ADDIS ABABA UNIVERSITY

COLLEGE OF HEALTH SCIENCE

SCHOOL OF PUBLIC HEALTH

ASSESSMENT OF LONG ACTING AND PERMANENT CONTRACEPTIVE METHODS UTILIZATION AND ASSOCIATED FACTORS AMONG FEMALE ANTIRETROVIRAL THERAPY ATTENDEES IN GONDAR TOWN,NORTH WEST ETHIOPIA, 2014

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Assessment of long acting and permanent contraceptive methods utilization and associated factors among female antiretroviral therapy attendees in Gondar town, North West Ethiopia, 2014

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Approved by the examining board

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Acronyms

AAU	Addis Ababa University
AIDS	Acquired Immune Deficiency Syndrome
ART	Antiretroviral Therapy
EDHS	Ethiopian Demographic and Health Survey
Epi-Info	Epidemiological Information
ETB	Ethiopian Birr
FMOH	Federal Ministry of Health
HIV	Human Immune Deficiency Virus
IRB	Institutional Review Board
IUD	Intrauterine Device
LAPMs	Long Acting and Permanent Contraceptive Methods
NGO	Non Governmental Organization
PLWHA	People Living With HIV AIDS
PMTCT	Prevention of Mother-To-Child Transmission
SPSS	Statistical Package for Social Sciences
SSA	Sub Sahara Africa
WHO	World Health Organization
WRAG	Women of Reproductive Age Group

Abstract

Background: The prevalence of unintended pregnancy is high among HIV-positive women. Although there is higher motivation among HIV-positive women to avoid unintended pregnancy and desire for use of highly effective contraception, long acting and permanent contraceptive methods usage remained low. Preventing unintended pregnancy among women living with HIV is an important component of prevention of mother-to –child transmission (PMTCT), yet only a little is known about LAPMs use among women who are on ART in Gondar town, North West Ethiopia.

Objective: To determine long acting and permanent contraceptive methods utilization and associated factors among female antiretroviral therapy attendees in Gondar town, North West Ethiopia, 2014

Method: Institution based cross-sectional study was conducted by interviewing 480 women of reproductive age (15–49years) that were selected using systematic random sampling technique from a list of ART attendees in government health facilities. Structured and pretested Interviewer administered questionnaire was used to obtain information from the respondents. Descriptive, bivariate, and multivariate methods were used to analyze utilization of LAPMs and the factors associated with LAPMs utilization.

Result: Two hundred fifty six (85.0%) of the sexually active women were using some modern form of contraception. The current utilization rate of LAPMs (alone or with condom) was 62(24.1%). Women who had high knowledge **[AOR=2.59, 95% CI [1.04, 6.45]** and ever had been pregnant since the commencement of ART **[AOR= 2.68, 95%CI [1.21, 5.93**] had an increased odds of using LAPMs**.** Moreover, those women who had discussion about family planning with health care provider [**AOR=2.69, 95% CI [1.18, 6.15]** were more likely to use LAPMs**.**

Conclusion and recommendation: The finding discloses that the general usage of contraceptive amongst sexually active women on ART was high though specific usage of LAPMs was found to be low. Based on the finding, there is a need to improve the implementation of integrated Family Planning service with ART service and improve counseling service that emphasized on LAPMs use.

1. Introduction

1.1. Background of the study

Human Immune deficiency virus(HIV) infection and Acquired Immune deficiency Syndrome(AIDS) affects populations globally and it is one of the leading causes of death among women of reproductive age(1). The introduction of antiretroviral therapy decreases the mortality rate of people living with HIV/AIDS from 2.3 million in 2005 to 1.6 million in 2012. In 2012,more than 35.3 (32.2–38.8) million people were living with the virus globally and 2.3 million new HIV infections were also recorded(2).

Sub-Saharan Africa has continued to bear the greatest burden of the HIV/AIDS epidemic, accounting for 69% of the people living with HIV worldwide. The other most affected regions of the world are the Caribbean, Eastern Europe and Central Asia, where 1.0% of adults were living with HIV in 2011(3). Ethiopia is among countries that are most severely affected by HIV/AIDS pandemic. According to EDHS 2011 report, an average adult HIV(15-49) prevalence of the country is 1.5%(4).Women have a higher HIV prevalence (1.9 percent) than men (1.0 percent).The prevalence of HIV in Amhara region is 1.6%(4).

In 2011, 330 000 [280 000–390 000] children were newly infected with HIV globally. More than 90% of the children who acquired HIV infection in 2011 live in sub-Saharan Africa (3). In order to achieve the global goal of reducing the number of children newly infected with HIV by 2015 a scale-up of prevention strategies, including primary HIV prevention for women and access to contraception and other family planning services should be enhanced (2).Family planning (FP) is a strategy to prevent vertical transmission of HIV from mother to child. The effective use of family planning (FP) plays an important role by preventing unintended pregnancies among women with HIV, thus reducing infant HIV infections and the number of children needing HIV treatment, care, and support. FP intervention will also reduce the need for antiretroviral drugs for PMTCT(5). It is estimated that each year, contraceptive use prevents an estimated 577,200 unplanned pregnancies among HIV-positive women in sub-Saharan Africa, resulting in an estimated 173,000 HIV-positive births averted (6).

Helping women with HIV to meet their own family size and child spacing goal is one of the four elements of a comprehensive approach to prevent mother to-child transmission (PMTCT) of HIV(5). Although many countries are planning to implement the new WHO policies, family planning is still a critical component for meeting the needs of all HIV positive women(6). Ethiopia has adopted the WHO 4-pronged PMTCT strategy as a key entry point to HIV care for women, men and families(7). 1)Primary prevention of HIV among women of child bearing age; 2) Prevention of unintended pregnancies among women living with HIV; 3)Prevention of HIV from a women living with HIV to her infant; 4) Provision of appropriate treatment, care and support to women living with HIV and their children and families. Family planning counseling and service provision is one of PMTCT program package in Ethiopia(7).

Long-acting methods like the IUD and implant which are reversible method and permanent methods like sterilization are highly effective contraceptive methods. LAPMs are vital to the overall success of reproductive health and family planning programs. LAPMs are also an option for women and couples who are living with HIV/AIDS and want to prevent unintended pregnancies. IUDs, implants, and female sterilization can all be used by women with HIV/AIDS (8).

1.2. Statement of the problem

Prevention of mother-to-child transmission (PMTCT) of HIV has been a global priority since the late 1990's(9).Although great progress has been made in preventing vertical transmission of HIV, nearly half a million children(430,000) globally were newly infected in 2008. Of which 90% were as a result of mother-to-child transmission(9). In Sub-Saharan Africa approximately 60% of adults living with HIV are women (1). Over 90% of infection in children is acquired through mother-to-child transmission (MTCT) during pregnancy, labor, delivery, or breast feeding and as more women contract the virus, the number of children infected has been growing(1). Unintended pregnancies are high among HIV-positive women. In a number of African countries, the rates of unintended pregnancy among women living with HIV range from 51% to 84%(10).

The level of contraceptive use is somewhat higher in the more developed regions (67 %) than in the less developed regions (62 %)(11). Sub-Saharan Africa has the lowest level of contraceptive prevalence, with only 22% of women of reproductive age who are married or in union using contraception and they are located mainly in Western Africa and in the Horn of Africa(11). Thus, in developed countries as a whole, contraceptive prevalence was highest for the pill (16 %) and the male condom (14 %). In developing countries the methods with the highest prevalence were female sterilization (22 %) and the IUD (17 %), accounting for 60% of overall contraceptive use. (11). In Ethiopia, 27 % of currently married women were using some modern contraceptive method. The most commonly used method was injectable(21%)(4).

Globally, the most common contraceptive methods used by HIV positive women were condom and diaphragm (12) .Reports from some Africa countries showed that only a few number of HIV positive women were using LAPMs, relying instead on condoms and injectables(5).In Ethiopia, a study reported that only 2.4% of HIV positive women from Northern Ethiopia used implant(13). Another study undertaken in Addis Ababa reported that rates of LAPMs use were 14.4% among women on ART (14)and 14.3 % in Western part of Ethiopia(15).

Currently, safe and effective contraceptive choices are available for women and couples who need protection against unwanted pregnancy(8)**.** The Long-acting methods like the IUD and implants and permanent methods like sterilization are convenient for users, effectively prevent pregnancy and not dependent on users' adherence. Additionally, continuation does not require repeated contact with health care providers. These factors make LAPMs more effective than short-acting methods in preventing pregnancies among typical users. These methods have also an advantage of cost effectiveness for programs over time, can result in substantial cost saving for governments, and contribute directly to reaching national and international health goals (8). Despite these advantages of LAPMs, the increased motivation of HIV-positive women to avoid unintended pregnancy and the desire for use of highly effective contraception, the utilization of LAPMs among these groups of people is typically low(5).

Although a great progress has been achieved in prevention of vertical transmission of HIV/AIDS and improving the life of PLWHA through ART, less attention was given for the prevention of unintended pregnancies among HIV positive women as a strategy to PMTCT. This result in high rate of unintended pregnancies among women with HIV, new infant HIV infections and increase the number of pregnant women and children needing HIV treatment, care, and support. LAPMs use is part of an important, but often overlooked, strategy for preventing unintended pregnancy.

Limited information is available about LAPMs utilization and factors associated with the utilization of it in a segment of population who visited ART clinics in Ethiopia, particularly in Amhara region, Gondar town. The study will contribute in filling the existing information gap hence suggest proper intervention measures for LAPMs use which in turn reduce unintended pregnancy among HIV positive women and infant HIV infection.

1.3. Significance of the study

The finding of this study could inform about LAPMs utilization rate and associated factors among HIV positive that have paramount significance in reducing mother to child transmission of HIV as they can avoid unintended pregnancy, reduce pregnancy related maternal and child mortality and improve their health.

The result of this study can be used by the people who are working on programs that target on PLWHA in order to improve family planning service provided. Policy-makers and program managers will promote an enabling environment through evidence-based policies and guidelines, improve the provision of family planning services, and the education of HIV positive women once the evidence gap is filled. This study could serve as base line information for further study on LAPMs utilization and associated factors among HIV positive women. It also provides evidence-based information that can be used in the future for national strategic plan for elimination of mother to child transmission of HIV.

2. Literature review

2.1. Utilization of Long Acting and Permanent Contraceptive Method

More than 350million couples worldwide have limited or no access to effective and affordable FP, especially to LAPMs(8).For the world as a whole, female sterilization is the most commonly used method of contraception followed by IUCD(11).

A study done in South Africa on contraceptive use among HIV positive women showed 96% of the study participants were currently using contraceptives. Of these 61.3% were using condoms(alone or combined with other methods), 20.0% injectable, 19.7% abstinence,4.5% intrauterine contraceptive device (IUCD), 2.2% pills and 0.7% coitus interruptus (16) . On the other hand, in another study done in Cape town, South Africa, the vast majority of women both HIV positive and HIV negative were using short acting methods, primarily the 3-monthly injectable(DMPA), no IUD and small percentage(6.4%) of participants reported they had undergone female sterilization. A small percentage of women (3.8% HIV positive and1.7% HIV negative) were using condoms in addition to a hormonal method of contraception or sterilization(17).

Similarly, in a study conducted in southwestern Uganda on contraceptive use and associated factors among women enrolling into HIV care showed 52% of the study participants were using injectable, 30% condom and 9% oral contraceptive. Use of highly effective contraceptive methods(IUCD and female sterilization) was reported for 0.7% of the study subjects(18).In contrast in other study conducted in Mbarara,Uganda,84% of participant reported using barrier contraceptive methods, primarily the male condom. Almost 30% reported using hormonal contraceptive methods, with injection being the most common hormonal method and only 5% reported having undergone surgical sterilization(19).

In a study conducted in Zimbabwe on the reason for low utilization of long acting contraceptive method showed that the majority of the respondents (67%) did not intend to have another child, though the majorities (68%) were not on any family planning method whilst 32% were on a family planning method. None of the respondents were using permanent method of family planning whilst condoms are used by 17% of the respondents. The main long acting

contraceptives, Jadelle and intrauterine contraceptive device were used by 4% of the respondents(20) .

In a study conducted in Addis Ababa, Ethiopia on fertility desire and family planning need among HIV positive men and women on ART unit showed that 246(53.5%) of the respondents were using different forms of FP. The most preferred method of FP was condom and injectables 72.9% and 21.2% respectively whilst implant and IUD had the lowest utilization rate(21). Similarly in another study done in Addis Ababa on unmet reproductive health care needs and occurrence of unintended pregnancy among HIV positive women in ART units showed more than half (60%) of the respondents were using condom. Injectables and pills were the other methods mostly used next to condom; 74 (39%), 28 (15%), respectively. On the other hand, 4.3% were using IUD, 8.5% Norplant and permanent method was the least used method (1.6%)(14).

A study conducted on utilization of modern contraceptives among HIV positive reproductive age women in Tigray, Northern Ethiopia reported less than half,167 (46.3%) of respondents were currently using a modern contraceptive method. The most commonly used method, 100 (59.9%) was dual contraceptives. Overall, 29.3% of the respondents reported using hormonal methods only (injectables, pill, and Norplant; 22.7%, 4.2%, and 2.4% respectively). IUDs were not reported by any respondent(13). In another study conducted in Gimbie town, Western Ethiopia showed that 224(56.7%) of the respondent were using modern contraceptive .With regards to the specific contraceptives, pills 20(8.9%), Injectables 25(11.2%), IUCD 6(2.7%), implants 21(9.4%), condom 77(34.4%), vasectomy 3(1.3%), female sterilization 5(2.2%),and 67(30%) use dual protection(15).

2.2. Factors associated with LAPMs utilization

In a study conducted in Uganda among sexually active PLWHA showed that spouse approval [AOR=9] and knowledge of family planning methods [AOR=4]were strongly associated with family planning use whereas age ,educational status, FP counseling and HIV sero-positivity were not significantly associated with family planning use (22).In contrast, in another study conducted in Uganda showed that age, marital status, educational status, monthly income ,and number of children were independently associated with increased odds of contraception use(18).

Similarly, in study done in Johannesburg amongst HIV positive women showed that age, income, employed, and number of living children were significantly associated with hormonal contraceptive use(injectable, pill, implant and IUCD)(23).

A cross sectional study conducted on contraceptive utilization and associated factors among HIV positive women in Tigray ,North part of Ethiopia showed that Women who were urban dwellers[AOR=2.55] , completed primary education [AOR= 2.27] , having one or more living children [AOR=6.34]and those openly discussed about contraceptive methods with their husbands or sexual partners [AOR=6.34] were more likely to use contraceptive .There was no significant association between age ,educational status, occupation and other variables and contraceptive use(24).In contrast, age ,occupation ,educational status and currently on HAART were significantly associated with modern contraceptive use among HIV positive women (13). Another study conducted in Mekele, Northern part of Ethiopia showed that knowledge about LAPMs (AOR=7.8) and number of pregnancy the woman[AOR = 2.7] had significant association with the use LAPMs(25).

A cross sectional study conducted on demand for long acting and permanent contraceptive methods and factors for non use among married women in Goba town, South East Ethiopia showed ever use of LAPMs of contraceptives [AOR=17.43], the number of times discussion on LAPMs with their husband/partner [AOR=4.6], intention to use LAPMs in the future [AOR=3.99] and number of pregnancy [AOR=3.67] were found to have significant association with the use of LAPMs of contraceptives. Statistically significant association was not seen between age of women , number of children alive ,educational status, religion, income of the family and other variables and utilization of LAPMs of contraceptives (26) .

2.3. Reasons for not using LAPMs

In study conducted in Zimbabwe, the major reasons mentioned for not utilizing long acting contraception among women living with HIV were fear of side effects, limited knowledge, didn't have a sexual partner ,never use family planning methods before, planning to have children, unavailable at the post test-support services clinic since the set-up of the clinic is not ideal for the provision of these services and the cost to access the services is not affordable for most of the respondents (20). In study done in Cape Town, the vast majority of women were using short acting methods. HIV positive women reported that they would not use IUD because they were

not sure of its safety related with their current health status. The other reason why women do not want to use IUD and female sterilization was procedure related (17).

In study conducted in Mekele ,the main reason cited by the married women for not using LAPM was the use of another method of contraceptive, developing side effect, not allowed by husband, medical problem and the non availability of service(25).

Most of the studies were done on contraceptive use and associated factors among HIV positive women, but the utilization of LAPMs and associated factors among this target population were not assessed.

3. Objectives

3.1. General objective:-

- To determine long acting and permanent contraceptive methods utilization and associated factors among female antiretroviral therapy attendees in Gondar town**,** North West Ethiopia 2014

3.2. Specific objective:-

- To determine the prevalence of LAPMs utilization among HIV positive women who are on ART
- To identify factors associated with the utilization of LAPMs among HIV positive women who are on ART

4. Methodology

4.1. Study area and Study period

The study was conducted in Gondar town. Gondar town is one of the 23 districts in North Gondar zone, which is found in North West part of Ethiopia and located at 180 km from Bahri dar the capital city of Amhara regional state and 750km from Addis Ababa. According to 2007 census, the town had total population of 207,044 of whom 98,120 were men and 108,924 women. The town is established on 40.27 km^2 (15.55 sq mi) and divided in to 24 kebelles. The majority of the inhabitants were orthodox Christians (84.2%), Muslim (11.8%) and 1.1% were Protestant. There are one governmental hospital and eight health centers in Gondar town. Among these, one hospital and four health centers provide ART service. Each of health institutions had family planning units which provide family planning service separately. There are no private clinics which provide ART service in the town. In Gondar town, about 12408 people are currently on ART and about 37815 people are family planning user among the general population at September 2014(27). The study was conducted from August 2013 to June 2014.

4.2. Study design

- Institution based cross-sectional study design was used.

4.3. Population

4.3.1. Source population

- All HIV positive women of reproductive age (15–49years) attending ART units in Gondar health institutions.

4.3.2 Study population

- Non pregnant HIV positive women of reproductive age (15–49years) attending ART units in Gondar health institutions at the time of the study.

4.4. Inclusion and exclusion criteria

4.4.1. Inclusion criteria

- Women of reproductive age (15-49 years old) attending ART units in Gondar health institutions

4.4.2 .Exclusion criteria

- Critically ill clients
- Women who are unable to hear and/or speak
- Women with mental illness
- Unwilling to participate

4.5. Sample size calculation

Sample size was determined by the single population proportion formula with the following assumptions: prevalence of LAPMs utilization (p) to be 14.4% from the study conducted in Addis Ababa, Ethiopia among HIV Infected women in ART Units (26) with a margin of error of 3%, and 95% confidence level. Based on evidences obtained from the respective Gondar city health bureau and Gondar university hospital, the source population was 4234.So population correction was used to get the corrected finite sample size that was 468.To compensate for non response rate 10% of the sample was added=46; finally a total of 515 HIV positive women were sampled for the study.

$$n = \frac{\left(Z\alpha_{/2}\right)^2 P(1-P)}{d^2}$$

Where: z=standard score corresponding to 95% CI=1.96

p= 14.4%

d=Margin of error/ precision = 3%

n= $\frac{(1.96)^2(0.144)(1-0.144)}{(0.03)^2}$ = 526

$$n_f = \frac{n}{1+{}^{n}/_{N}}$$

$$n_f = \frac{526}{1+{}^{526}/_{4234}}$$

n_f = 467.8

4.6. Sampling procedure

One hospital and four health centers were included in the study since these are the only health institutions which provide ART service in Gondar town. The sample for each health institution was allocated proportionally to the number of clients on ART at each institution. Respondents were selected by systematic random sampling method from the existing sampling frame of clients list. Every 8^{th} women who came to each health institution were selected respectively. If the selected participant not available or fulfill the exclusion criteria, then the next client was included in the study. " 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 five facilities (by referring the client's registration book) by the total sample size.

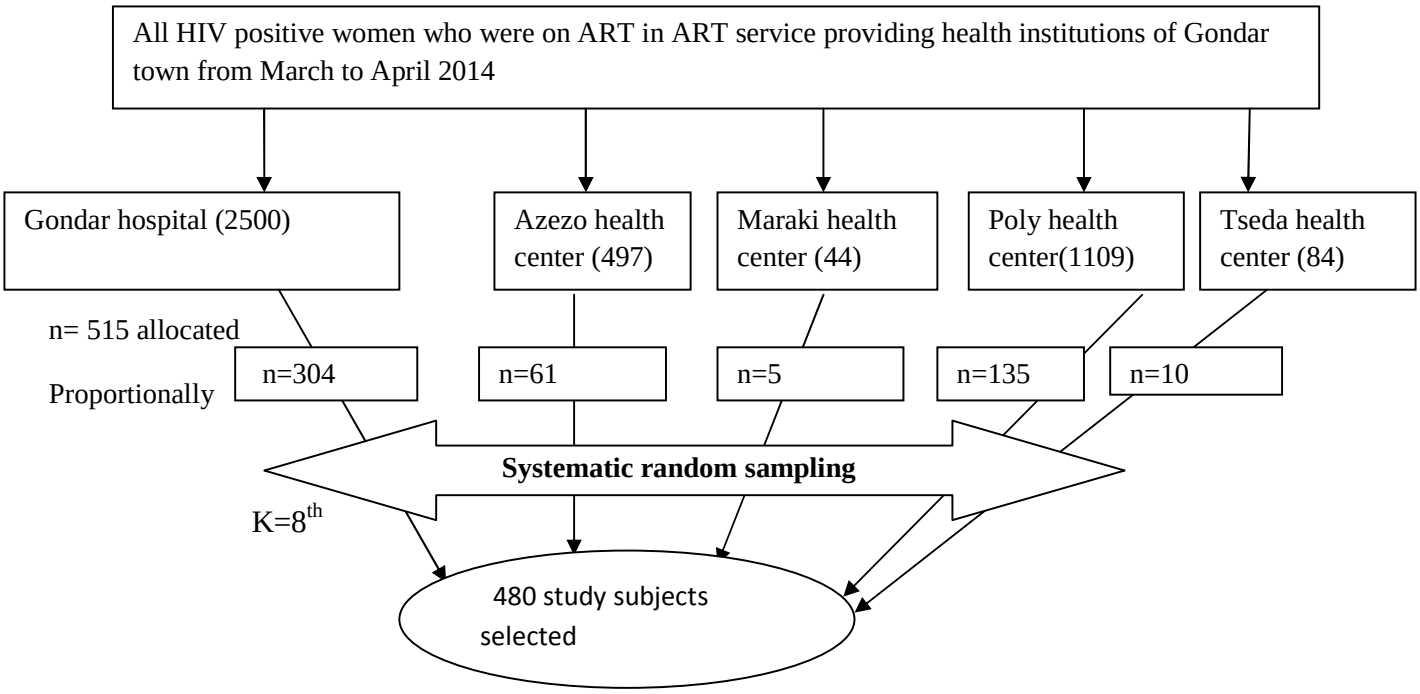

Figure 1: Schematic presentation of the sampling procedure used in the study, Gondar town, North West Ethiopia, 2014

4.7. Data collection procedures

Instrument: Interviewer administered questionnaire was adopted with modification from related studies (4, 20, 26)and translated to the local Amharic language. The questionnaire was composed of five parts (socio-demographic and economic characteristics, ART status, sexual & reproductive characteristics, knowledge, current contraceptive utilization, and associated

factors). It mostly contains closed ended questions and few open-ended ones. A structured Amharic version questionnaire was used for data collection after pre-testing on 5% of the same source population other than the sampled population who were found in the selected two health institutions. An exit Interviews was carried out during the regular working hours by the trained female nurses who were working in the five health institutions other than ART units for one month and fifteen days.

4.8. Data Quality control

The questionnaire was translated from English to Amharic and back translated to English by other translator to check for consistency. Prior to the actual data collection, questionnaire was pretested on 5% of the same source population who are not part of the actual sample a week before the commencement of the main research. The supervisor and data collectors were trained for two days. The training was focus on the objective, methodology and the data collection tool of the survey that the data collectors were able to conduct data collection efficiently and effectively, standardize their interviewing technique and interview in consistent manner.

During the actual data collection process, supervisor checked the data collectors on the heath institutions randomly for consistency and completeness of each questionnaire. Filled questionnaires were checked daily by principal investigator. The principal investigator was establish close and regular contact with the supervisor and data collector to follow up the progress; problems encountered and gives them feedback on issues they were not clear.

The collected data were cleaned for inconsistencies. All of the entered data were re-checked by comparing the entered data with the actual questionnaire. Frequencies were used to check for missed values. Any errors identified at that time were corrected after revision of the original data using the code numbers.

4.9. Data Analysis

After data collection, each questionnaire was given a unique code by the principal investigator. The principal investigator entered the data using Epi-info version 3.5.4 then exports it to SPSS version 21 for cleaning and analysis.

Frequencies and percentage of different variables were computed as appropriate. Bivariate analysis was used to determine the association between different factors and the outcome

variable. Odds ratio with 95% confidence interval was computed to assess the presence and degree of association between the dependent and independent variables.

The variables with a p- value as high as 0.2 in the bivariate analysis and not significant but evidence from literature review indicating possible association were considered in multiple logistic regression to control for confounding variables.

Age of respondent, number of living children, monthly income, and duration on ART was recoded to make the variables categorical.

4.10. Study variables

Dependent variables: - Utilization of LAPMs

Independent variables:-

- **Socio- demographic and economic characteristic** such as: Age, educational level, marital status, occupation and income
- **Reproductive characteristics**: have a child ,number of living children ,desire for another child and pregnancy history
- **Client characteristics**: knowledge about LAPMs ,heard about LAPMs, discussion with husband or sexual partner about family planning methods and partner opinion
- **Service characteristics**: discussion with health provider/HEW about family planning methods
- **ART status**: duration on ART

4.11. Operational definition of variables

ART attendees: Women who had at least one visit to the selected ART treatment unit for receiving ART.

Dual method: utilization of any hormonal or permanent modern contraceptive method along with male condom

Current use of contraceptive method: referred to respondents who responded positively for use of contraceptive methods at time of the interview to delay or avoid pregnancy.

Currently sexually active: Women who had been sexually active within the past 6 month

LAPMs: - methods that provide pregnancy protection for more than one year per application. They include the intrauterine device (IUD), implants, female sterilization.

IUDs and implants are long-acting temporary (reversible) methods; when removed, return to Fertility is prompt.

Female sterilization is the Permanent methods of contraception**.**

Measurement

Knowledge about LAPMs was measured among those who reported they had heard about LAPMs. Each question had three mutually exclusive response options: 'yes,' 'no,' and 'I do not know.' Each correct answer earned one point. Women's knowledge was estimated by the total number of correct answers to 16 items on knowledge with a minimum score of 0 and maximum of 16.To measure the knowledge it was categorized based on the percent of knowledge of the distinct characteristics of LAPMs as: "high" –those who knew 67% and above, "moderate" those who knew 33-66% and "low" those who knew less than 33%.

4.12. Ethical Considerations

Prior to data collection, ethical clearance was obtained from the Research Ethics Committee (REC) of school of Public Health, College of Health Science of AAU. Written permission letter was obtained from Gondar city health bureau, Gondar university hospital and other concerned bodies in the study area. During data collection, each respondent was informed about the purpose, scope and expected outcome of the research, and appropriate informed written consent was taken from the respondents. Anyone who was not willing to participate was excluded from the study; and during the interview, respondents who are interested to avoid specific questions or discontinue the interview were allowed to do so. In order to establish anonymous linkage, only the codes, not the names of the respondents, were registered on the questionnaire. During the training of data collectors and supervisor, ethical issues were addressed as important component of the research.

4.13. Dissemination of Results

The finding of the study will be submitted to Addis Ababa University College of Health Science, School of Public Health, Gondar city health bureau and Gondar university hospital. The result

will be presented at the School of Public Health in partial fulfillment of masters of degree in public health and in different seminars, meetings and workshops. Publication on subject related peer-reviewed scientific journals will also be considered.

5. Result

5.1. Socio-demographic characteristics of HIV positive women

A total of 480 women of age 15-49 participated with a response rate of 93.2%. The mean age of the respondents was 31.2±5.7 (SD) years. Approximately, 287(60.0 %) of the participants were in the age group of 25 to 34years. Majority 421(87.7%) of respondents were Orthodox Christians and 256(53.3%) were married. In terms of educational status, 156(32.5%) had primary level education. With regard to occupation, 230(47.9%) were self employee and 221(46.0%) of the respondents had monthly income less than or equal to 500 ETB. The average monthly income of the respondents was 1015.5 ±1038.8(SD) ETB. (Table 1)

Table 1: Socio-demographic and economic characteristics of HIV positive reproductive age women attending ART units in Gondar health institution, Northwest Ethiopia, 2014. (n= 480)

Variables	Frequency	Percent
Age		
15-24	43	9.0
25-34	287	59.8
≥35	158	31.3
Mean ± SD	31.2±5.8	
Religion		
Orthodox	421	87.7
Others*	59	12.3
Marital status		
Single	34	7.1
Married	256	53.3
Divorced	75	15.6
Widowed	75	15.6
Separated	40	8.3
Educational status		
No schooling	143	29.8
Primary	156	32.5
Secondary	141	29.4
Tertiary	40	8.3
Occupational status		
Self employee	230	47.9
Employee in formal sector	50	10.4
Unemployed	200	41.7
Monthly House hold income		
0-500	221	46.0
501-1500	171	35.6
1501-2500	47	9.8
>2501	41	8.5
Mean ± SD	1015.5±1038.8	
Total	**480**	**100**

*=Muslim, Protestant, Catholic

5.2. ART status, sexual & reproductive health characteristics of HIV positive women

Of the 480 respondents, 302(62.9%) had sexual encounter six month prior to the data collection time. Majority 400(83.3%) of the respondents had a child, 242 (60.5%) of which were having two or more children and more than half 254(52.9%) of the study participant didn't want to have another child in the future. Approximately 185(39.0%) of respondents became pregnant while receiving ART, 109(58.9%) of which were unintended. Three hundred forty seven (72.3%) the participants had been on ART for more than one year. (Table 2)

Table 2: ART status and sexual & reproductive health characteristics of HIV positive woman attending ART units in Gondar health institution, North West Ethiopia, 2014. (n=480)

Variable	Frequency	Percent
Currently Sexually active		
Yes	302	62.9
No	178	37.1
Have a child		
Yes	400	83.3
No	80	16.7
Number of living children (n=400)		
One child	158	39.5
two and more child	242	60.5
Desire to have a child		
Yes	226	47.1
No	254	52.9
Pregnancy since on ART		
Yes	185	38.5
No	295	61.5
Recent pregnancy (n=185)		
Planned	76	41.4
Unplanned	109	58.9
Duration on ART		
≤12 month	133	27.7
>12month	347	72.3

5.3. Current contraceptive use and service characteristics among HIV positive sexually active women

Two hundred fifty six (85.0%) of the sexually active women were using some modern form of contraception while 46 (15.0%) were not using any form of contraceptive at the time of interview. The most commonly used method, 86(33.6%) was condom followed by dual method 74(28.8%). The current utilization rate of LAPMs (alone or with condom) was 62(24.1%) and the average year of practicing LAPM was 2.2(median=2).

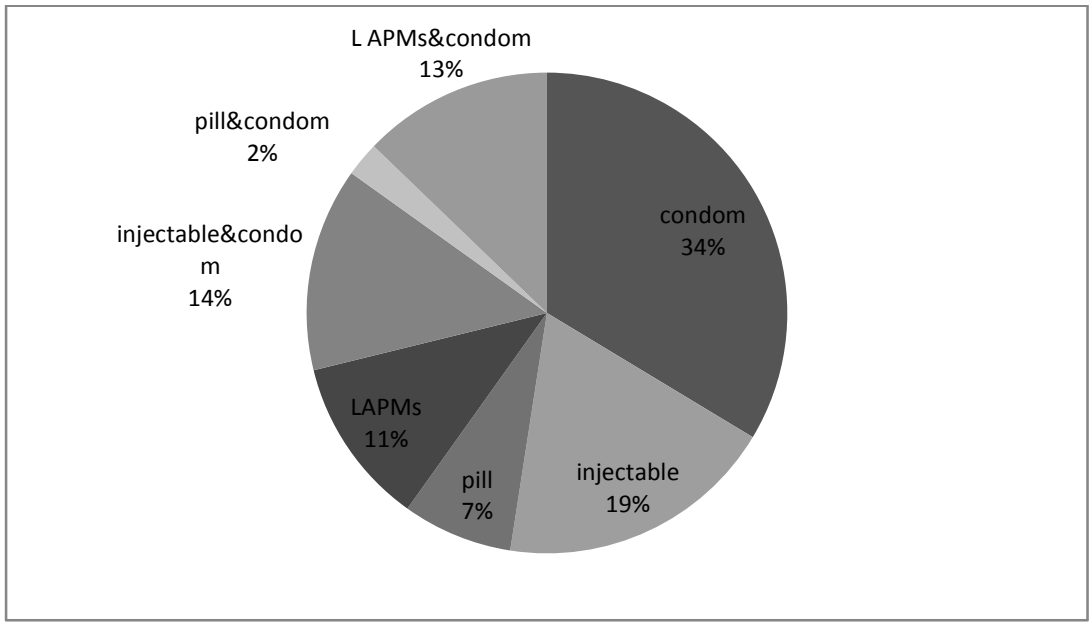

Figure 2. Contraceptive methods used by sexually active women attending ART units in Gondar health institution, North West Ethiopia, 2014

From the LAPM users majority 50(80.6%) of respondents were using implant followed by IUCD 7(11.3%) and female sterilization 5(8.1%). Majority 42(67.7%) of study participants obtained the service from governmental health centers. Forty one (66.1%) of the respondents started using LAPMs while receiving ART. More than half 163(67.9%) of study participants didn't intend to use LAPMs in the future. The main reason cited by the women for LAPMs choice was having enough child 27(44.6%) and want to space 25(38.5%).

More than half 158(59.2%) of the respondents had discussion about family planning with their husband/ sexual partner in the past six month. The decision of using any contraceptive methods was mainly made by both partners together for 134(84.8%) of the respondents. More than half 191(63.2%) of participants had discussion about family planning methods with health care provider in the past six month and majority 151(79.1%) were told about the side effects of each method and the solutions 153(80.1%). Among the women who did not desires having more children, only 34(25.0%) were currently using LAPMs. (Table 3)

Table 3: LAPMs use and service characteristics among women attending ART units in Gondar health institution, North West Ethiopia, 2014

Variable	Frequency	Percent
Type of LAPMs use(n=62)		
Implant	50	80.6
IUCD	7	11.3
Female sterilization	5	8.1
Source of LAPMS (n=62)		
Govt.Hospital	12	19.4
Govt. Health center	42	67.7
Govt .Health post	1	1.6
Family guiding association	7	11.3
Start using LAPMs(n=62)		
Before HIV diagnosis	8	13
After HIV diagnosis	13	21
Initiation of ART	41	66.1
Desire to use LAPMs(n=240)		
Yes	77	32.1
No	163	67.9
Reason for LAPMs choice(n=62)		
Have enough children	27	41.5
Want to space my children	25	38.5
Advice from a health professional	14	21.5
Other reason*	3	4.7
Discuss with husband or sexual partner about FP(n=267)		
Yes	158	59.2
No	109	40.8
Partner opinion about FP use(n=158)		
Decided together	134	84.8
Decided alone	24	15.2
Discussion with health provider/HEW about FP(n=302)		
Yes	191	63.2
No	111	36.8
Health provider told about side effects (n=191)		
Yes	151	79.1
No	40	20.9
Health provider told about solution (n=191)		
Yes	153	80.1
No	38	19.9

*= Knowing HIV status, have problem with other methods

The major reasons mentioned for not using LAPMs were fear of side effects& inconvenience 143(47.4%), fear of drug interaction 64(21.1%),desire to have a child 47(15.6%) and use of another method 42(14.0%).

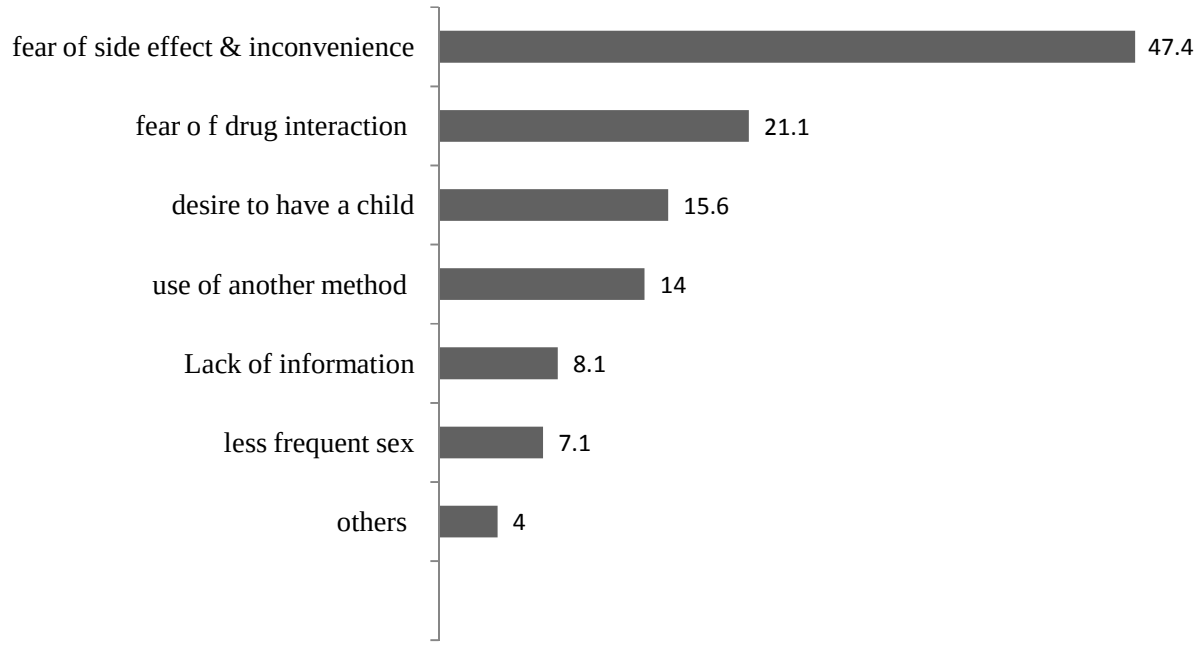

Figure 3. Reasons for not using LAPMs among women attending ART units in Gondar health institution, North West Ethiopia, 2014

Others = Partner disapprove, provider recommend other method, method was out of stock, service was not available, don't think can conceive

5.4. General knowledge of respondents on LAPMs

Regarding respondent's awareness about LAPMs, 296(98%) had heard about LAPMs. Among this, 296(100%) had heard about implants. Media (Radio and Television) and health institutions were the major source of information for 179(61.0%) and 178(60.1%) respondents, respectively. Concerning the general use of LAPMs, 231(78.0%) of participant mentioned that LAPMs were useful for child spacing. One hundred ten participants (37.2%) had low knowledge about LAPMs.

Table 4:- General knowledge about LAPMs among women attending ART units in Gondar health institution, North West Ethiopia, 2014(n=296)

Variable	**Frequency**	**Percent**
Ever heard about LAPMs		
Yes	296	98.0
No	6	2.0
Type of method ever heard		
Implant	296	100
IUCD	276	93.2
Tuba ligation	97	32.8
vasectomy	61	20.6
Source of information		
Health institution	178	60.1
HEWs	29	9.8
Family	12	4.1
Friends	58	19.6
Media	179	61.0
Other *****	9	3.1
General use of LAPMs		
Prevent unwanted pregnancy	146	49.3
Prevent maternal and child mortality and morbidity	74	25.0
Limiting family size	116	39.2
Child spacing	231	78.0
Knowledge about LAPMs(n=302)		
Low	110	37.2
Moderate	91	30.7
High	95	32.1

* = Training, Education

5.5. Knowledge of respondents about implant, IUCD and female sterilization among women who attend ART units in Gondar health institution

Majority 177(59.8%) of the respondents knew that LAPMs are highly effective than short acting methods in preventing unwanted pregnancy .One hundred forty four (48.6%) of women were not sure of that IUCD can prevent pregnancies for 10years. Two hundred twelve (71.6%) of respondents knew that immediate pregnancies after removal of IUCD. Majority 277(76.7%) of the respondents knew that implant can prevent pregnancy for 3 – 5 years, 254(85.8%) of participants aware of that implants result in immediate pregnancy after removal and require minor surgical procedure 207(69.9%). Majority 225(76.0%) of the respondents were not aware that pregnancy is not possible after tubal ligation is done for female sterilization.

Table 5: Knowledge about implant, IUCD and female sterilization among women attending ART units in Gondar health institution, North West Ethiopia, 2014 (n=296)

Knowledge statements	Yes %	No %	I don't know %
LAPMs are highly effective than short acting method in preventing unwanted pregnancy	59.8	23.0	7.0%
IUCD can prevent pregnancies for more than 10 years	39.5	11.8	48.6
IUCD is not appropriate for female at high risk of getting STIs	11.8	18.2	69.9
IUCD has no interference with sexual intercourse or desire	35.1	8.4	56.4
Breastfeeding women can use the IUD	30.7	10.5	58.8
IUCD is immediately reversible(become pregnant quickly when removed)	71.6	3.0	25.3
IUCD can be used by HIV positive women	42.6	9.1	48.3
IUCD can cause cancer	12.2	22.3	65.5
Implant can prevent pregnancies 3-5 years	76.7	4.4	18.9
Implants require minor surgical procedure during insertion and removal	69.9	4.7	25.3
Implants is immediately reversible(become pregnant quickly when removed)	85.8	0.3	13.9
Do you think Implants can be used by HIV positive women?	58.4	6.8	34.8
Female sterilization needs an operation to be performed	15.2	2.7	82.1
Women can have Female sterilization to avoid having any more children	22.0	2.0	76.0
Sterilization is a more effective method of Contraception than the injection to avoid unwanted pregnancy	19.9	0.7	79.4
Do you think Sterilization can be used by HIV positive women?	18.6	1.4	80.1

5.6. Factors associated with LAPMs utilization

5.6.1. Socio-demographic characteristics and LAPMs use

Crude analysis of socio-demographic variables on binary logistic regression showed that age, marital status, education status, occupation and monthly household income of the respondents were not significantly associated with LAPMs utilization.

Table 6: Bivariate analyses of socio-demographic characteristics and LAPMs use among female ART attendees in health institution of Gondar town, NW Ethiopia, 2014(n=302)

Variable	LAPMs utilization		Crude OR
	Yes (%)	N0 (%)	
Age(years)			
15-34	50(22.3)	174(77.7)	1.58 [0.79, 3.15]
≥ 35	12(15.4)	66(84.6)	1
Marital status			
Single *	8(14.5)	47(85.5)	1
Married	54(21.9)	193(78.1)	1.64[0.73,3.69]
Educational status			
No schooling	18(20.9)	68(79.1)	1
Primary	25(24.3)	78(75.7)	1.21[0.61,2.41]
Secondary and above	19(16.8)	94(83.2)	0.76[0.37,1.56]
Occupation			
Self employee	23(18.4)	102(81.6)	2.02[0.84,4.83]
Employee in formal sector	10(31.3)	22(68.8)	1.11[0.60,2.04]
Unemployed	29(20.0)	116(80.0)	1
Monthly house hold income(ETB)			
≤500	15(14.7)	87(85.3)	1
501-1500	31(24.0)	98(76.0)	1.84[0.93,3.62]
1501-2500	9(25.0)	27(75.0)	1.93[0.76,4.91]
≥2501	7(20.0)	28(80.0)	1.45[0.54,3.91]

*Single= included never married, divorced, separated and widowed

* Statistically significant factor

5.6.2. ART status, client and service characteristics

Among client and service characteristics, ever had been pregnant since the commencement of ART, had discussion with partner and health care provider/HEW were significantly associated with LAPMs utilization at p<0.05. Women who had been pregnant since the commencement of ART were more likely use LAPMs than those who were not **[COR= 3.08, 95%CI [1.67, 5.68].**Women knowledge about LAPMs were associated with LAPMs utilization. Women who had high knowledge were 2.6 times more likely to use LAPMs as compared with those who had low knowledge**[COR=2.65, 95% CI: 1.31,5.33).**Moreover, women on ART who had discussion about family planning with their husband or partner were **2** times more likely use LAPMs than those who did not discuss **[COR=1.97 ,95% CI [1.04, 3.74]** and also those women who had discussion with health care provider use LAPMs 3 times more likely than those who didn't

discuss**[COR=2.93,95% CI [1.48, 5.78]** respectively**.** However, having a child, desire to have a child, number of living children, ever heard about LAPMs, partner opinion about contraceptive use and duration on ART were not significantly associated with LAPMs utilization.

Table 7:-Bivariate analyses of factors associated with LAPMs use among female ART attendees in Gondar health institution, North West Ethiopia, 2014. (n=302)

Variable	**LAPMs utilization**		**Crude OR**
	Yes (%)	No (%)	
Have a child			
Yes	59(22.2)	207(77.8)	3.14[0.93, 10.59]
No	3(8.3)	33(91.7)	1
Number of living children			
1	18(18.9)	77(81.1)	1
≥2	41(24.0)	130(76.0)	1.35[0.73,2.51]
Ever had been pregnant			
Yes	45(28.8)	111(71.2)	**3.08[1.67,5.68]***
No	17(11.6)	129(88.4)	1
Desire to have a child			
Yes	28(16.9)	138(83.1)	1
No	34(25.0)	102(75.0)	1.64[0.94,2.88]
Duration on ART			
≤12 month	19(24.4)	59(75.6)	0.74(0.40,1.36)
>12 month	43(19.2)	181(80.8)	1
Discuss with partner about FP			
Yes	40(25.3)	118(74.7)	**1.97 [1.04, 3.74]***
No	16(14.7)	93(85.3)	1
Partner opinion			
Decide together	35(26.1)	99(73.9)	1.34[0.47,3.87]
Decide alone	5(20.8)	19(79.2)	1
Discuss with health provider /HEW about FP			
Yes	50(26.2)	141(73.8)	**2.93 [1.48, 5.78]***
No	12(10.8)	99(89.2)	1
Heard about LAPMs			
Yes	61(20.6)	235(79.4)	1.30[0.15,11.32]
No	1(16.7)	5(83.3)	1
Knowledge about LAPMs			
Low	15(13.6)	95(86.4)	1
Moderate	18(19.8)	73(80.2)	1.56[0.74, 3.31]
High	28(29.5)	67(70.5)	**2.65[1.31,5.33]***

5.6.3. Multivariate analysis of LAPMs use and factors

A multivariate analysis was performed to identify independent predictors of LAPMs utilization. Factors with p-values ≤ 0.2 and those factors not significant but evidence from literature review indicating possible association with LAPMs use were considered in the logistic regression model.

Consequently, ever had been pregnant since the commencement of ART, had discussion with health care provider and knowledge about LAPMs showed significant association. Women who had been pregnant since the commencement of ART were more than two times more likely to use LAPMs than those who had not **[AOR=2.68, 95% CI [1.21, 5.93]**.Those women who had discussion about family planning with health care provider/HEW were more than two times more likely to use LAPMs than those who did not discuss [**AOR=2.69, 95% CI [1.18, 6.15].** In addition ,women who had high knowledge about LAPMs were more than 2 times more likely to practice LAPMs as compared with those who had low knowledge **[AOR= 2.59, 95% CI [1.04, 6.45].**

Table 8: Multivariate analyses of variables associated with LAPMs use among female ART attendees in Gondar health institution, North West Ethiopia, 2014. (n=302)

Variable	LAPMs utilization		COR	AOR
	Yes(%)	No(%)		
Age				
15-34	50(22.3)	174(77.7)	1.58[0.79,3.15]	1.20[0.52,2.80]
≥35	12(15.4)	66(84.6)	1	1
Marital status				
Single	8(14.5)	47(85.5)	1	1
Married	54(21.9)	193(78.1)	1.64[0.73,3.69]	3.23[0.60,17.24]
Educational status				
No schooling	18(20.9)	68(79.1)	1	1
Primary	25(24.3)	78(75.7)	1.21[0.61,2.41]	1.07[0.45,2.53]
Secondary and above	19(16.8)	94(83.2)	0.76[0.37,1.56]	0.57[0.21,1.54]
Occupation				
Self employee	23(18.4)	102(81.6)	2.02[0.84,4.83]	1.00[0.47,2.14]
Employee in formal sector	10(31.3)	22(68.8)	1.11[0.60,2.04]	1.94[0.64,5.91]
Unemployed	29(20.0)	116(80.0)	1	
Ever being pregnant				
Yes	45(28.8)	111(71.2)	**3.08[1.67,5.68]***	**2.68[1.21,5.93]***
No	17(11.6)	129(88.4)	1	**1**
Discuss with partner about FP				
Yes	40(25.3)	118(74.7)	**1.97 [1.04, 3.74]***	1.70[0.79,3.67]
No	16(14.7)	93(85.3)	1	1
Discuss with health care provider /HEW about FP				
Yes	50(26.2)	141(73.8)	**2.93 [1.48, 5.78]***	**2.69[1.18,6.15]***
No	12(10.8)	99(89.2)	1	**1**
Knowledge about LAPMs				
Low	15(13.6)	95(86.4)	1	1
Moderate	18(19.8)	73(80.2)	1.56[0.74, 3.31]	1.07[0.42,2.74]
High	28(29.5)	67(70.5)	**2.65[1.31,5.33]***	**2.59[1.04,6.45]***
Number of living children				
1	18(18.9)	77(81.1)	1	1
≥2	41(24.0)	130(76.0)	1.35[0.73,2.51]	1.24[0.56,2.75]
Desire to have a child				
Yes	28(16.9)	138(83.1)	1	1
No	34(25.0)	102(75.0)	1.64[0.94,2.88]	1.42[0.67,3.02]

6. Discussion

This study attempted to assess utilization of LAPMs and associated factors among female ART attendees who are in their reproductive age. Overall, less than a quarter 62(24.1%) of respondents in this study reported LAPMs use. Ever had been pregnant since the commencement of ART, had discussion with health care provider/HEW and knowledge about LAPMs showed significant association.

The reported prevalence of LAPMs use was higher in our study than the LAPMs prevalence rate for general population in Amhara region (4). The higher uptake of LAPMs might be due to the fact that women attending ART units have an opportunity to discuss and also improve their awareness through time on LAPMs utilization due to frequent counseling service.

Similarly, LAPMs use was higher in our finding than the studies conducted in Uganda which was 0.7%, 5.0% and 9.0% respectively (18, 19, 22). This could be due to that one study done in Uganda used retrospective study design and study period difference. The current finding is also higher than findings from Addis Ababa (14.4%)(14) and Tigray, Northern Ethiopia(2.4%)(13).This might be due to variation in time reference given for being sexually active and study period.

In this study, among LAPMs user about 16.5% of women utilize implant and few number of respondents (2.3%) use IUCD and (1.7%) female sterilization which is broadly in line with study done in Addis Ababa(14)and Gimbie, South West Ethiopia(15). However, this finding is not consistent with the study conducted in Tigay, Northern Ethiopia that reported no utilization of female sterilization in (13). This might be due to the fact that about half of modern contraceptive users (49.7%) got the service within the ART clinic so female sterilization might not be provided in that service area(13).

Among respondents who reported use of contraception, condoms were the most used (33.6%) followed by dual contraception (28.8%).This finding is different from EDHS report in Amhara region, irrespective of HIV status(4). This variation might be women on ART exposed to frequent counseling which promote the utilization of condoms to prevent HIV transmission and the easier access of condom in ART units makes condom utilization rate high in this study population. This finding is congruent with the findings from Gimbie, South West Ethiopia(15).

In this study, the utilization of contraceptive methods was dominated by short acting family planning methods. It highlights that the need to promote the utilization of LAPMs among this target group.

Those women who had discussion with health care provider/HEW about family planning methods were associated with LAPMs use. This finding is consistent with the study done in Johannesburg, South Africa(23). This might be related to the fact that when health care provider/HEW had discussion with clients about contraceptive methods, it will help them to know the available methods including LAPMs, their advantage and disadvantage. So these help them to make an informed choice and avoid unnecessary perception or fear.

Women reported having been pregnant after the initiation of ART had increased odds of using LAPMs. This might be due to that entry to ANC may represent an opportune time to assess women's reproductive intentions for spacing or limiting future pregnancies and postpartum family planning options. It is also opportune time to provide IUD or TL immediately following a birth and also implant before going home from the facility. Additionally, entry into prevention of mother-to-child transmission of HIV (PMTCT) program is a great opportunity for integrating family planning services, including LAPMs(28).

This study revealed that women who had high knowledge about LAPMs were more likely to practice LAPMs as compared with those who had low knowledge which is consistent with a study done in Mekele, Northern Ethiopia(25).This might be having good access to information and knowledge about LAPMs helps to have positive attitude towards LAPMs utilization.

7. Limitation of the study

- The cross-sectional study design makes it difficult to determine the direction of causality(temporal relation between exposure and outcome)
- There is a risk of social desirability bias where by HIV positive women may over-report their contraceptive use because of pressure from health workers and community members to practice protected sex and avoid unwanted pregnancy.
- Lack of adequate literatures generally on the LAPMs use and HIV positive women , which prevents further elaborating the discussion

8. Conclusion and Recommendation

8.1 Conclusion

- The finding discloses that the general usage of contraceptive amongst sexually active women on ART was high though specific usage of LAPMs was found to be low.
- Ever had pregnancy since the commencement of ART, occupation, had discussion about family planning with health care provider/HEW and knowledge about LAPMs were independent factors for LAPMs utilization.
- The main reasons for non-use of LAPMs were fear of side effects& inconvenience, and fear that contraception may create complication with ART drugs.
- Low knowledge among respondents highlights the need for increasing knowledge and awareness of these underutilized methods.

8.2. Recommendation

Program level

- Improve the implementation of integrated family planning service with ART service in order to decrease unplanned pregnancies amongst HIV- positive women
- A lot need to be done to improve the knowledge of HIV positive women about LAPMs

Researcher

- Mixed study should be conducted to identify some of the factors for LAPMs use
- Further study should be conducted to produce better evidence focusing on service delivering institutions

Service provider

- Promoting dual protection (condom plus highly effective methods such as LAPMs) as way of ensuring a reliable contraceptive method to provide extra protection against pregnancy beyond that which condom use alone provide.
- Increased emphasis should be given to improve LAPMs uptake during counseling service to HIV positive women.

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10. Annexes

10.1. Annex I: Conceptual framework

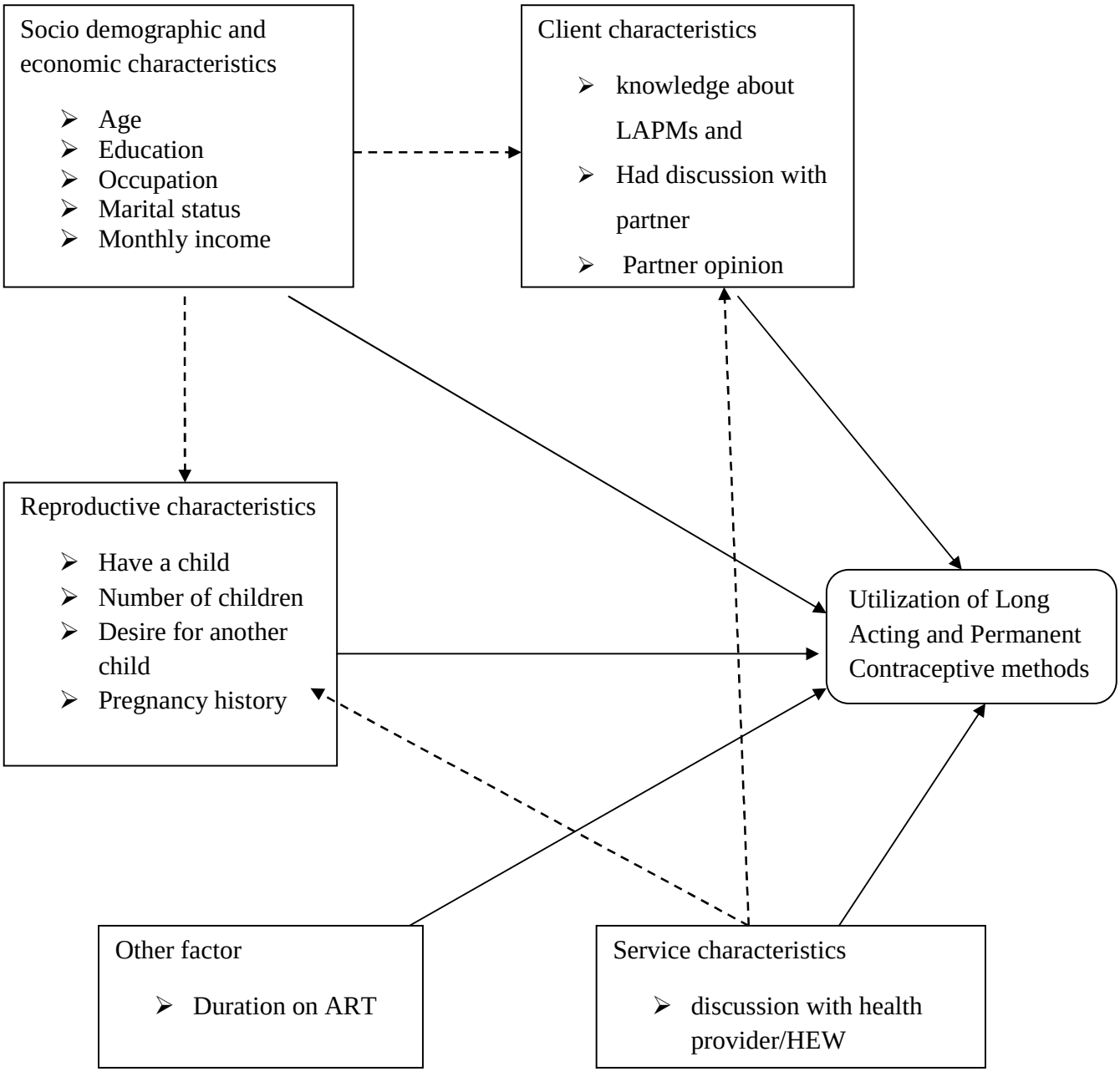

Figure 4: -Conceptual framework: Long acting and permanent contraceptive methods utilization and associated factors among female antiretroviral therapy attendees in Gondar town

10.2. Annex II: Structured questionnaire for Client Exit Interview

English version

Instructions to interviewer: Introduce yourself and explain the purpose of your visit.

SECTION 1 : Interviewer visits and identification

Interviewer visit

Interviewer

Name _____

Date _____

Signature _____

RESULT CODES

1=Completed 2=Partly completed

3= Respondent not found 4=Respondent refused

5= Other (specify) _____

Supervisor	Principal investigator
Name _____	Name _____
Date _____	Date _____
Signature _____	Signature _____

01. Health Facility (Name): _____

02. Type of Facility Where Interview Took Place

1. Health Center 2. Hospital

03.Client chart number or MRN_____

Good morning/afternoon. My name is

_____

I am working for Addis Ababa University. I am a member of a research group working in Gondar town. I would like to ask you some questions about modern contraception specifically we will discuss more on long acting and permanent contraception. The main aim of this study is to assess long acting and permanent contraceptive methods utilization and associated factors among female antiretroviral therapy attendees in Gondar town(health institution). Your truth full answers for all of our questions will be very important to improve the family planning services in the future. All the information you give will be kept confidential and we won't use your names. You may also stop the interview at any time. If you decide that you do not want to participate in the study, or that decide at any time in the future you do not want to participate; it will not affect the services you receive at the clinic now or in the future. We appreciate if you try to answer all the questions. If you agree to be interviewed, the interviews will take15 minutes.

Do you have any questions?

May I begin the interview now?

1.Respondent Agree to be interviewed_____ (signature)

2.Respondent do not agree to be interviewed_____(signature)

Thank you

Section 2: Socio-demographic and economic characteristics

No	Questions	Response
101	What is your age?	_____yrs
102	What is your religion?	1.Orthodox 2.Muslim 3.Protestant 4.Catholic 5.Others,specify
103	What is your marital status?	1.Single 3.Divorced 2.Married 4.Widowed 5.Separated
104	Educational status?	1. Illiterate (can't read or write) 2. Read and write 3 .primary 4. Secondary 5. Technical/vocational 6.Higher
105	Occupation of respondent?	1.Student 2.Private Business /merchant 3.Government employee 4.House wife 5.Daily laborer 6.Farmer 7.Other,specify _____
106	Total monthly income of Family?	Enter the amount in birr_____

Section 3: ART status and sexual & reproductive characteristics of respondents

No	Question	Response	Skip
201	For how long have you been taking ART?	_____month or year	
202	Do you have a child to whom you have given birth?	1.yes 2.no	No→204
203	How many living children of your own do you have?	--------	
204	Do you want to have child in the future?	1.yes 2.no	
205	Have you ever had sex in past six month?	1.yes 2.no	
206	Have you ever been pregnant since the commencement of ART?	1.yes 2.no	No → 301
207	Was your recent pregnancy?	1. Planned 2.Unplanned	

Section 4: Current contraceptive utilization and associated factors

No	Questions	Response	Skip
301	Are you currently using Long acting and permanent contraceptive method?	1.Yes 2.No	No → 309
302	Which Method are you using?	1. Implant 2. Intrauterine contraceptive devices 3. Female sterilisation	
303	What makes you use the current method (LAPMs)?	1. Have enough children 2. Pressure from my husband 3. Want to space my children 4. Advice from a health professional 5.Advice from others 6. Other reason	
304	Where did you get the service?	1. Govt.Hospital 2.Govt. Health center 3. Govt .Health post 4.Family guiding association 5. Private hospital 6. Private clinic 7. NGO 8.Others, specify	
305	For how long have you been using the current method without stopping?(LAPMs)	----------	
306	When did you start using the current method?	1. Before HIV diagnosis 2.After HIV diagnosis 3.initiation of ART	
307	How do you get the service?	1.Free 2.Paid	If free s → 311
308	Is the service affordable?	1. Yes 2. No	
309	If you are not using LAPMs, what are the reasons ?	1. Fear of side effects 2. Partner disapproves 3. Cost of method is not affordable 4. The Service is not available at all 5. No appropriate provider was around 6. Provider recommended another method 7. The method was out of stock at the time of the visit 8.Not sure of its safety related with their current health status 9. Not currently sexually active 10. IUD & Implant could move around freely in	

		the body once inserted and could be lost at the day of removal 11. Planning to have a child in the next three years 12.Others	
310	Do you think you will use LAPMs in the future?	1.Yes 2.No	
311	Are you currently using any other family planning method?	1.Yes 2.No	No→313
312	Which Method are you using?(circle all mention)	1. Injectables 2. Pill 3.Female condom 4.Diaphram/Foam/Jelly 5.Standard days method 6.Lactational Amenorrhea 7.Withdrawal 8.Male condom 9.Other modern method 10.Other traditional method	
313	Have you discussed with your husband or sexual partner about family planning methods in the past six month?	1.Yes 2.No	No→314
314	What was your partner's opinion?	1.Forced you to choose a method he wanted. 2.You and your partner decided together 3. Didn't participate in the decision 4. I decided alone	
315	Did any health provider/HEW at the health facility discuss with you about family planning methods in the past six month?	1.Yes 2.No	No→401
316	Were you ever told by a health or family planning worker about side effects or problems you might have with the method?	1.Yes 2.No	
317	Were you told what to do if you experienced side effects or problems?	1.Yes 2.No	

Section 5: General Knowledge of respondents about LAPMs

No	Questions	Response	Skip
401	Have you heard about LAPMs?	1.Yes 2.No	No → end
402	Which method of Long acting and permanent contraceptive methods do you know?(circle all mentioned by the respondent)	1. Intra uterine contraceptive device 2. Implant 3. Tubalegation 4. Vasectomy	
403	What is your source of information? (circle all mentioned by the respondent)	1.Health institutions 2.HEWs 3.Family 4.Friends 5.Mass media(TV, Radio, etc 6.NGO 7.Others ------	
404	What general uses of LAPMs do you know? (circle all mentioned by the respondent)	1.Helps for prevention of unwanted pregnancies 2.Prevention of possible maternal and child death and ill health 3. Limiting family size 4. Child spacing 5. Others_____	

Section 6: knowledge about implant, IUCD and female sterilization

No	Questions	Response
501	LAPMs are highly effective than short acting method in preventing unwanted pregnancy	1. Yes 2. No 3. I don't know
502	Intra Uterine Contraceptive Device can prevent pregnancies for more than 10 years	1. Yes 2. No 3. I don't know
503	Intra Uterine Contraceptive Device is not appropriate for female at high risk of getting STIs	1. Yes 2. No 3. I don't know
504	Intra Uterine Contraceptive Device has no interference with sexual intercourse or desire	1. Yes 2. No 3. I don't know
505	Breastfeeding women can use the IUD	1. Yes 2. No 3. I don't know
506	Intra Uterine Contraceptive Device is immediately reversible(become pregnant quickly when removed)	1. Yes 2. No 3. I don't know
507	The intrauterine contraceptive device can be used by HIV positive women?	1. Yes 2. No 3. I don't know
508	Intra Uterine Contraceptive Device can cause cancer	1. Yes 2.No 3. I don't know
509	Implant can prevent pregnancies 3-5 years	1. Yes 2.No 3. I don't know
510	Implants require minor surgical procedure during insertion and removal	1. Yes 2.No 3. I don't know
511	Implants is immediately reversible(become pregnant quickly when removed)	1. Yes 2.No 3. I don't know
512	Do you think Implants can be used by HIV positive women?	1. Yes 2.No 3. I don't know
513	Female sterilization needs an operation to be performed	1. Yes 2.No 3. I don't know
514	Women can have Female sterilization to avoid having any more children	1. Yes 2.No 3. I don't know
515	Sterilization is a more effective method of Contraception than the injection to avoid unwanted pregnancy	1. Yes 2.No 3. I don't know
516	Do you think Sterilization can be used by HIV positive women?	1. Yes 2.No 3. I don't know

THANK YOU

10.3. Annex III. Amharic version questionnaire

ለጠያቂው መመሪያ ፡ እራሶትን ያስተዋዉቁ እነዲሁም የመጡበትን ምክኒያት

ክፍል 1 ፡ ጠያቂው የተገኙበት እና የመለያ ሁኔታ
ጠያቂው የተገኙበት
የጠያቂው **ስም_____** **ቀን_____** **ፊርማ_____**
የዉጤት ቁጥር 1.**ሙሉ በሙሉ የተሟላ** 2.**በግማሽ የተሟላ** 3.**ተጠያቂው አልተገኙም** 4. **ተጠያቂው ለመሳተፍ ፍቃደኛ አይደሉም** 5.**ሌላ(ግለፀ)**

የተቆጣጣሪ **ስም_____** **ቀን_____** **ፊርማ_____**	**የጥናቱ ተመራማሪ** **ስም_____** **ቀን_____** **ፊርማ_____**

01.**የጤና ድረጅቱ ስም**: _____
02.**ቃለ መጠይቁ የተደረገበት የጤና ድረጅቱ ክፍል 1.ሆስፒታል 2. ጤና ጣቢያ**
03.**የታካሚው ካርድ ቁጥር**_____
ጤና-ይስጥልኝ ስሜ ---------- ይባላል፡፡ የምሰራዉ ለአዲስ አበባ ዩኒቨርሲቲ ነዉ፡፡ በጎንደር ከተማ ለረጅም ጊዜ እና በቋሚነት ስለሚያገለግሉ የወሊድ መቆጣጠሪያ ዘዴዎች ለማጥናት በተዋቀረዉ ቡድን ዉስጥ አባል ነኝ፡፡ከዚህ በመቀጠል ስለዘመናዊ የወሊድ መቆጣጠሪያ ዘዴ በተለይም ስለረጅም ጊዜ እና በቋሚነት ስለሚያገለግሉ የወሊድ መቆጣጠሪያ ዘዴ ልጠይቅዎት አፈልጋለዉ፡፡የጥናቱ ዎና አላማ በጎንደር ከተማ የሚገኙ ከቫይረሱ ጋር የሚኖሩ እነዲሁም የፀረ ኤች አይ ቪ መድሀኒት ተጠቃሚ ሴቶች የረጅም ጊዜና በቋሚነት የሚያገለግሉትን የወሊድ

መቆጣጠሪያ ዘዴዎችን እንደሚጠቀሙ እና ተዛማጅ ምክኒያቶችን መገምገም ነዉ።የቤተሰብ ምጣኔ አገልግሎቱን በተመለከተ ለምንጠይቅዎት ጥያቄዎች የሚሰጡን ትክክለኛና ቀና መልስ በጎንደር ከተማ የቤተሰብ ምጣኔ አገልግሎትን ለወደፊት ለማሻሻል ወሳኝ ሚና አለዉ።

በዚህ መጠይቅ ዉስጥ ስሞትን እና እርስዎን ለመለየት የሚያገለግል ነገር አይጻፍም።

መመለስ ያልፈለጉትን ጥያቄ እንዲመልሱ አይገደዱም። በሂደቱ ዉስጥ በጥናቱ ላለመካፈል በማንኛዉም ወቅት መወሰን ይችላሉ አስገዳጅ ሁኔታ ዉስጥም አይገቡም። በጥናቱ ዉስጥ ላለመካፈል በሚወስኑት ዉሳኔ የተነሳ የሚደርስብዎት አንዳችም ነገር የለም። የሚያገኙትን የጤና አገልግሎትም አይስተጓጉልም። ነገር ግን ሁሉንም ጥያቄዎች እንዲመልሱልን እናበረታታለን።ጥያቄዎቹም ከ 15 ደቂቃ በላይ አይዎስዱም።

ጥያቄ አለዎት?

ቃለ መጠይቁን መጀመር እችላለሁ?

ተጠያቂው ለቃለ መጠይቁ ተስማምተዋል_____(ፊርማ)

ተጠያቂው ለቃለ መጠይቁ አልተስማሙም_____(ፊርማ)

አመሰግናለሁ!!!

ክፍል 2፡ የማህበራዊና የዲሞግራፊያዊ ሁኔታዎች ላይ የተመሰረቱ ጥያቄዎች

ቁጥር	ጥያቄዎች	መልሶች
101	እድሜዎ ስንት ነዉ?	_____ዓ.ም
102	ሃይማኖትዎ ምንድነዉ?	1.ኦርቶዶክስ 2.ሙስሊም 3.ፕሮቴስታንት 4.ካቶሊክ 5.ሌላ (ግለፅ)
103	የትምህርት ሁኔታ?	1.አልተማርኩም 2.ማንበብ እና መጻፍ እችላለሁ 3.1ኛ ደረጃ 4.2ኛደረጃ 5.ሙያ እና ቴክኒክ 6.ከፍተኛ
104	የስራ ሁኔታ?	1. ተማሪ 2.ነጋዴ(የግል) 3.የመንግስት ተቀጣሪ 4.የቤት እመቤት 5.የቀን ሰራተኛ 6.ገበሬ 7.ሌላ (ግለፅ)
105	ጠቅላላ የቤተሰቦ የወር ገቢ ስንት ነው?	_____
106	የጋብቻ ሁኔታ?	1. ያላገባ 2. ያገባ 3.የተፋታች 4.ባሏ የሞተባት 5. የተለያየች

ክፍል 3፡ በፀረ ኤች.አይ.ቪ መድሃኒት እና በስነ ተዋልዶ ላይ የተመሰረቱ ጥያቄዎች

ቁጥር	ጥያቄዎች	መልሶች	ወደ ይሂዱ
201	የፀረ ኤች.አይ.ቪ መድሃኒት መዉሰድ ከጀመሩ ምን ያህል ጊዜ ሆኖት?	----------ወር/አመት	
202	ልጅ ወልደዋል?	1. አዎ 2. የለኝም	የለኝም ⟶204
203	ስንት ልጆችን ወልደዋል?	_____	
204	ወደፊት ልጅ እንዲኖሮት ይፈልጋሉ?	1.አዎ 2.አልፈልግም	
205	ባለፉት ስድስት ወራት የግብረ ስጋ ግንኙነት አድርገዋል?	1. አዎ 2.አላደርግም	
207	የፀረ ኤች.አይ.ቪ መድሃኒት መዉሰድ ከጀመሩ ጀምሮ አርግዘዉ ያዉቃሉ?	1. አዎ 2.አላውቅም	አላውቅም ⟶301
207	የቅርብ ጊዜ እርግዝናዎ?	1.የታቀደ 2.ያልታቀደ	

ክፍል 4፡ የወሲድ መቆጣጠሪያ ዘዴ ተጠቃሚነት እና ተዛማጅ ምክኒያቶች

ቁጥር	ጥያቄዎች	መልሶች	ወደ ይሂዱ
301	በአሁን ጊዜ የረጅም ጊዜና ቋሚ (ዘላቂ) የወሊድ መቆጣጠሪያ ዘዴ ተጠቃሚ ነዎት?	1.አዎ 2.አይደለሁም	አይደለሁም ⟶ 309
302	የትኛዉን አይነት ዘዴ ተጠቃሚ ነዎት? (የተገለፁትን ሁሉ ያክቡ)	1.በክንድ ዉስጥ የሚቀበር 2.በማህፀን ዉስጥ የሚቀመጥ 3. የማህፀን ቱቦን ማስቋጠር	
303	የረጅም ጊዜና ቋሚ የወሊድ መቆጣጠሪያ ዘዴ ተጠቃሚ እነዲሆኑ ያደረጎት ምክንያት ምንድነዉ? (የተገለፁትን ሁሉ ያክቡ)	1.ተጨማሪ ልጆች እንዲኖሩኝ ስለማልፈልግ 2.የባለቤቴ ግፊት 3.አራርቆ ለመዉለድ 4. የጤና ባለሙያ ምክር 5.የሌላ ሰዉ ምክር 6.ሌላ (ግለፅ)	
304	አገልግሎቱን የት ነዉ የሚያገኙት?	1. ከመንግስት ሆስፒታል 2. ከመንግስትጤና ጣቢያ 3. ከመንግስት ጤና ኬላ 4.ከቤተሰብ መምሪያ 5. ከግል ሆስፒታል 6. ከግል ክሊኒክ 7.መንግስታዊ ያልሆኑ ድርጅቶች 8.ሌላ (ግለፅ)	
305	ምን ያህል ጊዜ ሆኖት አገልግሎቱን(ያለማ ቋረጥ) መጠቀም ከጀመሩ?	_____	
306	መቼ ነበር አገልግሎቱን መጠቀም የጀመሩት?	1.ከኤች አይ ቪ ምርመራ በፊት 2.ከኤች አይ ቪ ምርመራ በኋላ 3.የፀረ ኤች.አይ.ቪ መድሀኒቱን ስጀምር	
307	አገልግሎቱን እንዴት ነው የሚያገኙት?	1.በነፃ 2.በክፍያ	በነፃ ⟶ 311
308	ክፍያው ተመጣጣኝ ነው ይላሉ?	1.አዎ 2.አይደለም	⟶ 311
309	የረጅም ጊዜና ቋሚ የወሊድ መቆጣጠሪያ ዘዴ ተጠቃሚ ካልሆኑ ያልተጠቀሙበት ምክንያት ምንድንዉ? (የተገለፁትን ሁሉ ያክቡ)	1.በጤናየ ላይ የጎንዮሽ ችግር እንይደርስ ፍራቻ 2.ባለቤቴ ስላልመረጠልኝ 3.ለአገልግሎቱ የሚከፈለዉ ገንዘብ ዉድ ስለሆነ 4.የመረጥኩት ዘዴ በጤና ጣቢያዉ ስለማይገኝ 5. አገልግሎቱን የሚሰጥ የጤና ባለሙያ ባለመኖሩ 6. የጤና ባለሙያዉ ሌላ ዘዴ ስለመረጠልኝ 7.የመረጥኩት ዘዴ በሄድኩበት ጊዜ ስላለቀ 8.አሁን ካለሁበት የጤና ሁኔታ ጋር ምቹ ነዉ ብየ ስላላሰብኩ 9.የግብረ ስጋ ግንኙነት ስለማላደርግ	

		10. በክንድ የሚቀበርዉ እና በማህፀን ዉስጥ የሚቀመጠዉ ዘዴ በሰዉነት ዉስጥ ስለሚቀሳቀስ እና ሊጠፋ ስለሚችል 11.በሚቀጥሉት 3 አመታት ልጅ የመዉለድ እቅድ ስላለኝ 12.ሌላ	
310	ወደፊት የረጅም ጊዜና ቋሚየወሊድ መቆጣጠሪያ ዘዴ ተጠቃሚ ይሆናሉ?	1.አዎ 2.አልሆንም	
311	በአሁን ጊዜ ሌላ የቤተሰብ ምጣኔ አገልግሎት ተጠቃሚ ነዎት?	1.አዎ 2.አይደለሁም	አይደለሁም ◄ ⟶ 313
312	የትኛዉን አይነተ ዘዴ ተጠቃሚ ነዎት? (የተገለፁትን ሁሉ ያክቡ)	1.በመርፌ የሚሰጥ 2.የሚዋጥ ፒል 3.የሴቶች ኮንዶም 4.አረፋማ እንክብል 5.የቆጠራ ዘዴ 6.በማጥባት እርግዝናን መከላከል 7.የወንድን የዘር ፍሬ ማፍሰስ 8.የወንዶች ኮንዶም 9.ሌላ ዘመናዊ ዘዴ 10. ሌላ ባህላዊ ዘዴ	
313	ባለፉተ ስድስት ወራት ከባለቤቶት ጋር ስለቤተሰብ ምጣኔ አገልግሎት ተወያይተዉ ያዉቃሉ?	1.አዎ 2.አላውቅም	አላውቅም⟶ 314
314	የባለቤቶ ሀሳብ ምን ነበር?	1.እሱ የፈለገዉን ዘዴ እንድጠቀም ያስገድደኛል 2.በጋራ እንወስናለን 3.በዉሳኔ ላይ አልተሳተፍኩም 4.ብቻየን ነው የወሰንኩት	
314	ባለፉተ ስድስት ወራት የጤና ባለሙያ(የጤና ኤክስቴንሽን ባለሙያ)ስለቤተሰብ ምጣኔ አገልግሎት አወያይቶት ያውቃሉ?	1.አዎ 2.አያውቁም	አያውቁም ⟶ 401
316	የጤና ባለሙያው የወሊድ መቆጣጠሪያ ዘዴዎቹ የሚያስከትሉትን ተጓዳኝ ችግሮች ነግሮዎታል?	1.አዎ 2.አልነገሩኝም	
317	የጤና ባለሙያው ችግሮቹ በሚያጋጥሞት ጊዜ ምን ማድረግ እንዳለቦት ነገሮታል?	1.አዎ 2.አልነገሩኝም	

ክፍል 5፡ተጠያቂዎች ስለረጅም ጊዜና ቋሚ የወሊድ መቆጣጠሪያ ዘዴዎች ስላላቸዉ ጠቅላላ እዉቀት

ቁጥር	ጥያቄዎች	መልሶች	ወደ ይሂዱ
401	ስለረጅም ጊዜና በ ቋሚነት ስለሚያገለግሉ የወሊድ መቆጣጠሪያ ዘዴዎች ሰምተው ያዉቃሉ?	1.አዎ 2.አላውቅም	አላውቅም → መጨረሻ
402	የትኞቹን አይነት የረጅም ጊዜና ቋሚ የወሊድ መቆጣጠሪያ ዘዴዎች ያዉቃሉ?(የተገለጹትን ሁሉ ያክቡ)	1.በክንድ የሚቀበር 2.በማህፀን ዉስጥ የሚቀመጥ 3.የማህፀን ቱቦ ማስቋጠር 4.የወንድ የዘር ፍሬን ማምከን	
403	የመረጃ ምንጮት ምንድነዉ?	1.የጤና አገልግሎት የሚስጡ ድርጅቶች 2.የጤና ኤክስቴንሽን ባለሙያ 3.ቤተሰብ 4.ጓደኛ 4.የመረጃመረብ(ቴሌቪዥን፣ሬዲዮ...ወ.ዘ.ተ) 5.መንግስታዊ ያልሆኑ ድርጅቶች 6.ሌላ(ግለå)	
404	ስለረጅም ጊዜና በ ቋሚነት ስለሚያገለግሉ የወሊድ መቆጣጠሪያ ዘዴ የሚያቋቸዉን ጥቅሞች ይግለፁ?	1.ያልተፈለገ እርግዝናን መከላከል 2.የእናቶችን እና የህጻናትን ሞት እንዲሁም በሽታን መከላከል 3.የቤተሰብን ብዛት መወሰን 4.አራርቆ መዉለድ 5.ሌላ(ግለå)	

ክፍል 6፡ተጠያቂዎች በክንድ ስለሚቀበርዉ፣በማህፀን ዉስጥ ስለሚቀመጠዉእንዲሁም ስለማህፀን ቱቦን ማስቋጠር ስላላቸዉ እዉቀት

ቁጥር	ጥያቄዎች	መልሶች
501	ለረጅም ጊዜና በ ቋሚነት የሚያገለግሉ የወሊድ መቆጣጠሪያ ዘዴዎች ከአጭር ጊዜ ዘዴዎች በተሻለ ያልተፈለገን እርግዝና ይከላከላሉ?	1.እዉነት 2. ሀሰት 3. እርግጠኛ አይደለሁም
502	በማህፀን ዉስጥ የሚቀመጠዉ የወሊድ መቆጣጠሪያ ዘዴ (ሉፕ)እርግዝናን ከ10 አመት በላይ መከላከል ይችላል?	1.እዉነት 2. ሀሰት 3. እርግጠኛ አይደለሁም
503	በማህፀን ዉስጥ የሚቀመጠዉ ዘዴ(ሉፕ)ለአባላዘር በሽታ ተጋላጭ ለሆኑ ሴቶች አያገለግልም?	1.እዉነት 2. ሀሰት 3. እርግጠኛ አይደለሁም
504	በማህፀን ዉስጥ የሚቀመጠዉ ዘዴ(ሉፕ) በግብረ ስጋ ግንኙነት ላይ ምንም ጉዳት አያደርስም?	1.እዉነት 2. ሀሰት 3. እርግጠኛ አይደለሁም
505	የምታጠባ እናት በማህፀን ዉስጥ የሚቀመጠዉን ዘዴ (ሉፕ)መጠቀም ትችላለች?	1.እዉነት 2. ሀሰት 3. እርግጠኛ አይደለሁም
506	በማህፀን ዉስጥ የሚቀመጠዉን ዘዴ(ሉፕ) ማስወጣት እና ማርገዝ ይቻላል?	1.እዉነት 2. ሀሰት 3. እርግጠኛ አይደለሁም
507	ከቫይረሱ ጋር የሚኖሩ ሴቶች በማህፀን ዉስጥ የሚቀመጠዉን ዘዴ (ሉፕ)መጠቀም ይችላሉ?	1.እዉነት 2. ሀሰት 3. እርግጠኛ አይደለሁም
508	በማህፀን ዉስጥ የሚቀመጠዉ ዘዴ (ሉፕ) ካንሰር ሊያመጣ ይቻላል?	1.እዉነት 2. ሀሰት 3. እርግጠኛ አይደለሁም
509	በክንድ ዉስጥ የሚቀበረዉ ዘዴ እርግዝናን ከ 3-5 አመት ይከላከላል	1.እዉነት 2. ሀሰት 3. እርግጠኛ አይደለሁም
510	በክንድ ዉስጥ የሚቀበረዉ ዘዴ ቀለል ያለ ቀዶ ጥገና ያስፈልገዋል?	1.እዉነት 2. ሀሰት 3. እርግጠኛ አይደለሁም
511	በክንድ ዉስጥ የሚቀበረዉን ዘዴ ማስወጣት እና ማርገዝ ይቻላል?	1.እዉነት 2. ሀሰት 3. እርግጠኛ አይደለሁም
512	ከቫይረሱ ጋር የሚኖሩ ሴቶች በክንድ ዉስጥ የሚቀበረዉን ዘዴ መጠቀም ይችላሉ?	1.እዉነት 2. ሀሰት 3. እርግጠኛ አይደለሁም
513	የማህፀን ቱቦን ማስቋጠር ቀለል ያለ ቀዶ ጥገና ያስፈልገዋል?	1.እዉነት 2. ሀሰት 3. እርግጠኛ አይደለሁም
514	የማህፀን ቱቦን ማስቋጠር ልጅ እንዳይወለድ ያደርጋል	1.እዉነት 2. ሀሰት 3. እርግጠኛ አይደለሁም
515	የማህፀን ቱቦ ማስቋጠር በመርፌ ከሚሰጠዉ ዘዴ የተሻለ ያልተፈለገ እርግዝናን ይከላከላል?	1.እዉነት 2. ሀሰት 3. እርግጠኛ አይደለሁም
516	ከቫይረሱ ጋር የሚኖሩ ሴቶች የማህፀን ቱቦን ማስቋጠር ዘዴን መጠቀም ይቻላሉ?	1.እዉነት 2. ሀሰት 3. እርግጠኛ አይደለሁም

አመሰግናለሁ