Orthodox -----1 Catholic -----2 Protestant -----3 Muslim -----4 Others (specify) -----5	

107	What ethnic group does you belong to?	Amhara-----1 Tigre -----2 Oromo -----3 Gurage -----4 Others (specify) -----5	
108	What is your current occupation?	Government employee-----1 Private employee -----2 Daily-laborer-----3 House wife -----4 House made/servant-----5 Merchant-----6 Others(specify) -----7	
109	What is your husband highest educational status?	Unable to read & write -----1 Able to read & write -----2 Grade 1-8 -----3 Grade 9-10+2-----4 10+2 completed & above----5	
110	What is your husband's current occupation?	Government employee-----1 Private employee-----2 Daily labor -----3 Merchant -----4 Others(specify)-----5	
111	How much is your family average total monthly income?	Approximate _____Eth.Birr	
112	Do you have any support from family or relatives?	Yes-----1 No-----2	If no skip to q201
113	Average monthly support	Approximate	

		Eth.Birr	
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Part 2 obstetric history

S.N	Question	Coding category	Skip to
201	How many children do you have?	_____	
202	Did you attend antenatal care (ANC) during your last Pregnancy?	Yes-----1 No-----2	If no skip to 204
203	How many visits you have had?	_____	
204	Have you ever been counseled about infant feeding options?	Yes-----1 No-----2	If no skip to Q 206
205	During which visit (more than one answer is possible)	ANC -----1 Delivery -----2 PNC -----3 ART visit -----4 Others -----5	
206	Where did you get birth?	Health institution-----1 Home-----2	
207	What was your type of delivery?	SVD-----1 SVD with episiotomy----2 CS-----3 forceps -----4 vacuum -----5 others (specify) -----6	
208	Did you attend postnatal care (PNC)?	Yes-----1	

	No-----2	
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Part 3 HIV disclosure and ART enrolment

S.N	Question	Coding category	Skip to
301	When did you know your HIV Status?	before pregnancy-----1 during this pregnancy-----2 during delivery-----3 after delivery -----4 specify(others)-----5	
302	Did your husband tested for HIV?	Yes-----1 No-----2 I don't know -----3	
303	Have you disclosed your HIV status?	Yes-----1 No-----2	If no skip to 305
304	For whom you disclose your HIV status?	Husband-----1 sister/brother-----2 parents -----3 friends -----4 others(specify)-----5	

Part- 4. Feeding practice of HIV positive mothers

S.N	Question	Coding category	Skip to
401	Did you ever breastfed your child?	Yes-----1 No-----2	If no skip to q 410
402	When did you give breast to your child afterbirth?	Within first hour-----1 after first hour-----2	
403	Did your infant receive any thing to drink or eat before the first breast feeding?	Yes-----1 No-----2	

404	What food or fluid provided/ (more than one answer is possible don't read the choices probe for more)	Butter -----1 Water -----2 Tea -----3 Water and sugar -----4 Others (specify) _____5	
405	Have you ever given any foods/ fluids other than breast milk to your child until six months of age or if he/she is less than six months, up to now	Yes-----1 No-----2	If no skip to 410
406	Have you given any foods/ fluids other than breast milk to your child yesterday or last night?	Yes-----1 No-----2	
407	Why did you provide these foods or fluids? (Probe for more) (multiple answer is possible)	Infant perceived unwell -----1 Mother unwell -----2 Infant and mother unwell----- 3 Advised by husband -----4 Advised by other person -----5 It is a norm of the society -----6 Lack of knowledge -----7 Breast is insufficient for the infant ----8 Fear of stigma & discrimination -----9 Others (specify -----10	
408	What foods or fluids other than breast milk did the child receive before six months of age?	(more than on answer is possible) Water or tea-----1 Formula /powder milk -----2 Cow milk -----3 Porridge/ cereal based fluid-----4 Adult food -----5	

		Soft drink -----6 Others (specify)-----7	
409	What foods or fluids other than breast milk did the child receive yesterday or last night?	(more than on answer is possible) Water or tea-----1 Formula /powder milk -----2 Cow milk -----3 Porridge/ cereal based fluid-----4 Adult food -----5 Soft drink -----6 Others (specify)-----7	
410	Has anyone else (beside yourself) ever breastfed your infant	Yes-----1 No-----2	If no skip to q414
411	How many days other person fed your child?	Number of day's -----1 Don't know-----2	
412	Why did the other person breast feed your child?	Mother ill/sick -----1 Breast or nipple difficulty -----2 No enough milk -----3 Had to go out /separated from the infant -----4 Advised by husband/other family work -----5 Did not want to infect with HI----6 Others (specify)-----7	
413	What is the relation between the breast feeder and you?	sister -----1 mother -----2 family member -----3	

		Neighbors -----4 Other (specify)-----5	
414	Have you ever expressed your breast milk until the child's six months of age?	Yes-----1 No-----2	If no skip to 422
415	Have you ever expressed your breast milk yesterday or last night	Yes-----1 No-----2	
416	Have you given the expressed milk yesterday or last night?	Yes-----1 No-----2	
417	Have you ever given the expressed breast milk to your child?	Yes-----1 No-----2	
418	What kind of utensils you used to?	Bottle -----1 Cup with spoon -----2 Others specify -----	
419	How many days of which you expressed milk was given to your child?	Number of days -----	
420	Have you treated the expressed milk with heat?	Yes-----1 No-----2	
421	Why did you express the milk?	To relive breast engorgement-----1 To relive pain due to coracle-----2 To heat treat before feeding-----3 To separate from the infant-----4 To wean or stop breast feeding---5 Infant unable to suckle on breast feeding -----6 Others (specify) -----7	
422	What feeding options you have	Exclusive breastfeeding for the first 6	

	<p>practiced?</p> <p>[don't read the options, but listen to the mothers response & categorize it under the given options]</p>	<p>months followed by complementary feeding in addition to the breast feeding starting from 6 months -----1</p> <p>Exclusive replacement feeding for the first 6 months followed by complementary feeding in addition to the breast feeding starting from 6 months -----2</p> <p>Wet nursing for the first 6 months followed by complementary feeding in addition to the breast feeding starting from 6 months -----3</p> <p>Expressed milk for the first 6 months followed by complementary feeding in addition to the breast feeding starting from 6 months -----4</p> <p>Breast milk and foods-----5</p> <p>Other(specify)-----6</p>	
<p>423</p>	<p>What was your reason for the choice of your feeding option? (multiple answer is possible)</p> <p>[don't read the options, but listen to the mothers response & categorize it under the given options]</p>	<p>Thinking it is safe for the baby -----1</p> <p>Thinking it is safe for the mother -----2</p> <p>Can't afford the cost of replacement food -----3</p> <p>Have no time and skill for the preparation of replacement food -----4</p> <p>Fear of MTCT -----5</p> <p>Lack of knowledge on MTCT -----6</p> <p>No counseling was done on this issue----7</p> <p>Advised by husband -----8</p> <p>Advised by other person -----9</p> <p>Counseled by the health professional ---10</p> <p>It is a norm of the society -----11</p> <p>Lack of knowledge -----12</p> <p>Breast is insufficient for the infant ----13</p>	

		Fear of stigma & discrimination -----14 Others (specify) -----15	
424	Have you ever practiced exclusive replacement feeding?	Yes-----1 No-----2	If no skip to q442
425	Why you prefer exclusive replacement feeding? (multiple answer is possible)	Fear of MTCT of HIV/AIDS -----1 No adequate milk in the breast -----2 The mother fill sick at the time of delivery -----3 Low CD4 count -----4 Others (specify) -----5	
426	What kind of replacement food you are giving to your child?	Commercial infant formula -----1 Home prepared formula -----2 Fresh animal milk, full cream (pasteurized or powdered milk). Ultrahigh temperature milk-----3 Both alternatively-----4	
427	How many tins of commercial formula milk used per week?	----- tins	
428	How many liters of cow milk used per week?	----- liters	
429	Have you seen demonstration about preparation of replacement feeding	Yes-----1 No-----2	
430	Who demonstrated?	Health worker-----1 Neighbors -----2 NGO worker-----3 If others specify -----	

431	Do you have an ability to follow instruction on the tin for mixing the formula?	Yes -----1 No -----2 If other specify-----	
432	How frequent you prepared formula cow milk to feed the child per day?	----- times a day	
433	What do you do any milk left in the cup after the feed?	Gives to an older child -----1 Discarded -----2 Use for a later feed -----3 If other specify -----	
434	Do you have refrigerator?	Yes-----1 No-----2	
435	What kind of utensils you used to?	Bottle-----1 Cup and spoon-----2 Other(specify)-----	
436	Do you give adequate time for your child (care)?	Yes-----1 No-----2	If yes skip to q434
437	What was your reason not to give enough time for your child care?	_____ -	
438	Do you boil water to wash the utensil?	Yes-----1 No-----2	If yes skip to q436
439	What is your reason not to boil water?	No adequate fuel -----1 no adequate time -----2 if other specify -----	
440	Do you wash your hands before preparing infant food?	Yes-----1 No-----2	
441	Who feed the child mostly?	Servant-----1	

		Grandmother-----2 Sister-----3 Husband-----4 Other(specify)	
442	Have you started complementary food for your child?	Yes-----1 No-----2	If no skip to q501
443	At what age did you start complementary food?	_____ months	

Part -5. Attitude and knowledge of HIV positive mothers towards infant feeding

I will read the following saying and you will respond 1) strongly disagree 2) disagree 3) I do not have any idea 4) agree 5) strongly agree

501	Do you agree that HIV positive mother who prefer replacement feeding should give her breast in the presence of families or neighbors?	1 2 3 4 5	
502	Do you agree breast feeding practice of HIV positive mothers for their new born baby does not contribute for the transmission to their baby?	1 2 3 4 5	
503	Do you agree mothers living with HIV/AIDS decision together with spouse about the feeding of their children does not contribute anything to the benefit of the child?	1 2 3 4 5	
504	Do you agree no mother to child transmission of HIV/AIDS during breast feeding?	1 2 3 4 5	
505	Do you agree that mixed feeding can minimize the risk of HIV/AIDS than exclusive breast feeding?	1 2 3 4 5	
506	Do you agree on when CD4 count increase the risk of HIV transmission during breast feeding might increase	1 2 3 4 5	

Assessment of knowledge of HIV positive mothers towards infant feeding

S.N	Questions	Coding categories	Skip to
507	Do you know HIV/AIDS can be transmitted from mother to child?	Yes-----1 No-----2	If no skip to q509
508	At which of the times it can be transmitted during (more than one answer is possible)	Pregnancy-----1 Delivery -----2 Breast feeding -----3	
509	Have you ever heard about infant feeding options recommended for HIV sero-positive mothers?	Yes-----1 No-----2	If no skip to q511
510	Where did you get the information (more than one answer is possible)	Neighbors -----1 Health professional-----2 Husband -----3 Others(specify) -----4	
511	Do you know the recommended infant feeding practice of HIV sero-positive mothers?	Yes-----1 No-----2	If no skip to q601
512	What kind of infant feeding option recommended for HIV positive mothers? [don't read the options, but listen to the mothers response & categorize it under the given options]	Exclusive breastfeeding for the first 6 months followed by complementary feeding in addition to the breast feeding starting from 6 months-----1 Exclusive replacement feeding for the first 6 months followed by complementary feeding in addition to the breast feeding starting from 6 months -----2 Wet nursing-----3 Expressed milk-----4 Breast milk and foods-----5 Other(specify)-----	

Part 6 cessation of breast feeding

S.N	Question	Coding categories	Skip to
601	Are you currently breast feeding your child?	Yes-----1 No-----2	If no skip to Q 603
602	At what age of your child do you intend to stop breast feeding?	6 months -----1 6-12 months -----2 13-18 months-----3 19- 24 months-----4 >12 months -----5	
603	Have you completely stopped breast feeding?	Yes-----1 No-----2	
604	How old was your infant when you stopped breast feeding?	-----days -----weeks -----months	
605	Why did you stop breast feeding your child?	Infants no longer wanted to breast feed-----1 To encouraged infant to eat solid food-----2 Pregnancy-----3 Fear of transmission of HIV-----4 mother can afforded replacement feeding--5 advised by health providers -----6 infant too sick to breast feeder----7 mothers too sick to breast feed---	

		-----8 advised by husband----- -----9 advised by other person----- -----10 other(specify)	
606	Did you encounter any problem when you stopped breast feeding?	Yes-----1 No-----2	

Part seven –assessment of health condition of the mother

S.N	Question	Coding category	Skip to
701	CD4 count (from the clients card)	During delivery _____ Current _____	
702	HIV disease progress (from the client’s card) (during delivery)	Stage 1-----1 Stage 2-----2 Stage 3-----3 Stage 4-----4	
703	Have you ever encountered breast problem?	Yes-----1 No-----2	If no skip to q 705
704	Which of the breast problems you have encountered?	Engorgement-----1 Sore nipples -----2 Cracked nipples-----3 Burning, tingling-----4 Others -----5	
705	BMI	during pregnancy _____ during delivery _____ current _____	
706	Any long term illness?	Yes-----1 No-----2	If no skip to q 801

707	If yes which disease	Tuberculosis -----1 D.M.-----2 Cancer -----3 Hypertension -----4 Cardiac problem -----5 Others -----6	
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Part eight- assessment of health condition of the child

S.N	Question	Coding category	Skip to
801	Have the infant had mouth ulcer?	Yes-----1 No-----2	
802	Do you know the HIV status of your child?	Yes-----1 No-----2	If no skip to q 804
803	What is the HIV status of your child?	HIV negative-----1 HIV positive-----2	
804	Does your child ever been diseased?	Yes-----1 No-----2	If no skip to q901
805	What disease	-----	

Part nine- assessment of infant's formula

S.N	Question	Coding category	Skip to
901	Don't you perceive any barrier for social and cultural reasons or for fear of stigma and discrimination for choosing this option?	Yes-----1 No-----2	
902	Do you have adequate time, knowledge, skills and other resources to prepare and feed the infant day and night?	Yes-----1 No-----2	
903	Can you afford to buy formula or cow's milk each week? with the price of minimum 150	Yes-----1 No-----2	
904	Can you continuously supply for all the ingredients without interruption as long as the infant need for 12 months?	Yes-----1 No-----2	
905	Can you get clean water and boil the water /	Yes-----1 No-----2	

	milk each day and prepare the replacement food hygienically and nutritionally adequate?		
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Part ten –assessment of counseling practice of health workers

S.N	Question	Coding category	Skip to
1001	Sex of the health workers who give counseling	M -----1 F -----2	
1002	Did the health care provider explain to you different feeding Options?	Yes-----1 No-----2	
1003	Did the health care provider tell about advantages of breast feeding?	Yes-----1 No-----2	
1004	Did the health care provider tell about disadvantages of breast feeding?	Yes-----1 No-----2	
1005	Did the health care provider tell about advantage of replacement feeding?	Yes-----1 No-----2	
1006	Did the health care provider tell about disadvantage of replacement feeding?	Yes-----1 No-----2	
1007	Did the health care provider tell about risk of mixed feeding?	Yes-----1 No-----2	
1008	Did the health care provider explain how to practice the chosen feeding options	Yes-----1 No-----2	

Now I have completed my questions thank you for your cooperation.

Annex 3: Amharic version Data Collection Format

ጂማ ዩኒቨርሲቲ የድህረ-ግጥም ት/ቤት የኅብረተሰብ ጤና ህክምና ሳይንስ ኮሌጅ

የሥነ-ህዝብና የቤተ-ሰብ ጤና ት/ክፍል

ለጥናቱ ተሳታፊዎች አጠቃላ መረጃ

ጤና ይስጥልኝ፡፡ ስሜ _____ ይባላል፡፡ የጤና በለመድ ነኝ ፡፡ አሁን እዚህ የተገኘሁት ከኤች አይቪ ጋር የመኖሩ እናቶች የሕጻናት አመገብ ሁኔታን ተፅዕኖ የሚደርጉትን ኤች አይ ቪ ከእናት ወደ ልጅ የመተላለፍ ሁኔታ ጋር በተያያዘ የሚከፈልን ጥናት መረጃ ለመስጠት ነው፡፡ ጥናቱን የምታጠቁ በጅም ዩኒቨርሲቲ በህብረተሰብ ጤና ትምህርት ቤት ወስጥ የሚከተርስ ተማሪ የሆኑትን ትዕግስት ዳንኤል ናት፡፡ የጥናቱን ወጠታ ለተጠቃሚዎች ማለትም ከኤች አይ ቪ ጋር ለመኖሩ እናቶች ትክክለኛውን የአመገብ ዘዴ በመለየት ትክክለኛውን መረጃ እንዲያገኙ ይረዳል፡፡ በተጨማሪም የተለያዩ ፕሮግራሞችን ለመጅመር እንደሚችሉ ሀሳብ ያገለግላል፡፡ በሀገር አቀፍም ሆነ በዚህ ክልል ደረጃ የኤች አይ ቪ ከእናት ወደ ልጅ የመተላለፍ እድልን ለመቀነስ በሚደረገው ፕሮግራም ትልቅ አስተዋጽኦ ያደርጋል፡፡ አሁን በእርስዎ የሚኖሩ ጥያቄ አጠቃላይ፡፡ አንዳንድ ጥያቄዎች በግል ሁኔታ ላይ ያጠነጠኑ ናቸው፡፡ የሚከተሉት ማለት ማለት በሙሉ ሚስጥራዊነቱ የተጠበቀ ነው፡፡ ስምዎ በዚህ ፎርም ላይ አይፀጻፍም፡፡ በምጣይቅዎት ጥያቄ ማለት የመሆኑ ሁኔታ ማለት በሙሉ በእርስዎ ፈቃደኝነት ላይ የተመሰረተ ነው፡፡ ነገር ግን የሚከተሉት ማለት ትክክለኛ መሆኑ ህብረተሰቡ ምን እንደሚነዘብ፣ ምን እንደሚቀጥብ ለመረዳት ያስችለኛል፡፡ በእውነቱ ስለትብብርዎና ለጥናቱ ስለሚደርጉት አስተዋጽኦ በጣም ላመስግንዎት እወዳለሁ፡፡ ቃለ መጠይቁ ከ20-30 ደቂቃ አካባቢ ይፈጃል፡፡

የጥናቱ ተሳታፊዎች የስምዎን ትምህርት መግለጫ ወል ከዚህ በታች በፊርማ ተጠቃሽ ግለሰብ ስለጥናቱ አላማ በሚገባ ተረድቻለሁ፡፡ የምስጢር መረጃም ለጥናቱ ተግባር ብቻ እንደሚያገለግልና የምስጢር መረጃም ሆነ ማንነቴ በሚከተር እንደሚጠበቅ ተረድቻለሁ፡፡ በዚህም መሰረት በፍቃደኝነት በጥናቱ ለመስተፍ ተስማማቻለሁ፡፡

ምስክርታ

1. ስም ----- ፊርማ -----
----- ቀን -----
2. ስም ----- ፊርማ -----
----- ቀን -----

ለጥናቱ ተሳታፊ የምርምር ጥናት ማብራሪያና የተሳታፊነት ፊርማ ቅፅ

የጥናቱ ርዕስ: ከኤች አይ ቪ ጋር የሚኖሩ እናቶች የህፃናት አመገብ ሁኔታ እና ተፅዕኖ የሚደርጉት ነገሮች በመግባት ጠፍ ድርጅት ተጠቃሚዎች ከአዲስ አበባ

የጥናቱ ዋና ተሟላጭ: ትእግስት ዳንኤል

የጥናቱ ተባባሪ ተሟላጭዎች: ፕሮፌሰር ተፈራ በላቸው እና አቶ አለሙሁ አራጋው

የድርጅቱ ስም: ጅም ዩኒቨርሲቲ የህብረተሰብ ትምህርት ኮሌጅ

የስፖንሰሩ ስም: ምንም እስፖንሰር የለም

ሀ. የጥናቱ ዋና አላማዎች:

ጠቅ ማጥባትን ማበረታታት ለህፃናጽ ትልቅ አስተዋፅኦ አለው፡፡ የኸውም የእናት ጠቅ ለህፃኑ ተመጠኝ ምግብን ያስገኛል የተለያዩ የህፃናት በሽታዎች ይከላከላል እናም የህፃናት ሞትን የከላከላል በሌላ ማልከም ልጅ አራርቆ ለመላድ ይጠቅማል፡፡

ጥናቶች እንደሚመለከቱት ያለምንም አይነት መከላከያ ከ25-40% የሚሆኑ በኤች አይ ቪ የተያዙ እናቶች በሽታዎን ወደ ህፃኑ ሊያስተላለፉ ይችላሉ በእርግዝና በወለድ እና በጠቅ ማጥባት ወቅት

የዚህ ጥናት ዋናው አላማው ከኤች አይ ቪ የተያዙ እናቶች የህፃናት አመገብን ማጥናት እና ለአመገቡ ተያያዥ የሆኑ ጉዳዮችን አጥንቶ የጥናቱን ወጠቅ ከእናት ወደ ልጅ ኤች አይ ቪ መተላለፍን ለመገታት እንደ መረጃነት ለመጠቀም

ለ. የጥናቱ ሂደት

በጥናቱ ለመሳተፍ ከተስማሙ ነርሲ/ሱ ወይንም የጠፍ መኮንን/ኗ የፀረ ኤች አይ ቪ መድሀኒት ክፍል የሚከፈሉ ቃለ መጠይቅ ያደርጉለታል ስምም በመጠይቁ ላይ በጭሽ አይሰፍርም፡፡

ሐ- በፈቃደኝነት መሳተፍ

በጥናቱ ለመሳተፍ ፈቃደኛ ባለመሆንም ከጠፍ ጣይዎ የሚገኙትን አገልግሎት በምንም ማልኩ ሊጎዳ አይችልም፡፡ ከተስማሙ በኋላ ማቋረጥ በፈልጉ ቃለ መጠይቁን ለሚደርግሎት ሰው መገንጠር ይችላሉ፡፡

መ. ያለመቻላት ስሜት

ከ 20-30 የሚሆን ደቂቃ ልንወስድበት እንችላለን

ሠ. ጥቅም

በጥናቱ በመሳተፍም በቀጥታ ተጠቃሚ ላይሆኑ ይችላሉ የጥናቱ ወጠቅና ማስሰቢያዎች ግን ጥናቱ ለሚቋረግበት ህዝብ ይጠቅማሉ፡፡

ረ. ማስጠንቀቂያ

የግለሰብ ህክምና ስምምነትን ጨምሮ እና ለጥናቱ የሰጠው አንድ ማህተም የተጠበቀ ነው፡፡

ሰ. ጥያቄዎችና ከጥናቱ የመውጣት ነፃነት

ቃለመጠይቁን ማቋረጥ በፈለጉ ሰዓት ማቋረጥ ይችላሉ የትኛውም አይነት ጥያቄ ካለቦት አጥኚውን ማረጋገጥና መጠየቅ ይችላሉ፡፡

ሸ. ስለጥናቱ ተጨማሪ መረጃ

ይህ ጥናት በጅምር ዩኒቨርሲቲ ለህብረተሰብ ትምህርት ክፍል የስነምግባር ቅኝት ኮሚቴ እና በአዲስ አበባ ጤና ቢሮ ተገምግሞ ፀድቋል፡፡ ተጨማሪ መረጃ ማግኘት ከፈለጉ ጥያቄ ካለዎት የጥናቱን ተመራማሪ ወይንም ለክፍሉ ከተመዘኑ የተመደበውን ተቆጣጣሪ ማግኘት ይችላሉ፡፡

ትዕግስት ዳንኤል

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ክፍል አንድ ማህበራዊና ግላዊ መረጃ

ቁጥር	ጥያቄ	ኮድ	ወደ ጥያቄ ቁጥር ይለፉ
101	e" f S f P " < ;	----- S < K < S f	

102	ጻጴጠሙ ለደህንነት ስርዓት ነው	ጻጴጠሙ ለደህንነት -----/-----/-----	
103	ጻጴጠሙ ስርዓት	1. ስርዓት 2. ስርዓት	
104	ጻጴጠሙ ለደህንነት ስርዓት ስርዓት ስርዓት	1. ስርዓት 2. ስርዓት 3. ስርዓት 4. ስርዓት 5. ስርዓት	
105	ሰው ስርዓት ስርዓት ስርዓት ስርዓት ስርዓት	1. ስርዓት ስርዓት ስርዓት 2. ስርዓት ስርዓት ስርዓት 3. ስርዓት ስርዓት ስርዓት 4. ስርዓት ስርዓት ስርዓት 5. ስርዓት ስርዓት ስርዓት ስርዓት ስርዓት	
106	ሰው ስርዓት ስርዓት ስርዓት ስርዓት ስርዓት	1. ስርዓት ስርዓት ስርዓት 2. ስርዓት ስርዓት ስርዓት 3. ስርዓት ስርዓት ስርዓት 4. ስርዓት ስርዓት ስርዓት 5. ስርዓት ስርዓት ስርዓት ስርዓት ስርዓት	
107	ሰው ስርዓት ስርዓት ስርዓት ስርዓት ስርዓት	1. ስርዓት 2. ስርዓት 3. ስርዓት 4. ስርዓት 5. ስርዓት ስርዓት ስርዓት ስርዓት ስርዓት	
108	ሰው ስርዓት ስርዓት ስርዓት ስርዓት ስርዓት	1. ስርዓት ስርዓት ስርዓት ስርዓት ስርዓት 2. ስርዓት ስርዓት ስርዓት ስርዓት ስርዓት 3. ስርዓት ስርዓት ስርዓት ስርዓት ስርዓት 4. ስርዓት ስርዓት ስርዓት ስርዓት ስርዓት 5. ስርዓት ስርዓት ስርዓት ስርዓት ስርዓት 6. ስርዓት ስርዓት ስርዓት ስርዓት ስርዓት 7. ስርዓት ስርዓት ስርዓት ስርዓት ስርዓት	

109	ገጽ ፩ ላይ ያለውን ጽሑፍ አንብቦ ይጻፉ፤	<ol style="list-style-type: none"> 1. ገጽ ፩ ላይ ያለውን ጽሑፍ አንብቦ ይጻፉ፤ 2. ገጽ ፩ ላይ ያለውን ጽሑፍ አንብቦ ይጻፉ፤ 3. ገጽ ፩ ላይ ያለውን ጽሑፍ አንብቦ ይጻፉ፤ 4. ገጽ ፩ ላይ ያለውን ጽሑፍ አንብቦ ይጻፉ፤ 5. ገጽ ፩ ላይ ያለውን ጽሑፍ አንብቦ ይጻፉ፤ 	
110	የገጽ ፩ ላይ ያለውን ጽሑፍ አንብቦ ይጻፉ፤	<ol style="list-style-type: none"> 1. ገጽ ፩ ላይ ያለውን ጽሑፍ አንብቦ ይጻፉ፤ 2. ገጽ ፩ ላይ ያለውን ጽሑፍ አንብቦ ይጻፉ፤ 3. ገጽ ፩ ላይ ያለውን ጽሑፍ አንብቦ ይጻፉ፤ 4. ገጽ ፩ ላይ ያለውን ጽሑፍ አንብቦ ይጻፉ፤ 5. ገጽ ፩ ላይ ያለውን ጽሑፍ አንብቦ ይጻፉ፤ 	
111	የገጽ ፩ ላይ ያለውን ጽሑፍ አንብቦ ይጻፉ፤	----- ገጽ ፩ ላይ ያለውን ጽሑፍ አንብቦ ይጻፉ፤	
112	የገጽ ፩ ላይ ያለውን ጽሑፍ አንብቦ ይጻፉ፤	<ol style="list-style-type: none"> 1. ገጽ ፩ ላይ ያለውን ጽሑፍ አንብቦ ይጻፉ፤ 2. ገጽ ፩ ላይ ያለውን ጽሑፍ አንብቦ ይጻፉ፤ 	
113	የገጽ ፩ ላይ ያለውን ጽሑፍ አንብቦ ይጻፉ፤	----- ገጽ ፩ ላይ ያለውን ጽሑፍ አንብቦ ይጻፉ፤	

ክፍል ሁለት የፅንሰና የወላድ ሁኔታ

ገጽ	ጽሑፍ	ጥያቄ	ገጽ ስልጠና
201	የገጽ ፩ ላይ ያለውን ጽሑፍ አንብቦ ይጻፉ፤	-----	
202	የገጽ ፩ ላይ ያለውን ጽሑፍ አንብቦ ይጻፉ፤	<ol style="list-style-type: none"> 1. ገጽ ፩ ላይ ያለውን ጽሑፍ አንብቦ ይጻፉ፤ 2. ገጽ ፩ ላይ ያለውን ጽሑፍ አንብቦ ይጻፉ፤ 	
203	የገጽ ፩ ላይ ያለውን ጽሑፍ አንብቦ ይጻፉ፤	-----	
204	የገጽ ፩ ላይ ያለውን ጽሑፍ አንብቦ ይጻፉ፤	<ol style="list-style-type: none"> 1. ገጽ ፩ ላይ ያለውን ጽሑፍ አንብቦ ይጻፉ፤ 2. ገጽ ፩ ላይ ያለውን ጽሑፍ አንብቦ ይጻፉ፤ 	
205	የገጽ ፩ ላይ ያለውን ጽሑፍ አንብቦ ይጻፉ፤	<ol style="list-style-type: none"> 1. በቅድመ ወላድ ክትትል ጊዜ 2. በወላድ ወቅት 3. በድህረ ወላድ ክትትል ወቅት 4. የፀረ ኤች ኤይ ቪ መጽሀኒት ክትትል ወቅት 5. ሌሎች 	

206	ጻፋፍ ምሩጽ ጻፋጽጽፍ;	1. ሀገራዊ ደረጃ 2. አባቶች ወሰን	
207	ጻፋጽጽፍ ስሜት ሀገራዊ ምሩጽ;	1. ሀገራዊ 2. ሀገራዊ አገልግሎት 3. ሀገራዊ አገልግሎት 4. ሀገራዊ ስሜት 5. ሀገራዊ (ሀገራዊ ስሜት) 6. አገልግሎት አገልግሎት	
208	ጻፋጽጽፍ ስሜት ሀገራዊ ምሩጽ;	1. ሀገራዊ 2. ጻፋጽጽፍ	

ክፍል ሶስት : የኤች. አይ. ቪ .ወጠቱን ግልፅ ስለማድረግ

ገጽ	ግልፅ	ጥያቄ	ግልፅ ገጽ አገልግሎት
301	የኤች አይ ቪ ወጠቱንን ማግኘት ለወያኔ ያወቅሽዎት	1. ከአርግገና በፊት 2. በዚህኛው አርግገና ወቅት 3. በወሊድ ወቅት 4. ከወሊድ በኋላ 5. ሌሎች ካሉ ይጠቀሱ----- -----	
302	ጻፋጽጽፍ ስሜት ሀገራዊ ምሩጽ ስሜት ሀገራዊ ምሩጽ;	1. ስሜት 2. ጻፋጽጽፍ 3. ስሜት	
303	ጻፋጽጽፍ ስሜት ሀገራዊ ምሩጽ ስሜት ሀገራዊ ምሩጽ;	1. ስሜት 2. ጻፋጽጽፍ	ስሜት አዎ ከሆነ ወይ 307 እለፍ
304	ጻፋጽጽፍ ስሜት ሀገራዊ ምሩጽ ስሜት ሀገራዊ ምሩጽ;	1. አገልግሎት 2. አገልግሎት ስሜት 3. አገልግሎት 4. አገልግሎት 5. አገልግሎት አገልግሎት	

ክፍል አራት የህፃናት አማካኝ ሁኔታ

ገጽ	ግልፅ	ጥያቄ	ግልፅ ገጽ አገልግሎት

401	KMīP Ö<ት ጻፀw}“< ለ“<nK<;	1. ጻP 2. ጻ4KU	SMc< ጻ4KU ሃጎ’ ለ IØ’ 421 °Kō
402	SĒS]Á KMፀP Ö<f ለÖu<ት ሃ“Kፈ ሃU” ለIM ሸ>? u%EL “<;	1. uSĒS]Á ሃ”É c_f “<eØ 2. ሃ”É c_f u%LE	
403	ልጅዎት SĒS]Á Ö<f ሃSØv~ uøf T”——“<”U ጻ4T>Ö× ለAU K?L UÓw “eÇDM”;	1. ጻP 2. ጻ4KU	SMc< ጻ4KU ሃጎ’ ለ IØ’ 407 ለKñ
404	U” ለ’f uÓw ለAU SÖØ cØ}“M; (ሃ”É uLÄ SMe SeÖf Ä%oLM U’Y“<” ለhwv)	1. pu? 2. “<H 3. hÄ 4. “<H“ eE’ 5. K?L ካK ለÖke< -----	
405	Mī-f eÉef “C ለስከግዳው ድረስ ከእናት ጠት ውት በተጨማሪ ሌላ ምግብ ሰጥተዋል; ለጅዎ ስድስት ወር ካልግዳው ለስከዛሬ ድረስ;	1. ጻP 2. ጻ4KU	
406	LKፀf 24 cG]f KMīPፍ ሃ“f Ö<f “]f u]ÚT] K?L UÓw cØ}“M;	1. ጻP 2. ጻ4KU	SMc< ጻ4KU ሃጎ’ ለ IØ’ 411 ለKñ
407	KU” ሃÖ<f “]f “<ፀ cÖ<; (ሃ”É uLÄ SMe SeÖf Ä%oLM)	1. Mì eKፉSS 2. “~ eK}SS< 3. “fጻ4a“ I’< eK}SS< 4. uvM Uጎ’ 5. uK?KA< c< Uጎ’ 6. u.ከvu=“< ጻ4}KSÄ eKጎ’ 7. የግንዛቤ ለጥረት 8. የጠት ወተት ለህፃኑ በቂ ስላልሆነ 9. መገለጻና መድለዳ በመፍራት 10. K?L “K< ለÖke	
408	KI“~ ጻ4}cÖ< K?KA< UÓx< U”É” “+“<; (ሃ”É uLÄ SMe SeÖf Ä%oLM)	1. “<H ለAU hÄ 2. ጻ4Eof “]f 3. ጻ4Ywf “]f 4. ሸ”ö 5. ጻ4~m UÓw 6. KeLd SÖÙ< 7. K?L “K< ለÖke	
409	KI’< f”f” ለ“U f”f Tፉ የተሰጡ ምግቦች ምን ምን ድኅ ው	1. “<H ለAU hÄ 2. ጻ4Eof “]f	

	(ሃ፣"É uLÄ SMe SeÖf Ä%oLM)	3. ¾Ywf "jf 4. Ñ"ö 5. ¾-m UÓw 6. KeLd SÖÙ, 7. K?L "K< ÄÖke	
410	ÿ°eP "β MĒPp" Ö<f ÁÖv c"< ,K;	1. ,P 2. ¾KU	SMc< ¾KU ÿj' "Ä ØÁo lT' 415 °Kö
411	KU" ÁIM Ñ>? K?L c"< MĪPp" ,Öu<;	1. ¾k"f w³f ----- 2. አላወቅም-----	
412	KU" K?L c"< MĪPp" ,Öu<;	1. °"f eKጋSS, 2. ¾Ö<f ,Ó' 3. ¾°"f Ö<f um "jf eKK?K- 4. ŸMì KSK? f 5. uvM "ÄU ¾²SÉ Uገ' 6. ¾e^ G<'@} 7. :?>Ä,y=" LKTe}LKö 8. K?L "K ÄÖke -----	
413	ትናንት ወይንም ትናንት ምሽት የለበትን ወተት ለልጅዎ ሰጥተው ነበር	1. ,P 2. ¾KU	
414	ÁKu<f" ¾Ö<f "jf KMĒPp cØ}"< Á"<nK<;	1. ,P 2. ¾KU	SMc< ¾KU ÿj' "Ä ØÁo lØ' 420°Kö
415	ÁKu<f" ¾Ö<f "jf KMĒPp KSeÖf ¾}ÖkS<f SSÑu=Á U"É" ";<;	1. Ö<U 2. uÿ<vÁ" uT"ÿ=Á 3. K?L "K Ä}ke -----	
416	ÁKu<f" ¾Ö<f "ጎት uጸጻf ፣S"< / ፣öM}ጎ ለ"<nK<;	1. ,P 2. ¾KU	
417	KU"É" " "< Ö<fPp" የT>ÁMu<f;	1. ¾Ö<f ISU" KTe}Ñe 2. ¾qcK ¾Ö<f ሃö" KTe}ጎÑe 3. ŸSSÑw uòf KTVp 4. ŸMì Ò' ,wa LKS³M 5. Ö<f "jf KTqU 6. Mì KsvØf ፣KS%oM 7. K?L "K< ÄÖke< -----	

418	የትኛውን የህፃን አመገብ ዘዴዎች ተጠቅመው ያወቃሉ	<ol style="list-style-type: none"> 1. እስከ 6 ወር ድረስ ጠቅ ብቻ ከዛም ተጨማሪ ምግብ ከ 6 ወር ጀምሮ 2. ጠቅን የሚተካ ወተት (replacement feeding) እስከ 6 ወር ድረስ ከዛም ተጨማሪ ምግብ ከ 6 ወር ጀምሮ 3. እስከ 6 ወር ድረስ የሌለን እናት ወተት በማጥባት ከዛም ከ 6 ወር ጀምሮ 4. እስከ 6 ወር ድረስ የታለበ ወተት ከ 6 ወር ጀምሮ ተጨማሪ ምግብ 5. ጠቅ እና ምግብ 6. ሌሎች ካሉ ይጠቀሱ 	
419	ለመረጠቅ የአመገብ ሂደት ምክንያት ምንድን ነበር	<ol style="list-style-type: none"> 1. ለህፃኑ ጥሩና ምቹ ነው ብሎ በማሰብ 2. ለእናት ጥሩ እና ምቹ ነው ብሎ በማሰብ 3. የእናት ጠቅ የሚተካ ወተት ለመገዛት አቅም ስለሌለኝ 4. የእናት ጠቅ የሚተካ ወተት ለመዘጋጀት ጊዜና እወቅት ስለሌለኝ 5. የእናት ወደ ልጅ የኤች አይ ቪ ቫይረስ እንዳይተላለፍ በመፍራት 6. ከእናት ወደ ልጅ የኤች አይ ቪ ቫይረስ እንደሚተላለፍ ግንዛቤ ስለሌለኝ 7. በዚህ ዙሪያ ምንም አይነት የምክር አገልግሎት ስላላገኘሁ፡፡ 8. በባል ምክር 9. ከሌላ ሰው ምክር ስላገኘ 10. የጠፍ ባለሙያ ምክር ስላገኘው 11. በአከባቢው የተለመደ ስለሆነ 12. የግንዛቤ አጥረት 13. የእናት ጠቅ ወተት ለህፃኑ በቂ ስላልሆነ 14. መግለጫ መደብን በመፍራት 15. ሌላ ካለ ይጠቀሱ 	

431	°ÉΤ@“< e”f c=]” KMĩ–]ÚT] UÓw ÈS\Kf;	-----“^f	
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ΦΤΚΑ Ømf ,vvKA“ ’vKG< ,eτφ¾f–” 1) uxU eTTKG< 2) λeTTKG< 3) U”U
,e]Á¾f ¾K”U 4) ,MeTUU 5) uxU ,MeTTU uTKf ÁÓKè

501	’É ,?<,Á y= uÁTE “<eØ ÁK °“f ¾°“f Ö<f “]f ¾T>}” UÓw w%o Klé’<“E ÝS[Ö< u%EL ²SE“ K?KA< Ó[u?<, ÖÑvD c=“ Ö<f ,þÖvU }wL“Çf}T Klé’< Ö<f SeÖf ,Kvf	1 2 3 4 5	
502	,?<,Á y= uÁT†“< “<eT ,PKv†– °“ , ¾T>“KÆ lé“f Ý}“KÆ ÈUa ÁK“< ¾,SÖÑw G<’@þ K:?,Á.y= Ýλ“f “Á Mĩ ¾S}LKö G<’@þ ¾T> ,p u[;]“< ,e]“è* ¾KU	1 2 3 4 5	
503	,?<,Á.y= uÁTE “<eØ ÁK °“f eKlé’<“E ,SÖÑw ÝvKu?... Ó’ uÓ^ uS]” S“c“E Klé’< ,SÖÑw ÖkT@þ ¾K“<U	1 2 3 4 5	
504	ኤች አይ ቪ ኤድስ ከናት ወደ ልጅ በጠኑ ማጥባት ወቅት ይተላለፋል	1 2 3 4 5	
505	ከጠኑ ጋር የተቀላቀለ ሌሎች ምግቦችን መብጠኑ ጠኑ ብቻ ከመብጠኑ አንፃር የኤች አይ ቪ ኤድስ የመተላለፍ መጠኑን ይቀንሳል	1 2 3 4 5	
506	የ CD ₄ መጠን ሲቀንስ በጠኑ ማጥባት ወቅት የኤች አይ ቪ የመተላለፍ ሂደቱ ይጨምራል	1 2 3 4 5	

የግንዛቤ ዳሰሳ ጥያቄዎች

507	ኤች አይ ቪ ኤድስ ከአናት ወደ ልጅ እንደማይተላለፍ ያወቃሉ	1. ጎ- 2. ¾KU	
508	ኤች አይ ቪ ከአናት ወደ ልጅ የማይተላለፈው መቼ ነው	1. በእርግዝና ወቅት 2. በወለድ ሰአት 3. በጠኑ ማጥባት ወቅት	
509	eK li” ,SÖÑw cU}– Á–nÁ<?	1. ,P 2. ¾KU	
510	eK li” ,SÖÑw SÈS]Á Ý¾f cS<;	1. ÝÖ[u?f 2. ÝÖ?“ vKS<Á 3. ÝfÇ’ ÖÅ— 4. K?L “K ÄÖkc<	

511	<p>ሕግ ላይ ያሉ ስርዓቶች ለአጠቃላይ ጤና ጥቅም ሆኖታል።</p> <p>ሕግ ላይ ያሉ ስርዓቶች ለአጠቃላይ ጤና ጥቅም ሆኖታል።</p>	<ol style="list-style-type: none"> 1. ሕግ ላይ ያሉ ስርዓቶች ለአጠቃላይ ጤና ጥቅም ሆኖታል። 2. ሕግ ላይ ያሉ ስርዓቶች ለአጠቃላይ ጤና ጥቅም ሆኖታል። 3. ሕግ ላይ ያሉ ስርዓቶች ለአጠቃላይ ጤና ጥቅም ሆኖታል። 4. ሕግ ላይ ያሉ ስርዓቶች ለአጠቃላይ ጤና ጥቅም ሆኖታል። 5. ሕግ ላይ ያሉ ስርዓቶች ለአጠቃላይ ጤና ጥቅም ሆኖታል። 6. ሕግ ላይ ያሉ ስርዓቶች ለአጠቃላይ ጤና ጥቅም ሆኖታል። 	
512	<p>ሕግ ላይ ያሉ ስርዓቶች ለአጠቃላይ ጤና ጥቅም ሆኖታል።</p> <p>ሕግ ላይ ያሉ ስርዓቶች ለአጠቃላይ ጤና ጥቅም ሆኖታል።</p>	<ol style="list-style-type: none"> 1. እስከ 6 ወር ድረስ ጠጥሮችን በብቻ ከዘመን ተጨማሪ ምግብ ከ 6 ወር ጀምሮ 2. ጠጥሮችን የሚተካ ጠጥሮች (replacement feeding) እስከ 6 ወር ድረስ ከዘመን ተጨማሪ ምግብ ከ 6 ወር ጀምሮ 3. እስከ 6 ወር ድረስ የሌሎችን እናት ጠጥሮችን በማጥፋት ከዘመን ከ 6 ወር ጀምሮ 4. እስከ 6 ወር ድረስ የታለበ ጠጥሮች ከ 6 ወር ጀምሮ ተጨማሪ ምግብ 5. ጠጥሮች እና ምግብ ሌሎች ካሉ ይጠቀሱ 	

ክፍል ስድስት ጠጥሮች የማጥፋት የማቆም ሂደት

ID	ጥያቄ	ጥያቄ	ማስታወሻ
601	<p>ሕግ ላይ ያሉ ስርዓቶች ለአጠቃላይ ጤና ጥቅም ሆኖታል።</p> <p>ሕግ ላይ ያሉ ስርዓቶች ለአጠቃላይ ጤና ጥቅም ሆኖታል።</p>	<ol style="list-style-type: none"> 1. ሕግ 2. ሕግ 	<p>ሕግ ላይ ያሉ ስርዓቶች ለአጠቃላይ ጤና ጥቅም ሆኖታል።</p> <p>ሕግ ላይ ያሉ ስርዓቶች ለአጠቃላይ ጤና ጥቅም ሆኖታል።</p>
602	<p>ሕግ ላይ ያሉ ስርዓቶች ለአጠቃላይ ጤና ጥቅም ሆኖታል።</p> <p>ሕግ ላይ ያሉ ስርዓቶች ለአጠቃላይ ጤና ጥቅም ሆኖታል።</p>	<ol style="list-style-type: none"> 1. ሕግ 2. ሕግ 3. ሕግ 4. ሕግ 5. ሕግ 	
603	<p>ሕግ ላይ ያሉ ስርዓቶች ለአጠቃላይ ጤና ጥቅም ሆኖታል።</p> <p>ሕግ ላይ ያሉ ስርዓቶች ለአጠቃላይ ጤና ጥቅም ሆኖታል።</p>	<ol style="list-style-type: none"> 1. ሕግ 2. ሕግ 	
604	<p>ሕግ ላይ ያሉ ስርዓቶች ለአጠቃላይ ጤና ጥቅም ሆኖታል።</p> <p>ሕግ ላይ ያሉ ስርዓቶች ለአጠቃላይ ጤና ጥቅም ሆኖታል።</p>	<p>ሕግ ላይ ያሉ ስርዓቶች ለአጠቃላይ ጤና ጥቅም ሆኖታል።</p> <p>ሕግ ላይ ያሉ ስርዓቶች ለአጠቃላይ ጤና ጥቅም ሆኖታል።</p>	
605	<p>ሕግ ላይ ያሉ ስርዓቶች ለአጠቃላይ ጤና ጥቅም ሆኖታል።</p> <p>ሕግ ላይ ያሉ ስርዓቶች ለአጠቃላይ ጤና ጥቅም ሆኖታል።</p>	<ol style="list-style-type: none"> 1. ሕግ 2. ሕግ 3. ሕግ 	

		4. ግንደታ ለሕይወት ይሻግራል 5. ግንደታ ለሕይወት ይሻግራል 6. ለሕይወት ግንደታ ይሻግራል 7. ለሕይወት ግንደታ ይሻግራል 8. ለሕይወት ግንደታ ይሻግራል 9. ለሕይወት ግንደታ ይሻግራል 10. ለሕይወት ግንደታ ይሻግራል 11. ግንደታ ለሕይወት ይሻግራል	
606	ግንደታ ለሕይወት ይሻግራል?	1. አይሆንም 2. ይሆናል	
607	ግንደታ ለሕይወት ይሻግራል?	1. ለሕይወት ግንደታ ይሻግራል 2. ግንደታ ለሕይወት ይሻግራል 3. ግንደታ ለሕይወት ይሻግራል 4. ግንደታ ለሕይወት ይሻግራል 5. ግንደታ ለሕይወት ይሻግራል 6. ግንደታ ለሕይወት ይሻግራል	

ግንደታ ለሕይወት ይሻግራል? ግንደታ ለሕይወት ይሻግራል

701	የ CD ₄ መጠን	በወሊድ ወቅት ----- በአሁኑ ወቅት -----	
702	የአጭር እና ርታ ስርዓት ያለበት ደረጃ (በወሊድ ወቅት)	ደረጃ -----	
703	የግንደታ ህመም ችግር ገጠመዎት ያውቃል	1. አይደለም 2. ይደግፋል	
704	የትኩረት የግንደታ ችግር ነበር የገጠመዎት	1. የግንደታ ችግር አለኝ 2. የግንደታ ችግር አለኝ 3. የግንደታ ችግር አለኝ 4. የግንደታ ችግር አለኝ 5. ሌላ ካለ ይጠቀሱ	
705	ከብሮት ከቁመት አንፃር	1. በእርግጥ ወቅት 2. በወሊድ ወቅት 3. በአሁኑ ሰዓት	

706	ለረጅም ጊዜ የሚቆይ በሽት አለቦት	1. አዎ 2. የለም	
707	ከለቦት የትኛው	1. የሳምንት በሽታ 2. የሰኞ በሽታ 3. ካንሰር 4. የደም ግፊት 5. የልብ ችግር 6. ሌሎች ካሉ ይጠቀሱ --	

ክፍል ስምንት: የህፃናት የጤና ሁኔታ የሚጠየቀው ማጠቃለያ

801	ህፃናት አፍ አካባቢ ቆስሎብት ያውቃል	1. አዎ 2. የለም	
802	የልጅዎን የኤት አይ ቪ ወጠኑ ያውቃሉ	1. አዎ 2. የለም	
803	የልጅዎ የኤት አይ ቪ ወጠኑ ምንድን ነው	1 ግዙብ 2 ኔጋቲቭ	
804	ልጅዎ ታም ያውቃል	1. አዎ 2. የለም	
805	ምን አይነት በሽታ ነበር	----- -	

ክፍል ዘጠኝ: የእናት ጠቅላላ የሚካተቱ ወተት በተመለከተ ማጠቃለያ

901	ይህንን የአመገብ ዘዴ ለማረጋገጥ ማንኛውም አይነት የአካባቢ ባህላዊና ማህበራዊ እንዲሁም ማለፊያ ማድለግ የለም ወይ	1. አዎ 2. የለም	
902	ህፃናት ቀንና ማታ ለማጥጋጽ በቂ ጊዜ፣ እውቀት፣ ትሎታ እና ሌሎች ግብአቶች አሉት;	1. አዎ 2. የለም	
903	የላም ወተት ወይንም የህፃን የጣስ ወተት ለመዝገብ በሳምንት ከ 150 ብር ጀምሮ ማውጣት ይችላሉ;	1. አዎ 2. የለም	
904	ሁሉንም ለህፃናት የሚያስፈልገውን አቅርቦት በተከታታይ ሳይቋረጥ ለ 12 ወራት ማቆየት ይችላሉ;	1. አዎ 2. የለም	
905	የእናት ጠቅላላ የሚካተቱ ወተት በንፅኅናት እና ለአመገብ ምቹ በሆነ ማድረግ	1. አዎ	

ለማዘጋጀት ንፁህ ወሃ ያገኛሉ; ወሃውን በየቀኑ ማጽላት ይችላሉ;	2. የለም
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ክፍል አስር: ስለ ህፃን አመገብ የሚከናወኑ ስርዓቶች ላይ የሚደረግ ጥናት

1001	ስለ ህፃን አመገብ የሚከናወኑ ስርዓቶች ላይ የሚደረግ ጥናት	1. ስነ-ምግባር 2. ወንድ
1003	ከስድስት ወር በታች ላሉት ህፃናት የሰጠው ስለ ስርዓቶች ማጥናት ጥቅም ነግረዎታል	1. አዎ 2. የለም
1004	ከስድስት ወር በታች ላሉት ህፃናት የሰጠው ስለ ስርዓቶች ማጥናት ጥቅም ነግረዎታል	1. አዎ 2. የለም
1005	ከስድስት ወር በታች ላሉት ህፃናት የሰጠው የሰጠው ወተትን በሌላ የከብት ወተት ወይም የህፃን የጣክ ወተት ተክቶ የሚሰጠው ጥቅም ነግረዎታል	1. አዎ 2. የለም
1006	ከስድስት ወር በታች ላሉት ህፃናት የሰጠው የሰጠው ወተትን በሌላ የከብት ወተት ወይም የህፃን የጣክ ወተት ተክቶ የሚሰጠው ጥቅም ነግረዎታል	1. አዎ 2. የለም
1007	ከስድስት ወር በታች ላሉት ህፃናት የሰጠው ስርዓቶች ላይ የሚደረግ ጥናት ስርዓቶች ላይ የሚደረግ ጥናት	1. አዎ 2. የለም
1008	ከስድስት ወር በታች ላሉት ህፃናት የሰጠው የሰጠው ወተትን የህፃን አመገብ ዘዴ እንዴት እንደሚሰጠው ነግረዎት ነበር	1. አዎ 2. የለም