Demand for long acting and permanent contraceptive methods and associated factors among female antiretroviral treatment attendees in Addis Ababa, Ethiopia

By Miraf Walelegn

Advisor -Mitike Molla (PHD)
-Mr. Mulgeta Tamire (MPH)

A Thesis submitted to the School of Graduate Studies of Addis Ababa University in partial fulfillment of the Requirements for the Degree of Masters of Public Health

July 2014
Addis Ababa, Ethiopia

ADDIS ABABA UNIVERSITY COLLEGE OF HEALTH SCIENCE SCHOOL OF PUBLIC HEALTH

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Dean of School of Public Health

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Advisors

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Examiners

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ACRONYMS

AIDS	Acquired immune deficiency syndrome
ART	Antiretroviral treatment
FHAPCO	Federal HIV/AIDS prevention and control office
FP	Family planning
HIV	Human immune deficiency virus
IUD	Intrauterine device
LAPMs	Long acting and permanent methods
PMTCT	Prevention of mother to child HIV transmission
TL	Tubal ligation

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ABSTRACT

Background: Unmet need for family planning is similar sometimes even higher among women living with HIV. There is also a significant number of unintended pregnancies ranging from 51 percent to 84% among HIV-positive women. In Ethiopia, the prevalence rate of LAPMs among the general population has shown an increment. The use of implant recently has increased from 12% to 16%.

Objectives: The objective of this study is to assess the demand for long acting and permanent contraceptive method and factors associate with it among HIV-positive women enrolled on antiretroviral treatment program in public hospitals in Addis Ababa, Ethiopia.

Methods: A facility based mixed methods research combining quantitative cross sectional study design and qualitative research was carried out in Addis Ababa among HIV-positive women initiated ART. A sample size of 421 was calculated and distributed to the selected hospitals based on the number of ART clients each have. A structured and pre- tested questionnaire was used to collect the data. Data collection was under taken from March2- April 20 2014 for both qualitative and quantitative study. The qualitative study was conducted in the same hospitals. Binary logistic regression and multivariate analysis were employed using SPSS version 21.

Result: A total of 394 HIV positive women who initiated ART were included on the study with the response rate of 93.6%. The total demand for LAPMs among HIV positive women on ART was 60.2% (95% CI 55-65) which was 14% for met need and 46.2% unmet need. Factors associated with demand for LAPMS were number of live children (AOR 0.188 95% CI 0.074-0.476) and disclosure of HIV status to family members (AOR 0.400 95% CI 0.227-0.750). Number of live children (AOR 0.100 95% CI 0.032-0.311), marital status (AOR 0.405 95% CI 0.169-0.968, disclosure of HIV status to family members (AOR 0.339 95% CI 0.182-0.631) and satisfaction with cost of method (AOR 0.438 95% CI 0.221-0.867) were predictors of unmet need. The qualitative study findings also supported the above result where the participants explained that family members usually interfere in the women's decision to use LAPMs.

Conclusion and recommendation: The study shows the high total demand and unmet need for LAPMs, which may increase the mother to child HIV transmission due to unintended pregnancies caused by the failure of other short acting methods. Unmet need for LAPMs of contraception can be addressed by proper training of service providers (Both ART and FP), better counseling skill on family planning and proper management of side effects.

1. INTRODUCTION

1.1 Background

Access to modern contraceptives is a human right and one of the most important issues emphasized by the international scientific community. Reproductive health and family planning services access and use have shown a huge progress because of harmonized international family planning effort over the past four decades [1].

Many people in reproductive age needs family planning to make informed choice about their life related with fertility including spacing and limiting of births. Having the desired family size leads to having a better life style which intern can improve their own lives and significantly increase their newborn survival and health [2]. However, obstacles and challenges remains affecting further progression of the access and use of family planning service [1].

Integration of family planning and HIV services could potentially decrease unwanted pregnancy, HIV transmission to infants and healthcare costs. A broad HIV service delivery infrastructure offers a great opportunity for the integration of the two services [3]. Providing family planning service is often neglected by many countries as a strategy to preventing unintended pregnancies, which is an important component of preventing HIV transmission to infants [2].

Worldwide contraceptive prevalence among women of reproductive age varies ranging from 8% in West Africa and 78% in northern Europe. The most commonly used contraceptives are female sterilization (32%), IUD (22%), oral contraceptive pill (14%) accounts for more than two third of all contraceptive practice worldwide. Female sterilization and IUD accounts for 70% of the contraceptive used in less developed countries because they are promoted by health care services as cost effectiveness in terms of pregnancy prevention and service provision [4].

The contraceptive prevalence rate in Ethiopia has increased from 6% in 2000 to 33% in 2014. The use of more effective long-term methods, such as implants has also increased from 12% to 16% [5]. According to EDHS 2011the contraceptive prevalence rate in Addis Ababa is 56.3% which is relatively high than the other regions. Nevertheless, the prevalence rate for LAPMs is very low which is 2.3% for female sterilization, 2.6% for IUD, and 2.8% for implant. Moreover, the knowledge for LAPMs is relatively lower than the short acting contraceptive methods [6].

A report from Ethiopia in 2011 international family planning conference showed, 17 facilities offering FP/ART integrated. In this facilities 81.2% were counseled on FP, 24.1% received hormonal contraceptives (pills or injectables), and 91.4% received condoms. Challenges to integration of FP and ART service were found to be, high trained staff turnover and lack of ART health management information systems (HMIS) addressing FP. Overall, providers felt that offering FP to VCT and ART clients was important and overdue. FP/HIV integration focus on the FP counseling and provision of contraceptives for HIV positive women, which in turn helps to ensuring client satisfaction, high-quality counseling tailored to the needs of HIV/AIDS service clients and efficient utilization of resources [7].

Expanding access to family planning programs would substantially benefit HIV prevention efforts and provide other health and social benefits to women living with HIV as well as to the wider population [8].

1.2 Statement of the problem

In Sub-Saharan Africa, the most frequently affected part of the community by HIV/AIDS is young women. In severely affected part of the region, 10% to 30% of pregnant women are HIV-positive [9]. Health care system's focus is mainly on offering curative care or responding to the medical and social needs of HIV-positive women and couples [10]. However most people living with HIV are sexually active and need information and service about FP [2].

The proportion of unmet need ranges regionally from 10% in North Africa and West Asia to 24% in Sub-Saharan African countries. Unmet need for family planning is similar sometimes even higher among women living with HIV [8].There is also a significant number of unintended pregnancies ranging from 51 percent to 84% among HIV-positive women [3]. Nevertheless, in many countries policies and guideline, family planning is rarely included as a strategy to prevent perinatal HIV transmission. It has been estimated that using family planning to decrease pregnancy to HIV infected women could decrease the number of HIV-positive births equivalent to those prevented by ART [8]. To reduce maternal mortality and poor birth outcome there should be a wide access to FP particularly the LAPMs. However, Studies done recently underestimated the safety and effectiveness of long acting and permanent contraceptive methods [1].

Women are not able to decide on their sexual and reproductive health by themselves because they are economically dependent, religious attitudes to women's right, political instability within the society and other cultural factors. Other factors affecting use of contraceptives include range of methods available, patient choice, prevalent health and religious beliefs, perceptions of method effectiveness, and side effects for example, women may have less tolerance for heavy and prolonged vaginal bleeding than amenorrhea. In addition, women do not have the knowledge about reproductive health and literacy skill to follow written instruction [4].

1.3 Rationale of study

Improving family planning service in particular among women accessing antenatal, delivery, and postnatal services is one of the cones of prevention of mother-to-child HIV transmission (PMTCT) program [11,12]. The most important wide-ranging PMTCT Strategy is provision of family planning service for HIV-positive women [13, 14]. Compared to providing ART for HIV-positive pregnant women, preventing unintended pregnancies among these women is found to be cost effective approach to prevent vertical transmission, reduce poor neonatal out comes and various other health and societal costs. It also decreases their vulnerability to morbidity and mortality related to pregnancy and vital to meeting HIV-positive women's sexual and reproductive health needs [15, 16]. However, until now, PMTCT programs in Africa often miss opportunities to provide HIV-positive, as well as HIV-negative, clients with family planning services [17]. Long acting and permanent contraceptives are more effective in actual use than short-acting methods for preventing unintended or closely spaced pregnancy [18]. No studies have documented the demand and associated factors for long acting and permanent family planning method in ART patients. Hence the present study is aimed to fill such gaps and show the magnitudes and hence intervention areas for programmes.

2. LITERATURE REVIEW

2.1 Prevalence of LAPMs

In South Africa, study reported nearly 99% of HIV positive and HIV negative participants reported that they were currently using a modern method of contraception. The majority of women were using short acting methods, mainly the injectables, Depo Provera (DMPA) [19]. A prospective study conducted in Uganda reported on reproductive intentions and out comes among women on ART reported most of the women use short term method particularly condom [20]. The reason for using short acting methods was convenience of the method, provider recommendation, absence of side effects and method effectiveness in preventing pregnancy. None of the participants was using IUD and small percentage of participants reported they had undergone female sterilization [19]. Similar to this in Uganda, the use of semi permanent and permanent which in this case is hormonal injection implant or permanent is low. A large amount of the sexually active women have no desire to have children at two years but do not use any method, more than half use condom alone and the majority were not using semi permanent or permanent method for spacing [20].

EDHS 2011 reported unmet need for contraception is 25%, where 16% for spacing and 9% for limiting [6]. In Tigray, a study showed contraceptive prevalence of 44.3%. Next to injectables, male condom was the most common type of contraceptive used. In addition, a considerable number of women used dual method. Generally, utilization of permanent methods was very low both before and after HIV diagnosis [21].

Another study in Oromia region, on demand for long acting and permanent methods of contraceptives and factors for non-use among married women reported the current utilization rate of LAPMs of contraceptives was 8.72%.Of these, largely used LAPM was Norplant next to that IUD and TL were used. Women age 25-29 were the main users of LAPMs however, utilization of these methods decrease as the age of the women increase from 30-49. More than half of the current LAPMs users, report using these methods for delaying pregnancy while large number were using LAPMs because they did not want any more babies. The total demand for LAPMs of contraceptives was found to be 18.12%. The unmet need for LAPMs of contraceptives was 9.4% (3.78% for spacing and 5.59% for limiting). Unmet need for participants having unintended

pregnancy currently was very small for both spacing and limiting. Moreover some of the respondents want to limit their number of children [22].

2.2 Factors associated with demand for LAPMs

A study conducted in Zimbabwe on the reasons for low utilization of long acting contraceptives amongst HIV positive women showed more than half of the respondents were not using modern contraceptive although most of the respondents did not intend to have another child. Most of the patients use short acting methods and the Jadelle and intrauterine contraceptives were used by only 4% of the respondents, permanent contraceptive were not used by any of the respondents [23]. A report from a study conducted in Kenya on overcoming barriers to family planning through integration showed most of the HIV-positive men understood that their wife/partner should use FP to have the desired family size and improve the health of the mother and child. The use of more effective contraceptive such as hormonal, IUD, or permanent methods was low [24].

The reasons for not using long acting contraception were having no sexual partner during the time of the study, fear of side effects and few of the participants were not sure of the side effects of long acting contraceptives hence just decided not to use them. Other reasons include, respondents were not sure of the mode of action of the long acting contraceptives, age above 35 years old hence did not think they were supposed to use any long acting contraception whilst few of the respondents had reached menopause and others never used contraception in their lives. Generally, there was a knowledge gap and miss perceptions by the respondents about long acting family planning method [23]. the most important barriers of contraceptive in the study conducted in Kenya use were concern about side effect, luck of knowledge, myth and misconceptions, structural barriers, such as staff shortage and others. Many men participants were not aware of long acting and reversible contraceptives and permanent methods including vasectomy where a large knowledge gap was observed [24].

Another study conducted in Kenya on providers' perspectives on provision of family planning to HIV-Positive individuals in HIV care showed most of the providers were clinical officers and nurses followed by HIV/VCT (voluntary counseling and testing) counselors and community

clinic health assistants, or health worker volunteers. a few respondents reported that at least one long acting reversible contraception method was available at their site. Half of the providers reported that there was a provider trained in IUCD insertion. Two-thirds of the respondents reported that they desired additional family planning training. Some of the providers reported receiving family planning training during the previous two years. Despite the safety of DMPA, IUC, and implants, few providers thought these methods were safe. More over TL was least recommended method for clients by the providers [25].

A crossectional survey conducted in Rwanda on pregnancy desires, and contraceptive knowledge and use among prevention of mother-to-child transmission shows more HIV-negative women want additional children in the future and more HIV-positive women report discussing family planning with health service provider during/after their most recent pregnancy. Hormonal contraceptive were the most frequently discussed method by the health service providers. Higher number of HIV-positive women was more likely to use any FP method as well as modern contraceptive than HIV-negative women. The most frequently used FP among HIV-positive was condom. The use of modern method and any FP was low among those women who desire to limit birth. However, HIV-positive women who desire to limit birth were more likely to use any method as well as modern method than HIV-negative women who wanted to limit birth. In the same study with no difference by HIV status majority of the women who were not using FP during the study have the intention to use FP in the future. Generally, the strongest determinant of FP use and desire to have additional children was HIV status. The other factors include socio-demographic variables, relationship status, and parity [26].

In a study conducted in Zambia, women 25–34 years age or ≥35 years and women with higher monthly income had lower odds of accessing contraceptive services than women 16–24 years. Women who have children were more likely to access reproductive health services than those women with no children. Factors associated with modern contraceptive use were also assessed in this study where women ≥35 years old, single women and those for whom HIV status disclosure was unknown were less likely to using modern contraception. Women with one or more living children and women with CD4+ cell counts of 250–350 cells/UL were more likely to use modern contraceptive method than among nullipara and those with low CD4+ cell counts [27].

A recent study in Gimbie reported that more than half of the respondent were using modern contraceptive in the past one month prior to the survey. Majority of the women use condom and dual methods following these injectables, implants and pills were used. The least used methods were IUCD, female sterilization and vasectomy [28]. A study conducted on unmet reproductive health care needs and occurrence of unintended pregnancy among HIV positive women in ART Units in Addis Ababa showed the most commonly used contraceptive is condom, injectables and pills. The use of IUCD, Norplant and permanent method was low [29].

Higher number of women does not want to have more children among the current users and non-user. The non-users reported that they are not using modern contraceptive due to fear of complication with ART drugs, fertility related reasons, partner opposition, method related reasons and desire to have a child to use. Women who have information on modern contraceptive were more likely to use modern contraceptive more over women who have family size ≤4 are less likely to use contraceptive [28]. In Addis Ababa, factors associated with unmet need for FP were having HIV-negative partner and unintended pregnancies.CD4 count >200 were negatively associated with unmet need for contraception. Among the non pregnant, fecund and sexually active women who were not using contraception most of them want to have birth later and want no more children in addition a significant number of these women want to have child soon [29].

1.4 Conceptual framework

This conceptual framework was constructed by referring different literatures.

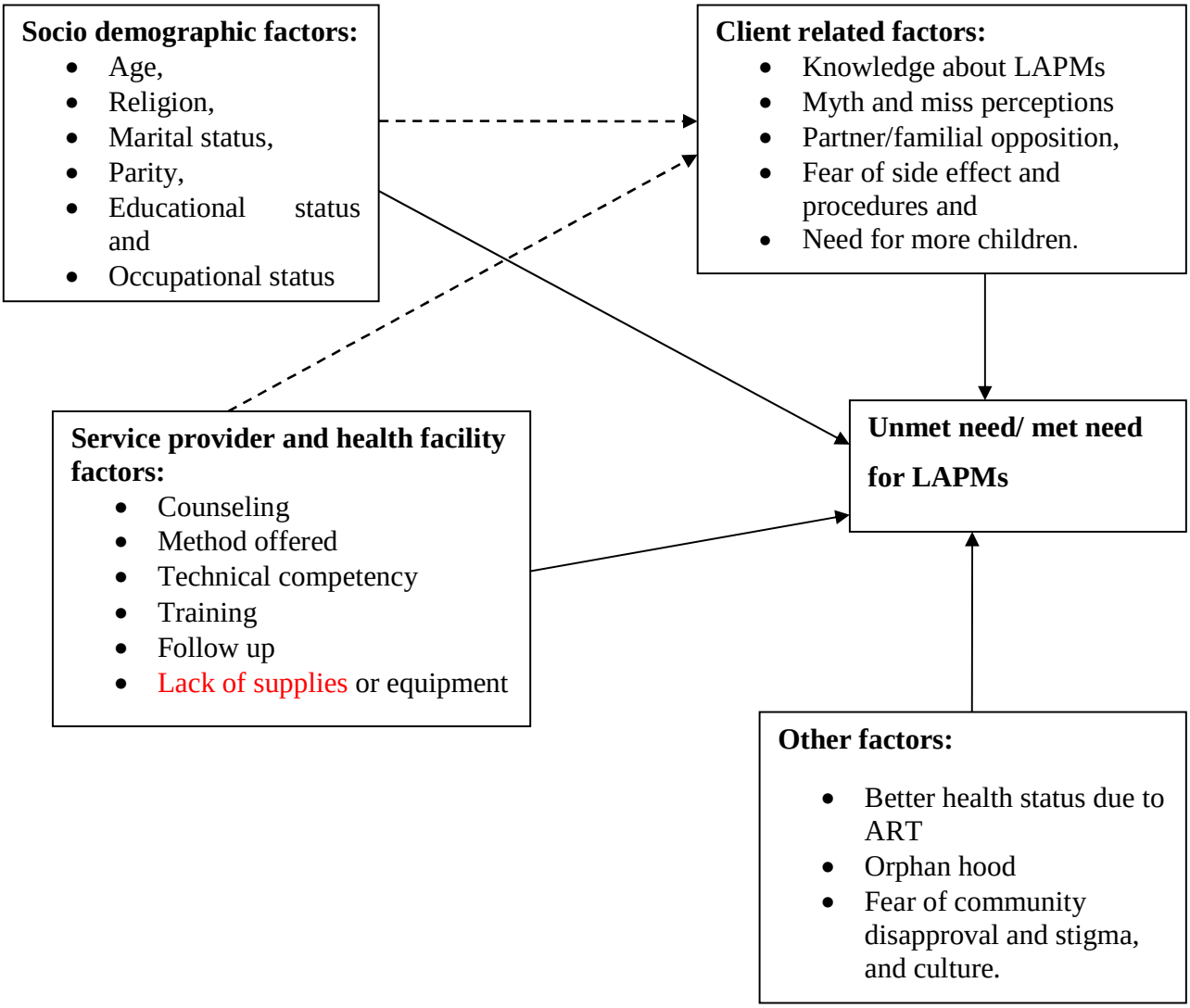

Fig 1: Conceptual framework for main factors associated with the demand of long acting and permanent contraceptive method among ART clients

3. OBJECTIVE OF THE STUDY

3.1 General objective

To assess the demand for long acting and permanent contraceptive methods and factors associated with it among HIV-positive women enrolled on antiretroviral treatment program in public hospitals, Addis Ababa, Ethiopia 2014.

3.2 Specific objectives

1. To assess the demand for long acting and permanent contraceptive methods.
2. To assess the availability of long acting and permanent contraceptives.
3. To determine factors associated with demand for long acting and permanent contraceptive method.
4. To explore factors affecting the demand for long acting and permanent contraceptive method.

4. METHODS

4.1 Study area and period

The study was under taken from March2-April10 2014 in three hospitals ARV treatment units in Addis Ababa. Around 3,122,000 people living in Addis Ababa, which is the capital city of Ethiopia. According to the 2011 EDHS, the HIV prevalence in the city was 5.2%. There are around nine public hospitals, 25 health centers, two government clinics and 20 private hospitals provide ART service. According to a report from EMOH/FHAPCO 2013 over all about 51,182 people are on ART currently. The study was conducted in public hospitals found in the city.

4.2 Study design

A facility based quantitative cross sectional and qualitative study was carried out in Addis Ababa in three of the public hospitals. The quantitative study was carried out among HIV positive women on ART. The qualitative study included both focus group discussions among HIV positive women on ART and in-depth interview with the family planning providers of all the three hospitals.

4.3 Study population

Quantitative

Target population- All HIV-positive women aged 18-49 who have been enrolled in ART program in Addis Ababa city.

Study populations- All HIV-positive women aged 18-49 who were on ART program and found in the selected public hospitals.

Qualitative

Women who were on ART program during the data collection period and staffs who work in family planning units were included in the qualitative study.

Inclusion criteria

- Women of reproductive age group who have visited ART treatment unit at least once.
- Staffs who were the leader of the FP unit or who were in charge of the LAPMs.

Exclusion criteria

- Women who were mentally incompetent or severely ill
- Under age for legal marriage 15-17years age group.

4.4 Sample size

The sample size was calculated for demand of LAPMs and factors associated with it and finally the largest sample size was used to conduct the study. Sample size for the factors associated with demand for LAPMs were calculated using two population formula, for knowledge and desire to have children where each of them give a sample size of 59 and 122 respectively.

The sample size was determined using single population formula.

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

Where Z = confidence interval at 95%=1.96

P= Population proportion =Demand for LAPMs in Ethiopia is 47%

d= margin of error=5%

Assumption

Desired precision (d) = 5%

Expected prevalence (p) = Demand for long acting and permanent contraceptive methods in Ethiopia is 47 %. (Source: MEASURE DHS STAT)

Confidence level = 95%, which means α at 0.05 and Z α/2 = 1.96

Hence, the calculated sample size was 383. Adding a 10 % non-response rate finally a total sample size of 421 of woman were sampled for the study.

4.5 Sampling procedure

The study was conducted in three ART units of public hospitals giving ART services in Addis Ababa. Public hospitals were chosen because of their experience in providing ART treatment for longer period and have a high number of ART clients than the health centers and private health facilities. Generally, there are around 56 health facilities providing ART service in the city. Out of nine public hospitals providing ART, services three were selected. The hospitals were selected because of their high patient load and proximity to each other. The sample from each hospital was allocated proportionally to the number of clients on ART at each institution.

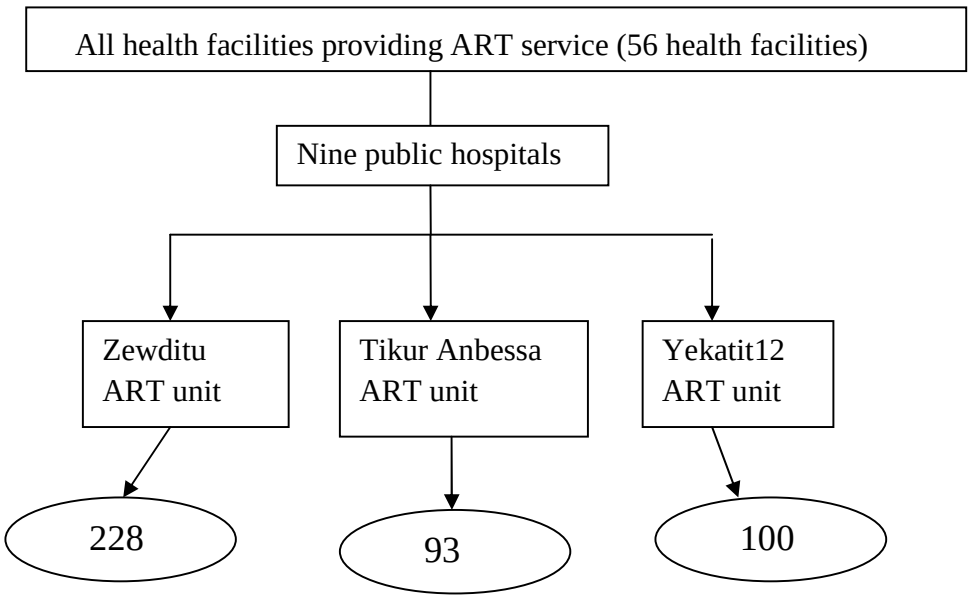

Fig 2: Schematic presentation of the sampling procedure used in the study, Addis Ababa, Ethiopia, 2013-3014

The sampling frame was a list of all ART patients at the selected hospitals at a specific point in time who met the inclusion criteria. The sampling frame was obtained from ART units of each hospital. Those patients was chosen using systematic random sampling procedure. Every "K^{th}" women age 18-49, coming for the ART follow-up was selected." K" was calculated by dividing expected total number of women coming for the ART follow up within a month prior to data collection in the three facilities (by referring the client's registration book) by the total sample size. Therefore, every 16^{th} women who had an appointment during the specific day of the data collection at Zewditu Memorial Hospital, Tikur Anbessa Hospital, and Yekatit12 Hospital were selected.

Qualitative

The qualitative study was carried out to identify factors related to utilization of LAPMs and acquire detail explanations. It was done sequentially after the quantitative data was collected. For the in-depth interview and focus group discussion, theoretical sampling procedure until saturation was applied to select the study participants using different criteria such as marital status, age, parity, education status and others.

4.6 Variables

Dependent variable

Demand long acting and permanent contraceptive methods.

Unmet need for long acting and permanent contraceptive methods.

Independent variables

Client characteristics: Socio-demographic such as age, marital status, religion, educational status, occupational status, parity; HIV related variables like duration of HIV diagnosis and ART, recent CD4 count, disclosure of HIV status, HIV and ART, status of the partner; family planning related variables like current intention to use family planning, method offered at the family planning unit, knowledge, adequacy of information given, husband/ partner opposition, desire for more children, misconceptions, fear of side effect and procedure involved.

Service provider and facility factors: Counseling, training, technical competency, follow up, treat client with respect, pelvic exam during FP session, confidentiality/privacy and cost of method

4.7 Data collection procedures

Quantitative

A structured and pre- tested questionnaire was use to collect the data. Data were collected using four nurses where two of them were assigned to Zewditu Memorial Hospital and the rest were assigned to Tekur Anbassa and Yekatit12 Hospital. The data collection was supervised by the principal investigator.

Qualitative

Open-ended semi-structured interviewer guide was used for qualitative data collection. Three Focused group discussions were held among women of reproductive age who are currently on ART and three in-depth interviews were held among the family planning service providers from the same hospitals where the quantitative participants were sampled. Selection was continued until the saturation of the information. The principal investigator was the moderator, one-note taker, and one assistant for recording were used to conduct the qualitative assessment.

4.8 Data management and quality assurance

The questionnaire was originally prepared in English, translated in to Amharic, and back translated to English to check consistency. It was pre-tested in 5 %(20 women) of the sample, which was not included in the study. The pre test was conducted at Arada Health Center and appropriate modification was made based on the findings. The data collectors were trained on data collection tool for one day. The quality of data was controlled at different levels for completeness and consistency. First by data, collectors at the end of each questionnaire, then by principal investigator each night on the same day inconsistencies and completeness were checked accordingly.

4.9 Data analysis

Quantitative

All the data was entered and cleaned using EPI Info version 3.5.4 and exported in to and analyzed using SPSS version 21. Descriptive statistics was computed to determine unmet need, met need, and total demand of LAPMs. Analysis such as proportion, percentage, and frequency distribution were used to describe the data. A P-value <0.05 was considered statistically significant. Bivirate logistic regression was computed to show the association between the independent and dependent variables. Multi logistic regression was used to evaluate independent effects of selected variables controlling the effect of others. It was calculated using those variables, which had $p < 0.05$, $p < 0.2$, and those variables, which were found to have association on other studies.

Qualitative

Field note was taken during the interview and focus group discussion in addition to the tape recorder. The qualitative data from the focus group discussion and interviews with FP providers were analyzed using content analysis. The analysis was started by importing the transcribed the data into the OpenCode programme to facilitate the coding process. Units of relevant meaning were examined line-by-line and coded by the principal investigator, finally eleven categories were identified and presented using cautation.

4.10 Operational definitions

- **Long acting contraceptive:** Intra-Uterine Device (IUD) and Norplant.
- **Permanent methods of contraceptive:** Tubal ligation
- **Demand for LAPMs:** The sum of LAPM being used (Met need) and method that is desired but not used due to any reason (unmet need).
- **Unmet need for LAPMs of Contraceptive:** Refers to those who are not currently using LAPMs, not currently pregnant or amenorrhea, are able to bear a child (fecund), and want to delay the next birth for two or more years/want to stop childbearing. Women with an unmet need for LAPMs can also be those who are not currently using LAPMs, are pregnant, or amenorrheic, or had a current pregnancy/last birth that was mistimed and want to delay the next birth/ unwanted and want no more children.
- **Unmet need for spacing:** Refers to those who are not currently using LAPMs, not currently pregnant or amenorrheic, are able to bear a child (fecund), and want to delay the next birth for two or more years. Women with an unmet need for spacing can also be those who are not currently using LAPMs, are pregnant, or amenorrheic, or had a current pregnancy/last birth that was mistimed and want to delay the next birth.
- **Unmet need for limiting:** Refers to those who are not currently using LAPMs, not currently pregnant or amenorrheic, able to bear a child (fecund) but want to stop child bearing, or women who are not using LAPMs but are pregnant or amenorrheic, and have an unwanted pregnancy and want no more children.
- **Woman who are on ART follow up care:** Women who at least one visit to the selected ART treatment unit for receiving ART.

4.11 Ethical consideration

Written ethical clearance was obtained from the Research and Ethical committee (REC) of the School of Public Health, College of Health Science in Addis Ababa University and from other departments accordingly. During the data collection, informed consent was obtained from each respondent by first explaining the objectives of the study and the rights of the respondent to participate or not in the study. Names were not asked from any of the respondents. All interviews were taken in a place that keeps privacy. Privacy and confidentiality of the interviews and information gathered was assured for all participants.

4.12 Dissemination

A copy of the research findings was given to the sponsor, MPH library and other responsible bodies. At the end of the study, it was presented at the School of Public Health College of Health Science. Efforts will be made to publish in peer review journal and present in various seminars and workshops.

5. RESULT

5.1 Over view of socio-demographic characteristics

A total of 394 women of age 18-49 participated in the survey making a response rate of 93.6%. Many of the respondents were from Zewditu Memorial Hospital ART treatment unit 217(55.1%).

Regarding the socio-demographic characteristics of the study participants 125(31.7%) of the respondents were in the age group of 35-39 and 113(28.7%) were in the age group of 25-29. The mean age of the respondents was 32(± 5). Majority of the respondents were married or living with their partner 265(67.3%) while 76(19.3%) were never been married. Concerning the educational status of the respondents, almost one third attended secondary and primary school 129(32.7%) and 126(32%) respectively. One hundred thirty nine (35.3%) of the study participants were housewife and 120 (30.5%) were self employed while 33 (8.4%) were unemployed. (Table 1)

Table 1: Socio-demographic Characteristics of HIV positive women in the ART units Addis Ababa, (Zewditu Memorial, Tikur Anbessa and Yekatit hospitals) Ethiopia, March-April, 2014

Socio-demographic characteristics (n=394)	Frequency	Percentage
Age		
18-24	20	5.1
25-29	113	28.7
30-34	106	26.9
35-39	125	31.7
40-44	27	6.9
45-49	3	0.8
Religion		
Muslim	68	17.3
Orthodox	230	58.4
Protestant	80	20.3
Others	16	4.1
Marital status		
Married	265	67.3
Never married	76	19.3
Divorced /separated	35	8.9
Widowed	18	4.6
Education level		
Illiterate/no education	87	22.1
Primary	126	32
Secondary	129	32.7
12+	52	13.2
Occupation		
House wife	139	35.3
Private and government employee	87	22.1
Self employed	120	30.5
Unemployed	33	8.4
Others	15	3.8
Monthly income		
≤500	36	9.1
500-1500	141	35.8
≥1500	129	32.7
No income	88	22.3
Number of live children		
0	111	28.2
1-2	208	52.8
≥3	75	19.0

5.2 HIV related characteristics

Many of the respondents had known their HIV status for five or more years 248 (62.9%) and 292 (74.1%) had stayed for three or more years on ART. The median duration of HIV diagnosis and the median duration since the start ART were 2years. Three hundred nineteen (81%) of the respondents had recent CD4 count of >350 cells/mm3 while seventy-five (19%) have recent CD4 count of ≤350 cells/mm3. Among three hundred sixty four (92.4%) women in the study who were married and in relationship, 326(89.6%) had disclosed their HIV status to their partner and 155(39.3%) of them disclose their HIV status to family members. Three hundred twenty-six (89.6%) of the partners were tested; among these 305(93.6%) were positive and 21(6.4%) of the partners were negative. (Table 2)

Table 2: HIV related features and desire for children in the future among women living with HIV three ART units, Addis Ababa (Zewditu Memorial, Tikur Anbessa and Yekatit hospitals) Ethiopia, March-April 2014

Variables	Frequency	Percentage
Months since HIV diagnosis(n=394)		
<60	146	37.1
≥60	248	62.9
Months of ART duration(n=394)		
<36	102	25.9
≥36	292	74.1
Recent CD4 count (cells/mm3) (n=394)		
≤350	75	19
>350	319	81
Disclosure of HIV status to partner(n=364)		
Yes	326	89.6
No	38	10.4
Disclosure HIV status to family members(n=394)		
Yes	155	39.3
No	239	60.7
Partner get tested (n=364)		
Yes	326	89.6
No	16	4.4
Do not know	22	6
HIV status of the partner(n=326)		
Positive	305	93.6
Negative	21	6.4
Partner ART status(n=305)		
Yes	283	92.7
No	16	5.2
Do not know	6	2
Desire to have child(n=394)		
Yes	181	45.9
No	188	47.7
Not sure	25	6.3
When do they want to have children(n=206)		
Want soon(before 2 years)	56	27.2
After two years	37	18
Do not know	113	54.9

5.3 Contraceptive use

Three hundred eighty two (97%) had ever used any family planning method while 334(84.8%) had ever used family planning method since they know their HIV status and 384(97.5%) had intention to use a certain contraceptive method while 10(2.5%) did not have the intention to use contraceptives. Three hundred twelve (79.2%) used any family planning method currently and 82(20.8%) did not use any family planning method. ART unit which provides only condom was the major place where most of the participants 155(39.3) receive family planning method. Among the women who use family planning method 36(12.1%) had a problem with the method they were using and 34(94.4%) of them discussed their problem with a health provider and 25(73.5%) got satisfied with the solution they get from the provider. Two hundred seventy four (69.5%) went to a health facility for family planning during the last six month and eleven (2.8%) came to the hospitals for family planning during the collection period. (Table 3)

Table 3: Contraceptive use among women living with HIV three ART units, Addis Ababa (Zewditu Memorial, Tikur Anbessa and Yekatit hospitals) Ethiopia, March-April 2014

Characteristics	Frequency	Percentage
Ever used any family planning method(n=394)		
Yes	382	97
No	12	3
Ever use any family planning method since HIV diagnosis(n=394)		
Yes	334	84.8
No	60	15.2
Current intention to use family planning method(n=394)		
Yes	384	97.5
No	10	2.5
Current use of any contraceptive method(n=394)		
Yes	312	79.2
No	82	20.8
Receive method on your mind(n=275)		
Yes	259	94.2
No	16	5.8
Receive method by(n=275)		
Referral	4	1.0
Receive method from family planning unit	271	68.8
Place to get the family planning method(394)		
At the ART unit	155	39.3
Family planning unit of the same hospital	38	9.6
Another governmental health facility	95	24.1
Private facility	21	5.3
FGA or other NGO clinic	22	5.6
Pharmacy	95	24.1
Shop	1	0.3
Other specify	1	0.3
Reason for using any contraceptive method(n=394)		
Economic status for raising a child	6	1.5
Desired family size	70	17.8
Do not want to have a child currently	193	49
Concern about health and quality of life	41	10.4
Fear of transmitting HIV to my child	18	4.6
Anxiety about leaving an orphan	2	0.5
Concern about limiting accesses to care for family due to stigma and discrimination	1	0.3
Others	10	2.9

The most commonly used family planning method among the respondents was condom 113(36.2%) followed by dual method 103(33%) where 44(14.1%), 27(8.7%), 25(8%) and seven (2.2) used condom with injectables, pills, IUCD and implant respectively.

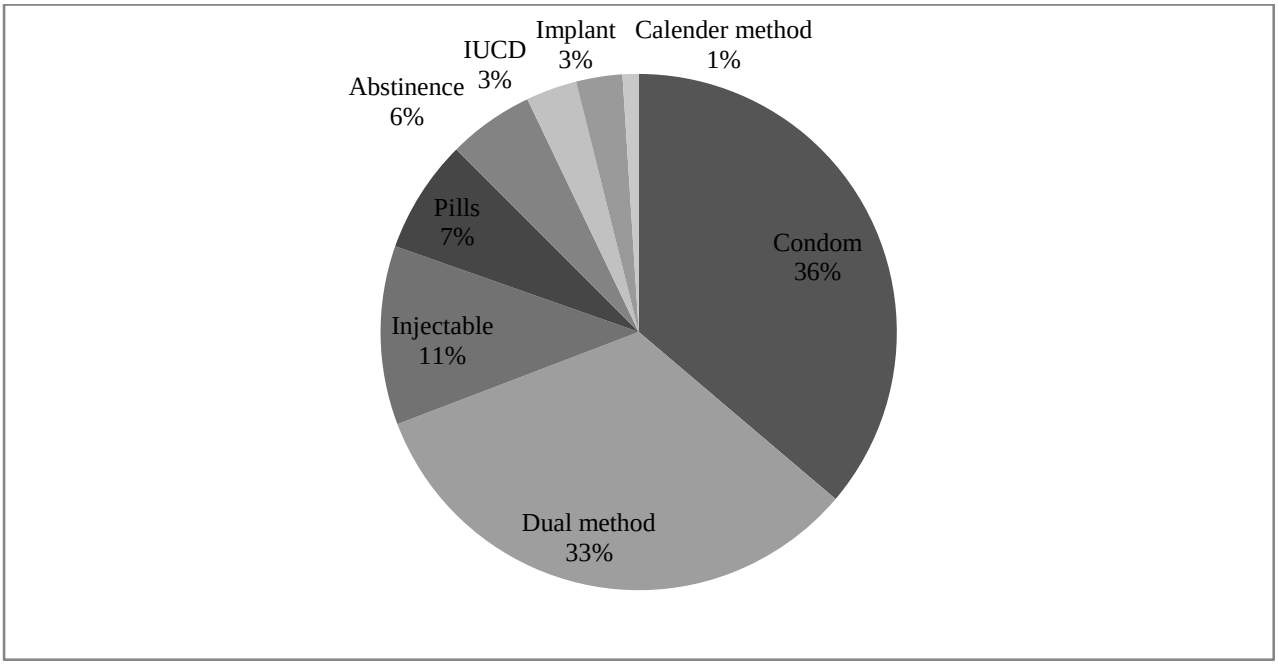

Fig 3: Percentage of contraceptive used among three ART units in Addis Ababa (Zewditu Memorial, Tikur Anbessa and Yekatit12 hospitals), Ethiopia, March-April 2014

The most common reasons for not using any family planning method were, not having partner 30 (36.6%) and they have want to give birth 35(42.7%).

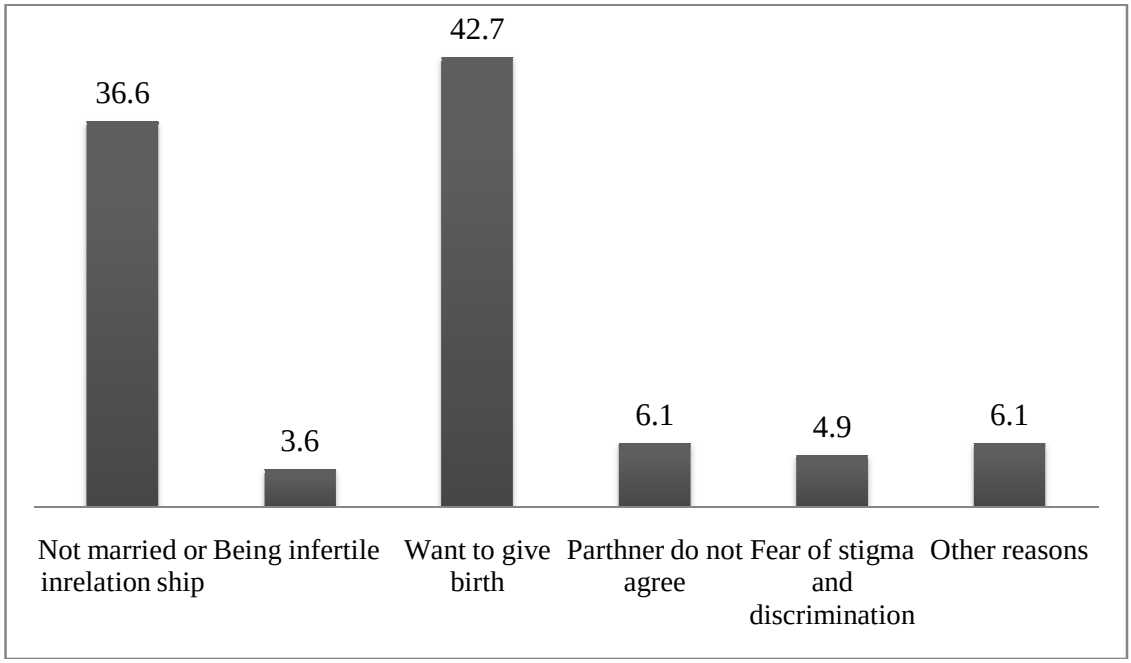

Fig 4: Reasons for not using contraceptive among three ART units in Addis Ababa, Ethiopia, March-April 2014

Commonly used methods and reasons

All of the in-depth interview participants reported that the most commonly used method was injectables and they implied that LAPMs are becoming more familiar than the previous times. The respondents explained that majority of the women in their locality use injectables reasoning that LAPMs involve some medical procedures for insertion and removal.

> *"Most of the time clients request for injectables followed by Implanon. When we compare it to the previous times, Implanon utilization is better these days. Previously the most commonly used method next to injectables was pills but currently it is changed by Implanon… The reason they want to use these methods is because of peer pressure"*
>
> In-depth interview, Black Lion Hospital FP provider (Table 8)

Factors related with the actual side effects of the method

The most common reason for not using the LAPMs was fear of side effects and discomforts. These methods cause excessive bleeding for most of the women and some methods where contraindicated to give to women with chronic diseases. More over the precautions needed to use loop was the other mentioned factor by the providers.

"Implanon causes excessive bleeding in many mothers this may cause problems related with sexual intercourse." In-depth interview Zewditu Memorial Hospital FP provider (Table 8)

5.4 General knowledge, misconceptions, and partner influence on LAPMs

Among the total study participants 366(92.9%) had knowledge about LAPMs. The most commonly mentioned LAPMs was IUCD 325(88.8%) followed by implant which was mentioned by 301(82.2%) of the women. Of the total respondents who visited a health facility during the past six month 154(56%) had pelvic exam during the family planning session among these only two (1.3%) complained that they did not have privacy during the exam. Two hundred thirty (83.6%) of the study participants think that the conversation they had with the provider will be kept confidential while the rest feel the provider will not keep their information in confidential. Those women who discussed with their partner about family planning accounted for 205(69.7%) of the respondents. (Table 4)

Knowledge on LAPMs

Majority of the participants said that they had heard about LAPMs but they claim that they did not have any detail knowledge on these methods. The knowledge of these women was usually dependent on their neighbors, friends, and families.

"The advantage of IUCD is tat it does not have any harm to users body. IUCD does not cause physical change there are some contraceptives that increases body weight these include the pill, injectables. However, this method does not change physical posture. In addition it has no pain" FGD 1 respondent 5(Table 8)

"I do not know anything about LAPMS. I have heard about it but I have no idea whether it is bad or good." FGD 2 respondent (Table 8)

One hundred ten (27.9%) of the women heard misconceptions about LAPMs. Of these most of the misconceptions were about IUCD 95(30.6%) followed by Implanon 56(18.1%). (Table 4)

Misconception

Some of the women suggested that they heard misunderstandings in the community. In addition, they explained that they heard coincidences, which could be related or not related with the LAPMs.

> *"I think the ART tablet itself protects pregnancy for example I don't use any contraceptive method and I have not been pregnant for a long time. I have also a friend who does not use any contraceptive method because the ART protects against pregnancy."* FGD 1 respondent 4(Table 8)

> *"Loop and implant might hurt you if you fall down on the side of insertion and it might go deep inside the arm. I know a woman who became paralyze falling down on the side of Implanon insertion*." FGD 3, respondent 1(Table 8)

Table 4: Knowledge, misconceptions, and partner influence on LAPMs among HIV positive women in three ART units, Addis Ababa (Zewditu Memorial, Tikur Anbessa and Yekatit hospitals) Ethiopia, March-April 2014

Variables	Frequency	Percent
General knowledge on LAPMs(n=394)		
Yes	366	92.9
No	28	7.1
LAPMs known(n=394)		
IUCD	325	88.8
Implant	301	82.2
Tubal ligation	105	28.7
Vasectomy	79	21.6
Mention ≤ 2 LAPMs	266	72.7
Mention ≥ 3 LAPMs	100	27.3
Misconceptions about LAPMS(n=394)		
Yes	110	27.9
No	284	72.1
Discuss with partner about family planning(n=294)		
Yes	205	69.7
No	89	30.3
Partners opinion(n=294)		
Force you to use the method he wanted	17	5.8
Decide together	188	63.9
Decide by my self	89	30.3
Pelvic exam during family planning visit(n=275)		
Yes	154	56
No	121	44
Privacy during the exam(154)		
Yes	152	98.7
No	2	1.3
Other clients could here during FP session(n=275)		
Yes	102	37.1
No	73	62.9
Provider confidentiality(n=275)		
Yes	230	83.6
No	45	16.4
Satisfaction with the cost of method received(n=275)		
Yes	74	26.9
No	201	73.1

5.5 Interpersonal relation, counseling, and method offered

Of those women who went to a health facility for family planning during the past six month or during the study time 253(92%) of the respondents reported that they were treated with respect by the provider. In addition 230(83.6%) felt they were treated with respect by staffs other than the family planning provider. Respondents were asked if they went to any health facility for FP during the last six months and were satisfied with the cost of the method they received. Among these 201 (73.1%) did not pay for FP service they get and those who paid also were satisfied with the cost of the method they decided to receive. Ninety-nine (27.2%) of the providers discuss about IUCD during the FP session while 88(24.2%) discussed about implant and 22(6%) discussed TL and vasectomy respectively. (Table 5)

Counseling

All of the family planning providers implied that they always offer LAPMs to their clients. They said that they always try to convince each client to use the methods especially for HIV positive women. In addition, they said that it was very difficult to advise clients on permanent methods.

> *"First we counsel the clients on Implanon and loop however only some of them get convinced and agree to use these methods."* In-depth interview, Black Lion Hospital FP provider (Table 8)

> *"We counsel HIV positive women to limit the number of children they have because there is a chance of transmitting the disease to their child. They need more counseling than the HIV negative women*." In-depth interview, Black Lion Hospital FP provider (Table 8)

Table 5: Interpersonal relation, counseling, waiting time and follow up among HIV positive women in the ART units, Addis Ababa (Zewditu Memorial, Tikur Anbessa and Yekatit12 hospitals) Ethiopia, March-April 2014

Variables (n=275)		Frequency	Percentage
Provider treat client with respect			
Yes		253	92
No		22	8
Other staffs treat client with respect			
Yes		230	83.6
No		25	9.1
No other staff		20	7.3
Counseling			
Dual method	Yes	232	84.4
	No	43	15.6
Additional children	Yes	239	86.6
	No	37	13.4
Explain how to use the method effectively		265	96.4
Describe side effects		244	88.7
Tells what to do if any problem with the method		256	93.1
Provider discuss/offered on LAPMs			
Two or less LAPMs		89	32.3
More than two LAPMs		20	7.3
Offer only methods other than LAPMs		166	60.4
Comfortable to ask questions during the session			
Yes		254	92.4
No		21	7.6
Information given on FP			
Too little		36	13.1
Enough		201	73.1
Too much		38	13.8
Waiting time			
<15 minutes		89	32.4
16-30 minutes		124	45.1
31-45 minutes		53	19.3
46-60 minutes		8	2.9
I don't know		1	0.3
Clients opinion on the waiting time			
No waiting time		73	26.5
Reasonable/ short		176	64.1
Too long		26	9.4
Discuss follow up visit			
Yes		217	78.9
No		58	21.1

5.6 Hospital audit

The three hospitals family planning units were observed for supplies, technical competency and training of the family planning providers.

Family planning methods available in all the hospitals during the observation were combined pills, injectables, condom, and implant. IUCD was available in Yekatit12 and Zewditu Memorial Hospitals while there was a run out of IUCD in Tikur Anbessa Hospital during the observation. Among the family planning methods combined pills, injectables, condom were usually provide at the hospitals. The least provided contraceptives were tubal ligation and vasectomy. Tubal ligation and vasectomy is undertaken at Zewditu Memorial Hospital and Yekatit12 Hospital and it was not available at Tikur Anbessa Hospital due to lack of trained staffs. It would take one week or less when run out to replace family planning methods as well as the LAPMs at Zewditu Memorial and Yekatit12 Hospitals and the provider does not know how long it will take to replace them at Tikur Anbessa Hospital.

All the hospitals have a waiting area that was sheltered from the sun and rain. However, none has a sign on the street or on the exterior part of the building announcing that family planning services are available for HIV positive as well as HIV negative women. There were at least three IEC materials at the hospitals: the most commonly available were posters, flip chart, and wall charts. Regarding the guideline and protocol for delivering family planning, it was available in all of the hospitals but it had not been observed because it was not available on the table or near by the providers. The client records were kept in secure area protected from damage and privately at all hospital.

Concerning the technical competency, all of the family planning providers were nurses. Reproductive health training focused on IUCD and Implant insertion and removal was given to one person at Yekatit12 and Tikur Anbessa Hospital each while it was given for two providers at Zewditu Memorial Hospital. None of the hospitals provider receives refreshment training on LAPMs.

5.7 Demand for LAPMs

The total demand for LAPMs among clients who were using family planning service was 60.2%, which is a sum of met need and unmet need. Met need/current LAPMs user at the three hospitals were 51(14%) which was 10.4% for limiting and 3.6% for spacing and unmet need/family planning clients who wants to post pone or avoid pregnancy but not using any of the LAPMs were 168(46.2%) where 37.4% was for limiting and 8.8% was for spacing.

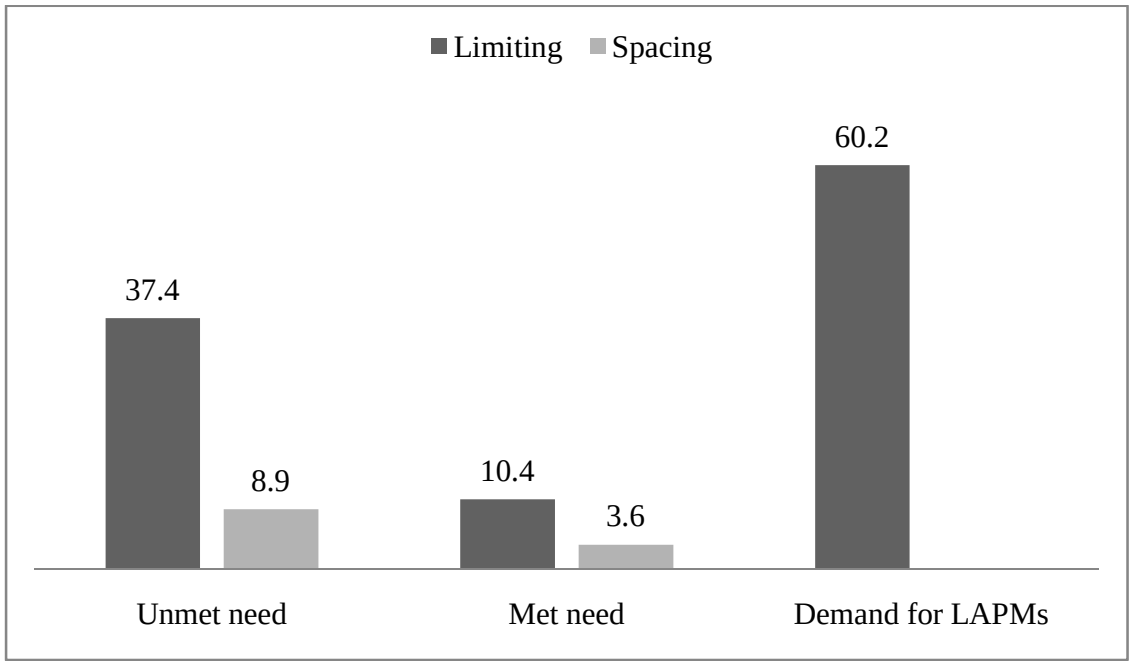

Fig 5: Demand for LAPMs, Addis Ababa, (Zewditu Memorial, Tikur Anbessa and Yekatit12 hospitals) Ethiopia, March-April 2014

5.8 Factors associated with met need of LAPMs

5.8.1 Socio demographic factors

The socio-demographic characteristics were assessed for association with demand for LAPMs. Number of children was significantly and negatively associated ($P< 0.05$) with demand for LAPMs. Other factors like age, religion, marital status, educational status, occupational status and monthly income were not significantly associated ($P>0.05$) with demand of LAPM.

5.8.2 HIV related factors

Disclosure of HIV status to family members were significantly and negatively associated (P<0.05) with demand for LAPMs. Whereas, duration of HIV diagnosis and ART, recent CD4 cell count, disclosure of HIV status to partner and partner HIV status had no significant association (P>0.05) with demand for LAPMs.

5.8.3 Knowledge, misconceptions, and partner influence on demand for LAPMs

Clients perception on confidentiality of the FP provider and satisfaction with the cost of method received were significantly and negatively associated (P<0.05) with demand of LAPMs. Misconception, knowledge and discussion with partner about FP within the past six month were not significantly associated (P>0.05) with demand.

Partner involvement and reasons to prefer LAPMs

Some women suggest that it was better to decide jointly for couples about which method to use. They explained that a woman should not decide by herself on any family planning method.

> "*First a woman has to convince her husband about using a contraceptive then she can go to a health professional for advice because her partner may not agree. The two couples should discuss about FP before going to the health facility for advice.*"FGD 1 respondent 2(Table 8)

Among the participants, there were women who claim that LAPMs are better than the short acting once. Some of the participants agreed that couple should use permanent methods if they did not want to have any more children

> *"Using LAPM is part of civilization. Women have a good perception about LAPMs. For example, if couples do not want to have a child any more there is a appropriate choice available. There for using LAPMs is modern way of living…."*FGD 1, respondent 4(Table 8)

5.8.4 Demand for LAPMs and interpersonal relation, counseling, and method offered

LAPMs offered by the provider and counseling on the use of condom in addition to other contraceptives were found to be significantly and positively associated (P<0.05) with demand for LAPMs. The information given at the family planning session was also found to be significantly and negatively associated with the demand for LAPMs (P<0.05). However, interpersonal relation of the provider and follow up visit were not significantly associated (P >0.05) with demand of LAPMs.

5.9 Factors associated with unmet need

5.9.1 Socio-demographic factor

From the bivarate analysis of socio-demographic characteristics and unmet need, number of live children was found to be significantly and negatively associated (P <0.05) with the unmet need of LAPMs. Age, religion, marital status, educational status, and occupational status were not significantly associated (P>0.05) with unmet need for LAPMs.

Preferred number of children and reasons

Majority of the participants said that they want to have many children and the only thing that holds them back from doing so was economic status and health related problems. Generally, the respondent described the consequences of having many children even though most of them had a desire for more children.

> *"The only thing that holds me back from having many children is my income. I would like to have as many children as possible"* FGD 3, respondent 6(Table 8)

> *"The advantage of having many children is at least one of them will be in a good economic status and help the rest of the family and end their poverty. For example, my mother had eight kids and our chance is different. But we support each other and have a good economic status."* FGD 2, respondent 4(Table 8)

5.9.2 HIV related factors

Disclosure of HIV status to family members were significantly and negatively associated (P<0.05) with unmet need. Duration of HIV diagnosis and ART, recent CD 4 cell count, disclosure of HIV status to partner and partners HIV status were not significant predictor of LAPMs.

Community and family members influence

The community and other family members were explained as one of the reasons for not wanting to space or limit number of children. The involvement of family members was suggested to have very strong effect on both limiting and spacing number of children.

> "*Family members of the husband usually disagree so that the women use contraceptives…They say she does not want to give birth because she is selfish. They also think that she does not give birth because she wants to take care of herself*." FGD 3, respondent 7(Table 8)

Living under the same roof with family members were mentioned as a reason for not taking any contraceptive method. Respondents said it is difficult for a woman who did not disclose her HIV status to her family to use ART and contraceptives at the same time because she had to keep both in secret. Therefore, since ART medication is mandatory she have to leave contraceptive use behind.

> *"There are HIV positive women who live with their family hiding their HIV status where they cannot even take their ART properly, thus, using contraceptive in these situation is very difficult"* FGD 1, respondent 2(Table 8)

5.9.3 General knowledge, misconception, and partner influence on unmet need of LAPMs

Satisfaction with cost of method received was significantly and negatively associated (P<0.05) with unmet need of LAPMs. Knowledge, misconceptions, privacy during the family planning sessions, and discussion with partner about family planning were not significantly associated with unmet need of LAPMs.

Client related factors for not using LAPMs among the participants

The reasons for not wanting to use LAPMs among participants were being sexually in active, absence of menstruation flow and menopause. The other reasons were fear of misconceptions heard at the community and side effects of the methods.

> *"I don't think loop is reliable. My in low once told me that she had used it for many years and she got pregnant while using this method so I do not think it is reliable."* FGD 2, respondent 1(Table 8)

> *"Some women do not want to use LAPMs thinking that it has severe form of side effect on HIV positive women. For example I do not want this method because of fear of side effect and health problem it will cause in the future"* FGD 1, respondent 1(Table 8)

Partner opposition and other factors

The family planning providers elucidated that the partners were one of the challenges to increase the utilization of LAPMs. They said that they usually do not cooperate with them and neglect the fact that the women should use LAPMs. The focus group discussion participants also said that there is partners' opposition to LAPMs, which hinders women from using these methods.

> *"After some women agree to take contraceptive, their husbands refuse and rush them to go home. The husband needs to be involved in the FP process."* In-depth interview Zewditu Memorial Hospital FP provider. (Table 8)

> *"No man will be willing for vasectomy thinking that it could decrease their sexual feeling. I do not think there is anyone who will be willing to do that…Even our husbands do not agree with it when they hear promotions through media."* FGD 3, respondent 6(Table 8)

5.9.4 Unmet need and interpersonal relation, counseling, and method offered

None of the factors related with the provider and health facility were significantly associated (P>0.05) with unmet need.

Health facility and providers related factors

The participants described most of the provider's factors were unwillingness of the FP provider to remove these methods and their involvement in the women's decision to discontinue LAMs.

> *"The health professionals are the reasons why people are using condom, pills, and injectables as the only choices. I think a woman who does not want to give birth now might want a child after six month when she has a better living condition. Nevertheless, she cannot remove LAPMs immediately because of the provider's refusal."*FGD 3, respondent 6(Table 8)

All of the health professionals suggested that there was inadequate number of personnel for insertion and removal of LAMs. The other challenge was the attitude of other professionals about these methods.

> *"The challenges include absence of adequate trained personnel to insert and remove LAMs. For example, there are five staffs working at FP unit but only two are trained on LAPMs. The other is appointments should not be given for screening because most of the women do not come back."*In-depth interview Yakatit12 Hospital FP provider (Table 8)

5.10 Multivariate analysis for factors associated with demand for LAPMs

From the multivariate analysis of factors associated with demand for LAPMS, those women who have no child and with one or two children were less likely to have demand for LAPMs than those who had three or more children (AOR 0.188 95% CI 0.074-0.476) and (AOR 0.273 95% CI 0.117-0.637. Women who disclose their HIV status to at least one of their family member were less likely to have demand for LAPMs (AOR 0.400 95% CI 0.227-0.750). (Table 6)

Table 6: Multivariate analysis for factors associated with demand for LAPMs among HIV positive women in the ART units, Addis Ababa (Zewditu Memorial, Tikur Anbessa and Yekatit12 hospitals) Ethiopia, March-April 2014

Variable	Demand for LAPMs		COR(95% CI)	AOR(95%CI)
	Yes (%)	No (%)		
Number of live children				
0	45(45.9)	53(54.1)	**0.197(0.096-0.406)**	**0.188(0.074-0.476)**
1-2	118(59.9)	79(40.1)	**0.347(0.178-0.676)**	**0.273(0.117-0.637)**
≥3	56(81.2)	13(18.8)	1	1
Disclosure HIV status to family members				
Yes	71(50.4)	70(49.6)	**0.514(0.334-0.791)**	**0.400(0.227-0.750)**
No	148(66.4)	75(33.6)	1	1
Satisfaction with cost of the method received				
Yes	38(52.1)	35(47.9)	**0.580(0.337-0.999)**	0.595(0.317-1.116)
Did not pay	131(65.2)	70(34.8)	1	1
Method offered by the provider				
Offer at least one LAPM	75(68.8)	34(31.2)	**1.666(1.001-2.772)**	1.517(0.852-2.698)
Offer other methods other than LAPMs	94(57)	71(43)	1	1
Information given				
Too little	15(42.9)	20(57.1)	**0.306 (0.116-0.806)**	0.422(0.142-1.252)
Enough	127(63.2)	74(36.8)	0.699(0.328-1.491)	0.587(0.257-1.341)
Too much	27(71.1)	11(28.9)	1	1
Confidentiality of the provider				
Yes	133(58.1)	96(41.9)	**0.346(0.159-0.753)**	0.453(0.196-1.046)
No	36(80)	9(20)	1	1
Counseling on dual method				
Yes	149(64.2)	83(35.8)	**1.975 (1.018-3.830)**	1.502(0.702-3.212)
No	20(47.6)	22(52.4)	1	1

5.11 Multivariate analysis for factors associated with unmet need of LAPMs

Multivariate analysis of factors associated with unmet need of LAPMs showed, women with no children and with one or two children were less likely to have unmet need for LAPMs (AOR 0.100 95% CI 0.032-0.311) and (AOR 0.301 95% CI 0.125-0.726) respectively. Moreover married women were less likely to have unmet need than never married women (AOR 0.405 95% CI 0.169-0.968). Those women who disclose their HIV status to family members were less likely to have unmet need than those who did not (AOR 0.339 95% CI 0.182-0.631). The other factor associated with unmet need was satisfaction with the cost of the method clients decided to receive, women who were satisfied with the cost of the method they decide to accept were less likely to have unmet need than those who did not pay at all (AOR 0.438 95% CI 0.221-0.867). (Table 7)

Table 7: Multivariate analysis for factors associated with unmet need of LAPMs among HIV positive women in the ART units Addis Ababa, (Zewditu Memorial, Tikur Anbessa and Yekatit12 hospitals) Ethiopia, March-April 2014

Variable	Unmet need		COR(95% CI)	AOR(95% CI)
	Yes (%)	No (%)		
Educational status				
Illiterate/no education	38(52.8)	34(47.2)	1.171(0.550-2.494)	0.575(0.166-2.000)
Primary	55(56.1)	43(43.9)	1.340(0.653-2.750)	0.743(0.237-2.332)
Secondary	54(54)	46(46)	1.230(0.601-2.516)	0.539(0.192-1.516)
12+	21(48.8)	22(51.2)	1	1
Occupation				
House wife	66(56.4)	51(43.6)	1.412(0.576-3.459)	1.116(0.324-3.835)
Private and government employee	35(47.9)	38(52.1)	1.005(0.393-2.568)	1.100(0.287-4.211)
Self employed	56(56)	44(44)	1.388(0.560-3.444)	1.562(0.474-5.149)
Unemployed	11(47.8)	12(52.2)	1	1
Number of live children				
0	39(42.4)	53(57.6)	**0.228(0.108-0.481)**	**0.100(0.032-0.311)**
1-2	87(52.4)	79(47.6)	**0.341(0.171-0.681)**	**0.301(0.125-0.726)**
≥3	42(76.4)	13(23.6)	1	1
Marital status				
Married	116(51.3)	110(48.7)	0.710(0.430-1.172)	**0.405(0.169-0.968)**
Single	52(59.8)	35(40.2)	1	1
Disclose HIV status to family members				
Yes	60(46.2)	70(53.8)	**0.595(0.378-0.937)**	**0.339(0.182-0.631)**
No	108(59)	75(41)	1	1
Satisfied with the cost of FP				
Yes	29(45.3)	35(54.7)	**0.509(0.286-0.904)**	**0.438(0.221-0.867)**
Did not pay	114(62)	70(38)	1	1
Information given at the family planning unit				
Too little	15(42.9)	20(57.1)	0.413(0.153-1.115)	0.545(0.179-1.656)
Enough	108(59.3)	74(40.7)	0.803(0.363-1.774)	0.786(0.320-1.930)
Too much	20(64.5)	11(35.5)	1	1
Counseling on dual protection				
Yes	123(59.7)	83(40.3)	1.630(0.837-3.174)	1.601(0.716-3.580)
No	20(47.6)	22(52.4)	1	1

6. Discussion

The total demand for LAPMs among clients who were using family planning service was 60.2%. Current LAPMs users at the three hospitals were 51(14%) and unmet need/family planning clients who wants to post pone or avoid pregnancy but not using any of the LAPMs were 168(46.2%).

The focus group discussion and in-depth interview showed even though majority of these women have knowledge on LAPMs most of them did not use this method because of fear of side effects, dual purpose of condom and misconceptions heard at the community level. In addition to this, the quantitative finding showed number of children and disclosure of HIV status to family members were the predictors for both demand for LAPMS and unmet need.

The total demand for LAPMs were higher than that of the total population demand for modern contraceptive, which is 28% in Addis Ababa [6]. The reported prevalence of LAPMs (14%) was higher than the prevalence of 4% reported in Zimbabwe and 3% in Swaziland among post partum HIV positive women [23, 30]. This difference could be due to study setting and population. The FP providers who were interviewed explained that the utilization of long term contraceptives had shown an increment comparing it to the previous times. They implied that women living with HIV/AIDS fear to use IUCD because of risk of infection however the use of implant had shown a significant change during the past few years.

Unmet need was higher than EDHS 2011 report, which is 10.6% in Addis Ababa [6]. Similar to this study, there is a high need for family planning among HIV positive women in sub-Saharan African countries where most of these women could not have access and have untended pregnancies because of high-unmet need [31]. Participants of the qualitative study reported that these women did not want to have children in general nevertheless they did not want to use the LAPMs because of fear of misconceptions heard about LAPMs.

One of the factors associated with met need of LAPMs was number of live children. Women who had no children (showing sample size is in adequate to have enough statistical power) and with one or two children were less likely to have demand for LAPMs. In Zambia, the use of

modern contraceptive in general is higher among women who had one or more children [27]. Possible reason for this could be women with few or no children are more likely to have a desire for more children therefore; they refrain from using long term and permanent method.

Another important factor associated with demand for LAPMs was disclosure of HIV status where those women who disclose their HIV status were less likely to have demand for LAPMs. An evidence from the qualitative study showed that there was a pressure on the women from the family members to have additional children and there were misconceptions about LAPMs from the elderly family members, which hinders these women from using LAPMs.

Number of children was one of the factors associated with unmet need among the ART users, where those who had no children and with one or two children were less likely to have unmet need for LAPMs than those who have three or more children. In Gimbie, respondents who have family size ≤4 are less contraceptive users [28]. The difference could be due to study area fertility rate (urban and rural). One of the reasons for the above result in the present study could be explained by the qualitative study finding where women with no children or few children are less likely have the desire to limit and space the number of children they have.

Married women were less likely to have unmet need for LAPMs than those women who were never married. In Rwanda, women who were not in union were less likely to use modern contraceptive [26]. A study in Hosanna of southern Ethiopia also showed married women are more contraceptive users. The reason for the above finding could be those women who are married engage in a regular sexual activity than the unmarried once due to this married women use LAPMs than unmarried women to avoid pregnancy.

Women who disclose their HIV status to family members were less likely to have unmet need. The qualitative study result from the discussion with women on ART showed, the family members like parents, sisters/brothers and other relatives support the women to use contraceptive after they had known her HIV status. However, family members from the husband side usually oppose the use of LAPMs.

Clients who were satisfied with the cost of the method they received were less likely to have unmet need than those women who did not paid for FP method they receive. The women who paid for contraceptive method they receive were lower than a study conducted in Uganda [32]. The reason for this is most of the women in the present study receive contraceptive from government health facilities where family planning is provided free.

7. STRENGTH AND LIMITATION

Strengths of the Study

- The study used qualitative method to triangulate and interpret the findings of the quantitative results and as well explains issues not evidently described in the quantitative data.
- Data collectors who were familiar with ART clients and who had repeated exposure to them due to previous data collection process were used to decrease social desirability bias.

Limitations of the study

- Since the study was institutional based, HIV positive woman in the health care system may differ from women outside of the health care system that might undermine generalizing the result to the general population.
- Lack of adequate literatures generally on the LAPMs and HIV positive women , which prevents further elaborating the discussion
- Cross sectional study does not show temporal relationship between exposure and outcome.

8. CONCLUSION

- The study showed that high demand yet unmet need for LAPMs, which may increase the mother to child HIV transmission due to unintended pregnancies, caused by the failure of other short acting methods. Met need was low which could be due to decreased flow of HIV positive women to the family planning unit of the hospitals.
- Majority of the women in the study use barrier method like condom in addition injectables and pills implying that most of the providers giving emphasis for counseling and offering of condom followed by injectables.
- Number of living children and disclosure of HIV status to family members were predictors of demand for LAPMs.
- Women with no child and with one or two children, married women, those who disclose their HIV status to family members and women who were satisfied with the cost of FP they received were less likely to have unmet need for LAPMs.
- Majority of the women have general knowledge about LAPMs in contrary to the use of LAPMs were low. Considerable numbers of women have heard misconceptions about these methods. Since Addis Ababa is a city people have better access to health service and information, the misperception should have been lower. The qualitative study indicated that misconceptions are still hindering the use of LAPMs.
- None of the participants reported using permanent methods indicating that lower number of providers offering LAPMs during the FP session and counseling at the ART units.

9. RECOMMENDATION

The government and stakeholder

- Policy makers and other NGOs should give emphasis to improve utilization of LAPMs among HIV positive women as a main strategy to reduce mother to child HIV transmission.
- Facilitate integration of ART service and family planning services for these women is mandatory because these women have fear of being exposed to other providers and clients.

Health care provider

- Comprehensive and consistent reproductive health services should be provided so that these women become more concerned about the contraceptive use.
- Unmet need for LAPMs of contraception can be addressed by proper training of service providers(Both ART and FP), better counseling skill on family planning and proper management of side effects.

Researchers

- Researchers are advised to conduct further studies on same issue outside and inside of the health care system and in different parts of the country to come up with more results that are representative.

10. REFERENCES

1. Roy. J, Long Acting and Permanent Contraceptive, Journal of Midwife and Women's Health, 2007: P 1.
2. WHO, Priority Interventions, 2009, Version 1.2: P 1.
3. GBC Health, Family Planning and HIV Services: Increased Efficiency and Impact through Integration, 2012.
4. Mitchell H S., Stephens E., Contraception Choice for HIV positive Women, UK, 2004.
5. http://www.pma2020.org/sites/default/files/PMA2014
6. CSA, Demographic and Health Survey Ethiopia, Addis Ababa, 2011.
7. Alemayehu.A.M., Mengistu.A.K., Alden.N., Family Planning and HIV Service Integration November 29- December 2, Pathfinder International, Ethiopia, Dakar: Senegal, 2011: P 1.
8. DanielT.H., John.S., HeidiW.R., Benefits and Costs of Expanding Access to Family Planning Programs to Women Living with HIV, Carolina ,USA, 2009: P 124-129.
9. UNAIDS, Mother to Child Transmission, No date.
10. WHO, Medical Eligibility Criteria for Contraceptive Use, Department of Reproductive Health and Research Geneva, 2004.
11. Druce N., Nolan A., Seizing the Big Missed Opportunity: Linking HIV and Maternity Care Services in Sub-Saharan Africa, 2007: P 190–201.
12. Delvaux T., Konan et al., Quality of Antenatal and Delivery Care Before and After the Implementation of a Prevention of Mother to Child HIV Transmission Programme in Cote d'Ivoire. Tropical Medicine International Health, 2008: P 970–979.
13. UNFPA and WHO, Sexual and Reproductive Health of Women Living with HIV/AIDS: Guidelines on Care, Treatment, and Support for Women Living with HIV/AIDS and their Children in Resource Constrained Settings, 2006.
14. WHO, Strategic Approaches to the Prevention of HIV Infection in Infants: Report of a WHO Meeting; 20–22 March 2002; Morges, Switzerland, 2003.
15. Sara J. N., et al., Providers Perspectives on Provision of Family Planning to HIV-Positive Individuals in HIV Care, Nyanza Province, Kenya, 2013.
16. WHO and USAID, Sexual and Reproductive Health and HIV/AIDS, 2005.
17. Karl.P., Pelisa D., Family Planning Among HIV Positive and Negative Prevention of Mother to Child Transmission (PMTCT) Clients in a Resource Poor Setting, South Africa, 2008.
18. USAID, Approaches for Expanding Choice and Access to Long-Acting Reversible Contraceptives and Permanent Methods of Family Planning, No year.
19. Sarah.C., et al., Factors Impacting Knowledge and Use of Long Acting and Permanent Contraceptive Methods by Postpartum HIV positive and negative Women, Cape Town, South Africa, 2012: P 5-6.
20. Jaco.H., et al., Reproductive Intentions and Outcomes among Women on Antiretroviral Therapy:Uganda, 2009: P 4.
21. Yohannes A. M., Ejigu G. Z., Contraceptive Utilization and Associated Factors among HIV Positive Women on Chronic Follow up Care, Tigray Ethiopia, 2014.
22. Abulie T., Getu D., Mezgebu Y., Demand for Long Acting and Permanent Methods of Contraceptives and Factors for Non-Use Among Married women, Goba, Ethiopia. Reproductive-Health-Journal, 2012.

23. Pester.S., The Reasons for Low Utilization of Long Acting Contraceptives amongst HIV Positive Women, Zimbabwe, 2013: P 31-33.
24. Rachel L.S., et al., Overcoming Barriers to Family Planning through Integration: Perspectives of HIV-Positive Men, Kenya, 2013: P 3.
25. Sara J. N., et al., Providers' Perspectives on Provision of Family Planning to HIV-Positive Individuals in HIV Care in Nyanza Province, Kenya, 2013: P 6-3.
26. Batya E., et al., Pregnancy Desires, and Contraceptive Knowledge and Use among Prevention of Mother-To-Child Transmission Clients, Rwanda, 2009.
27. Carla J. C., et al., Modern Contraceptive and Dual Method Use among HIV-Infected Women, Zambia, 2011: P 4.
28. Addisu P., Ewenat G., Gezahegn T., and Fekede A., Modern Contraceptive Utilization among Female ART attendees in Health Facilities, Gimbie, Ethiopia, 2014: P 2-3.
29. Girum Z., Unmet Reproductive Health Care Needs and Occurrence of Unintended Pregnancy among HIV Positive Women in Antiretroviral Treatment Units; Addis Ababa, Ethiopia, 2011.
30. Charlotte E.W., Timothy.A., Ian N.A., Family Planning Practices and Pregnancy Intentions among HIV-positive and HIV-negative Postpartum Women Swaziland, 2013: P 4-7.
31. Population Action International, The Benefits of Integrating HIV and Family Planning Programs, Washington DC, 2012.
32. Birungi I., Contraceptive Utilization and Associated Factors among HIV positive women in Mulago Iss clinic, Uganda, 2009.
33. Anley H., Demand for Long Acting and Permanent Contraceptive Methods and Associated Factors among Family Planning Service Users, Batu town, Ethiopia, 2009.

11. ANNEX

QUESTIONNAIRE

Addis Ababa University School of public health

Informed-Consent form

Greeting

My name is ----------First I would like to thank you for your time.

I am working in a study conducted on assessment of demand for long acting and permanent contraceptive method and factors associated by Miss. Miraf Walelegn, from Addis Ababa University, School of Public Health. The main purpose of the study is to assess to discover unmet for LAPMs and utilization of LAPMs among women on ART follow up care and associated factors with low utilization of these methods. We are inviting HIV positive women on ART between the ages of 18 and 49 years to contribute for the study. The study will not cause any harm to you except giving the information. So I would like to ask you some questions related to the subject. Your responses will help the region and country as well as other stakeholder to plan Family planning Services. Your name will not be recorded and all the information you give will be kept strictly confidential and is to be used only for the purpose of this study. You have the right not to respond any question if you do not want to and your participation is voluntary. Are you willing to participate?

Yes No

If they say yes and are willing to participate in the study, say thanks and proceed to the consent form. If they say no, say thanks. Do not force or reinforce people to participate in the study.

Consent form

I understand the information given fully. So I am willing to participate in the study.

Date of the interview _____
Name of the hospital _____
Name of Interviewer _____Signature of Interviewer _____
Signature of the participant _____ Date _____

In case you need to contact:

Contact address of the investigator :
Name: Miraf Walelegn
Tel. 0922781156
Email.miraf.walelegn@gmail.com

Section I: Socioeconomic and Demographic data of the Respondent

QN	Questions	Categories	Skip
101	How old were you at your last birthday?	_____	
102	What is your religion?	1. Muslim 2. Orthodox Christians 3. Protestant 4. Others	
103	What is your marital status?	1. Single 2. Married 3. Divorced 4. Widowed	
104	What is the highest level of school that you completed?	1. Illiterate (cannot read and write) 2.Able to read and write (no grade) 3. Primary education(1-8) 4. Secondary education(9-12) 5. Attended higher education(12+)	
105	What is your main occupation?	1. House wife 2.Government employee 3. Daily laborer 4. Petty trader 5.Merchant 6.Student 7.Unemployed 8.Others _____	
106	Do you have an income?	1. Yes 2. No	If no skip to 201
107	If yes, What is your total monthly income?	_____ Eth.Birr	
108	Do you have children?	1.Yes 2.No	If no skip to 108
109	How many children do you have?	1.One 2.Two 3.Three 4.More than 3	

Section- II HIV related characteristics

QN	Questions	categories	Skip
201	How long had it been since you where diagnosed with HIV?	1.Write the time _____ Do not remember	
202	How long has it been since you started ART?	1. Enter the time _____ Do not remember	
203	Do you know your recent CD_4 status?	1.Enter the number _____ Do not remember	
204	Have you disclosed your HIV status?	1.Yes 2.No	
205	To whom did you disclose your HIV status?	1.Husband, partner 2.Family(parents) 3.Brothes and sisters 4.Relatives 5.Friends 6.Community/public Other _____	
206	Were your husband / partner ever tested?	1.Yes 2. No Do not know	If no skip to 301
207	What is the HIV status of your partner?	1 Positive 2.Negative Do not know	If 2 skip to 301
208	If your partner is positive, is he on ART?	1.Yes 2.No Do not know	

Section -III Questions on demand and associated factors

QN	Questions	Categories	Skip
301	Have you ever used any family planning method?	1.Yes 2.No	
302	Have you ever used any method of contraception since you were diagnosed with HIV?	1. Yes 2.No	If no skip to 304
303	If Yes, what was the method?	1. Condom 2. Pill 3. Injectables 4. IUD 5. Implant 6. TL 7. Vasectomy 8. Diaphragm 9.Calendar method 10. Coitus interrupts 11. Abstinence 12.Condom + other___ Other_____	
304	Do you need/want to use method of contraception now?	1. Yes 2. No	
305	Do you use any method of contraception currently (during the study period)?	1.Yes 2. No	If no skip to 315
306	Why do you want to use family planning method?	1. Economic status for raising 2. Desired family size 3. Ideal spacing 4. Concerns about health and quality of life 5.Fear of transmitting HIV 6.Anxiety about leaving orphans 7.Concerns about limited access to care for family due to stigma and discrimination Other _____	
307	If the answer is yes to Q 305, what is the type of method you are using currently?	1. Condom 2. Pill 3. Injectables 4. IUD 5. Implant 6. TL 7.Vasectomy 8. Diaphragm 9.Calendar method 10. Coitus interrupts 11. Abstinence	

		12.Condom + other___ Other_____	
308	From where do you get the family planning method?	1.At the ART treatment unit 2.From the same hospital where you take ART 3.From another governmental 4. Private facility 5. FGA or other NGO clinic 6.Pharmacy 7.Shop Other _____	
309	If from health facilities, have you had a problem with the method you are using now?	1. Yes 2.No	If no skip to 315
310	Did you ever want to discuss the problem with your provider?	1.Yes 2.No	
311	Who initiated the discussion?	1.Your self 2.The provider	
312	Did the provider try to understand the nature of your problem?	1. Yes 2.No	
313	Did the provider suggest what you should do (action you should take) to resolve the problem?	1. Yes 2.No	
314	Were you satisfied with the advice or treatment that you received for your problem?	1. Yes 2.No	
315	If the answer is no to Q 305, what is the reason you are not use any method of family planning currently?	1. I am not married or in a relationship 2. I am infertile 3. I want to give birth because of better health due to ART 4.My partner does not agree 5.Fear of stigma and discrimination 6.Fear of side effect Other specific----------	
316	Do you know about LAPMs contraceptive methods? Before your consultation.	1. Yes 2.No	If no skip to 320

317	Which LAPMs do you know?	1. Implant 2. Female sterilization 3.IUD 4.Vasectomy	
318	What do you think are the importance of long acting and permanent method?	1.Helps for prevention of unwanted pregnancies 2. Prevention of possible maternal and child death and ill health. 3. Limiting in family size 4. Child spacing I do not know Others_____	
319	What do you think are the limitations of long acting and permanent contraceptive method?	1.Inability to give birth for a long time 2.Procedures involved 3.Unsafe related to the health status/side effect 4.I do not know 5.Other _____	
320	Have you heard myths and beliefs in the community about the long acting and permanent contraceptive methods? If yes, please specify	1. Yes 2.No Implant _____ Tubal ligation _____ IUCD_____ Vasectomy_____	
321	Do you come here today to obtain a specific contraceptive method?	1. Yes 2.No	
322	Did you went to a health facility during the past 6 month to receive a contraceptive method?	1.Yes 2.No	If no skip to 347
323	Were you given a prescription or a referral for a method during the time?	1. Yes, received a method 2 .No 3. Yes, referred for a method	

324	Which method(s) did you receive or were you given a referral? (PROBE: Any others?)*Mark all that apply.*	1. Condom 2. Pill 3. Injectables 4. IUD 5. Implant 6. T7.L 7. Vasectomy 8. Diaphragm 9. Calendar method 10. Coitus interrupts 11. Abstinence 12.Condom + other___ Other_____	
325	Have you discussed with your partner about which method to use? If she has partner.	1.Yes 2.No	If no partner skip to 327
326	What was your partner opinion?	1.Force you to choice a method that is of interest for him 2.Decide together 3. I decided by myself	
327	Did you get the method you want to have/the method on your mind when you come here?	1.Yes 2.No	
328	Which method did you want when you visited the health facility? (PROBE: Before your consultation, did you have a specific method in mind?)	1. Condom 2. Pill 3. Injectables 4. IUD 5. Implant 6. TL 7. Vasectomy 8. Diaphragm 9.Calendar method 10. Coitus interrupts 11. Abstinence 12.Condom + other___ Other_____	
329	If no to Q 327, why do you think you did not get the method you wanted? *Mark most important reason only.*	1. Chose not to accept the method at this time 2. Preferred method was not appropriate (Contraindications) 3. Changed mind after listening to provider 4.Provider recommended another method 5. Cost of method is not affordable 6.Not available at clinic at the time 7.No appropriate provider available that day	

		Others _____ Do not know/ Do not remember	
330	Which methods did the provider discuss with you?	1. Condom 2. Pill 3. Injectables 4. IUD 5. Implant 6. TL 7.Vasectomy 8. Diaphragm 9.Calendar method 10. Coitus interrupts 11. Abstinence 12.Condom + other___ Other_____	
331	For the method you decided to accept, did the provider:	A. Explain to you how to use the method effectively? 1. Yes 2.No *Do not ask if method = sterilization* B. Describe possible side effects? 1. Yes 2.No C. Tell you what to do if you have any problems? 1. Yes 2.No D. Explain that this method does not provide protection against STIs and AIDS? 1.Yes 2.No	
332	Did the provider encourage you to use condoms at the same time?(For those who use method other than condom)	1.Yes 2. No	
333	Did you feel comfortable to ask questions during the family planning session?	1. Yes 2.No	
334	Do you feel the information given to you during your visit today or during your visit in within the past 6 month was:	1. Too little 2.About right 3.Too much Do not know	
335	Did you have a pelvic exam during your visit today or in the past 6 month?	1.Yes 2.No	If no skip to 337

336	Did you have enough privacy during your exam? (Probe: Clients or staff, other than those caring for you, could not see you)	1.Yes 2.No Do not know	
337	When meeting with the provider, do you think other clients could hear what you said?	1.Yes 2.No Do not now	
338	Do you believe that the information that you shared about yourself with the provider will be kept confidential?	1.Yes 2.No Do not now	
339	During your visit to the clinic how were you treated by the provider?	1.Very well 2.Well 3.Not very well/ poorly	
340	During your visit to the clinic how were you treated by the other staff?	1.Very well 2.Well 3.Not very well/ poorly 4.There was no other staff	
341	About how long did you wait between the time you first arrived at this clinic and the time you saw a staff person for a family planning consultation?	1. <15 minutes 2. 16-30 minutes 3. 31-45 minutes 4. 46-60 minutes 5. 61-90 minutes 6. 91-120 minutes 7. >120 minutes Don't know	
342	Do you feel that your waiting time was reasonable or too long?	1.No waiting time 2.Reasonable/ short 3. Too long Do not know	
343	Did the provider discus about HIV and STIs	1.Yes 2.No	
344	Are you satisfied with the cost of method you decided to accept?	1.Yes 2.No 3.Not paid	
345	Were you told when to return for a follow-up visit?	1.Yes 2.No	
346	Did the health provider discuss about having additional children?	1.Yes 2.No Do not remember	

347	Do you have a desire to have children in the future?	1.Yes 2.No Do not know	
348	If yes to, when do you want to have a child?	1.With in the next two year 2.Atleast after 2 years Do not know	

Hospital Audit and family planning unit team leader survey check list
Identification Number: _____
Instructions: Complete this inventory using observation and discussion with the person in charge of family planning services for ART clients. Verify the existence of functional equipment and supplies and the condition of the facility through observation.

Note: The respondent should be the head of ART department.

BACKGROUND CHARACTERISTICS

01. Hospital (Name & Number): _____

02. Date of interview: Day_____, Month_____,Year_____.

Name of Interviewer:_____
Signature of primary investigator_____

Section I Equipment and Commodities Inventory

1.Which of the following contraceptive methods are provided at this facility?(observe and ask)

Type of Contraceptive	Usually Provides	Method Available today
1. COMBINED PILLS	Yes No	Yes No
2. PROGESTERONEONLY PILL	Yes No	Yes No
3. INJECTABLES	Yes No	Yes No
4. CONDOMS	Yes No	Yes No
5. SPERMICIDE	Yes No	Yes No
6. DIAPHRAGM	Yes No	Yes No
7. IUD	Yes No	Yes No
8. IMPLANTS	Yes No	Yes No
9. FEMALE STERILIZATION	Yes No	Yes No
10. VASECTOMY	Yes No	Yes No

2. When you run out of contraceptives, how long does it take to replace them? *(ASK)*

1. One week or less
2. One month or less
3. Six months or less
4. Other_____ Do not know

3. From LAPMs which methods are offered at this ART department? *(OBSERVE AND ASK)*

Type of methods	Provided	Available at all times in last 6 months	If no, reason not available last time
1. IMPLANTS	Yes No	Yes No	1. Supplies not available 2. Equipment not available 3. Trained staff not available 4.Other_____
2. IUD	Yes No	Yes No	1. Supplies not available 2. Equipment not available 3. Trained staff not available 4.Other_____
3. FEMALE STERILIZATION	Yes No	Yes No	1. Supplies not available 2. Equipment not available 3. Trained staff not available 4.Other_____
4. VASECTOMY	Yes No	Yes No	1. Supplies not available 2. Equipment not available 3. Trained staff not available 4.Other_____

4. When you are unable to perform the above methods, how long does it take for them to resume?*(ASK)*

1. One week or less
2. One month or less
3. Six months or less Other_____ Do not know

Section II Conditions of facility

5. Verify if there is a client waiting area with seating that is sheltered from sun and rain at the clinic. *Note: The waiting area must have some form of seating.* ***(OBSERVE)***

1.Yes 2.No

6. Is there a sign on the street or on the exterior of the building announcing that family planning services are available for HIV positive women? (***OBSERVE)***

1.Yes 2.No

Section III Materials

7. Which family planning IEC materials are available?

(OBSERVE OR ASK)

Type Of Material	Yes	No
A. Posters	☐	☐
B. Flip Chart	☐	☐
C. Brochure/Pamphlet (at least 10)	☐	☐
D. Information Sheet (at least 10)	☐	☐
E. Job Aids	☐	☐
F. Counseling cards	☐	☐

G. Other (specify)_____

_____

Section IV Training

8. Reproductive health focused trainings taken by ART service providers/staffs who provides family planning service for ART clients(ASK)

S.No	**Qualification**	**Type of training**	Duration of training
1			
2			
3			

Section V Protocols and Guidelines

9. Please show me the most recent version of written guidelines and protocols for delivering family planning services.

Record "yes" if at least one set of written guidelines is available. ***(OBSERVE AND ASK)***

1. Available and observed (record date of version)_____
2. Available, but not observed Not available
3. Don't know

10. Please show me where all of the client records are kept.

Record "yes" if client records are kept in a secure area. ***(OBSERVE AND ASK)***

1. Yes
2. No
3. Do not know

11. Provider providing MOST of the Counseling session:

1. Nurse
2. Health officer
3. Doctor

Other _____

12. Sex of Provider:

1. Female 2.Male

Questionnaire for the focus group discussion with women on ART

Location:_____

Date: _____

Time discussion started: _____ Time ended: _____

Socio demographic characteristics of the participants

Age: _____

Marital status: _____

Educational status: _____

Parity: _____

Number of children alive: _____

Code of the participants……

General questions

1. What are the benefits of having children? What is the ideal number of children for a couple to have?

2. Why would couples want more or fewer children? Probe: HIV positive women/couples

3. What are some of the negative consequences of having many children? [PROBE: for the mother? For the children? For the family as a whole?]

4. How do people in the community view couples that decide to have only two children? Knowledge:

5. If a couple wants to postpone the birth of another child or if they do not want to have any more children, what can they do? [PROBE: IUD, implant, male sterilization, female sterilization] after mentioning the methods classify them into the ones best for spacing and the ones best for stopping childbearing.

Perceptions about LAPM

6. Can you describe IUD to me? What are the advantages of using an IUD? What are the disadvantages? To what extent does IUD prevent pregnancy? How does this method compare to a method like the pill or injectables? Under what circumstances should a couple consider using an IUD?

7. Can you describe the implant or Norplant to me? What are the advantages of using an implant or Norplant? What are the disadvantages? To what extent does an implant/Norplant prevent pregnancy? How does this method compare to a method like the pill or injectables? Under what

circumstances should a couple consider using an Implant or Norplant?

8. What do you understand by female sterilization or tubal ligation? What are the advantages of undergoing female sterilization? What are the disadvantages? To what extent does female sterilization prevent pregnancy? How does this method compare to a method like the pill or injectables? Under what circumstances should a couple consider female sterilization?

9. What do you understand by male sterilization? What are the advantages of undergoing male sterilization? What are the disadvantages? To what extent does male sterilization prevent pregnancy? How does this method compare to a method like the Pill or injectables? Under what circumstances should a couple consider male sterilization?

Reasons for not using

10. Some couples who want to delay or avoid a pregnancy are not using any modern method of contraception. What are the reasons they are not using a method?

11. What are the family planning methods that couples in this locality are most likely to use?

12. Why do couples prefer these methods?

13. Some couples use a family planning method for some time and then discontinue. What are the reasons some people who need family planning methods discontinue using the methods?

14. Do you know a woman or a couple that decided to stop using a family planning method? Please tell us her/their story? [PROBE: Circumstances that led to the discontinuation? Consequences of discontinuing?]

15.Use of Family Planning

a. Have you ever used any family planning method before?

b. If yes, what method?

c. If you have never used any family planning method before what are your reasons?

d. If you had an opportunity to use family planning, which method would you prefer to use and why?

e. If you were given an opportunity to use LA/PM, would you be willing to take it and why?

f. What do you think are the barriers to women preventing them to use a method of their choice?

16. In this locality, if a couple wants to do something in order to postpone a pregnancy, how would they go about making that decision? [PROBE: couple discussion? Role of friends and family members? Role of health service providers?]

17. How about if a couple wants to do something in order not to have any more children, how would they go about making that decision? [PROBE: couple discussion? Role of friends and family members? Role of health service providers?]

18. What are perceptions of women about the LAPMs?

19. What are the reasons for not using LAPMs?

20. Is there anything else that you would like to tell me about any of the issues that we have discussed so far?

Thank the participants for their time and contribution

Questionnaire for the in-depth interview

Location:_____

Date: _____

Time discussion started: _____ Time ended: _____

Age: _____ Sex: Male ☐ Female ☐

Code of the participant_____

A. How long have you been working in family planning service provision?

B. What are the common family planning methods requested by clients in this facility? Why are these methods preferred?

C. How common do family planning clients request for LA/PMs here?

D. For clients who report discontinuation of use of a method or LA/PM, what were the common reasons given for discontinuation?

E. What could be some of the reasons why clients would avoid using LA/PMs?

F. What are the challenges in providing LA/PMs here?

G. What do you think should be done to improve family planning service provision especially the LA/PM provision?

H. What do you think should be done to encourage uptake of LA/PM among women on ART

Would you like to add something different from what we have discussed?

Thank the participants for their time and contribution.

Annex
Structured questionnaires Amharic version
አዲስ አበባ ዩኒቨርስቲ ጤፍ አጠባበቅ ትምህርት ቤት

የጥናት ሚጃ ሚኻጫ

መግቢያ

ጤፍ ይስጥልኝ ስም ----------ይባላል ፡፡ጊዜዎትን ሰተዉ ሊነጋግሩን ስለወደዱ እናመሰግናለን፡፡የምሰራዉ ለአዲስ አበባ ኒቨርስቲ ጤፍ አጠባበቅ ትምህርት ቤት ነዉ፡፡በአዲስ አበባ ከተማ ለረጅም ጊዜ በቋሚት ስለሚገለግሉ ወሊድ መቆጣጠሪ ዘዴዎች ለማጥናት በተዋቀረዉ ቡድን ወስጥ አባል ነኝ፡፡የጥናቱ ዋና አላማ ምን ያህል የፀረ HIV መድሀኒት ከትትል ተጠቃሚ ሴቶች ይህንን ወሊድ መቆጣሪያ መመሰድ እየፈለጉ እንደሚጠቀሙ ለማወቅ እና የሚጠቀሙት ምክንያት ምንድን ነዉ የሚለዉን ጥያቄ ለመሞለስ ነዉ፡፡ስለዚህም እድሜቸዉ ከ 18- 49 አመት ያሉ ፀረ HIV መድሀኒት የሚጠቀሙ ሴቶችን ጥናቱ ያካትታል፡፡ጥናቱ በእርሶ ላይ ምንም አይነት ጉዳት የሚያስከትልና ሚጃወም በጥንቃቄ በሚስጥር የሚያዝ መሆኑን እንገልፃለን፡፡ የሚሰጡ ሚጃ ከልሉን አገሪቱን ብሎም ሌላ የቤተሰብ ምጣኔ አገልግሎት የሚሰጡ ድርጅቶችን ይጠቅሚል፡፡ከላይ የተጠቀሰዉን ለረጅም ጊዜና በቋሚት ስለሚገለግሉ ወሊድ መቆጣጠሪያዎች ጥያቄዎችን እንጠይቅዎታለን፡፡መመለስ ያልፈለጉትን ጥያቄ እንዲመልሱ አይገደዱም፡ከዚህ ማከይቅ ወስጥ እርስዎን ለመለየት የሚገለግል ነገር አይፃፍም፡በሂደት ወስጥ በጥናቱ ላለመካፈል በማንኛወም ወቅት መወሰን ይችላሉ፡፡አስገዳጅ ሁኔታ ወስጥ አይገቡም፡በጥናቱ ላለመሳተፍ በወሰኑት ወሳኔ የተነሳ የሚርስቦት አንዳችም ሁኔታ የለም፡የሚገኙት የጤፍ አገልግሎት አይስተጓጎልም፡ነገር ግን ሁሉንም ጥያቄ እንዲመልሱ አናበረታታለን፡፡የሚሰጡን ሚጃ ለ HIV ህመማን ለሚሰጠዉ የቤተሰብ እቅድ አገልግሎት ጥራት ለሚዳት ከፍተኛ እገዛ ያደርጋል፡፡ጥያቄዎቹ ከ 15 ደቂቃ በላይ አይወስዱም፡እናም ጥያቄዎቹን ለመሞለስ ስለሚደርጉልን እገዛ በቅድሚያ አመሰግናለሁ፡፡ግልፅ ያልሆነ ነገር ካለ ሊጠይቁን ይችላሉ፡፡

ከዚህ ቀጥሎ በጥናቱ ለመሳተፍ መስማማቶትን ለሚጋገጥ የሚከተለዉን የስምምነት ቅፅ አነብሎታለሁ፡፡

የስምምነት ቅፅ

ተመራማሪዉ የጥናቱን አላማ በሚባ አስረድተወኛል፡፡በተጨማሪ በጥናቱ ያለመሳተፍና በማንኛወም ጊዜ ለማቋረጥ ያለኝን መበት ገልፀወልኛል፡፡በዚህ መሰረት በጥናቱ ለመሳተፍ መሉ ፈቃደኛ መሆኑን አረጋግጣለሁ፡፡

ተጠያቂዉ ተስማምቷል ☐ አዎ ☐ አልተስማማም

የጠያቂዉ ፊርማ_____ ቀን_____

የተጠያቂዉ ፊርማ _____ ቀን_____

አዲስ አበባ ዩኒቨርስቲ የጤፍ አጠባበቅ ትምህርት ቤት

የጠያቂው ስም /ቁጥር/ _____
1. የጤፍ ድርጅቱ ስም_____
2. ቃለ መጠየቁ የተደረገበት ጊዜ _____/ _____/ _____(ቀን/ወር/ዓ.ም)

ክፍል 1 የማህበራዊና ዲሞግራፊያዊ ሁኔታዎች

101	እድሜዎት ስንት ነዉ	_____	
102	ሀይማኖትዎ ምንድን ነዉ	1.እስላም 2.አርቶዶክስ 3.ፕሮቴስታንት 4.ሌላ ካለ(ይገለፅ) ----------	
103	የጋብቻ ሁኔታ	1.ያላገባች 2.ያገባች 3.የፈታች/ የተለያየች 4.ባል የሞተባት	
104	የትምህርት ደረጃዎት	1.ማንበብና መፃፍ ሚይችል 2.ማንበብና መፃፍ የሚችል(ከፍል የሌለዉ) 3.የመጀመሪያ ደረጃ ያጠናቀቀ(1-8) 4.ሁለተኛ ደረጃ ያላጠናቀቀ(9-12 5.ከፍተኛ ትምህርት ያጠናቀቀ(12+)	
105	በአሁኑ ጊዜ የሚሰዳደሩበት የስራ አይነት	1.የቤት እመቤት 2.የመንግስት ስራ ተቀጣሪ 3.የቀን ሰራተኛ 4.ጽቃቅን ንግድ 5.ነጋዴ 6.ተማሪ 7.ስራ የሌለዉ 8.ሌላ ካለ ይጠቀስ ----------	
106	ልጆች አልዎት?	1.አዎ 2.የለኝም	2→ 108
107	ስንት ልጆች አልዎት?	1.አንድ 2.ሁለት 3.ሶስት 4.ከ ሶስት በላይ	
108	የወር ገቢ አለዎት	1.አዎ 2.የለኝም	2→ 201
109	ገቢ ካለዎት አጠቃላይ የወር ገቢዎት ምን ያክል ነዉ	……..ብር	

ክፍል 2 የ -HIV ሁኔታ ላይ የተመሰረቱ ጥያቄዎች

201	ኤች አይ ቪ እንዳለቦት ከተነገሮት ስንት ጊዜ ይሆናል?	1.----------(ጊዜዉ ይፃፍ) አላስታወስም	
202	የፀረ ኤች አይ ቪ ክትትል ሚድረግ ከጀመሩ ስንት ጊዜ ይሆናል	1. ----------(ጊዜዉ ይፃፍ) አላስታወስም	
203	በቅርብ ጊዜ የታዩት የ CD4 ቁጥር ስንት ነዉ	1.ቁጥሩን ይፃፉ ---------- አላው ቅም	
204	ኤች አይ ቪ ፖዝቲቭ መሆንዎን ተናግረዉ ያዉቃሉ?	1.አዎ	

		2.አልተናገርኩም	
205	ለማን ነው የተናገሩት ?	1.ለፍቅር ጓደኛዎ /ለባለቤትዎ 2.ለወላጆችዎ 3.ለወንድም ና እህቶችዎ 4.ለዘመድ 5.ለጓደኛዎ 6. ለህብረተሰቡ/በአካባቢዎ ለሚኖሩ ሰዎች ሌሎች	
206	ባለቤትዎ ወይም የፍቅር ጓደኛዎ ኤች አይ ቪ ተመርምሯል	1.አዎ 2.አልተመረመረም አላወቅም	2→ 301
207	የባለቤትዎ ወይም የፍቅር ጓደኛዎ የኤች አይ ቪ ወጩ ምንድን ነው?	1.ፖዝቲቭ 2.ነጌቲቭ አላወቅም	2→ 301
208	ባለቤትዎ ወይም የፍቅር ጓደኛዎ የኤች አይ ቪ ፖዝቲቭ ከሆነ የፀረ ኤች አይ ቪ መድሀኒት ከትትል ጀምሮአል?	1.አዎ 2.አልጀመረም አላወቅም	

ክፍል 3 በአገልግሎት ጥራት ላይ የተመሰረቱ ጥያቄዎች

301	የቤተሰብ ምጣኔ አገልግሎት ተጠቅመው ያውቃሉ	1.አዎ 2.አልጠቀምም	
302	ኤች አይ ቪ ፖዝቲቭ እንደሆኑ ካወቁ በኃላ የወሊድ መቆጣጠሪያ ተጠቅመው ያውቃሉ	1.አዎ 2.አልተጠቀምኩም	2→ 304
303	ተጠቅመው ካወቁ የትኛዉ አይነት	1. ኮንደም(የወንድ ወይም የሴት) 2. የሚጥ ጢል 3. በመርፌ የሚሰጥ 4. በማህፀን ውስጥ የሚቀመጥ 5. በክንድ የሚበር 6. በቀዶ ጥገና የሚሰራ ዘላቂ 7. በማህፀን በር ላይ የሚቀመጥ	

		8. የቆጠራ ዘዴ 9. የወንዱን የዘር ፈሳሽወደ ወጪ በማፍሰስ 10. ግንኙነት ማቆም 11. ኮንዶምና + ሌላ ሌሎች	
304	የወሊድ መቆጣጠሪያ ማጠቀም አለብኝ ብለዉ ያስባሉ?	1.አዎ 2.አላስብም	
305	አሁን በዚህ ወቅት የወሊድ መቆጣጠሪያ ይጠቀማሉ	1.አዎ 2.አልጠቀምም	2→ 315
306	የወሊድ መቆጣጠሪያ ማጠቀም የፈለጉበት ምክንያት ምንድን ነዉ	1.ልጆች ወልዶ ለማሳደግ በቂ ገንዘብ ስለሌለኝ 2.በቂ የሆኑ ልጆች ስላሉኝ 3.አሁን ልጅ መዉለድ ስለማልፈልግ 4.የራሴ ጠፍ እንዳይጎዳና የተሻለ ህይወት እንድኖር 5.የ ኤች አይ ቪ ቫይረሱ ወደ ልጅ ይተላለፋል በዬ ስለምሰጋ 6.እኔ ከሞትኩ ልጄ ያለ አሳዳጊ ይቀራል ብዬ ስለምሰጋ 7.በአድሉና መላለል ስወልድ በቂ የሆነ እንክብካቤ ስለማላገኝ ሌላ ካለ ይጠቀስ----------	
307	የወሊድ መቆጣጠሪያ ከተጠቀሙ የትኛዉ አይነት	1. ኮንደም(የወንድ ወይም የሴት) 2. የሚዋጥ ፒል 3. በመርፌ የሚሰጥ 4. በማህፀን ዉስጥ የሚቀመጥ 5. በክንድ የሚቀበር 6. በቀዶ ጥገና የሚሰራ ዘላቂ 7. በማህፀን በር ላይ የሚቀመጥ 8. የቆጠራ ዘዴ 9. የወንዱን የዘር ፈሳሽወደ ወጪ በማፍሰስ 10. ግንኙነት ማቆም 11. ኮንዶምና + ሌላ ሌሎች	
308	የወሊድ መቆጣጠሪያ ከየት ነዉ የሚያገኙት?	1. ፀረ ኤች አይ ቪ መድሃኒት ከሚሰጥበት ቦታ 2. ከፀረ ኤች አይ ቪ መድሃኒት ከሚሰጥበት ቦታ ወደ ሆስፒታሉ የቤተሰብ ምጣኔ አገልግሎት ክፍል ሪፈር ተደርጋ 3.ከሌላ የመንግስት የጠፍ ተቋም 4.ከግል የጠፍ ተቋም 5.ከቤተሰብ መምሪያ ወይም NGO 6.ከፋርማሲ 7.ከሱቅ 8.ሌላ ይገለፅ	
309	ይወስዱ የነበረዉ ከጠፍ ተቋም ከሆነ የወሊድ መቆጣጠሪያ ዘዴዉ የፈጠረቦት ችግር ነበር?	1.አዎ 2.አልነበረም	2→ 315
310	የነበረብዎንችግር ከጠፍ ባለሙያ ጋር መመከር ፈልገው ነበር?	1.አዎ 2.የለብኝም	
311	ሊመከሩ ስለፈለጉት ችግር /ስለቤተሰብእቅድሁኔታበመጀመሪያጉዳዩያነሳወሳ ወ?	1.እርስዎእራስዎት 2.የጠፍባለሙያ	
312	የጠፍ ባለሙያ ስለ ችግርዎ ለሚዳት ሞክሯል/ራለች	1.አዎ	

		2.አልሞከረም/ችም	
313	የጠፍ ባለማያዉ የወሊድ መቆጣጠሪያ ዘዴዉ የፈጠረቦት ችግር ለመፍታት ምን ሜድረግ እንዳለቦት ነገሮች	1.አዎ 2.አልነገረኝም	
314	የጠፍ ባለማያዉ ለችግርዎ በሰጥዎት መፍትሄ ረክተዋል?	1.አዎ 2.አልረካሁም	
315	ለጥያቄ ቁጥር 305 ሜልሱ አልጠቀምም ከሆነ የዘመናዊ የወሊድ መቆጣጠሪያ ዘዴ ያልተጠቀሚት ምክንያት ምንድን ነው ጎትጉተው አይጠይቁ የሚሉትን ሁሉ ክበቡ	1.አላገባሁም/የፍቅር ጓደኛ የለኝም 2.ያለ መወለድ/መህን ስለሆንኩኝ 3.ልጆች መወለድ በመፈለግ 4.የፍቅር ጓደኛ/ባለቤቱ ተቃወሞ 5.መላለልና መድሉን በመፍራት ሌላ ይጠቀስ ----------	
316	ለረጅም ግዜና ለዘለቄታዉ የሚገለግሉ የወሊድ መቆጣጠሪያ ዘዴዎች ያዉቃሉ	1.አዎ 2.አላወቅም	2→ 320
317	የትኛዉ የወሊድ መቆጣጠሪያ ዘዴ ያዉቃሉ	1.በከንድ ወስጥ የሜበር 2.በቀዶ ጥገና የሚሰራ ዘላቂ(የሴት) 3.በሜህፀን ወስጥ የሜቃመጥ 4. .በቀዶ ጥገና የሚሰራ ዘላቂ(የወንድ)	
318	ለረጅም ጊዜ እና ለዘለቄታው የሚገለግሉ ወሊድ መቆጣጠሪያ ዘዴዎች ጥቅሞ ምንይመስለዎታል?	1.ያልተፈለገእርግዝናንለመከላከል 2.የእናችንሞትእናሕመምለመቀነስ 3.የቤተሰብቁጥርንለመጣጠን 4.አራርቆለመወለድ 5.አላወቅም ሌሎች_____	
319	ለረጅም ጊዜና ለዘለቄታው የሚገለግሉ የወሊድ መቆጣጠሪያ ዘዴ ጉዳት ምንድነው?	1.መካንነት 2.የቤተሰብምጫ ወንለማጠቀምየ ሚከተቱድርጊቶች 3.ከኤችአይቪጋርለሜፎሬሴቶችየ ጠፍ ጉዳትያስከትላል 5.አላወቅም ሌሎች_____	
320	ከላይ ከተጠቀሱት የወሊድ መቆጣጠሪያ ዘዴዎች አጉል አምነቶችና አባባሎች ሰምተዋል?	1.አዎ አዎ ካሉ ይገለፅ 2.አልሰሜሁም ስለ በከንድ ወስጥ የሜቃበር ስለ በሜህፀን ወስጥ የሜቃመጥ ስለ በቀዶ ጥገና የሚሰራ ዘላቂ(የሴት) ስለ በቀዶ ጥገና የሚሰራ ዘላቂ(የወንድ)	
321	ዛሬ ወደ እዚህ የጠፍ ድርጅት የጣኑ አንድ አይነት የወሊድ መቆጣጠሪያ ዘዴ ለመሰድ ነዉ?	1.አዎ 2.አይደለም	
322	ባለፉት ሶስት ወራት ወስጥ አንድ አይነት የወሊድ መቆጣጠሪያ ዘዴ ለመሰድ ወደ ጠፍ ድርጅት መተዋል?	1.አዎ 2.አልመጣሁም	2→ 347
323	የቤተሰብ ምጣኔ ዘዴ ማዘጉ ወይም ሪፈራል ተሰጥዎት ?	1.አዎ.የመድሀኒት ማዘጉዣ 2.አልተሰጠኝም 3.አዎ ሪፈራል	
324	የትኛዉ አይነት የቤተሰብ ምጣኔ ዘዴ ተሰጠዎት ወይም ለየትኛዉ አይነት የቤተሰብ ምጣኔ ዘዴ ማዘጉ ሪፈራል ተፃፈሎት	1. ኮንደም(የወንድ ወይም የሴት) 2. የሜቃጥ ጢል 3. በሚፌ የሚሰጥ 4. በሜህፀን ወስጥ የሜቃመጥ 5. በከንድ የሜቃበር 6. በቀዶ ጥገና የሚሰራ ዘላቂ 7. በሜህፀን በር ላይ የሜቃመጥ 8. የቆጠራ ዘዴ	

		9. የወንዱን የዘር ፈሳሽወደ ወጪ በማፍሰስ 10. ግንኙነት ማቆም 11. ኮንዶምና + ሌላ ሌሎች	
325	የትኛዉ የወሊድ መቆጣጠሪያ ዘዴ መዉሰድ እንዳለቦት ከባለቤትዎ ጋር ተመካክረዋል (ባለቤት ላላአቸዉ ብቻ ከሌላቸዉ ወደ ጥያቄ ……. እለፍ)	1.አዎ 2.አልተማከርኩም	2→ 327
326	የባለቤትዎ ሀሳብ ምን ነበር?	1.እሱ የሚጠቀን የወሊድ መቆጣጠሪያ ዘዴ እንድጠቀም ይፈልጋል 2.ስለ ምርጫዬ ተወያይተን ነዉ የወሰነዉ 3.ራሴ ነኝ የወሰንኩት	
327	ከቤትዎአስበወየ ማዝትንየወሊድመቆጣጠሪያነወየ ወሰዱት	1.አዎ 2.አይ	
328	የትኛዉ አይነት የወሊድ መቆጣጠሪያ ዘዴ ለመዉሰድ ፈልገዉ ነዉ የማዝት (የጠፍ ባለመዎዎን ሳያገኙ በፊት ያሰቡት	1. ኮንደም(የወንድ ወይም የሴት) 2. የሚዋጥ ፒል 3. በመርፌ የሚሰጥ 4. በማህፀን ዉስጥ የሚቀመጥ 5. በክንድ የሚቀበር 6. በቀዶ ጥገና የሚሰራ ዘላቂ 7. በማህፀን በር ላይ የሚቀመጥ 8. የቆጠራ ዘዴ 9. የወንዱን የዘር ፈሳሽወደ ወጪ በማፍሰስ 10. ግንኙነት ማቆም 11. ኮንዶምና + ሌላ ሌሎች	
329	መዉለስዎ አይደለም ከሆነ ለምን ከቤትዎ አስበዉ የማዝትን የወሊድ መቆጣጠሪያ ዘዴ አልወስዱም	1.ላለመዉሰድ ስለወሰንኩ 2.ያሰብኩት የወሊድ መቆጣጠሪያ ዘዴ ለእኔ እንደሚይሆን ስለተረዳሁ 3.የጠፍ ባለመዎዉን ሰምቼ ሀሳቤን ስለቀየርኩ 4.የጠፍ ባለመዎዉ ሌላ ወሰጂ ስላለ 5.ዋጋው ስለከበደኝ 6.በጠፍ ድርጅቱ በወቅቱ ስለሌለ 7.ሊሰጠኝ የሚቻል ባለመመዎ ስለሌለ ሌሎች —————————— አላስታወስም	
330	የጠፍ ባለመዎዎ የትኛዉ አይነት የወሊድ መቆጣጠሪያ ዘዴ አወያዮት	1. ኮንደም(የወንድ ወይም የሴት) 2. የሚዋጥ ፒል 3. በመርፌ የሚሰጥ 4. በማህፀን ዉስጥ የሚቀመጥ 5. በክንድ የሚቀበር 6. በቀዶ ጥገና የሚሰራ ዘላቂ 7. በማህፀን በር ላይ የሚቀመጥ 8. የቆጠራ ዘዴ 9. የወንዱን የዘር ፈሳሽወደ ወጪ በማፍሰስ 10. ግንኙነት ማቆም 11. ኮንዶምና + ሌላ ሌሎች	
331	ስለ ወሰዱት የወሊድ መቆጣጠሪያ የጠፍ ባለመዎዉ	325 ሀ.አጠቃቀመን ነገሮት 1.አዎ 2.አልነገረኝም 325 ለ.የጎንዮሽ ጉዳት እንዳለዉ ነገሮት 1.አዎ 2.አልነገረኝም	

		325 .ችግር ቢያጋጥሞት ምን ሚድረግ እንዳለቦት ነገሮት 1. .አዎ 2.አልነገረኝም 325 መ.የወሊድ መቆጣጠሪያ ኤች አይ ቪን እንደሚከላከል ገለፀሎት(ኮንዶም ካልሆነ) 1. .አዎ 2.አልነገረኝም	
332	የጠፍ ባለመያው ከሚወስዱት የወሊድ መቆጣጠሪያ በተጨማሪ ኮነዶም እንዲጠቀሙ መካርዎት (የሚጠቀሙት ኮንዶም ካልሆነ)	1.አዎ 2.አልጠየቀኝም	
333	ያልገባዎትን ጠይቀው ለሚዳት ይመቾ ነበር?	1. አዎ 2.አይመቾም	
334	ስለቤተሰብ ምጣኔ ዘዴ የተሰጥዎት ሚጃ እንደት ነበር?	1.በጣም ትንሽ 2.በቂ 3.በጣም ብዙ 4.አላወቅም	
335	የማህፀን ምርመራ ተደረገልዎት?	1. አዎ 2. አልተደረገልኝም	2→ 337
336	አገልግሎቱን ያገኙት ማእከጥሮ ሊጠበቅ በማቻልበት ቦታ ነወ?	1. አዎ 2. አይደለም 3.አላወቅም	
337	የጠፍ ባለመያ የህክምና ንገልግሎቱን ሲሰጥዎት ሌሎች ደንበኞች ያዳምጡ ነበር?	1. አዎ 2. አይደለም 3. አላወቅም	
338	ከጠፍ ባለመያ ጋር ያደረጉት ወይይት በማእጥር ይይዝልኛል ብለው ያምናሉ?	1.አዎ 2.አላምንም 3. አላወቅም	
339	ወደ ጠፍ ድርጅት ሲማጡ የጠፍ ባለመያው ንቀባበል እንዴት ነበር?	1.በጣም ጥሩ 2.ጥሩ 3.ደካማ/የማያስደስት	
340	ወደ ጠፍ ድርጅቱ ሲማጡ የሌሎች የጠፍ ባለመያዎች አቀባበል እንዴት ነበር?	1.በጣም ጥሩ 2.ጥሩ 3.ደካማ/የማያስደስት/ 4.ሌላ ባለመያ አላጋጠመኝም	
341	የወሊድ መቆጣጠሪያ ንገልግሎት እስከሚገኙ ድረስ ምን ያህል ጠበቁ?	1. ከ15 ደቂቃ ያነሰ 2. 15-30 ደቂቃ 3. 31-45 ደቂቃ 4. 46-60 ደቂቃ 5. 61-90 ደቂቃ 6. 91-120 ደቂቃ 7. 120 ደቂቃ በላይ 8.አላወቅም	

342	የጠበቁት ሰዓት እንዴት ነበር?	1. አላስጠበቀኝም 2. አጭር ነበር 3.ረጅም ነበር 4. አላወቅም	
343	ንገልግሎት የሰትዎት ባለሞያ ስለአባላዘር በታ ነገርዎት?	1.አዎ 2.አልነገረኝም	
344	ለተሰጥዎት የወሊድ መቆጣጠሪያ በከፈሉት ክፍያ ደስተኛ ነዎት?	1.አዎ 2.አይደለሁም 3.አልከፈልኩም	
345	የጠፍ ባለሞያው መች መሞላስ እንዳለቦት ነገርዎት?	1.አዎ 2.አልነገረኝም	
346	የጠፍ ባለሞያው ስለተጨማሪ ልጅ መውለድ አወያዮት?	1. አዎ 2. አይደለም 3. አላወቅም	
347	ተጨማሪ ልጅ እንዲኖሮት ይፈልጋሉ?	1. አዎ 2.አልፈልግም 3.አላወቅም	
348	ከምን ያህል ጊዜ በኋላ ሌላወኛውን ልጅን መውለድ ይፈልጋሉ?	1.በሞቃጥሉት 2 አመት ውስጥ 2.ከ2 ዓመት በኋላ 3.አላወቅም	

የቡድን ወይይት

የቃለ መጠይቅ ቦታ _____

ቀን _____ ሰአት፡ የጀመረበት _____ ያለቀበት _____

የማህበራዊና ዲሞግራፊያዊ ሁኔታዎች

እድሜዎት ስንት ነዉ---

የጋብቻ ሁኔታ---

የትምህርት ደረጃዎት---

ስንት ልጆች አሎት---

ጠፍ ይስጥልኝ የወይይቱ ተሳታፊዎች

የፀረ ኤች አይ ቪን መድሀኒት የሚወስዱ ሴቶች የረጅም ጊዜና ለዘለቄታዉ የሚገለግሉ የወሊድ መቆጣጠሪያ ዘዴዎችን ለምን እንደሚይጠቀሙ የተሻለ ግንዛቤ ለማገኘት ይህንን ወይይት አዘጋጅተናል

ወደ ወይይቱ ከመግባታችን በፊት በፈቃደኝነት ላይ ለተመሰረተዉ የወይይት ተሳትፎአችሁ ላመሰግናችሁ እፈልጋለሁ

የወይይት ነጥቦች

1. በአንድ ቤተሰብ ወስጥ የልጆች መኖር ጥቅም ምንድነዉ? ሁለት ፍቅረኛማቾች ምን ያህል ልጆች ቢኖሩአቸው ጥሩ ነዉ?
2. ባለትዳሮች/ ፍቅረኛማቾች/ ብዙ የልጆች ቁጥር እንዲኖራቸው የሚፈልጉት ለምንድነዉ?(HIV positive ሴቶችስ)?
3. ብዙ ልጆች ሲኖሩ ጉዳቱ ምንድነዉ? አወጣጅኝ ለእናት ለልጅ ባጠቃላይ ለቤተሰቡ?
4. በህብረተሰቡ ወስጥ ሁለት/አንድ ልጆች ያላቸው ሰዎች እንዴትነው የሚታዩት?
5. ባለትዳሮች/ ፍቅረኛሞች ልጅ መዉለድ ቢፈልጉ (አራርቀው መዉለድ ቢፈልጉ) የቤተሰብ ቁጥራቸዉን መጣበን ወይንም መዉለድ ማቆም ቢፈልጉ ምን ሜድረግ አለባቸው ? (IUD, Implant, sterilization male female classify for አራርቆ መዉለድ & limit
6. ማህጸን ወስጥ የሚቃመጥ/በክንድ የሚበር /ማህፀን ማስቋጠር/ የወንዶች ዘላቂ የወሊድ መቆጣጠሪያ ምን ማለት ነዉ(ሊያብራሩልን ይችላሉ)፡፡ IUD መጠቀም ጥቅሙ ምንድነዉ/ ጉዳቱስ ? IUD(implant) እርግዝናን እስከምን ድረስ ነው የሚከላከለዉ፡፡

ይሄ የወሊድ መቆጣጠሪያ ከሌሎቹ የወሊድ መቆጣጠሪያ ጋር ሲነፃፀር እንዴት ነው? ባለትዳሮች/ፍቅረኛሞች መቼ ነው ይሄንን መቆጣጠሪያ ማጠቀም ያለባቸው? በምን ሁኔታ ወስጥ ያሉ ባለትዳርች?

7. አንዳንድ ባለትሮች /ፍቅረኛሞች መወለድ ሚፈልጉ(ዘግይተው መወለድ የሚፈልፉ ከነ ጭራሹ መወለድ የሚፈልጉ ግን ምንም አይነት ዘመናዊ የወሊድ መቆጣጠሪያ የሚጠቀሙት ለምንድነው?

8. ባብዛኛው በብዛት ሴቶች የሚጠቀሟት የ ወሊድ መቆጣጠሪያ ምንድነው? ለምንድነው እነዚህ የተመረጡት?

9. አንዳንድ ባለትዳሮች(ፍቅረኛሞቹች) የቤተሰብ ምጣኔ አገልግሎትእየተጠቀሙ ያቋርጣሉ ለምን?

10. ከላይ የተጠቀሱትን አይነት ፍቅረኛሞች/ባለትዳሮች ካወቃቹ ምክሌ ቢነግሩን (ታሪካቸወን ለምን እነዳቋረጡ? ካቋረጡ ያጋጠሟቸው ችግር?)

11. የቤተሰብ ምጣኔ ተጠቅመው ያወቃሉ? ምን ዓይነት? ካልጠጠቀሙ ለምን?

12. የወሊድ መቆጣጠሪያ የማጠቀም እድል ቢሰጥ የትኛወን ለማጠቀም ይመርጣሉ? ለምን?

13. ለረጅም ጊዜና ለዘለቄታዉ የሚገለግሉ የወሊድ መቆጣጠሪያ ዘዴዎችን ለማጠቀም እድሉ ቢሰጦት ለማጠቀም ፍቃደኛ ኖት? ለምን?

14. ሴቶች የሚጠቅን የወሊድ መቆጣጠሪያ እንዳይጠቀሙ የሚያደርጋቸው ምክንያት ምንድነው?

15. ሴቶች መወለድ ባይፈልጉ(እርግዝናን ማዘግየት ቢፈልጉ) እና ይሄንን በተመለከተ እርምጃ መወሰድ ቢፈልጉ እንዴት ነው የሚወስኑት

16. ሴቶች ስለ ለረጅም ጊዜና ለዘለቄታዉ የሚገለግሉ የወሊድ መቆጣጠሪያ ዘዴዎችን ያላቸው አመለካከት ምን ይመስላል?

17. ለምንድነው እነዚህን የወሊድ መቆጣጠሪያዎች የሚጠቀሙት?

18. እስካሁን ከተነጋገርንባቸው ነገሮች በተጨማሪ ሊነግሩን የሚፈልጉት ሃሳብ ካለ?

ለቃለ ማጠይቅ የተዘጋጁ ጥያቄዎች

የቃለ ማጠይቅ ቦታ _____

ቀን _____ ሰአት፡ የጀመረበት _____ ያለቀበት _____

እድሜ _____

1. በዚህ የቤተሰብ ምጣኔ አገልግሎት ማጫ ወስጥ ለስንት ጊዜ አገልግለዋል

2. በብዛት ተጠቃሚዎች የሚጠይቁት የወሊድ መቆጣጠሪያ ዘዴዎች ምንድን ናቸዉ እነዚህ ዘዴዎች የሚመረጠበት ምክንያት ምንድን ነዉ

3. ብዙ ጊዜ ተጠቃሚዎች ለረጅም ጊዜና በቋሚት የሚገለግሉ የወሊድ መቆጣጠሪያዎችን ፈልገዉ ይመጣሉ

4. የረጅም ጊዜና በቋሚት የሚገለግሉ የወሊድ መቆጣጠሪ ማጠቀም ያቋረጡ ሴቶች የሚረጣቸዉ ምክንያቶች ምንድን ናቸዉ

5. የረጅም ጊዜና በቋሚት የሚገለግሉ የወሊድ መቆጣጠሪያ ዘዴዎች ተጠቃሚዎች ማጠቀም የሚፈልጉት ለምንድ ነዉ

6. በጠፋ ባለመያወስ በኩል እነዚህን የምጣኔ ዘዴዎች ለማጠት ያሉ ችግሮች ምን ምን ናቸዉ

7. ባጠቃላይ የኔተሰብ ምጣኔ አገልግሎት ለማሻሻል ምን መደረግ አለበት በተለይ ለረጅም ገዜና በቋሚ ት ሊያገለግሉ የወሊድ መቆጣጠሪያ ዘዴዎች

8. ለረጅም ገዜና በቋሚ ት ሊያገለግሉ የወሊድ መቆጣጠሪያዎችን ሰዎች እንዲጠቀሙ ለሚድረግ ምን መደረግ አለበት በተለይ የፀረ ኤች አይ ቪ መድሀኒ ት ከትትል ለሚያደርጉ ሴቶች

Table 8: Socio-demographic profile of respondents for qualitative study

Respondent	Age	Marital status	Educational status	Parity	Number of live children
Yekatit Hospital					
FGD 1					
1	37	Married	12	0	0
2	42	Married	12	1	1
3	43	Married	10+	2	2
4	30	Married	8	1	1
5	35	Married	12	2	2
6	38	Married	8	2	2
7	33	Married	Diploma	0	0
Zewditu Memorial Hospital					
FGD 2	38	Married	8	1	1
1	35	Married	No education	1	1
2	45	Married	12	0	0
3	38	Married	6	0	0
4	28	Married	6	2	2
5	35	Not married	10+	0	0
6	38	Married	12	1	1
7					
FGD 3					
1	39	Married	12 complete	1	1
2	34	Single	10	0	0
3	32	Separated	12 complete	1	1
4	38	Single	12+	0	0
5	25	Single	10	0	0
6	35	Married	10	2	2
7	30	Single	10	0	0
8	25	Married	10+2	0	0
In-depth interview					
Tikur Anbassa Hospital	59				
Zewditu Memorial Hospital	47				
Yekatit Hospital	24				

Table 9: Categories and codes as identified from the qualitative and quantitative data

Commonly used methods and reasons	**Preferred number of children and reasons**
Physical change and disfigurement	Low economic status
Chronic illness	Marriage survival
Pain and damage to the body	Strong bond between couples
Psychological illness	Living condition
Method suitable for health	Low replacement level
Peer influence	
Factor related with the actual side effect	**Community and family member influence**
Medical illegibility	Perceived infertility
Impact on marriage	Mistrust
Discomfort	Social impact
Precautions	Support
Possible side effects	**Reasons for not using LAPMs**
Knowledge on LAPMs	Early menopause
Early adopters	Desire for children
Demand for LAPMs	Procedure involved
Awareness on method	Sexual inactivity
Method choice	**Partner opposition**
Misconceptions	Disagreement
Disbeliefs about ART	Discomfort during sexual intercourse
Personal experience	Conceal method
Health problems	Mistrust the provider
Fear of method disappearance	Unacceptability of provider
Disease transmission	**Health facility and provider related factors**
Myth about fertility	Promotion of family planning service
Counseling	Health professionals negative attitude
Education	Unavailability of method
Adequate time for client	Lack of skilled personnel
Committed provider	Measures taken to avoid side effects
Involvement in women's decision	Lack of training
Partner involvement and reasons to prefer LAPMS	Run out
Open discussion	
Convince partner	
Support	
Positive attitude	
Availability of extensive choice	
Non hormonal method choice	

1. **Declaration of the principal investigator**

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

Name: Miraf Walelegn Ayalew (BSC)

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Date: _____

Place of submission: Addis Ababa University, College of Health Science, School of Public Health.

2. **Approval of the primary advisor**

This thesis work has been submitted with my approval as university advisor.

Name: _____

Signature: _____

Date: _____

Place: Addis Ababa University, College of Health Science, School of Public Health.