# **Consistent Condom Utilization and its Associated Factors among Sexually Active** Female Anti-Retro Viral Treatment Users in Finoteselam District Hospital, Northwest Ethiopia, 2018

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#### **Abstract**

Consistent condom utilization is the key strategy to prevent new HIV strain transmissions among ART users. There are limited evidences on consistent condom utilization among women who are on ART in Ethiopia. Methods: A cross-sectional study design was conducted among sexually active female ART users from June to August, 2018. Data were collected using a systematic random sampling data collection method. The multivariable logistic regression model was used to identify the predictors for the outcome Results: study indicated that 137(34.2%) women reported that they were using condom for the last three months, of whom 81 (59.1% (n=137)) used condoms consistently. Respondents' age group from 21-30 (AOR=4.381, 95%CI=1.05, 18.331), Counseling about condom utilization (ARO = 9.442, 95% CI = 4.387, 20.32) and husbands' educational status "diploma and above" (AOR = 3.65, 95% CI = 1.007, 13.227) were significantly associated with condom utilization.

## **Keywords**

HIV, ART, consistent, condom, ethiopia

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# **Background**

An estimated of 38 (31.6-44.5) million people were living with HIV (including 2.6 million children) globally, according to the 2019 estimates.<sup>1,2</sup> Larger percentage of this number is from low- and middle- income countries. Around 25.8 million People living with HIV are in sub-Saharan Africa, among whom 59% are women, accounting 70% of the global total. Majority of HIV positive young individuals are living in sub-Saharan Africa and the primary means of the infection is via mother to child transmission during pregnancy.<sup>3</sup>

According to Ethiopian Demographic Health Survey (EDHS) of 2016, the national prevalence of HIV is 0.9% with a big difference between urban and rural societies (2.9% and 0.4% respectively). Antiretroviral treatment (ART) has begun in Ethiopia, in 2003. More than 600, 000 Ethiopian are currently living with Human immunodeficiency virus (HIV) according to the 2018 spectrum estimates. Ethiopian government has been recognizing the need for ART and issued the first guideline in 2003 to facilitate a rapid scale up of it and the free ART service has been practiced since 2005 in public health institutions. Around 1361 health institutions are currently providing ART services in this state. The Ethiopian ART guideline has been giving reproductive aged women as the main target audience and the national HIV goal and its guiding principles are based on the realization of the sustainable development goals.4

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Condom provision is a cost wise intervention for prevention of mother to child transmission of HIV and maternal morbidity and mortality from unintended pregnancy. Prevention of unintended pregnancy among HIV positive women is the second prong of four WHO prongs of prevention of mother to child transmission of HIV (PMTCT. Both HIV infection and unwanted pregnancy can be prevented through working on consistent condom utilization.

Ethiopia is widely affected by the HIV/AIDS pandemicity. An estimated of 30% to 64% of all pregnancies are unintended. Consistent condom utilization is supported by global HIV statistics and different studies because it has dual roles, the protection of both STI/HIV infections and unintended pregnancies. As the researchers' knowledge is concerned, there is no study conducted on specifically our study population prior to this study in Ethiopia at large. So this study would be the bench mark for policymakers to distribute and adjust the management changes of sexually active female ART users specifically in around the study area. In addition to this, our finding might be important for the improvement of condom use among the study population since the result had been already explained for the population in the setting.

Nowadays, ART service is widely practiced in the globe which makes people living longer with HIV. This indirectly can be the risk for the HIV infection expansion. 10 So, if people living with HIV do not consistently practice safer behaviors, they can acquire sexually transmitted diseases, which may also be new strains of HIV, and put others at risk for HIV acquiring. 11 International reports show that there are high number of unwanted pregnancies among HIV positive individuals. These condition can deliver the recommendation of practicing consistent condom utilization. Therefore, authors were interested in conducting a research on specifically reproductive aged sexually active female ART users in the setting thinking that recommendations from the study finding might be important to reduce unintended pregnancies. This cross sectional quantitative study showed the magnitude of consistent condom utilization and its associated factors among sexually active female ART users in Finote-Selam district Hospital, 2018.

## Methods

## Study Setting and Design

Institutional based cross-sectional study was conducted from June 1 to August 30, 2018 in Finote-Selam District Hospital which is located in Amhara regional state, North-west Ethiopia. The study setting is 176 kilometers far from Bahir Dar (capital city of Amhara region) and 387 kilometers from Addis Ababa (capital city of Ethiopia). The total population living in the town was around 60 000 according to Ethiopian 2007 population census. This District Hospital gives different services for more than 1.2 million catchment population. There were around 12,550 clients in the Zone who were on ART among whom 1605 (1305 sexually active women) were

enrolled in Finote-Selam district Hospital. Number of nurses assigned in ART clinic were 32 including one focal person. Regarding health institutions, there are one district hospital, 3 health centers and 4 private clinics, of which, two health centers and the Hospital have ART services in the town.

# Study Population

Sexually active reproductive aged women who were enrolled in Finote-Selam district Hospital for ART service were our study population.

## Sample Size Calculation and Sampling Procedures

A single population proportion formula was used by taking the assumptions: HIV positive women who use condom (p = 0.344), <sup>12</sup> 95% confidence interval, maximum of 5% margin of error and adding 15% non-response rate which gives a total of 400 study participants.

ART clinic logbook revised first to know how many women were sexually active. Then, taking the number of sexually active female ART users, systematic random sampling technique was used to select the study participants. There were 1305 women who were sexually active and on ART in the Hospital. We calculated the K interval which became three and every third woman was selected. To start the interview, number 1-3 was selected by lottery method and number 2 was selected randomly. Since ART follow up is recycling process, one woman could come to the Hospital more than one times during the data collection period and to avoid re-interviewing, any third woman was also asked whether or not they were interviewed in the last time for this research and if they were so, the immediate next sexually active woman was interviewed.

# **Data Collection Processes**

Data were collected using a face to face interview technique. The questionnaire was contextualized/adapted from the literatures and its contents were socio-demographic factors, women's awareness factors and reproductive health factors. It was a valid tool in Ethiopian context<sup>13</sup> and prepared in English by reviewing various literatures and translated into local language (Amharic) and back to English in order to check consistency. Pretest was conducted in a health center nearer to Finote-Selam district Hospital and necessary corrections on the tool were employed accordingly. Data collection was conducted by female midwives who were working in Finote-Selam district Hospital but other than ART clinic to avoid social desirability bias.

# **Operational Definitions**

Consistent condom utilization: Using either female or male condom during every sexual inter course for the last three months (13).

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**Dual protection:** The prevention of both unintended pregnancy and HIV infection which can be possible through the use of either male or female condom consistently.<sup>14</sup>

**Sexually active female ART users:** Those women who were on ART and had sexual practice at-least for the last three months prior to this study.<sup>15</sup>

**Poor counselling:** When health care providers provided counseling that does not address the condom's dual function (preventions of unintended pregnancy and new HIV infection) (13).

**Negative husbands` attitude:** When husbands are not volunteer to use condom during sexual intercourse with their wives (reported by study participants).

**Women's awareness:** Measured by the 15 awareness questions with count numbers of Yes's or Nòs. Those participants who scored mean above mean of the awareness questions were considered as having good awareness.

# **Data Quality Control**

Structured data collection tool was utilized and the validity and clarity of the tool was tested among a 5% of the sample size before the final utilization of the questionnaire in the other health institution found in Finote-Selam town. Training was given for data collectors and a supervisor regarding the objectives of the study, data collection method and significance of the study. During data collection, each data collector was supervised for any difficulties and direction and necessary corrections were provided.

The collected data were checked and on spot corrective measures were taken both by data collectors and the supervisor. Daily communications were conducted among data collectors, the supervisor and principal investigator for discussion regarding presenting difficulties and to assess the progress of data collection.

## Data Processing and Analysis

All collected data were rechecked visually for completeness and coded. We used Epi Info version 7 and SPSS version 20 for data entry and analysis respectively. Multivariable logistic regression was employed to minimize the confounding effect and to identify the associated variables. Variables having P-value less than 0.2 in the bi-variable analysis were fitted into multivariable logistic regression model. A 95% confidence interval and odd ratio were computed and variables having P-values less than 0.05 in the multivariable logistic regression analysis were considered as factors associated with consistent condom utilization. For further analysis, descriptive statistics like frequencies and cross tabulations were performed.

#### Results

# Socio-Demographic Characteristics

A total of 400 sexually active women who sought ART services had completed the interview administer questionnaire among

whom 188 women (47%) were between 21 and 30 years age group. The mean age of the participants was 31.6 years (SD  $\pm$  7.2).

Majority, 279 (70%) and 291 (72.8%) were urban dwellers and Orthodox Christian followers respectively. Nearly, three fourth of the respondents, 288 (72%) were married. Regarding the occupational status, 161 (40.3%) were self-employees.

One third of the respondents, 133 (33.3%) educational status was unable to read/write. Forty (10%) respondents` monthly income was below 300 Ethiopian Birr or 10.7 USA dollars and the median monthly income was 800.8 Ethiopian birr or 28.6 USA dollars.

Regarding husbands' educational status, nearly one third, 83 (28.8%) were with diploma and above. Most of the husbands, 198 (68.8%) were HIV positives (Table 1).

# Reproductive Characteristics

Four from five participants, 326 (81.5%) reported that they had pregnancy history. Twenty (5%) study participants were currently pregnant among whom three quarter, 15 (75%) pregnancies were unintended.

More than half of the women, 220 (55%) had got counseling on condom utilization. Regarding family planning usage, majority of the study participants, 324(81%) had history of contraception use. Only One third, 137 (34.2%) of the participants responded that they were using condom for the last 3 months, of whom, 81 (59.1%) and 57 (40.9%) were consistent and inconsistent users respectively. Husband's negative attitude was the main reason not to use condom according to the participants reports (Table 2).

## Women's General Awareness

A dichotomized response scale was used to measure the general awareness regarding condom utilization among sexually active female ART users, based on fifteen related questions. "Yes" or "no" answers were numbered and the mean was calculated to examine participants' awareness for specific topics related to condom utilization.

Majority (95%) of the participants were aware about ways of HIV transmission.

Three quarter, 290 (72.5%) of the participants were aware that condom has dual prevention role (HIV and unintended pregnancy). But 32 (8%) and 28 (7%) of study participants wrongly responded that pills and injectable have dual protection roles respectively. Most (84.5%) of the mothers were aware that HIV could be prevented through abstinence and consistent condom utilization. But 98(29%) and 11(3.3%) participants wrongly responded that being on ART and taking pills could prevent HIV transmission which both percentage indicate that there were women who were not aware about HIV prevention methods.

Nearly half, 195 (48.8%) of the study subjects were aware that the continuation of unsafe sex with HIV positive partner

**Table 1.** Socio-Demographic Characteristics of Women who Sought ART Services in Finote-Selam District Hospital, North West Ethiopia from June-August 2018 (n = 400).

Age in years         <20       18       4.5         21-30       188       47         31-40       156       39         >40       38       9.5         Residence       Urban       279       70         Rural       121       30         Religion       121       30         Orthodox       291       72.8         Muslim       87       21.8         Protestant       22       5.5         Marital status       Single       59       14.6         Married       288       72         Divorced       30       7.5         Widowed       23       5.8         Educational status       Solational status         Not able to write and read       133       33.3         Able to write and read       48       12         From 9-12 grades       95       23.8         Diploma and above       68       17         Income in ETB/USA dollars       <300 ETB/<10.7 \$       40       10         300-600 ETB/10.7 -21.4 \$       129       32.3         601-1000 ETB/23.5-35.7 \$       131       32.8         Current occupation       4	Variables	Frequency	Percent
21-30	Age in years		
31-40   156   39   38   9.5   Residence   Urban   279   70   Rural   121   30   Religion   Orthodox   291   72.8   Muslim   87   21.8   Protestant   22   5.5   Marital status   Single   59   14.6   Married   288   72   Divorced   30   7.5   Widowed   23   5.8   Educational status   Not able to write and read   48   12   From 1-8 grades   56   14   From 9-12 grades   95   23.8   Diploma and above   68   17   Income in ETB/USA dollars   <300 ETB/<10.7 \$   40   10   300-600 ETB/10.7 -21.4 \$   129   32.3   601-1000 ETB/21.5-35.7 \$   131   32.8   Current occupation   Housewife   145   36.3   Self-employee   161   40.3   Governmental employee   75   18.8   Others   19   4.8   Husband's HIV status   Positive   198   68.8   Negative   100   3.5	<20	18	4.5
>40       38       9.5         Residence	21-30	188	47
Residence Urban 279 70 Rural 121 30 Religion Orthodox 291 72.8 Muslim 87 21.8 Protestant 22 5.5 Marital status Single 59 14.6 Married 288 72 Divorced 30 7.5 Widowed 23 5.8 Educational status Not able to write and read 133 33.3 Able to write and read 48 12 From 1-8 grades 56 14 From 9-12 grades 95 23.8 Diploma and above 68 17 Income in ETB/USA dollars <300 ETB/<10.7 \$ 40 10 300-600 ETB/10.7 -21.4 \$ 129 32.3 601-1000 ETB/21.5-35.7 \$ 100 25 >1000 ETB/235.7 \$ 131 32.8 Current occupation Housewife 145 36.3 Self-employee 161 40.3 Governmental employee 75 18.8 Others 19 4.8 Husband's HIV status Positive 198 68.8 Negative 198 68.8 Negative 198 68.8 Negative 198 68.8	31-40	156	39
Urban 279 70 Rural 121 30 Religion Orthodox 291 72.8 Muslim 87 21.8 Protestant 22 5.5 Marital status Single 59 14.6 Married 288 72 Divorced 30 7.5 Widowed 23 5.8 Educational status Not able to write and read 133 33.3 Able to write and read 48 12 From 1-8 grades 56 14 From 9-12 grades 95 23.8 Diploma and above 68 17 Income in ETB/USA dollars <300 ETB/<10.7 \$ 40 10 300-600 ETB/10.7 -21.4 \$ 129 32.3 601-1000 ETB/21.5-35.7 \$ 131 32.8 Current occupation Housewife 145 36.3 Self-employee 161 40.3 Governmental employee 75 18.8 Others 19 4.8 Husband's HIV status Positive 198 68.8 Negative 198 68.8 Negative 198 68.8 Negative 198 68.8	>40	38	9.5
Rural Religion	Residence		
Religion Orthodox Orthodox 291 72.8 Muslim 87 21.8 Protestant 22 5.5 Marital status Single 59 14.6 Married 288 72 Divorced 30 7.5 Widowed 23 5.8 Educational status Not able to write and read 48 12 From 1-8 grades 56 14 From 9-12 grades 95 23.8 Diploma and above 18 Income in ETB/USA dollars <300 ETB/<10.7 \$ 40 300-600 ETB/10.7 -21.4 \$ 129 300-600 ETB/10.7 -21.4 \$ 129 313 32.8 Current occupation Housewife 145 Self-employee 161 Governmental employee 75 18.8 Others 19 4.8 Husband's HIV status Positive 198 Regative 198 68.8 Negative	Urban	279	70
Orthodox       291       72.8         Muslim       87       21.8         Protestant       22       5.5         Marital status       Single       59       14.6         Married       288       72         Divorced       30       7.5         Widowed       23       5.8         Educational status       State of the control of th	Rural	121	30
Muslim       87       21.8         Protestant       22       5.5         Marital status       59       14.6         Single       59       14.6         Married       288       72         Divorced       30       7.5         Widowed       23       5.8         Educational status       8       12         Not able to write and read       133       33.3         Able to write and read       48       12         From 1-8 grades       56       14         From 9-12 grades       95       23.8         Diploma and above       68       17         Income in ETB/USA dollars       300 ETB/USA dollars         <300 ETB/S10.7 \$	Religion		
Protestant       22       5.5         Marital status       59       14.6         Single       59       14.6         Married       288       72         Divorced       30       7.5         Widowed       23       5.8         Educational status       8       12         Not able to write and read       133       33.3         Able to write and read       48       12         From 1-8 grades       56       14         From 9-12 grades       95       23.8         Diploma and above       68       17         Income in ETB/USA dollars       300 ETB/USA dollars         <300 ETB/S 10.7 \$	Orthodox	291	72.8
Marital status         Single       59       14.6         Married       288       72         Divorced       30       7.5         Widowed       23       5.8         Educational status       Not able to write and read         Not able to write and read       133       33.3         Able to write and read       48       12         From 1-8 grades       56       14         From 9-12 grades       95       23.8         Diploma and above       68       17         Income in ETB/USA dollars       300 ETB/USA dollars         <300 ETB/S10.7 \$	Muslim	87	21.8
Single       59       14.6         Married       288       72         Divorced       30       7.5         Widowed       23       5.8         Educational status       5.8         Not able to write and read       133       33.3         Able to write and read       48       12         From 1-8 grades       56       14         From 9-12 grades       95       23.8         Diploma and above       68       17         Income in ETB/USA dollars       300 ETB/SA dollars         <300 ETB/SID.7 \$	Protestant	22	5.5
Married       288       72         Divorced       30       7.5         Widowed       23       5.8         Educational status       5.8         Not able to write and read       133       33.3         Able to write and read       48       12         From 1-8 grades       56       14         From 9-12 grades       95       23.8         Diploma and above       68       17         Income in ETB/USA dollars       300 ETB/USA dollars         <300 ETB/S10.7 \$	Marital status		
Divorced       30       7.5         Widowed       23       5.8         Educational status       5.8         Not able to write and read       133       33.3         Able to write and read       48       12         From 1-8 grades       56       14         From 9-12 grades       95       23.8         Diploma and above       68       17         Income in ETB/USA dollars       300 ETB/USA dollars         <300 ETB/S10.7 \$	Single	59	14.6
Widowed       23       5.8         Educational status          Not able to write and read       133       33.3         Able to write and read       48       12         From I-8 grades       56       14         From 9-12 grades       95       23.8         Diploma and above       68       17         Income in ETB/USA dollars          <300 ETB/S10.7 \$	Married	288	72
Educational status  Not able to write and read  Able to write and read  From I-8 grades  From 9-12 grades  Diploma and above  Income in ETB/USA dollars  300 ETB/<10.7 \$  300-600 ETB/10.7 -21.4 \$  601-1000 ETB/21.5-35.7 \$  100  25  >1000 ETB/>35.7 \$  Current occupation  Housewife  Housewife  Governmental employee  Others  19  4.8  Husband's HIV status  Positive  198  688  17  102  133  33.3  33.3  34  48  17  10  10  30.3  56  17  10  10  30.3  56  10  10  30.3  56  10  30.3  56  56  14  40  10  30.3  56  68  68  68  68  68  68  68  68  68	Divorced	30	7.5
Not able to write and read	Widowed	23	5.8
Able to write and read 48 12 From I-8 grades 56 14 From 9-12 grades 95 23.8 Diploma and above 68 17 Income in ETB/USA dollars <300 ETB/10.7 \$ 40 10 300-600 ETB/10.7 -21.4 \$ 129 32.3 601-1000 ETB/21.5-35.7 \$ 100 25 >1000 ETB/>35.7 \$ 131 32.8 Current occupation Housewife 145 36.3 Self-employee 161 40.3 Governmental employee 75 18.8 Others 19 4.8 Husband's HIV status Positive 198 68.8 Negative 10 3.5	Educational status		
From I-8 grades 56 14 From 9-12 grades 95 23.8 Diploma and above 68 17 Income in ETB/USA dollars <300 ETB/=10.7 \$ 40 10 300-600 ETB/=10.7 -21.4 \$ 129 32.3 601-1000 ETB/=21.5-35.7 \$ 100 25 >1000 ETB/=35.7 \$ 131 32.8 Current occupation Housewife 145 36.3 Self-employee 161 40.3 Governmental employee 75 18.8 Others 19 4.8 Husband's HIV status Positive 198 68.8 Negative 10 3.5	Not able to write and read		33.3
From 9-12 grades 95 23.8  Diploma and above 68 17  Income in ETB/USA dollars  <300 ETB/<10.7 \$ 40 10  300-600 ETB/10.7 -21.4 \$ 129 32.3  601-1000 ETB/21.5-35.7 \$ 100 25  >1000 ETB/>35.7 \$ 131 32.8  Current occupation  Housewife 145 36.3  Self-employee 161 40.3  Governmental employee 75 18.8  Others 19 4.8  Husband's HIV status  Positive 198 68.8  Negative 10 3.5	Able to write and read	48	12
Diploma and above Income in ETB/USA dollars       68       17         <300 ETB/<10.7 \$			14
Income in ETB/USA dollars <300 ETB/<10.7 \$ 40 10 300-600 ETB/10.7 -21.4 \$ 129 32.3 601-1000 ETB/21.5-35.7 \$ 100 25 >1000 ETB/>35.7 \$ 131 32.8 Current occupation Housewife 145 36.3 Self-employee 161 40.3 Governmental employee 75 18.8 Others 19 4.8 Husband's HIV status Positive 198 68.8 Negative 10 3.5	From 9-12 grades		23.8
<300 ETB/<10.7 \$	•	68	17
300-600 ETB/10.7 -21.4 \$ 129 32.3 601-1000 ETB/21.5-35.7 \$ 100 25 >1000 ETB/>35.7 \$ 131 32.8 Current occupation Housewife 145 36.3 Self-employee 161 40.3 Governmental employee 75 18.8 Others 19 4.8 Husband's HIV status Positive 198 68.8 Negative 10 3.5			
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Current occupation       145       36.3         Housewife       145       36.3         Self-employee       161       40.3         Governmental employee       75       18.8         Others       19       4.8         Husband's HIV status       198       68.8         Negative       10       3.5	· · · · · · · · · · · · · · · · · · ·		<del></del>
Housewife       145       36.3         Self-employee       161       40.3         Governmental employee       75       18.8         Others       19       4.8         Husband's HIV status       198       68.8         Negative       10       3.5	>1000 ETB/>35.7 \$	131	32.8
Self-employee         161         40.3           Governmental employee         75         18.8           Others         19         4.8           Husband's HIV status         198         68.8           Negative         10         3.5	Current occupation		
Governmental employee         75         18.8           Others         19         4.8           Husband's HIV status         198         68.8           Negative         10         3.5			
Others 19 4.8  Husband`s HIV status  Positive 198 68.8  Negative 10 3.5			
Husband's HIV status Positive 198 68.8 Negative 10 3.5			
Positive 198 68.8 Negative 10 3.5		19	4.8
Negative 10 3.5			
Unknown 80 27.8	0		
	Unknown	80	27.8

Others = Commercial sex workers, Students, Merchants, ETB = Ethiopian Birr, \$ = USA dollar.

worsens women's health but more than half, 205 (51.2%) were not aware its worsening.

## Prevalence of Condom Utilization

During the study period, out of 400 sexually active women who sought ART service in Finote-Selam district Hospital, 137 (34.2%) (95% CI = 33.9%, 34.5%) of the respondents were using condom. Of this, 81 (59.1%) (95% CI = 50.3%, 67.9%) were using consistently and 56(14%) used it inconsistently. The reasons why they did not use condom currently (self-concerned) were: 56 (21.3%) negative attitude from the partner, 49 (18.6%) because they were married, 40 (15.2%)

**Table 2.** Reproductive Characteristics of Women who Sought ART Service in Finote- Selam District Hospital, North West Ethiopia from June-August 2018 (n = 400).

Variables	Frequency	Percent
Counselling on condom		
Yes	195	48.8
No	205	51.2
Ever used family planning		
No	76	19
Yes	324	81
Condom use for the last 3 months		
No	263	65.8
Yes	137	34.2
Among condom users (n = 137)		
Consistently	81	59. l
Inconsistently	56	40.9
Reasons not to use condom for the last 3 months		
Husband's negative attitude	56	21.3
Marital relationship	49	18.6
Condom irritant(not comfortable)	40	15.2
Poor counselling	37	14
No reason	30	11.4
Religious factor	24	9
Pregnancy desire	19	7.2
Peer pressure	8	3

not satisfied when using condom, 37 (14%) poor counselling from the health care providers, 30 (11.4%) no reason, 24(9%) religious factors, 19 (7.2%) pregnancy desire and the remaining 17(6.4%) reasoned out peer pressure, unavailability of condom and HIV status of the partner.

## Factors Associated with Condom Utilization

In bi-variable analysis: maternal age, residence, maternal current occupation, maternal educational status, marital status, income, husband's HIV status, gravidity, counselling about condom utilization religion and husbands' educational status were the potential factors to be associated with consistent condom utilization (P– values < 0. 2).

Multivariable logistic regression showed that: husband's educational status which was diploma and above, counselling about condom utilization and maternal age group from 21-30 years had been independently associated with consistent condom utilization.

Women whose age was from 21-30 years were 4.4 times more likely to use condom than aged greater than 40 years (AOR = 4.38, 95% CI = 1.05, 18.33).

Counseling was one of the positively associated variables for consistent condom utilization among sexually active female ART users. Women who were counseled were more likely to use condom than their counterparts (AOR = 9.45, 95% CI = 4.39, 20.32).

Strong association was also depicted that husbands' educational status where women whose husbands' educational

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status was diploma and above were more likely to use condom than with unable to read and write (AOR = 3.65, 95%CI = 1. 01, 13.23) (Table 3).

# **Discussion**

This cross-sectional study design was conducted to determine the prevalence of consistent condom utilization and its associated factors among sexually active female ART users in Finote-Selam district Hospital, Northwest Ethiopia. There are studies which addressed the issue of consistent condom utilization among the general population. But, because of the false assumptions that HIV-positive individuals do not need condoms since they are once positive, there were limited reports regarding the frequency and determinants of consistent condom utilization among sexually active female ART users. This study, therefore, has provided important information regarding the general patterns of condom utilization and factors that limit its utilization among sexually active women who sought ART service in Finote-Selam district Hospital.

The study results have shown that the prevalence of condom utilization for both consistent and inconsistent users among sexually active female ART users in the study area to be 34.2%. From these, 81 (59.1%) and 56 (40.9%) participants were consistent and inconsistent condom users respectively. The discussion is for consistent users among the study population as the study's general objective to this research aimed to assess consistent condom utilization among sexually active female ART users in the study setting (81/400 = 20.2%).

This finding is in line to the descriptive cross-sectional study findings reporting consistent condom utilization among sexually active ART users reported in Nigeria as a (27.2%). But it is lower than facility based cross-sectional study findings among reproductive age women in Oromia region, Gimbie Town, West Ethiopia (34.4%). But the study in Gimbie Town excluded pregnant and infertile women. One of the roles for condom utilization is to prevent pregnancy. Therefore, if pregnant and infertile women were included in the reference study, there could be a lower proportion report of condom use because the mentioned participants were already either pregnant or infertile. Therefore, the difference might be due to the difference between the study populations, sampling technique (the previous one was stratified) and study area.

The finding is also lower than institutional based comparable cross-sectional study findings among 1418 reproductive age women (770 ART users and 648 ART naïve) in Addis Ababa (45.7%). The most probable reasons for this difference might be: Information difference for condom service (Addis Ababa, central city, compared with district, study area), data collection tools and procedures, study period and study population differences and accessibility difference for condom. The mentioned reference had used only non-pregnant women living with HIV who might use condom to prevent unintended pregnancy compared with pregnant women included in the current study.

The study also revealed that it's finding to be lower than the study findings conducted in Brazil (82%), Zimbabwe (46.5%), Lilongwe, Malawi (45.2%) and Central Latin America, Guatemala (81.7%). The difference might be due to: data collection method (self-administered in Brazil), educational status, study population difference (study in Malawi avoided pregnant women as study participants) and study site.

In the present study, the commonest reasons not to use condom among all participants were reported as: negative attitudes from the partners (21.3%), ideally their participation in condom use is mandatory, followed by marital relationship (18.6%), irritates of condom (15.2%), lack of counselling from the health care providers (14%), with no reason (11.4%), religious factors (9%), Pregnancy desire (7.2%) and peer pressure (6.4%). The reasons found in the present study are in agreement with the studies conducted in Brazil, Amhara regional referral Hospitals, Malawi and Guatemala, in which studies revealed almost the same reasons not to use condom. 3,13,17,20

This study found that women who had history of counselling about condom utilization were 9.5 times more likely to use condom than those who had not been counseled. This finding is consistent with a previous study conducted in West Ethiopia. This might be due to: those who were counseled got good knowledge about condom's dual protection role. Moreover, those who were not counseled might not know where condom was provided and how condom was used. Additionally, counseled women might be lesser worried about social stigmatization and could give more emphasis not to infect their partners with the new HIV strains.

Maternal age was a positive predictor variable for consistent condom utilization. Women who were aged between 21 and 30 were more likely to use condom than aged above 40 years. This finding is in agreement with the previous study conducted in Amhara regional state (Gondar referral Hospital) which shows that women whose age group was above 32 years were 69% less likely to use condom than aged less than 32 years.<sup>21</sup> But this finding is contradicted with the previous study finding in Lilongwe, Malawi which shows that reproductive age women whose age group was less than 25 years were 76% less likely to use condom than age group of 25-34. 17 The contradiction might be due to reference category selection experience. The possible explanations might be: Women with this age group might have more information about HIV/AIDS because they are young and they might also be more responsible to care about their partners in contrast to older HIV-positive individuals. This age group might have used condom to prevent unintended (unwanted) pregnancy because the older women due to the biological fact that they would be menopausal (no menstruation cycle, no more being pregnant), they might be less likely to use condom. The young are more energetic so as to move to the area where condom is available.

This study also depicted that educational status of husbands was a positive predictor of consistent condom utilization. Those women whose husbands' educational status was diploma and above were 3.65 more likely to use condom than their

**Table 3.** Bi-variable and Multi-variable Analysis of Factors Associated with Consistent Condom Utilization in Finote-Selam District Hospital, Northwest Ethiopia, June-August 2018 (N = 400).

10(3.8) 109(41.4) 112(42.6) 32(12.2) 160(60.8) 103(39.2) 33(12.5) 183(69.6) 25(9.5) 22(8.4) 110(41.8) 36(13.7) 37(14.1) 47(17.9) 33(12.5) 11(42.2) 107(40.7) 33(12.5) 12(4.6)	4.27(1.20, 15.26)* 3.87(1.54, 9.69)^ 2.10(0.82, 5.36) 1.00  4.26(1.20, 15.26)^ 1.00  17.34(2.19, 37.21)* 12.7(1.68, 94.1)* 4.4(0.48, 40.6) 1.00  1.59(0.72, 3.52) 2.46(1.21, 5.01)* 4.88(2.67, 8.93)^ 5.08(2.64, 9.76)^  1.00 1.87(1.11, 3.14)* 4.71(2.56, 8.66)* 3.39(1.36, 8.45)*	1.77(0.16, 20.14) 4.5(1.15, 7.54)** 2.42(0.63, 9.37) 1.00  1.16(0.48, 2.83) 1.00  8.2(0.77, 22.15) 4.60(0.79, 15.32) 5.93(0.68, 45.67) 1.00  1.00 1.11(0.36, 3.43) 0.67(0.21, 2.18) 1.24(0.37, 4.18) 0.48(0.09, 2.67)  1.00 1.89(0.83, 4.30) 3.11(0.71, 13.71) 0.29(0,03, 3.94)
109(41.4) 112(42.6) 32(12.2) 160(60.8) 103(39.2) 33(12.5) 183(69.6) 25(9.5) 22(8.4) 110(41.8) 36(13.7) 37(14.1) 47(17.9) 33(12.5) 11(42.2) 107(40.7) 33(12.5)	3.87(1.54, 9.69) <sup>2</sup> 2.10(0.82, 5.36) 1.00  4.26(1.20, 15.26) <sup>3</sup> 1.00  17.34(2.19, 37.21)* 12.7(1.68, 94.1)* 4.4(0.48, 40.6) 1.00  1.59(0.72, 3.52) 2.46(1.21, 5.01)* 4.88(2.67, 8.93) <sup>3</sup> 5.08(2.64, 9.76) <sup>3</sup> 1.00 1.87(1.11, 3.14)* 4.71(2.56, 8.66)*	4.5(i.15, 7.54)*** 2.42(0.63, 9.37) 1.00  1.16(0.48, 2.83) 1.00  8.2(0.77, 22.15) 4.60(0.79, 15.32) 5.93(0.68, 45.67) 1.00  1.00 1.11(0.36, 3.43) 0.67(0.21, 2.18) 1.24(0.37, 4.18) 0.48(0.09, 2.67)  1.00 1.89(0.83, 4.30) 3.11(0.71, 13.71)
112(42.6) 32(12.2) 160(60.8) 103(39.2) 33(12.5) 183(69.6) 25(9.5) 22(8.4) 110(41.8) 36(13.7) 37(14.1) 47(17.9) 33(12.5) 11(42.2) 107(40.7) 33(12.5)	3.87(1.54, 9.69) <sup>2</sup> 2.10(0.82, 5.36) 1.00  4.26(1.20, 15.26) <sup>3</sup> 1.00  17.34(2.19, 37.21)* 12.7(1.68, 94.1)* 4.4(0.48, 40.6) 1.00  1.59(0.72, 3.52) 2.46(1.21, 5.01)* 4.88(2.67, 8.93) <sup>3</sup> 5.08(2.64, 9.76) <sup>3</sup> 1.00 1.87(1.11, 3.14)* 4.71(2.56, 8.66)*	4.5(i.15, 7.54)*** 2.42(0.63, 9.37) 1.00  1.16(0.48, 2.83) 1.00  8.2(0.77, 22.15) 4.60(0.79, 15.32) 5.93(0.68, 45.67) 1.00  1.00 1.11(0.36, 3.43) 0.67(0.21, 2.18) 1.24(0.37, 4.18) 0.48(0.09, 2.67)  1.00 1.89(0.83, 4.30) 3.11(0.71, 13.71)
32(12.2) 160(60.8) 103(39.2) 33(12.5) 183(69.6) 25(9.5) 22(8.4)  110(41.8) 36(13.7) 37(14.1) 47(17.9) 33(12.5)  11(42.2) 107(40.7) 33(12.5)	2.10(0.82, 5.36) 1.00  4.26(1.20, 15.26)^ 1.00  17.34(2.19, 37.21)* 12.7(1.68, 94.1)* 4.4(0.48, 40.6) 1.00  1.59(0.72, 3.52) 2.46(1.21, 5.01)* 4.88(2.67, 8.93)^ 5.08(2.64, 9.76)^  1.00 1.87(1.11, 3.14)* 4.71(2.56, 8.66)*	2.42(0.63, 9.37) 1.00  1.16(0.48, 2.83) 1.00  8.2(0.77, 22.15) 4.60(0.79, 15.32) 5.93(0.68, 45.67) 1.00  1.00 1.11(0.36, 3.43) 0.67(0.21, 2.18) 1.24(0.37, 4.18) 0.48(0.09, 2.67)  1.00 1.89(0.83, 4.30) 3.11(0.71, 13.71)
32(12.2) 160(60.8) 103(39.2) 33(12.5) 183(69.6) 25(9.5) 22(8.4)  110(41.8) 36(13.7) 37(14.1) 47(17.9) 33(12.5)  11(42.2) 107(40.7) 33(12.5)	1.00 4.26(1.20, 15.26)^ 1.00 17.34(2.19, 37.21)* 12.7(1.68, 94.1)* 4.4(0.48, 40.6) 1.00 1.59(0.72, 3.52) 2.46(1.21, 5.01)* 4.88(2.67, 8.93)^ 5.08(2.64, 9.76)^ 1.00 1.87(1.11, 3.14)* 4.71(2.56, 8.66)*	1.00  1.16(0.48, 2.83) 1.00  8.2(0.77, 22.15) 4.60(0.79, 15.32) 5.93(0.68, 45.67) 1.00  1.00 1.11(0.36, 3.43) 0.67(0.21, 2.18) 1.24(0.37, 4.18) 0.48(0.09, 2.67)  1.00 1.89(0.83, 4.30) 3.11(0.71, 13.71)
160(60.8) 103(39.2) 33(12.5) 183(69.6) 25(9.5) 22(8.4) 110(41.8) 36(13.7) 37(14.1) 47(17.9) 33(12.5) 11(42.2) 107(40.7) 33(12.5)	4.26(1.20, 15.26)^ 1.00  17.34(2.19, 37.21)* 12.7(1.68, 94.1)* 4.4(0.48, 40.6) 1.00  1.59(0.72, 3.52) 2.46(1.21, 5.01)* 4.88(2.67, 8.93)^ 5.08(2.64, 9.76)^  1.00 1.87(1.11, 3.14)* 4.71(2.56, 8.66)*	1.16(0.48, 2.83) 1.00 8.2(0.77, 22.15) 4.60(0.79, 15.32) 5.93(0.68, 45.67) 1.00 1.00 1.11(0.36, 3.43) 0.67(0.21, 2.18) 1.24(0.37, 4.18) 0.48(0.09, 2.67) 1.00 1.89(0.83, 4.30) 3.11(0.71, 13.71)
103(39.2)  33(12.5) 183(69.6) 25(9.5) 22(8.4)  110(41.8) 36(13.7) 37(14.1) 47(17.9) 33(12.5)  11(42.2) 107(40.7) 33(12.5)	1.00 17.34(2.19, 37.21)* 12.7(1.68, 94.1)* 4.4(0.48, 40.6) 1.00 1.59(0.72, 3.52) 2.46(1.21, 5.01)* 4.88(2.67, 8.93)^ 5.08(2.64, 9.76)^ 1.00 1.87(1.11, 3.14)* 4.71(2.56, 8.66)*	1.00  8.2(0.77, 22.15) 4.60(0.79, 15.32) 5.93(0.68, 45.67) 1.00  1.00 1.11(0.36, 3.43) 0.67(0.21, 2.18) 1.24(0.37, 4.18) 0.48(0.09, 2.67)  1.00 1.89(0.83, 4.30) 3.11(0.71, 13.71)
103(39.2)  33(12.5) 183(69.6) 25(9.5) 22(8.4)  110(41.8) 36(13.7) 37(14.1) 47(17.9) 33(12.5)  11(42.2) 107(40.7) 33(12.5)	1.00 17.34(2.19, 37.21)* 12.7(1.68, 94.1)* 4.4(0.48, 40.6) 1.00 1.59(0.72, 3.52) 2.46(1.21, 5.01)* 4.88(2.67, 8.93)^ 5.08(2.64, 9.76)^ 1.00 1.87(1.11, 3.14)* 4.71(2.56, 8.66)*	1.00  8.2(0.77, 22.15) 4.60(0.79, 15.32) 5.93(0.68, 45.67) 1.00  1.00 1.11(0.36, 3.43) 0.67(0.21, 2.18) 1.24(0.37, 4.18) 0.48(0.09, 2.67)  1.00 1.89(0.83, 4.30) 3.11(0.71, 13.71)
33(12.5) 183(69.6) 25(9.5) 22(8.4) 110(41.8) 36(13.7) 37(14.1) 47(17.9) 33(12.5) 11(42.2) 107(40.7) 33(12.5)	17.34(2.19, 37.21)* 12.7(1.68, 94.1)* 4.4(0.48, 40.6) 1.00 1.59(0.72, 3.52) 2.46(1.21, 5.01)* 4.88(2.67, 8.93)^ 5.08(2.64, 9.76)^ 1.00 1.87(1.11, 3.14)* 4.71(2.56, 8.66)*	8.2(0.77, 22.15) 4.60(0.79, 15.32) 5.93(0.68, 45.67) 1.00 1.00 1.11(0.36, 3.43) 0.67(0.21, 2.18) 1.24(0.37, 4.18) 0.48(0.09, 2.67) 1.00 1.89(0.83, 4.30) 3.11(0.71, 13.71)
183(69.6) 25(9.5) 22(8.4)  110(41.8) 36(13.7) 37(14.1) 47(17.9) 33(12.5)  11(42.2) 107(40.7) 33(12.5)	12.7(1.68, 94.1)* 4.4(0.48, 40.6) 1.00 1.59(0.72, 3.52) 2.46(1.21, 5.01)* 4.88(2.67, 8.93)^ 5.08(2.64, 9.76)^ 1.00 1.87(1.11, 3.14)* 4.71(2.56, 8.66)*	4.60(0.79, 15.32) 5.93(0.68, 45.67) 1.00 1.11(0.36, 3.43) 0.67(0.21, 2.18) 1.24(0.37, 4.18) 0.48(0.09, 2.67) 1.00 1.89(0.83, 4.30) 3.11(0.71, 13.71)
183(69.6) 25(9.5) 22(8.4)  110(41.8) 36(13.7) 37(14.1) 47(17.9) 33(12.5)  11(42.2) 107(40.7) 33(12.5)	12.7(1.68, 94.1)* 4.4(0.48, 40.6) 1.00 1.59(0.72, 3.52) 2.46(1.21, 5.01)* 4.88(2.67, 8.93)^ 5.08(2.64, 9.76)^ 1.00 1.87(1.11, 3.14)* 4.71(2.56, 8.66)*	4.60(0.79, 15.32) 5.93(0.68, 45.67) 1.00 1.11(0.36, 3.43) 0.67(0.21, 2.18) 1.24(0.37, 4.18) 0.48(0.09, 2.67) 1.00 1.89(0.83, 4.30) 3.11(0.71, 13.71)
25(9.5) 22(8.4) 110(41.8) 36(13.7) 37(14.1) 47(17.9) 33(12.5) 11(42.2) 107(40.7) 33(12.5)	4.4(0.48, 40.6) 1.00 1.00 1.59(0.72, 3.52) 2.46(1.21, 5.01)* 4.88(2.67, 8.93)^ 5.08(2.64, 9.76)^ 1.00 1.87(1.11, 3.14)* 4.71(2.56, 8.66)*	5.93(0.68, 45.67) 1.00 1.11(0.36, 3.43) 0.67(0.21, 2.18) 1.24(0.37, 4.18) 0.48(0.09, 2.67) 1.00 1.89(0.83, 4.30) 3.11(0.71, 13.71)
22(8.4)  110(41.8) 36(13.7) 37(14.1) 47(17.9) 33(12.5)  11(42.2) 107(40.7) 33(12.5)	1.00 1.00 1.59(0.72, 3.52) 2.46(1.21, 5.01)* 4.88(2.67, 8.93)^ 5.08(2.64, 9.76)^ 1.00 1.87(1.11, 3.14)* 4.71(2.56, 8.66)*	1.00 1.00 1.11(0.36, 3.43) 0.67(0.21, 2.18) 1.24(0.37, 4.18) 0.48(0.09, 2.67) 1.00 1.89(0.83, 4.30) 3.11(0.71, 13.71)
110(41.8) 36(13.7) 37(14.1) 47(17.9) 33(12.5) 11(42.2) 107(40.7) 33(12.5)	1.00 1.59(0.72, 3.52) 2.46(1.21, 5.01)* 4.88(2.67, 8.93)^ 5.08(2.64, 9.76)^ 1.00 1.87(1.11, 3.14)* 4.71(2.56, 8.66)*	1.00 1.11(0.36, 3.43) 0.67(0.21, 2.18) 1.24(0.37, 4.18) 0.48(0.09, 2.67) 1.00 1.89(0.83, 4.30) 3.11(0.71, 13.71)
36(13.7) 37(14.1) 47(17.9) 33(12.5) 11(42.2) 107(40.7) 33(12.5)	1.59(0.72, 3.52) 2.46(1.21, 5.01)* 4.88(2.67, 8.93)^ 5.08(2.64, 9.76)^ 1.00 1.87(1.11, 3.14)* 4.71(2.56, 8.66)*	1.11(0.36, 3.43) 0.67(0.21, 2.18) 1.24(0.37, 4.18) 0.48(0.09, 2.67) 1.00 1.89(0.83, 4.30) 3.11(0.71, 13.71)
36(13.7) 37(14.1) 47(17.9) 33(12.5) 11(42.2) 107(40.7) 33(12.5)	1.59(0.72, 3.52) 2.46(1.21, 5.01)* 4.88(2.67, 8.93)^ 5.08(2.64, 9.76)^ 1.00 1.87(1.11, 3.14)* 4.71(2.56, 8.66)*	1.11(0.36, 3.43) 0.67(0.21, 2.18) 1.24(0.37, 4.18) 0.48(0.09, 2.67) 1.00 1.89(0.83, 4.30) 3.11(0.71, 13.71)
37(14.1) 47(17.9) 33(12.5) 11(42.2) 107(40.7) 33(12.5)	2.46(1.21, 5.01)* 4.88(2.67, 8.93)^ 5.08(2.64, 9.76)^  1.00 1.87(1.11, 3.14)* 4.71(2.56, 8.66)*	0.67(0.21, 2.18) 1.24(0.37, 4.18) 0.48(0.09, 2.67) 1.00 1.89(0.83, 4.30) 3.11(0.71, 13.71)
47(17.9) 33(12.5) 11(42.2) 107(40.7) 33(12.5)	4.88(2.67, 8.93)^ 5.08(2.64, 9.76)^ 1.00 1.87(1.11, 3.14)* 4.71(2.56, 8.66)*	1.24(0.37, 4.18) 0.48(0.09, 2.67) 1.00 1.89(0.83, 4.30) 3.11(0.71, 13.71)
33(12.5) 11(42.2) 107(40.7) 33(12.5)	5.08(2.64, 9.76)^ 1.00 1.87(1.11, 3.14)* 4.71(2.56, 8.66)*	0.48(0.09, 2.67) 1.00 1.89(0.83, 4.30) 3.11(0.71, 13.71)
11(42.2) 107(40.7) 33(12.5)	1.00 1.87(1.11, 3.14)* 4.71(2.56, 8.66)*	1.00 1.89(0.83, 4.30) 3.11(0.71, 13.71)
107(40.7) 33(12.5)	1.87(1.11, 3.14)* 4.71(2.56, 8.66)*	1.89(0.83, 4.30) 3.11(0.71, 13.71)
107(40.7) 33(12.5)	1.87(1.11, 3.14)* 4.71(2.56, 8.66)*	1.89(0.83, 4.30) 3.11(0.71, 13.71)
33(12.5)	4.71(2.56, 8.66)*	3.11(0.71, 13.71)
` /		
12(4.6)	3.39(1.36, 8.45)*	0.20(0.022.04)
	• • •	0.27(0,03, 3.74)
		,
118(78.1)	1.00	1.00
4(2.6)	0.5 (0.35, 2.5)	0.2 (0.11, 3.1)
29(19.3)	0.4 (0.27, 5.12)	0.24 (0.15, 4.4)
(	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	(3, 3, 3,
106(40.3)	7.68(4.57, 12.89)^	9.5(4.39, 20.32)^^
I57(S9.7)	1.00	1.0Ò ′ ′
Frequency (%)	COR (95% CI)	AOR (95% CI)
, ()		-
45(24.6)	1.00	1.00
51(27.9)	1.55(0.59, 4.02)	1.23(0.42, 3.6)
31(16.9)	2.36(0.87, 6.36)	1.47(0.45, 4.83)
23(12.6)	4.89(1.87, 12.79)^	2.62(0.75, 9.11)
33(18)	8.53(3.57, 20.37)^	3.65(1.01, 13.23)**
28(10.6)	1.00	1.00
	0.65(0.23, 1.44)	057(0.16, 2.08)
		0.73(0.12, 2.74)
67(25.5)		0.52(0.13, 2.14)
67(25.5) 67(25.5)	, , , , ,	( , , , , ,
67(25.5) 67(25.5)	1.00	1.00
67(25.5)		1.54(0.71, 3.35)
67(25.5) 197(74.9)	1.1(0.0/ 1.02)	1.4(0.38, 5.23)
67(25.5) 197(74.9) 57(21.7)		1.1(0.30, 3.23)
67(25.5) 197(74.9)	3.03(1.25, 7.34)*	
67(25.5) 197(74.9) 57(21.7) 9(3.4)	3.03(1.25, 7.34)*	2 43/0 51 11 49\
67(25.5) 197(74.9) 57(21.7)		2.43(0.51, 11.68) 1.31(0.71, 2.43)
	101(38.4) 67(25.5) 67(25.5)	101(38.4) 0.65(0.23, 1.44) 67(25.5) 1.15(0.52, 2.55) 67(25.5) <b>2.23(1.05, 4.76)*</b> 197(74.9) 1.00 57(21.7) 1.1(0.67, 1.83)

<sup>\*(</sup>p-values <0.05), ^ (p-values<0.01), \*\* (p-values<0.05), ^^ (p-values<0.01).

Others: - Commercial sex workers, students, merchants, 1.00:- Reference category.

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husbands' educational status was unable to read and write. This is in line with cross-sectional study findings, conducted in north- west Ethiopia, Amhara regional state (Gondar referral Hospital) which shows those study participants whose educational status was above secondary high school were more likely to use condom.<sup>22</sup> Predicted reasons for this might be:Husbands who were educated might be more likely to discuss condom's purpose with their wives, educated husbands might give domestic teaching to the issue of condom, so as to use it, education might make the husbands more responsible no to transmit new HIV strains to their wives, women whose husbands were educated might be more informatics than the viseversa to use condom, usually husbands and wives education are parallel, so, women whose husbands were educated might be also educated, thus might be more aware to condom.

# Limitations of the Study

The outcome variable was assessed using study participants'reported information which might be over reported
(Hawthorne effect), lack of qualitative component and correct
condom use practice was not assessed which are the probable
limitations of the study.

## **Conclusion**

This study revealed that consistent condom utilization among sexually active female ART users in Finote-Selam district Hospital was low compared with different study results in regions of Ethiopia and many other countries. Being in age groups 21-30, husbands' educational status diploma and above and counselling were found to be positively associated with consistent condom utilization among sexually active female ART users. The commonest reason not to use condom was negative attitude from the partner. Authors recommend that health care providers working in ART clinic should give due emphasis on counseling of women living with HIV for condom utilization. We also recommend that in the follow-up period, health care providers had better include the husbands and give health education because their negative attitude had been mentioned as the commonest reason not to use condom.

#### **Acknowledgments**

The authors would like to acknowledge University of Gondar for the ethical clearance approval. Our thanks extend to the study participants.

## **Data Sharing Statement**

The datasets used and/or analyzed during this study are available from the corresponding author on reasonable request.

## **Ethical Approval and Consent to Participate**

Ethical clearance was first obtained from Institutional Review Board (IRB) of the University of Gondar with ethical number of V/P/RCS/05/716/2020. An official permission was also obtained from Finote-Selam town health office. The investigator then communicated to Finote-Selam district Hospital administrator and got permission.

Finally, each participant gave their informed written consent. Confidentiality was assured by making the questionnaire anonymous and we had assured that this research was conducted in accordance with the declaration of Helsinki health ethics principle.

#### **Authors' Contribution**

**GLA** brought the idea. All authors (**GLA**, **MBB** and **AAS**) had made significant contributions equally on proposal development, data collection process, data management and analysis, and write up. All authors have read and approved the manuscript.

#### **Disclosure**

Authors have no competing interests.

#### **Consent for Publication**

Not applicable because there are no individually detailed data, videos or images.

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# **Abbreviations**

AIDS Acquired immune deficiency syndrome

ART antiretroviral treatment

PLHIV people living with human immune deficiency

virus