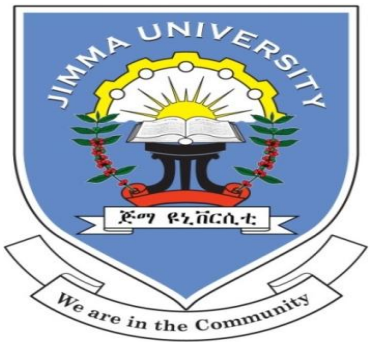

JIMMA UNIVERSITY
COLLEGE OF HEALTH SCIENCES
DEPARTMENT OF EPIDEMIOLOGY

DUAL CONTRACEPTIVE UTILIZATION AND ASSOCIATED FACTORS AMONG HIV POSITIVE WOMEN ATTENDING ART CLINIC IN NIGIST ELLEN MOHAMMED MEMORIAL HOSPITAL, HOSANNA, ETHIOPIA

By:

Markos Selamu (Bsc)

A RESEARCH THESIS SUBMITTED TO THE DEPARTMENT OF EPIDEMIOLOGY, COLLEGE OF JIMMA UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTERS IN PUBLIC HEALTH

Jimma, Ethiopia

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List of abbreviations

AIDS	Acquired Immune Deficiency Syndrome
AOR	Adjusted Odds Ratio
ART	Anti Retroviral Therapy
ARV	Anti Retroviral Treatment
CD4	Cluster of differentiation / Cell differentiation
CPR	Contraceptive Prevalence Rate
CSA	Central Statistical Agency
EDHS	Ethiopian Demographic and Health Survey
HAART	Highly Active Antiretroviral Therapy
HAPCO	HIV/AIDS Prevention and Control Office
HIV	Human Immune Deficiency Virus
IUD	Intrauterine Device
MOH	Ministry of Health
PMTCT	Prevention of Mother to Child HIV Transmission
REC	Research & Ethical Committee
SPSS	Statistical Package for Social Science
STI	Sexually Transmitted Infection
UNAID	United Nations Program on HIV/AIDS
WHO	World Health Organization
PCA	principal component analysis
NEMMH	Nigist Ellen Mohammed Memorial Hospital

Abstract

Background: Human immune deficiency virus continues to have disastrous medical, economic, social, and physical impacts on individuals, their communities and the nations of the world. Sub-Saharan Africa is at the epicenter of the epidemic and continues to carry the full brunt of its health and socioeconomic impact. Dual protection is a strategy that prevents both unwanted pregnancy and sexually transmitted infections, including human immune deficiency virus. Also antiretroviral treatment has contributed a lot in decline of human immune deficiency virus related morbidity and mortality.

Objectives: To assess dual contraceptive utilization and associated factors among women living with human immune deficiency virus in Nigist Ellen Mohammed Memorial Hospital, Hossana, South Nation Nationalities and Peoples Regional State**,** Ethiopia.

Methods: Facility based cross-sectional study was conducted among women living with human immune deficiency virus in Nigist Ellen Mohammed Memorial Hospital. Data were collected through face-to-face interview using structured questionnaires. Participants were selected by using simple random sampling technique from sampling frame. Descriptive statistics was done to describe the data. Bivariate and multivariable analysis was performed using logistic regression on SPSS version 20.0 software/ Adjusted odds ratio along with 95%CI were estimated to identify factors associated with dual contraceptive utilization. Level of statistical significance was decleared at p-value less than 0.05.

Results: The prevalence of dual contraceptive utilization of women living with human immune deficiency virus in Nigist Ellen Mohammed Memorial Hospital was 28.3% (95% CI: 23.8, 33.7). Dual contraceptive utilization was significantly associated with participants who receiving follow up counseling in the last three months (AOR: 6.05; 95% CI: 2.46, 14.83), starting antiretroviral treatment (AOR: 0.21; CI: 0.07, 0.64), had no child (AOR: 0.19; 95% CI: 0.06, 0.57), supporting to use dual contraceptive utilization (AOR: 6.36; 95% CI: 2.49, 16.28).

Conclusions: Dual contraception utilization by women living with human immune deficiency virus was low and had no child; receiving follow up counseling in the last 3 months; starting antiretroviral treatment; supporting to use dual contraceptive methods were associated with dual contraceptive utilization

Keywords: Dual contraceptive utilization, women living with human immune deficiency virus, Nigist Ellen Hospital

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CHAPTER 1: INTRODUCTION

1.1 Background

Dual contraceptive utilization: refers to the use of a barrier contraceptive (i.e., condoms), which can reduce transmission of many STIs, plus another effective family planning method that can prevent pregnancy as recommended by the World Health Organization(WHO) (e.g., hormonal methods, intrauterine devices, hormonal pills) (1). The co-occurrence of HIV and unintended pregnancy has prompted a relatively recent body of work on dual protection, the simultaneous protection against STIs and unintended pregnancy (2). Dual protection can be achieved through single method use (condoms) or dual contraceptive use (condoms plus another contraceptive method).

Some studies that have considered the benefits of dual protection for people living with HIV show that dual protection can be an effective strategy to prevent HIV transmission to partners and to promote safe childbearing (3, 4). Worldwide, HIV is the leading cause of death for women of childbearing age, and up to 64% of all pregnancies are unintended (5, 6).

HIV positive women provision of family planning is essential to enable fertility control and to prevent unintended pregnancy. ART lowers viral load that ART together with condoms helps to prevent HIV transmission to a sexual partner. And the ART together with family planning is the most effective way to reduce the vertical transmission of HIV (7).

The antiretroviral therapy (ART) has contributed a lot in decline of HIV/ AIDS related morbidity and mortality. While antiretroviral treatment enables women living with HIV to regain their sexual capability, new challenges to prevent HIV transmission to sero discordant partner and re-infection with new drug resistant virus have risen. It also avoids acquiring other strains of HIV that may lead to develop ART drug-resistance (8).

Sub-Saharan Africa has the highest prevalence and incidence of HIV-1 infection in the world. In Uganda, HIV-1 prevalence among adults HIV-positive women were 57% (5). In 2008, the number of children newly infected with HIV was approximately 430,000, of which 90% were infected through mother-to-child transmission (MTCT). The World Health Organization (WHO) lists preventing unintended pregnancies among women living with HIV as a second pillar of preventing mother-to-child transmission (PMTCT) (9).

In Sub-Saharan Africa (SSA), region where reproductive age women account for the majority of people living with HIV, unintended pregnancies were estimated to account for 14–58 % of all Pregnancies (10).

Increase of contraceptive prevalence rate (CPR) in sub-Saharan Africa with corresponding reduction in primary HIV infections and unintended pregnancies in HIV infected women has potential to decrease the proportion of infants infected with HIV by 35-55%. The provision of appropriate contraceptive information, counseling services will play a significant role in reducing the burden of HIV/AIDS in Africa. The dual contraceptive utilization practice should form the cornerstone of reproductive health care (11).

According to the national fact sheet 2010 from Acquired Immune Deficiency Syndrome (AIDS) in Ethiopia, the adult HIV prevalence is 2.4% and adult HIV incidence is 0.26 and total HIV positive population was 1,216,908 (12, 13). Presence of ART women infected with HIV can live longer and if they don't practice safe sex, they will put others at risk of new HIV infection (13).

Ethiopia is one of the countries' most severely hit by the HIV epidemic. The dominant heterosexual transmission, the vertical virus transmission from mother to child accounts for more than 90% of HIV/AIDS infection (14). The correct and consistent use of contraceptive methods is important to prevent unintended pregnancies and transmission of sexually transmitted infections (STIs) (15). The World Health Organization (WHO) recommends that women living with HIV use dual contraceptive methods or dual protection to prevent unintended pregnancies and STIs (16).

1.2 Statement of the problem

HIV/AIDS were a major global health importance; unprotected sex among people living with HIV is a challenging issue in HIV prevention. An estimated that 33 million people were living with HIV/AIDS worldwide. Sub-Sahara Africa was 60% of people living with HIV/AIDS and more than half of these population groups were females (5). There were 2.3(1.9–2.7) million new HIV infections globally, Sub-Saharan Africa remains most severely affected, with nearly 1 in every 20 adults 4.9% living with HIV and accounting for 69% of the people living with HIV worldwide (17)

In many areas of the world where HIV prevalence is high, rates of unintended pregnancy and unsafe abortion have been shown to be high. Of all pregnancies worldwide in 2008, 41% were reported as unintended. Unintended pregnancy is a common problem in both HIV-positive and HIV negative women. A study conducted in Swaziland has indicated that 69.2% of women reported that their pregnancy was unintended with no difference in sero-status. However, the rate of unwanted pregnancy was found to be significantly higher in HIV-positive women than their counterparts 20.7% versus 13.5% (18).

In some cases, women living with HIV continued to have unprotected sex with their partner, even though they were aware of the risk of infecting their partner, rather than begin using condoms, and have their partner discover their HIV-positive status. Many countries, as many as one-third of the 357,000 annual maternal deaths are attributable to unintended pregnancies; the majority of these mortalities occur in low- and middle-income countries. The burden of unintended pregnancy and STIs was greater among younger and economically disadvantaged men and women (19).

In Zambia, as in many other sub-Saharan African countries, HIV-infected women of childbearing age highly vulnerable to STIs (20). High-risk sexual behavior in patients on highly active antiretroviral therapy (HAART) is a major social and public health problem. If HIV-positive individuals continue to have unprotected sex with HIV-negative persons or persons of unknown HIV status, inconsistent condom use such behavior may continue to spread HIV infection (21, 22).

In Ethiopia, over 90% of adult cases of HIV are attributable to heterosexual activity. Many people living with HIV in the country, ART enables them a return to normal life including a resumption of sexual activity and desire for children. Unless appropriate care taken in sexual activity and desire to have children, it also means for HIV infected women that the chances of transmitting the infection to their children and to their partner are higher considering the high population (23)**.**

In Ethiopia according to country progress report on HIV/AIDS response a total of 333,434 people had ever started ART and 249,174 adults were on ART by the end of 2011. Overall HIV prevalence has remained low in 2011; HIV prevalence is 1.9% for women and 1.0% for men (23).

Encouraging the dual contraceptive use is important for HIV prevention and recognized as contributing & enabling women living with HIV to avoid unintended pregnancy can reduce vertical transmission of HIV and maternal mortality associated with HIV infection (24).

There were few studies done on dual contraceptive utilization among HIV positive reproductive age women in Ethiopia. Therefore, to improve the practice of dual contraceptive utilization, counseling both partners, creates awareness and education, development of adolescent-friendly contraceptive use, youth centers. The promotion of dual protection (simultaneous protect against unwanted pregnancy and STIs) plays an important role in public health interventions (25).

In Ethiopia many studies were conducted in utilization of family planning & associated factors like unintended pregnancy, unprotected sex & sexual risk behaviors among HIV positive reproductive age women; but a few studies was conducted in dual contraceptive utilization. There was no study conducted on issues related to dual contraceptive utilization among HIV positive women in study setting. Therefore, the aim of this study is to assess dual contraceptive utilization and associated factors among HIV positive women in Nigist Ellen Mohammed Memorial Hospital, Hossana**.**

1.3 Significance of the study

Finding of this study will help as a guide for the improvement of dual contraceptive utilization and associated factors among HIV positive women; and used for setting evidence based strategy for concerned stakeholders, policy development, program managers, and evaluators;

To assess need of dual contraceptive methods among HIV positive women and contribute to design appropriate intervention programs to women living with HIV.

It helps to prepare the necessary resources and flourish programs for better design to intervention programs. The study findings may help in developing strategies and intervention to increase use of contraceptive methods among HIV positive women.

CHAPTER TWO: LITERATURE REVIEW

2.1 Dual contraceptive utilization & associated factors

The contraceptive prevalence rate for all Ethiopian women age 15-49 is 20%. The total wanted fertility rate is three children per woman, 1.8 fewer than the total fertility rate of 4.8 children per woman, suggesting that Ethiopian women have not been very successful in achieving their reproductive intentions (23). In 2009, an estimated 15.7 million women above the age of 15 was living with HIV globally and 1.4 million of them become pregnant. Nearly 90% of these expectant mothers were living in 22 countries in sub-Saharan Africa and India (26). Among HIV positive women who attend ART clinic in Ethiopia use condom accounts only 33% & 28% use hormonal contraceptive methods (27).

Study conducted in gimbie town, western Ethiopia on modern contraceptive utilization among female attend ART clinics showed that women who starting ART treatment was less likely to utilized dual contraceptive methods as compared to who did not start ART treatment (28). Study done in Gebretsadik Shawo Hospital showed that women who did not have been counseling about use dual contraceptive methods less likely than those who received counseling about use dual contraceptive methods & participants who did receive support to use dual contraceptive were 2.08 times more likely to use dual contraceptive than those who did not receive support to use dual contraceptive (29). Also, study conducted in Uganda on utilization of family planning services participants who did receive support to use dual contraceptive were more likely to use dual contraceptive than those who did not receive support to use dual contraceptive (30)

2 .1.2 Socio demographic characteristics

Age and dual contraceptive use

With regarding to study conducted in Gebretsadik Shawo Hospital, SNNPR, South West Ethiopia result showed that the current dual contraceptive utilization among HIV positive women was significantly associated with age (≥30 years were 2.5 times more users than age group of 15-24 years (29). HIV positive women who came from rural area were less dual contraceptive method users than those from urban area. With regarding to study done in Uganda result showed that being within the age group below 20 years had negative association with contraceptive use than age group 20-29 years (30).

The 2011 Ethiopia demographic and health survey modern contraceptive use higher in 30-34 years age groups 27.7% than the other age categories of reproductive age group (18-49) among contraceptive user (23).

Education level and Contraceptive use

Study conducted in South African youth showed that education status, employment status has been found to be significantly associated with dual contraceptive methods. And, also women indicated that living in an urban area, having more than one life time and communication about condoms with last sexual partner were strongly associated with the use of dual method (31). In 2011 EDHS, contraceptive use differs significantly across educational categories. Current use increases three fold from 22% among women with no education to 68% among those with more than secondary level (23). Married HIV positive reproductive age women used dual contraception to prevent the risk of transmission of HIV to their partner was significantly three times (32).

2.1.3 Reproductive history

With regarding to study conducted in Fitch Hospital factors found significantly predictive of dual contraceptive utilization for people living with HIVs were: Age at first marriage < 18 year (Early marriage) was four times more likely to have used dual contraceptive methods as compared to >18 year & people living with HIV who had more than four living children were ten times more likely to had used dual contraceptive methods as compared to have no living children's. People living with HIV had no fertility desire were 8.6 times more likely to utilized dual contraceptive methods as compared to have fertility desire (33).

2.1.4 Service related factors

Study from Uganda among HIV positive women report showed that participants who had no knowledge about FP methods were less likely use of FP than those who had knowledge about FP methods (30). In northern Ethiopia, Tigray study among HIV positive women results revealed that even though all of the participant ever heard at least one modern contraceptive, less than half 46.3% were currently using a modern contraceptive method (34)

With regarding study conducted in Gebretsadik Shawo Hospital, SNNPR, South West Ethiopia result showed that HIV positive women who have open discussion with partner use dual contraceptive methods ten times more than women who have no discussion with their partners. And, also current dual contraceptive utilization among HIV positive women with

current CD4 count >350 cells/dl use dual contraceptive methods 8.5 times more likely than CD4 count less than 250 cells/dl (29).

With regarding of service related factor showed that higher CD4 count was associated with less use of dual-contraceptive methods among HIV positive reproductive age women &other study result showed that higher CD4 count was associated with less use of dual-contraceptive methods among HIV positive women (31).

2.1.5 Sexual factors

With regarding to study conducted in Fitch Hospital the HIV positive women who had regular sexual intercourse were 4.9 more likely to use dual contraceptive utilization than compared to with multiple sexual partners (33).

2.1.6 Social and cultural factors

Every society has its unique culture and all cultures affect the lives and attitudes of its peoples. Cultural factors by extension affect contraceptive use among HIV positive women. Religion is a very important interrelated factor that influences contraceptive use among HIV positive women in Africa (35). Study conducted in Tanzania result showed that their HIV positive women who were not using contraceptive use 78% of them reported that religious beliefs influence their use of contraceptive methods (36).

Other study conducted in Uganda among HIV positive women result showed that participants who reported approval of their spouse or partner support were seven times more likely to use of contraceptive use than those who reported no approval of their spouse/ partner support (30).

Conceptual framework

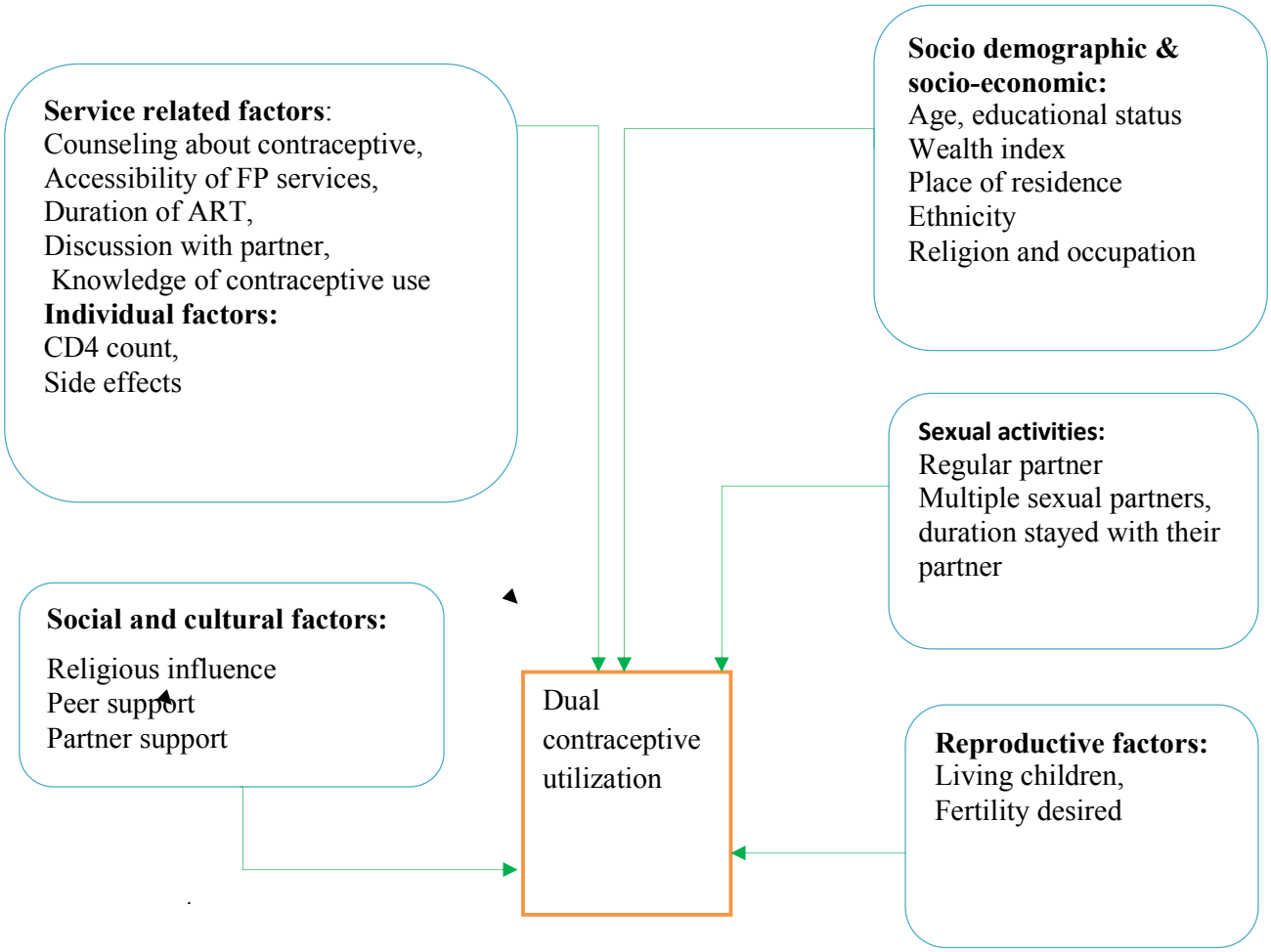

Figure 1: Conceptual frame work Adapted by reviewing difference literatures

Source: Adapted from: Egessa John Joseph 2010.

CHAPTER THREE: OBJECTIVES

3.1 General objective

- To assess the dual contraceptive utilization and associated factors among HIV positive women in Nigist Ellen Mohammed Memorial Hospital, Hossana, SNNPR, Ethiopia.

3.2 Specific objective

- To determine the prevalence of dual contraceptive utilization among HIV positive women ;
- To identify factors associated with dual contraceptive utilization among HIV positive women.

CHAPTER FOUR: METHODS AND MATERIALS

4.1 Study area and study period

The study was conducted among ART & pre-ART user in Nigist Ellen Mohammed Memorial Hospital (N.E.M.M.H), Hadiya zone, South Nation Nationalities and Peoples Regional State(SNNPR), Southern Ethiopia; which is located 232km far from south of Addis Ababa, the capital city of Ethiopia and 174 km far from north of Hawassa, capital city of SNNPR. ART clinic provides free services for patients for routine testing and counseling services, comprehensive HIV/AIDS prevention, treatment and care interventions. The number of people living with HIV ever enrolled ART/Pre-ART was 3,155 on chronic care registration log book among those currently active on ART and Pre-ART are 966 and 386 respectively while 692 HIV positive reproductive age women (according to institution report in 2015). The study was conducted from to March 12 to April 13, 2016.

4.2 Study design

Facility based cross-sectional study was conducted.

4.3. Population

4.3.1 Source population

All HIV positive reproductive aged women (18 to 49) years attending chronic HIV/AIDS care clinic

4.3.2 Study population

Selected HIV positive reproductive aged women (18 to 49) years

4.3.3 Inclusion criteria

HIV positive reproductive aged women attend chronic HIV/AIDS care clinic

HIV positive reproductive aged women at least one visit attended before this study.

4.3.4 Exclusion criteria

Unable to communicate verbally/seriously ill at time of data collection

Pregnant women at the time of data collection

4.4. Sample size and sampling technique/sampling procedure

The required sample size was calculated using a single population proportion formula as follows $n = \frac{(Z\alpha\backslash 2)^2 P(1-p)}{d^2}$

Where: n = sample required; Zα\2 = the critical values at 95% confidence level of certainty =1.96; P = 19.8% (Proportion from previous study; q = 1 – P; d= margin of error = 5%. After adjustment for non-response 10%; the total sample size required 269.

For the second objective the required sample size was calculated by using Epi-Info soft ware version 7.0. The variables associated with dual contraceptive utilization: residence (27.9%),CD4 count (29.6%), counseling about family planning (10.1%)with confidence interval 95%, power 80% assumption; Ratio (No of outcome in unexposed: No of outcome exposed). Sample size was calculated for the second objective from previous study (29).

Variables	% of outcome in Unexposed	Ratio (Unexposed: exposed)	Power	OR	Sample Size
Residence	Unexposed 27.9%	1:1	80%	0.309	252
CD4 count	Unexposed 29.6%	1:1	80%	8.516	62
counseling about F/P	Unexposed 10.1%	1:1	80%	0.042	253

The second objective calculated sample size was 252, 62 and 253 respectively, but 269 maximum sample size was taken.

4.4.1 Sampling Procedure /techniques

Computer generated simple random sampling technique was employed to select study respondents by using their ART & Pre-ART HIMS registration numbers. During the one - month study period; 258 HIV positive women were recruited from sample frame. Respondents, who were not obtained at appointment date, were revisited the whole data collection period.

4.5. Data collection procedures

4.5.1 Study Variables

Dependent variable: dual contraceptive utilization

Independent Variables

Socio-demographic characteristics (age, educational status, place of residence, ethnicity, religion, occupation, wealth index).

Wealth index: was constructed by using principal component analysis (PCA) on household asset variables following EDHS 2011.

Principal Components Analysis:

Variable reduction procedure,

Extracts all the factors underlying a set of variables,

The number of factors = the number of variables,

Completely explains the variance in each variable

It was divided into quintiles from one (lowest) to five (highest).

Accordingly, poorest, poorer, medium, rich & richest was conducted.

Varimax rotation was employed during factor extraction to minimize cross loading/complex structure.

Service related factors (counseling about contraceptive use, accessibility of FP services, and duration of ART/pre ART, discussion with their partner & knowledge of contraceptive use)

Knowledge scores: based on the type of skewness**,** majority of participants are at the right/left end of the curve. Mean drags/tends to shift towards distribution skewed directions, so not shows central location distribution.

Individual factors: CD4 count, side effects

Social and cultural factors (religious influence, peer support, partner support)

Reproductive factors (living children, fertility desire)

Sexual related factors (regular partner, multiple sexual partners, duration stayed with partner).

4.5.2 Data collection tool

Structured questionnaire was used to collect data which were adapted from different relevant literatures and modified to the local context. The questionnaire was designed to obtain information on study variables (dependent and independent Variables). The questionnaire was prepared in English and translated to Amharic & local language (Hadiyigna) and back retranslated to English to check its consistency. Translator to Amharic and back translated to English by independent translators to keep the consistency of the questionnaires.

4.5.3 Data collectors

Data were collected by three diploma nurses who were recruited from Hossana health center & one supervisor Bsc nurse from Nigist Ellen Mohammed Memorial Hospital. Data were collected by face to face interview using structured Amharic and local language (Hadiyigna) questionnaires.

4.6. Data quality assurance/control

To ensure data quality, data collectors and supervisor were trained by the principal investigator for two days on purpose of the study, on data collection tools, research ethical issues & confidentiality prior to data collection. Pre-test was done on 5% of the sample of HIV positive women in Homacho district Hospital to identify any inconsistency, skips patterns and acceptability of questionnaire, and then necessary corrections was made before the actual data collection. Supervisor closely followed the data collection throughout the data collection period along with the principal investigator. After data collection, each questionnaire was checked for completeness and code was given before data entry**.** The data were cleaned and carefully entered into Epidata version 3.1 & exported to SPSS version 20.0 for analysis.

4.7. Data processing and analysis

Descriptive statistics was done to describe the data. Bivariate and multivariable analysis was performed using logistic regression on SPSS version 20.0 software in order to determine factors associated with dual contraceptive utilization with statistical significant level of $p<0.05$ and CI of 95%. Independent variables with p-value of less than 0.25 was candidate variables to multivariable logistic regression for controlling the possible effect of confounders and finally the variables which has significant association with dual contraceptive utilization was identified on the basis of adjusted odds ratios (AOR), with corresponding 95% CI were used to quantify the degrees of association between independent variables& dual contraceptive utilization. Goodness of fit of the final model was checked using Hosmer & Lemeshow test considering good fit at P-value>0.05.

Multicollinearity among independently associated variables was checked

The Bartlett test of sphericity is statistically significant at $p<0.05$ conducted on analysis. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (MSA) greater than 0.5 for individual as well as the full set of items was used to check the appropriateness of the PCA (37). Internal consistency of PCA were checked

4.8. Ethical consideration

Ethical clearance& official letter approved from College of Jimma University School of public health & Health Research Ethical committee (REC). Written consent was obtained from medical director of NEMMH. Verbal informed consent for participation obtained from each study participant. The confidentiality of clients' information was ensured, as names or any identifiers of study participants were not be included in the data sheet. Before enrolling any of the eligible study participants, the purpose and the benefits and the confidential nature of the study was described and discussed for each participant. The discussions between the data collectors and the respondents were taken place privately and individually.

4.9. Dissemination plan

The finding of the study will be submitted & presented to college of Jimma University School of Public Health; Hadiya zone HIV/AIDS prevention and control office, Nigist Ellen Zonal Hospital and will be given to all responsible bodies. Additionally, the findings will be presented to different scientific communities, seminars, workshops and the manuscript will be send to different journals for publication.

4.10. Operational definition & terms

Dual contraceptive utilization: in this study it refers to the HIV positive women who used two methods of contraception simultaneously, a barrier method (male/female condom use in every sexual encounter in the last six months preceding the study) & other modern/hormonal/ contraceptive methods.

Accessibility of family planning service: it refers to the distance from client's residence to the health institution took 5km or ≤30 minutes walking time considered as accessible (38).

Knowledge of contraceptive use: in this study refers to from total of five dichotomized questions, 0 for incorrect answer and 1 for correct answer about contraceptive use, women who answered median score& above, considered as good knowledge and below median score considered as poor knowledge

Pregnant woman: refers to woman who reported she was pregnant or her husband who reported his wife pregnant

Reproductive aged women: in this study refers HIV positive women whose age 18-49 years attend chronic HIV/AIDS care clinic

CHAPTER FIVE: RESULTS

5.1. Socio demographic characteristics of the study participants

A total of 269 HIV positive women, overall response rate of 258 (95.9%) were included in this study.

Socio demographic characteristics of HIV positive women attending ART clinic in Nigist Ellen Mohammed memorial Hospital:

Concerning to age distribution, the median age of women 34 years (SD±6.28); nearly half (52.3%) was found to lie within 30-39 years, followed by 18-29 years which accounted for (24.4%) Table 1.

Bivariate analysis of socio demographic characteristics and dual contraceptive utilization
Factors likes: educational status, occupation status & wealth index associated with dual contraceptive use. These variables candidate for the multivariable analysis (at p- value<0.25)
Table 1: Bivariate analysis of socio demographic characteristics and dual contraceptive utilization in NEMMH, Hossana, Ethiopia, 2016 (n=258)

Variables	Categories	Frequency N (%)	dual contraceptive utilization		COR (95%CI)	p-value
			Yes, N (%)	No, N (%)		
Age group	18-29	63(24.4%)	17(27.0%)	46(73.0%	0.93(0.48, 1.84)	0.865**
	30-39	135(52.3%)	38(28.1%)	97(71.9%)	1.00	1.00
	40-49	60(23.3%)	18(30.0%)	42(70.0%)	1.09(0.56, 2.13)	0.792**
Ethnicity of mother	Hadiya	136(52.7%)	40(29.4%)	96(70.6%)	1.00	1.00
	Amhara	34(13.2%)	11(32.4%)	23(67.6%)	1.14(0.51, 2.57)	0.74**
	Gurage	32(12.4%)	10(31.2%)	22(68.8%)	1.09(0.47, 251)	0.84**
	Kambata	29(11.2%)	6(20.7%)	23(79.3%)	0.63(0.24, 1.65)	0.34**
	Silte	27(10.5%)	6(22.2%)	21(77.8%)	0.68(0.26, 1.83)	0.45**
Religion	Protestants	87(33.7%)	23(26.4%)	64(73.6%)	1.00	1.00
	Orthodox	72(27.9%)	24(33.3%)	48(66.7%)	1.39(0.70, 2.75)	0.34**
	Muslim	58(22.5%)	12(20.7%)	46(79.3%)	0.73(0.33, 1.60)	0.43**
	Catholic	20(7.8%)	6(30.0%)	14(70.0%)	1.19(0.41 ,3.47)	0.75**
	Adventist	21(8.1%)	8(38.1%)	13(61.9%)	1.71(0.63, 4.66)	0.29**
Educational status	cannot read write	53(20.5%)	17(32.1%)	36(67.9%)	1.16(0.55, 2.45)	0.695
	can read &write	45(17.4%)	7(15.6%)	38(84.4%)	0.45(0.18, 1.15)	0.097
	Primary	83(32.2%)	24(28.9%)	59(71.1%)	1.00	1.00*
	Secondary	55(21.3%)	14(25.5%)	41(74.5%)	0.84(0.39, 1.81)	0.656
	college & above	22(8.5%)	11(50.0%)	11(50.0%	2.46(0.94, 6.43)	0.067
Occupation status	Merchant	90(34.9%)	24(26.7%)	66(73.3%)	1.00	1.00*
	Housewife	75(29.1%)	18(24.0%)	57(76.0%)	0.86(0.43, 1.76)	0.695
	Employer	33(12.8%)	16(48.5%)	17(51.5%)	2.58(1.13, 5.92)	0.024
	daily laborer	33(12.8%)	7(21.2%)	26(78.8%)	0.74(0.28, 1.93)	0.538
	Students	27(10.5%)	8(29.6%)	19(70.4%)	1.15(0.44, 2.99)	0.762
Residence	Urban	197(76.4%)	58(29.4%)	139(70.6%)	1.00	1.00
	Rural	61(23.6%)	15(24.6%)	46(75.4%)	0.78(0.40, 1.51)	0.46**
	Poorest	52(20.2%)	15(28.8%)	37(71.2%)	0.66(0.29-1.47)	0.308
Wealth index status	Poor	48(18.6%)	13(27.1%)	35(72.9%)	0.60(0.26-1.39)	0.234
	Medium	55(21.3%)	21(38.2%)	34(61.8%)	1.00	1.00*
	Rich	51(19.8%)	15(29.4%)	36(70.6%)	0.67(0.30-1.52)	0.342
	Richest	52(20.2%)	9(17.3%)	43(82.7%)	0.34(0.14-0.83)	0.19

Key 1= Reference ** p >0.25 not significant

5.2. Dual contraceptive utilization by HIV positive women on ART & follow up care in NEMMH, Ethiopia in 2016 (n=258)

The prevalence of dual contraceptive utilization of HIV positive women in NEMMH was 73(28.3%), among those (23.3%), (2.7%) & (2.3%) were used Depo-Provera (injectable), pills & IUD in addition to condom respectively. Out of total respondents (71.7%) were used condom, among those (38.0%) were used condom always during sexual intercourse. The main reason was mentioned for use of contraceptive (36.4%) were reported that for protection/fear of STI, (20.2%) to prevent pregnancy, (7.0%) advised by health professionals, (4.3%) my partner was HIV negative & (4.3%) fear of re-infection with new stain of HIV. Main reason of the respondents who did not use contraceptives (11.6%) was desired to conceive child and (10.5%) were fear of side effects of ART drug with contraceptives use

Table 2: Dual contraceptive utilization by HIV positive women on ART & follow up care in NEMMH, Ethiopia in 2016(n=258)

variables	Categories	N (%)
Use condom	Yes	185(71.7%)
	No	73(28.3%)
How often use condom(n=185)	Always	98(38.0%)
	Sometimes	87(33.7%)
Dual contraceptive utilization	Yes	73(28.3%)
	No	185(71.7%)
Contraceptive types user(n=73)	Injectable	60(23.3%)
	Pills	7(2.7%)
	IUD	6(2.3%)
Reason for condom/ contraceptive use(n=185)	fear of STI	94(36.4%)
	to prevent pregnancy	52 (20.2%)
	professionals advice	18(7.0%)
	my partner HIV(-ve)	11(4.3%)
	to reduce viral loads	10(3.9%)
Reason not using contraceptive use(n=45)	want a child	30(11.6%)
	fear side effects	27(10.5%)
	lack of knowledge	13(5.0%)

5.3. Sexual and reproductive related factors & dual contraceptive utilization by HIV positive women on ART and follow up care NEMMH, Ethiopia in 2016

Out of the respondents (93.4%) had sexual intercourse within last six months: among those (84.9%) had sex with regular partner and (8.9%) were had multiple sexual partners.

HIV positive women's, (73.3%) who have had living children, among those (29.8%), (28.3%) & (15.1%) had one child, 2-4 children and >4 children respectively. Regarding to age at marriage, the majority (70.5%) were ≥18 years and (29.5%) age at first marriage <18 years Table 3

Factors likes: Age at first marriage, did have had child & sex with whom associated with dual contraceptive utilization. These variables candidate for the multivariable analysis (at p-<0.25)

Table 3: Bivariate analysis of Reproductive & sexual related factors of participants with dual contraceptive utilization in NEMMH, Hossana, Ethiopia, 2016 (n=258)

Variables	Categories	Frequency N (%)	dual contraceptive utilization		COR(95%CI)	p-value
			Yes, N (%)	No, N (%)		
Age at marriage	<18 years	76(29.5%)	27(35.5%)	49(64.5%)	1.63(0.91,2.90)	0.097
	>18 years	182(70.5%)	46(25.3%)	136(74.7%	1.00	1.00*
living children (n=189)	one child	77(29.8%)	25(32.5%)	52(67.5%)	1.00	1.00*
	2-4	73(28.3%)	26(35.6%)	47(64.4%)	1.15(0.58, 2.26)	0.68**
	>4	39(15.1%)	10(25.6%)	29(74.4%)	0.72(0.30, 1.69)	0.45**
desire to have a child in future	Yes	105(40.7%)	29(27.6%)	76(72.4%)	0.94(0.54, 1.64)	0.84**
	No	153(59.3%)	44(28.8%)	109(71.2%)	1.00	1.00*
partner desire child in future	Yes	116(45.0%)	32(27.6%)	84(72.6%)	0.94(0.54, 1.62)	0.82**
	No	142(55.0%)	41(28.9%)	101(71.1%)	1.00	1.00*
Did have had child	Yes	190(73.6%)	61(32.1%)	129(67.9%)	1.00	1.00*
	No	68(26.7%)	12(17.6%)	56(82.4%)	0.45(0.23, 0.91)	0.025
Sex with whom (n=242)	Husband	219(84.9%)	71(32.4%)	148(67.6%	1.00	1.00*
	multi sexual	23(8.9%)	2(8.7%)	21(91.3%)	0.19(0.05, 0.87)	0.032
Stayed with your partner's	≤4 years	109(42.2%)	30(27.5%)	79(72.5%)	1.00	1.00*
	5-9years	78(30.2%)	22(28.2%	56(71.8%)	1.03(0.54, 1.98)	0.92**
	10-14yea	41(15.9%)	14(34.1%)	27(65.9%)	1.36(0.63, 2.95)	0.43**
	>15 years	30(11.6%)	7(23.3%)	23(76.7%)	0.80(0.31, 2.06)	0.65**

Key 1= Reference **p >0.25 not significant

5.4. Service related factors & socio-cultural factors and use dual contraceptive utilization on ART and follow up care in NEMMH, Ethiopia in 2016.

Regarding knowledge of contraceptive use 169(65.5%) has had knowledge about dual contraceptive methods. With regarding to HIV positive women & her sexual partner HIV status, (73.6%) were both partners HIV-positive (concordant), but (19.8%) was her sexual partner only HIV negative (discordant). Regarding about CD4 count, (41.1%) was reported that their recent CD4 count 350-500cells/mm3 while (36.8%) was CD4 count greater than 500cells/mm3. The majority of respondents (74.0%) were reported that health status after start ART was improved.

Concerning about time to reach health institution (80.2%) was reported that it takes ≤ 30 minutes to reach the health institution from their residence. The majority of respondents (95.0%) were reported that services utilized in the health institution. The majority (93.4%) of respondents there is no cultural practice in their community that prevents from dual contraceptive utilization Table 4.

Factor likes: receiving counseling in the last 3 months, decision makers, recent CD4 count, starting ART drug, health status after started ART, knowledge status, supporting to use dual contraceptive. These variables candidate for the multivariable analysis (at p<0.25)

Table 4: Bivariate analysis of service related factors & dual contraceptive utilization in NEMMH, Hossana, Ethiopia, 2016 (n=258)

Variables	Categories	Frequency N (%)	Dual contraceptive utilization		COR(95%CI)	p-value
			Yes, N (%)	No, N (%)		
Receiving counseling last 3months	yes	121(46.9%)	60(49.6%)	61(50.4%)	9.38(4.78,18.39	0.00
	No	137(53.1%)	13(9.5%)	124(90.5%)	1.00	1.00*
discuss their partner	Yes	155(60.1%)	56(36.1%)	99(63.9%)	1.00	1.00
	No	103(39.9%)	17(16.5%)	86(83.5%)	0.35(0.19, 0.65)	0.001
Decision decided (n=155)	my decision	54(20.9%)	17(31.5%)	37(68.5%)	1.00	1.00*
	my partner	48(18.6%)	15(31.2%)	33(68.8%)	0.99(0.43, 2.28)	0.98
	Join	53(20.5%)	24(45.3%)	29(54.7%)	1.80(0.82, 3.96)	0.14
Recent CD4 count	<250 cells/dl	29(11.2%)	4(13.8%)	25(86.2%)	0.47(0.15, 1.46)	0.193
	250 -350 cells/dl	28(10.9%)	7(25.0%)	21(75.0%)	0.98(0.37, 2.55)	0.959
	350- 500 cells/dl	106(41.1%)	27(25.5%)	79(74.5%)	1.00	1.00*
	>500cells/dl	95(36.8%)	35(36.8%)	60(63.2%)	1.71(0.93, 3.12)	0.083
Partner HIV status result (n=241)	+ve	190(73.6%)	58(30.5%)	132(69.5%)	1.00	1.00*
	-ve	51(19.8%)	12(23.5%)	39(76.5%)	0.70(0.34, 1.43)	0.33**
Starting ART drug	Yes	191(74.0%)	50(26.2%)	141(73.8%)	0.67(0.37, 1.23)	0.204
	No	67(26.0%)	23(34.3%)	44(65.7%)	1.00	1.00
how long since started ART (n=191)	< 12 months	9(3.5%)	2(22.2%)	7(77.5%)	0.85(0.16, 4.31)	0.84**
	12-24 months	67(26.0%)	19(28.4%)	48(71.6%)	1.17(0.59, 2.31)	0.64**
	>24 months	115(44.6%)	29(25.2%)	86(74.8%)	1.00	1.00*
how long since started pre-ART (n=67)	< 12 months	19(7.4%)	6(31.6%)	13(68.4%)	0.93(0.25, 3.34)	0.903**
	12-24 months	23(8.9%)	8(34.8%)	15(65.2%)	1.06(0.32, 3.56)	0.917**
	>24 months	24(9.3%)	8(33.3%)	16(66.7%)	1.00	1.00
Health status after started ART	Improved	191(74.0%)	60(31.4%)	131(68.6%)	1.00	1.00*
	Same	40(15.5%)	9(22.5%)	31(77.5%)	0.63(0.28, 1.41)	0.266
	Worsen	27(10.5%)	4(14.8%)	23(85.2%)	0.38(0.13, 1.14)	0.086
time clients residence to institution	≤ 30 minutes	207(80.2%)	58(28.0%)	149(72.0%)	1.00	1.00*
	>30 minutes	51(19.8%)	15(29.4%)	36(70.6%)	1.07(0.54, 2.10)	0.84**
Knowledge status	poor Knowledge	89(34.5%)	11(12.4%)	78(87.6%)	0.24(0.12, 0.49)	0.00
	good Knowledge	169(65.5%)	62(36.7%)	107(63.3%)	1.00	1.00*
receiving support	Yes	108(41.9%)	53(49.1%)	55(50.9%)	6.26(3.4,11.45)	0.00
	No	150(58.1%)	20(13.3%)	130(86.6%)	1.00	1.00*
support from whom(n=1o8)	Husband	56(21.7%)	25(44.6%)	31(55.4%)	1.00	1.00
	Friends	52(20.2%)	28(53.8%)	24(46.2%)	1.45(0.67, 3.08)	0.34**

Key 1=reference ** p >0.25 not significant

5.5. Factors associated with dual contraceptive utilization

Multivariable logistic regression was applied to identify the variables independently associated with dual contraceptive utilization among HIV positive women. Significant factors during bivariate analysis were considered together in multivariable analysis. Significant factors fitting binary logistic regression and specifying backward likelihood stepwise logistic regression method with P< 0.05. In multivariable analysis the following factors were independent predictors of dual contraceptive utilization with p-value <0.05, in this study variables associated with dual contraceptive use: have had child, receiving follow up counseling in the last 3 months, starting ART drug and supporting to use dual contraceptive methods. The participants who had no child less likely to utilized dual contraceptive utilization as compared to have had living children with (AOR: 0.19; CI: 0.06, 0.57) & Participants who receiving follow up counseling in the last three months more likely use dual contraceptive methods than those who did not receive follow up counseling in the last three months with (AOR: 6.05; CI: 2.46, 14.83). With regarding to start ARV therapy, starting ART treatment less likely to utilized dual contraceptive methods as compared to did not start ART treatment with (AOR: 0.21; CI: 0.07, 0.64). Supporting to use dual contraceptive utilization more likely to use dual contraceptive utilization than those who did not receive support to use dual contraceptive utilization with (AOR: 6.36; CI: 2.49, 16.28)

Table 5: Independent variables which was significantly associated with dual

Contraceptive utilization in NEMMH, 2016 (n=258)

Variable	categories	dual contraceptive utilization		COR(95%CI)	AOR(95%CI)
		Yes, N (%)	No, N (%)		
have had child	Yes	61(32.1%)	129(67.9%)	1.00	1.00
	No	12(17.6%)	56(82.4%)	0.45(0.23, 0.91)	0.19(0.06, 0.57)
receiving counseling in the last 3 months	Yes	60(49.6%)	61(50.4%)	9.38(4.78, 18.39)	6.05(2.46, 14.83)
	No	13(9.5%)	124(90.5%)	1.00	1.00
starting ART drug	Yes	50(26.2%)	141(73.8%)	0.67(0.37, 1.23)	0.21(0.07, 0.64)
	No	23(34.3%)	44(65.7%)	1.00	1.00
Supporting to use dual contraceptive methods	Yes	53(49.1%)	55(50.9%)	6.26(3.42, 11.45)	6.36(2.49, 16.28)
	No	20(13.3%)	130(86.6%)	1.00	1.00

CHAPTER SIX: DISCUSSION

This study attempted to assess dual contraceptive utilization and associated factors among HIV positive reproductive age women. This study revealed that, the prevalence of dual contraceptive utilization of HIV positive women in NEMMH was 28.3% (95% CI: 23.8-33.7%). This finding of the study showed that the participants reported using dual-contraceptive utilization, and this figure is high when compared to the cross sectional study conducted in Gebretsadik Shawo Hospital, Keffa Zone, SNNPR, Ethiopia on HIV-positive women which is (19.8%) (29). Reasons for this variation might be due to study setting, age group & time of contraceptive utilization. But, similar with study conducted in Fitch Hospital Oromia region on people living with HIV finding showed that (32%) (33). And also, study conducted in western Ethiopia on modern contraceptive utilization among reproductive age group female attend ART clinic finding showed that (30%) use dual contraceptive utilization (28).

Factor like have had no child, receiving follow up counseling in the last 3 months, starting ART drug & supporting to use dual contraceptive utilization were significantly associated with dual contraceptive utilization. In this study HIV positive women who had no living children less likely to utilized dual contraceptive utilization as compared to who have had living children with (AOR: 0.19; 95% CI: 0.06, 0.57), this finding was similar with study conducted in Fitch Hospital Oromia region on people living with HIV (33).

According this study HIV positive women who receiving follow up counseling in the last three months 6.05 times more likely use dual contraceptive than those who did not receive follow up counseling in the last three months with (AOR: 6.05; 95% CI: 2.46, 14.83). This finding was similar with finding from the cross sectional study done in Gebretsadik Shawo Hospital, Ethiopia (29).

Regarding to ARV therapy, those who starting ART treatment were less likely to utilized dual contraceptive methods as compared to who did not start ART treatment with (AOR: 0.21; 95% CI: 0.07, 0.64). This finding was similar with study done gimbie town, western Ethiopia on modern contraceptive utilization among female attend ART clinics (28). Reasons for non uses of dual contraceptives might be fear of contraception related complication with ART drugs.

Study participants who supporting to use dual contraceptive were 6.36 times more likely to use dual contraceptive than those who did not support to use dual contraceptive (AOR: 6.36; 95% CI: 2.49, 16.28). This finding similar with study finding from the cross sectional study done in Gebretsadik Shawo Hospital, Ethiopia on HIV positive women (29). Also, this finding similar with study conducted in Uganda on utilization of family planning services among HIV positive women (30).

According to study conducted in Gebretsadik Shawo Hospital, Bonga, SNNPR, Ethiopia educational status, occupational status, decision with their partners, recent CD4 count, were the significantly associated. But these variables were not significant in this study. Possible reasons for this variation might be due to age group, economic status & patient status /stages/.

In this study strength of this research is computer generated random sampling techniques used. This shows all study participants equal chance was recruited.

Even if study conducted on facility based primary data were used. A set of reliability and validation rules were applied and all associated factors were taken after indication of significance in the "goodness of fit" for the models. Even though this study also had a few limitations: Cause and effect relation not assured

Dual contraceptive utilization & wealth index were assessed based on self-reported information which is subjected to socially desirability bias.

Recall bias: some questions not time bounded.

CHAPTER SEVEN: CONCLUSION AND RECOMMENDATION

Conclusion

In this study level of dual contraceptive utilization was low. Factors likes have had child, receiving follow up counseling in the last 3 months, starting ART treatment & supporting to use contraceptive were significantly associated with dual contraceptive utilization.

Modern contraceptive method use other than condoms was low (no one use permanent, implant).

Recommendation

Health professionals working in ART clinics should be to consider and plan to increases number of dual contraceptive users among HIV positive women in NEMMH.

It needs intervention by involving woreda, zonal health office, NEMMH & other concerned stakeholders towards the increment of coverage of family planning in the NEMMH for HIV positive women.

The use of same-sex data collectors, trained interviewers other than ART unit in order to minimize limitation socially desirability bias as well as information.

For researchers: Further studies should be conducted in the hospital and outside the hospital setup overcome limitations in this study.

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Questionnaires

Annex 1: English questionnaires

Introduction

My name is----------; I am a student in Jimma University in masters of public health. We are interviewing HIV positive reproductive aged women in ART clinic in Nigist Ellen Mohammed Memorial Hospital, Hossana in order to find out prevalence and factors associated with dual contraceptive utilization among HIV positive women. I am going to ask you some questions that are not difficult to answer. Your name will not be written in this format and never be used in connection with any of the information you are going to tell me. You are not obliged to answer any question that you do not want to answer and you may end this interview at any time you want to. This study will be addressing the knowledge gap with regarding to factors associated with dual contraceptive utilization among HIV positive women. I would like to appreciate you help in responding to these questions, and the interview will not be taken more than 20-30 minutes.

Are you willing to participate in this study? 1. Yes 2.no

Signature……

If you have any doubts or questions, you may contact the study investigator, **Markos Selamu**

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Part 1: socio –demographic assessment

101	Age	_____years	Skip Q
102	Ethnicity	1. Hadiya 2.Gurage 3. Amharic 4.kambata 5.silte 6.other(specify)__	
104	Religion	1.Protestant 2.Orthodox 3. Muslim 4. Catholic 5. Other (specify)	
105	educational status	1. can't read and write 2. Can read and write(no grade) 3. Primary school (1-8) 4. Secondary school (9-12) 5. Colleges and Above	
106	occupation	1. house wife 2. merchant 3.government employee 4. daily laborer 5.other(specify)	
107	residence	1.urban 2.rural	

Part 2: Reproductive & sexual factors

201	What is your age at 1st marriage?	1.<18yr 2.>=18yr	skipQ
202	Do you have child?	1.yes 2.no	Q204
203	How many live children do you have? (if yes)	1.one child 2.two to four children 3.more than four children	
204	Do you desire to have a child in the future?	1.yes 2.no	
207	Does your partner desire to have a child in the future?	1. yes 2. no	
209	Have you had sexual intercourse in the last 6 months?	1. yes 2.no	Q211
210	Sex with whom?	1.regular partner (husband) 2.(multi-sexual Partner)	
211	Did you use condom?	1. yes 2.no	Q214
212	How often did you use condom?	1. always 2. sometimes	

213	What was the reason for condom use?	1. to prevent pregnancy 2. my partner is HIV negative 3. to reduce viral loads 4. fear of other STIs 5. just health professional's advice 6.other (specify)--	
214	Do you use condom plus another contraceptive?	1.yes 2.no	Q316
215	Which types of contraceptives do you use?	1.Pills 2.Injectables 3. IUD 4. permanent 5.other specie-	
216	What was reason for not using contraceptive use?	1.I want a child 2.I fear side effect 3. lack of knowledge	
217	How long you stayed with your partner's?	1. ≤4 yrs 2. 5-9yrs 3.10-14yrs 4.greater than15 yrs	
	Part 3 : Service related factors (knowledge assessment)		
301	Have you ever heard of any contraceptive methods that couple can use to avoid or delay pregnancy?	1. Yes 2. No	Q403
302	Which types of contraceptive method did you heard?	1. Pills 2. Implant 3. Injectable 4. Condom 5. IUDs 6. all	
303	Do you know any contraceptive methods?	1. Yes 2. No	Q405
304	Which types of contraceptive method, did you know?	1. Pills 2. Implant 3. Inject able 4. Condom 5. IUDs 6.all	
305	Did you know sex without condom use risk for STI transmission?	1.yes 2.no	
	(Counseling & discussion assessment questions) :		
306	Have you ever received any follow up counseling in the last 3 months?	1.yes 2.no	no 408
307	Which type of counseling, did you receive?	1. to use condom 2. dual contraceptive use 3. about Nutrition	
308	Have you ever discussed with your partner about using any contraceptive method to delay or avoid pregnancy use?	1.yes 2.no	no410

309	Who would decision makers?	1.my decision 2. my partner decision 3. joint decision 4. others (specify	
310	Did your husband or partner get HIV tested?	1.yes 2.no	no412
311	What was his result?	1.positive 2.negative	
312	How much is your recent CD4 count?	1. CD4 count<250 cells/dl 2.CD4count250-350cells/dl 3.CD4count350-500cells/dl 4.>500cells/dl 99. I didn't remember	
313	Did you start ART drug?	1.yes 2.no	no315
314	How long had since you have started ART?	1) <12 months 2) 12-24 months 3) >24 months	
315	How long had since you have started pre-ART?	1) <12 months 2) 12-24 months 3) >24 months	
316	How your health status after started ART?	1.Improved 2.same 3. worsened	
	(Availability &accessibility related questions):		
317	How many minutes it takes from your home to health facility reach?	_____	
318	Have you ever faced services absence when you go health facility for services utilization returned without being services utilized?	1.yes 2.no	
Part 4 : social & cultural related factors			
401	Anyone who was support to use dual contraceptive methods?	1.yes 2.no	no403
402	who was support	1. husband 2. friends 3. relatives 4.religious person 5. other specify	
403	Is there any cultural practice in your community that Prevents you from using contraceptive?	1.yes 2.no	

Part iv: household characteristics wealth index questionnaires		
501	What is the main source of drinking water for members of your household?	1. piped water into dwelling 2. protected dug well 3. unprotected dug well 4. protected spring water 5. unprotected spring Water 6. river 7. other (specify) _
503	Which kind of toilet facility do members of your household usually use?	1. latrine 2. pit latrine with slab 3. pit latrine without slab 4. ventilated pit latrine(VIP) 5. other specify
504	Do you share this toilet facility with other households?	1. Yes 2.No
506	Does your household have these things?	1. Yes 2. No (506)1. watch/clock? (507)2. radio? (508)3. television? (509)4. mobile telephone? (510)5. table? (511)6. chair? ` (512)7.bed with cotton/ Sponge/spring mattress? (513)8. kerosene lamp/pressure lamp? (514)9. lamp? (515)10. electricity? (516)11. car (517)12.motor bicycle (518)13.electric mitad
519	Main material of the floor.	1.earth/sand 2. dung 3.wood 4. cement 5. other specify___
520	Main material of the roof.	1.no roof 2.leaf 3.corrugated iron /metal 4.other specify _____
521	Main material of the exterior walls.	1. no walls 2. bamboo/wood with mud

		3.stone/wood 4.uncovered adobe 5.reused clay 6. other specify____
522	How many living rooms have?	no. of rooms _____
523	How many bed rooms do the household has?	no. of rooms _____
524	Does any member of household own livestock, herds, other farm animals, or poultry?	1. yes 2. no
525	How many animals do you have household own?	(525)1. milk cows_1.yes 2.no (526)2. oxen or bulls __1.yes 2.no (528)4. donkeys__1.yes 2.no (530)6. goats__ 1.yes 2.no (531)7.sheep__ 1.yes 2.no (532)8.hens__ 1.yes 2.no
533	Does any member household have a bank or microfinance saving account?	1. yes 2. no
534	Does any member household own any agricultural land?	1.yes 2.no
535	How many estimated quintal grains produce yearly?	(535)1.wheat ------- 1.yes 2.no (539)5.teff -------- 1.yes 2.no (541)7.beans ----1.yes 2.no
543	Does any member household own permanent plants like chat, coffee, gesho, fruits, produce for market?	1.yes 2.no

Annex II: questionnaire Amharic version

ጅማ ዩኒቨርሲቲ የህብረተሰብ ጤና እና የህክምና ሳይንስ ኮሌጅ

በአማርኛ የተተረጎመ የስምምነት ቅፅ

የጥናቱ ርዕስ/ዓላማ: ኮንዶምንና ሌላ የእርግዝና መከላከያ በአንድ ላይ የሚጠቀሙ እና ተዛማጅ መንስኤዎቻቸዉን ለማወቅ በሆሳዕና ንግስት እሊን መሀመድ ሚሞሪያል ሆስፕታል በኤች. አይ. ቪ/ኤድስ ቨሪስ ደመቸው ውስጥ የላበቸው እናቶች ላይ የሚከሄድ ጥናት ነው፡፡

መግቢያ

የዚህ ጥናት ማብራሪያና የስምምነት ቅጽ ዓላማ አሁን እርሰዎ እንዲሳተፉበት የምጠይቀዎትን የጥናት ምንነት ማብራራት ነው፡፡ በዚህ ጥናት ፕሮጀክት ለመሳተፍ ከመወሰንዎ በፊት ይህንን የማብራሪያ ቅጽ ስነበብ በጥንቃቄ በመገንዘብ ጥያቄዎች ካሎዎት ይጠይቁ፡፡ በተጨማሪም በጥናቱ መሳተፍ ከጀመሩ በኋላ በማንኛውም ጊዜ ጥያቄዎች ካሎዎት መጠየቅ ይችላሉ፡፡

ደህና አደሩ/ ዋሉ. ስሜ----- ይባላል፡፡ ይህ ጥናት የሚካሄደው ጅማ ዩኒቨርሲቲ በሕብረተሰብ ጤና እና የህክምና ሳይንስ ኮሌጅ የሁለተኛ ዲግሪ ተማሪ በሆነው በአቶ ማርቆስ ሰላሙ ሲሆን ኮንዶምን ና ሌላ የእርግዝና መከላከያ በአንድ ላይ የሚጠቀሙ እና ተዛማጅ መንስኤዎቻቸዉን ለማወቅ በሆሳዕና ንግስት እሊን መሀመድ ሚሞሪያል ሆስፕታል በኤች. አይ ቪ. ቨሪስ በደመቸው ውስጥ የላበቸው እናቶች ላይ የሚከሄድ ጥናት ነው፡፡ በዚህ ጥናት በመሳተፍዎ ምንም ዓይነት ስጋት (ችግር) አያጋጥምዎትም፡፡ ደግሞም በመሳተፍዎ የተለየ ጥቅምም ሆነ ማካካሻ አያገኙም፡፡ ሆኖም የሚሰጡት እውነተኛ መልስ በኤች. አይ ቪ/ኤድስ ቨሪስ ደመቸው ውስጥ የላበቸው እናቶች ላይ ኮንዶምንና ሌላ የእርግዝና መከላከያ በአንድ ላይ እንደይጠቀሙ ዬሚየደርጉ መንስኤዎችን ላይቶ በማወቅና የሕብረተሰቡን አመለካከት የበለጠ ለማሻሻል ትልቅ ጠቃሚታ እንዳለው ላረጋግጥልዎት እወዳለሁ፡፡

በመጨረሻም ለሚሰጡት መልስ በቅድሚያ እያመሰገንኩ በአጠቃላይ መጠይቁ ከ20-30 ደቂቃዎች በላይ እንደማይወስድ እገልፅሎታለሁ፡፡ ጥያቄዎቹን እጠይቆታለሁ ስሞዎት ከዚ ቅጽ ላይ አይጠቀስም የሚሰጡኝ መረጃመም በሚስጢር ይጠበቅሎታል ለአንዱ ወይም ለሁሉም ጥያቅዎች መልስ መስጠት ካልፈለጉ ሙበቶዎ የተጠበቀ ነው፡፡

በዚህ ጥናት ለመሳተፍ ፋቃደኛ ነዎት; 1) አዎ 2) አይደለም

ስለመስማማትዎ በፊርማ ይግለፁ…… ተሳታፊው ማንበብና መጻፍ የማይችል ከሆነ የምስክር

ፊርማ…… ቀን……..

በጥናቱ ዙሪያ ማንኛውም ጥያቄ ካለዎት ማነጋገር ይችላሉ፡፡

ማርቆስሰላሙ፡ 0916696915/0945899202

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ስለትብብርዎትአመሰግናለሁ

ክፍልአንድ፣-ማህባራዊናየስነህዝብመጠይቅ

101	እድሜዎበዓመትስንትይሆናል?	_____
102	ብሄር	1. ሀድያ 2.ጉራጌ 3.አማራ 4.ከምባታ 5.ስልጤ 6.ሌለካለይገለፁ
104	ሃይማኖት	1. ፕሮቴስታንት 2. ኦርቶዶክስ 3. ሙስሊም 4. ከቶሊክ 6.ሌለካለይገለፁ
105	የትምህርትሁኔታ	1. መደበኛት/ትያልተማረች 2. መፃፍናማንባብየምትችል 3. አንደኛደረጃ (1-8) 4. ሁለተኛደረጃ (9-12) 5. የኮሌጅእናከዘበላይ
106	የሥራሁኔታ	1.የቤትእመቤት2. ነጋዴ 3.የመንግስትሰራተኛ 4. የቀንሰረተኛ 5. ሌለካለይገለፁ
107	የሚኖሩበትቦታ	1. ከተማ 2. ገጠር

ክፍል 2: የስነ-ተዋልዶታሪክንየሚደስስመጣየቅ

201	የመጀመረያጋብቻስፈፅሞዎዕድሜስንትነበር	1.ከ18አመትበታች 2.በ18አመቶዎናከዘበለይ
202	ልጆችአለዎት	1.አዎ 2.አይደለም →204
203	መልሶጥ.ቁ 202, አዎከሆነአሁንበህይወትያሉትስንትናቸዉ	1.አንድልጅ 2.ከሁለትእስከአራትልጆች 3. ከአራት ልጆችበላይ
204	ወደፊትልጅእንድኖሮትይፈልጋሉ	1.አዎ 2.አይደለም
207	በላቤትሽወደፊትልጅእንድኖሮትይፈልጋሉ	1.አዎ 2.አይደለም
209	ባለፉቱ 6 ወራትውስጥየግብረ-ሥጋግንኙነትነበረዎት	1.አዎ 2.አይደለም → 214
210	መልሶቁጥር 209, አዎከሆነየግብረ-ሥጋግንኙነትከመንጋር?	1.ከበለቤቴጋር 2. ከበለቤቴዉጭከብዙንዳኛቼጋር
211	ኮንዶምተጠቅመዋል?	1. አዎ 2.አይደለም
212	መልሶ "ለጥ.ቁ # 211", አዎከሆነአጠቃቀምዎትእንዴትነው?	1. ሁልጊዜ 2. አልፎአልፎ
213	ኮንዶምየተጠቀሙበትምክንያት/ቶችምንድነው/ናቸው (ከአንድበላይመልስይቻላል)	1. እረግዝናንለመከላከል 2. ጓደኛዬከኤችአይቪቨይረስነፃስለሆነ 3. በሌላአይነትየኤችአይቪቨይረስ መያዝንለመከላከል 4. ሌሎችየአበላዘርበሽታለመከላከል 5. የጤናበለሙያምክር 6. ሌላከሌይጥቀስሱ----
214	ከኮንዶምበታጨመርሌላየቤተሰብምጣኔአገልግሎትይጠቀመሉ?	1. አዎ 2.አይደለም 216
215	መልሶ "ለጥ.ቁ # 214", አዎከሆነየትኛዉንአይነትየቤተሰብምጣኔአገልግሎትይጠቀመሉ? (ከአንድበላይመልስይቻላል)	1. እንክብል 2. በመርፉየምስጥየእርግዝናመከላከያ 3. በመህጸንዉስጥየምቀመጥ 4.ቋሚየእርግዝናመከላከያ (5).ሌሎችከላይጥቀሱ
216	እርግዝናመከላከያዘዴያልተጠቀሙበትምክንያትምንድነዉ?	1.ልጅስለምፈልግ 2.የጎንዮሽጉዳትስለፈራሁ 3. አጠቃቀሙንስለማላዉቅ(4).ሌሎችከለይጥቀሱ
217	ከትዳርአጋርሽጋርለምንያክልጊዜአብራችሁኖራችዋል?	1. አራትዓመትናከዚያበታች 2. 5-9 ዓመታት 3)10-14 ዓመታት 4. 15 ዓመታትበላይ
	ክፍል 3 : የተቋሙአገልግሎትንየተመለከተውንየሚድስስመጠይቆች (የእዉቀትመለኪያመጠይቆች)	
301	ስለእርግዝናመከላከያዘዴከዚህበፊትሰምተዉያዉቃሉ?	1. አዎ 2. አይደለም 303
302	መልሶ "ለጥ.ቁ # 301",	1.እንክብል 2. በክንድየምቀበር 3.

	አዎከሆነየትኛዉንእርግዝናመከላከያዘዴነውየሰሙት?	በመርፌየምሰጥየእርግዝናመከላከያ 4. ኮንዶም 5. በማህጸንዉስጥየምቀመጥ 6.ሌሎችከለይጥቀሱ
303	መንኛዉንምየእርግዝናመከላከያዘዴያዉቃሉ?	1. አዎ 2. አይደለም 305
304	መልሶ “ለጥ.ቁ # 303”, አዎከሆነየትኛዉንየእርግዝናመከላከያዘዴያዉቃሉ?	1. እንክብል 2. በክንድየምቀበር 3. በመርፌየምሰጥየእርግዝናመከላከያ 4.ኮንዶም 5. በማህጸንዉስጥየምቀመጥ 6.ሌሎችከለይጥቀሱ
305	ኮንዶምንሳይጠቀሙየግብረስጋግንኙነትመፈጸምለአባለዘርበሽታእንደ ምያጋልጥያዉቃሉ? (ከምክርወያይትእናሌሎችአገልግሎትየምደስስመጠይቆች)	1. አዎ 2. አይደለም
306	ባለፉት 3 ወራትዉስጥማንኛዉንምየምክርአገልግሎትአገኝተዋሉ?	1. አዎ 2. አይደለም 308
307	መልሶ “ለጥ.ቁ # 306”, አዎከሆነየትኛዉንየምክርአገልግሎትነበርያገኙት?	1. ኮንዶምመጠቀም 2. ኮንዶምንናሌላየእርግዝናመከላከያበአንድላይስለመጠቀም 3. ስለአመጋገብ 4ሌሎችከለይጥቀሱ
308	ከትዳርአጋሪዎጋርስለማንኛዉምእርግዝናመከላከያዘዴተወያይተዉያ ዉቃሉ?	1. አዎ 2. አይደለም →310
309	መልሶ “ለጥ.ቁ # 308”, አዎከሆነእርግዝናመከላከንለመጠቀምማንነዉየምወስነዉ?	1.እኔ 2. ባሌ 3. እኔናባሌ 4. ሌሎችከለይጥቀሱ
310	የትዳርአጋሪዎከዚህበፍትየደምምርመራአድርገዋል?	1. አዎ 2. አይደለም→ 312
311	መልሶ “ለጥ.ቁ # 310”, አዎከሆነየደምምርመራዉጤቱምንነበር?	1.ፖዝቲቪ 2.ኔጋቲቪ
312	በአሁኑጊዜ CD4 ስንትነዉ?	1.ከ250 cells/dl በታች 2.ከ250-350cells/dl 3.ከ350-500cells/dl 4 ከ500cells/dl በላይ 5.አላስተዉስም
313	ፀረ HIV/AIDS ጀምረዋሉ?	1. አዎ 2. አይደለም
314	?መልሶጥ.ቁ # 313, አዎከሆነፀረ HIV/AIDS መድኃኒትከጀመሩምንያክልጊዜሆነ?	1) <12 ወራት 2) 12-24 ወራት 3) >24 ወራት (4) አላስተዉስም
315	መልሶጥ.ቁ # 313 አይደለምከሆነ pre-ART መድኃኒትከጀመሩምንያክልጊዜሆነ	1) <12 ወራት 2) 12-24 ወራት 3) >24 ወራት (4) አላስተዉስም
316	ፀረ HIV/AIDS መድኃኒትከጀመሩወድህየጤንነትሽሁኔታምንይመስላል? (የጤናተቋምግበዓትንናርቃትንየምደስስመጠይቆች)	1.ተሻሽሏል 2.ያዉነዉ3.አልተሻሸለም
317	የጤናተቋምለመድረስከመኖርያቤትዎምንየክልደቅቃይወስዳል?	_____
318	ጤናተቋምከመጡበኃላየምፈልጉትንአገልግሎትአጥተዉሳይጋለገሉወደ ቤትተመልሰዉያዉቃሉ?	1. አዎ 2. አይደለም

ክፍል 4 : ማህበራዊናባህላዊመጠይቆች		
401	ኮንዶምንናሌላየእርግዝናመከላከያበአንድላይመጠቀምንየምደግፍዎት ሰዉአለ?	1. አዎ 2. አይደለም 403
402	መልሶ “ለጥ.ቁ # 401”, አዎከሆነማንነዉየምደግፍዎት?	1. ባሌ 2. ጓደኞቼ 3. ዘመዶቼ 4. የሐይማኖትሰዎች/መርዎች5. ሌሎችካለይጥቀሱ

403	በአከባቢዎትየእርግዝናመከላከያዘዴንእንዳይጠቀሙየሚያደርግማህበራዊተጽኖአለ?	1. አዎ 2. አይደለምከሆነ

ክፍል5፡-የኢኮኖሚሁኔታንየሚዳስስመጠይቅ		
501	አብዛኛውንጊዜለቤተሰቦአባላትየመጠጥውሃየሚያገኙትከየትነው ?	1. ቧንቧበቤትውስጥ 2. ክደንያለውየጉድጓድውሃ 3. ክደንዬሌለውየጉድጓድውሃ 4. የተጠበቀየምንጭውሀ 5. ያልተጠበቀየምንጭውሀ 6.ወንዝ….7.ሌለካለይገለፀ
503	አብዛኛውየቤተሰብዎአባላትየሚጠቀሙትየትኛዉንየመፀዳጃቤትአይነትነውያላዎት?	1. በአካባቢቁሳቁስየተሰራመፀዳጃቤት 2. ክደንየለውመፀዳጃቤት 3.ክደንዬሌላውመፀዳጃቤት 4.መስተንፋሻየለውመፀዳጃቤት 5.ሌለካለይገለፀ
504	ከሌላቤተሰብጋርበጋራትጠቀመላችሁ?	1.አዎ 2.አይደላም
506	እነዚህነገሮችበቤታችሁዉስጥአሉ? (1 =አዎ 2= የለም)	1.አዎ 2.አይደላም 1. የግርጊደሰዐት? 1.አዎ 2. አይደላም 2. ራድዮ? 1.አዎ 2. አይደላም 3. ቴሌቭዥን? 1.አዎ 2. አይደላም 4.ተንቀሳቃሽ/ሞባይል/ስልክ?1አዎ 2. አይደላም 5. ጠለጴዛ? 1.አዎ 2. አይደላም 6. ወንባር? 1.አዎ 2. አይደላም 7.እስጵሪንግአልጋከነትራስ? 1.አዎ 2.አይደላም 8.ኩራዝ 1.አዎ 2. አይደላም 9. ሌላብርሃን? 1.አዎ 2. አይደላም 10.ኤሌክትሪክ/ሶላርመብራት 1.አዎ 2. አይደላም 11.መኪና 1.አዎ 2. አይደላም 12 ሞተርሳይክል1.አዎ 2. አይደላም 13.የኤሌትሪክምጣድ1.አዎ 2. አይደላም
507	የመኖሪያቤቱወለልየተሰራበትቁስ/ጥሬዕቃ/ ምንድንነዉ?	1.ከአፋር 2. ከእበት 3.ከእንጨት 4.ከስሚንቶ 5. ሌለካለይገለፀ----
508	የመኖሪያቤቱጣራየተሰራበትቁስ/ጥሬዕቃ/ ምንድንነዉ?	1.ጣራየለውም 2.በሳር/ቅጠል 3.በብረት /ቆርቆሮ 4. ሌለካለይገለፀ----
509	የመኖሪያቤቱየውጪግርግዳየተሰራበትቁስ/ጥሬዕቃ/ ምንድንነዉ?	1.ግድግዳየለውም 2.ቀርቀሃቅጠል/ቀርቀሃ/ 3.በድንጋይናበጭቃየተሰራ 4.ያልተለሰነሸከላ5.በሸከላተሰርቶየተለሰነ

510	በመኖርያቤቱዉስጥስንትክፍልአለ?	የክፍልብዛት ( )
511	በቤቱውስጥከሚገኙትክፍሎችውስጥስንቶቹክፍሎችለመኝታያገለግላሉ?	የክፍልብዛት ( )
512	የቤትእንስሳቶችአሏችሁ?	1.አዎ 2.አይደላም→ 514
513	መልሶተ.ቁ512 አዎከሆነከፊትለተዘረዘሩትእንስሳትበቤትውስጥምንያህልእንዳሉበቁጥርይገለጹ? ከሌለ 00 ይጻፍ	1. የወተትላም---------- 2.ባሬ _____ 4. አህያ_____ 6. ፌያል _____ 7.በግ ___ 8.ዶሮ ___
514	ከቤተሰብአባልውስጥየባንክወይምበጥቃቅንብድርናቁጠባሂሳብደብተርያለዉአለ?	1.አዎ 2.አይደላም
515	ከቤተሰብአባልውስጥየራሱይዞታየሆነየእርሻመሬትያለውአለ?	1.አዎ 2.አይደላም→ 517
516	መልሶተ.ቁ515 አዎከሆነከፊትለተዘረዘሩትጥራጢሬዎች/ሰብሎችበዐመትስንትኩምታልእንዴም ያማርቱበቁጥርይገለጹ? ከሌለ 00 ይጻፍ	1.ስንዴ------- 5.ጤፍ -------- 7.በቄላ -------
517	ከቤተሰብአባላትውስጥቋሚሰብሎችንአንደቡና፣ጫት፣ጌሾ፣ፍራፍሬናቅመማቅመ ምለገበያሽያጭየሚያመርትርትአለ?	1.አዎ 2.አይደላም

Annex III: questionnaire Hadiyisa version (local language)

Jimmi unveresti minadabina fayahoma egachi lossan minane la'am digiree massi kitabi naqasha gudesemina wexakam naqash wixachina itti sagara uwoo mana sidimina gudesako gudesha soroobimmi horoori sawwit lam abaroos qodakam goggo HIV xiqqi worone yookki amo'i hosa'n hospitaalane xummi egechchane hinkaan galaxxoo keen yooda'ee mashika'uwwi mahi ihukisida'e la'immina issoomane.

Loppitato ayyiche:-

Summi iki ____yamamook xummi egechchane awwaado uwwimm ogorane awwaaxxaan yoo galaxxati bikina gudakohane.Ka naqashik horror washi HIV ammonne xummi egechchane hinkaa'n awwaaxxan galaxxaada'e la'imminaa mashshika'uw mahi ihukisida'e la'immina Hossaa'n hospitaalane yoo HIV xiqqi worone yookki amo'one issakam sorooba.Kine uwitakam naqash xummi egechchane awwaado uwwimm ogorane araqa awadohane: uwitakam naqasha hundam koxixanchine maxaqanche amando bikina mahim affobe'ane ehukisa chakesomo. Ka xamichuwika hundam ihuko koli dabacha higime xansisohane ihukarem kine ka xamichina uwitakam nakash danami misha ebimina araka awadohane ihookko.

Xamicha dabarimina hasakamone?

Oyya , ashere _____ Aa'ee, galaxomo_____

Ayyi Xamichim hee'ulaasi kaa silkii xamehe **Markos Selamu** 0916696915/0945899202

Email: marksena15@gmail.com

Naqash wixa'anchi suma_____furmaa_____ayamoo_____

1. Baxanchi matto:-minaadaph heechch ogoraa gat qaanquwwa Hossaa'n hospitaalane HIV xiqqi worone yookki amo'one issakam sorooba megabit agaana 2008 H.D.

S.Nº	minaadaph heechch ogoraa	
101	Umer mee'o?	Hincho_____
102	Ki giir maha?	1. Hadiyya 2. Guraage'e 3.Amaara 4. Kambaata 5.Silxe'e 6.Mullane (caakise)_____
104	Amanati maha?	1. Potestant 2.Oritodokisa 3. Musilima 4.Katolika (5) Mulane(chakise)
105	Mee'i baxxancha gulitta?	1. Losan bee'ane 2.qanaan'amaa kitaabimaa xaanomo 3. .Luxxi qooxo losa'n mine guullaammo (1-8) 4.La'mmi qooxo losa'n mine guullaammo(9-12) 5.kolleja kollejii lobaane
106	Baxxi ogori maha?	1.Mi'in ama 2.dadaraancho 3.Adi'l batancho 4.balla baxxancho 5. Mullan ihulas (caakise)
107	Hanni waattittokki?	1. Beeroo 2. haxxi ulla

Baxxanichi lamo: **fikaanimaa saraayyo xaamichuwwa**

201. Mini issiti amaani umuri mee'i hee'uko? 1. <18hinchi 2.>=18 hinchi

202. Ciilluwwi yooho? 1. eyya 2.aa'ee X 204 mare

203. X# 202 eyya yitolas Mee'i ciilluwwi foorii yooho?1).matii 2). 2-4 ciilluwwi 3). Soorii lobaanee

204. ilaagenee qaatenaa qoodo'i yoo? 1. eyya 2.aa'ee

207. kimi'ini aro'i ilaagenee ciilluwwi qaatonaa haaso? 1. eyya 2.aa'ee

209. lohi agaanii illage shahixxi edaancha exitaa heelito? 1. eyya 2.aa'ee X 211mare

210. X# 209 eyya yitolas, ayyenee? 1.areene 2. Ariinsii muulli maaninne

211. kondooma awwqxxito? 1. eyya 2.aa'ee X 216

212. X# 211 eyya yitolas, hiinkido amaanee? 1.hundi'amaaneemi 2.higaa higaa

213. kondooma awwqxxito maashika'ii? Maati lobokaa doo'illimaa xaantotto 1.laamfooromaani egeelliminaa 2.ikii arii HIV bee'anee ihu bikinaa 3. HIV vaayiresa qaxoomaa xa'isiminaa 4.shaa'ixi edaanchi higoo jaabbi googo xa'isiminaa 5.haakimi soguu bikinaa 6. Mulaki yoolas cakise

214. kondoomii maqqire mulli abaroos qodoo'o awwaxito? 1. eyya 2.aa'ee X 216 mar

215. X# 214 eyya yitolas, hinikaa hagaara awwaxito? Maati lobookaa doo'limaa xaanitoto 1.kiininaa 2.maarife'ee 3.alibaachini agoohani 4.huundi'amaanii 5. Mulaki yoolas cakise

216.abaroos qodo'oo awaaxitoobee mashika'i maaha? 1.ciilluwa haasomi bikkinaa 2.qaara'i mashika badoomi bikina 3.qaara'i bikina laachi be'ee

217. ariine hinikaani hiinicho hellakka? 1.<=4 hiinicho 2). 5-9 hiinicho 3.10-14 hiinicho 4.>15 hiinicho

Baxxanichi saso: faayya'oomi egeechi miini uwwo awaado (laachchi xaamicha)

301.Ayyi abaroos qodoo'omee awaaximi laamfooromaani egero'isa maceesa laaqqoo?1. eyya 2.aa'ee X 303 maare

302. X#301 eyya yitolas, hiinikki abaroos qodoo'i googgo maceesa laaqqoo? 1. kiininna 2.guduumonee dubaakami abaroos qodoo'i 3. Maarife e'inee 4.koondoma 5. alibaachini agohi abaroos qodoo'o 6.mullaki ihulas caakis

303. Ayyi abaroos qodoo'omee awaaximi googo laaqqoo?1. eyya 2.aa'ee

304. X#303 eyya yitolas, hiinikki abaroos qodoo'i googgo laaqqoo? 1. kiininna 2.guduumonee dubaakami abaroos qodoo'i 3. Maarife e'inee 4.koondoma 5. alibaachini agohi abaroos qodoo'o 6.mullaki ihulas caakise

305. koondomii bee'i exaakami shayyixxi edaamichi shayyixxi orachchone eebbo jaabbo laqqoo? 1. eyya 2.aa'ee

Soogitaaninaa awaadoo xaamichchuwwa

306. Sasi agaanii ilaage ayyi luwwi bikinaami soogitaanoo uwaakka laqqoo? 1. eyya 2.aa'ee X 308

307. X# 306 eyya yitolas, maahi bikina uwwaakko'ok? 1. koondoma awaxximi bikina 2. koondominee maaqiree mulli abaroos qodoo'o awaaxximi bikina 3.hurbaaxi bikina 4.mullaki ihulas caakise

308.kimii'ni arini abaroos qodoo'o awaaxximi bikina atoraata laqqoo? 1. eyya 2.aa'ee X310

309. X# 308 eyya yitolas, ayyetee atoraacha ogaatoh? 1.ani ogaatoomo 2. i aro'i ogaato 3.laamimee ogaanitomo 4.mullaki ihulas caakise

310. kiki aro'i HIV maraamarama he'ukko? 1. eyya 2.aa'ee X 312 maare

311. X# 310 eyya yitolas, mishi maahi he'ukko?1. yokko 2.bee'e

312. kaaba kiki CD4 xigimee'o? 1. CD4 xigi <250 cells/dl 2.CD4 xigi 250-350cells/dl 3.CD4xigi350-500cells/dl 4. >500cells/dl 5) sawomoyyoo

313. HIV/AIDS qaarqre maasitoolanihe? 1. eyya 2.aa'ee

314. X#313 aa'ee yitolas, woni qaara'illi illage maasakami qaraare maasima ashetitani hinikaani amaanee ihaa?1).<12 agaani 2).12-24 agaana 3).>24 agaani 4. saawomoyoo

315. X# 313 eyya yitolas, HIV/AIDS qaraare maasimaa ashetitaani hinikaani Amanne ihaa? 1).<12 agaani 2).12-24 agaana 3).>24 agaani

316. HIV/AIDS qaraare maasimaa ashetitaani ki faaya'oomi duhaa'i hinikideete? 1.eraanee 2.ehaanami ellukoyoo

Faaya'om minee afiimi bikina kuroo xaamichchuwwa

317. Faaya'om minee afiminaa kimini mee'i daqqiqa maaso? caakise____

318. Faaya'om minee affa lasaage matiiti awwado gullitoni dabalitaa laqqo? 1. eyya 2.aa'ee

Baxxanichi soro miinadaaph gaati bikinaa kuroo xaamichuwwa

401. Ayyi maanichimi koondominee maqire mulli abaroos qodoo'o awaaxximi bikina haraamatoo uwaa? 1. eyya 2.aa'ee X 403 maare

402. X# 401 eyya yitolas, ayyetee haraamatoo uwaame'ukkok? 1. i ari 2.iki beshshi 3. qaarimaani 4. waa'i bikina woccani

403. Ayyi heechchi qaanqimi ogoorim kiini hegeegonee abaroos qodoo'o awaaxx im horoo luwwi yoo? 1. eyya 2.aa'ee

Baxxanchi onto: Mi'n amaxxi duuha'a		
501	Abaroos lophphookolli aggi wo'o eebakkamok haniinse?	1.Mi'n woro yoo boombii 2.Ifichi yoo ba'l wo'ii 3.Ifichi bee'i ba'l wo'ii 4.egeram bu'i 5.Egeramubee'i bu'i 6.Daaje 7. Mullan ihulas caakise
503	Hinkido'i Shu'm mine abaroos awaaxxokkok?	1.Hegeegoyooluwwi baxxam Bare 2.ifisaanch yookki bare 3.fooqako bare 4.Fosha fisoohaanine(VIP) 5. Mullan ihulas caakise
504	Mulli mi'n manine maqire awwaxitakkamonihe?	1. eyaa 2.bee'e X506 maare
506	Mine kamu'uttuwwi hinkakeen yoo?	1. eyaa 2.bee'e 1. goritii sa'at? 2. iraadoon?

		3. Televegin? 4. Muba'eli ? 5. xaaraphezi? 6. xaqaashi? ` 7.aligi bake'anchinemi? 8. kuraaz? 9. mulii caaki? 10. elekitiriiqi? 11. kaame'e? 12.dokidooqe'e 13. elekitiriqi gala'i
507	Gulant baxamukkok?	1.buchcha/ashabo'o 2. oreet nanamaakohane 3. haqqa 4. Simminto'o 5. mullan ihulas
508	Mi'I iiman baxxamukkok?	1. Iiman bee,ane2.huqqa/ bura'a 3. qoqoro'o 4. Mullan ihulas caakise
509	Bii'l gorttanni baxamukkok?	1. Gorte'I bee'e 2. leema 3.kiinna/haqqa 4. maragakobee'i haraa 5. Maragako'i haraa
510	Minenne mee'i baxxanchchi yoo?	4. Mullan ihulas caakise mee'i baxxanchchi_____
511	Mee'i insech baxxanchchi yoo?	Mee'i baxxanchchi yoo__
512	Abaroos woriinse ayyi manchinami diinati yookokkik yoo?	1.yookko 2.bee'e X 514 mare
513	X #512 dabach eyaa yitolaasi mee'i yooda'e? yookoka kitaabe /be'eka ''00''	1.meenti laari__ 2.mirgoo'uwi __ 4. haalli__ 6.fella'i__ 7.geerebi__ 8.antaaba'i__
514	Abaroos woriinse ayyi manchinam bank akkaawunt /santiba wixxa'akkam akkawunt yoo?	1.yookko 2.bee'e
515	Abaroos woriinse ayyi manchinam abuulli uulli yoo?	1.yookko 2.bee'eX 517 mare
516	X #515 dabach eyaa yitolaasi hiinkanii yooda'e hiinchonne xiiga kuree? yookoka kitaabe /be'eka ''00''	1. araasi ------- 3. soo'i--------- 5. xafee'i -------- 7. baqeelli----
517	Abaroos woriinse ayyi manchinam ixxi gaaqqi xale'ikki meerinaa hinca'ooki muutaani/mishshi k.b cahaat,buunni geesho'ii?	1.yookko 2.bee'e