

**ADDIS ABABA UNIVERSITY
FACULTY OF MEDICINE
CENTRALIZED SCHOOL OF NURSING**

**The desire to have children: IS PMTCT an opportunity
for HIV positive people? A Cross Sectional Study in
Mekelle Health institutions, Tigray/Ethiopia, 2009.**

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• **Abbreviations and acronyms**

1. AIDS – Acquired Immuno Deficiency Syndrome.
2. ANC – Ante Natal Clinic
3. ART – Antiretroviral Therapy.
4. ARV – Antiretroviral treatment.
5. DHS – Demographic and Health Survey.
6. FHAPCO – Federal HIV/AIDS Prevention & control office
7. GESOMO – Gender and Society Organization Moment.
8. HAART – Highly Active Anti Retroviral Therapy.
9. HAPCO – HIV/AIDS Prevention & Control Office.
10. HCs. – Health Centers.
11. HIV – Human Immuno – deficiency virus.
12. MOH – Ministry of Health.
13. MTCT – Mother – To Child Transmission.
14. PLWHA – People Living With HIV/AIDS
15. PMTCT – Prevention of Mother – To – Child Transmission
16. RH- Reproductive Health
17. UNAIDS – Joint United Nations program on HIV/AIDS
18. UNICEF – United Nations Children’s Fund
19. WHO – World Health Organization.

Abstract

Back ground: The introduction of highly active antiretroviral therapy has changed the life prospect of PLWHA towards parenthood. However, little is known about the extent of PLWHA desire to have children.

Objective: The aim of this study is to assess the desire to have children and identify factors associated with desire to have children among men and women living with HIV/AIDS at follow up of ARV treatment units.

Method: A cross-sectional facility based study was conducted; using a pre tested structured questionnaires on sample of HIV-infected men and women attending at ARV treatment sites in Mekelle hospital and three health centers in Mekelle town. Total sample sizes of 367 respondents were selected using systematic random sampling technique. Respondents were selected proportional to the size of each facility serving ARV treatment. Data were analyzed using SPSS statistical soft ware version 15.0. Ethical clearance was obtained from the Medical Faculty of Addis Ababa University.

Result: Data were obtained from 367 respondents, yielding a response rate 98.9%. One hundred forty four (39.2%) of respondents had desire to have children. Among men this proportion was 43.6% (n=61), in contrast to 36.6 (n=83) of women. Generally desire to have children was higher in the age group 20-29 years compared to elderly age group with OR 10.48 (95% CI: 5.07, 21.63). Respondents who disclosed their HIV status to their partners had significant association for desire to have children compared to those who do not disclosed with OR 1.67 (95% CI: 1.00, 2.80).

Conclusion A significant proportion of HIV infected individuals have desire for children. Issues related to fertility desires need to be addressed more frequently by health care providers to their HIV-infected clients through counseling to facilitate informed decision-making about child bearing.

1. BACKGROUND AND STATEMENT OF THE PROBLEM

In many areas of the globe most HIV infection is transmitted sexually or in association with pregnancy, childbirth and breast feeding. Women of child bearing age constitute nearly half of the estimated 32 million adults currently living with HIV world wide (1). Mother-to-child transmission (MTCT) is the dominant mode of acquisition of HIV type 1 for children, resulting in approximately 1800 of the 16000 new infection occurring each day, mostly in sub-Saharan Africa. The increasing number of infected women of child bearing age makes the prevention of MTCT a public health priority in many African Countries where antenatal HIV seroprevalence ranges between 5 and 40% (2).

In Ethiopia, data obtained in 2005 from Ante Natal Clinic (ANC) surveillance and the Demographic and Health Survey (DHS) assessment suggests that the epidemic has stabilized. The adult (15-49 years old) national HIV prevalence was estimated at 2.2% in 2003/04 and 2.1% in 2006/7. In 2007 there were about 977,394 people in the country living with HIV, about 125,528 new infections (about 344 a day), 75,420 HIV-positive pregnancies and 14,148 HIV-positive births. The number of People Living with HIV/AIDS (PLWHA) requiring Antiretroviral Therapy (ART) was 258,264 which include 242,548 adults and 15,716 children. In Tigray HIV prevalence rate is 2.7% which is slightly higher than the national prevalence (3).

The number of PLWHA ever started on ART has increased sharply from 8,276 in June 2005 to 24,236 in June 2006 to 97,299 in June 2007 and to 122,243 at the end of December 2007. But despite these achievements, coverage of essential prevention, treatment and care services remains limited. Only 34.9% of PLWHA in need of treatment are receiving ARVs. It is no more than 6.48% of HIV-positive pregnant women received ARV drugs to reduce the risk of MTCT (3).

The national ARV Guideline, which was endorsed in 2003 and subsequently revised in 2004, promotes the free provision of PMTCT drugs to pregnant women who test positive. In 2006, 3.24% of HIV infected pregnant women received ARV drugs to reduce the risk of MTCT. In 2007, coverage increased to 7.03 % (3).

HIV infection affects the way women and men experience parenthood. It has a negative impact on their ability to have children, related not only to psychosocial aspects such as stigma and discrimination and decreased sexual activity, but also to the clinical impact of HIV infection and sexually transmitted infection (STIs) on fertility (4, 5).

In countries where ARV are available, women and men experience similar challenges, including lack of information regarding safe pregnancy and PMTCT, negative attitudes towards HIV positive people having children and problems accessing safe and legal abortions (6).

Fertility issues for HIV-positive men and women are becoming increasingly important. Provision of antiretroviral (ARV) medication, such as zidovadine and other antiretroviral drugs, has potentially reduced transmission from infected mothers to their children from 20-45% to about 2% (7).

The desire of HIV-infected persons to have children in the future has significant implication for the transmission of HIV to sexual partners and newborns. Although the risk of transmission of HIV from mother to infant can be decreased with prophylactic treatment, maternal transmission accounts for almost all new HIV infections in children (8).

Although, the availability of HAART and of interventions for prevention of mother-to-child transmission (PMTCT) in most countries has markedly changed the life prospects of people living with HIV, creating the possibility of new life projects, including parenthood, the perception of PLWHA about PMTCT and their intention to have children is a gray area to be explored (9).

Thus, it is the purpose of this study to assess the attitudes of PLWHA towards parenthood, identify factors associated with the desire to have children among PLWHA and, assess the perception of clients about the effectiveness of PMTCT service.

1.1 - Significance of the study

In our country, there is only limited information available about fertility desire of women and men living with HIV/AIDS. Some women may have children even after HIV diagnosis and very little is known about whether the pregnancies were intentional or not. Findings from the study done in 2004 and 2006 on “the reproductive decision and sexual behavior of people living with HIV/AIDS” as well as “fertility desire and family planning demand among PLWHA who follow ARV” indicated that, their decision affected by different factors such as fear of the transmission of the virus from mother to child, leaving of orphans due to their expected short remaining life and of these who had discussion about family planning and sexuality with their care providers felt that their care providers have not sufficiently addressed such issue (10,11).

Therefore, the current study tries to assess the fertility desire of PLWHA who are using ARV treatment, assess the perception of PLWHA about PMTCT, and assess the perception of PLWHA concerning the health care providers approach on their provision of effective RH rights. Nowadays ARV treatment and PMTCT services are expanding through out the nation. So, it has good implication that findings generated from this study will contribute to understand the factors that influence fertility desire, be useful in designing programs, helps to identify ways to improve PMTCT services, and it is also useful to any interested organization working in this area to use the data obtained from this study.

2. LITERATURE REVIEW

Each year, over half a million newborns are infected with HIV in sub-Saharan Africa through MTCT. Without interventions, there is a 20-45% chance that a baby born to an HIV-infected mother will become infected. Of all health crises in the Africa region, HIV/AIDS has attracted the most political support and resources. Programmes for the PMTCT of HIV include antenatal HIV testing and counseling, avoiding unintended pregnancy, provision of appropriate ARV regimen for mothers and newborns, and support for safer infant feeding options and practices. However, in spite of efforts to scale up, less than ten percent of pregnant women in Africa infected with HIV receive intervention to reduce MTCT (12). Even in settings where effective prophylaxis is available to prevent transmission during pregnancy and childbirth, there is often a major gap in service provision in the post natal period.

In the developed world, access to ARV treatment has increased pregnancy incidence among women living with HIV (13). Both the Swiss and the American studies reported that individuals who experienced improved health while on ARV are significantly more likely to desire parenthood (14).

Effective prevention and treatment of HIV infection with ART are now available, even in countries with limited resources (15). Nonetheless, comprehensive programs are needed to reach all persons who require treatment and to prevent transmission of new infections.

Health care providers should consider that the promotion and protection of reproductive rights of both men and women living with HIV can also contribute to reduce HIV transmission (16).

In the absence of any intervention to prevent transmission, as is the case for most African mothers, roughly one-third of all infants born to HIV-positive mothers will acquire the infection. The risk is unpleasant in contrast to high income countries, because transmission rates are less than two percent; there is almost total elimination of pediatric HIV (17).

In 2005, approximately 123 million women were estimated to have given birth globally in low and middle income countries. With 77 percent of women (70 million) in these countries having access to at least one ANC visit, this provides the opportunity for all these women to have access to PMTCT services. But this remains a missed opportunity for most women (18).

Regardless of HIV status, a woman's sexual identity is often defined by her reproductive ability child bearing is seen as a woman's obligation and even after a woman discovers she is HIV infected, motherhood still validated her life. In many cultures, women believe childbearing is their purpose for living. For many women, no alternative source of personal identity exists apart from parenting (19).

Desire for children is an interactive process that includes the need to love and be loved and varies as a woman passes through different phases of life. Men and women have children as a means of perpetuating themselves. Socially, the notion of lineage is coupled with a person's needs and is a part of cultural tradition transmitted from one generation to another. An indigenous factor such as sense of self, which is comprised of competence and mastery, influences one's desire for children (20).

In a study done on 1992 HIV-infected men and women attending an AIDS support organization in Jinja, Uganda, men were almost four times to want more children than the women (27% Vs.7%). Although 81% knew that mother-to-child transmission of HIV could be prevented only 22% believed that an HIV-infected woman who received PMTCT therapy could still deliver an HIV-infected child (21).

"Fertility Desires and Intentions of HIV-positive Men and Women," a study published in 2001 in Family planning perspectives, concluded that 29% of HIV-positive women and 28% of HIV-positive heterosexual men who received medical care in the U.S desired children in the future. Yet while many women and men with HIV have desire children, fertility and conception issues may complicate the realization of this dream. Indeed, of these desiring children among the total sample of 1,421 subjects aged 20-44, 31% of women and 41% of men did not expect to have any (22).

2.1 - Fertility–related needs of women and men living with HIV

As more than 80% of all women living with HIV and their partners are in their reproductive years, many will continue to want children after learning their positive status, whether to start a family or to have more children (23). Others may wish to regulate their fertility, so that they can decide whether to try for a pregnancy and when (24). Fertility–related needs of women and men living with HIV and of discordant couples may differ substantially from those who are HIV negative (24, 25). HIV infection may affect sexuality because of fear of infecting the sexual partner(s), feeling of guilt and shame aggravated by stigma related to HIV, or emotional or psychological distress, reducing desire for or interest in sexual relations. With the increasing availability of ARV treatment and improvement in health status, there may be a renewed interest in sexual relations and the desire to have children for women and men living with HIV (26).

Giving birth and having children play a significant role for the social and the personal identify of women and men in most if not all cultures. As access to ARV treatment increases, and MTCT rate decreases, having children can become a realistic option for many more HIV positive women and men. Because people on ARV treatment recover their health, their sexual activity may also increase (27, 28).

2.2 - Infertility among women and men living with HIV

Infertility affects 8-12% of the world’s population, with male and female factors accounting for 40% each, and the remaining 20% either shared or unexplained factors (29). Studies have reported that the fertility of HIV positive women is lower than that of HIV– uninfected women in all but the youngest age group (30). Determinants of lower fertility may be biological, demographic or behavioral. They include co–infection with other STIs, in particular syphilis, which put women at higher risk of fetal loss and still- birth (31, 32). There is evidence that, also men with more advanced HIV disease have abnormal semen and a decrease in semen volume and progressive motility has been seen in men receiving ART (30, 33).

The World Health Organization (WHO) as well as advocacy organizations have affirmed the right of women living with HIV to make an informed choice whether to continue a pregnancy

and to have access to safe abortion where it is not against the law and to post-abortion care for complications of unsafe abortion where it is (34, 35).

2.3 - Contraception options

A study evaluating PMTCT sites in Kenya and Zambia has shown that HIV positive women had similar contraceptive use rates to HIV negative women, while in Rwanda the demand for contraception was higher among HIV positive women (36, 37).

According to WHO's Medical Eligibility criteria for contraceptive use, most contraceptive methods are considered to be safe and effective for HIV positive women, both with asymptomatic HIV and AIDS. Recent WHO publications indicated that there are no restrictions on the use by HIV positive women of hormonal contraception, whether pills, injectable, implants, patches or rings. Women on ARV treatment can use them as well. However, the drug rifampicine, which is used for tuberculosis treatment, may decrease the effectiveness of oral contraceptives (38, 39).

In general, human rights are the foundation of sexual and reproductive rights. Non-discrimination and equality are of particular important when dealing with PLWHA.

There fore, HIV positive men and women could now live longer, lead healthier lives and may have a different out look for fertility desire. However, little is known whether PLWHA desire to have children or not and what factors influence their decision. Thus, this thesis tries to assess and analyze the fertility desire of PLWHA receiving ARV treatment, helps to understand what factors affect their desire to have children and helps to know the challenges and obstacles at the service delivery levels that might impair the fulfillment of their reproductive rights in Mekelle Hospital and Health Centers at ARV treatment sites

2.4 - Conceptual frame work

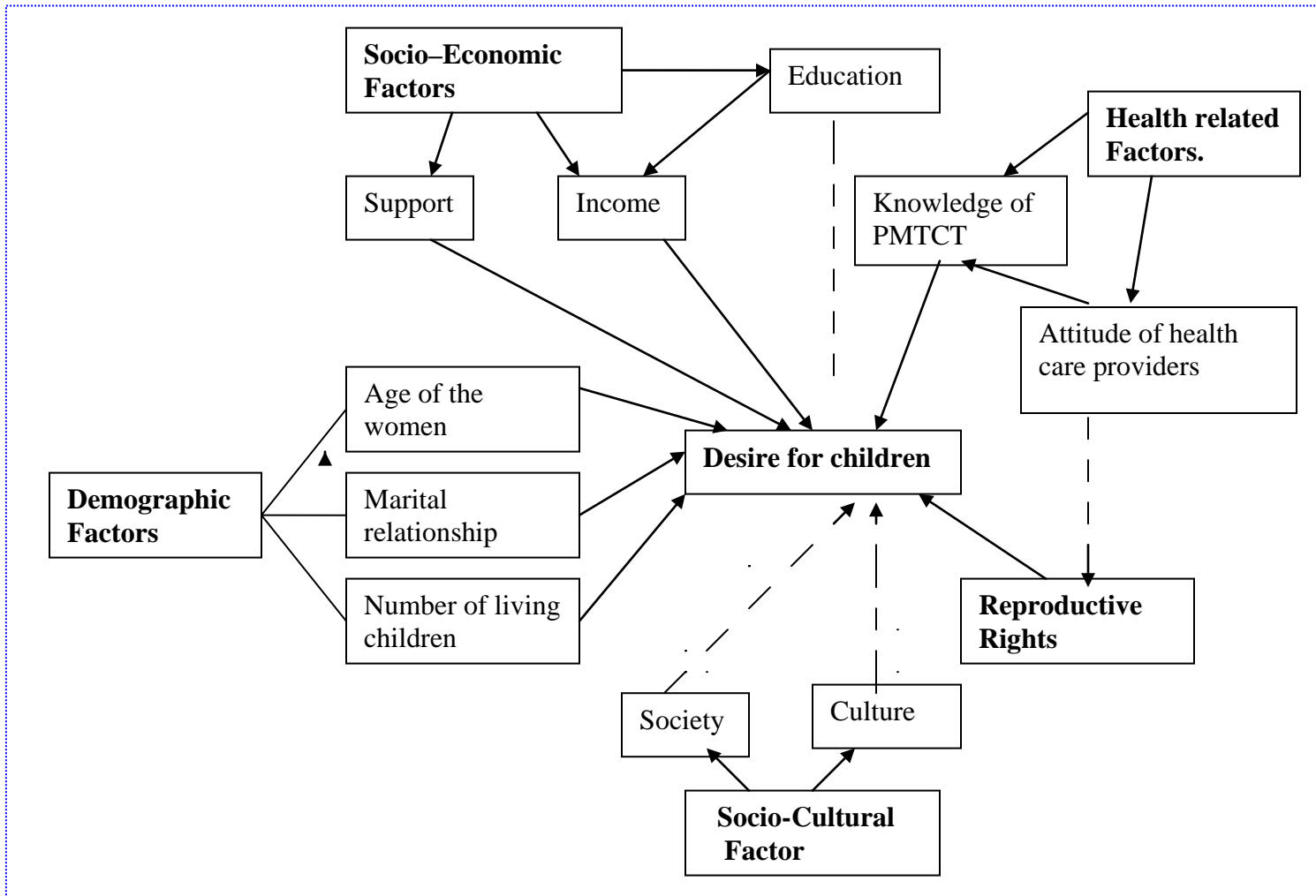


Figure 1 – Conceptual framework on factors that influence fertility desire among PLWHA.

3. OBJECTIVES

3.1 General objective

The aim of this study is to assess the desire to have children and perceptions about PMTCT among PLWHA enrolled in ARV treatment sites, in Mekelle Hospital and Health Centers.

3.2 Specific objectives

- Assess the attitudes towards parenthood among PLWHA using ARV treatment.
- Assess the awareness of PLWHA about MTCT and PMTCT.
- Assess the perception of PLWHA about the contraception utilization.
- Identify factors associated with desire to have children among PLWHA.
- Assess the attitudes of PLWHA towards their health care providers in supporting of the RH rights.

4 - METHODS AND MATERIALS

4.1 - Study area and period

The study was carried out between March 1 – April 10, 2009. The sample for this study was obtained from participants who follow ARV treatment in Mekelle hospital and health centers (HCs): Semen HC, Kasech HC and Mekelle HC, Tigray/Ethiopia. Mekelle is the capital city of Tigray Administrative Regional state, found 783 kms north of Addis Ababa. The town is divided into seven administrative localities. Its population is estimated to be 240,000. It has two governmental Hospitals, three private Hospitals, five governmental health centers, as well as twenty private clinics.

In Tigray, according to FHAPCO monthly HIV care and ART update report as of end of May 10, 2008, HIV care cumulative ever enrolled in 42 health institutions shows about 20,055 clients, those who currently on ART are 8,312. And those who are currently on ART treatment in Mekelle health institutions are 2,746 clients: Kasech health center, Mekelle Health Center, Mekelle Hospital, and Semien Health Center accounts (108, 180, 2,388, & 70) respectively (40).

The area of study is selected by its high prevalence of HIV, convenience access to the investigator, availability of data collectors who are fluent in the local language and availability of ARV provision more relatively than the other sites.

4.2 - Study design

A facility based cross-sectional study was conducted among HIV-positive individuals receiving follow-up care at ARV treatment centers in Mekelle Hospital and three Health Centers to assess the desire to have children.

4.3 - Study Population and Sampling

4.3.1 - Study Population

The source population

The source populations were all PLWHA who are on follow up treatment in Mekelle hospital and other three health centers receiving ARV treatment during the study period.

Study population

The survey included all members of PLWHA who had at least one visit to the selected hospital and health centers ARV treatment sites during the study period. Then study participants were selected from the sampling frame.

Inclusion criteria

All PLWHA:

- For female, those in reproductive age groups (15-49 years),
- For men 18 and above years, and
- At least one visit in the selected hospital or health centers for ARV treatment.

Exclusion criteria

All PLWHA:

- Those who are unable to hear, have mental health problems, seriously ill, and
- Those under and greater than the age specified in the inclusion criteria will be excluded from the study.

4.3.2 - Sample size

Sample size calculation for the Quantitative method

The sample size is determined using single population proportion formula assuming the proportion of HIV positive individuals who receive ARV treatment and have the desire to have children is 50%, 5% marginal error, 95% confidence interval and 10% non response rate.

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

Where, n= the required sample size

z= standard score corresponding to 95% confidence interval

p= Assumed proportion of fertility desire 50%

d= the margin of error (precision) 5%

$$n = \frac{1.96^2 \times (0.5 \times 0.5)}{(0.05)^2}$$

=384, from un defined population. So, for defined population will be calculated as follows:

$$n = \frac{n_o}{(1 + \frac{n_o}{N})}$$

Where, n_o = the sample size from an infinite population,
N=finite population size.

$$n = \frac{384}{1 + \frac{384}{2,746}}$$

$$n = \frac{384}{1.1398}$$

$$= 337 + 10\% \text{ of non response rate}$$

$$337 + 34 = \underline{371} \text{ required sample size}$$

4.3.3 - Sampling Technique for the quantitative method

The study area was selected by its **convenience**, and all governmental health facilities which provide ARV treatment service in Mekelle town were included, so, the study sample met the inclusion criteria. The study participants (clients) included in the study sample were selected from the sampling frame using Systematic Random Sampling (SRS) technique. Sample size for each unit was determined based on proportional to the unit's client size of each facility serving ARV treatment. The sampling interval was depending on the number of clients visiting the selected health facility on each day, on the range of two - thirteen PLWHA per day and varies according to the serving capacity.

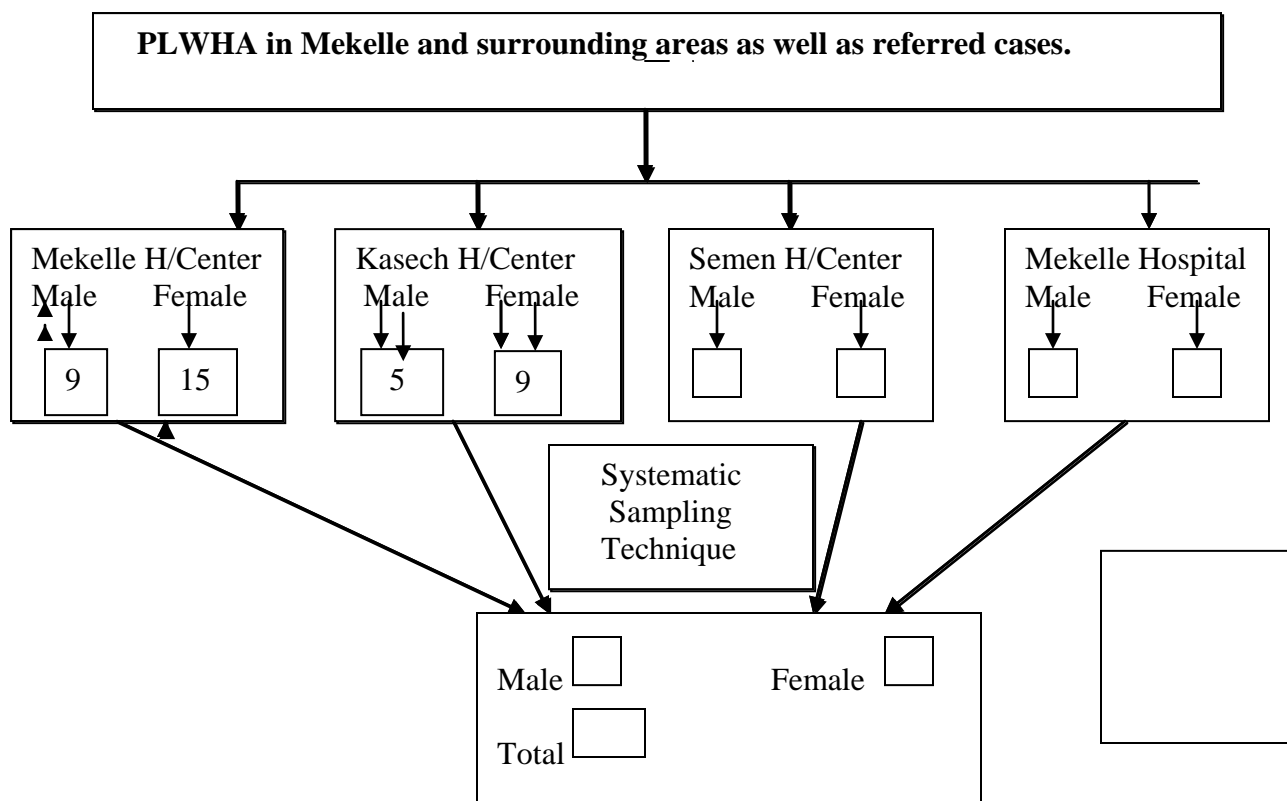


Figure 2 – Schematic presentation of the Sampling Procedures of the study subject Mekelle/Tigray, Ethiopia 2009.

4.4 - Data collection technique and data collectors

Data were collected using structured questionnaire with closed and open ended questions. The questionnaire was prepared in English and then translated into Tigrigna local language then after translated back to English to keep its consistency. The questionnaires have contained questions on socio- demographic characteristics; health care providers address themes such as child bearing and sexuality, as well as their perception of MTCT and PMTCT. Prior to the start of the actual study, the questionnaires were pre-tested in the local language, to make sure that the questions are clear and understandable by the respondents. In order to conduct the pre test, two interviewers were recruited from other health institutions. Based on the findings of the pre-test, the questionnaires were found to be adjusted some corrections. The pretest was conducted at Queha hospital which is ten kilo meters far from Mekelle town, and it was pretested on about 3% of the sample size.

ARV treatment service providers were selected as data collectors. Data collectors were eight and supervisors were also two in number. Those data collectors and supervisors were trained in order to have adequate information on how to carry out the process and who were fluent in the local language. The principal investigator was the over all supervisor of the process during data collecting period.

An exit interview was conducted by the trained data collectors (nurses) selected from different health institutions explore by the structured questionnaires interview. The interview has taken about twenty to thirty minutes and it was carried out at secured prepared room. Supervision is then carried out informally.

4.5 - Variables

Dependent variables

PLWHA's desire to have children

Independent variables

- Socio-demographic characteristics (gender/sex compared between men and women, age categories, marital status, number of children, educational level, monthly income, religion status,...)
- Awareness of MTCT & PMTCT.
- Reason for using and not using contraception,
- Perception of PLWHA about PMTCT service and service providers.

4.6 - Operational definitions

- Fertility desire → whether women or men living with HIV/AIDS who receive ARV treatment would like to have children in the future or not.
- HIV-positive women → Women living with HIV/AIDS aged 15-49.
- HIV-positive men → Men living with HIV/AIDS aged 18 and above.
- Awareness → the ability to mention the correct mode of transmission and prevention of HIV infection.
- Perception → the way of thinking to whom contraception should be provided.
- Mother to child Transmission (MTCT) → Refers to the transmission of HIV from Mother-to-the child through various mechanisms such as pregnancy, delivery or breast feeding.
- Prevention of mother to child Transmission (PMTCT) → Refers to the mother that helps to decrease the chance of transmission of the virus to the child by a certain percent.
- PMTCT opportunity → The perception of PLWHA about the effectiveness of PMTCT services to prevent transmission of HIV to their children.

4.7 - Quality control methods

To assure the quality of data, structured data collection instrument was used. Data collectors and supervisors were trained. Pre-test was carried out. During the data collection process, all the collected data were reviewed and checked daily for its completeness.

In the data collection process strictly follow up was carried out and supervised informally. After the questionnaires collected from the study sites, manual editing and coding was undertaken on selected survey items to enhance data quality.

4.8 - Data processing, analysis and interpretation

Data were cleaned, entered into a computer and analysis was made using SPSS version 15.0 statistical software. To analyze attitudes towards parenthood and identify factors associated with desire to have children among PLWHA and as the study out come, desire to have children

was compared between men and women, Odds Ratio(OR) and 95% Confidence Interval(CI) were used to check significant association between dependent & independent variables.

4.9 - Ethical considerations

Ethical clearance was obtained from the Institution Review Board of the Faculty of Medicine, Addis Ababa University. A formal letter was written to Tigray regional health bureau, Tigray regional HAPCO, and permission to carry out the study was obtained from the regional health bureau to deal the study in the selected sites of Mekelle hospital and health centers.

Verbal consent was obtained from the study participants after explaining the objective and procedures of the study. Confidentiality was maintained and assured by excluding their names from identification of the study subject.

4.11 - Dissemination of the result

The study result will be presented to Addis Ababa University Medical Faculty of Centralized School of Nursing and documents will be disseminated to all responsible bodies in the study area: Tigray Regional Health Bureau, Regional HAPCO. The findings will be disseminated through different meetings, workshops and publication of the findings will be considered.

Table 1: People living with HIV/AIDS using ARV treatment updated report as of end of May 10, 2008 at four health institutions, Mekelle, Tigray/Ethiopia, 2009.

Health institution	PLWHA on ART	
	No.	%
Mekelle hospital	2,388	87.0
Mekelle health center	180	6.6
Kasech health center	108	3.9
Semen health center	70	2.5

5. Results

Out of the estimated 371 eligible respondents who receive ARV treatment during the study period, 367 agreed to participate and interviewed in the study from March 1- April 10, 2009; making the response rate 98.9%. Among the respondents, 140 (38.1%), were men and 227 (61.9%) were women.

5.1 Socio-economic and demographic characteristics

A total of three hundred sixty seven (98.9%) study subjects responded to the exit interview. The age range of the study subjects were 20 to 65 years with a mean age of 34.6 (\pm 7.74) years and the median age was 34.0 years. The majority of respondents 345 (94.0%) were orthodox by religion and 350 (95.4%) of the study subjects were from Tigray ethnic group. One hundred sixty two (44.1%) of the respondents were married, 87 (23.7%) were divorced, 58 (15.8%) of the respondents were widowed and 49 (13.4%) were single. (Table 2)

More than one-third (39.2%) of the respondents had at list primary education, while 98 (26.7%) were illiterate and 97 (26.4%) were secondary level. The majority 87 (23.7%) of respondents were unemployed and 68 (18.5%) were daily laborers, while government, private employee and house wife were 51 (13.9%), 43 (11.7%) and 45 (12.3%) respectively.

Regarding monthly income, 101 (27.5%) of the respondents reported that they do not have any income, 114 (31.0%) earn less than 200 Eth. Birr, 129 (35.4%) earn 201-1000 Eth. Birr, 20 (5.4%) earn 1001-3000 Eth. Birr, and only 3 (0.8%) respondents earn 3001-5000 Eth. Birr per month.

Table2– **Distribution of PLWHA using ARV treatment by Socio – economic and demographic characteristics Mekelle, Tigray/Ethiopia, 2009.**

Back ground characteristics n=367	PLWHA using ART		
	Female n (%)	Male n (%)	Total n (%)
Age			
20 – 29	82(22.3)	15(4.1)	97(26.4)
30 – 39	108(29.4)	61(16.6)	169(46.0)
40 – 49	37(10.1)	50(13.6)	87(23.7)
≥50	0(0.0)	14(3.8)	14(3.8)
Religion			
Orthodox	213(58.0)	132(36.0)	345(94.0)
Muslim	12(3.3)	7(1.9)	19(5.2)
Catholic	0(0.0)	1(0.3)	1(0.3)
Protestant	2(0.5)	0(0.0)	2(0.5)
Ethnicity			
Tigray	217(59.1)	133(36.3)	350(95.4)
Amhara	7(1.9)	7(1.9)	14(3.8)
Affar	2(0.5)	0(0.0)	2(0.5)
Gurage	1(0.3)	0(0.0)	1(0.3)
Marital status			
Single	21(5.7)	28(7.7)	49(13.4)
Married	85(23.1)	77(21.0)	162(44.1)
Non married partner	4(1.1)	2(0.5)	6(1.6)
Divorced	67(18.3)	20(5.4)	87(23.7)
Separated	5(1.4)	0(0.0)	5(1.4)
Widowed	45(12.3)	13(3.5)	58(15.8)
Education			
Illiterate	77(21.0)	21(5.7)	98(26.7)
Primary	83(22.6)	61(16.6)	144(39.2)
Secondary	58(15.8)	39(10.6)	97(26.4)
Higher	9(2.4)	19(5.2)	28(7.6)
Occupational status			
Student	9(2.4)	4(1.1)	13(3.5)
Unemployed	63(17.2)	24(6.5)	87(23.7)
Governmental employee	17(4.6)	34(9.3)	51(13.9)
Private employee	21(5.7)	22(6.0)	43(11.7)
House wife	45(12.3)	0(0.0)	45(12.3)
Daily laborer	48(13.1)	20(5.4)	68(18.5)
Merchant	16(4.35)	16(4.35)	32(8.7)
House made	4(1.1)	1(0.3)	5(1.4)
Driver	0(0.0)	12(3.3)	12(3.3)
Other	4(1.1)	7(1.9)	11(3.0)

Note: Education categories refers; primary → 1-6 grade, secondary → 7-10 or 12 & Higher → diploma & above.

5.2 HIV/AIDS related characteristics of PLWHA and their attitude towards parenthood

Duration of time since HIV diagnosis, 132 (36.0%) reported 1-24 months, 157 (42.8%) respondents have said 2-4 years and 76 (20.7%) said >4 years, while 2 (0.5%) respondents did not remember the duration (Table 3). Nearly half 178 (48.5%) of respondents reported that they knew their HIV positive status for the first time after provider initiative counseling & testing (PICT), and 148 (40.3%) after VCT received. The rest during pregnancy, Pre-marital check up and others such as while they came for medical check up in order to go abroad (4.4%, 2.2% and 4.6%) were reported respectively.

Concerning the duration of ARV treatment, 140 (38.1%) of respondents started ARV treatment about 1-12 months, 142 (38.7%) said about 1-3 years and 85 (23.2%) responded >3 years.

Sixty four (17.5%) of women participants had two children and 34 (9.3%) of men had one child at the time of survey. In contrast, the majority of women 64 (17.4%) and 41 (11.2%) of men respondents wish to have two children in the future.

Among the study population, 181 (49.3%) of respondents changed their intention for child bearing after ARV treatment introduced. One hundred sixty seven (45.5%) respondents were not changed their intention in either to have or not to give birth. Regarding the effect of ARV treatment on the intention to have children 118 (59.0%) participants reported that their intention to have children is changed after they started ARV treatment. Among men this proportion was 57.3%, in contrast to 60.2% of women. Seventy three (36.5%) respondents said ARV treatment has no effect on their intention to have children.

Table 3–HIV/AIDS related characteristics of PLWHA and their attitude towards parenthood using ARV treatment, Mekelle, Tigray/Ethiopia 2009.

Characteristics n=367	Male n (%)	Female n (%)	Total n (%)
Time since HIV Diagnosis			
1-24 monthly	56(15.3)	76(20.7)	132(36.0)
2-4 years	60(16.4)	97(26.4)	157(42.8)
> 4 years	24(6.5)	52(14.2)	76(20.7)
do not remember	0(0.0)	2(0.5)	2(0.5)
HIV positive status knowing at first times			
During pregnancy.	0(0.0)	16(4.4)	16(4.4)
Pre – marital check up.	2(0.55)	6(1.65)	8(2.2)
After VCT received	77(21.0)	71(19.3)	148(40.3)
After PICT	55(15.0)	123(33.5)	178(48.5)
Other.	6(1.6)	11(3.0)	17(4.6)
Duration of receiving ARV Rx.			
1-12 month	60(16.3)	80(21.8)	140(38.1)
1-3 years	52(14.2)	90(24.5)	142(38.7)
>3years	28(7.6)	57(15.6)	85(23.2)
Number of children having now			
One child	34(9.3)	53(14.4)	87(23.7)
Two children	25(6.8)	64(17.5)	89(24.3)
Three children	20(5.5)	42(11.4)	62(16.9)
Four children	13(3.5)	16(4.3)	29(7.9)
Five children	12(3.3)	16(4.3)	28(7.6)
>Five children	8(2.2)	4(1.1)	12(3.3)
Do not have children	28(7.6)	32(8.7)	60(16.3)
Number of children needed in the future			
One child	8(2.2)	21(5.7)	29(7.9)
Two children	41(11.2)	64(17.4)	105(28.6)
Three children	35(9.5)	62(16.9)	97(26.4)
Four children	20(5.5)	32(8.7)	52(14.2)
Five children	18(4.9)	17(4.6)	35(9.5)
>Five children	10(2.7)	12(3.3)	22(6.0)
Do not need	4(1.1)	14(3.8)	18(4.9)
No response	4(1.1)	5(1.4)	9(2.5)
Intention changed after ARV Rx.			
Introduced			
Yes	78(21.2)	103(28.1)	181(49.3)
No	53(14.4)	114(31.1)	167(45.5)
no response	9(2.5)	10(2.7)	19(5.2)
Way of intention changed (n=200)			
To have children	47(53.3)	71(60.2)	118(59.0)
Not to have children	30(36.6)	43(36.4)	73(36.5)
Un decided	5(6.1)	4(3.4)	9(4.5)

5.3 Awareness of PLWHA on MTCT/PMTCT

The majority, 131 (35.7%) of men and 214 (58.3%) of women respondents are aware about the perinatal transmission of HIV infection. Out of all the respondents interviewed, 57 (15.5%) of respondents said that HIV can be transmitted during pregnancy, 50 (13.6%) said during labor, 41 (11.2%) said through breast feeding, and 47 (12.8%) of respondents have the knowledge that HIV can be transmitted during pregnancy, labour and through breast feeding (table 4)

Three hundred thirty seven (91.8%) of respondents were aware about PMTCT. Six (1.6%) respondents said PMTCT does not work (table 4).

More than half of the respondents, 126 (39.7%) of the women and 85 (26.7%) of the men disclosed their test results to their sexual partner while 70 (22.0%) of women and 29 (9.1%) of men respondents were not disclosed. One hundred seventy seven (77.6%) of respondent partners had HIV tested, 33 (14.5%) of partners were not tested and 16 (7.0%) respondents did not talk about it with their partners. One hundred forty three (80.8%) of respondent reported that their partner is HIV positive, 32 (18.1%) of the respondent partners are HIV negative and about 2(1.1%) of the respondent do not know their partners status.

Regarding to the number of children delivered after knowing their HIV positive status, 69 (18.8%) of respondents gave birth to one child, 9 (2.5%) of respondents gave two children, only 1 (0.3%) woman gave birth more than three children and 9 (2.5%) of women respondents were pregnant at the study period.

From the total respondents who gave birth after tested HIV positive, 25 (31.7%) respondents gave birth to HIV positive children, 17 (21.5%) of respondent's children were negative, while 37 (46.8%) of the children's HIV status were not known.

From the total female respondents 36 (15.9%) women became pregnant after tested HIV positive, among them 22 (59.5%) respondents said the pregnancy was wanted and 14 (37.8%) was unwanted. The decision for the unwanted pregnancy was 9 (64.3%) of respondents said to give birth and 4 (28.6%) of them said to terminate the pregnancy.

Table 4- Awareness of PLWHA about MTCT/PMTCT, Mekelle, Tigray/Ethiopia, 2009.

Characteristics n=367	PLWHA using ARV Rx.		
	Male n (%)	Female n (%)	Total n (%)
Awareness about MTCT of HIV			
Yes	131(35.7)	214(58.3)	345(94.0)
No	1(0.3)	4(1.1)	5(1.4)
I do not know	7(1.9)	8(2.2)	15(4.1)
no response	1(0.25)	1(0.25)	2(0.5)
Method of transmission			
During pregnancy	17(4.6)	40(10.9)	57(15.5)
During labor	16(4.4)	34(9.2)	50(13.6)
Through breast feeding	10(2.7)	31(8.5)	41(11.2)
All mentioned the above	20(5.5)	27(7.4)	47(12.8)
During pregnancy and labor	20(5.5)	31(8.4)	51(13.9)
During labor and breast feeding	30(8.2)	32(8.7)	62(16.9)
During pregnancy and breast feeding	17(4.6)	19(5.2)	36(9.8)
I do not know	9(2.5)	10(2.7)	19(5.2)
No response	1(0.25)	1(0.25)	2(0.5)
Others	0(0.0)	2(0.5)	2(0.5)
Awareness of PMTCT			
Yes	125(34.1)	212(57.7)	337(91.8)
No	1(0.3)	5(1.3)	6(1.6)
I don't know	13(3.6)	7(1.9)	20(5.5)
No response	1(0.3)	3(0.8)	4(1.1)
Disclosure sero status to partner (N=318)			
Yes	85(26.7)	126(39.7)	211(66.4)
No	29(9.1)	70(22.0)	99(31.1)
No response	4(1.25)	4(1.25)	8(2.5)
Partners had HIV test (N=228)			
Yes	78(34.2)	99(43.4)	177(77.6)
No	12(5.3)	21(9.2)	33(14.5)
Did not tell me	6(2.6)	10(4.4)	16(7.0)
No response	0(0.0)	2(0.9)	2(0.9)
Partner's HIV status (N=177)			
Positive	63(35.6)	80(45.2)	143(80.3)
Negative	15(4.5)	17(9.6)	32(18.1)
Do not know	0(0.0)	2(1.1)	2(1.1)
Number of children give birth after Knowing HIV positive			
Only one child	23(6.3)	46(12.5)	69(18.8)
Two children	1(0.3)	8(2.2)	9(2.5)
>Three children	1(0.3)	0(0.0)	1(0.3)
Do not have give birth	115(31.3)	164(44.7)	279(76)
Pregnant at this moment	0(0.0)	9(2.5)	9(2.5)
Giving birth to any HIV positive child After knowing living with HIV/AIDS (N=79)			
Yes	4(5.1)	21(26.6)	25(31.7)
No	7(8.9)	10(12.6)	17(21.5)
Do not know the status	15(19.0)	22(27.8)	37(46.8)
*For women respondents			
Becoming pregnant after tested HIV positive (N=227)			
Yes		36(15.9)	
No		190(83.7)	
No response		1(0.4)	
After HIV positive testing, the pregnancy was: (N=37)			
Wanted		22(59.5)	
Not wanted		14(37.8)	
No response		1(2.7)	

5.4 PMTCT service and contraceptive characteristics of PLWHA using ARV treatment

Contraceptive related characteristics of PLWHA using ARV treatment study population are listed in table 5.

One hundred forty four (39.2%) respondents used contraceptive method at the time of the study. The most commonly used family planning method was condom 106 (73.6%) followed by injectable 32 (22.2%).

The most common reason for using contraception 70 (48.6%) said fear of health problems, 41 (28.5%) were advised by health workers, 17 (11.8%) have enough number of children, 6 (4.2%) said fear of leaving orphan, 5 (3.5%) partner have not desire for children and 5 (3.5%) said fear of HIV transmission to the fetus if pregnancy happens (table 5)

Reason for not using contraception method the majority 180 (80.8%) of the respondents said; no sexual contact at this moment/abstinence and followed by 13 (5.8%) clients responded want to have children and others 17 (7.6%) were pregnant at the time of survey and some of them they were prisoners (table 5).

One hundred thirty (35.4%) respondents said that the availability of PMTCT service increased their intention to have children and in contrast the majority, 201 (54.8%) respondents said the presence of PMTCT service didn't have any effect on their fertility desire. Thirty two (8.7%) respondents reported that they do not know whether the service encouraged their intention for giving birth or not, while 4(1.1%) clients didn't give any response (table 5).

Table 5 – Perception of PLWHA about PMTCT service and contraceptive Characteristics using ARV treatment, Mekelle, Tigray/Ethiopia 2009.

Characteristics n=367	PLWHA using ARV Rx		
	Male n (%)	Female n (%)	Total n (%)
Using any contraceptive method			
Yes	69(18.8)	75(20.4)	144(39.2)
No	70(19.1)	150(40.9)	220(60.0)
No response	1(0.3)	2(0.5)	3(0.8)
Type of contraceptive used (N=144)			
Condom	69(47.9)	37(25.7)	106(73.6)
Oral pill	0(0.0)	6(4.2)	6(4.2)
Inject able	0(0.0)	32(22.2)	32(22.2)
Reason for using contraception (N=144)			
Have enough number of children	13(9.0)	4(2.8)	17(11.8)
Advised by health worker	18(12.5)	23(16.0)	41(28.5)
Partner have not desire for children	0(0.0)	5(3.5)	5(3.5)
Fear of health problems	32(22.9)	37(25.7)	70(48.6)
Fear of leaving orphans	3(2.1)	3(2.1)	6(4.2)
Others.	2(1.4)	3(2.1)	5(3.5)
Reason for not using contraception (N=223)			
Want to have children.	4(1.8)	9(4.0)	13(5.8)
Partner wants to have children	1(0.45)	1(0.45)	2(0.9)
Both couples want to have children	3(1.3)	0(0.0)	3(1.3)
Fear of contraceptive complication with ARV treatment	1(0.5)	2(0.9)	3(1.4)
No sexual contact at movement	55(24.7)	125(56.1)	180(80.8)
Infertility	0(0.0)	5(2.2)	5(2.2)
Others	7(3.1)	10(4.5)	17(7.6)
PMTCT service encourages for giving birth			
Yes	51(13.9)	79(21.5)	130(35.4)
No	68(18.5)	133(36.3)	201(54.8)
I do not know	18(4.9)	14(3.8)	32(8.7)
No response	3(0.8)	1(0.3)	4(1.1)

5.5 PLWHA's desire for children

One hundred forty four (39.2%) of the respondents have a desire to have children and 223 (60.8%) do not intend to have children in the future. Of those who had desire, 61 (43.6%) were men, in contrast to 83(36.6%) were women. This finding is inconsistent with the finding in United States, of which 28 % of HIV-positive heterosexual men and 29 % of HIV- positive women who receive medical care desire children in the future (22). Other study done in Brazil shows also, 202 (27.9%) participants reported desire to have children. Among men this proportion was 50.1% (n=103), in contrast to 19.2% (n=99) of women.

Forty eight (21.1%) women with the age group 20-29 and 30 (21.4%) men in the age group 30-39 had desire to have children in the future (Table 6). Among individuals who were married 30 (21.4%) men and 38 (16.7%) women had desire to have children in the future. This finding is also inconsistent with the findings in United States, of which 33% of men and 64% of women had partners who desire children in the future (22).

Among those who desire children, 23 (16.4%) men and 32 (14.1%) women have one child, while 6 (4.3%) men and 23 (10.1%) women respondents have two children (table 6).

Regarding educational level the majority 36 (15.9%) of women who have desire to have children were primary school while 23 (16.5%) men were secondary level.

Related to monthly income, the majority 29 (12.8%) of women and 12 (8.6%) of men respondents who have no income desire to have children while 15 (10.7%) of men and 18 (7.9%) of women respondents who have 201- 500 birr monthly income have desire for giving birth in the future.

Table 6–Distribution of PLWHA using ARV Rx. on desire for children by socio-demographic characteristics of respondents, Mekelle, Tigray/ Ethiopia 2009.

Characteristics	PLWHA using ARV Rx. Desire for children					
	Male (N=140)			Female (N=227)		
	No n (%)	Yes n (%)	Total n (%)	No n (%)	Yes n (%)	Total n (%)
Age						
20 – 29	4(2.9)	11(7.8)	15(10.7)	34(15.0)	48(21.1)	82(36.1)
30 – 39	31(22.2)	30(21.4)	61(43.6)	74(32.6)	34(15.0)	108(47.6)
40 – 49	31(22.1)	19(13.6)	50(35.5)	36(15.9)	1(0.4)	37(16.3)
≥50	13(9.3)	1(0.7)	14(10.0)	-	-	-
Marital status						
Single	11(7.9)	17(12.1)	28(20.0)	12(5.3)	9(4.0)	21(9.3)
Married	47(33.6)	30(21.4)	77(55.0)	47(20.7)	38(16.7)	85(37.4)
Divorced	11(7.9)	9(6.4)	20(14.3)	40(17.6)	27(11.9)	67(29.5)
Separated	-	-	-	3(1.3)	2(0.9)	5(2.2)
Widowed	9(6.4)	4(2.9)	13(9.3)	40(17.6)	5(2.2)	45(19.8)
non-married partners	1(0.7)	1(0.7)	2(1.4)	2(0.9)	2(0.9)	4(1.8)
Number of living children						
Only one	11(7.9)	23(16.4)	34(24.3)	21(9.3)	32(14.1)	53(23.4)
Two children	19(13.6)	6(4.3)	25(17.9)	41(18.1)	23(10.1)	64(28.2)
Three children	13(9.3)	7(5.0)	20(14.3)	37(16.3)	5(2.2)	42(18.5)
Four children	13(9.3)	0(0.0)	13(9.3)	15(6.6)	1(0.4)	16(7.0)
Five children	10(7.2)	2(1.4)	12(8.6)	16(7.0)	0(0.0)	16(7.0)
Five and above.	8(5.7)	0(0.0)	8(5.7)	4(1.8)	0(0.0)	4(1.8)
I do not have child	5(3.6)	23(16.4)	28(20.0)	10(4.4)	22(9.7)	32(14.1)
Educational level						
Illiterate	11(7.9)	10(7.1)	21(15.0)	54(23.8)	32(10.1)	77(33.9)
Primary	41(29.2)	20(14.3)	61(43.5)	47(20.7)	36(15.9)	83(36.6)
Secondary	16(11.4)	23(16.5)	39(27.9)	37(16.3)	21(9.2)	58(25.5)
Higher	11(7.9)	8(5.7)	19(13.6)	6(2.7)	3(1.3)	9(4.0)
Total monthly income						
Below 100.00 birr	5(3.6)	7(5.0)	12(8.6)	28(12.3)	10(4.4)	38(16.7)
101 -200 birr	12(8.6)	9(6.4)	21(15.0)	27(11.9)	16(7.0)	43(18.9)
201 -500 birr	17(12.2)	15(10.7)	32(22.9)	23(10.2)	18(7.9)	41(18.1)
501 – 1000 birr	22(15.7)	10(7.2)	32(22.9)	15(6.6)	9(4.0)	24(10.6)
1001- 3000 birr	10(7.2)	8(5.7)	18(12.9)	1(0.45)	1(0.45)	2(0.9)
3001 – 5000 birr	2(1.4)	0(0.0)	2(1.4)	1(0.4)	0(0.0)	1(0.4)
No income	11(7.85)	12(8.55)	23(16.4)	49(21.5)	29(12.8)	78(34.3)

5.6 Attitude of PLWHA towards their health care providers

Three hundred seventeen (86.4%) respondents reported that they had discussed with ARV treatment providers about sexuality/ child bearing, while 45 (12.3%) clients didn't discuss or it was not explained by the providers and 5(1.4%) did not give response.

Concerning current health condition, 349 (95.1%) of the clients responded that their health is improved, 15 (4.1%) responded said not improved and only 2 (0.5%) respondents said their health condition is deteriorated.

Ninty nine (27.0%) of the respondents reported that health care provider's encourage PLWHA to give birth while 235 (64.0%) respondents said they discourage, 10 (2.7%) and 21 (5.5%) of the respondents said neither encourage nor discourage or do not know the providers approach respectively.

Three hundred forty nine (95.1%) of respondents answered that they are satisfied with the service provided, while only 18 (4.9%) clients said they are not satisfied or partially satisfied with the service provided.

Table 7- Distribution of PLWHA's attitude towards the health care providers, Mekelle, Tigray/Ethiopia 2009.

Characteristics n=367	PLWHA using ARV treatment		
	Male n (%)	Female n (%)	Total n (%)
ARV provider discuss about sexuality/ child bearing			
Yes	119(32.4)	198(54.0)	317(86.4)
No	18(4.9)	27(7.4)	45(12.3)
No response.	3(0.8)	2(0.6)	5(1.4)
Current overall health condition			
Improved	130(35.4)	219(59.7)	349(95.1)
Not improved	7(1.9)	8(2.2)	15(4.1)
Deteriorate	2(0.5)	0(0.0)	2(0.5)
No response	1(0.3)	0(0.0)	1(0.3)
Health care provider's initiation			
Encouragable	41(11.2)	58(15.8)	99(27.0)
Discouragable	87(23.7)	148(40.3)	235(64.0)
Neither encourage nor discourage	2(0.5)	8(2.2)	10(2.7)
Don't know	9(2.4)	12(3.3)	21(5.5)
No response	1(0.25)	1(0.25)	2(0.5)
Satisfaction with the service			
Yes	127(34.6)	222(60.5)	349(95.1)
No	5(1.3)	1(0.3)	6(1.6)
Partial	4(1.1)	3(0.8)	7(1.9)
No response	4(1.1)	1(0.3)	5(1.4)

5.7 Characteristics of PLWHA using ARV treatment associated with the desire to have children in the future

On univariate analysis, desire to have children was higher in the age groups 20-29 years compared to elderly age groups with OR 10.48 (95% CI: 5.07,21.63) and age group 30-39 years had also significant association for desire to have children with OR 3.20 (95% CI: 1.73,5.90). Men were having high desire for children compared to women, with OR 2.74 (95% CI: 1.63, 4.62). Widowed had less association for desire to have children with OR 0.21 (95% CI: 0.08, 0.52). Unemployed and governmental employees had also less desire to have children in the future with OR 0.30 (95% CI: 0.09, 1.00) and OR 0.19 (95% CI: 0.05, 0.71) respectively.

Length of time receiving ARV treatment had association for desire to have children in the future. Those in the time range of more than three years receiving ARV treatment had less desire to have children in the future compared to less than one year OR 0.44 (95% CI: 0.24, 0.79).

Number of children had an association with the desire to have children in the future. Those respondents who had no child, one child, and two children have more desire to have children in the future compared to those who have three or more children with OR 5.09 (95% CI: 3.42, 9.15), OR 4.12 (95% CI: 2.73, 8.01), and OR 3.89 (95% CI: 1.93, 7.86) respectively.

Respondents whose partners want to have children had more desire to have children in the future with OR 4.88 (95% CI: 2.86, 10.42). Those respondents who disclosed their HIV status to their partners had significant association for desire to have children in the future compared to those who do not disclosed with OR 1.67(95% CI: 1.00, 2.80).

Respondents who aware of the availability of PMTCT service had high desire to have children in the future compared to those who do not aware with OR 5.41 (95% CI: 3.40, 8.61).

Respondents who had discussion about sexuality and child bearing with health care providers had more desire to have children in the future compared to those who had no discussion with OR 3.31 (95% CI: 2.00, 5.61).

Table 8 Characteristics associated with the desire to have children in the future among PLWHA on ARV R_x. in Mekelle, Tigray/ Ethiopia 2009.

characterstics	Desire to have children Adj. OR(95%CI)
Age 20-29yrs 30-39yrs >=40	10.48(5.07,21.63)* 3.20(1.73,5.90)* 1
Sex(1)	2.74(1.63,4.62)*
Marital status Single Married Divorced Widowed Separated/non married partner	1 0.69(0.35,1.35) 0.73(0.35,1.52) 0.21(0.08,0.52)* 0.65(0.17,2.53)
Occupational status Student Unemployee Gov.Employee	1 0.30(0.09,1.00)* 0.19(0.05,0.71)*
Length of time on ARV 1-12 months 1-3 yrs >3yrs	1 1.88(0.55,1.42) 0.44(0.24,0.79)*
No. of children having now No child One child Two children >=Three children	5.09(3.42,9.15)* 4.12(2.73,8.01)* 3.89(1.93,7.86)* 1
Partner want to have child No Yes	1 4.88(3.86,11.42)**
Disclosure of serostatus to partners No Yes	1 1.67(1.00,2.80)*
PMTCT service encourages for giving birth No Yes	1 5.41(3.40,8.61)**
Health care provider encourage Discourage Encourage	1 3.31(2.00,5.61)**

*** Statistically significant**

Discussion

The over all aim of this study was to assess the desire for children among people living with HIV on ARV treatment.

In this study, lower socio-economic status, less educated and younger age of respondents has been shown desire to have children in the future. Even if 87 (23.7%) respondents were divorced and 58 (15.8%) widowed, this shows that these people are affected by low socio-economic status. This factor may explain why their desire for children is influenced by socio-economic conditions.

In this study 131(35.7%) of men and 214(58.3%) of women know that HIV can be transmitted from an infected mother to her baby. But, 47(12.8%) respondents were able to mention the exact route of HIV transmission that is during pregnancy, labour and through breast feeding. Although 337(91.8%) knew that MTCT of HIV could be prevented, only 6(1.6%) believed that HIV-infected women who received PMTCT service could still deliver an HIV-infected child. This finding has shown that the knowledge is higher compared with the finding in Jinja, Uganda, where 81% knew PMTCT and only 22% believed PMTCT did not work (21). This study shows that many HIV-infected adults desire to have children has important implications for the prevention of vertical and heterosexual transmission of HIV.

One hundred twenty six (39.7%) of women and 85(26.7%) of men disclosed their HIV test result to their sexual partner while 70(22.0%) of women and 29(9.1%) of men respondents were not disclosed. Having a partner whose HIV status was known is significant predictor for desire to have children compared with whose partner's HIV status was unknown. This finding suggests that knowledge of partner's HIV status may affect whether or not people desire to have children.

After knowing their HIV positive status 69(18.8%) of respondents gave birth to one child, 9(2.5%) gave two children and 1(0.3%) gave more than three children. After tested HIV positive 25(31.7%) respondents give birth to HIV positive children. From total female respondents 36(15.9%) were become pregnant among them 22(59.5%) respondents reported

that the pregnancy was wanted and 14(37.8%) was unwanted. The prevalence of pregnancy after diagnosis of HIV-infected women is lower compared with the findings in the United States in which, the prevalence of pregnancy after diagnosis was 29% (22). This shows many women become pregnant unintentionally and it has especial implication for service needs that aid in decision-making to plan the outcome of their pregnancy. So, HIV positive women who get pregnant will need access to medical care, as these women are disproportionately marginalized populations that are less likely to receive pre natal care. In addition, there is a need to assure that HIV-positive women who give birth will need follow up of the new borns until HIV status can be ascertained. This finding shows that pregnancy is unavoidable for PLWHA and a possibility for transmission of HIV from mother to child still exists.

While recent studies have shown that maternal transmission of HIV can be reduced to about 2%, the possibility of vertical transmission still exists. According to this study, mothers who are on ARV treatment responded that, about 25(31.6%) of HIV positive children acquired the infection after the maternal diagnosis of HIV. This finding is higher compared with the study done in United States, where 15% children who tested HIV-positive acquired after the maternal diagnosis of HIV (22). This shows that, there is a gap of service provision; so many of HIV positive people may not be able to access optimal care to reduce the likelihood of HIV transmission to the new born. This data may provide a good estimate of mother-to-child transmission risk with current levels of access to prophylaxis.

From the total respondents, 144(39.2%) were using contraceptive method at the time of study. PMTCT and family planning service have to be linked to ensure that PLWHA have easy access to contraceptive methods to prevent unintended pregnancies. It has also an important and effective component of preventing mother-to-child transmission of HIV. Among the most common reason for using contraception 70(48.6%) said fear of health problems, 41(28.5%) were advised by health providers, 17(11.8%) have enough number of children, 6(4.2%) fear of leaving orphan, 5(3.5%) partner have not desire for children and 5(3.5%) fear of HIV transmission to the fetus. This study shown that, more than half respondents had given different reasons why they use the method. Any way, HIV-positive individuals will need family planning counseling as well as the family planning service needs to be strengthened.

Generally, in this study it was found that, many HIV- infected men and women desire to have children in the future. More men and women who desire children have little children or don't have child than those who didn't desire children. Desire to have children is more observed in men. This study provides further tangeable evidence of how important the desire for parenthood is among people living with HIV studies from developed countries showed men to be more likely to express desire for parenthood. In one study, conducted in Swiss HIV cohort study 22% of men (aged 20-50) and 20% of women (aged 20-40) reported desire for having children(41). These numbers are lower than our finding, which is 39.2% of HIV-positive people who receive ARV treatment desire to have children. Among men this proportion was 43.5 % (n=61) aged (20-50), in contrast to 36.5% (n=83) of women aged (20-39).

In other study of a representative sample of people living with HIV in the United States, showed that, 28% of men and 29% of women expressed desire to have children in the future(14). In both these studies, gender was not predictor of desire for parenthood. Gender difference in parenthood desire in our study may be due to different factors such as socio-economic back ground women have no equal opportunity for work, education and others like men, hence they may want to restrict for giving birth. The other reason could be women may face over burden due to their gender roles as domestic care providers of sick partners and children. Accordingly, among the participants in this study those who did not have children or with fewer children were more likely to desire children this could be also because of the socio-cultural influence.

Regarding of fertility desire, 45(12.3%) of all participants felt that health care providers would not sufficiently address issues such as sexuality and desire for children. This finding is not consistent with the finding in swiss, in which, 47% of all participants felt that health care providers would not sufficiently address the issues (41).Ninety nine (27.0%) of respondents said that health care providers encourage PLWHA to give birth while 235(64.0%) respondents said they discourage. But, in this study 18 (4.9%) respondents reported that they were not satisfied or partially satisfied with the service.

While opportunities exist for PMTCT in strengthening care, there are many gaps in the continuum of care, weak coordination of services, and there was no sufficient follow up for post partum women. HIV-positive men and women who desire children have numerous service needs in addition to planning for a future closely linked to medical care for their health. To help them make informed choices is very essential in the provision of health service.

In summary, the results of this study showed that there is a need for health care providers to discuss fertility issues with their HIV-infected clients using ARV treatment. .

4.10 - Strength and Limitation of the study

Strength of the study

- High participation rate (Almost all of the eligible study population responded to the questionnaires).
- Because the study used a representative sample, the findings of this study is generalizable to similar population.

Limitation of the study

- Since this is a cross sectional study it is difficult to ascertain cause and effect.

Conclusion

Those who desire children are found in younger age group, of lower socio-economic status, and men are dominant gender who desire to have children.

Attitude of PLWHA towards parenthood become increased to have children.

Awareness on MTCT/PMTCT was high but, as the finding shows many of these people may not be able to access optimal care to reduce the likelihood of transmission to the new born.

HIV positive people's desire to have children has important implications for the prevention of vertical and heterosexual transmission of HIV. The need for counseling to facilitate informed decision-making about child bearing is mandatory.

This research indicated that some women have children even after HIV diagnosis; this shown being infected with HIV, does not mean PLWHA do not have the desires to have children.

According to this study, we can say that PMTCT is not an opportunity for HIV positive people using ARV treatment in Mekelle health institutions, as evidenced by 31.7% of respondents gave birth to HIV positive children, 54.8% respondents believe that PMTCT service have not any effect on their fertility desire and 64.0% of respondents expressed that health care providers discourage PLWHA to give birth.

A significant proportion of HIV-infected individuals express a desire to have children. Issues related to fertility desire and sexual relations need to be addressed by health care providers. Health care providers should consider that the promotion and protection of reproductive rights of both men and women living with HIV/AIDS can also contribute to reduce HIV and MTCT.

Recommendation

- Stakeholders should participate in supporting for PLWHA using ARV treatment those who have desire to have a child in providing nutrition, social service and other supports.
- PLWHA should be assisted in their decision-making by means of providing nonjudgmental and accurate information about risks and benefits concerning the desire to have children.
- HIV treatment centres should also include contraceptive counseling on a routine basis. Health care providers are in a key position for conveying messages about fertility issues.
- A comprehensive PMTCT service is needed to address the preventing HIV infection in women of reproductive age and avoiding unintended pregnancy among HIV-infected women.
- HIV positive women and men under ARV treatment should be empowered to take informed choices relating to their reproductive lives.
- There is a need for improving the services. Training should be needed to health care providers especially in communication and counseling skills about reproductive issues.
- In conclusion, further research is needed for better access to assist and carried out with respect for reproductive rights of all living with HIV/AIDS using ARV treatment to meet the fertility-related needs of men, women and couples living with HIV.

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Annex II - CONSENT FORM

In signing this document, I am giving my consent to participate in the study entitled “The desire to have children: Is PMTCT an opportunity for HIV positive people? A cross sectional study in Mekelle Health institutions, Tigray, Ethiopia.”

I have been informed that the purpose of this research project is to assess fertility desire among HIV positive men and women and the factors which affect their desire using ART in Mekelle health institutions. I understand that I am selected to participate in this study randomly.

I have been informed that my participation in this study is willing full and voluntary even I have right to refuse or interrupt the interview and my name will not be mentioned on the questionnaire. Besides to that all the information I gave will be kept strictly confidential.

I understand also the results of this study will be helpful to generate useful information for planning appropriate reproductive health strategies and interventions for PLWHA.

Respondents Signature _____

Date _____

Annex III - INDIVIDUAL QUESTIONNAIRE IDENTIFICATION

Questionnaire Number: _____ Interviewer’s code: _____

Name: _____ signature: _____

Date of Interview _____ date _____ month/2009.

SUPERVISOR’S VISIT

Supervisor’s name: _____ code: _____ signature: _____

Checked on: _____ date _____ month/2009.

RESULT CODES 1. Complete 2. In complete

Time interview began: _____

Time interview ended: _____

Interviewer’s signature: _____

Supervisor’s signature: _____

INSTRUCTION: Read the questions to the client and circle the responses among the provided options.

SECTION I: SOCIO – DEMOGRAPHIC CHARACTERISTICS

Q. No.	Questions	Coding categories	skip to:
101	How old are you?	_____(in completed years)	
102	Sex?	Male - - - 1 Female - - - 2	
103	What is your religion?	Orthodox - - - 1 Muslim - - - 2 Catholic- - - 3 Protestant--- 4 others(specify) _____5	
104	What ethnic group do you belong to?	Tigray - - - - 1 Amhara - - - -2 Oromo - - - - 3 Afar - - - - -4 Guragie - - - - 5 others (specify) _____5	

105	What is your current Marital Status?	Single----- 1 Married -----2 Divorced -----3 Separated ----- 4 widowed ----- 5 Non-married partner ---6	
106	What is your highest education level you completed?	Illiterate-----1 Primary -----2 Secondary -----3 Higher -----4	
107	What is your current occupational Status?	Student -----1 Unemployed -----2 Governmental employee -3 Private employee ----- 4 House wife ----- 5 Daily laborer -----6 Petty trade (merchant) -- 7 House servant ----- 8 Driver ----- 9 Others(specify) _____10	
108	What is your total monthly income?	below 100.00 Eth. birr -- 1 100- 200 birr ----- 2 201- 500 birr ----- 3 501-1000 birr -----4 1001- 3000 birr ----- 5 3001- 5000 -----6 Above 5000 birr ----- 7 No income -----8 I don't know -----9	

SECTION II: INFORMATION ON HIV/AIDS AND TREATMENT			
CONDITIONS			
201	Are you a member of any HIV/AIDS related organizations?	yes - - - 1 No - - - 0 no response - - - - - 2	
202	If “yes” for Q. 201, for how long have you been a member in any HIV/AIDS related organizations?	1 up to 12 months - - - 1 1- 3 years - - - - - 2 3-5 years - - - - - 3 5-7 years - - - - - 4 more than 7 years - - - 5 I don’t remember - - - -6 no response - - - - - 7	
203	How did you know your HIV positive status for the first time?	During Pregnancy period (for Female) - - - - - 1 Pre-marital check up - - - - 2 After VCT received - - - - - 3 Provider Initiated Counseling and Testing (PICT) - - - - - 4 Others (specify) _____ 5	↓ 303
NB.	Question No. 204, 205, and 206 are only for those who have partner and for those who have no partners skip to 207.		
204	Have you disclosed your sero status to your partner?	Yes - - - 1 No - - - 0 No response - - - - 2	
205	Did your partner have HIV tested?	Yes - - - 1 No - - - 0 She/He did not tell me- - - 2 No response - - - 3	
206	If “yes” for Q. No. 205, what is the HIV status of your partner?	HIV – positive - - - - 1 HIV negative - - - - - 0 I do not know - - - - - 2	

207	How long has it been since you were diagnosed as HIV positive?	1 – 24 mouths - - - 1 2 – 4 years - - - - 2 > 4 years- - - - -3 I do not remember - - - - - 4	
208	For how long have you been on ARV treatment?	1 – 12 mouths - - - 1 1 – 3 years - - - - - 2 more than 3 years - - - - - 3	
209	Who covered the cost of drugs (ARV treatment)?	My self - - - - - 1 Free access from the government - - - - - 2 Covered by care & support NGO's - - - - - 3 My parents /Relatives - - - 4	
210	How is your over all health condition after you starts receiving ARV treatment?	Improved - - - - - 1 No change - - - - - 0 Deteriorated - - - - - 2 No response - - - - - 3	
211	Did you get support from different community groups?	Yes - - - 1 No - - - 0 No response - - - - 2	
212	If “yes” for Q. No. 211, from where did you get the support?	Relatives - - - 1 Friends - - - - 2 Neighbors - - 3 GO's - - - - - 4 NGO's - - - - - 5 Others (specify) _____ 6	
213	If you get support so, what kind of support?	Money - - - - - 1 Home Based Care (HBC) - - 2 Counseling - - - - - 3 Food - - - - - 4 Material(Utensils, Clothes)- 5	

		Health care -----6 Others(specify) _____7	
214	Did your counselor / ARV provider discuss about sexuality, child bearing, ---	Yes ----- 1 No -----0 No response ---- 2	
SECTION III: INFORMATION ON FERTILITY RELATED CHARACTERISTICS OF THE RESPONDANTS.			
301	How many children you need in your life?	Only one -----1 Two children -----2 Three children -----3 Four children ----- 4 Five children -----5 More than five children-- -6 I do not need at all ----- 0 No response -----7	
302	How many live children do you have now?	One child ----- 1 Two children -----2 Three children -----3 Four children -----4 Five children -----5 More than five children-- - 6 I did not have alive children-0	
Question No. 303, 304, 305,306,307, and 308 are only for women respondents			
303	If you know your HIV result is positive during pregnancy period, what was your decision to the pregnancy?	To give birth ----- 1 To abort the pregnancy --- 2 I do not know -----3 No response ----- 4	
304	Have you been pregnant after tested HIV positive?	Yes --- 1 No ---- 0 no response ----- 2	↓ 401

305	If “yes” for Q. No 304, was the pregnancy wanted/unwanted?	Wanted ----- 1 No wanted -----0 No response ----- 2	
306	If your answer for Q. No 305 is “unwanted”, how did the unwanted pregnancy happen? (Multiple answers possible).	Failure of contraceptive -----1 Rape ----- 2 Not using any birth control method - -----3 No response ----- 4	
307	If your response to Q. No 305 again “Unwanted” what was your measure?	To give birth ----- 1 To abort the pregnancy --- 2 No response ----- 3	
308	Did you face any health problem while you were pregnant after being HIV positive?	Yes -----1 No ----- 0 No response ----- 2	
309	How many live children did you give birth after knowing your HIV positive status?	Only one -----1 Two children ----- 2 Three children ----- 3 More than three children -- -4 I did not give birth ----- -02 Pregnant at this moment -- 5	↓ 401
310	Did you give birth to any HIV positive child after you know you were living with HIV/AIDS	Yes ----- 1 No ----- -0 I didn’t know the status-- -2	
SECTION IV – INFORMATION ON CONTRACEPTION			
401	Are you using any contraceptive method currently?	Yes ----- 1 No ----- -0 No response ----- 2	
402	If “yes” for Q. No. 401, what type of contraceptive?	Condom ----- 1 Oral pill ----- -2	

		Injectable -----3 Norplant ----- 4 IUCD -----5 Others (specify) _____6	
403	If “yes” for Q. No 401, why do you use the contraceptive? (multiple answer possible)	I have enough number of children-1 Advised by health workers to use it.- - - - - 2 Partner did not have the desire to have children -----3 Fear of complicated health problem -----4 Fear of leaving orphans - - 5 Others (specify) _____6	
404	If “No” for Q. No 401, why do not use it? (multiple answer possible)	I want to have children - - - 1 My partner wants to have children ----- 2 Both of us want to have children - - ----- 3 Lack of access to contraception- -- 4 Fear that contraceptive may create complication with ARV treatment - - - - - 5 No sexual contact at the movement - -----6 Infertility - - - - - 7 Others (specify) _____8	↓ 506
405	Would you like to use any contraceptive method in the future?	Yes ----- 1 No ----- 0 I do not know -- 2 No response -----3	

SECTION V – ATTITUDE TOWARDS CHILD BEARING		
501	Is that possible to prevent transmission of HIV from mother to baby?	Yes ----- 1 No -----0 I do not know -- 2 No response --- -3
502	What is your intention to have a child after being you are HIV positive?	I still want to give birth --- 1 Decrease the desire to have children ----- 2 Increase to have children - -3 I did not have a desire to give birth - -----4 I do not know -----5 No response ----- 6
503	If the answer for Q. No 502 is “code 1, 3” in what ways your intention changed? (multiple answer is possible)	Fear that older children may die - ----- 1 Reassured by PMTCT --- 2 Optimized about ARV --- 3 Existing cultural influence -4 I want to replace my self - -5 Others (specify)_____6 2 and 4- -----7 1, 4, and 5- ----- 8
504	If the answer for Q. No 502 is “code 2, 4,” in what ways your intention changed?(multiple answer is possible)	Marital dissolution - - - -1 Economic Problem - - - - 2 Health problem - - - - - 3 Not to have orphan - - - -4 Widowed - - - - - - - 5 Already fulfilled desired family size -----6 Fear of transmitting HIV

		to a child -----7 Others(specify)_____8	
505	Would you like to have a child in the future?	Yes ----- 1 No -----0 Un decided -- 2 No response ----- 3	↓ 509 ↓ 510
506	If “yes” for Q. No 505, when do you prefer to have a child?	With in 2 years ----- 1 After 2 years ----- 2 I do not know ----- 3 No response ----- 4	
507	If your response for Q. No 505 is “yes” again, how many (more) children would you like to have in the future?	1 child ----- 1 2-3 children ----- 2 More than 3 children --- 3 Undecided -----4 I do not know ----- 5 No response -----6	↓ 510
508	How soon do you want to fulfill your need?	After a year ----- -1 After 2 years ----- -2 After 3 years ----- -3 Undecided ----- 4 Other (specify)_____5	↓ 510
509	If your response for Q. No 505 is “No” why do not want to have children in the future? (multiple answer is possible)	Already had desired number of children----- 1 Fear of mother to child transmission- - - - -2 Fear of leaving orphan --- 3 Advised by health workers not to have child -----4 Fear of complicated health -5	

		No adequate income - - - - - 6 Other(specify)_____7	
NB. For those who have sex partner in Q. No 105 ask Q. No 510.			
510	Does your partner want to have a child in the future?	Yes - - - 1 No - - - 0 I do not know - - - 2 No response - - - - - 3	
SECTION VI - KNOWLEDGE AND ATTITUDE ON MTCT/PMTCT AS WELL AS SOME RELATED HEALTH FACTORS			
601	Does HIV transmit from mother to child?	Yes - - - - 1 No - - - - -0 →close the interview I do not know - - - 2 → close the interview No response - - - 3.	
602	If “yes” for Q. No 601, when does HIV transmission occur from mother to child? (multiple answer is possible)	During pregnancy - - - - - 1 During labor - - - - - -2 Through breast feeding – 3 All are answers- - - - - -4 1and2 - - - - - - -5 2and3 - - - - - - - 6 1and3 - - - - - - - 7 I do not know - - - - - 8 No response - - - - - 9 Others (specify) _____10	
603	Do you know prevention method, which decrease mother to–child transmission?	Yes - - - - -1 No - - - - - 0 → close the interview I do not know - - 2→close the interview No response - - - - - 3	

604	If “yes” for Q. No 603, what are these methods.	Medication - - - - - 1 Safe delivery - - - - - 2 Replacement feeding for breast feed - - 3 All are answers - - - - - 4 1and2 - - - - -5 2and3 - - - - - 6 1and3 - - - - -7 Others(specify) - - - - - 8	
605	If the answer for Q. No 604 is “code1”, at what time should be provided the medication?	During pregnancy - - - - - 1 During labor - - - - -2 After delivery to new born- 3 All are answers - - - - -4 1and2 - - - - -5 2and3 - - - - - 6 1and 3- - - - - 7 I do not know - - - - -8 No response - - - - -9.	
606	Is the introduction of PMTCT service encourages you to give birth	Yes- - - - - 1 No - - - - - 0 I do not know - -2 No response - - -3	
607	Had your intention to have a child been changed after ARV treatment introduced?	Yes - - - - - 1 No - - - - -0 No response - - - - 2	
608	If changed, in what way your intention changed?	To have children - - - - -1 Not to have children- - -0 Undecided - - - - -2	
609	How do you perceive your current overall health condition now as compared to previous time (before	Improved - - - - - 1 Not improved - - - - -0 Deteriorate - - - - - 2	

	starting ARV)?	No response - - - - -3	
610	Do health care providers encourage/ discourage people living with HIV/AIDS to have children	Encourage - - - - - 1 Discourage - - - - -2 Neither encourage nor discourage - - - -3 I do not know - - - - -4 No response - - - - -5	
611	Are you satisfied with the service that you have provided?	Yes - - - - -1 No - - - - -0 Partial - - - - -2 No response - - - 3	

መምርሒ I – “ቅጥረ ውልቀ ሐበሬታ”

“የኒቨርስቲ ካዲስ አበባ”

“ፋካሊቲ ሕክምና”

አጠቃላሊ ቤት ትምህርቲ ነርስ

“አብ መቐለ ካብ ዘለዎ ጥራና ትካላት ፀረ ኤች ካይ ቪ መድሓኒት ዝጥቀሙ ወገናት ቆልዑ ናይ ምውላድ ድልዎቶም “ንምዕናዕ” ዝካየድ ናይ ውልቀ ሰብ ሐበሬታ ንምርካብ ዝግለመ ቅጥረ እዩ።

ሽመይ _____ እንትኸውን ዝሰርሐ ካብዚ መዕናዕቲ መረድካታ ምእካብ ኸይኑ ካብ _____ ሆስፒታል/ጥራና ጣብያ ፀረ ኤች ካይ ቪ መድሓኒት ዝጥቀሙ ደቂ ተባዕትዮን ደቂ ኣንስትዮን ቃለ-ምልልስ ብምግባር (ብምሕታት) ቆልዓ ናይ ምውላድ ድልዎቶምን ካብ ቆልዓ ምውላድ ዘጋጥሞም ተጋንፎን እንታይ ከምዝመስል ንምዕናዕን ነቶም ፀገማት ድማ እኹል ፍታሕ ንምሃብን ዝግለመ’ዩ።

እቲ ትህብዎ/ኦ ሐበሬታ ነቲ ዝድለ ዕላማ ሽቶ ንምውቃዕ ብጣዓሚ ጠቓሚ ስለዝኾነ ብሓቅን ብትኽክልን መልሲ ንክትህቡ/ባ ብትሕትና ንሓትት። እቲ ትህብዎ/ኦ መልሲ ምስጥርነቱ ዝተሓለየ’ዩ። ስለዝኾነ ድማ ናትኩም/ክን ሽም ካብቲ ቃለ መሕትት ካይጥቀስንዩ። እቲ መልሲ ንምውሃብ ድልዎት እንተዘይሃልዩ ድማ መልሲ ዘይመሃብን ካብኡ ሓሊፉ’ውን እቲ ቃለ መሕትት ካብ ዝኾነ እዋን ናይ ምቁራዕ መሰልኩም/ክን ሕሉው እዩ።

ካብዚ መጠይቕ ንክትሳተፉ/ኣ ፍቓደኛ ዲኹም/ክን?

- 1- እወ
- 2- ኣይፋሉን

መልሲ “እወ” እንተኸይኑ የቐይነየለይ! እሞ ናብቲ መሕትት ንንቐዕል።

መልሲ “ኣይፋሉን” እንተኸይኑ የቐንየለይ።

ናይ ሓታቲ “ኮድ” _____ ሽም _____ ክታም _____

መሕትት ዝካየደሉ ዕለት _____ ወርሒ _____ /2001ዓ.ም

ናይ ተቐጻጻሪ/ሪት ሽም _____ ክታም _____

መምርሒ II - ውልቀ መስተት

“ዩኒቨርሲቲ ኣዲስ ኣበባ”

“ፋካሊቲ ሕክምና”

አጠቓላሊ ቤት ትምህርቲ ነርስ

ብኤች ኣይ ቪ ፖዘቲቭ ዝኾኑ ወገናት ፀረ ኤች ኣይ ቪ መድሓኒት ኣብ መቐለ ጥዲና ትካላት ክትትል ዝግበሩ ወገናት ናይ ቆልዑ ምውላድ ድልዎቶም ንምፍላጥን ንምፅናዕ ዝካየድ ናይ ውልቀሰብ ፍቓድ መርከብ ፎርም

ንምሕታት ፍቓድ ምርካብ

ኸቡራት መልሲ ወሓብቲ!

ሽመይ _____ እንትኸውን ዝሰርሐ ከም መረድኣታ ሰብላቢ ኸይኑ ኣብ _____ ሆስፒታል/ጥዲና ጣቢያ ፀረ ኤች ኣይ ቪ መድሓኒት መውሓቢ ክፍሊ ንኤች ኣይ ቪ ፖዘቲቭ ዝኾኑ ደቂ ተባዕትዮን ደቂ ኣንስትዮን ዘለዎም ናይ ቆልዓ ምውላድ ድልዎቶምን ኣብ ቆልዓ ምውላድ ዘጋጥሞም ተጋንፎ እንታይ ምኻኑ ንምፍላጥዮ።

ኸቡራት መልሲ ወሓዘቲ! እቱ ትውሕብዎ መልሲ ነቱ ዝድለይ ዕላማ ሽቶ ንምውቃዕ ብጣዓሚ ጠቓሚ እስካብ ዝኾነ ብሓቅን ብትክክልን መልሲ ንክትህወና ብትሕትና ንሓትት። እቱ ትህብዎ መልሲ ምስጥርነቱ ዝተሓለየዮ። ስለዝኾነ ድማ ናትኩም ሽም ኣብቱ ቃለ መስተት ኣይጥቀስንዮ። እቲ መልሲ ንምውሃብ ድልዎት እንተዘይሃልዩ ድማ መልሲ ዘይመሃብን ካብኡ ሓሊፉ'ውን እቱ ቃለ መስተት ኣብ ዝኾነ ዕዋን ናይ ምቁራዕ መሰልኹም ሕልወ እዩ።

ኣብቱ መፅናዕቲ ንክሳተፍ ፍቓደኝነት ኣለኩምዶ?

- 1- እወ
- 2- ኣይፋሉን

መልሲ “እወ” እንተኾይኑ ነቶም መልሲ ወሃብቲ ኣመስግን እሞ እቱ መህተት ቐፅልሉ መልሲ “ኣይፋሉን” እንተኾይኑ ነቶም ዝምልከቶም ኣመስጊኻ እቱ መስተት ኣቋርፅ።

105	አብዘ. ኸዘ. እዋን ናይ ሓዳር ኩነታት ኸመይ እዩ?	ዘይአተዋ/ዘይአተዉ - - - - - 1 በዓልቲሓዳር/በዓልሓዳር - - - - -2 ዝተፋተሉ - - - - - 3 ዝተፈላለዩ(ንግዚኡ) - - - - -4 ሰበይቶም/ሰብአዮም ዝሞቶም - - - -5 ተኣታትዮም ሓቢርም ዝነብሩ - - - -6	
106	ናይ ትምህርቲ ደርጃ ተማሂረን/ተማሂርም ዝተጠናቐቑሉ እንታይ'ዩ?	አይተምሃርኩይ - - - - -0 ቀዳማይ ብርኪ ትምህርቲ - - - - -1 ካልኣይ ብርኪ ትምህርቲ - - - - -2 ኮልጅ/ዩኒቨርሲቲ - - - - -3	
107	አብዘ. ከዘ. እዋን ዘለወን/ዘለዎም ናይ ስራሕ ዓይነት እንታይ'ዩ?	ተምሃሪት/ተምሃራይ - - - - - 1 ስራሕ አልቦ - - - - - 2 ናይ መንግስቲ ስራሕተኛ - - - - -3 ናይ ግሊ ስራሕ - - - - - 4 ስራሕ ዘይብላ ኣብ ገዛ ትውዕል - - -5 ማዓልታዊ ስራሕ - - - - - 6 ንግዲ ስራሕ - - - - - 7 ናይ ገዛ ስራሕተኛ - - - - - 8 መራሒ መኪና - - - - - 9 ኻሊእ እንተሃሊዩ ይገለፅ _____ 10	
108	ወርሓዊ እቶት ክንደይ እዩ?	ትሕቲ ሚኒ.ቲ ቅርሺ (ብር)- - - - - 1 ካብ 100.00-200.00 ቅርሺ - - - 2 ካብ 201.00-500.00 ቅርሺ- - - 3 ካብ 501.00-1000.00 ቅርሺ- - - 4 ካብ 1001.00-3000.00 ቅርሺ- - - 5 ካብ 3001.00-5000.00 ቅርሺ- - - 6 ልዕሊ 5000.00 ቅርሺ - - - - - 7 እቶት የለን - - - - - 8 አይፈለግኩን - - - - - 9	
ክፍሊ II — ሓበሬታ ብዛዕባ ኤች ኣይ ቪ/ ኤድስን ኩነታት ሕክምናን			
201	ኣብ ዝኾነ ናይ ኤች ኣይ ቪ/ኤድስ ዝምልከት ማሕበር ኣባል ዲኻን/ዲኹም?	እዉ - - - - - 1 አይፋሉን - - - - -0 መልሲ አይተብሃውን - - - -2	
202	ንሕቶ ተራ ቐፅሪ 201 መልሲ “እዉ” እንተኾይኑ ንክንደይ እዋን ኣብቱ ማሕበር ብኣባልነት ፀኒሖም/ሓን?	ካብ 1-12 ወርሒ - - - - - 1 ካብ 1-3 ዓመት - - - - - 2 ካብ 3-5 ዓመት - - - - - 3 ካብ 5-7 ዓመት - - - - - 4 ልዕሊ 7 ዓመት - - - - -5 አይዝክርን - - - - -6 መልሲ አይተብሃውን - - - - - 7	

203	ንመጀመርታ እዋን ኤች ኣይ ቪ ኣብ ደመን/ደሞም ምህላዩ ኸመይ ፈሊጠን/ፈሊጠም?	ኣብ እዋን ጥንሲ (ንደቂ ኣንስትዮ) - - -1 ቅድሚ መርዓ ምርመራ - - - - - 2 ዓርሲ ተበግሶ ምርመራ ድሕሪ ምግባሪይ (VCT) - - - - - 3 ከም ኣጋጣሚ ንካሊእ ህክምና ምስመዓእኹ(PICT) - - - - - 4 ካሊእ እንተሃሊዩ ይገለፅ 5	303
መተሓሳስቢ ሕቶ ቐፅሪ 204፣ 205 ከምኡ ወን 206 ዝምልከት ኣብ ሕቶ ቐፅሪ 105 ዝተሓተተ ንሰብ ሓዳር ዝኾኑ ጥራሕ ይኸውን ንካልኦት ሕቶ ቐፅሪ 207 ሕተት			
204	ንሓዳርክን/ንሓዳሪኩም ኩነታት ደም ምርመራ ውፅኢት ተናገርክን/ተናገርኩምዶ?	እወ - - - - - 1 ኣይፋሉን - - - - - 0 መልሲ ኣይተብሃወን - - - - - 2	
205	በዓልገዛኸን/በዓልተገዝኦም ናይ ኤች ኣይ ቪ ምርመራ ገይርም/ገይረንዶ?	እወ - - - - - 1 ኣይፋሉን - - - - - 0 ኣይነገረኒ/ኣይነገረትኒ - - - - 2 መልሲ ኣይተብሃወን - - - - - 3	
206	መልሲ “እወ” እንተኮይኑ ንሕቶ ቐፅሪ 205፣ ናይ ኤች ኣይ ቪ ኩነታት በዓልገዝኦን/በዓልተገዝኦም እንታይ እዩ?	ኤች ኣይ ቪ ፖዘቲቭ - - - - - 1 ኤች ኣይ ቪ ነገቲቭ - - - - - 0 ኣይፈለጥኩን - - - - - 2	
207	ኤች ኣይ ቪ ፖዘቲቭ ምዃኑ ካብ ዝፍለጥ ክንደይ እዋን ይኸውን?	ካብ 1-24 ወርሒ - - - - - 1 ካብ 2-4 ዓመት - - - - - 2 ልዕሊ 4 ዓመት - - - - - 3 ኣይዝክርን- - - - - 4	
208	መድሓኒት ፀረ ኤች ኣይ ቪ ምውሳድ ካብ ዝጀመርክን/ ዝጀመርኩም ክንደይ እዋን ይኸውን?	1-12 ወርሒ - - - - - 1 1-3 ዓመት - - - - - 2 ልዕሊ 3 ዓመት - - - - - 3	
209	ናይቱ ፀረ ኤች ኣይ ቪ መድሃኒት ዋጋ ዝሸፍኖ መንዩ?	ባዕለይ - - - - - 1 ብናይ መንግስቲ ረድኤት - - - - - 2 መንግስታዊ ዘይኮኑ ሓገዝቲ ድርጅታት- - 3 ብቤተሰብ/ኣዝማድ - - - - - 4	
210	ድሕሪ ቱ መድሓኒት ምውሳድ ብዛዓብ ናይ ጥዲነኣን/ጥዲንኦም ኩነታት ኸመይዩ?	ተመሓይሹ - - - - - 1 ለውጢ የብሉን - - - - - 0 ቢኢሱኒ - - - - - 2 መልሲ ኣይተውሃበን - - - - - 3	
211	ካብ ዝተፈላለዩ ክፋል ሕብረተሰብ ሓገዝ ትረኽባ/ትረኽቡዶ?	እወ - - - - - 1 ኣይፍሉን - - - - - 0 መልሲ ኣይተብሃወን - - - - - 2	

212	መልስ “አወ” እንተኾይኑ ንሕቶ ቁፅሪ 211 እቱ ሓገዝ ካበይ እዩ ዝርከብ?	ካብ ኣዝማድ - - - - - 1 ካብ ኣዕሩኹቲ - - - - - 2 ካብ ጎረቤት ሰባት - - - - - 3 ካብ መንግስታዊ ድርጅታት - - - - - 4 ካብ መንግስታዊ ዘይኾኑ ድርጅታት - - - - - 5 ኻልእ እንተሃሊዩ ይገለፅ _____ 6	
213	ሓገዝ ትረክቡ እንተኾይኑኩም እንታይ ዓይነት ሓገዝ?	ገንዘብ - - - - - 1 ገዛ ንገዛ ሓገዝ (HBC)- - - - - 2 ምክሪ - - - - - 3 ምግብ - - - - - 4 ማተርያል(ናይ ገዛ ኣቁሑት፣ኸዳን...)- - - - - 5 ጥዲናዊ ሓገዝ - - - - - 6 ካሊእ እንተሃሊዩ ይገለፅ _____ 7	
214	ምክሪ ዝህበን/ዝህቦም ወይ ድማ ፀረ ኤች ኣይ ቪ መድሃኒት ዝህበን/ዝህቦም ባዓልሙያ ብዝገባ ያታዊ ርክብ ወይ ቆልዓ ምውላድ ብዝምልከት ያመያይጠክን/ያመያይጠኩም ዶ?	እወ - - - - - 1 ኣይፋሉን - - - - - 0 መልሲ ኣይተብሃወን - - - - - 2	
ክፍሊ III- ሓበሬታ ብዛዕባ ስለ ተዋልዶ ብዝተመለከተ ካብ መልሲ ወሃብቲ			
301	ኣብ ሂወትክን/ሂወትኩም ክንደይ ቆልዑት ክህልወኹም ትሓስቡ?	ሓደ ጥራሕ - - - - - 1 ክልተ ቆልዑት - - - - - 2 ሰለስተ ቆልዑት - - - - - 3 ዓርባዕተ ቆልዑት - - - - - 4 ሓሙሽተ ቆልዑት - - - - - 5 ልዕሊ ሓሙሽተ ቆልዑት - - - - - 6 ምንም ቆልዓ ኣይወለድን - - - - - 0 መለሲ ኣይተብሃወን - - - - - -7	
302	ክሳብ ኸዚ እዋን ክንደይ ቆልዑት ወሊድኩም?	ሓደ ጥራሕ - - - - - 1 ክልተ ቆልዑት - - - - - 2 ሰለስተ ቆልዑት - - - - - 3 ኣርባዕተ ቆልዑት - - - - - 4 ሓሙሽተ ቆልዑት - - - - - 5 ልዕሊ ሓሙሽተ ቆልዑት - - - - - 6 ምንም ቆልዓ የብለይን - - - - - 0	
	ሕቶ ቁፅሪ 303፣304፣305፣306፣307፣ከምኡ'ውን 308 ንደቂ ኣንስትዮ መልሲ ወሃብቲ ጥራሕ ይምልከት::		
303	ኤች ኣይ ቪ ፖዘቲቭ ምዃንክን ዝፈለጥኻን ኣብ እዋን ጥንሲ እንድሕር ደኣ ነይሩ ውሳኔኻን እቱ ናይ ጥንሲ ኩነታት እንታይ ነይሩ?	ንክውለድ - - - - - 1 ንክወፅእ/ንክኸድ - - - - - 2 ኣይፈልጥን - - - - - 3 መልሲ ኣየተውሃበን - - - - - 4	

304	“ድሕሪምርመራ ኤች ኣይ ቪ/ኤድስ ምግባር ጥንሲ ገጢምክን ዶ?”	እው - - - - - 1 ኣይፋሉን - - - - - 0 መልሲ ኣይተብሃውን - - - - - 2	▼ 401
305	ንሕቶ ቁፅሪ 304 መልሲ “እው” እንድሕር ኮይኑ ፣ እቱ ጥንሲ ዝተደለየ ድዩ ነይሩ ወይሲ ዘየተደለየ?	ዝተደለየ - - - - - 1 ዘይተደለየ - - - - - 0 መልሲ ኣይተብሃውን - - - - - 2	
306	ንሕቶ ቁፅሪ 305 መልሲ “ዘይተደለየ” እንድሕር ኮይኑ እቱ ዘየተደለየ ጥንሲ ኸመይ ክኸሰት ኪኢሉ? (ብዙሕ መልስታት ይህሉ)	መከላኸሊ መድሓኒት ብትክኸል ብዘይምስርሑ - 1 ፆታዊ ርክብ ብዓመፅ ስለዝነበረ - - - - 2 መከላኸሊ መድሃኒት ብዘይምጥቃም - 3 መልሲ ኣይተብሃውን - - - - - 4	
307	ከዚውን እቲ መልሲ ንሕቶ ቁፅሪ 305 “ዘይተደለየ” እንድሕር ኸይኑ፣ ናትኸን ውሳኔ እንታይ ነይሩ?	ንምውላድ - - - - - 1 ጥንሲ ንምስዳድ (ምንፃል) - - - - 2 መልሲ ኣይተብሃውን - - - - - 3	
308	ድሕሪ ኤች ኣይ ቪ ፖዘቲቭ ምኻንክን ኣብ እዋን ጥንሲ ዝኾነ ናይ ጥዕና ፀገም ገጢምክን ይፈልጥ ዶ?	እው - - - - - 1 ኣይፋሉን - - - - - 0 መልሲ ኣይተውሃብን - - - - - 2	
309	ድሕሪ ኤች ኣይ ቪ ፖዘቲቭ ምኻንክን ክንደይ ቆልዑት ወሊድኸን / ወሊድኹም?	ሓደ ጥራሕ - - - - - 1 ክልተ ቆልዑት - - - - - 2 ሰለስተ ቆልዑት - - - - - ልዕሊ ሰለስተ ቆልዑት - - - - - 4 ቆልዑት የብለይን/ኣይወልድኩን - - - 0 መልሲ ኣይተብሃውን - - - - - 5	▼ 401
310	ምስ ኤች ኣይ ቪ/ኤድስ ምንፃር ካብ ትጅምራ/ ትጅምሩ ኤች ኣይ ቪ ፖዘቲቭ ዝኾን ቆልዓ ተወሊዱ’ዶ?	እው - - - - - 1 ኣይፋሉን - - - - - 0 ኩነታት ኣይፈልጥን - - - - - 2	
ክፍሊ IV — ሓበሬታ ብዛዕባ ጥንሲ ሜላ መከላኸሊ ጥንሲ			
401	ኣብዚ ከዚ እዋን ናይ ጥንሲ መከላኸሊ ሜላ ትጥቀማ/ትጥቀሙ’ዶ?	እው - - - - - 1 ኣይፋሉን - - - - - 0 መልሲ ኣይተውሃብን - - - - - 2	
402	“እው” እንተኾይኑ መልሲ ንሕቶ ቁፅሪ 401፣ እንታይ ዓይነት ጥንሲ መከላኸሊ ትጥቀማ/ትጥቀሙ?	ኮንዶም - - - - - 1 ዝወሓጥ ክኒን - - - - - 2 ብመርፍእ ዝበሃው - - - - - 3 ኖቸጥላንት(ኣብ ኢድ ዝግበር) - - 4 ኣብ ማህፀን ዝኣትው (ሉፕ) - - - 5 ኻሊእ እንተሃሊዩ ይገለፅ _____ 6	
403	“እው” እንተኾይኑ መልሲ ንሕቶ ቁፅሪ 401፣ ንምንታይ’ዩ ጥንሲ መከላኸሊ ትጥቀማ/ትጥቀምዎ?	እኹል ቁፅሪ ቆልዑት ስለዘለዉኒ - - - 1 ካብ ጥዲና ሰብ ሙያ ንክጥቀም ምኽሪ ስለዝተውሃብኒ - - - - - 2	

	(ብዙሕ መልስታት ይህሉ)	ባዓልገዛይ/ባዓልቲገዛይ ቆልዑት ንክህልወና ድልየት ስለዘይብሎም/ስለዘይብላ - - - 3 ናይ ጥዲና ስንኪ ንክይፍጠር ብምፍራሕ- - 4 ወለዲ ኣልባ ቆልዑት ንክይወልዱ ብምስጋእ - - - - - 5 ካሊእ እንተሃሊዩ ይገለፅ _____ 6	
404	ንሕቶ ቁፅሪ 401 መልሲ “ኣይፋሉን” እንተኾይኑ ንምንታይ ኣትጥቀማይ/ኣይትጥቀሙይ?	ቆልዑት ንክህልወኒ ብምድላይ - - - - 1 ባዓልገዛይ/ባዓልቲገዛይ ንክህልየና ድልየት ስለዘለዎም/ስለዘለወን - - - - - 2 ኹላትና ቆልዑት ንክህልየና ድልየት ስለዘለና - - - - - 3 ናይ ጥንሲ መከላኸሊ ንምርካብ ሕፅረት ስለዘጋጥም - - - - - -4 ጥንሲ መከላኸሊ ምስ ARV መድሓኒት ካልእ ሳዕቤን ንክያምፅእ ብምፍራሕ - - - - 5 ኣብዚ ኸዚ እዋን ናይ ግብረ ስጋ ርክብ ስለዘይግበር - - - - - 6 ጠንሲ ዘይምኽሳት ኩነታት ስለዘሎ - - -7 ካልእ እንተሃሊዩ ይገለፅ _____ 8	
405	ንሓዋሩ ዝኾነ ናይ ውላድ መከላኸሊ መድሃኒት ምጥቓም ድልየት ኣሎ'ዩ?	እወ - - - - - 1 ኣይፋሉን - - - - - -0 ኣይፍልጥን - - - - - 2 መልሲ ኣይተውሃበን - - - - -3	
ክፍሊ V - ብዛዕባ ቆልዓ ምውላድ ዘሎ ኣመላኻኽታ			
501	ኤች ኣይ ቪ ካብ ኣዶ ናብ ቆልዓ ንክይመሓላለፍ ምክልኻል ይከኣል ዩ?	እወ - - - - - 1 ኣይፋሉን - - - - - -0 ኣይፈልጥን - - - - - 2 መልሲ ኣይተብሃወን - - - - -3	
502	ድሕሪ ኤች ኣይ ቪ ፖዘቲቪ ምኻንን/ምኻኖም ቆልዓ ንክህልዩም ኸመይ ይርእይዎ/ኦ?	ቆልዓ ንክንወልድ ከዚ'ውን ድልየት ኣለኒ- - 1 ቆልዑ ንክህልወኒ ድልየተይ ቀኒሱ - - - -2 ቆልዑ ንክህልወኒ ድልየተይ ወሲኹ - - - - 3 ቆልዑ ንክወልድ ድልየት የብለይን - - - -4 ኣይፈልጥን - - - - - -5 መልሲ ኣይተብሃወን - - - - -6	
503	መልሲ ንሕቶ ቁፅሪ 502፣ ኮድ 13 3ን እንድሕርደኣ ኾይኑ፣ ብምንታይ ኩነታት እዩ ድልየት ተቀይሩ? (ብዙሕ መልስታት ይህሉ)	እቶም ቀዲሞም ዝተወለዱ ይሞቱ ይኾኑ ዝብል ፍርሒ - - - - - 1 ካብ ኣዶ ናብ ቆልዓ መከላኸሊ ዘሎ ምኻኑ ብምርግጋፅ - - - - - -2 ARV መድሃኒት ብምትእምማን - - - - - 3	

		ባህላዊ ተፅዕኖ ስለዘለሎ - - - - - 4 ባዕለይ ምትካእ ስለዘለኒ - - - - - 5 ካሊእ እንተሃሊዩ ይገለፅ _____ 6	
504	መልሲ ንሕቶ ቁፅሪ 502፣ ኮድ 2ን 4ን እንደሕር ደኣ ኾይኑ ብምንታይ ኩነታት እዩ እቱ ድልዎት ተቀይሩ? (ብዙሕ መልስታት ይህሉ)	ሓዳር ብምፍራሱ - - - - - 1 ናይ ኢኮኖሚ ፀገም - - - - - 2 ብጥዲና ፀገም - - - - - 3 ወለዲ ኣልባ ህፃናት ንክይህልዉ - - - 4 ባዓልቲገዛ/ባዓልገዛ ብዘይምህላይ- - - 5 ናይ ቤተሰብ ቁፅሪ ድልዎት ስለዘተማለኩ- 6 ኤች ኣይ ቪ ናብ ህፃን ንክይመሓላለፍ ብምፍራሕ - - - - - 7 ካሊእ እንተሃሊዩ ይገለፅ _____ 8	
505	ንሓዋሩ ቆልዓ ንክህልዩ/ንክህልዩም ድልዎት ኣለወን/ኣለዎምዶ?	እዉ - - - - - 1 ኣይፋሉን - - - - - 0 ኣይወሰንኩን - - - - - 2 መልሲ ኣየተብሃውን - - - - - 3	↓ 509 ↓ 510
506	“እዉ” እንተኾይኑ መልሲ ንሕቶ ቁፅሪ 505፣ መዓዘ ንክህልዩም ቆልዓ ይደልዩ?	ኣብ 2 ዓመት ውሽጢ - - - - - 1 ድሕሪ 2 ዓመት - - - - - 2 ኣይፈልጥን - - - - - 3 መልሲ ኣይተብሃውን - - - - - 4	
507	እንደሕር ደኣ እቱ መልሲ ንሕቶ ቁፅሪ 505 “እዉ” ተኾይኑ እንደገና ንቅድሚት ክንደይ ቆልዑት ንክህልዩ/ንክህልዩም ድልዎት ኣለወን/ኣለዎም?	1 ቆልዓ - - - - - 1 ካብ 2-3 ቆልዑት - - - - - 2 ካብ 3 ንላዕሊ ቆልዑት - - - - - 3 ኣይወሰንኩን - - - - - 4 ኣይፈልጥን - - - - - 5 መልሲ ኣይተብሃውን - - - - - 6	↓ 510
508	ድልዎትክን/ድልትኩም ንክማላእ ኣብ ክንደይ እዋን ውሽጢ ክኸውን ኣለዎ ኢልኩም/ኢልክን ትሓስቡ/ባ?	ድሕሪ 9መት - - - - - 1 ድሕሪ 2 ዓመት - - - - - 2 ድሕሪ 3 ዓመት - - - - - 3 ኣይወሰንኩን - - - - - 4 ካሊእ እንተሃሊዩ ይገለፅ _____ 5	↓ 510
509	እንደሕር ደኣ መልሲ ንሕቶ ቁፅሪ 505 “ኣይፋሉን” ኮይኑ ንሓዋሩ ቆልዑ ንክህልዩ/ንክህልዩም ንምንታይ ተደልዩ? (ብዙሕ መልስታት ይህሉ)	እኩል ቁፅሪ ቆልዑ ስለዘለዉኒ - - - - 1 ካብ ኣዶ ናብ ቆልዓ ኤች ኣይ ቪ ንክይመሓላለፍ ብምፍራሕ - - - - - 2 ወለዲ ኣልባ ህፃውነቲ ንክይኾኑ ብምፍራሕ- 3 ቆልዓ ንክይውለድ ካብ ጥዲና ሰብ ሙያ ስለዘተምሃርኩ - - - - - 4 ናይ ጥዲና ሰንኪ ብምፍራሕ - - - - - 5 እኹል እቶት ስለዘይብለይ - - - - - 6 ካለፅ እንተሃሊዩ ይገለፅ _____ 7	

	መተሳሰቢ- ካብ ሕቶ ቁፅሪ 105 ዝርከብ ርክብ ግብረሰጋ ዘለዎም ተፃመድቲ ሕቶ ቁፅሪ 510 ሕቶት ዝቐረበ እዩ።	
510	ባዓልገዝእን/ባዓልቲገዝኦም ንሓዋሩ ቆልዓ ንክህልዩን/ንክህልዮም ድልዮት ኣለዎምዶ?	እው - - - - - 1 ኣይፋሉን - - - - - 0 ኣይፈልጥን - - - - - 2 መልሲ ኣይተብሃውን - - - - - 3
ክፍሊ VI- ሓበሬታ ብዛዕባ ምምሕልላፍ ኤች ኣይ ቪ ካብ ኣዶ ናብ ቆልዓ/ ምክልኻል ኤች ኣይ ቪ ምምሕልላፍ ካብ ኣዶ ናብ ቆልዓ ዘሎ ፍልጠትን ኣመላኻኽታን ከምኡ'ውን ጥዲና ተንክፍ ተፃብኦታትን		
601	ኤች ኣይ ቪ ካብ ኣዶ ናብ ቆልዓ ክመሓለፍ ይኽእል'ዶ?	እው - - - - - 1 ኣይፋሉን - - - 0 → ምቕፃል ኣብቅዕ ኣይፈልጥን - - 2 → ምቕፃል ኣብቅዕ መልሲ ኣይተብሃውን - - - - - 3
602	ንሕቶ ቁፅሪ 601 መልሲ “እው” እንተኾይኑ ፤ መዓዝ እዩ ኤች ኣይ ቪ ካብ ኣዶ ናብ ቆልዓ ዝመሓለፍ (ብዙሕ መልሲታት ይህሉ)	ኣብ ዕዋን ጥንሲ - - - - - 1 ኣብ ዕዋን ሕርሲ - - - - - 2 ቆልዓ ኣብ ዝጠቦሉ ዕዋን - - - - - 3 ኣይፈልጥን - - - - - 11 መልሲ ኣይተብሃውን - - - - - 97 ካልእ እንተሓለዩ ይገለፅ _____ 78
603	ካብ ኣዶ ናብ ቆልዓ ንኬመሓለፍ ወይ ከዓ መከላከሊ ሜላ ትፈልጥዎ/ኦ ዶ?	እው - - - - - 1 ኣይፋሉን - - - - - 0 ኣይፈልጥን - - - - - 2 መልሲ ኣይተብሃውን - - - - - 3
604	ንሕቶ ቁፅሪ 603 መልሲ “እው” እንተኾይኑ ፤ እቶም ሜላታት መከላኸሊ እንታይ እዮም?	መድሃኒት - - - - - 1 ጥዲንኡ ዝተማለኸ ኣወላልዳ - - - - - 2 ንኣመጋግባ ጡብ ኣዶ ብኻሊእ ምትካ- 3 ካልእ እንተሓለዩ ይገለፅ _____ 78
605	መልሱ ኮድ “1” እንተኾይኑ ንሕቶ ቁፅሪ 603፤ እቲ መድሃኒት ኣብ መዓዝ ዕዋን ክወሃብ ኣለዎ?	ኣብ እዋን ጥንሲ - - - - - 1 ኣብ እዋን ሕርሲ - - - - - 2 ድሕሪ ወለዲ ነቲ ዝተወለደ ቆልዓ - - 3 ኣይፈልጥን - - - - - 11 መልሲ ኣይተብሃውን - - - - - 97
606	ምትእትታው ግልጋሎት ምክልኻል ምትሕልላፍ ኤች ኣይ ቪ ካብ ኣዶ ናብ ቆልዓ ብዝተመልከተ ቆልዓ ንምወላድ የተባብዕ'ዶ?	እው - - - - - 1 ኣይፋሉን - - - - - 0 ኣይፈልጥን - - - - - 2 መልሲ ኣይተብሃውን - - - - - 3
607	ደሕሪ ARV መድሓኒት ምትእትታው ቆልዓ ንክሕልዩን/ከም ኣመላኻኽታ/ኣመላኻኽታኩም ለዊጥክን/ለዊጥኩምዶ?	እው - - - - - 1 ኣይፋሉን - - - - - 0 መልሲ ኣይተብሃውን - - - - - 2
608	እንደሕር ደኣ ተቐይርክን /ተቐይርኩም እንተኾይኑ/ኩም	ቆልዓ ንክህልዩን/ንክህልዮኩም - - - - 1 ቆልዓ ንክይህልወክን/ንክይህልዮም - - - 0

	እንታይ መንገዲ መሪዕኩም?	አይወሰንኩን - - - - -2	
609	አብዚ ከዚ እዋን አጠቓላሊ ኩነታት ጥዲናክን/ትዲናኹም ኸመይ ይግንዘብኦ/ይግንዘብዎ ምስቲ ቅድሚያ ARV ምጅማርክን/ምጅማርኩም ክነፃፀር ክሎ?	ምምሕያሽ - - - - - 1 ለውጡ የብሉን - - - - -0 ኩነታት ጥዲና ምግዳድ - - - - - 2 መልሲ አይተብሃውን - - - - - 3	
610	መናውሒ ዕድመ/ናይ ኤች አይ ቪ/ ኤድስ መከላኸሊ ዝህቡ ሰባት ቆልዑ ኸክህልዎክም/ክን የተባብዑኹም/ኹን ዶ?	እው - - - - - 1 አይፋሉን - - - - -2 ክልቲኦ ምንም አይንብልን - - 3 አይፈልጥን - - - - -4 መልሲ አይተብሃውን - - - -5	
611	ቦቱ ዝወሃብ ግልጋሎት ጥዲና ዕጉባት ድክን/ድኹም?	እው - - - - - 1 አይፋሉን - - - - -0 መንጎ መንጎ - - - - -2 መልሲ አይተብሃውን - - - - -3	

ASSURANCE OF PRINCIPAL INVESTIGATOR

The undersigned agrees to accept responsibility for the scientific ethical and technical Conduct of the research project and for provision of required progress reports as Per terms and conditions of the Research Publications Office in effect at the time of Grant is forwarded as the result of this application.

Name of the student: Amanuel Desta G/Michael

Date. _____ Signature _____

Approval of the primary Advisor

Name of the primary advisor: Sr Amsale Cherie

Date. _____ Signature _____