

WOLKITE UNIVERSITY  
COLLEGE OF MEDICINE AND HEALTH SCIENCES  
DEPARTMENT OF MIDWIFERY



ASSESSMENT OF KNOWLEDGE ATTITUDE AND PRACTICE AMONG LACTATING HIV POSITIVE WOMENS ABOUT FEEDING OF INFANT IN ATTAT GENERAL HOSPITAL SOUTH ETHIOPIA, 2020

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A RESEARCH PAPER SUBMITTED TO WOLKITE UNIVERSITY COLLEGE OF MEDICINE AND HEALTH SCIENCE DEPARTMENT OF MIDWIFERY IN PARTIAL FULFILLMENT OF THE REQUIRMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN MIDWIFERY

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WOLKITE, ETHIOPIA

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## ABBREVIATIONS AND ACRONYMS

AFASS .....Acceptable, Feasible, Affordable, Sustainable and Safe

AIDS.....Acquired Immuno Deficiency Syndrome

ANC..... Antenatal Care

ART .....Antiretroviral Therapy

EBF.....Exclusive Breastfeeding

IMCI .....Integrated Management of Childhood Illness

MCH .....Maternal and Child Health

MOH .....Ministry Of Health

MTCT..... Maternal to Child Transmission

PMTCT .....Prevention of Maternal To Child Transmission

UNDP .....United Nations Development Program

WHO ..... Word Health Organization

## **ABSTRACTE**

**BACKGROUND:** Mother to child transmission (MTCT) is the main mode of HIV transmission in children under 15 years old. This problem is significant in sub-Saharan African countries, where more than 80% of children living with HIV are found. The balance between the risk of transmission of human immunodeficiency virus (HIV) through breastfeeding and its life saving benefits complicates decisions about infant feeding among HIV –positive mothers in the 6 month. The world health organization recommends feeding practices for infants from Human Immunodeficiency Virus (HIV) infected mothers to be safe to both the infant and the mother. To date, however, no community based studies have been conducted to assess the level of knowledge, attitude and practice of the target population of PMTCT programs (pregnant or lactating mothers), and the counseling/ care providers about feeding of infants born to HIV positive women in Ethiopia.

**OBJECTIVE:** it assessed knowledge, attitude, and practice of HIV –positive lactating women at Attat General Hospital, Gurage zone, SNNP Region, South Ethiopia 2020. **Methods:** Institutional based cross-sectional study was conducted among womens, who are lactating HIV-positive at Attat General Hospital/ from November to December. Data was collected by using Simple random sampling technique. Data on was collected using a Semi structured questionnaire adapted from literatures, then; the data was entered using EP- info version seven statistical software and analyzed using SPSS version20.

**RESULT** Of 362 who were eligible for the study 12( 3.31%) refused to participate. From the remaining 350 lactating mothers with HIV data was collected. Among the study subjects (n=350),279(79.7%) visited health institutions for antenatal care and 71( 20.3% ) not visited during their last pregnancy from study size 127(36.3%) of mother were having sufficient(good knoweldge) about infant feeding however more than half of study size 223(63.7%) have no sufficient knoweldge.143(40.9) mothers have good attitude and 207(59.1) poor attitude.more than half of the study 193(55.1) have good practiced and 157(44.9) of them have poor practiced.

**Conclusion:** safe breast feeding HIV exposed infants in hospitals of attat is still achallenge in order to achieve the goal of HIV free survival in children,the cause of poor breast feeding practice must be identified and addressed.focus must be laid on education of HIV postive women during pregnancy and throughout breast feeding period.

- In this study, most of the mothers were merchantess. The household monthly income of half of the mothers was very low (below 133 Ethiopian Bir), and majority of the households got their drinking water from pipe.

- Most (79.7%) of the mothers of the study area used antenatal care and the major source of information of the mother with HIV and infant feeding were health facilities.

**KEY WORDS:** ethiopia, exclusive breastfeeding, hiv/aids, anti natal care

## CHAPTER ONE

### INTRODUCTION

#### *1.1 Background of the study*

Human immuno deficiency Virus (HIV) is a virus that weakens the immune system of an individual exposing body to several opportunistic infections [1]. Mother to child transmission (MTCT) is the main mode of HIV transmission in children under 15 years old. This problem is significant in sub-Saharan African countries, where more than 80% of children living with HIV are found. Previous studies in Ethiopia present in consistent and inclusive findings on the prevalence and associated factor of MTCT of HIV. [1]. Although the main mode of transmission is through un protected sexual intercourse, a significant number of vertical transmission also occurs from mother to child. Mother to child transmission (MTCT) is when HIV is transmitted from mother to child during pregnancy, childbirth, or breastfeeding [1-3]. The balance between the risk of transmission of human immunodeficiency virus (HIV) through breastfeeding and its life saving benefits complicates decisions about infant feeding among HIV –positive mothers in the 6 month. The world health organization recommends feeding practices for infants from Human Immunodeficiency Virus (HIV) infected mothers to be safe to both the infant and the mother. This includes prevention of mother to child transmission of the virus and at the same time meeting nutritional requirements of the child. This requires prioritizing prevention of HIV transmission through breastfeeding against non HIV morbidity and mortality especially from malnutrition and serious illnesses such as diarrhea, among nonbreastfed infants. United Nations General Assembly Special Session on HIV/AIDS in June 2001 generated an unprecedented level of global leadership, awareness, and support to respond to the HIV/AIDS crisis. A Declaration of Commitment on HIV/AIDS was adopted at the Special Session; specifying times bound goals and targets to measure progress and to ensure accountability. The UN General Assembly Special Session on Children also endorsed these goals and targets in May 2002.(2,3).

The following points are based on the WHO/UNICEF/UNAIDS policy guidelines on infant feeding, which accommodate all infant feeding options for mothers with HIV. Central to these guidelines is the right of mothers to make decisions, on the basis of full and clear information, on what is best for them and their infants, and to be supported in Carrying out those decisions :(5)

For women who are known not to be infected with HIV, and for women who do not know their infection status: protect, promote and support exclusive breastfeeding for six months, followed by

continued breastfeeding with appropriate complementary feeding for up to two years of age or more. All HIV infected mothers should receive counseling, which includes 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. Regardless of her decision, a mother should be supported in her choice. When replacement feeding is acceptable, feasible, affordable, sustainable and safe, it is recommended that HIV infected mothers avoid all breastfeeding; if the available replacement feeding does not meet all of these criteria, exclusive breastfeeding is recommended during the first months of life. HIV infected mothers who breastfeed should be assisted in using good breastfeeding techniques to help prevent breast conditions like mastitis, breast abscesses and nipple fissures. These conditions should be promptly treated if they occur. To minimize the risk of HIV transmission, breastfeeding should be discontinued as soon as possible, taking into account local circumstances, the individual women's situation and the risks associated with replacement feeding (including contracting infections other than HIV, malnutrition, costs and sustainability). In order to avoid harmful nutritional and psychological consequences and to maintain breast health, HIV infected mothers who breastfeed should be provided with specific guidance and support when they stop breastfeeding.

When HIV infected mothers choose not to breastfeed or to stop breastfeeding, they should be provided with specific guidance and support for at least the first two years of the child's life to ensure adequate replacement feeding. Programmed should strive to improve conditions in order to make replacement feeding safer for HIV infected mothers and families. HIV infected women should have access to information, follow-up clinical care and support, including family planning services and nutritional support.

Nevertheless, it is also one of the ways in which an HIV positive mother virus to her infant (6) without intervention, the risk of mother to child transmission (MTCT) of HIV is 15-30% in non-breast feeding populations; breastfeeding by an infected mother increases the risk by 5-20% to a total of 20-45% (7). Studies have also shown that MTCT of HIV varies with the duration of breastfeeding and pattern of infant feeding. The MTCT rates by duration of breast feeding vary between, 25-35% if breast feeding through 6 months and 30-45% if there is breast feeding through

18-24 months (8). The rate of transmission by pattern of infant feeding was found to be low in exclusively breast feeding (19.4%) than mixed fed infants (26.1%) for 3 months(9).

### ***1.2 Statement of the problem***

The Joint United Nations Programme on HIV/AIDS (UNAIDS) reported in 2015 that there were an estimated 36.7 million people living with HIV globally, 1.8 million of whom were children. Of this population, 2.1 million were newly infected and 1.1 million died from the disease. Approximately 380 000 of the 1.89 million population of Lesotho are infected with HIV, of whom 380 000 were children between the age of 0-15 years and 342 000 were adults above the age of 15 years in 2014. Of an estimated 55 000 annually births in the country, approximately 15 235 infants were born to HIV-infected mother in 2014. The prevalence of HIV/AIDS has rapidly increased since 1980s in developing countries. As a result, it has led to several demographic, economic and social consequences. More than 2 million children are living with HIV/AIDS globally, in which more than 80% of them live in sub-Saharan Africa countries. For example in 2012, 260 000 new pediatric HIV infections occurred, and most of these infections were in sub-Saharan Africa. The most seriously affected areas in Africa include Southern and Eastern Africa countries. Hence, the United Nations Program on HIV/AIDS (UNAIDS) set the 90-90-90 target by 2020. The target aims to end the epidemics of HIV by 2030. The post-2015 HIV priorities plan to dramatically reduce the annual new HIV infection and thereby to save the lives of many people. Ethiopia is one of the Eastern Africa countries with adult HIV prevalence of 1.5% in the population aged 15-49 years old. The prevalence of 1.9 and 1%, respectively. In 2013, there were more than 160 000 HIV positive children (aged less than 15 years) in Ethiopia. In addition, the number of orphaned children due to HIV/AIDS were 800 000. Even though there are a higher number of children with HIV, ART coverage among children was only 12% in the same year.

Nonetheless, studies conducted in Ethiopia have shown that the fertility desire among HIV positive women is still high. For this reason, the Ethiopian Federal Ministry of Health (FMOH) adopted a prevention of mother to child transmission (PMTCT) program aimed at eliminating mother to child transmission of HIV in 2011. PMTCT is a program designed to provide effective interventions during pregnancy, labor and delivery and breastfeeding period for the mother and the baby. The intervention includes the provision of ARV drugs for the mother and the baby and HIV preventive

practice. In the absence of such intervention, the risk of MTCT of HIV is 15 to 45%. But through the use of ARV drugs and appropriate preventive mechanisms, the risk can be reduced to less than 5% in under-resourced settings like Ethiopia.

Few studies have been conducted on the prevalence of MTCT of HIV and its associated factor in Ethiopia. However, available studies present inconsistent and inconclusive findings in the prevalence of MTCT of HIV and its associated factor. Therefore this study will conduct to assess the prevalence of mother to child transmission of HIV in Ethiopia using available published evidence. The finding of this study will be useful in the design and implementation of proper strategies to reduce the high rate of MTCT of HIV.

To date, however, no community based studies have been conducted to assess the level of knowledge, attitude and practice of the target population of PMTCT programs (pregnant or lactating mothers), and the counseling/ care providers about feeding of infants born to HIV positive women in Ethiopia. Thus, this study will contribute to fill the information gap, and in the design of strategies to prevent mother to child transmission of HIV and to promote appropriate infant feeding practice in the study setting and the country at large.

### ***1.3 Significance of the study***

This research was contributes to understand the level of knowledge, attitude and practice among mothers about feeding of infants born to HIV positive. It also will helps for the stake holders (governmental and nongovernmental organizations) in their involvement and intervention to tackle the problem. The study also will establish base line information for more elaborate study. Also the findings help to describe EBF practice and reveal areas for further study and was assisted health care professionals, health extension workers and community health promoters to understand EBF practice in the study area and help them to prioritize and focus their efforts. Additionally, since there is limited research in the study area, this study can be used as baseline for further studies.

## CHAPTER TWO

### *2. Literature Review*

Studies in South Africa (Lancet 1999) and in Kenya (JAMA 2000) have shown the variation in MTCT rates by duration of breastfeeding, exclusivity of breastfeeding and/or replacement feeding, and the great danger of mixed feeding (2, 3, 4, 5, 9). For appropriate decision about infant feeding options, mothers' knowledge of their HIV status (Utilization of PMTCT service), the risks and benefits of the feeding options are mandatory. In three districts of Chian Rai Province of Thailand, a study done to assess knowledge and attitudes of mothers towards infant feeding showed that vast majority of women (72%) with HIV infection were intending to 'formula feed' their infants. In contrast the vast majority of antenatal women of unknown HIV status planned to breastfeed (83%).

In this study, all women, regardless of HIV status, consider breastfeeding to be more advantageous than formula feeding. However, once women with HIV infection are informed of the risk of HIV transmission through breastfeeding, they are able to make their own decision to follow the recommendation to formula feed (12). In the contrary, a study done in Pun, India, revealed that equal number of HIV positive women intended to breastfeed (44%) and give diluted animal milk (44%) (13). Regarding to the infant feeding practices of mothers, a cross sectional survey conducted in Khayelitsha, Cape Town, found that almost all (95%) of women attending PMTCT program formula feed their infants and did not breast-feed at all. Majority (70%) of their infants never had diarrhea, indicating that formula feeding is safe and feasible in an urban environment where sufficient potable water is available (14). However, a considerable number of studies are showing miss match between the recommendations made, and the infant feeding practices of the mother who have utilized PMTCT services in the poor resource settings Of the world. In Nairobi, Kenya, a study comparing feeding patterns of infants born to HIV infected women at 1 and 6 weeks showed that mixed feeding was common and significantly increased by 6 weeks (31%) as compared to the 1st postpartum week (15). Additionally, a study done in Lusaka, Zambia, on mothers of known HIV status who had all received pre and post - test HIV counseling found that all mothers breast-feed but only 35% of infants below 4 months.

were exclusively breastfeed. HIV infected mothers introduced fluid and weaned their infants significantly early than HIV uninfected mothers. The study conducted in Pun, India, also showed that HIV positive mothers in the postpartum mixed fed their infants frequently which put the infants

at greater risk of both non HIV- related morbidity and HIV transmission as early introduction of foods other than breast milk may increase MTCT (16, 17). Even though, to date, no published data showed mothers' KAP on infant feeding practices in the context of MTCT and PMTCT programs in Ethiopia. The Demographic Health Survey of Ethiopia 2016 showed that 58% percent of Ethiopian Children 4 - 5 months of age are exclusively breast feeding. But, the figure is low in urban settings of the country (18). In Addis Ababa, a cross sectional study showed a 32 % exclusive breast feeding rate in those less than 4 months of age, 57.4 % complementary feeding rate in 6-9 months of age, and 2.8% mothers who did not initiate breast feeding at all. In this study, most of the mothers who had antenatal, childcare and postnatal visit to health facilities did not get advice on child feeding (19). knowledge, attitude & practice of mothers towards infant feeding patterns are interrelated to each other. The study done in Nairobi, Kenya found that most of the mothers (86%) who planned to breast-feed were more likely to feed their infants as planned (55%). A cross sectional study done on pregnant women in Kilimanjaro region also showed that most of the women (85%) who had previously breastfeed had initiated breastfeeding within few hours postpartum, and those having knowledge of exclusive breast feeding were the least likely to end exclusive breast feeding early. In this study, knowledge of HIV transmission through breastfeeding was not associated with breastfeeding practices, but it requires further study. (22). Studies have also shown some socio economic, and VCT /PMTCT service related factors, which affect the knowledge, attitude and practice of mothers about feeding patterns of infants born to HIV positive women. The Kilimanjaro region Study showed that married women were the least likely to end exclusive breastfeeding early (22). The Kenya's study also showed that HIV positive women opted to breastfeed due to financial constraints, partner influence, and fear of losing confidentiality (15). In the Pune, India's, study, the hospital counselors had an important role in assisting HIV positive women in their intended feeding choice as well as actual practice.

The time immediately after delivery was noted as critical for re counseling about infant feeding and further support of the woman's decision, thus lowering mixed feeding (17). In the contrary, a qualitative study in Mosh, northern Tanzania, found that informed choice of infant feeding method by HIV - infected women, as recommended by UNAIDS / WHO/ UNICEF guidelines, was seriously compromised by the actual advice given, directive counseling, lack of time to cope with a positive HIV test result and lack of follow - up support, regardless of socio - economic status (23). Institutional based cross sectional study done in Mwanza town Public Health Facilities, Benchi-

Maji Zone ,South Nation Nationality and people, South Ethiopia, in 2017 on assessment of knowledge, attitude and practice(KAP) towards prevention of mother to child transmission of HIV/AIDS among Antenatal care client showed that 75.3% knew that HIV can be transmitted from infected mother to child. According to the study 75.9% had positive attitude towards MTCT of HIV/AIDS, and 69.4% of the respondent choose exclusive breastfeeding as a first choice for six month (8).Institutional based cross-sectional study was conducted in Gonder town health institutions, North West Ethiopia, in 2017 on assessment of KAP of HIV positive mother on antiretroviral treatment towards infant feeding showed that 68.91% of the participants had good knowledge and 67.16% of the participant knew about mother to child transmission of HIV during breastfeeding .Participants who had favorable attitude towards recommended infant feeding were found to be 75.87% and 85.57% of participants agreed that exclusive breastfeeding for six month is nutritionally complete feeding for the infant. And the magnitude of their practice showed 23.7% of mother practiced infant feeding according to WHO recommendation.(10).

## **CHAPTER THREE**

### **OBJECTIVES OF THE STUDY**

#### ***3.1. General objective:-***

To assess the knowledge, attitude and practice (KAP) among lactating HIV positive mothers In Attat General Hospital Gurage zone, southern Ethiopia,2020/21

#### ***3.2. Specific objectives:***

1. It determine the level of knowledge of feeding of infants born to HIV positive women
2. It determine attitude of mothers about feeding of infants born to HIV positive women
3. It determine practice of lactating mothers about feeding of infant born to HIV positive women

## CHAPTER FOUR

### METHODS AND MATERIALS

**4.1 study area and period:** This study was conducted in Guraghe zone, Attat hospital, about 187km south west of Addis Ababa along the Jimma road in the southern region of Ethiopia. The hospital has been operative since 1969. The hospital provides services to both inpatients and outpatients. It has 65 beds. In addition, there are 48 beds in the maternity waiting area, 13 beds in the nutrition rehabilitation unit, 3 labor beds and 2 delivery beds that are often used as over flow beds.. Study was conducted from November to December, 2020

**4.2. study design:** Institutional based cross sectional descriptive study was conducted

**4.3. Source population:** HIV positive breast feeding/lactating clients of Attat General Hospital, and Wolkite Health center

**4.4. Study population:** were lactating mothers with HIV positive who has under one year old children were from all wards.

#### **4.5 Inclusion criteria**

All HIV positive breast feeding women

#### **4.6 .Exclusion criteria**

Women who is; -seriously ill

- did not able to give an informed Consent
- had difficulty of communication

#### **4.7 sample size determination and sampling technique**

##### **4.7.1 Sample Size determination**

The sample size determine by using the formula for single population proportion by assuming 5% marginal error and 95% confidence interval (@( $\alpha$ )=0.5) and the prevalence(P) for each ( KAP) was 68.91% ,75.87%,and 23.7% respectively according to studies done in Gonder town Health institutions , North West Ethiopia. By the formula

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

Where:

n = Sample size

P = Proportion of each factor

d= margin of error

$Z (\alpha/2)$  = confidence interval and significance level

The sample size of mothers who have good knowledge calculated as

$$n = (1.96)^2 \cdot 0.6891 \cdot (1 - 0.6891) / 0.0025 = 329$$

The sample size of mothers who have good attitude calculated as

$$n = (1.96)^2 \cdot 0.7587 \cdot (1 - 0.7587) / 0.0025 = 281$$

The sample size of mothers who have good practice calculated as

$$n = (1.96)^2 \cdot 0.237 \cdot (1 - 0.237) / 0.0025 = 278$$

So the the largest sample size for this study is 329, and by assuming 10% non -response rate, the final sample size was=362

#### **4.7.3 Study variables**

##### **4 Dependent variable -**

- \_ Knowledge about infant feeding options recommended to HIV positive women
- Attitude towards infant feeding options recommended to HIV positive women
- Infant feeding practice of lactating mothers

##### **4.7.2• Independent variables:**

Socio demographic variables: Age, Address, Marital status  
Ethnicity, Religion, Level of Education, Income, Occupation

- Drinking water source
- Important person for mothers in deciding how to feed infant

#### **4.7.4 Operational definition**

Good Knowledge: if the respondent scores the mean or above for knowledge questions.

Poor Knowledge: if the respondent scores below the mean for knowledge questions.

Good Attitude: if the respondent score the mean or above for attitude question.

Poor attitude: if the respondent score below the mean for attitude question.

Good Practice: if the respondent complies with WHO recommendation of feeding of infants born to HIV positive mother [1] .Either

Exclusive breastfeeding fulfilling; (a) initiating breastfeeding within the first one hour of life;(b) exclusive breastfeeding for the first six month.(infant receive only breast milk);followed by (c) continued breast feeding up to two years or beyond(with introduction of appropriate complementary food at six month)

ERF (not breastfeeding at all); the mother or caregiver can access health care that offers comprehensive child health service. These descriptions are intended to give simpler and more explicit meaning to the concepts represented by AFASS (Acceptable, Feasible, Affordable, Sustainable and Safe,)

Poor Practice; if the respondent practice neither EBF nor ERF according to WHO recommend at birth up to 6 month.

#### ***4.8. Data collection tool and procedures***

The questionnaire is purely for the purpose of this research. All information given was treat as confidential and does not require names or identities of the informants The questionnaire was prepared in English. A structured English questionnaire was translated to amaharic by the investigator and face to face interview was used collect data on knowledge, attitude, and practice of HIV –positive mother about breastfeeding of their infants and respectful maternity care related question. After data was collected, questionnaires was reviewed and checked for completeness and relevance by principal investigators. Simple Random probability sampling was used.

##### ***4.9 .1 Data collection procedure***

Data was collected by Midwifery students and we were trained for two days on data collection and quality beforehand. Data collection method was by using interview method. Using structured and pre tested questionnaires

##### ***4.9.2 Data quality control***

The quality of data was assured by proper designing and pre-testing of the questionnaires on 5% of similar study participants in Attat town health center facility and by giving training for the data collectors and supervisors before the actual data collection. Every day after data collection, data was reviewed and checked for completeness, frequencies, accuracy, consistencies, missed values and

variables and clarity by the supervisors and principal investigators and the necessary feedback was offered. Any error identified will be corrected; data clean up and cross-checking was done before analysis.

#### ***4.10 Data analysis and interpretation***

Data was checked, sorted, categorized and coded. After coding, the data was entered using EPI-info version seven statistical software and then exported to SPSS version 23 for analysis. Frequencies, proportion and summary statistics will be used to describe the study population in relation to relevant variables. The results were summarized by using frequency distributions tables and figures or a graph which were used to describe the variables of the study.

#### ***4.11 Ethical consideration***

Before conducting this study, permission was given for us from Wolkite University, college of medicine and health science department of midwifery and then officials in different level of study area was communicated through letters from my department. The letter of permission was present to Attat Hospital. Verbal informed consent was obtained from the respondents before collection of data after we explained the purpose of the study. Confidentiality of information was assured and privacy was maintained throughout.

#### ***4.12 Dissemination result plan***

The finding of this study was disseminated to Wolkite university, college of medicine and health science, department of Midwifery and other else who are responsible for taking an action depending on our result and efforts will be made to published.

## CHAPTER FIVE

### RESULT

#### Socio-demographic Characteristics

Of 362 who were eligible for the study 12( 3.31%) refused to participate. From the remaining 350 lactating mothers with HIV data was collected. The mean age of the mothers was 24 years (SD=5.0) and ranges from 19to 35 years. Regarding the marital status,278(79.4%) were married, 32(9.1%) were divorced (separated), 20(5.7%) were widowed ,and 20(5.7%) were single. Similar proportion of mother 233(66.6%)and 55(15.7%) respectively, were followers of the Orthodox Christian and Islamic. greater than half of the study subjects were gurage 223(63.7%) followed by oromia 66(18.9%) by ethnicity. During the study period, most of the mothers were merchant, 88(25.1%), and both government employees and other accuntes 262(65.9%) by occupation. The median household monthly income was 3000 ETB, and range from 1000 to 12000 ETB. More than one third of the study subjects (n=350) completed primary education, allmost all one third of study subject 84(24.0%) can read and write.while another attnded college and above 75(21.4%) and completed secondary education were 17(4.9). The remaining, 53(15.1%) were did not have formal education (Table 1).

Table 1: socio demographic characteristics of mothers. attat hospital, south Ethiopia, December,2020

Variables	frequency	Percentage
<b>Age</b>		
Below 20	19	2.9
20-25	155	44.2
26-30	154	44
Above 30	31	8.9
<b>Address</b>		
Urban	272	77.7
Rural	78	22.3
<b>Marital status</b>		
Married	278	79.4
Divorced	32	9.1
Widowed	20	5.7

Single	20	5.7
<b>Religion</b>		
Orthodox	233	66.6
Muslim	55	15.7
Protestant	53	15.1
Other	9	2.6
<b>Ethnicity</b>		
Gurage	223	63.7
Oromo	66	18.9
Amara	61	17.4
<b>Educational status</b>		
No formal education	53	15.1
Read and write	84	24
Primary school	121	34.6
Secondary school	17	46.4
College and above	75	21.4
<b>Occupation</b>		
Merchant	88	25.1
Teacher	43	12.3
Housewife	61	17.4
Farmer	76	21.7
Other	82	23.4
<b>Family income</b>		
1000-3000	179	51.1
3500-7000	138	39.4
Greater than 7000	33	9.5

**Mothers Utilization of Maternal Health and Important Persons on Infant Feeding Decisions:**

Among the study subjects (n=350),279(79.7%) visited health institutions for antenatal care and 71( 20.3% ) not visited during their last pregnancy.(Table 2)

Table 2 distribution of mothers by utilization of maternal health,attat,south, Ethiopia, 2020

<b>Variables</b>	<b>frequency</b>	<b>percentage</b>
<b>ANC during recent pregnancy</b>		
Yes	279	79.7
No	71	20.3

**Source of Information of Mothers about Infant Feeding:**

Among the (350)mothers, 209(59.7%) mothers had information on infant feeding only breast feeding , who had information on on supplementary only feeding were 44(12.6%),while another who had information about replacement feeding were 88(25.1),and the remainig 9(2.6%) had about on bottle feeding.(Table 3).

Table 3: distribution of mothers by their source of information about infant feeding attat general hospital south Ethiopia December 2021

<b>Variables</b>	<b>frequency</b>	<b>Percentage</b>
<b>Information about infant feeding</b>		
About breast feeding only	209	59.7
About supplementary feeding	44	12.6
About replacement feeding	88	25.1
Bottle feeding	9	2.6

**Knowledge and Attitude of Mothers towards Infant Feeding Options Recommended to HIV Positive women**

Mothers’ knowledge about MTCT, PMTCT, and infant feeding options recommended to HIV positive women was assessed by asking questions about ways of transmission of HIV from infected women to her baby, ways of prevention of HIV transmission from infected women to uninfected persons and the child of infected women, and about the feeding options recommended to HIV positive women.

In the same way, questions were asked to assess the presence of favorable (good) or unfavorable (bad) attitude among mother infant feeding options. Then, the mothers were categorized as having "good" or "poor" attitude, "sufficient" or "insufficient" knowledge about the issues under consideration based on their response to the questions and the definitions of the terms described under the heading ‘operational definitions’ in the research.

Table 4: Distribution of mothers by their knowledge about and attitude towards PMTCT and infant feeding options recommended to HIV positive women, Attat hospital, south, Ethiopia, December 2020

<b>Variables</b>	<b>frequency</b>	<b>Percentage</b>
<b>Knowledge about MTCT during breast feeding</b>		
Sufficient	283	80.9
Not sufficient	67	19.1
<b>Knowledge about PMTCT</b>		
Sufficient	174	49.7
Not sufficient	176	50.3
<b>Knowledge about infant feeding option</b>		
Sufficient	127	36.3
Not sufficient	123	63.7
<b>Attitude towards infant feeding option</b>		
Good	143	40.9
Poor	207	59.1

Based on this assessment, 127( 36.3%)of the mothers were having sufficient knowledge about infant feeding options recommended to HIV positive women and 223(63.7%) of mother were not having sufficient knowledge about infant feeding option recommended to HIV positive women. In the contrary, only 143(40.9% ) of the mothers was having favorable (good) attitude to wards the feeding options and majority of the study subjects have poor(not good) 207(59.1%) attitude towards infant feeding option recommended to HIV positive women. (Table 4).

#### Infant Feeding Practices of Lactating Mothers, and Intention of Pregnant Women:

All the lactating mothers of the study population were asked about what they have been feeding their infants since birth. And, it was found that exclusive breast feeding was more than half of study practiced 193(55.1%)of the lactating mothers, mixed breast feeding only by 123(35.1%) and exclusive replacement feeding by 34 (9.7%) of the mothers from birth up to the 6th months of age of their infants (table 5).

Table 5: infant feeding practice of lactating mothers from birth up to the 6th month after delivery. attat general hospital, south, Ethiopia, December 2020

<b>Variables</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Infant feeding practice</b>		
Exclusive breast feeding	193	55.1
Mixed feeding	123	35.1
Exclusive replacement feeding	34	9.7

**Challenges:**

1. Inadequate number of trained human power on PMTCT .
2. Delay in laboratory result since lab technicians were not assigned only for HIV testing in the health institutions. It leads to prolonged waiting time of mothers, and mothers once they left home, most didn't come back for posttest counseling (to collect their HIV test result) thus it results missed opportunity.
3. Fear of stigma/discrimination in the community
4. Partners were not involved with HIV testing
5. Absence of care and support: Replacement feeding supply for the infants

ii. Suggested Solutions:

1. Support for poor HIV positive mothers who decided to use replacement feeding (free or subsidized price)
2. In health facilities increase number of trained counselors (in number and quality): train all health workers so that PMTCT can be fully integrated to all parts or activities of the health institutions.
3. " PMTCT PLUS care should be present i.e. care and support for HIV positive mothers and the children with free drugs for opportunistic infections and free long term ART service)
4. Increase community awareness to avoid discrimination, to increase partners' involvement to HIV testing to allow mothers free choice and use of infant feeding options

## CHAPTER SIX

### 6.1 DISCUSSION

In this study, 79.7% mothers visited health institutions for antenatal care and (53.1%) number of mothers were counseled (got advice) on infant feeding as compared to the study done in Addis Ababa in 2014 (18%)(19). The study from India also supports the important role of hospital counselors in assisting HIV positive women in their intended feeding choice as well as actual practice. And it also documented that the time immediately after delivery is critical for re counseling about infant feeding and further support of the woman's decision, thus lowering mixed feeding (17). Therefore, strengthening the counseling being provided during antenatal clinic visits of mothers in the health institutions of the current study area and the started follow up health assessment of their babies and reinforcing counseling of the HIV positive mothers delivered in the maternity ward as part of the PMTCT program of the wolkite University specialized Hospital will be helpful in the PMTCT of HIV in the area.

Most (59.1%) of the mothers were found to have unfavorable attitude towards the infant feeding options recommended to HIV positive mothers. This may be related to low awareness of the community about the importance of the feeding options recommended to HIV positive women in the prevention of MTCT of HIV, which is supported by the observed insufficient knowledge of most of the mothers included in this study about MTCT and PMTCT of HIV in general and the feeding options in particular.

In this study the knowledge of mothers significantly decrease in those mothers whose most important person in making decision on how to feed their infants were husbands (partners) than the mothers themselves. Regarding prevalence of infant feeding practices; in the current study, the lactating mothers practicing mixed feeding were 35.1%, exclusive breastfeeding 55.1%, and exclusive replacement feeding 9.7%, for the infants of 0 to 6th month of age. The rate for exclusive breast feeding (55.1%) is greater than the rate (6.91%) found in the other study done in Jimma three years back on a lower sample size (n=333) of mothers of children aged less than two years (29). Even though, this finding seems encouraging, still it is lower than the rate of exclusive breast feeding documented in the 2016 Demographic Health Survey of Ethiopia (58%) and the Addis Ababa's Study (32%); and, the rate for mixed finding is consistently high in the study area (18,19). The failure of HIV positive mothers to adhere to safe infant feeding practices and the high

prevalence of mixed feeding practice of the mothers of the study area are very clear signs of the potential high transmission of HIV to children of the study area. In addition to increased risk of MTCT, regardless of the HIV status of the mothers, the infants are at risk of death from non HIV diseases. Literatures also agree with the fact that mixed feeding increases not only MTCT of HIV but also the risk of non HIV diseases like diarrhea and malnutrition in the 1st 6 months of age of infancy (5, 8, 33). Thus, the aforementioned situations may indicate the need of integrated and comprehensive efforts to reduce urgently the risk of MTCT in the study area and other similar parts of the country. Disease prevention and control in line to this, currently, evidences from developed countries are showing that the risk of MTCT can be reduced to below 2% by combination of antiretroviral prophylaxis given to women during pregnancy and labour and to the infant in the first weeks of life, elective caesarean delivery and completely avoiding breastfeeding (34, 35). However, caesarean sections have increased the risk of morbidity and possible mortality for the mother, particularly in low resource settings because of anesthesia risks, blood loss, pain, and increased recovery time. Besides this, abstinence of breastfeeding is often not acceptable, feasible or safe in resource poor countries (35, 36). Moreover, according to WHO, interventions focusing on the PMTCT of HIV need to be complemented by interventions that address primary prevention of HIV infection, especially among women of childbearing age and their partners, prevention of unintended pregnancies among HIV infected women, and the provision of care, treatment and support for HIV infected women, their children and families (3)

## **6.2 LIMITATIONS OF THE STUDY**

However, since the study involved questions of personal sensitive issues related to lactating and PMTCT, it might have introduced some social desirability bias.

## **CHAPTER SEVEN**

### **7. CONCLUSIONS AND RECOMMENDATION**

#### ***7.1 CONCLUSIONS***

Safe breast feeding HIV exposed infants in hospitals of attat **is** still achallenge in order to achieve the goal of HIV free survival in children, the cause of poor breast feeding practice must be identified and addressed. focus must be laid on education of HIV positive women during pregnancy and throughout breast feeding period.

- In this study, most of the mothers were merchants. The household monthly income of half of the mothers was very low (below 133 Ethiopian Birr), and majority of the households got their drinking water from pipe.

- Most (79.7%)of the mothers of the study area used antenatal care and the major source of information of the mother with HIV and infant feeding were health facilities.

## 8. REFERENCES

1. Disease prevention and control department. Fifth Report of AIDS in Ethiopia. , Ministry of Health, Ethiopia, Nov, June 2011.2. Dunn DT, Newell MI, Ades AE Peckham CS. Risk of Human Immunodeficiency Virus Type 1 Transmission through Breastfeeding. *Lancet* 2011; 340: 585 –588
3. Family Health Department. National guideline on the prevention of Mother -to - child Transmission of HIV in Ethiopia, Ministry of Health, Addis Ababa, Ethiopia, November 2011.
4. Decock KM, Fowler MC, and Mercier E, et al. Prevention of mother -to - child HIV transmission in resource- poor countries: translating research in to policy and practice. *Journal of American Medical Association*. 2011; 283: 1175 - 1182
5. Coutsooudis A, Pillay K, spooner E, Kuhn L, coovadia HM. Influence of infant - feeding patterns on early mother - to - Child transmission of HIV -1 in Durban, South Africa: a prospective cohort study. South African Vitamin A study group. *Lancet* 2014;
6. Latham MC, Preble EA, Appropriate feeding methods for infants of HIV infected mother in sub-Saharan Africa. *British medical journal* - 2010
7. WHO Technical consultation on Behalf of the UNFPA/UNICEF/ WHO /UNAIDS Inter Agency Task Team on mother -to - child Transmission of HIV. New data on the prevention of mother - to - child transmission of HIV and their policy Implications, conclusions, & implications, Geneva, January 2012
8. Family Health Department. National Strategy for infant & young child feeding Federal ministry of health, Ethiopia, April 2014.
9. Nduati R., et al. Effects of breastfeeding and formula feeding on transmission of HIV-1: a randomized clinical trial. *JAMA* March 1 2010; 283(9)
10. UNAIDS. WHO, UNICEF, UNAIDS Statement on current status of WHO/UNAIDS/UNICEF Policy guidelines September 2007. Geneva.
11. Kuhn L, Stein z: Infant survival, HIV infection, & feeding alternatives in lessdeveloped courtiers, public Health Forum *American Journal of public health* 2007; 87 (6): 926-931 12. Talawats, Dore

GJ, Le coeur S, Lallemand M. Infant feeding practices and attitudes among women with HIV infection in northern Thailand. *AIDS Care*. 2007 Oct; 14(5):625-31

13. Grenier T. The HIV threat to breast-feeding: Virus, fear and greed, Bangladesh Breast feeding foundation 2009;

14. Hilderbrand K, Goemaere E and Coetzee D. The prevention of mother to child HIV transmission programme and infant feeding practices. *S Afr Med J* 2013 Oct;93 (10) 779-781.

15. Kiarie JN, Richardson BA, Mbori-Ngacha D, Nduati RW and John-Stewart GC. Infant feeding practices of women in a perinatal HIV – 1 prevention study in Nairobi, Kenya. *J Acquir Immune Defic syndr* 2015; 35 (1) : 75-81

16. Omari AA, Luo c, Kankasa C, Bhat GT, Bunn J. Infant-feeding practices of mothers of known HIV status in Lusaka, Zambia.

Health policy plan. 2013 Jun: 18(2): 156-62

17. Suryavanshi N, Jonnalagadda S, Erande As, et al. Infant feeding practices of HIV positive mothers in India. *J Nutr*. 2013 May; 133(5): 1326-31

18. CSA. 2016 Ethiopia Demographic & Health Survey, Central Statistical Authority, Addis Ababa,.

19. Kesela T. , Kebede D. pattern of feeding of infants in Addis Ababa, Ethiopia. *Ethiop. J. Health Dev*. 2014; 10(1): 57-65.

20. Rogers, E.M. *Communication strategies for Family Planning*, Free press, USA. 2015; 21. Piotrow et al. *Behavior change Model: knowledge Approval, Intention, practice and Advocacy in communication framework*, JHU. Ccp;

22. De Paoli M, Manongi R, Helsing E, klapp KI. Exclusive breastfacing in the era of AIDS. *J Hum lact*. 2011;Nov; 17(4): 313-20.

23. Manuela de paoli M., Manongi R., klepp K., Counselors' perspectives on Antenatal HIV testing and Infant feeding dilemmas facing women with HIV in Northern Tanzania. *Reproductive Health Matters* 2010; 10 (20): 144-156.

24. CSA. Population and housing census of Ethiopia. Result for Oromiya Region, November 2008;Vol. 2:1 – 328
25. Asefa M., Drewette R., Hewison J. An Ethiopian birth cohort study: the study design, *Ethiop. J. Health Dev.* 2012; 16 (special Issue): p. 21 - 36
26. Department of Health. Evaluation of Voluntary Counseling and Testing in the National Prevention of Mother to Child Transmission Programme, Ministry of Public Health of Thailand in collaboration with WHO and, UNAIDS, Thailand, Oct. 2010.
27. UNAIDS. Evaluation of a national AIDS programme, UNAIDS/ 99.7 E 2009;
28. WHO. Breastfeeding and Replacement Feeding practices in the context of mother-to child transmission of HIV: An Assessment Tool For Research, RHR, CAH

## ANNEXE I. QUESTIONNAIRE

Table 6: questionnaires to assess knowledge, attitude and practice among lactating hiv positive women

Circle and write the appropriate response accordingly			
PART- I: Socio-demographic characteristics of participants			
Q. No	Questions	Response	Skip to
001	How old are you?	Age in completed years_____	
002	What is your current marital status?	1. Single 2. Married 3. Divorced 4. widowed	
003	Family monthly income (ETB)	Birr _____	
004	What is your ethnicity?	1. Gurage 2. Oromo 3. Amhara 4. Others ( specify)____	
005	What is your religious practice?	1. Orthodox 2. Muslim 3. Protestant 4. Other(specify)____ _____	
006	Educational status	1. No formal education 2. Read and write 3. Primary 4. Secondary	

		5. College and above	
007	What is your occupation?	-----	
008	Where do you reside?	1. Urban 2. Rural	
<b>PART- II. knowledge related questions</b>			
010	During this pregnancy, did you attend antenatal care in any health institution?	1. Yes 2. No 3. I don't know	
011	Feeding only breast milk is adequate to babies in the 1 <sup>st</sup> 6months for all women	1. True 2. False 3. I don't know	
012	Breast milk prevents childhood illnesses.	1. True 2. False 3. I don't know	
013	HIV infection can be transmitted form HIV infected mother to her baby through breast feeding	1. True 2. False 3. I don't know	
014	Feeding only formula or other food to babies is expensive than breast milk?	1. True 2. False 3. I don't know	
015	Feeding only formula or other food to baby prevents transmission of HIV from an infected woman to her baby.	1. True 2. False 3. I don't know	
016	Feeding infants breast milk and formula or other fluids is good for all babies in the 1st 6 months	1. True 2. False 3. I don't know	
017	Giving both breast milk of the mother and complimentary food (other foods) starting the 6th month is important for the healthy growth of all babies of HIV negative mothers.	1. True 2. False 3. I don't know	
018	Giving both breast milk of the mother and complimentary food (other foods) starting at 6 <sup>th</sup> month will increase transmission of HIV from infected mother to her baby.	1. True 2. False 3. I don't know	
<b>PART III. Attitude related questions</b>			
019	If your sister or relative has told you that she became HIV positive: Would you encourage her only to breast feed her baby?	1. Yes 2. No 3. No response	
020	If your sister or relative has told you that she became HIV positive: Would you encourage her not to breast feed at all?	1. Yes. 2. No 3.No response	
021	If your sister or relative has told you that she became HIV positive: Would you try to support her to feed only formula or cow's milk to her baby?	1. Yes. 2.No 3.No response	If no skip to Q 023

022	If you don't want to support her to feed her baby only formula or cow's milk, why not?	<ol style="list-style-type: none"> <li>1. Not BF at all is culturally unacceptable</li> <li>2. Expensive to purchase it for long time</li> <li>3. Getting fuel or cooking material is difficult</li> <li>4. Frequent feeding with cup is difficult</li> <li>5. Not BF leads to be suspected for HIV, stigma &amp; discrimination</li> <li>6. Others (specify)_____</li> </ol>
<b>PART IV. Practice on infant feeding</b>		
023	During antenatal care visits, were you counseled about infant feeding?	1.Yes. 2.No.
024	What information (advice) on infant feeding was given to you during the antenatal visits?	<ol style="list-style-type: none"> <li>1. About Breast feeding only</li> <li>2. About bottle feeding</li> <li>3. About supplementary feeding</li> <li>4. About replacement feeding</li> <li>5. Other (specify)_____</li> </ol>
025	What have you intended to give (feed) your baby with in the first three days after delivery, before your <b>white milk</b> begins flowing regularly	<ol style="list-style-type: none"> <li>1. The fluid that came from the breasts</li> <li>2. Butter</li> <li>3. Water &amp; Sugar</li> <li>4. Nothing fed</li> <li>5. Other (specify)</li> </ol>
026	What have you intended to feed (give) your child from birth up to 12 months after delivery?	<ol style="list-style-type: none"> <li>1. Water/tea.</li> <li>2. Water and sugar/salt</li> <li>3. Breast milk</li> <li>4. Powdered milk</li> <li>5. Cow's milk</li> <li>6. Porridge</li> <li>7. Cereal based fluid</li> <li>8. Adult food</li> </ol>

		9 .Others(specify
027	For the above foods, the foods you have intended to feed your child, at what age will the intended foods be given (started)?	1. Water/tea at ____ day/s ____ month/s 2 .Water & sugar/salt tea at ____day/s ____ month/s. 3 Others
028	How many times you feed your intended foods to your child?	____ times/day

***THANK YOU !!!***