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Assessment of factors associated with infant and young child feeding practices of HIV Positive mothers in selected hospitals of SNNPR, Ethiopia.

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ABBREVIATIONS

AAU	Addis Ababa University
AIDS	Acquired Immune Deficiency Syndrome
AFASS	Acceptability, Feasibility, Affordability, Sustainability, Safety
ART	Anti retro viral therapy
C/S	Cesarean section
EBF	Exclusive breast feeding
ERF	Exclusive replacement feeding
FDRE	Federal democratic republic of Ethiopia
FHAPCO	Federal HIV/AIDS Prevention and Control Office
HAPCO	HIV/AIDS Prevention and Control Office
HIV	Human Immune Deficiency Virus
IYCF	Infant and young child feeding
MTCT	Mother to child transmission
MF	Mixed feeding
NGO	Nongovernmental organization
SNNPR	Southern Nations Nationalities and Peoples of Region
SVD	Spontaneous vaginal delivery
UNICEF	United Nations Children's Fund
WHO	World Health Organization

ABSTRACT

Introduction: Mother-to-child transmission is the largest source of HIV infection in children. About one third of children infected are believed to be vertically during breast-feeding. Infant feeding in the context of HIV is complex. HIV positive women are confused about feeding methods and mixed feeding continued to be widespread. However, there is little literature on the practice of HIV positive mothers and counseling message of health workers in Ethiopia.

Objective: The objective of this study was to assess magnitude and factors associated with infant and young child feeding practice of HIV positive mothers in selected hospitals, Southern Nations Nationalities and Peoples of Region, 2011.

Methods: An institution based cross sectional study was conducted using both quantitative and qualitative methods. A total of 201 HIV positive mothers with children less than two years of age were selected at morning time in order of arrival. Health workers working on anti-retroviral therapy and prevention of mother to child transmission clinics were taken for in-depth interview in Hawassa, Yirgalem and Dilla Hospitals.

Result: A sample of 183 HIV positive mothers participated in the study making the response rate of 91%. Of all respondent, 87(47.5%) HIV positive mothers had children with the age of less than 6 months, among 87(47.5%) HIV positive mothers, 56.3% had experience of exclusive breast feeding, 35.6% mixed feeding and 8.1% exclusive replacement feeding. Regarding issues discussed during counseling time by health workers, from total of 183 HIV positive mothers, 78.7% mothers received counseling on different feeding options. Most, 96.2% and 76.0% of mothers received counseling on advantages & disadvantages of breast feeding respectively, and 67.8% and 71% disadvantages of replacement and mixed feeding respectively. Mother's who had antenatal follow up and favorable attitude towards feeding options were more likely to practice exclusive breast feeding and less likely to practice mixed feeding.

Conclusions and Recommendations: more than half of mothers practiced exclusive breast feeding and very small proportion of HIV positive mothers chose replacement feeding, but still greater than one third of HIV positive mothers practiced mixed feeding. In general, infant and young child feeding practices observed in this study fall sort of the WHO recommendations, so it is recommended that all HIV positive mothers should be provided with adequate information to enable them to select the best feeding option for their babies, and to successfully carry out their infant feeding decisions.

1. INTRODUCTION

Mother-to-child transmission of HIV (MTCT) has become a rare event in well resourced settings with the widespread access to effective antiretroviral treatment. In 2008, around 370,000 children worldwide were newly HIV infected with 90% of these in sub-Saharan Africa. Based on single point HIV prevalence estimate, in 2010, Ethiopia Adult (15-49 years) HIV Prevalence was 2.4 % (urban 7.7% rural 0.9%) while HIV Positive Births were 14,276 (1). SNNPR is one of the regions in Ethiopia which has a high rate of HIV prevalence, with adult HIV prevalence of 2.3% (10.2% in urban areas and 1.5% in rural areas) (2).

MTCT is by far the largest source of HIV infection, with 90% of the cases infected during pregnancy, birth or breast-feeding (3). About 10-20% of the babies acquire the virus from their mothers during breast-feeding for the first 24 months (4, 5).

Infant feeding in the context of HIV is complex because of the major influence that feeding practices and nutrition have on child survival. HIV positive women were confused about feeding methods and mixed feeding continued to be widespread (6).

WHO/UNAIDS guidance states that when replacement feeding is acceptable, feasible, affordable, sustainable, and safe, avoidance of all breastfeeding by HIV infected mothers is recommended to prevent postnatal transmission of HIV infection. Otherwise, it is recommended to follow exclusive breast feeding during the first 6 months of life. The recommendation further state that HIV infected mothers should receive counseling on the risks and benefits of different infant feeding options and be given guidance and support to choose the most appropriate option for their situation (7).

As key gatekeepers in influencing mothers' decisions on infant feeding, health workers can help to reduce rates of postnatal transmission of HIV by providing HIV-infected mothers with accurate information on infant feeding that captures the risks and benefits of different feeding options. Studying what health workers currently believe and practice regarding infant feeding for HIV infected women is an important concern because attitudes and cultural beliefs may affect their counseling behavior (8, 9).

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

2. LITRATURE REVIEW

In 2006 the WHO recommended that HIV positive mothers exclusively breastfeed their infants for 6 months and then rapidly wean. After weaning, mothers were advised to begin giving replacement feeding but an emphasis was placed on the dangers of mixed feeding. Mixed feeding was believed to increase HIV transmission. It was also advised that replacement feeding could take place where it was “acceptable, feasible, affordable, sustainable and safe” (10).

The latest (2010) guideline produced by the WHO is that in order to reduce the risk of the baby becoming infected, mothers, or their infant(s),is/ are advised to take a course of antiretroviral drugs throughout the breastfeeding period. Mothers are also advised to exclusively breastfeed their infant for 6 months and after time, introduce other food substances while continuing to breastfeed for up to a year(6).

In Ethiopia the first PMTCT guideline was published by the FMOH in November 2001. The revised guideline ,in 2007, recommends for all HIV positive mothers living in resource constrained settings will be Exclusive breastfeeding (EBF) for the first 6 month with complementary feeding at 6 months and continuing of BF 12-18 months(11).

Awareness of health workers towards infant feeding options recommended to HIV positive mothers

A study done in Côte d’Ivoire, 92% of health workers were aware of the fact that some children can have HIV infection through breast milk (12).

A cording to a study done in four African countries, a program for prevention of mother to child transmission, only 7% of health workers were correctly able to estimate the risk of transmission of HIV from an infected mother to child at birth(13).

In a study done in Malawi, almost all of the health workers were aware that breastfeeding was mode of transition of HIV from an infected mother to her infant, but they were uncertain about the estimated risk from this practice(14).

Attitude of health workers about infant feeding options recommended to HIV positive mothers

A qualitative study done in Malawi, half of health workers believed that all or most HIV infected mothers would transmit the virus during breastfeeding while half believed that only some mothers would transmit the virus. Most health workers believed that HIV-infected mothers should breastfeed exclusively, on the other hand, some of them believed that HIV-infected women should not breastfeed because of the risk involved in transmitting the virus to the infant(14).

In a study done in Cote d'Ivoire showed that 76% of health workers believed that complete avoidance of breastfeeding would be more acceptable and feasible for children born to HIV-infected mother rather than exclusive breastfeeding with early cessation (12).

Feeding practice of HIV positive Mothers

In South Africa, a study found that only 25% of mothers exclusively breastfed where as 75% of women used formula or undertook mixed feeding during the first 6 months(15).

A study in Zambia showed that all mothers breastfed but only 35% of infants below 4 months were exclusively breastfed. Commercial formula milk and cow's milk were used by 26.8% of mothers as breast milk substitutes (16).

According to a study done in Eastern Uganda, 91.5% of HIV positive mothers initiated breastfeeding while 8.5% never breastfed their infants. Pre-lacteal feeding was given by 64%, (17).

According to a study done in rural district in Uganda, even if most (84.5%) of HIV positive mothers had ever breastfed their infants, but only 31.5% of mothers had experience of exclusive breast feeding, and 15.5% of mothers had experience of exclusive replacement feeding since birth (18).

From a Study done in Kenya indicated that; 35% of HIV positive mothers had practice of exclusive breast feeding while 50% had replacement feeding and 14% had mixed feeding. Mothers who had disclosed their HIV status to their spouses were more likely not to breastfeed than mothers who had not disclosed their status (19).

Descriptive longitudinal cohort studies done in Zambia, despite strong support for good breastfeeding practice, only 37% of women were EBF at week 16. Factors significantly associated with shorter duration of EBF were prim parity, maternal systemic illness, and infant length at 6 weeks (20).

A clinical trial in Ethiopia, designed to evaluate the efficacy of ARVs in preventing of HIV through breastfeeding, followed breastfeeding and non-breastfeeding sero positive women. Researchers found that less than half (46.8%) of infants who were breastfed in the first week of life were exclusively breastfed. From infants who had been breastfed at all, 16% were weaned by two weeks, and 66% by 4 months(21).

According to finding from Addis Ababa, nearly half (46.8%) of the mothers practiced exclusive replacement feeding ; 30.6% used exclusive breast-Feeding ; 15.3% used mixed feeding and the rest 7.3% practiced breast-feeding for 2 months followed by replacement feeding there after expressed breast-milk feeding and wet-nursing were practiced by 4.3% and 0.3% respectively

The same study in Addis Ababa among mothers who practiced mixed feeding, the commonest reasons cited were neighbor's advice in 40%; while insufficient breast milk, husband imposition, mother's illness and both mother's and infant's illness were mentioned by 26%, 14%, 8% and 6.0% respectively. This study also identified, most (79, 1%) mothers started complementary food at child age of 6-9 months and Small proportion (20.4%) of respondents started complementary food for child age before 6months (22).

Counseling practice of health workers related to infant feeding options recommended to HIV Positive women

Appropriate and good quality infant feeding counseling is best in the PMTCT and women to adhere the chosen methods (23).All HIV-infected mothers should receive counseling, which includes provision of general information about the risks and benefits of various infant feeding options and specific guidance in selecting the option most likely to be suitable for their situation. Whatever a mother decides, she should be supported in her choice (24).

A study done in Botswana, Kenya, Malawi and Uganda, Poor infant feeding counseling is a common finding across PMTCT programs even after training. This and the lack of subsequent

support for the infant feeding decision, almost inevitably leads to mixed feeding which increases the risk of MTCT (13).

Study in four African countries shows that infant feeding options were mentioned in 48% observations of PMTCT counseling sessions. In nearly all these sessions either breastfeeding 85% or formula feeding 10% was the only options offered to mothers. Discussion about Exclusive breast feeding for 6 months were takes place in about 88.6%, among this advantage of EBF, only 25.7%, advantage and disadvantage of ERF discussed in about 62.9% (25).

Across sectional study design done in South Africa designed to assess counseling practice of health workers showed that discussion about availability of different feeding option takes place in about 85% of HIV positive mothers (26).

ANC follow up, disclosure status and attitude towards feeding options of HIV positive mothers

A study from India indicated, large proportion of HIV positive mothers disclose their sero-status, of whom most (67%) of them disclose to their husband (27).

A study done in South Africa reveled that, in multivariate analysis, having ANC visits was identified as protective factor from mixed feeding. Findings of this study raise concern over the implementation of infant feeding policy at health care facilities (26).

From study done in Addis Ababa, 54% of HIV positive mothers disclose their sero status to their spouse. Mothers disclose their sero-status to their spouse more likely to practice exclusive replacement feeding. In the same study area, the percentage of mothers who had ANC follow up and favorable attitude towards recommended feeding options were 94.2% and 87.2% respectively (22)

3. OBJECTIVE

3.1. GENERAL OBJECTIVE

- ❖ To assess the magnitude and factors associated with infant and young child feeding practice of HIV positive mothers in Hawassa, Yirgalem and Dilla hospitals of SNNPR, Ethiopia, 2011.

3.2. SPECIFIC OBJECTIVES

- To assess infant and young child feeding practices of HIV positive mothers (timely initiation, exclusive breast feeding, complementary feeding and replacement feeding).
- To assess infant and young child counseling practice of health workers.
- To describe the attitude of HIV positive mothers and health workers about infant and young child feeding options recommended for HIV positive mothers.
- To assess factors associated with infant and young child feeding practice of HIV positive mothers.

4. METHODOLOGY

4.1. Study area and period

The Southern Nations Nationalities and People's Regional State (SNNPRS) consists of 13 zones and 104 woredas. The region has an estimated 15,042,531 (20.4% of the national estimate) people. Close to 90% of the population are estimated to be rural inhabitants, while 1,545,710 or 10.3% are urban; this makes the SNNPR Ethiopia's most rural region. The study was conducted in Hawassa, Yirgalem and Dilla hospitals. Hawassa referral and teaching hospital is located in Hawassa which is 275 km south of Addis Ababa, the capital city of Ethiopia. Currently 1000 HIV positive women are on ART of which 126 women have children less than two years old. Yirgalem Hospital is located in Yirgalem town in southern Ethiopia, located 315 kilometers South of Addis Ababa and 40 kilometers south of Hawassa. Currently 732 HIV positive women are on ART of which 121 women had children less than two years old, and also Dilla referral hospital is located 365km south of Addis Ababa in Gedeo Zone of SNNPR. Currently 612 HIV positive women are on ART of which 104 women with children less than two years of age. The study was conducted in December, 2010-May, 2011.

4.2. Study Design

A cross sectional study was conducted using both quantitative and qualitative methods.

4.3. Source Population

For quantitative study

-HIV positive mothers with children less than 2 years old and who had follow-up in Hawassa, Yirgalem and Dilla hospitals.

For qualitative study

-Health workers in ART/PMTCT service in Hawassa, Yirgalem and Dilla hospitals.

4.4. Study population

For quantitative study

HIV positive mothers with children less than 2 years of old, who had follow-up and present on the time of data collection time in, Hawassa, Yirgalem and Dilla hospitals

For qualitative study

Health workers working in ART & PMTCT service of Hawassa, Yirgalem and Dilla hospitals.

4.5. Sample size determination

Sample size for quantitative study was determined using the formula of single population proportion in the following assumptions.

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

- Desired precision (d) = 0.05
- Expected prevalence (p) = 46.8% which is exclusive replacement feeding rate HIV positive mothers (22)
- $Z_{\alpha/2}$ at 95% confidence level = 1.96

Based on the assumption, the calculated sample size (n_o) was =

$$n = \frac{(1.96)^2 \times 0.468(0.532)}{0.05^2} = 383$$

And, using finite population correction formula to estimate final sample size (n_f) from a finite target population (N) = 351

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

For $n_f = 183$ and by adding 10% for non response rate during the actual study then the sample size was **201**

The sample size was divided in to three according to the number of study subjects on follow up in each Hospital (proportional to size).

4.5. Sampling procedures

a) Quantitative component

HIV positive mothers with their infants and young children visiting the three hospitals in the morning time were taken in order of arrival (almost random sampling technique).

Inclusion criteria: HIV positive mothers with children less than 2 years and visiting these three hospitals

Exclusion criteria- mothers seriously ill who were unable to respond

b) Qualitative component

In-depth interviews were conducted among volunteered health workers till reached to a point of saturation of information. The selection was done by consulting administrators of the health institutions, in order to identify health workers who were directly involved to the PMTCT/ART service provision.

4.6. Data Collection Tools and procedures

Quantitative

Structured questionnaires were adopted and some modification was made according to the objective of this study. The questionnaire was initially prepared in English and then translated in to Amharic. The Amharic version was again translated back to English to check for consistency of meaning. The translated Amharic version questionnaire was pre-tested prior to the actual data

collection on 10(5%) respondents outside of the study area, at Hawassa health center in similar population group. Modification of some questions was made based on findings from the pre-test. Six diploma nurses were recruited for data collection. Three supervisors with first degree in public health and nursing were recruited from Hawassa, Yirgalem and Dilla hospitals. A two days training was given for data collectors and supervisors on how to collect the data and other related procedures by the principal investigator. Continuous follow up and supervision was made by supervisors and the principal investigator throughout the data collection period.

Qualitative

Qualitative data was collected through in-depth interview. A total of 10 in-depth interviews were conducted among respondents working on ART/PMTCT sites using volunteer sampling technique. In-depth interview was held until saturation and the average time taken was 30-45 minutes. A semi-structured open ended topic guide was used for in-depth interview to facilitate the discussion and all interviews were collected by principal investigator. Each in-depth interview was tape recorded, transcribed, translated and finally summarized for write up. The theme: Awareness, attitudes and counselling messages of health workers related to feeding Options recommended to HIV-positive mothers.

4.7. Data Quality assurance

Quantitative

To assure data quality, data collectors with previous experience of data collection were recruited and a two days training given both for the data collectors and supervisors. Moreover questionnaire was pre-tested and necessary amendment was considered. The collected data was reviewed and checked for completeness and consistency by supervisors and principal investigator on daily bases at the spot during the field work.

Qualitative

Participants were inquired to give a genuine response by explaining the purpose and importance of the study. The interview was held in none working hours. In-depth interview was conducted by principal investigator.

4.8. Data processing and Analysis

Quantitative

Data were coded and entered into EPI/INFO version 3.3.1 and cleaned and checked for outliers and completeness. For analysis, the data was exported to SPSS Version 16 and was checked for missing values. Frequencies were used for describing the study population in relation to relevant variables. Bivariate logistic regression analysis was calculated to assess the presence and degree of association between dependent and independent variables. Adjusted odd ratio using Multivariate logistic regression model was used to control for possible confounding effects and to assess the separate effect of the variables.

In the three closed ended attitude questions with Likert scales, five options were mentioned ranging from 1= strongly dis-agree to 5=strongly agree, and a total score was calculated.

Qualitative

The tape recorded data was transcribed and translated .The translated data was transported to Open Code software and analyzed using thematic analysis

4.9. Study Variables

4.9.1. Dependent Variables

Feeding practice (EBF, ERF, MF)

4.9.2. Independent Variables

Socio demographic variables:

- ✓ Age, marital status, education and occupation status of Mothers
- ✓ Education status and occupation of spouse
- ✓ household income

Maternal related factors:

- ✓ Awareness and attitude
- ✓ Disclosure of HIV status
- ✓ Place of delivery
- ✓ Mode of delivery
- ✓ Antenatal follow up
- ✓ Time of first antenatal visit

Factors related to health workers:

- ✓ awareness, attitude and counseling practice

4.10. Standard and operational definitions

Breast feeding: refers to the child receiving breast milk direct from the breast or expressed.

Exclusive breastfeeding under 6 months: Proportion of infants 0–6 months of age who are fed exclusively with breast milk.

Infants 0-5.9 months of age who received only breast milk during the previous day

Infants 0-5.9 months of age

Early/Timely initiation of breastfeeding: Proportion of children born in the last 23 months who were put to the breast within one hour of birth

Children 0-23.9 months of age who were put to the breast within one hour of birth

Children 0-23.9 months of age

Mixed feeding: feeding both breast milk and other foods or liquids less than six months.

Complementary foods: Introduction of solid, semi-solid or soft food in addition to breast milk

Complementary feeding: Proportion of infants 6–9 months of age who receive complementary foods

Infants 6–9 months of age who received solid, semi-solid or soft foods during the previous day

Infants 6–9 months of age

Exclusive replacement feeding: feeding a child who is not receiving breast milk with diet that provide all the nutrients to the child needs until the child fully fed on family foods.

Cessation of breastfeeding: completely stopping breastfeeding, including suckling

Awareness of HIV positive mothers towards the recommended feeding options: mothers who responded at least one correct recommended feeding options considered to be having awareness about it.

Attitude of HIV positive mothers: an opinion, outlook or idea towards recommended feeding options for HIV positive women.

Three closed ended questions were applied and the response option was Likert scale ranging from strongly agrees to strongly disagree. This scoring with the mean and above was considered have favorable attitude.

Counseling practice of health workers: health workers who apply recommended options during counseling of HIV positive mothers

4.11. Ethical Considerations

The proposal was submitted to the Research ethics committee (REC) of the School of Public Health and Addis Ababa University. Following the endorsement by the REC, Hawassa Referral Hospital, Yirgalem and Della Hospitals were informed about the objectives of the study through a support letter from the School of Public Health, AAU and written permission was obtained from the Hospitals administration. Each woman was informed about the purpose of the study and the right of the women not to participate in the study was respected. Confidentiality of the respondents was respected. Informed consent was obtained from HIV positive mothers and health workers. After data collection necessary advice on different feeding options as well as side effects of mixed feeding were explained to HIV positive mothers.

5. RESULT

I. QUANTITATIVE

5.1. Socio-demographic characteristics

A total of 183 HIV positive mothers with infants and young children 0-23.9 months of age from three selected hospitals of SNNPR were included in the study making the response rate 91%. The rest 9% did not respond because they were absent on their follow up date. The mean age of the mothers and their children were 26 (SD±5.5) years and 7.8 (SD±5.6) months respectively. The majority of mothers, 155(84.7) were married. One third, 51(27.9%) mothers had no formal education and 81(44.3%) of husbands completed elementary school (1-8 grade). Eighty seven (47.5%) of respondents were Orthodox followed by protestant, 77(42.1%) in religion, and the dominant ethnic groups were Amhara and Sidama with 47(25.7 %,) and 44(24.0%) respectively. More than half, 119 (65%) mothers were house wives. But, 91(50.5%) husbands were employed. Regarding mothers duration of living with the husband, 72 (39.3%) mothers lived 1-5 years. Majority of respondents, 157 (86.3%) used pipe as source of drinking water, 16 (8.8%) and 9(4.9%) used spring and well water respectively. One third of, 73(39.9%) of respondents had monthly income of less than 400br (Table- 1).

Table -1- Socio demographic characteristics of HIV positive mothers in Hawassa, Yirgalem and Dilla hospitals of SNNPR, 2011, (n=183)

Variable	Frequency	Percent (%)
Age of mothers		
15-24	70	38.3
25-34	93	50.8
35-49	20	10.9
Age group of children		
<6months	87	47.5
6-11months	52	28.4
>11 months	46	25.1
Marital status		
Marred	155	84.7
Divorce	20	10.9
Widowed	3	1.7
Separated	5	2.7
Education of mothers		
No formal education	51	27.9
write & read	20	10.9
Grade 1-8	48	26.2
Grade 9-12	50	27.3
>grade 12	14	7.7
Religion		
Orthodox	87	47.5
Protestant	77	42.1
Muslim	16	8.7
Catholic	3	1.6
Ethnic group		
Amhara	47	25.7
Sidama	44	24.0
Oromo	23	12.6
Gedeo	22	12.0
Welyta	21	11.5
Guragie	14	7.7
Others *	9	4.8
Occupation of mothers		
Employed	38	20.8
house wife	119	65.0
Merchant	18	9.8
Others**	8	4.3
Income		
<400birr	73	39.9
401-800birr	62	33.9
>800birr	48	26.2

*Others= silitie, Tigre, gamo

**others=student, supported by NGO, house made, daily labor

5.2. Obstetric history and ART prophylaxis of HIV positive mothers

From the total of 183 mothers, 151(82.5%) mothers were attending antenatal follow up, of whom majority of mothers attended during the first trimester, 108(71.5%) followed by second trimester, 43(28.5). Most, 155(84.7%) mothers delivered at governmental hospital and health center followed by 19(10.4%) delivered at home. Among those who delivered at health institution, 139(84.7%) respondents delivered with SVD followed by Cesarean section, 15(9.2%). The largest proportion of mothers, 111 (60.7%) and their children 148(80.9) took prophylaxes on the onset of labor and within 72 hours of birth respectively (Table -2).

Table 2: Obstetric histories of HIV positive mothers in Hawassa, Yirgalem and Dilla hospitals, SNNPR, 2011

Variable	Number	Percent
ANC follow up (n= 183)		
Yes	151	82.5
No	32	17.5
Place of delivery (n= 183)		
government hospital and health center	155	84.7
private hospital and clinic	9	4.9
Home	19	10.4
Types of institutional based delivery (n=164)		
SVD	139	84.7
SVD with episiotomy	9	5.5
C/S	15	9.2
Forceps	1	0.6
Ever started ART (n=183)		
Yes	111	60.7
No	72	39.3
ART prophylaxis given to the mother during pregnancy (n=72)		
Yes	47	65.3
No	25	34.7
ARV prophylaxis given to the child(n=183)		
Yes	148	80.9
No	35	19.1

5.3. Awareness and attitude towards the recommended feeding options and disclosure Status of HIV positive mothers

Large proportion, 174(95.1%) respondents heard about feeding options. Many of them 162(93.6%) received from health professionals. One hundred sixty four (89.6%) HIV positive mothers had awareness towards recommended feeding options. Majority, 175(95.6%) of HIV positive mothers had disclosed their sero status, and most, 131 (75%) of them disclosed to their husband. Regarding attitude of mothers towards feeding options, three closed ended questions using Likert scale were applied ranging from 1= strongly disagree to 5=strongly agree and the total sum score was calculated and those who scores above the mean considered have favorable attitude. Of all respondents 94(51.4%) have favorable attitude towards recommended feeding options (Table-3)

Table 3 – Awareness and attitude towards recommended feeding options and disclosure status of HIV positive mothers in Hawassa, Yirgalem and Dilla hospitals, SNNPR, 2011

Variable (n=183)	Number	Percent (%)
Heard about feeding options		
Yes	174	95.1
No	9	4.9
Source of information about feeding options *		
Neighbors	16	9.2%
Health professionals	162	93.6%
Husband	3	1.7%
Mass media	4	2.3%
Awareness about recommended feeding options		
Aware	164	89.6
Not aware	19	10.4
Disclosure status of mothers		
Yes	175	95.6
No	8	4.4
Attitude		
Favorable	101	55.2
Unfavorable	82	44.8

*= more than one answer is possible

5.4. Feeding practice of HIV positive mothers

From the total of 183 HIV positive mothers, 87 (47.5%) HIV positive mothers had children with age less than 6 months. Out of 87 (47.5%) HIV positive mothers, 49(56.3%) mothers exclusively breast fed their children, 31(35.6%) mothers practiced mixed feeding and 7(8.1%) mothers practiced exclusive replacement feeding,(figure.1).

From the total of 183 HIV positive mothers, 172(94%) mothers ever breast fed their children of whom, 98 (57%) mothers initiated the first milk less than one hour after birth. Sixteen infants (9.3%) received food/fluid before the first breast milk.

Among mothers practiced mixed feeding the commonest reasons were, 13(41.9%) of mothers reported it was due to infant sickness, 8(25.8%) influenced by people advice and 7(22.5%) conform to had custom.

Of 87 HIV positive mothers with children with age less than 6 months, 8(10.0%) respondents ever expressed their breast milk of whom, 1(12.5%) feed the expressed breast milk without treating with heat. One third, 3(37.5%) of the respondents used bottle and spoon followed by 2(25%) bottle only for feeding the expressed milk. Six (75%) of the mothers used the expressed milk for the sake of relieving breast engorgement while 1(12.5%) because child was unable to breast feed.

From those who ever gave replacement feeding half, 4(50%) of mothers used home prepared food and 2(25%) used commercial formula as replacement food. five (62.5%) mothers had not

seen demonstration how to prepare the infant formula food. Majority, 7 (87.5%) mothers had no refrigerator and some 3(13%) of mothers did not boil water for washing utensil. Half, 92(50.3%) respondents started complementary food, out of which,145(79.2%) mothers started when the children age was 6-9 months and 31 (16.9%) mothers started when the children age was <6months of age (Table-4 & figure -3).

Table- 4: Feeding practice of HIV positive mothers in Hawassa, Yirgalem and Dilla hospitals, SNNPR, 2011

Variable	Number	Percent
Ever breast feed (n=183)		
Yes	172	94.0
No	11	6.0
Time of first initiation of birth milk (n=172)		
first 1 hr	98	57.0
first 8 hrs	56	32.6
after 8 hrs	18	10.5
Infant received any food or fluid before breast milk (172)		
Yes	16	9.3
No	156	90.0
Expressed breast milk(n= 80)		
Yes	8	10.0
No	72	90.0
Ever gave the expressed milk(n=8)		
Yes	1	12.5
No	7	87.5
Ever replacement feed your child(n= 87)		
Yes	8	9.1
No	79	90.9
Kind of food used for replacement feeding (n= 8)		
Commercial formula	2	25.0
Home prepared	4	50.0
Both	2	25.0
Seen demonstration for preparation of RF(n= 8)		
Yes	3	37.5
No	5	62.5
Refrigerator (n= 8)		
Yes	1	12.5
No	7	87.5
Start complementary food(n=183)		
Yes	92	50.3
No	91	49.7

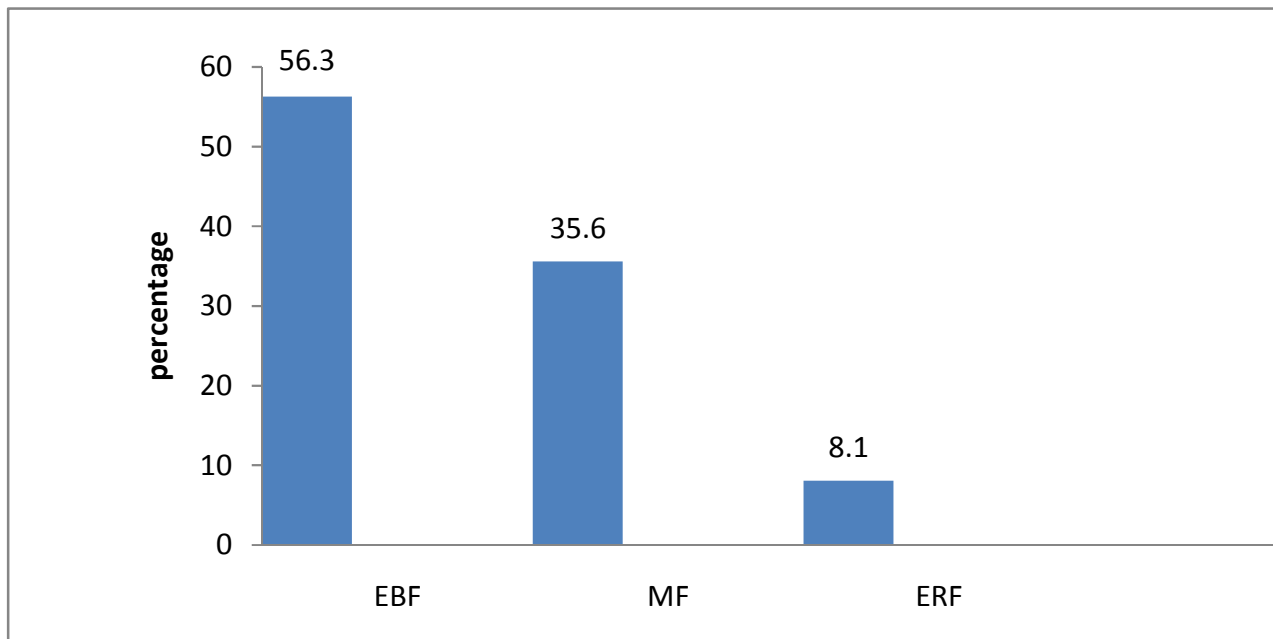


Figure 1-Feeding practice of HIV positive mothers in three selected hospitals of SNNPR, 2011

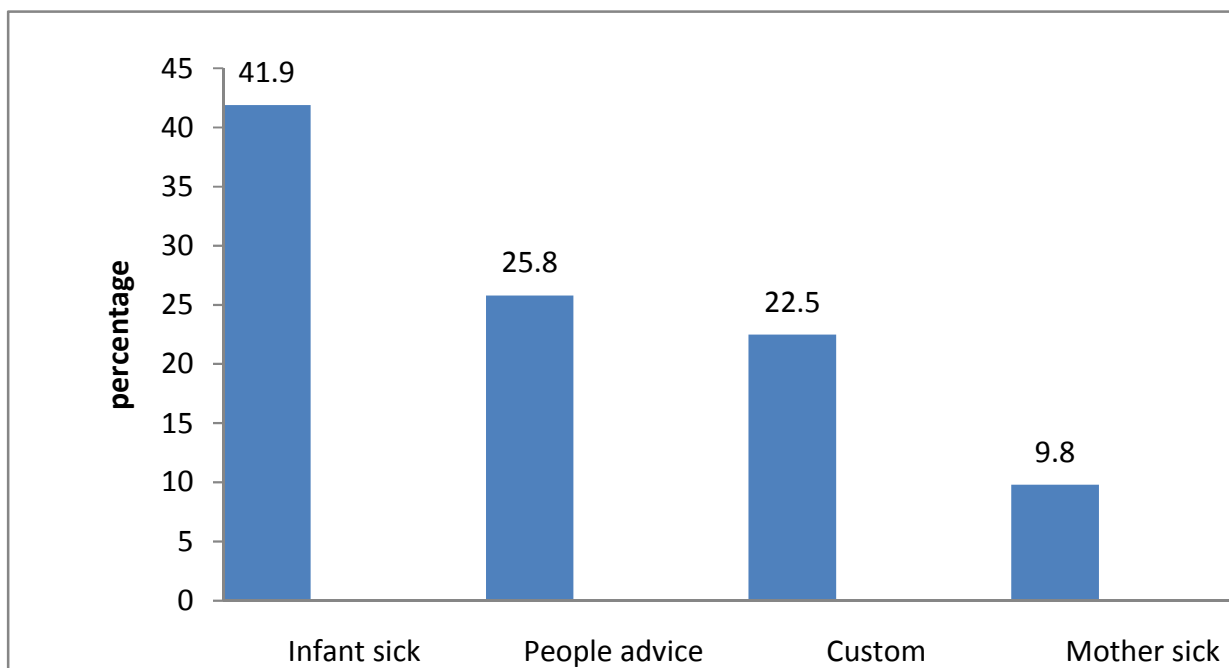


Figure -2: Reasons for mixed feeding of HIV positive mothers in selected hospitals of SNNPR, 2011.

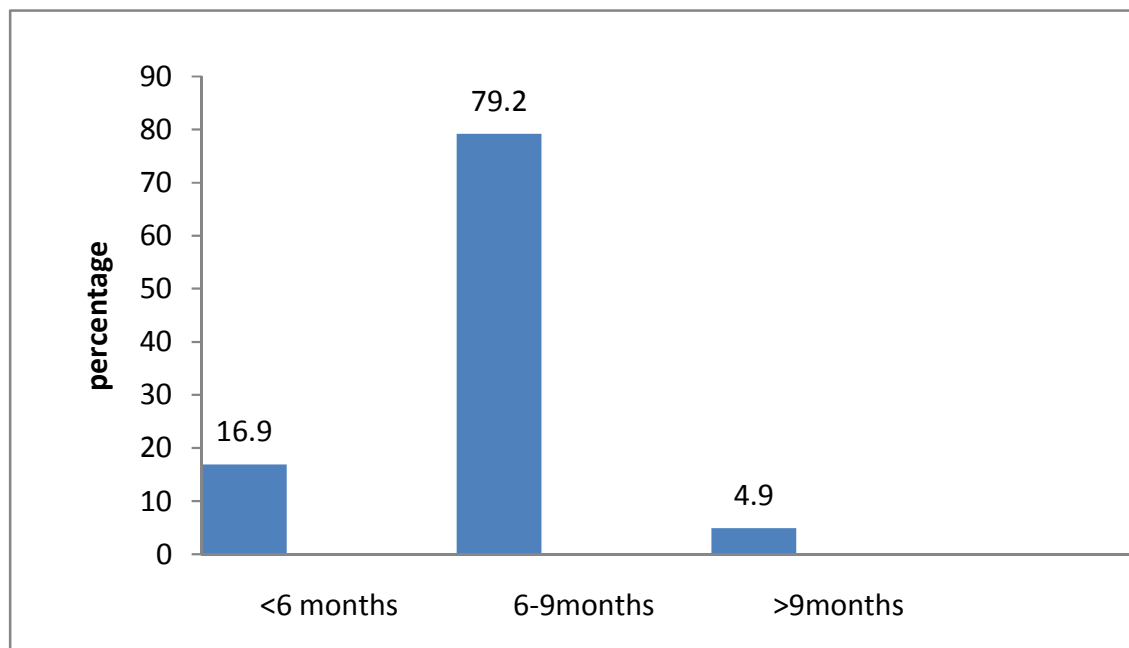


Figure.3. Starting age of Complementary feeding of infants and young children in selected hospitals of SNNPR, 2011

5.5. Cessation of breast feeding practice of HIV positive mothers

From the total of 131(71.6%) respondents who ever breast feed their children, 61(46.5%) respondents were who would like to stop breast feeding within 6-12months followed by 28(21.4%) who would like to stop <6months. Fifty two (28.4%) respondents ceased breast feeding at the time of data collection. From those who ceased BF at the time of data collection, 42(84%) respondents ceased breast feeding while the child age was 6-12 months followed by 10(16%) ceased breast feeding while the child age was less than 6month. More than half, 34 (68%) of respondents ceased breast feeding due to fear of transmission of HIV followed by 18(36%) for encouraging the child to eat solid foods. Of them who ceased breast feeding, 31(58.5%) of them faced different types of problems after stopping breast feeding (Table-5).

Table: 5 Cession of breast feeding practice of HIV positive mothers in Hawassa, Yirgalem and Dilla hospitals, SNNPR, 2011

Variable	Number	Percent (%)
Currently breast feeding		
Yes	131	71.6
No	52	28.4
Age of child when stop breast feeding(n=52)		
<6months	10	16
6-12months	42	84
Reasons for cessation of breast feeding (n= 52)*		
To encourage child to eat solid foods	18	36.0
Fear of transmission of HIV	34	68.0
Advice by health professionals	8	16.0
Others	9	18.0
Faced Problem after stopping BF(52)		
Yes	31	58.5
No	21	41.5

Others= Infant sick to breast feed, mother sick to breast feed, advice by husband, mother can afford to buy replacement feeding.

5. 6.Counseling practice of health workers

Out of 183 respondents, 129(70.5%) respondents were counseled by female health workers. During counseling sessions health workers discussed different points regarding feeding options for HIV positive mothers. Of all, 144(78.7%) mothers received counseling on different feeding options. Most mothers received counseling on advantages 176(96.2%) and disadvantages 144(78.7%) of EBF. One hundred thirty six (74.3%) and 124(67.8%) mothers received counseling on advantages and disadvantages of ERF respectively and 130 (71.0%) mothers received counseling on risk of mixed feeding. Majority, 156 (85.2%) respondents replaid that they were shown demonstration how to use the chosen feeding options.

5.7. Determinants of exclusive breast feeding

Bivariate logistic regression analysis revealed that antenatal follow up and attitude of mothers towards feeding options were significantly associated with exclusive breast feeding practice ($p < 0.05$), [Table-6]. In multivariate analysis also attitude of mothers towards feeding option and ANC follow up were retained as determinant factors for EBF [Table 8]. I.e. The odds of practicing exclusive breast feeding was 11 times more likely in women who had favorable attitude towards feeding options with AOR(95% CI) : 11[3.5-35.5] and the probability of practicing exclusive breast feeding was 4.6 times more likely to mothers who had ANC follow up with AOR(95% CI): 4.6[1.3-16.6].

Table -6: Bivariate logistic regression analysis showing relation between exclusive breast feeding practice and selected variables of HIV positive mothers in selected hospital of SNNPR, 2011

Variables(n=172)	EBF		COR[95%CI]
	Yes N [%]	No N[%]	
Age of mother			
15-29	34[56.7]	26[43.3]	1
30-49	15[75.0]	5[25.0]	2.3[0.7-7.1]
Educational status of mother			
</=8 grades	34[57.6]	25[42.4]	1
>8grade	15[71.4]	6[28.6]	1.8[0.6-5.4]
Occupation of mother			
Employed	10[83.3]	2[16.7]	3.7[0.8-18.2]
Unemployed	39[57.4]	29[42.6]	1
Income			
<400Ebr	21[67.7]	10[32.3]	1
401-800Ebr	15[55.6]	12[44.4]	0.6[0.2-1.7]
>800Ebr	13[59.1]	9[40.9]	0.7[0.2-2.1]
ANC follow up			
Yes	45[67.2]	22[32.8]	4.6[1.3-16.6]*
No	4[30.8]	9[69.2]	1
Disclosure status of mother			
Yes	48[62.3]	29[37.7]	3.3[0.3-38.1]
No	1[33.3]	2[66.7]	1
Attitude of mothers towards feeding options			
Favorable	38[82.6]	8[17.4]	9.9[3.5-28.3]**
Unfavorable	11[32.4]	23[67.6]	1
Awareness of mothers towards feeding option			
Awareness	47[66.2]	24[33.8]	6.8[1.3-35.6]*
unaware	2[22.2]	7[77.8]	1
Discussion about d/t feeding option during counseling session			
Yes	22[68.8]	10[31.2]	1.7[0.7-.3]
No	27[56.2]	21[43.8]	

*=P<0.05, **=P<0.01

5.8. Determinants of mixed feeding

Among the variables of infant feeding practice, exclusive replacement feeding was practiced by very few numbers (7) of mothers. As a result, the numbers/proportions related to it were found to be too little for any cross tabulation or statistical test, and hence excluded from such further statistical analysis.

The Bivariate logistic regression analysis revealed that mixed feeding has significant association with antenatal follow up and attitude of mothers towards feeding options ,(p<0.05) [Table 7]. In multivariate analysis also shows attitude of mothers towards feeding options and ANC follow up retain as determinant factors for mixed feeding, [Table 9]. i.e. The odds of practicing mixed feeding was 11 times more likely in unfavorable attitude towards feeding options with AOR(95% CI) : 11[1.1-15.9], and mother who had not ANC follow up was 4.2 times more likely to practice mixed feeding with AOR(95% CI) : 4.2[1.1-15.9]

Table- 7: Bivariate logistic regression analysis showing association between mixed feeding practice and selected variables of HIV positive mothers in selected hospital of SNNPR, 2011

Variables(n=172)	MF		COR[95%CI]
	Yes N[%]	No N[%]	
Age of mother			
15-29	26[43.3]	34[56.7]	1
30-49	5[25.0]	15[75.0]	2.3[0.7-7.1]
Educational status of mother			
</=8 grades	25[42.4]	34[57.6]	1.8[0.6-5.4]
>8grade	6[28.6]	15[71.4]	1
Occupation of mother			
Employed	2[16.7]	10[83.3]	1
Unemployed	29[42.6]	39[57.4]	3.7[0.8-18.2]
Income			
<400Ebr	10[32.3]	21[67.7]	0.7[0.2-2.1]
401-800Ebr	12[44.4]	5[55.6]	1.2[0.4-3.6]
>800Ebr	9[40.9]	13[59.1]	1
ANC follow up			
Yes	22[32.8]	45[67.2]	1
No	9[69.2]	4[30.8]	4.6[1.3-16.6]*
Disclosure status of mother			
Yes	29[37.7]	48[62.3]	1
No	2[66.7]	1[33.3]	3.3[0.3-38.1]
Attitude of mothers towards feeding options			
Favorable	8[17.4]	38[82.6]	1
Unfavorable	23[67.6]	11[32.4]	9.9[3.5-28.3]**
Awareness of mothers towards feeding option			
Awareness	24[33.8]	47[66.2]	1
unaware	7[77.8]	2[22.2]	6.8[1.3-35.6]*
Discussion about d/t feeding option during counseling session			
Yes	10[31.2]	22[68.8]	1
No	21[43.8]	27[56.2]	1.7[0.7-3]

*=P<0.05, **=P<0.01

Table 8: Results of multivariate logistic regression showing determinants of exclusive breast feeding practice of HIV positive mothers in selected hospitals of SNNPR, 2011. (n=172)

Variables	Exclusive breast feeding		AOR[95%CI]
	Yes [%]	No [%]	
Attitude of mothers towards feeding options			
Favorable	38[82.6%]	8[17.4%]	11[1.1-15.9]**
Unfavorable	11[32.4%]	23[67.6%]	1
ANC follow up			
Yes	45[67.2%]	22[32.8%]	4.2[1.1-15.9]*
No	4[30.8%]	9[69.2%]	1

*=P<0.05, **=P<0.01

Table 9: Results in multivariate logistic regression showing determinant of mixed feeding, practice of HIV positive mothers in selected hospitals of SNNPR 2011. (n=172)

Variables	Exclusive breast feeding		AOR[95%CI]
	Yes [%]	No [%]	
Attitude of mothers towards feeding options			
Favorable	8[17.4%]	38[82.6%]	1
Unfavorable	23[67.6%]	11[32.4%]	11[1.1-15.9]**
ANC follow up			
Yes	22[32.8%]	45[67.2%]	1
No	9[69.2%]	4[30.8%]	4.2[1.1-15.9]*

*=P<0.05, **=P<0.01

II. Qualitative findings

1. General information

A total of 10 counsellors with age ranging from 24-34 from three hospitals were volunteered to participate in the in-depth interview. As shown in the table -10, most of the counsellors were females with clinical nurse back ground. Majority of counsellors had experience greater than 2 years and a few had less than 2 years. Several counsellors had taken ART/PMTCT training (table 10).

Table-10-shows general information of health workers in Hawassa, Yirgalem and Dilla hospitals, 2011

Respondents	Site	Sex	Age	Profession	Experience	ART/PMTCT Training taken
1	Hawassa	Female	26	Clinical nurse	6	Yes
2	Hawassa	Female	29	Clinical nurse	7	Yes
3	Hawassa	Female	24	Clinical nurse	4	Yes
4	Yirgalem	Male	34	Clinical nurse	12	Yes
5	Yirgalem	Female	24	Midwifery nurse	2	Yes
6	Yirgalem	Female	25	Midwifery nurse	3	No
7	Yirgalem	Female	27	Midwifery nurse	4	No
8	Dilla	Male	26	Clinical nurse	2	Yes
9	Dilla	Female	24	Clinical nurse	4	Yes
10	Dilla	Female	28	Clinical nurse	3	No

2. Awareness, attitudes and counselling messages of health workers related to feeding

Options recommended to HIV-positive mothers

2.1. Exclusive breast feeding and mixed feeding

All participants understood what exclusive breastfeeding means and what the advantage of breast feeding is as illustrated by response from one of the respondents of the midwife nurse:

” exclusive breast feeding mean: - feeding an infant with breast milk alone. If this is the practice, it has an advantage of fulfilling the child’s body demand by containing all the nutrients, besides breast milk is cheap.” [Respondent -5]

Most of the participants knew that breastfeeding can be a means of transmitting HIV from an infected mother to her infant, but they were uncertain about the estimated risk from this practice.

A few believed that most HIV-infected mothers would transmit the virus during breastfeeding, while the majority correctly believed that only some mothers would transmit the virus.

Majority of participants believed that HIV-infected mothers should breastfeed exclusively, because this was the most feasible option in the community.

This statement was illustrated by a nurse in Dilla who said, "In my opinion, Yes, HIV-infected mothers are better to breastfeed because resources are scarce to buy infant formula in this community. In contrast a clinical nurse in Yirgalem said “In my opinion, HIV-infected mothers should not breastfeed. It is better to use formula from the shops, even thin porridge.” [Respondent -1, 7]

The findings from this study suggest several health workers replied most mothers use breast feeding as choice of feeding their child but some of them did not apply breast feeding exclusively.

A nurse counselor in Yirgalem hospital said “Since most mothers coming in our institution were coming from rural sites, they do not have awareness about other feeding options so that mostly use breast feeding as choice of feeding of a child” [Respondent -4]

2.2 Mixed feeding

The respondents replied on the issue of why the mother practiced mixed feeding: Introduction of solid foods before 6 months was reported as a major barrier to exclusive breastfeeding.

A nurse's illustrated, "They used to introducing other foods to the baby very early, they say nowadays children are too hungry. Thus, many start supplementary food at less than 6 months." [Respondent -9]

The other counselor said “women face increasing pressure from family members to introduce other liquids mostly when a child is sick.” [Respondent -5]

2.3. Exclusive replacement feeding

Most respondents explained replacement feeding as “feeding infants with food that replace breast milk “but most of them could not explain the terms AFASS criteria. They all agreed that it is simply too costly for ordinary people to buy the number of tins necessary to feed their infants in a safe way with infant formula.

On perception of health workers, most perceived exclusive breastfeeding to be preferable to infant formula because of the risk of contracting different disease other than HIV and most of the mother cannot afford to buy formula food.

A nurse in Della hospital replied “It will not be easy (to buy infant formula) so it is better the mother should breast feed her child” [Respondent -10]

The other nurse in Yergalem said.” In my opinion, replacement feeding is not better because we observed that mother who chose formula feed cannot adhere due to high cost of formula food.” [Respondent -6]

For infants of HIV-infected mothers, a few of respondents perceived infant formula to be preferable to exclusive breastfeeding because of the risk of contracting HIV through breastfeeding. They explained that the mother better to choose infant formula to reduce the chances of her infant contracting the disease.

Given the wide-spread poverty in this setting, infant formula is not commonly given to infants. It is only in rare cases – when mothers have the economic means to purchase it – that infant formula is used.

As clinical nurse in Dilla said: - “only small proportion living in urban and rich use it.”

And another nurse in Hawassa said “even if the rich and mother in urban use the replacement feeding option, major threat is connected to disclosure of their sero status.

Mixed feeding in situation of non-disclosure is a likely outcome.” [Respondent -8]

2.4 Counseling message/practice of health workers

Regarding the question rose what infant feeding option mostly counsel, most counsellors said that they counseled according to her situation. If she can afford to buy formula we encourage to choose it other ways encourage choosing exclusive breast feeding.

Counsellors in Yirgalem said “mostly we advise mothers to breastfeed up to 6 months because they cannot buy formula food.” [Respondent -5]

Demonstrations on how to use replacement feeding is key issue. But most counsellors in this study area did not demonstrate preparation of replacement feeding.

Counselor from Yirgalem said “mostly we did not show demonstration for the mother who chose replacement feeding because of there is no material in our institution.” [Respondent -7]

Concerning, challenges encountered during counseling of feeding option which influences adherence of the chosen feeding option or leads to mixed feeding, most nurses suggested disclosure status and language were great challenges.

As Hawassa counselor replied “the great challenge is disclosure of HIV status and the language barrier b/c in SNNPR there are 56 different types of languages so that it is difficult to counsel the clients.” [Respondent -3]

6. Discussion

The present study investigated infant and young child feeding practices in selected SNNPR hospitals. The study revealed that more than half of HIV positive mothers experienced exclusive breast feeding; some of practiced mixed feeding and very small proportion had experience of exclusive replacement feeding.

The percentage (56.3%) who practiced exclusive breast feeding in this study was higher than the figure from study done in Addis Ababa, Ethiopia (30.6%), Kenya(35%) (19, 22). This may be the comparative study areas may relied on replacement feeding (rate of RF for Kenya was 50% and Addis Ababa, 46.8%) and this shows the participants in this study area had low socio economic status to buy formula food compared to the above study areas which leads relay on easily accessible and affordable feeding option, breast feeding.

This study also identifies, from those mothers who ever breast feed, 57% of mothers timely initiated the first breast milk. Which is less than a study done in Eastern Uganda,(91.5%) (17) . This may be due to socio cultural difference of the two countries.

The rate of mixed feeding in the present study was 35.6 % which is higher than a study done in Addis Ababa, Ethiopia (15%) and Kenya (14%), but lowers than the figure from rural Uganda (61.5%) (18, 19, 22).

The main reason why mother gave this fluids/food other than breast milk before 6 months was; due to infant sickness (41.9%), people advice (25.8%) and custom (22.5%). Similar study in

Addis Ababa(22), has identified the same reasons for the practice of mixed feeding by HIV positive mothers.

The rate of exclusive replacement feeding was 8.1%. Similarly a qualitative result shows, most mothers did not use replacement feeding only when mothers have the economic means to purchase formula food. These finding was lower than compared to a study done in Addis Ababa ,46.8% and Kenya, 50% of the mothers practiced exclusive replacement feeding (19, 22).The reason may be most mothers in this study area coming from rural sites so that they might have low access to information as well as formula food. The other reason may be as counsellors said most of the mothers had low socio economic status so that cannot afford to buy the formula food.

Another finding shows that, only one mother practicing expressed but not heat treated breast-milk feeding, as well as no proportion of mother used wet-nursing by HIV negative mother which is similar what was reported from Addis Ababa (22).

This study shows that, most (79,2%) mothers started complementary food for child at age of 6-9 months and Small proportion (16.9%) of mothers started complementary food for child age before 6months.This finding is almost similar with a study done in Addis Ababa,(79.1% and 20.4% respectively) (22).

This study also shows, large proportion (95.6%) of HIV positive mothers disclose their sero-status, of whom most (75.1%) of them disclose to their husband, which is similar with a study done in India (67%) (27).

One of the influencing factors on the current recommended infant feeding practice among HIV positive mothers would be due to appropriate and good quality of infant feeding counseling in the PMTCT (23). 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 (24).

However, the percentage of women who received counseling on infant feeding options were 78.7% which is comparable with study done in South Africa, where 82% mothers received information about different feeding options (26).

Majority (96.2%), of mothers received counseling on advantage of exclusive breast feeding during counseling session, which is much higher compared to a study done in four African countries, where 25.7% of mothers received counseling on advantage of exclusive breast feeding (13). It is difficult to reason out, it may need further research to find the reason of this much discrepancy.

Most (78.7%), mothers received counseling on disadvantage of exclusive breast feeding, which is similar with what was reported by the study done in four African countries (76.0%) (25).

Several (78%) respondents said they received information on the risk of mixed feeding, which is almost similar to a study is done in South Africa (85%) (26).

Another finding from this study, 55.2% of HIV positive mothers had favorable attitude towards feeding options lower than a study done in Addis Ababa (87.2%)(22). The reason may be lack of full information regarding advantage and disadvantage of different feeding options.

Concerning determinant factors, mothers who had favorable attitude towards feeding options and mothers with ANC follow up were more likely to practice exclusive breast feeding but less likely to practice mixed feeding. As a study from Addis Ababa(22), the present study also stated that mothers who had unfavorable attitude towards feeding options were more likely to practice mixed feeding. In agreement with finding from South Africa study(26), having had ANC visits was a protective factor for mixed feeding.

Qualitative findings show that most health workers unable to estimate risk of HIV transmission which was also reported in a studies done in Malawi(14).

As reported by researcher from Malawi (14), this study also state that majority of health workers believed that HIV-infected mothers should breastfeed exclusively; on the other hand, some health workers believed that HIV-infected women should not breastfeed because of the risk involved in transmitting the virus to the infant. Even if breast milk contains HIV virus the majority of health worker attitude incline to EBF. This may be in resource limited countries (developing countries) the formula food does not fill full AFASS criteria.

Only few health workers believed that infant formula is preferable to exclusive breastfeeding because of the risk of contracting HIV through breastfeeding. They explained that the mothers should choose infant formula to reduce the chances of her infant contracting the disease which is in contrast from finding from Cote d'Ivoire(12), most health workers believed that infant formula is preferable to exclusive breastfeeding. The reason may be as most of counsellors reported; most mothers were unable to buy formula food.

7. STRENGTHS AND LIMITATIONS

Strengths

- Using both qualitative and quantitative methods
- Triangulation of finding from mothers and health workers.

Limitations

- The numbers of participants, included in the study were small. As a result, it caused the wide confidence interval.
- Study design (cross-sectional) which measures the exposure and outcome at the same time, cannot measure the cause and effect relationship.
- possibility of recall bias for questions regarding time of initiation of breastfeeding, prelacteal feeding, and complementary feeding

8. CONCLUSION

- More than half of HIV positive mothers had experience of exclusive breast feeding. Small proportion of HIV positive mothers had practice of mixed feeding, but very small proportion practiced exclusive replacement feeding. In general, infant and young child feeding practices observed in this study fall sort of the WHO recommendations.
- Half of mothers had favorable attitude towards feeding options. Majority of health workers believed that HIV-infected mothers are better to breastfeed exclusively.
- More than half of HIV positive mothers received information concerning the existence of different recommended feeding options from health workers that help make decision about infant feeding during the counseling session.
- Most of HIV positive mothers received information concerning the advantages and disadvantages of exclusive breast feeding as well advantage and disadvantage of replacement feeding during the counseling session in contrast to this relatively small proportion of HIV positive mothers received information regarding risk of mixed feeding during the counseling sessions.
- Mothers who had antenatal follow up and who had favorable attitude towards feeding options were more likely to practice exclusive breast feeding and less likely to practice mixed feeding

9. RECOMMENDATIONS.

By taking in to account the results of this study, the following recommendations are forwarded

Health workers

- Should provide adequate information to enable HIV positive mothers select the best feeding options for their babies, and to successfully carry out their infant feeding decisions.
- Should provide all the necessary information, regarding advantages and disadvantages of each feeding options for HIV positive mothers.
- Should emphasize on risk of mixed feeding during their counseling/education session.
- Should be provided with the most up-to-date information on optimal feeding practices so that they will be in a better position to give the most accurate recommendations to their patients.

Regional health office and local NGO

- Follow up training schedule should be given for counsellors working in PMTCT /ART sites.

Future research

- Further study should be conducted by including more study sites to allow a more robust analysis.

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Annex 1: 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 and PMTCT clinic for the research being conducted to the factors associated with feeding practice of lactating mothers on infant and young child feeding in relation of the risk of maternal to child transmission of HIV by Asteway Mengistie who is the Master of public Health student in Addis Ababa University. The result of the study will be helpful to the study population by Identifying in 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 your 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 Asteway Mengistie (Tel: 0912 08 80 29 or E-mail: astu7298@gmail.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 Addis Ababa University, MPH research project on Assessment of factors associated with infant and young infant feeding practice of HIV positive mothers of HIV, 2010,

Part 1) Socio Demographic data

No	Question	Coding categories	Skip to
101	How old are you (completed years)?	_____years	
103	What is your current marital status?	Circle the response Single -----1 Married -----2 Divorced -----3 Widowed-----4 Separated -----5	
104	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	
105	What is your religion?	Orthodox -----1 Catholic -----2 Protestant -----3 Muslim -----4 Others (specify) -----5	
106	What ethnic group does you belong to?	Amhara-----1 Welayta-----2 Sidama -----3 Gedio -----4 Others (specify) -----5	
107	What is your current occupation?	Government employee-----1 Private employee -----2 Daily-laborer-----3 House wife -----4 House made/servant-----5 Merchant-----6 Farmer -----7 Others(specify) -----8	

108	What is your husband highest educational status?	Unable to read & write -----1 Grade 1-8 -----2 Grade 9-10+2-----3 10+2 completed & above----4	
109	What is your husband's current occupation	Government employee-----1 Private employee-----2 Daily labor -----3 Merchant -----4 Others(specify)-----5	
110	Duration of living together with Husband	<1 year-----1 1-5 years-----2 5-10 years-----3 >10 years -----4	
111	What is your family total monthly income?	Approximate _____ Eth.birr	
112	What is the main source of drinking water for the member of your household?	>1 answer is possible Pipe -----1 Spring -----2 Well -----3 River -----4 Others (specify)-----5	

Part 2 obstetric history

No	Question	Coding categories	Skip to
201	Did you attend antenatal care (ANC) during your last Pregnancy?	Yes-----1 No-----2	If no skip to 204
202	At what gestational age start ANC	_____ weeks _____ months	
203	At what health institution did you attend?	Governmental hospital-----1 Private Hospital-----2 Governmental h/ center-----3 NGO clinic -----4 Other(specify)-----5	

204	What was your type of delivery	C/S -----1 Forceps-----2 vacuum -----3 SVD with episiotomy-----4 SVD -----5 Other(specify) ----- 6	
205	Have you ever started ART?	Yes-----1 No-----2	If yes skip to 301
206	Have ART been given to you during pregnancy	Yes-----1 No-----2	
207	Have ART been given to you during child delivery	Yes-----1 No-----2	

Part -3. Awareness and attitude of HIV positive mothers towards infant feeding

No	Questions	Coding categories	Skip to
301	Have you ever heard about infant feeding options?	Yes-----1 No-----2	
302	Where did you get information first about infant feeding options?	Neighbors -----1 Health professional-----2 Husband -----3 Others(specify) -----4	
303	What kind of infant feeding option recommended for HIV positive mothers?	Replacement feeding-----1 Exclusive breastfeeding---2 Wet nursing-----3 Expressed milk-----4 Breast milk and foods-----5 Other(specify)-----	
304	Did your husband tested for HIV?	Yes-----1 No-----2 I don't know -----3	
305	Have you disclosed your HIV status?	Yes-----1 No-----2	If yes skip to 307
306	What was your reason	_____	
307	For whom you disclose your HIV status?	Husband-----1 sister/brother-----2 parents -----3	

		friends -----4 others(specify)-----5	
308	When did you know your HIV Status?	before marriage-----1 during this pregnancy-----2 during delivery-----3 specify(others)-----4	

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

309	Do you agree that HIV positive mother who prefers replacement feeding should give her breast in the presence of families or neighbors?	1 2 3 4 5	
310	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	
311	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	

Part- 4.Feeding practice of HIV positive mothers

No	Question	Coding categories	Skip to
401	What is the age of your child?	----- days ----- weeks -----months	
402	Sex of your child	Male -----1 Female-----2	
403	Did you ever breastfed your child?	Yes-----1 No-----2	If no skip to q 410
404	When did you give breast to your child after birth?	Within first hour-----1 Within first 8 hours -----2 After 8 hours-----3	
405	Did your infant receive any thing to drink or eat before the first breast feeding?	Yes-----1 No-----2	
406	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 -----3 Others (specify) _____	

408	Have you given any foods/ fluids other than breast milk to your child yesterday or last night	Yes-----1 No-----2	If no skip to 410
409	Why did you provide these foods or fluids? (Probe for more)	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 or ethnic group -----6 Others (specify -----	
410	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 -----1 Porridge/ cereal based fluid-----2 Adult food -----3 Others (specify)-----4	
411	Has anyone else (beside yourself) ever breastfed your infant	Yes-----1 No-----2	
412	How many days other person fed your child?	Number of day's ----- Don't know	
413	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	
414	What is the relation between the breasts feeder and you	sister -----1 mother -----2 family member -----3 Neighbors -----4	

		Other (specify)-----5	
415	Have you ever expressed your breast milk yesterday or last night	Yes-----1 No-----2	If no skip to 421
416	Have you given the expressed breast milk to your child yesterday or last night?	Yes-----1 No-----2	
417	What kind of utensils you used to?	Bottle -----1 Cup with spoon -----2 Others specify -----	
418	How many days of which you expressed milk and gage to your child?	Number of days -----	
419	Have you treated the expressed milk with heat?	Yes-----1 No-----2	
420	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) -----	
421	Have you ever practiced exclusive replacement feeding?	Yes-----1 No-----2	
422	Why you prefer exclusive replacement feeding?	-----	
423	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	
424	How many tins of commercial formula milk used per week	----- tins	
425	How many tins of cow milk used per week?	-----tins	
426	Have you seen demonstration about preparation of replacement feeding	Yes-----1 No-----2	
427	Who demonstrated?	Health worker-----1 Neighbors -----2	

		NGO worker-----3 If others specify -----	
428	Do you have an ability to follow instruction on the tin for mixing the formula	Yes -----1 No -----2 If other specify-----	
429	How frequent you prepared formula cow milk to feed the child per day	----- times a day	
430	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 -----	
431	Do you have refrigerator	Yes-----1 No-----2	
432	What kind of utensils you used to?	Bottle-----1 Cup and spoon-----2 Other(specify)-----	
433	Do you give adequate time for your child (care)?	Yes-----1 No-----2	
434	What was your reason not to give enough time for your child care?	----- -	
435	Do you boil water to wash the utensil	Yes-----1 No-----2	
436	What is your reason not to boil water?	No adequate fuel -----1 no adequate time -----2 if other specify -----	

437	Do you wash your hands before preparing infant food?	Yes-----1 No-----2	
438	Who feed the child mostly?	Servant-----1 Grandmother-----2 Sister-----3 Husband-----4 Other(specify)	
439	Who decide how and what to feed the infant?	Myself only-----1 My husband-----2 Me and my husband-----3 Mother in low-----4 Other(specify)-----5	

440	Have you start complementary food	Yes-----1 No-----2	If no skip 501
441	At what age of the child did you start complementary food	-----months	

Part 5 cessation of breast feeding

No	Question	Coding categories	Skip to
501	Are you currently breasted feeding your child?	Yes-----1 No-----2	If no skip to
502	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	
503	Have you completely stopped breast feeding?	Yes-----1 No-----2	
504	How old was your infant when you stopped breast feeding?	-----days -----weeks -----months	
505	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)	
506	Did you encounter any problem when you stopped breast feeding?	Yes-----1 No-----2	

507	What problem did you encountered	Infant crises or unhappy-----1 Brest engorgement -----2 Disapproved by -----3 partner/family/neighbors -----4 Disapproved by health worker -----5 No food or milk to feed the infants -----6 Other problems(specify) -----7	
-----	----------------------------------	---	--

Part six –assessment of counseling practice of health workers

No	Question	Coding category	Skip to
601	Sex of the health workers who give counseling	M -----1 F -----2	
602	Did the health care provider explain to you different feeding Options	Yes-----1 No-----2	
603	Did the health care provider tells about advantages of breast feeding	Yes-----1 No-----2	
604	Did the health care provider tells about disadvantages of breast feeding	Yes-----1 No-----2	
605	Did the health care provider tells about advantage of replacement feeding	Yes-----1 No-----2	
606	Did the health care provider tells about disadvantage of replacement feeding	Yes-----1 No-----2	
607	Did the health care provider tells about risk of mixed feeding	Yes-----1 No-----2	
608	Did the health care provider explain how to practice the chosen feeding options	Yes-----1 No-----2	

Annex II Amharic versions questionnaire format

ለጥናቱ ተሳታፊዎች አጠቃላይ መረጃ

ጤና ይስጥልኝ። ስሜ _____ ይባላል። የጤና በለሙያ ነኝ ። አሁን እዚህ የተገኘሁት ከኤች አይቪ ጋር የሚኖሩ እናቶች የሕጻናት አመጋገብ ሁኔታን ተፅዕኖ የሚያደርጉትን ኤች አይ ቪ ከእናት ወደ ልጅ የመተላለፍ ሁኔታ ጋር በተያያዘ የሚጠናወድን ጥናት መረጃ ለመሰብሰብ ነው። ጥናቱን የምታጠናወድ በኢደስ አበባ ዩኒቨርሲቲ በህብረተሰብ ጤና ትምህርት ቤት ውስጥ የማስተርስ ተማሪ የሆነችዎልዎት ካሉት አስተዋይ መንግስቱ ናት። የጥናቱን ውጤት ለተጠቃሚዎች ማለትም ከኤች አይ ቪ ጋር ለሚኖሩ እናቶች ትክክለኛውን የአመጋገብ ዘዴ በመለየት ትክክለኛውን መረጃ እንዲያገኙ ይረዳል። በተጨማሪም የተለያዩ ፕሮግራሞችን ለመጀመር እንደመነሻ ሀሳብ ያገለግላል። በሀገር አቀፍም ሆነ በዚህ ክልል ደረጃ የኤች አይ ቪ ከእናት ወደ ልጅ የመተላለፍ እድልን ለመቀነስ በሚደረገው ፕሮግራም ትልቅ አስተዋጽኦ ያደርጋል። አሁን በእርስዎ የሚመለስ ጥያቄ አጠይቃለሁ። አንዳንድ ጥያቄዎች በግል ሁኔታ ላይ ያጠነጠኑ ናቸው። የሚሰጡት መልስ ሙሉ በሙሉ ሚስጥራዊነቱ የተጠበቀ ነው። ስመዎ በዚህ ፎርም ላይ አይፀጸፍም። በምጣይቅዎት ጥያቄ መልስ የመመለሱ ሁኔታ ሙሉ በሙሉ በእርስዎ ፈቃደኝነት ላይ የተመሰረተ ነው። ነገር ግን የሚሰጡኝ መልስ ትክክለኛ መሆኑ ህብረተሰቡ ምን እንደሚገነዘብ፣ ምን እንደሚተገብር ለመረዳት ያስችለኛል። በእውነቱ ስለትብብርዎና ለትናቱ ስለሚያደርጉ አስተዋጽኦ በጣም ያስችለኛል። በእውነቱ ስለትብብርዎና ለትናቱ ስለሚደርጉ አስተዋጽኦ በጣም ላመስግንዎት እወዳለሁ። ቃለ መጠይቁ 20-30 ደቂቃ አካባቢ ይፈጃል።

የጥናቱ ተሳታፊዎች የስምምነት መግለጫ ውል

ከዚህ በታች በፊርማ ተጠቃ ግለሰብ ስለጥናቱ አላማ በሚገባ ተረድቻለሁ። የምስጠው መረጃም ለጥናቱ ተግባር ብቻ እንደሚውልና የምስጠው መረጃም ሆነ ማንነቱ በሚሰጥር እንደሚጠበቅ ተረድቻለሁ። በዚህም መሰረት በፍቃደኝነት በጥናቱ ለመሳተፍ ተስማምቻለሁ።

ምስክርኛ

1. ስም _____ 2. _____
ፊርማ _____ ፊርማ _____
ቀን _____ ቀን _____

ክፍል አንድ ማህበራዊ ና ግላዊ መረጃ

ቁጥር	ጥያቄ	ከድ	ወደ ጥያቄ ቁጥር ለፍ
101	ስንት አመትዎ ነው?	----- ሙሉ አመት	
102	አሁን ያሉበት የትዳር ሁኔታ ምን ይመስላል?	<ol style="list-style-type: none"> 1. ያላገባ 2. ያገባ 3. የተፋታ 4. የሞተበት 5. የተለያየ 	
103	ያጠናቀቁት ክፍተኛ ትምህርት ደረጃ ስንት ነው?	<ol style="list-style-type: none"> 1. ማንበብና መጻፍ የማይችል 2. ማንበብና መጻፍ 3. 1-8ኛ ክፍል 4. ከ9-10ተኛ ክፍል 5. 12ኛ ክፍል ያጠናቀቀና ከዚያ በላይ 	
104	ሃይማኖትዎ ምንድን ነው?	<ol style="list-style-type: none"> 1. ኦርቶዶክስ ሃይማኖት 2. ካቶሊክ ክርስቲያን 3. ፕሮቴስታንት ክርስቲያን 4. ሙስሊም 5. ሌሎች ከሉ ይጠቀሱ 	
105	ብሄርዎ ምንድን ነው?	<ol style="list-style-type: none"> 1. አማራ 2. ወላይታ 3. ሲዳሞ 4. ጌዲያ 5. ሌሎች ከሉ ይጠቀሱ----- 	
106	አሁን የሚሰሩት ስራ ምንድን ነው?	<ol style="list-style-type: none"> 1. የመንግስት ስራተኛ 2. የግል ተቀጣሪ 3. የቤት ዕመቤት 4. የቀንሰራተኛ 5. የቤት ዕመቤት 6. ነጋዴ 7. ሌላም ካለ ይጠቀሱ----- 	

107	የትዳር ጓደኛዎ የትምህርት ደረጃ ስንት ነው?	<ol style="list-style-type: none"> 1. ማንበብና መጻፍ የማይችል 2. ማንበብና መጻፍ የሚችል 3. ከ1-8ኛ ክለሳል 4. ከ9-10ተኛ 5. ከዚያ በላይ 	
108	ባለቤትዎ አሁን የሚሰሩት ስራ ምንድን ነው?	<ol style="list-style-type: none"> 1. የመንግስት ሰራተኛ 2. የግል ተቀጣሪ 3. የቀን ሰራተኛ 4. ነጋዴ 5. ገበሬ 6. ሌላ ካሉ ይጠቀሱ ----- 	
109	ከባለቤትዎ ጋር በትዳር አብረው የቆዩበት ጊዜ?	<ol style="list-style-type: none"> 1. ከአንድ አመት በታች 2. ከአንድ ዕስከ አምስት አመት 3. ከአምስት አመት እስከ አስር አመት 4. ከአስር አመት በላይ 	
110	የቤተሰብዎ አጠቃላይ ወራዊ ገቢ ስንት ነው?	----- የኢትዮጵያ ብር	
111	ለቤተሰብዎ አባላት በሙሉ የሚውል የመጠጥ ውሃ ዋና ምንጭ ምንድን ነው?	(ከአንድ በላይ መልስ መስጠት ይቻላል) <ol style="list-style-type: none"> 1. ቧንቧ 2. ምንጭ 3. ጉድጓድ 4. ወንዝ 5. ሌላ ካለ ይጠቀስ ----- 	

ክፍል ሁለት የፅንሰና የወሊድ ሁኔታ

ቁጥር	ጥያቄ	ኮድ	ወደ ጥያቄ ቁጥር ለፍ
201	በመጨረሻው ርግዝናዎ የጽንሰ ክትትል አድርገው ነበር ?	<ol style="list-style-type: none"> 1. አዎ 2. የለም 	
202	ስንት ወርዎ ላይ የርግዝና ክትትል ጀመሩ?	-----ሳ ምን ታት -----ወ ራት	

203	የመጨረሻውን ልጅዎትን የት ነው የወለዱት ?	<ol style="list-style-type: none"> 1. የመንግስት ሆስፒታል 2. የግል ሆስፒታል 3. የግል ክሊኒክ 4. የምንግስት ጤና ጣቢያ 5. መንግስታዊ ያልሆነ ክሊኒክ 6. ቤት 7. ሌላ ካለ ይጠቀስ ----- 	
204	የወለዱበት መንገድ ምን አይነት ነው?	<ol style="list-style-type: none"> 1. በማህጸን 2. በማህፀን ቀዶ ጥገና 3. በቀዶ ጥገና 4. በማዋለጃ ፎርሴፕሽን 5. በመሳቢያ (ቫኪውም) 6. ሌላ ካለ ይጠቀስ ----- 	
205	የጸረ ኤች አይቪ መድሀኒት ጀምረዋል?	<ol style="list-style-type: none"> 1. አዎ 2. የለም 	መልሱ አዎ ከሆነ ወደ ጥያቄ 301 ዕለፍ
206	በ ዕርግዝና ወቅት የጸረ ኤችአይቪ መድሀኒት ተሰጥተዎታል?	<ol style="list-style-type: none"> 1. አዎ 2. የለም 	
207	ከወለዱ በኋላ ለህፃን/ኗ የፀረ ኤች አይቪ መድሀኒት ተሰጥቶታል?	<ol style="list-style-type: none"> 1. አዎ 2. የለም 	

ክፍል ሶስት ህፃን አመጋገብ ና ከእናተ ወደ ልጅ የኤች አይ ቪ የመተላለፍ ሁኔታ መሰረታዊ እውቀት

ቁጥር	ጥያቄ	ክድ	ወደ ጥያቄ ቁጥር ለፍ
301	ስለ ህፃን አመጋገብ ሰምተው ያውቃሉ?	<ol style="list-style-type: none"> 1. አዎ 2. የለም 	
301	ስለ ህፃን አመጋገብ መጀመሪያ ክፍት ስሙ ?	<ol style="list-style-type: none"> 1. ከጎረቤት 2. ከጤና ባለሙያ 3. ከትዳር ጓደኛ 	

		4. ሌላ ካለ ይጠቀሱ -----						
303	ኤች.አይ.ቪ በደሚ ውስጥ ላለ እናት ምን አይነት የሕፃን አመጋገብ ዘዴ ይመከራል?	<ol style="list-style-type: none"> 1. የዕናት ጡትን የሚተካ ብቻ 2. የዕናት ጡት ወተት ብቻ 3. ከቫረሱ ነፃ ከሆነች ዕናት ጡት ማጥጣት 4. የጡት ወተትን አልቦ ማጠጣት 5. የዕናቱ ጡትና ሌሎች ምግቦችን ቀላቅሎ ማጠጣት 6. ሌላ ካለ ይጠቀስ ----- 						
304	የትዳር ጓደኛዎ የኤች.አይ.ቪ ምርመራ አካሂደዋል?	<ol style="list-style-type: none"> 1. አዎ 2. የለም 3. አላወቅም 						
305	የኤች.አይ.ቪ ውጤትዎን ነግረዋል?	<ol style="list-style-type: none"> 1. አዎ 3. የለም 	መልሱ አዎ ከሆነ ወደ 307 እለፍ					
306	ያልነበሩበት ምክንያት ምንድን ነው?	-----						
307	የኤች.አይ.ቪ ውጤትዎን ለማን ነግረዋል?	<ol style="list-style-type: none"> 1. ለባለቤትዎ 2. ለዕህትና ወንድም 3. ለወላጅ 4. ለጓደኛ 5. ሌላ ካለ ይጠቀስ ----- -- 						
308	ቅርብ ኤች.አይ.ቪ ምርመራ ያደረጉ መቼ ነበር	<p>ከጋብቻ በፊት</p> <p>በዚህ ዕርግዝና ጊዜ</p> <p>በወሊድ ጊዜ</p> <p>ሌላ ካለ ይጠቀስ-----</p>						
<p>ቀትሎ ጥቂት አባባሎችን አነባለሁ አስተያየትዎን 1) በጣም ስማማለሁ 2) እስማማለሁ 3) ምንም አስተያየት የለኝም 4) አልስማምም 5) በጣም አልስማማም በማለት ይግለጹ</p>								
309	አንድ ኤች.አይ.ቪ በደሚ ውስጥ ያለ ዕናት	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; text-align: center;">1</td> <td style="width: 20%; text-align: center;">2</td> <td style="width: 20%; text-align: center;">3</td> <td style="width: 20%; text-align: center;">4</td> <td style="width: 20%; text-align: center;">5</td> </tr> </table>	1	2	3	4	5	
1	2	3	4	5				

	የዕናት ጡት ወተት የሚተካን ምግብ ብቻ ለህጻን/ኗ ከመረጠች በኋላ ዘመድና ሌሎች ጎረቤቶች አጠገቧ ሲኖሩ ጡት አታጠባም ተብላ ዕንዳትተማ ለህጻን ጡት መስጠት አለባት					
310	ኤች.አይ.ቪ በደማቸው ውስጥ ያለባቸው ዕናቶች የሚወለዱ ህጻናት ከተወለዱ ጀምሮ ያለው የአመጋገብ ሁኔታ ለኤች.አይ.ቪ ከአናት ወደ ልጅ የመተላለፍ ሁኔታ የሚያበረክተው አስተዋጽኦ የለም	1	2	3	4	5
311	ኤች.አይ.ቪ በደሚ ውስጥ ያለ ዕናት ስለህጻን/ኗ አመጋገብ ከባለቤቷ ጋር በጋራ በመሆን መወሰኗ ለህጻን አመጋገብ ጠቀሜ የለውም	1	2	3	4	5

ክፍል አራት የህፃናት አመጋገብ ሁኔታ

ቁጥር	ጥያቄ	ክድ	ወደ ጥያቄ ቁጥር ለፍ
401	የልጅዎ ዕድሜ ስንት ነው?	----- ቀኖች ----- ሳምንት ----- ወራት	
402	የልጅዎ ጾታ ?	1. ወንድ 2. ሴት	
403	ለልጅዎ ጡት አጥብተው ያውቃሉ?	1. አዎ 2. የለም	መልሱ የለም ከሆነ ወደ ቁጥር 421 ዕለፍ
404	መጀመሪያ ለልጅዎ ጡት ያጠቡ ከወለዱ ከምን ያህል ጊዜ በኋላ ነው?	1. በመጀመሪያ አንድ ሰዓት ውስጥ 2. በመጀመሪያ ስምንት ሰዓት ውስጥ 3. ከስምንት ሰዓት በኋላ	
405	ልጃዎት መጀመሪያ ጡት ከመጥባቱ በፊት ማንኛውንም የሚጠጣ ወይም	1. አዎ 2. የለም	መልሱ የለም ከሆነ ወደ ቁጥር

	ሌላ ምግብ ወስዷል??		407 ለፍ
406	ምን አይነት ምግብ ወይም መጠጥ ሰጥተዋል?	(ከአንድ በላይ መልስ መስጠት ይቻላል ምርጫውን አ ንብብ) 1. ቅቤ 2. ውሃ 3. ሻይ 4. ውሃና ስኬር 5. ሌላ ናሉ ይጠቀሱ -----	
407	አሁን የምጠይቅዎት ላለፉት ሰባት ቀናት ለልጆዎት ስለሰጡ የምግብ አይነት ነው ከሚከተሉት ውስጥ ልጆዎ የትኛውን ምግብ አይነት ወስዷል?	(ምርጫውን ያንብቡ) 1. ውሃ ብቻ 2. የህጻናት ምግብ ከገበያ የሚገዛ 3. የዱቄት ወተት 4. የዕንስሳት ወተት 5. ጭማቂ 6. ሌሎች ካሉ ይጠቀሱ-----	
408	ላለፈት 24 ሰዎች ልጆዎት ከዕናት ጡት ወተት በተጨማሪ ሌላ ምግብ ሰጥተዋል?	1. አዎ 2. የለም	መልሱ የለም ከሆነ ወደ ቁጥር 411 ይለፉ
409	ለምን ከጡት ወተት ውጭ ሰጡ?	1. ልጁ ስለታመመ 2. ዕናቱ ስለተመመች 3. ዕናት የዋና ህፃኑ ስለተመመ 4. በባል ምክር 5. በሌሎች ስዎች ምክር 6. በአካባቢው የተለመደ ስለሆነ 7. ሌላ ካሉ ይጠቀሱ-----	
410	ለህፃናቱ የተሰጡ ሌሎች ምግቦች ምንድን ናቸው?	(ከአንድ በላይ መልስ መስጠት ይቻላል) 1. ውሃ ወይም ሻይ 2. የዱቄት ወተት 3. የከብት ወተት 4. ገንፎ 5. የአዎቂ ምግብ 6. ሌላ ጋለ ይጠቀስ	

411	ከዕርስዎ ውጭ ልጆዎትን ጡት ያጠባ ሰው አለ?	1. አዎ 2. የለም	መልሱ የለም ከሆነ ወደ ጥያቄ ቁጥር 415 ዕለፍ
412	ለምን ያህል ጊዜ ሌላ ሰው ልጆዎትን አጠቡ?	የቀናት ብዛት -----	
413	ለምን ሌላ ሰው ልጆዎትን አጠቡ	1. ዕናት ስለተመመች 2. የጡት ችግር 3. የዕናት ጡት በቂ ወተት ስለሌለው 4. ከልጁ ለመሌትየ 5. በባል ወይም የዘመድ ምክር 6. የስራ ሁኔታ 7. ኤች.አይ.ቪን ላለማስተላለፍ 8. ሌላ ካለ ይጠቀስ -----	
414	ልጅዎ ጡት ያጠቡ ከዕርስዎ ጋር ያለቸው ዝምድና ምድን ነው?	1. ዕህት 2. ዕናት 3. ሌሎች የቤተሰብ አባላት 4. ጎረቤት 5. ሌላ ካለ ይጠቀሱ -----	
415	ጡትዎትን አልበው ወይም ጨምቀው ያውቃሉ?	1. አዎ 2. የለም	መልሱ የለም ከሆነ ወደ ጥያቄ ቁጥር 421 ለፍ
416	ያለቡትን የጡት ወተት ለልጆዎት ሰጥተው ያውቃሉ	1. አዎ 2. የለም	መልሱ የለም ከሆነ ወደ ጥያቄ ቁጥር 420 ዕለፍ
417	ያለቡትን የጡት ወተት ለልጆዎት ለመስጠት የተጠቀሙት መመገቢያ ምንድን ነው?	1. ጡጦ 2. በኩባያና በማንኪያ 3. ሌላ ካለ ይተቀስ -----	
418	ለምን ያህል ጊዜ ጡት አልበው አጥብተው ያውቃሉ?	የቀናት ብዛት -----	

419	ያለቡትን የጡት ወተት በመቀት አክመው / አፍልተው ያውቃሉ?	1. አዎ 2. የለም	
420	ለምንድን ነው ጡትዎትን የሚያልቡት?	1. የጡት ህመምን ለማስተገስ 2. የቆሰለ የጡት ጫፍን ለማስተገስ 3. ከመመገብ በፊት ለማሞቅ 4. ከልጁ ጋር አብሮ ላለመዋል 5. ጡት ወተት ለማቆም 6. ልጁ ለመባጥት አለመቻል 7. ሌላ ካሉ ይጠቀሱ -----	
421	የዕናት ጡት ወተት የሚተካ ብቻ ልጅዎትን ለመመገብ ተጠቅመው ያውቃሉ/ ይጠቀማሉ? (Exclusive replacement feeding)	1. አዎ 2. የለም	መልሱ የለም ከሆነ ወደ ጥያቄ ቁጥር 440 ይለፉ
422	ለምን የዕናት ጡት የሚተካ ብቻ መረጡ?	-----	
423	ምን አይነት የዕናት ጡት ወተት የሚተካ ወተት ስጥተው ያውቃሉ?	1. ከገበያ የሚገዛ የህፃናት ወተት 2. ቤት ውስጥ የሚዘጋጅ ወተት (የከብት/ዱቄት ወተት/የሚሸጥ ወተት) 3. ሁለቱንም በማቀደድ 4. ሌላ ካሉ ይጠቀስ	
424	ምን ያህል ከሱቅ የሚገዛ (infant formula) የህፃን ወተት በሳምንት ይጠቀማሉ?	----- ጣሳ	
425	ምን ያህል የከብት ወተት በሳምንት ይመግባሉ?	----- ሊትር	
426	ስለህጻን ምግብ አዘገጃጀት ተግባር አይተዋል ወይ?	1. አዎ 2. የለም	መልሱ አዎ ከሆነ ወደ ጥያቄ ቁጥር 428 ይለፉ
427	ስለህጻን ምግብ አዘገጃጀት ተግባር	1. የጤና ባለሙያ 2. ጎረቤት	

	ያሳየዎት ማን ነው?	3. መንግስታዊ ያልሆነ ድርጅት 4. ሌላ ካለ ይጠቀስ -----	
428	በተገቢው መመሪያ መሰረት የህጻናት ምግብ መጥኖ የመስጠት ችሎታ አለዎት?	1. አዎ 2. የለም 3. ሌላ ካለ ይጠቀስ -----	
429	ህጻኑን/ኗን ለመመገብ በቀን ስንት ጊዜ የህፃኑን/ኗን ምግብ ያዘጋጃሉ?	----- ጊዜ	
430	ህጻኑ/ኗ ተመግቦ/ባ የተረፈውን ምግብ ምን ያደርጉዎል?	1. ለሌሎች ልጆች ዕሰጣለሁ 2. ዕደፋዋለሁ 3. አቆይቼ ለህጻኑ ዕመግብዋለሁ 4. ሌላ ካለ ይጠቀስ -----	
431	ፍሪጅ አለዎት?	1. አዎ 2. የለም	
432	ህጻኑ/ኗን ለመመገብ የሚጠቀሙት የመመገቢያ ዕቃ ምንድን ነው?	1. ጡጦ 2. ኩባያና ማንኪያ 3. ሌላ ካለ ይጠቀስ -----	
433	ለልጅዎ ምግብ ዝግጅት በቂ ጊዜ ይሰጣሉ?	1. አዎ 2. የለም	
434	በቂ ጊዜ ላለመስጠት ምክንያትዎ ምንድን ነው?	-----	
435	የህጻኑን መመገቢያም ዕቃዎች ለማጠብ ውሃ ያፈላሉ ወይ?	1. አዎ 2. የለም	መልሱ አዎ ከሆነ ወደ ጥያቄ ቁጥር 437 ይለፉ
436	ለምን?	1. በቂ ነዳጅ ስለሌለ 2. በቂ ጊዜ ስለሌለ 3. ሌላ ካለ ይጠቀስ -----	
437	የህጻኑን/ኗን ምግብ ከማዘጋጀትዎ በፊት ዕጅዎን ይታጠባሉ?	አዎ የለም	

438	በአብዛኛው ልጆቻችን የሚመጡ ማን ነው?	<ol style="list-style-type: none"> 1. የቤት ሰራተኛ 2. ዕናት 3. አያት 4. ዕህት 5. አባት 6. ሌላ ካለ ይጠቀስ----- --- 	
439	ተጨማሪ ምግብ ለልጅ ጀምረዋል?	<ol style="list-style-type: none"> 1. ዕኔ ብቻ 2. ባል ብቻ 3. ዕኔና ባለቤቱ በጋራ 4. የባል ዕናት 5. የዕኔ ዕናት 6. ሌላ ካለ ይጠቀስ ----- 	
440	ተጨማሪ ምግብ ለልጅ ጀምረዋል?.	<ol style="list-style-type: none"> 1. አዎ 2. የለም 	መልሱ አዎ ከሆነ ወደ ጥያቄ ቁጥር 501 ይለፉ
441	ዕድሜው ስንት ሲሆን ለልጅ ተጨማሪ ምግብ ጀመሩለት?	-----ወራት	

ክፍል አምስት ጡት የማጥባት የማቆም ሂደት

ቁጥር	ጥያቄ	ኮድ	ወደ ጥያቄ ቁጥር ለፍ
501	አሁን ልጆቻችን ጡት ያጠቡ ነው?	<ol style="list-style-type: none"> 1. አዎ 2. የለም 	መልሱ የለም ከሆነ ወደ ጥያቄ ቁጥር 503 ዕለፍ
502	ስንተኛ የልጆቻችን ዕድሜ ነው ጡት ማጥባት ማቆም የሚፈልጉት?	<ol style="list-style-type: none"> 1. ከስድስት ወር በ ች ባለው ጊዜ 2. ከ6-12 ወራት ባለው ጊዜ 3. ከ13-18 ወራት ባለው ጊዜ 4. ከ19-24 ወራት በላይ ባለው ጊዜ 	

		5. ከ24 ወራት በላይ ባለው ጊዜ	
503	ሙሉ ለሙሉ ጡት ማጥባት አቁመዋል?	1. አዎ 2. የለም	
504	ሙሉ ለሙሉ ጡት ማጥባት ሲያቆሙ የልጅዎት ዕድሜ ስንት ነበር	----- ቀናት ----- ሳምንቶች ----- ወራት	
505	ለምን ጡት ማጥባት አቆሙ	ከአንድ በላይ መልስ መስጠት ይቻላል 1. ህጻኑ ጡት መጥባት ስላልፈለገ 2. ሌላ ምግብ ዕንዲለምድ ለማበረተተት 3. የዕርግዝና 4. የኤ.አይ.ቪ መተላለፍ በመፍራት 5. የዕናት ጡት ወተት የሚካን ምግብ የመግዛት አቅም ስላለ 6. በጤና ባለሙያ ምክር 7. ህፃኑ ስለተመመች 8. ዕናት ስለመመመች 9. በባል ምክር 10. በሌሎች ሰዎች ምክር 11. ሌላ ካሉ የጠቀስ -----	
506	ጡት ማጥባት በሚያቆሙበት ጊዜ ችግር አጋጥሞዎታል?	1. አዎ 2. የለም	
507	ጡት ማጥባት በሚያቆሙበት ጊዜ ያጋጠምዎት ችግር ምንድን ነው?	1. ሕፃኑ ማልቀስ /ደስተኛ አለመሆኑ 2. የጡት ዕብጠት 3. የባል/በረቤቶች አለመደገፍ 4. በጤና ባለሙያ አለመደገፍ 5. ህፃኑን ለመመገብ ምግብ አለመኖር ሌሎች ችግሮች ካሉ ይጠቀሱ -----	

ክፍል 6 ኤች አይ ቪ በደሚ ውስጥ ላለ ዕናት የምክር አገልግሎት ሰጭዉን በተመለከተ የሚጠየቅ

ቁጥር	ጥያቄ	ኮድ	ወደ ጥያቄ ቁጥር ለፍ
601	የጤና ባለሙያዉ ከሰ ኤ.አይ ቪ ከስናት ወደ ስጅ በአመጋገብ ምክንያት እንዲት እንደሚተሳሰፍ ነገሮቻታል።	1. አዎ 2. የለም	
602	የጤና ባለሙያዉ ስለተሰያዩ የህፃናት አመጋገብ ጥቅምና ጉዳት ነገሮቻታል።	1. አዎ 2. የለም	
603	የጤና ባለሙያዉ ስለ ቤተሰብዎ እና ቤትዎ ሁኔታ እንጋገሮቻታል።	1. አዎ 2. የለም	
604	የጤና ባለሙያዉ ከተሰያዩ የህፃናት አመጋገብ አደነቶች ትክክለኛዉን እንዲመረጡ ረድቶታል።	1. አዎ 2. የለም	
605	የጤና ባለሙያዉ የመረጡትን የህፃናት አመጋገብ አደነት እንዲት እንደሚጠቀሙ ነገሮቻታል።	1. አዎ 2. የለም	
606	የጤና ባለሙያዉ ስለህፃናት አመጋገብ ምንምን ነገሮቻታል።	-----	
607	የጤና ባለሙያዉ ስለሰና ስለጅም ቀጠሮ ሰጥቶቻታል።	1. አዎ 2. የለም	
608	በቀጠሮ ሰት ህፃኑ እንዲት እንደሚመገቡ ጠደቆቻታል።	1. አዎ 2. የለም	

Annex III interview guide questionnaire format

Date _____

Name of PMTCT /ART site _____

Socio demographic characteristics of health workers

Gender-----

Age (years) -----

Title position-----

Started time -----

Ended time-----

Do you have taken pediatrics ART/PMTCT training yes -- No ---

Years in current occupation (experience) 1–5 years 6–10 years 10–15 years >16 years

1. Do all babies born to HIV-positive mothers become infected with HIV? Estimate it?
2. What the terms exclusive breastfeeding (EBF), exclusive replacement feeding (ERF), mixed feeding (MF) mean?
3. Explain the terms “acceptable, feasible, affordable, sustainable and safe” (AFASS) mean in relationship to infant feeding in the context of HIV?
4. What are the advantages and disadvantages of EBF and ERF
5. Since there is a chance that HIV can pass from an HIV-infected mother to her baby Through breast milk, is replacement feeding always better for the baby? Why?
6. What is your opinion on exclusive replacement feeding and breast feeding for HIV exposed infants and young infants? Which one do you think best for HIV positive mothers? Why?
7. What infant feeding options do you counsel for HIV positive mothers? and what is the most HIV positive mothers feeding experience Why?
8. Do you show to prepare formula feeding for HIV positive mothers? Do women re demonstrate how to prepare formula feeding?
9. Do you think HIV positive mothers adhering to their feeding choices? Or most are experienced mixed feeding? why do you think this is the case
10. What has been your greatest challenge in counseling women on infant feeding options? and what measure have you taken help HIV positive mothers women adhere to infant feeding choice