



ASRAT WOLDEYES HEALTH SCIENCE CAMPUS

SCHOOL OF NURSING AND MIDWIFERY

DEPARTEMENT OF SURGICAL NURSING

CERVICAL CANCER SCREENING SERVICE UTILIZATION AMONG HIV
POSITIVE AND NEGATIVE WOMEN IN OROMO ADMINISTRATIVE
ZONE, AMHARA REGIONAL STATE, ETHIOPIA, 2023: A COMPARATIVE
CROSS SECTIONAL STUDY

BY: FIRDOWS YIMAM ABDU

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Debre Berhan University

Asrat Woldeyes Health Science Campus, School Of Nursing and Midwifery, Department of
Surgical Nursing

I hereby, certify that I have read and evaluated this topic entitled cervical cancer screening service utilization among HIV positive and negative status in Oromo administrative zone, Amhara regional state, Ethiopia, 2023 which was prepared under my guidance. I recommend it to be submitted as fulfilling the thesis requirement.

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As a member of board examiners of MSc thesis open defense examination I certify that I have read and evaluate the thesis and examine the candidate Firdows Yimam. I recommend that the thesis be accepted as fulfilling the thesis requirement for degree of master science in adult health nursing.

_____ /__ /__
Full name Rank Signature Date

Final approval and acceptance of this thesis is contingent upon the submission of its final copy to the council of graduate studies through the candidate department or school graduate committee.

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ABBREVIATIONS OR/AND ACRONYMS

WHO	World Health Organization
AIDS	Acquired Immune Deficiency Syndrome
AOR	Adjusted Odds Ratio
ART	Anti-Retro Viral Therapy
CC	Cervical Cancer
CCS	Cervical Cancer Screening
CCSS	Cervical Cancer Screening Service
FMOH	Federal Ministry of Health
HIV	Human Immune Deficiency Virus
HPV	Human Papilloma Virus
IRB	Institutional Review Board
OPD	Out Patient Department
SPSS	Statistical Package for Social Science
SSA	Sub Saharan Africa
STD	Sexual Transmitted Disease
VIA	Visual Inspection with Acetic Acid
VIF	Variance inflation factors

ABSTRACT

Introduction:-Cervical cancer is cancer that occurs on the cervix, mostly caused by Human Papilloma Virus. It is public health priority in Ethiopia as there is high prevalence mortality and morbidity. There are various dimensions of factors which affect cervical cancer screening service utilization, but little is known about the uptake among HIV positive and negative women. Therefore, this study aimed to identify factors associated with it, and compare the prevalence among HIV positive and negative women.

Objective: -This study aimed to assess cervical cancer screening service utilization and associated factors among HIV positive and HIV negative status in Oromo Administrative Zone, Amhara, Ethiopia, 2023.

Methods: -Institution based comparative cross-sectional study was conducted from May 8-24, 2023. The sample size was computed using Epi-info 4.6 Software with the power of 80%, 95% confidence interval (CI), and the estimated ratio of the two groups were 1:1. Then the final sample was **624** (312 HIV positive and 312 HIV negative). A systematic random sampling method was used. Data were collected using structured questionnaire by trained data collectors and supervisors. Then, the data was entered into EPI-data version 4.6, and exported and analyzed using SPSS software version 20. Finally, logistic regression analysis was performed.

Results: - The overall prevalence of cervical cancer screening service utilization for HIV positive and negative was still low by accounting 118 (38.1%) and 69 (22.8%) respectively. In this study age (AOR: 5.341, 95% CI: 2.371, 12.033) occupation (AOR: 2.987, 95% CI: 1.515, 5.888) health care seeking behavior (AOR: 3.953, 95% CI: 1.999, 7.816), knowledge (AOR: 8.020, 95% CI: 4.145, 15.518) and attitude (AOR: 5.388, 95% CI: 2.663, 10.902) were statistically significant variables among HIV positive women and additionally residence (AOR: 3.158, 95% CI: 1.532, 6.510) was another significant variable for comparison group.

Conclusion and recommendation:-The magnitude of cervical cancer screening utilization was low. Hence, to improve the screening service utilization of cervical cancer, a campaign on community awareness, strengthening service linkage among departments, expansion of the centers for cervical cancer screening, and promotion of service utilization are recommended.

Keywords: - Cervical Cancer, screening, utilization, comparative study, Ethiopia.

1. INTRODUCTION

1.1. Background

Cervical cancer is a non-communicable and curable disease that has severe effects on women in the reproductive age range. The Human Papilloma Virus (HPV subtypes 16 and 18) is the primary cause of cervical cancer (CC), a malignancy that develops on the cervix (1,2).

It is the fourth most common cancer among women globally, with an estimated 570 000 new cases and 311 000 deaths worldwide, where as it ranks as the second most common cancer in females in Europe, nevertheless the highest regional incidence and mortality rates are seen in Africa (1,3,4).

Although the prevalence and mortality of CC vary greatly by geographic location, some estimates indicate that more than 90% of CC fatalities among women occurred in low- and middle-income (LMIC) nations (5).

It has been identified as the primary cause of maternal morbidity and mortality, particularly in sub-Saharan African nations, despite the fact that a significant improvement in the reduction of the global rate of maternal mortality was accomplished. It has repeatedly been demonstrated that using CCS services can lower cervical cancer incidence and mortality (6).

On November 17, 2020, the World Health Organization (WHO) formally launched its global strategy to speed up the elimination of cervical cancer as a public health issue (7).

When attempting to reduce the burden of CC in any community, it is a crucial factor. Early screening can help stop cervical cancer from developing by identifying and treating abnormal cells. Additionally, it can help with early cervical cancer detection, which increases the likelihood that victims will survive (8).

Before a person experiences any symptoms, cervical cancer screening (CCS) looks for precursors; if abnormal tissues or cancer are discovered early, it may be simpler to treat or cure (9).

1.2. Statement of the problem

CC is one of the main causes of death for women around the world, which is a public health issue. The incidence, the death rate and morbidities associated with CC significantly varies across the world; higher in the developing nations compared to the developed countries (7).

World health organization called for action to make CC no longer be a public health concern. He created a comprehensive strategy with specific objectives to eliminate CC. Once they reach the agreed-upon elimination threshold by the year 2030, countries will need to maintain their vaccine, screening, and treatment programs in order for it to become a reality (6).

According to reports from several nations, CC is the second most prevalent disease in developing nations, with 445,000 new cases being diagnosed each year (10).

Despite incidence and mortality of CC is the leading cancer, there is absence of effective detection methods and treatment strategies. It leads to sharply rising cervical cancer rates in developing countries (9).

Even though it is a main public health concern among women in Ethiopia, there is a scarcity of information on knowledge of screening, practice and barriers related to the usage of CCS service, which are needed for effective program implementation. The main barriers identified were knowledge, symptom and health system related barriers (11).

An estimated 57,000 instances of CC, or 22.2% of all female malignancies, were reported in Sub-Saharan Africa in 2000 (12). One of the main causes of the rising CC rates in emerging nations is the lack of efficient detection techniques and treatment approaches (9). Premalignant cervical lesions are ten years more likely to develop invasive CC in women who are HIV positive and have untreated HPV infections than HIV negative women (13).

There are various dimensions of factors which affect CCS utilization, but little is known about factors associated with CCS uptake among HIV positive and negative women. Therefore, this study aimed to identify which factors associated with CCS service utilization and compare CCS among HIV positive and Negative status women.

1.3. Significance of the study

Despite the fact that numerous research have been carried out in Ethiopia to evaluate the service use of cervical cancer screening in age-eligible women, particularly in HIV positive women, studies on both HIV positive and negative women are few in number and there is no studies done in Oromo administrative zone at all. The utilization of healthcare professional services must be evaluated because they can play a key role in increasing awareness of HIV positive women.

Thus, the findings from this study will help us to explore and compare the factors associated with CCS service utilization and generate evidence that could be targeted to enhance CCS among HIV-Positive and Negative women in Oromo administrative zone, Amhara region, Ethiopia. It also provides information to policy makers, so that they can set programs which are important to increase CCS utilization and it will provide baseline information for future researchers and planners of other intervention plan like; health education and promotion regarding CCS utilization service.

2. LITERATURE REVIEW

2.1. Prevalence of cervical cancer screening service utilization

Cervical cancer is one of the severest risks to women's life. VIA based CCS services in Ethiopia is well established, but other methods are not. Despite, WHO recommends CCS tests to be included as part of well-planned and implemented programs in every country's health care policy (6).

A study conducted on CCS uptake in Sub-Saharan Africa: a systematic review and meta-analysis the pooled prevalence of CCS in Sub Saharan Africa was 12.87% in the present (14). Among Women Living With HIV in Northern Tanzania showed that, 54%.of them are ever screened for CC in their lifetime since confirmed HIV positive (15). Another study conducted in Dodoma, Tanzania among Women of Reproductive age, only 7.9% had uptake CCS (16).

Another Meta-analysis study conducted on CCS service utilization and predictors among eligible women in Ethiopia showed , only one in every seven women utilized CCS in Ethiopia (6).A study conducted in Gomma Woreda, Jimma zone, Oromia regional state, Ethiopia, the uptake of CCS service was 38.7% (17).

Studies conducted in Girar Jarsoo district, North shoa, in Dire Dawa, and in Southern Tigray, the prevalence of CCS service utilization is quite low by accounting 21.2%, 4.0% and 8.0% respectively (18–20).Studies conducted in Jimma town and Sidama Zone, showed that, only 15.5% and 17.8% of have undergone CCS utilization respectively (11,21).

Another studies conducted in Bahir Dar City and Debre Markos town, the prevalence of CCS service uptake was determined to be 13.28% and 20.9. A study conducted in the same study area indicated that 5.4 % of women are utilize CCS service (22).

2.2. Determinant factors for CCS service utilization

2.2.1. Socio-Demographic Factors

Women's age is the determinant factors for CCS service utilization (23–25).a systematic review and Meta-analysis study done in Ethiopia revealed that women in their 30's were 4.58 times more likely to be screened compared to women in their 20s (23).

A study conducted in referral hospitals of Amhara region revealed that, women being in the age group of 30–39 and 40–49 years were two times and four times more likely to utilize CCS services than those who were in the age group of 21–29 years respectively (24). Similar study done in Sidama Zone showed that, women in the age category of 35-39 years old were 5 times more likely have CCS uptakes when compared to women with the age category of 25-29 years old (25).

Marital status was other significant predictors for the utilization of CCS. A systematic review and meta-analysis study done in Ethiopia showed that, women who were single/divorced/widowed 3.414 times more likely utilized CCS as compared with married women (22).

Rural residence was significantly associated with low uptake of screening in this study (24,26). A study conducted in Gomma District indicates that, women living in urban area were 4.45 times more likely to utilize CCS service than those who live in rural areas (17). Accordingly, study done in Southern Ethiopia, participants with urban residence were 2.7 times more likely to use cervical cancer screening when compared with their rural counterparts (27).

Age at first sexual intercourse was significantly associated with utilization of CCS(16,22,28). A studies conducted in Mertule Mariam Town, East Gojjam Zone and Debremarkos town, showed that women who had sexual intercourse at age of 16 years and below were 14 times and 3.021 times more likely to screen as compared with those women who had sexual intercourse at age above 16 years respectively (22,28).

The study conducted in Wolaita Zone, Sodo Town showed that, odds of CCS utilization is 3.7 times more likely among women who had at least a secondary level of education than those who were unable to read and write (29). A study done in referral hospitals of Amhara regional women

who completed secondary education and diploma and above were four times and two times more likely to utilize CCS services than those who had no formal education (24). A systematic review and meta-analysis study conducted in Ethiopia revealed that, women who had primary and above level of education were nearly 7 times more likely to undergo screened for CC than those with no formal educational levels (23). A study done in Mertule Mariam Town, East Gojjam Zone showed that, women who took college and above education were five times more likely to use CCS service as compared with women who did not take formal education (28). A study done in the Shabadino District, Southern Ethiopia showed that, women who attended primary school and above were 2 times more likely to utilize CCS service compared to those who did not attend any formal education (30). A study in Gomma district, Jimma zone showed that, women who attended secondary and above education level were 1.95 times more likely to actively uptake CCS service than those who had not attended formal education (17).

A study conducted in St. Paul's teaching and referral hospital revealed that self-employed women were more likely to be screened than governmental employed women (26). Another study conducted in Gomma district, South West Ethiopia showed that women employed in governmental organization were 2.61 times more likely to use the CCS service than house wives (17).. In the other hand a study done in Dire Dawa, employed women were three times more likely to utilize screening services compared to unemployed women (19). Similarly a study conducted at Aira Hospital, West Wollega indicated that being a housewife by their occupation were about 3 times more likely to have knowledge about CCS (31).

2.2.2. Knowledge related factors

A study done in Malawi revealed that, women who heard the information from both the health facility and media were 3 times more likely to have cervical cancer screening test than those who heard the information from the health facility only (12)A study done in Ilu Abba Bor zone showed that odds of utilization of cervical cancer screening was about 3.4 times more among women who were looking for cervical cancer information than their counterparts (32). A study done in Debre Markos town women who were informed by health providers about cervical cancer were 6.65 times higher to be screened as compared to their counter parts (33).

A study in Gurage zone showed that, women who were knowledgeable about cervical cancer screening were four times more likely to be screened for cervical cancer as compared with those who were not knowledgeable (28). A study conducted in Amhara region referral hospitals showed that, women who have good Knowledge were four times more likely to utilize CCS services than their counterparts (24). The study conducted in Debremarkos town showed that, women who were knowledgeable about CCS were 4.02 times more likely to utilize CCS service as compared to those who were not knowledgeable (22). A study conducted in Kembata Tembaro and Hadiya zones revealed that, women who knew the location for CCS service were 7.49 times more likely to use cervical cancer screening services when compared to those who did not have knowledge on cervical cancer screening locations (27). A study conducted in Hawassa town showed that, women those who have good knowledge about risk factors were three times more likely to use CCS than their counterparts (21).

A study conducted in showed that, women who had no perceived distance problem from the screening center to the health facility were 4.4 times more likely to uptake CCS service (17).

2.2.3. Attitude related factors

A study conducted in Debremarkos town showed that, women who had a favorable attitude about CCS were 3.225 and 3.38 times more likely to utilize CCSS as compared to those who had unfavorable attitudes respectively (22,33). A systematic review and meta-analysis done in Ethiopia revealed that, women who had favorable attitude towards CC and screening were 3.42 times more likely to undergo screening than those who have unfavorable attitude (23).

2.2.4. Reproductive and health service related factors

Studies conducted in Debremarkos and Mertule Mariam town revealed that, age at first sexual intercourse with their age of 16 years and below were 3.021 and 14 times more likely to utilize CCS as compared to those women who had started sexual intercourse after their age of 16 years respectively. In the other hand, women who have had a history of STD were 4.037 and 11 more likely to utilize CCS as compared to those who did not have STD history respectively (22,28).

The studies conducted in Debreworkos town and Shabadino District, Southern Ethiopia showed that, women who had a history of multiple sexual partners were 7 times and 4 times more likely to screen for CC as compared with those who have a single partner respectively(28,30).

Studies conducted at Mettu Karl Referral Hospital and in South Wollo Zone revealed that, having history of multiple sexual partner of the husband found to have 2.973 and 2.55 times more likely as compared to those women whose husbands had no two or more lifetime sexual partners (34,35).

A study conducted in Amhara region referral hospitals and showed that women who ever gave birth was nine times more likely to utilize CCSS(24). Another study conducted in Ilu Abba Bor zone revealed that nulliparous women were 74.4% less likely to utilize CCSS than women of parity more than two (32).

2.4. Conceptual frame work

This study is used a conceptual framework adapted from review of pertinent literature across the world. In the literature review, different characteristics are mentioned as factors for CCS utilization(36).

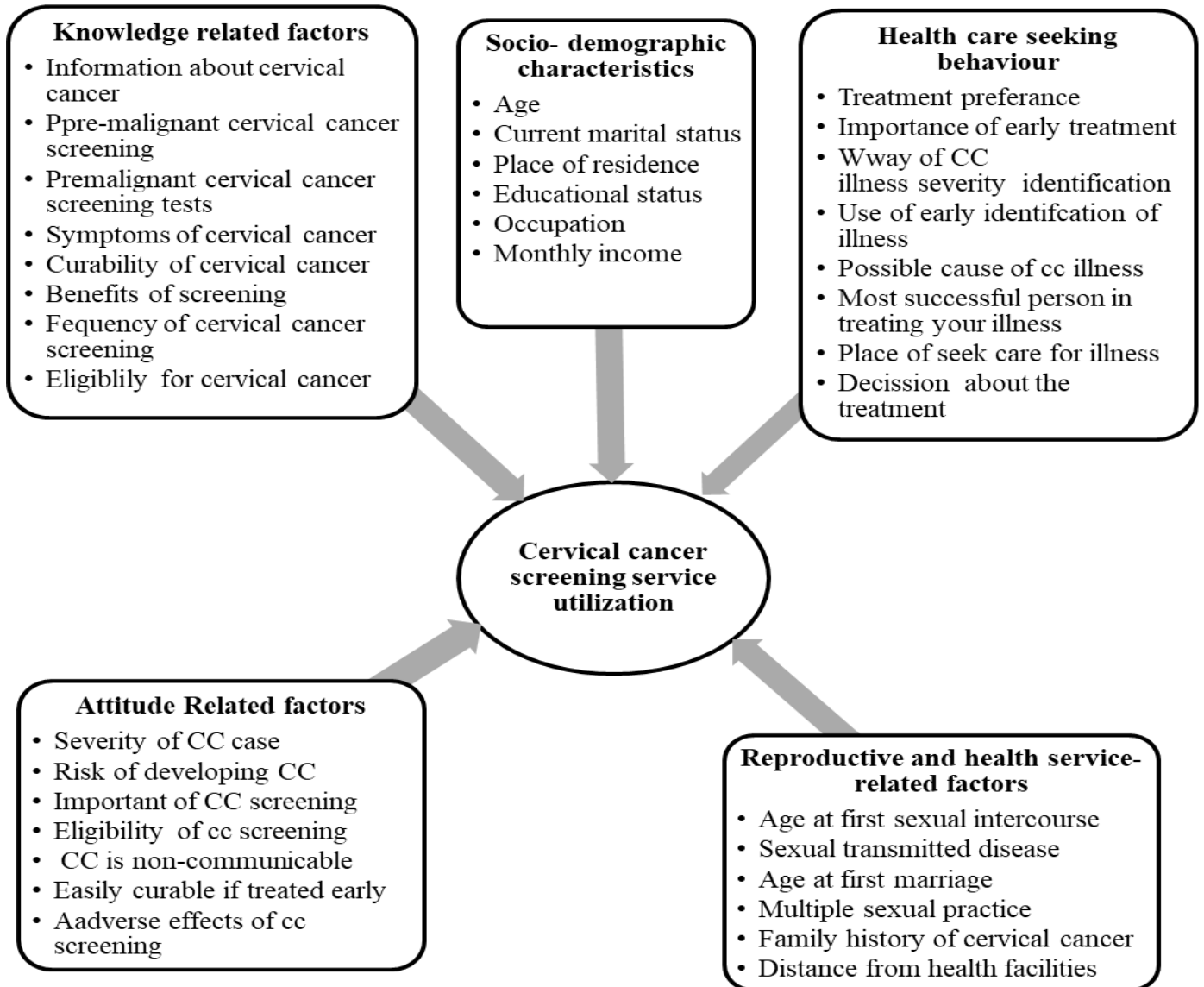


Figure 1:-conceptual framework of CCSS utilization

3. OBJECTIVES

3.1 General Objective

To assess cervical cancer screening service utilization and its associated factors among HIV positive and negative women in Oromo Administrative Zone, Amhara, Ethiopia, 2023.

3.2 Specific objective

1. To compare the prevalence of cervical cancer screening among HIV positive and negative women in Oromo Administrative Zone, Amhara, Ethiopia, 2023.
2. To identify factor associated with cervical cancer screening among HIV positive and negative women in Oromo Administrative Zone, Amhara, Ethiopia, 2023.

4. METHOD AND MATERIALS

4.1. Study Area

Oromo Administrative Zone is one of the zones in the Amhara Region of Ethiopia. The Oromo people, those who settled along the edge of the Ethiopian highlands that form this Zone. It is bordered on the southwest by Semien Shewa, on the northwest by Debub (South) Wollo and Argobba, and on the east by the Afar Region. Kemise is the administrative center of the Zone. It is organized into five Woredas (districts) and two town administrations. The two largest ethnic reported in Oromia were the Oromo (94.54%), and the Amhara (4.07%); all other ethnic groups made up 1.39% of the population. Oromiffa is spoken as a first language by 94.13%, and 3.43% spoke Amharic; the remaining 2.44% spoke all other primary languages reported. Around 97.07% were Muslim, and 2.4% of the population said they practiced Ethiopian Orthodox Christianity(37). According to 2019 zone administrative health department report, there are three government hospital, 27 health centers, and 105 health post 86 medium and primary private health facilities. Of these, there are 11 health facilities that provide cervical cancer screening services. Early marriage and polygamy is practiced, whereas cervical cancer screening practice is low.

4.2. Study Design and Period

Institution based comparative cross-sectional study was conducted in Oromo Administrative Zone Amhara region North-central Ethiopia. The study was conducted from May 8-24 /2023.

4.3. Source population

All HIV positive and Negative women those who are age eligible for cervical cancer screening service at selected health facility in Oromo administrative zone.

4.4. Study population

All HIV positive and Negative women who are age eligible for CCSS in selected HF at the time of data collection period in Oromo Administrative zone were study population.

4.5. Eligibility Criteria

4.5.1. Inclusion criteria

All women those who are eligible for cervical screening service from age 21-49 years old.

4.5.2. Exclusion criteria

Critically ill at the time of data collection and women who have had their cervix removed.

4.6. Sample size determination

The sample size was computed using Open-Epi info version 4,6 statistical software. The following assumptions is made: the power of the study (1- β) to be 80%, 95% confidence interval (CI), the estimated ratio of the two group (HIV negative and positive) ratio is 1:1,from different literature significant variables for CCS utilization is observed in the following variables: knowledge of pre-cervical cancer, number of sexual partner, attitude and history of STIs. Finally attitude towards CCS has chosen to calculate optimal sample size(29). Thus, adding a 10% non-response rate, the final sample size is **624** (312 HIV positive and 312 HIV negative) (22).

Table 1:-Sample size calculation for cervical cancer screening service utilization and associated factors among HIV positive and negative women, in Oromo Administrative Zone, Amhara, Ethiopia, 2023.

Variables	% of outcome in unexposed group	% outcome in exposed group	AOR	Sample size Positive/negative [Total]	References
Prevalence	26.9	73.1	3.4	22/22 [44]	(11)
Prevalence	15.5	84.5	2.9	10/10[20]	(38)
Knowledge	27.9	72.1	3.60	24/24[48]	(24)
Number of sexual partner	21.8	78.2	2.80	15/15[30]	
Attitude towards CCS	36.4	48.4	2.5	281/281 [566]	(29)
History of STIs	20.5	46.7	3.1	116/116 [232]	(38)

4.7. Sampling technique and Procedures

Oromo Administrative zone Governmental Health Facilities; Hospitals and Health centers list were obtained (Health Facilities that provide CCSS are 11 in numbers). To generalize the findings used based on the Health Facility list. First, health facilities were stratified by level into health centers, primary hospitals and general hospital. Of these, one General hospital is selected purposely and five Health Centers selected by simple random sampling method for giving equal chance for each Health Centers. Lastly five Health Centers and a Hospital were selected depending on the client flow in each Health Facilities.

HIV-positive women were recruited from antiretroviral therapy (ART) clinics by smart care for the specific study period. The number of age eligible HIV positive women in the 6 selected health facilities was 647. Finally; samples were selected by using systematic random sampling method with every $647/312=2$ interval until the required sample size was fulfilled. The first study participant was selected by lottery method. In part of HIV negative women, a total estimated number of age eligible women coming to medical OPD, surgical OPD, Gynecology and obstetrics OPD were 1845. Of these, 312 women were selected based on their testing and counseling of HIV, and determine their status by performing serologic test by trained data collectors.

4.7.1. Schematic presentation sampling procedure

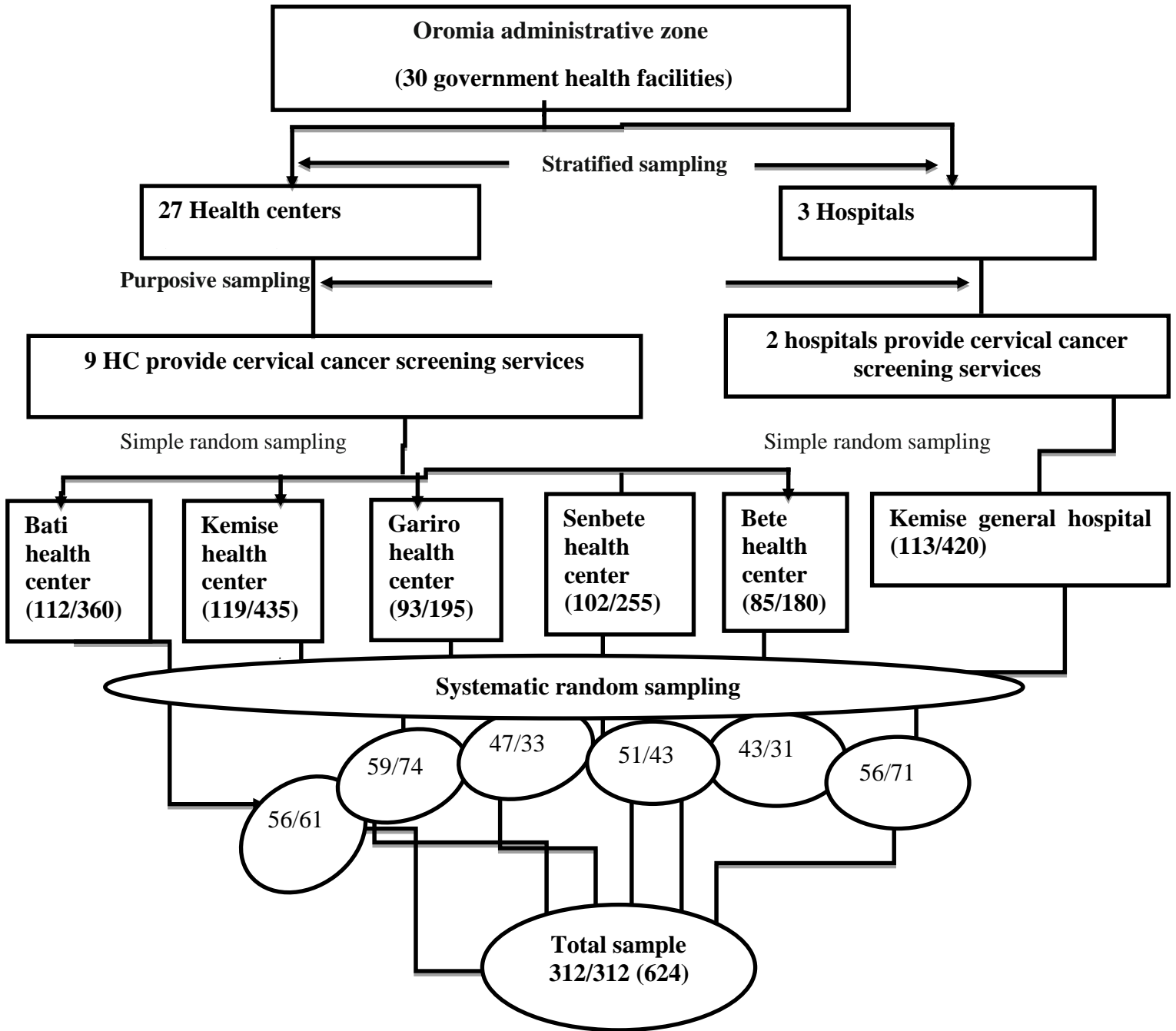


Figure 2:- Schematic presentation sampling procedure for cervical cancer screening service utilization and associated factors among HIV positive and negative women, in Oromo Administrative Zone, Amhara, Ethiopia 2023.

4.8. Study variables

4.8.1. Dependent variable

Cervical cancer screening service utilization

4.8.2. Independent variables

❖ Socio-Demographic Factors:

- Age
- Current marital status
- Place of residence
- Educational status
- Occupation
- Monthly income

❖ Health care seeking behavior

- Treatment preference
- Importance of early treatment
- way of CC illness severity identification
- Use of early identification of illness
- Possible cause of cc illness
- Most successful person in treating your illness
- place of seek care for illness
- Decision about the treatment

❖ Attitude related factors

- Severity of CC case
- Risk of developing CC
- Important of CC screening
- Eligibility of cc screening
- CC is non-communicable

- Easily curable if treated early
- Adverse effects of cc screening

❖ **Knowledge related factors**

- Information about cervical cancer
- pre-malignant cervical cancer screening
- premalignant cervical cancer screening tests
- Symptoms of cervical cancer
- Curability of cervical cancer
- benefits of screening
- frequency of cervical cancer screening
- Eligible for cervical cancer

❖ **Reproductive and health related factors**

- Age at first sexual intercourse
- Sexual transmitted disease
- Age at first marriage
- polygamy
- Multiple sexual practice
- Family history of cervical cancer
- Distance from health facilities

4.9. Measurement and Operational definitions

Knowledge about cervical cancer screening: It was measured by 12 knowledge questions. Each correct response was coded as 1 and the incorrect response was coded as 0 and summed up it. Finally, the median of the total score was calculated. Women those who have the score of median and above were considered as “**having good knowledge**”.

Poor health care seeking behavior: - Clients who scored less than median of the assessment Questions.

Good health care seeking behavior: - Clients who scored median and above of the assessment Questions.

Attitude towards cervical cancer screening: -It was measured by using a 5-point Likert questions from strongly agree to strongly disagree sequentially. The scores of the items were summed-up and calculate a mean score. A woman answered equal to and above the median value was considered having favorable attitude and woman answered below the median value was

4.10. Data collection tool

Data was collected using structured questionnaire adopted from relevant literature sources for the purpose of meeting the research objectives. The questioner initially adopted in English and later translated into local language by legal personnel who is an expert in English and local language (Amharic and Affan Oromo) then retranslated back to English version by another person for appropriateness of tools, language clarity and accuracy.

4.10.1. Data collectors and supervisors

Data collectors and supervisors were trained for two days on data collection process, accuracy and completeness. Six trained data collectors (3 BSc nurses, 3 midwives) and two supervisors (BSc nurse or BSc midwife) were participated in the data collection. Data collectors were closely monitor by supervisors and principal investigator throughout the data collection period.

4.10.2. Data collection procedures

Data were collected by interviewing the selected women in the private counseling rooms in their respective health facilities. The completed questionnaires were checked for its consistency and completeness by the supervisors during the entire data collection period. All methods were performed in accordance with the relevant guidelines and regulations (20).

4.10.3. Data quality control

Pre-test was conducted on 5% of respondents in non-selected adjacent health facilities of the study areas before data collection to check for its clarity, logical sequence, and language appropriateness. The tool on content, consistency, language and organization were checked thoroughly and modified in line with standards. To assure data quality, relevancy of questionnaire to the objective of the study was looked carefully. Data collectors and supervisors were trained for two days on data collection process, accuracy and completeness. During data collection, supervisors were reviewed every questionnaire for completeness and logical consistency, which was counter checked by the principal investigator on same day of data collection, The observed mistakes at the time was returned to data collectors for correction.

4.11. Data processing and analysis

Data were coded and entered into computer using EPI Data version 4.6 and transferred and analyzed using SPSS version 20. Descriptive statistics was computed to describe the study objectives in terms of appropriate variables. The statistical significance was tested by a Pearson's χ^2 (chi-square) test. To avoid unstable estimates, the cut-off point of 0.20 was entered in to bi-variate analysis to select variables for fitting a multi-variate logistic regression model and identify the independent contribution of each variable while adjusting for the effects of other variables in the model. Bi-variable and multi-variable logistic regression analysis was performed to identify factors associated with cervical cancer screening service utilization. Adjusted odds ratios and their corresponding 95% confidence intervals were used to determine the strength of the association between a dependent variable and independent variables. The necessary assumption of model fitness during logistic regression was checked using Hosmer-Lemeshow goodness-of-fit test statistics. Multi-collinearity was checked by a variable inflation factor and all showed no multi-collinearity with a variable inflation factor of less than five.

4.12. Ethical Consideration

Ethical clearance was obtained from Debre Berhan University, Formal letter was obtained from Oromo Administrative Zone Health department and public hospital and from respective woredas health offices.

A letter of support was obtained from respective health facilities. The information sheet and consent was provided for respondents to read for those who can read, whereas the interviewers were read the paper for those respondents who couldn't read. Before each interview, the aim of the study was clearly explained for study participants. Each respondent were assured that the information provided was confidential and uses only for the purpose of research. The information was obtained from the respondents and identified by their code numbers. Informed consent was obtained from all study subjects after the explanation of the purpose of the study.

4.13. Dissemination of the Result

The final report of this study will be written scientifically and submitted to Debre Berhan University, Asrat Woldeyes health science campus, School of nursing and midwifery, department of surgical nursing. The copy of report of the analysis result will be disseminated to all relevant bodies like FMOH, Oromo Administrative Zone Health department, and public hospital and from respective woredas health offices. As per the laws and regulation of the country, the study result will be presented and effort will be made to disseminate through publication.

5. RESULT

5.1. Socio-demographic characteristics of the respondents

A total of 613 participants, (310 HIV positive and 303 HIV negative respondents) were participated in this study. Resulting in an overall response rate of 98.2 % (both for HIV positive and negative women). The overall prevalence of cervical cancer screening service utilization for HIV positive and negative was slightly increase by accounting 118 (38.1%) and 69 (22.8%) respectively. The mean ages of both HIV positive and negative were 34.16 (± 6.95 SD) and 34.95 (± 7.57 SD) years respectively. In line with marital status majority of women, 253 (81.61%) and 180 (59.40) were married for HIV positive and negative respectively. The mean monthly income for HIV positive and negative women was 5205.80 (± 2869.71 SD) and 5667.29 (± 3456.96 SD) Ethiopian birr respectively. The mean time taken from home to health facility for HIV positive and negative women was 24.53(15.63) and 27.77 (18.17) minutes (Table 2).

Table 2: - Socio-demographic characteristics of HIV positive and negative women in Oromo Administrative Zone, Amhara, Ethiopia, 2023.

Variables	Category	HIV positive n=310 (50%)		HIV negative n=303 (50%)	
		Screened	Not screened	Screened	Not screened
Age	21-29	41(13.3)	88(28.5)	7(23.1)	70(23.1)
	30-39	29(9.4)	81(26.2)	45(16.1)	97(22.1)
	40-49	47(15.2)	23(7.4)	16(10.4)	67(22.1)
Level of education	Can't read and write	23(7.4)	48(15.5)	9(3.0)	17(5.6)
	can read and write	95(30.6)	144(46.5)	60(19.8)	217(71.6)
Current marital status	Married	99(31.9)	154(49.7)	51(16.8)	129(42.6)
	Unmarried	19(6.1)	38(12.3)	18(5.9)	105(34.7)
Current occupational status	Employed	56(18.1)	65(21.0)	34(11.2)	104(34.3)
	Un employed	62(20.0)	127(41.0)	35(11.6)	130(42.9)
Residence of the women	Rural	7(2.3)	60(19.4)	14(4.6)	102(33.7)
	Urban	111(35.8)	132(42.6)	55(18.2)	132(43.6)
Family average monthly income /ETB/	Less than 2000	11(3.5)	22(7.1)	2(0.7)	5(1.7)
	2000-3999	33(10.6)	54(17.4)	10(3.3)	65(21.5)
	4000-6000	42(13.5)	84(27.1)	37(12.2)	107(35.3)
	Above 6000	32(10.3)	32(10.3)	20(6.6)	57(18.8)

5.2. Health care seeking behavior related factors of CCSSU in Oromo Administrative Zone, Amhara, Ethiopia, 2023.

The study revealed that, women those who treated by traditional healers were 112 (36.1 %) and 150 (49.5%) for HIV positive and negative respectively. Majority of both HIV positive and negative women were believed as the benefit of early treatment by accounting 171(55.1 %) and 114 (37.6%) respectively (Table 3)

Table 3:-Healthcare seeking behavior related factors of cervical cancer screening service utilization in Oromo Administrative Zone, Amhara, Ethiopia, 2023.

Variables	Category	HIV positive n=310 (50%)		HIV negative n=303 (50%)	
		Screened	Not screened	Screened	Not screened
Health care seeking behaviors	Poor health care seeking behavior	77(24.8)	96(31.0)	17(5.6)	120(39.6)
	Good health care seeking behavior	41(13.2)	96(31.0)	52(17.2)	112(37.6)
If you become sick did you treat by traditional healers	Yes	10(3.2)	102(32.9)	18(5.9)	132(43.6)
	No	108(34.8)	90(29.0)	51(16.8)	102(33.2)
Believe about benefits of getting early treatment	Yes	114(1.3)	57(18.4)	30(9.9)	84(27.7)
	No	4(36.8)	135(43.5)	39(12.9)	150(49.5)
An illness can't be treated by modern medicine	Yes	32(10.3)	98(31.6)	40(13.2)	167(55.1)
	No	86(27.7)	94(30.3)	29(9.6)	67(22.1)

5.3 Knowledge related factors of cervical cancer screening service utilization in Oromo Administrative Zone, Amhara, Ethiopia, 2023.

One hundred fifty three (57.1%) and 118 (38.9 %) of HIV positive and negative women have good knowledge towards CCSSU respectively. Regarding benefit of screening 1150 (48.4%) and 128 (42.2%) HIV positive and negative women know the benefit respectively (4 Table).

Table 4:- Knowledge related factors of cervical cancer screening service utilization in Oromo Administrative Zone, Amhara, Ethiopia, 2023.

Variables	Category	HIV positive n=310 (50%)		HIV negative n=303 (50%)	
		Screened	Not screened	Screened	Not screened
Total knowledge about cc and its screening	Good knowledge	89(28.7)	64(20.6)	40(13.2)	78(25.7)
	Poor knowledge	29(9.4)	128(41.3)	29(9.6)	156(51.5)
Women ever heard about cervical cancer	Yes	85(27.4)	97(31.3)	40(13.2)	58(19.1)
	No	33(10.6)	95(30.6)	29(9.6)	176(58.1)
Information about cervical cancer screening	Yes	85(27.4)	46(14.8)	32(10.6)	46(15.2)
	No	33(10.6)	146(41.7)	37(12.2)	188(62.2)
Source of information	Media (TV and radio)	57(37.5)	13(8.6)	16(18.4)	9(10.3)
	Printed materials	27(17.8)	4(2.6)	2(2.3)	3(3.4)
	Health care workers	67(44.2)	29(19.1)	34(39.1)	36(41.4)
	Family and friends	35(23.0)	4(2.6)	7(8.0)	3(3.4)
Information about cervical cancer screening tests	Yes	83(26.8)	37(11.9)	42(13.9)	54(17.8)
	No	35(11.3)	155(50.0)	26(8.6)	180(59.4)
Women heard about benefits of screening	Yes	41(13.2)	109(35.2)	38(12.5)	90(29.7)
	No	77(24.8)	83(26.8)	31(10.2)	144(47.5)

5.4. Attitude related factors of cervical cancer screening service utilization in Oromo Administrative Zone, Amhara, Ethiopia, 2023

The study revealed that, HIV positive women who have good attitude were 141(45.5%) whereas 192(63.4%) HIV negative women have poor attitude (Table 5).

Table 5:-Attitude related characteristics of cervical cancer screening service utilization in Oromo Administrative Zone, Amhara, Ethiopia, 2023.

Variables	Category	HIV positive n=310 (50%)		HIV negative n=303 (50%)	
		Screened	Not screened	Screened	Not screened
Total attitude of women's cervical cancer and its screening	Poor attitude	26(8.4)	115(37.1)	33(10.9)	159(52.5)
	Good attitude	92(29.7)	77(24.8)	36(11.9)	75(24.8)
Cervical cancer is a killer disease	Strongly agree	5(1.6)	4(1.3)	7(2.3)	10(3.3)
	Agree	10(3.2)	59(19.0)	24(7.9)	70(23.1)
	Undecided	19(6.1)	9(2.9)	3(1.0)	26(8.6)
	Disagree	30(9.7)	31(10.0)	30(9.9)	52(17.2)
	Strongly disagree	54(17.4)	89(28.7)	5(1.7)	76(25.1)
Any reproductive-age women including you, are at risk of developing cervical cancer	Strongly agree	24(7.7)	()	6(2.0)	23(7.6)
	Agree	74(23.9)	4(1.3)	36(11.9)	82(27.1)
	Undecided	12(3.9)	11(3.5)	10(3.3)	98(32.3)
	Disagree	8(2.6)	45(14.5)	15(5.0)	20(6.6)
	Strongly disagree	0(0)	7(2.3)	2(0.7)	11(3.6)
	Very important	37(11.9)	29(9.4)	21(6.9)	25(8.3)
Screening is important in preventing cervical cancer	Important	45(14.5)	62(20.0)	18(5.9)	105(34.7)
	Moderately important	15(4.8)	15(4.8)	13(4.3)	21(6.9)
	Slightly important	21(6.8)	49(15.8)	10(3.3)	63(20.8)
	Un important	0(0.0)	37(11.9)	7(2.3)	20(6.6)

All eligible women should be screened for cervical cancer	Strongly agree	26(8.4)	6(1.9)	11(3.6)	4(1.3)
	Agree	32(10.3)	86(27.7)	19(6.3)	79(26.1)
	Undecided	51(16.5)	45(4.5)	11(3.6)	48(15.8)
	Disagree	9(2.9)	54(17.4)	26(8.6)	92(30.4)
	Strongly disagree	0(0.0)	1(0.3)	2(0.7)	11(3.6)
You can have cervical cancer but no symptoms	Always true	34(11.0)	15(4.8)	10(3.3)	32(10.6)
	Usually	15(4.8)	65(21.0)	10(3.3)	60(19.8)
	Occasionally	39(12.6)	28(9.0)	17(5.6)	36(11.9)
	Usually not true	30(9.7)	24(7.7)	30(9.9)	45(14.9)
	Never true	0(0.0)	60(19.4)	2(0.7)	61(20.1)
Cervical cancer is not communicable	Strongly agree	35(11.33)	9(2.9)	13(4.3)	8(2.6)
	Agree	38(12.3)	54(17.4)	15(5.0)	67(22.1)
	Undecided	38(12.3)	53(16.8)	18(5.9)	64(21.1)
	Disagree	6(1.9)	73(23.5)	22(7.3)	72(23.8)
	Strongly disagree	1(0.3)	4(1.3)	1(0.3)	23(7.6)
Screening cause no harm to the client	Strongly agree	3(1.0)	53(17.1)	7(2.3)	17(5.6)
	Agree	4(1.3)	69(22.3)	16(5.3)	46(5.2)
	Undecided	43(13.9)	15(5.5)	12(4.0)	68(22.4)
	Disagree	39(12.6)	45(14.5)	29(9.6)	72(23.8)
	Strongly disagree	29(9.4)	8(2.6)	5(1.7)	31(10.2)
Cervical cancer screening can find changes in the cervix before they become cancer	Strongly agree	21(6.8)	18(5.8)	9(3.0)	31(10.2)
	Agree	45(14.5)	73(23.5)	20(6.6)	71(23.4)
	Undecided	73(7.4)	45(14.5)	21(6.9)	43(14.2)
	Disagree	27(8.7)	25(8.1)	14(4.6)	43(14.2)
	Strongly disagree	2(0.6)	31(10.8)	5(1.7)	46(15.1)
If Cervical Changes Are Found Early from Cervical Cancer	Strongly agree	30(9.7)	14(4.5)	12(4.0)	19(6.3)
	Agree	52(16.8)	80(25.8)	22(7.3)	76(25.1)

Screening, it easily Curable.	Undecided	20(6.5)	60(19.4)	12(4.0)	96(31.7)
	Disagree	16(5.2)	32(10.3)	22(7.3)	25(8.3)
	Strongly disagree	0(0.0)	6(1.9)	1(0.3)	18(5.9)
Cervical cancer develops slowly and is Preventable.	Strongly agree	29(9.4)	11(3.5)	18(5.9)	10(3.3)
	Agree	47(15.2)	58(18.7)	28(9.2)	98(32.3)
	Undecided	20(6.5)	71(22.9)	9(3.0)	29(9.6)
	Disagree	21(6.8)	24(7.7)	3(1.0)	71(23.4)
	Strongly disagree	1(0.3)	28(9.0)	11(3.6)	26(8.6)

5.5. Reproductive related factors of cervical cancer screening service utilization in Oromo Administrative Zone, Amhara, Ethiopia, 2023

One hundred seventy four (66.2%) and 69(22.8%) of HIV positive and negative women had first sexual intercourse at the age of below 18 years. The women in both groups claimed that they had history of sexually transmitted disease by accounting 94(30.3%) and 28(9.2%) respectively. Also the women in both groups reported as they had history of multiple sexual partners, which accounts 35(11.3%) and 66(21.8%) HIV positive and HIV negative respectively. Regarding time taken home to health facility about 233(75.2%) HIV positive and 206(67.9%) of HIV negative were less than 30 minute (Table 6).

Table 6:- Reproductive and health related factors of cervical cancer screening service utilization in Oromo Administrative Zone, Amhara, Ethiopia, 2023.

Variables	Category	HIV positive n=310 (50%)		HIV negative n=303 (50%)	
		Screened	Not screened	Screened	Not screened
Age at first sexual intercourse	<18 years	74(23.9)	100(32.3)	50(16.5)	19(6.3)
	>18 years	44(14.2)	92(29.7)	128(42.2)	106(35.0)
History of STI	Yes	73(23.5)	21(6.8)	11(3.6)	13(4.3)
	No	45(14.5)	171(55.1)	58(19.1)	221(72.9)
Polygamy	Yes	6(1.9)	29(9.3)	15(5.0)	51(16.8)
	No	112(36.1)	163(52.5)	54(17.8)	183(60.4)
Multiple sexual partners of the women	Yes	0(0)	8(2.6)	3(1.0)	24(7.9)
	No	118(38)	184(59.3)	66(21.8)	210(69.3)
Family history of cervical cancer	Yes	2(5.6)	6(16.7)	4(1.3)	24(7.9)
	No	116(20.1)	186(32.2)	65(21.5)	210(69.3)
Ever known women who screened for cervical	Yes	58(18.7)	72(23.2)	35(11.6)	75(24.8)
	No	60(19.4)	120(38.7)	34(11.2)	159(52.5)
Physician recommendation about cervical cancer screening	Yes	92(29.6)	130(41.9)	48(15.8)	132(43.6)
	No	26(8.4)	62(20)	21(6.9)	102(33.7)
Barrier of cervical cancer screening	Yes	12(3.9)	65(20.1)	13(4.3)	31(10.2)
	No	106(34.2)	127(41)	56(18.5)	203(67.0)
Time taken from home to health facilities	Less than 30 minutes	103(33.2)	130(41.9)	49(16.2)	157(51.8)
	30-59 minutes	14(4.5)	46(14.8)	14(4.6)	54(17.8)
	60-90 minutes	1(0.3)	14(4.5)	6(2.0)	18(5.9)
	Greater than 90 minutes	2(0.6)	2(0.6)	0(0.0)	5(1.7)

5.6. Factors associated with cervical cancer screening service utilization among HIV positive women in Oromo Administrative Zone, Amhara, Ethiopia, 2023.

In this study, HIV positive women with age group 40-49 years were 5.341 times more likely to utilize cervical cancer screening service than those with age group 21-29 years (AOR=5.341; 95 % CI: 2.371,12.033). HIV positive women those who are employed were 2.987 times more likely to utilize CCSS than women those who are counterparts (AOR=2.987; 95 % CI: 1.515, 5.888).

HIV positive women those who have good health care seeking were 3.953 times more likely to utilize CCSS than women those who have poor Health care seeking behavior (AOR=3.953; 95 % CI: 1.999, 7.816). HIV positive women those who have good knowledge level were 8.020 times more likely to utilize CCSS than women those who have poor knowledge (AOR=8.020; 95 % CI: 4.145, 15.518). HIV positive women those who have good attitude were 5.388 times more likely to utilize CCSS than women those who have poor attitude level (AOR=5.388; 95 % CI: 2.663, 10.902). HIV positive women those who have history of STIs were 15.29 times more likely to utilize CCSS than counterparts (AOR=15.287; 95 % CI: 4.829, 48.399) (Table 7).

Table 7:-Factors associated with cervical cancer screening service utilization among HIV positive women in Oromo Administrative Zone, Amhara, Ethiopia, 2023.

Variables	Description	Screened n (%)	Not screened n (%)	COR(95% CI)	AOR(95% CI)
Age	21-29	41(13.3)	88(28.5)	1.000	1.000
	30-39	29(9.4)	81(26.2)	0.768(0.438,1.350)	0.940(0.452,1.953)
	40-49	47(15.2)	23(7.4)	4.386(2.356,8.164) ***	5.341(2.371,12.033) ***
Occupational status	Employed	56(18.1)	65(21.0)	1.765(1.104,2.821) *	2.987(1.515,5.888) **
	Unemployed	62(20.0)	127(41.0)	1.000	1.000
Residence	Rural	7(2.3)	60(19.4)	1.000	1.000
	Urban	111(35.8)	132(42.6)	7.143(3.137,16.262) ***	2.729(0.953,7.817)
Health care seeking behavior	Poor health care seeking behavior	77(24.8)	96(31.0)	1.000	1.000
	Good health care seeking behavior	41(13.2)	96(31.0)	0.532(0.332,0.854) ***	3.953(1.999,7.816) ***
Knowledge towards CCSSU	Poor knowledge	29(9.4)	89(41,3)	1.000	1.000
	Good knowledge	128(28,7)	64(20.6)	6.138(3.66,10.277) ***	8.020(4.145,15.518) ***
Attitude towards CCSSU	Poor attitude	26(8.4)	115(37.1)	1.00	1.000
	Good attitude	92(29.7)	77(24.8)	5.285(3.135,8.909)	5.388(2.663,10.902) ***
History of STIs	Yes	60(19.4)	73(23.5)	1.686(1.060,2.682) *	1.805(0.979,3.326)
	No	58(18.7)	119(38.4)	1.00	1.000

5.7. Factors associated with CCSSU among HIV negative women in Oromo Administrative Zone, Amhara, Ethiopia, 2023

The study revealed that, HIV negative women those who were 30-39 years old were 4.456 times more likely to utilize CCSS than those who were 21-29 years old (AOR=4.456; 95 % CI: 1.568, 12.664). HIV negative women those who are urban were 1.689 times more likely to utilize CCSS than women those who are rural resident (AOR=1.689; 95 % CI: 0.137, 0.609). HIV negative women those who have good health seeking behavior were 3.387 times more likely to utilize CCSS than women those who have poor attitude (AOR=3.387; 95 % CI: 1.656, 6.930). HIV negative women those who have good knowledge were 2.897 times more likely to utilize CCSS than the counterparts (AOR=2.897; 95 % CI: 1.454, 5.771). HIV negative women those who have good attitude were 25.89 times more likely to utilize CCSS than the women those who have poor attitude (AOR=2.638; 95 % CI: 1.354, 4.516) (Table 8).

Table 8:- Factors associated with CCSSU among HIV negative women in Oromo Administrative Zone, Amhara, Ethiopia, 2023.

Variables	Description	Screened n (%)	Not-screened n (%)	COR(95% CI)	AOR(95% CI)
Age	21-29	7(2.31)	70(23.1)	1.000	1.000
	30-39	45(16.1)	97(22.1)	4.634(2.022,11.123)***	4.456(1.568,12.664)*
	40-49	16(10.4)	67(22.1)	2.388(0.924,6.170)	1.670(0.5581,5.002)
Marital status	Married	54(17.8)	183(60.4)	1.000	1.000
	Unmarried	3(1.0)	24(7.9)	2.360(1.271,4.185)**	1.985(0.874,4.506)
Residence	Rural	14(4.6)	102(33.7)	1.000	1.000
	Urban	55(18.2)	132(43.6)	3.036(1.599,5.763)**	3.158(1.532, 6.510)**
Health care seeking behavior towards CCSSU	Poor health care seeking behavior	17(5.6)	120(39.6)	1.000	1.000
	Good health care seeking behavior	52(17.2)	114(37.6)	3.220(1.759,5.894)***	3.387(1.656,6.930)**

Knowledge towards CCSU	Poor knowledge	40(13.2)	78(25.7)	1.000	1.000
	Good knowledge	29(9.6)	156(51.5)	2.759(1.592,4.78)* **	2.897(1.454,5.771)**
Attitude towards CCSU	Poor attitude	33(10.9)	159(52.5)	1.000	1.000
	Good attitude	36(11.9)	75(24.8)	2.313(1.339,3.994) **	2.638(1.354,5.141)**
Age at first sexual intercourse	Less than 18 years	50(16.5)	19(6.3)	2.179(1.211,3.922) **	2.257(1.128,4.516)
	Above 18 years	128(42.2)	106(35.0)	1.000	1.000
History of STIs	Yes	11(3.6)	13(4.3)	3.224(1.373,7.569) **	2.864(0.975,8.417)
	No	58(19.1)	221(72.9)	1.000	1.000

6. DISSCUSSION

This study provides wide information regard to prevalence of cervical cancer screening service utilization and associated factors among HIV positive and HIV negative women in Oromo administrative Zone, Amhara regional state, Ethiopia. The overall prevalence of cervical CA screening service utilization for HIV positive and negative was slightly increase by accounting 118 (38.1%) and 69 (22.8%) respectively. This slightly higher than, the studies conducted in Girar Jarsoo district, North shoa, in Dire Dawa, and in Southern Tigray, the prevalence of CCS service utilization is quite low by accounting 21.2%, 4.0% and 8.0% respectively (18–20). The possible reasons might be due to the variation in the study participants, time deference', availability of information, and freedom of access to information regarding cervical cancer screening and its predisposing factors through social media and other routes.

In this study age, occupation, health care seeking behavior, knowledge and attitude were statistically significant variables among HIV positive women. In addition to that residence was another important determinant factor of CCSS.

The study showed that, HIV positive women whose are age of 40-49 years of were 5.341 times more likely to utilize CC screening service than those women who are age 21-29 years. This is supported by the study conducted in referral hospitals of Amhara region, that was women being in the age group of 40–49 years were four times more likely to utilize CCS services than those who were in the age group of 21–29 years (24). The reason why women in the younger age groups were less likely to utilize cervical cancer screening is that they might consider themselves low risk groups, and cancer related morbidity and mortality are diseases of older age groups, which might be screened in their 30's and above and women aged 40 and above might have better health seeking behavior and intention to be screened.

Furthermore, HIV positive women those who are employed were 2.987 times more likely to utilize CCSS than women those who are counterparts. This is similar with the study done in Dire Dawa, employed women were three times more likely to utilize screening services compared to unemployed women (19). This might be because the majority of employed women have access to information about cervical cancer screening service from friends, printed materials and media.

HIV positive women those who have good health care seeking behavior were 3.953 times more likely to utilize CCSS than women those who have poor health care seeking behavior. Even though, there is no study that is comparable with this variable in Ethiopia, health care seeking behavior is an important determinant factor for CCSSU,

HIV positive women those who have good knowledge level were 8.020 times more likely to utilize CCSS than women those who have poor knowledge. This study is corresponding to the study conducted in Debre Markos town, that was women who were knowledgeable about CCS were 4.02 times more likely to utilize CCS service as compared to those who were not knowledgeable (22). This might be due to an increased awareness level of women regarding cervical cancer and cervical cancer screening enable them to analyze the risks and benefits of utilizing the screening service, while simultaneously increasing their intention to utilize the screening service.

HIV positive women those who have good attitude level were 5.388 times more likely to utilize CCSS than women those who have counterparts. This finding is shared with a previous study conducted in Debremarkos town and systematic review and meta-analysis , which were women who had a favorable attitude about CCS were 3.225, 3.38 and 3.42 times more likely to utilize CCSS as compared to those who had unfavorable attitudes respectively (22,23,33). This might be explained by the fact that when women's knowledge regarding cervical cancer screening is good their attitudes towards utilizing the screening service increases, as well as the inverse.

Among HIV negative women those who were 30-39 years old were 4.456 times more likely to utilize CCSS than those who were 21-29 years old. This is Similar to the study done in Sidama Zone ,which was, women in the age category of 35-39 years old were 5 times more likely have CCS uptakes when compared to women with the age category of 25-29 years old (25). This might be women's assumption that is an increased risk of cervical cancer as their age increases. Additionally, in Ethiopia, the cervical cancer screening guideline promotes women aged 30-49 to be screened for cervical cancer. Another reason might be the belief that those who are younger do not really feel susceptible of the disease and as a result, they feel no need for screening.

HIV negative women those who are urban resident were 71 % less likely to utilize CCSS than women those who are rural resident. This is similar to the study conducted in Gomma District

and southern Ethiopia that was, women living in urban area were 4.45 and 2.7 times more likely to utilize CCS service than those who live in rural areas (16,27).

HIV negative women those who have good health care seeking behavior were 3.387 times more likely to utilize CCSS than women those who have poor health care seeking behavior.

HIV negative women those who have good knowledge were 2.897 times more likely to utilize CCSS than the counterparts. This is comparable with the study conducted in Kembata Tembaro and Hadiya zones revealed that, women who knew the location for CCS service were 7.49 times more likely to use cervical cancer screening services when compared to those who did not have knowledge on cervical cancer screening (27). A study conducted in Hawassa town showed that, women those who have good knowledge about risk factors were three times more likely to use CCS than their counterparts (21). There is, therefore, a need to increase awareness about cervical cancer and the need of being screened as a measure to prevent cervical cancer.

HIV negative women those who have good attitude were 25.89 times more likely to utilize CCSS than the women those who have poor attitude. This is in line with systematic review and meta-analysis, that was women who had favorable attitude towards CC and screening were 3.42 times more likely to undergo screening than those who have unfavorable attitude (23) This might be explained by the fact that when women's knowledge regarding cervical cancer screening is good their attitudes towards utilizing the screening service increases, as well as the inverse.

7. CONCLUSION

Based on these study findings the following conclusions were forwarded:-

Cervical cancer screening service utilization among both groups was low. The results explain that there are six factors for each group which was significantly associated with utilizing CCSS. Employed from occupational status and read and write from educational status about CC and its screening were main factors which determine utilization of the service among HIV positive women groups, Knowledge, Attitude and health care seeking behavior were significantly associated with CCSSU and also having history of sexual transmitted infection.

8. RECOMMENDATION

Based on the findings, cervical cancer screening rates have remained low and want to be improved through building their awareness. The study has specific indication for responsible bodies.

First for policy makers

The study proposed that there is a need for form policies and programs anticipated at awareness creation and elaborating knowledge and perspectives about cervical cancer and its prevention method which can be applied at all health institution programs. They should acknowledge and recognize that cervical cancer is a major public health concern and accord its prevention and treatment priority in education.

For health professionals and health facilities

Health providers have to inform women about cervical cancer and how to prevent it by advancing health education during every clinical contact in the form of regular outpatient cervical cancer screening is mandatory. Health facilities also address about awareness creation program.

For researchers

There is wide information gap about cervical cancer screening service among HIV positive and HIV negative women, it is very useful to study this curtail destination population with better study design that can crack out associated factors.

9. STRENGTH AND LIMITATION

9.1. Strength of the study

- ✓ Being comparative study
- ✓ It involves a large number of participants
- ✓ It concentrates on populations at risk: women WHO have HIV and who are in the early marriage.

9.2. Limitation of the study

As the study is cross sectional it makes difficult to explore cause and effect relationship among independent and dependent variables.

It is challenging to investigate the cause and effect relationships between the independent and dependent variables because the study is cross sectional.

Being the time given for research is no enough and also poor network connection.

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11. ANNEXES

Annex 1:-Information Sheet and Consent Form

Information Sheet

Debre Berhan University Asrat Woldeyes Health Science Campus, School of Nursing and Midwifery Department of Surgical Nursing information sheet on the cervical cancer screening service utilization and associated factor among women with HIV positive and Negative status in Oromo Administrative Zone, Amhara, Ethiopia, 2023.

Hello! How are you? My name is ----- . I am working in this Zone. Now I am a research team member to be conducted here by a postgraduate student in Adult health nursing at the Oromo administrative Zone. The purpose of the study is to assess the factors associated with cervical cancer screening service among women screened for cervical cancer in Amhara region Oromo administrative Zone. If you agree to participate in the study as a respondent, you will not have any risk in participating in the study except the time you spent during the interview. The study may be advantageous in identifying risk factors for cervical cancer screening service so it is important to develop strategies that help to improve the service utilization of cervical cancer screening. All the genuine information obtained from you will strictly keep confidential, your participation is purely voluntary, and no monetary incentives will be given for your participation in the study. You can withdraw any time during conducting the study, also your participation, non-participation, or refusal to answer questions will not have any effect on your life, and your name will not be recorded on this form. If you have any questions, **Sr. Firdows Yimam** is the contact person. **Firdows** can be reached through a call at **0910181509**, **Email- Firdi1509@gmail.com**

Are you willing to participate in the interview and stay with us for a few minutes (15-20) now?

Yes, go to the next page

No, Thanks! Proceed to next eligible participant

Note: Women who undergo screening for the cervical precancerous lesion, who are sexually active, women, who are from 21-49-year-old.

Annex I

Consent Form

I am informed that my identity and the information I give will be treated confidentially. I have also been informed that I can refuse to participate in the study or not respond to questions if I am not interested. Furthermore, I have been informed that I can stop responding to the questions at any time in the process. I am informed that my participation, non-participation, or refusal to answer questions will not have any effect on my life. I am informed that no financial incentives will be given for my participation in the study. I am also informed that my response will be used to develop strategies that help to improve the service utilization of cervical cancer screening.

If the study subject agrees to participate in the study, thank her and start the interview.

Interviewer's Name----- Signature-----Date-----

Note: No need to enforcing the clients to be included in the study.

Thank you!

Annexes II:-Questionnaire (English version)

For each question, make a circle around the spelling that corresponds to the answer; fill the blanks with the answer.

Participant’s code number: _____

Participant’s sero-status code: SP

SN

women screenfor CCS

women not screen CCS

Part 1: Socio-demographic characteristics of cervical cancer screening service utilization

s.no	Question	Response	Skip
101	How old are you? (completed years)	_____	
102	What is your level of education?	<ol style="list-style-type: none"> 1. Can’t read and write 2. able to read and write 3. Formal education & grade; 1-12 4. Diploma or technical/vocational 5. Higher (degree and above 	
103	What is your current marital status?	<ol style="list-style-type: none"> 1. Single 2. Married 3. Widowed 4. Divorced 5. Separated 	
104	What is your current occupation status?	<ol style="list-style-type: none"> 1. Housewife 2. Merchant 3. Daily laborers 4. Governmental employee 5. Private/NGO employee 6. Others (specify_____) 	
105	Residence of the women?	<ol style="list-style-type: none"> 1. Rural 2. Urban 	
106	How much is your family average monthly income (ETB)	Total_____ unknown.....1	

Part II: - Healthcare seeking behaviorrelated Questions of cervical cancer screening service utilization.

No	Questions and filters	Responses	Skip to
201	If you become sick did you treat by traditional healers	1. Yes 2. No	
202	If yes for 201 what is the most important reason for sorting traditional healers	1. Don't get cure from medical care 2. They do not charge too much 3. They are respectful 4. There is no long waiting time 5. Treatment is effective 6. Maintain confidentiality 7. Maintain privacy 8. Because, family recommended it 9. Because, they are near 10. Others (specify....)	If no skip 304
203	If yes for 201 what type of medication have you sought from traditional healer?	1. Massage 2. Herbal medication 3. Tattooing/cauterization 4. Spiritual care 5. Advice 6. Other (specify....)	Yes/No
204	If you are sick, do you believe that getting early treatment is beneficial?	1. Yes 2. No	
205	Is there an illness that can't be treated by modern medicine?	1. Yes 2. No	
206	How do you think severity of CC illness is identified	1. By combined symptoms of the disease. 2. If you refused to eat 3. If the illness continue for long time 4. Others (specify....)	Yes/No
207	What do you think the use of early identifying your illness?	1. To decide on management 2. To identify the cause 3. Others (specify....)	Yes/No
208	For the cervical cancer, what did you think is the possible cause?	1. Evil eye 2. Human papilloma virus 3. Microorganism 4. Curse from God 5. Eating contaminated food and water 6. Others (specify....)	Yes/No
209	Which person do you think is the most successful in the treating your illness?	1. Herbalist 2. Magician 3. Wogesha	Yes/No

		4. Private drug shop owner 5. Community or institution health worker 6. Other (specify....)	
210	If you become sick from where do you seek care for your illness?	1. Home treatment 2. Local healers 3. Traditional treatment 4. Private health care unit 5. Government health care unit 6. Others (specify....)	Yes/No
211	If you become ill with whom you decide about the treatment?	1. Have previous experience 2. Household identified 3. Neighbors identified 4. Religious leader 5. Health professional 6. Other (specify....)	Yes/No

Part III: - knowledge related questions on cervical cancer and screening.

301	Have you ever heard about cervical cancer?	1. Yes 2. No	If no, end the here
302	From which source you have heard about cervical cancer for the first time? Multiple answer possible	1. Media (TV and radio) 2. Printed materials 3. Health care workers 4. Family and friends	Yes/No
303	Have you ever heard about pre-malignant cervical cancer screening?	1. Yes 2. No	If no go to part 4
304	From which source you have heard about premalignant CCA screening for the first time?	1. Media (TV and radio) 2. Printed materials 3. Health care workers 4. Family and friends	Yes/No
305	Do you know premalignant cervical cancer screening tests?"	1. Yes 2. No	If no go to part 6
306	What are the symptoms of cervical cancer? Multiple answers possible	1. Vaginal bleeding 2. Foul smelling of vaginal discharge 3. Contact bleeding	Yes/No
307	Can cancer of the cervix be cured in its earliest stages?	1. Yes 2. No	

308	How can someone with cancer of the cervix be treated? Multiple answer possible	1. Herbal remedies 2. Surgery 3. Specific drugs given by hospital 4. radiotherapy	Yes/No
309	Do you hear of benefits of screening	1. Yes 2. No	
310	How frequent is screening for Premalignant cervical lesion done?	1. Once every year 2. Once every three years 3. Once every 5 years	Yes/No
311	Who should be screened?	1. Women of 25 years and above 2. Prostitutes 3. Elderly women	Yes/No

Part IV: - Attitude related characteristics questions

No	Questions	Responses	Skip
401	Cervical cancer is a killer disease?	1. Strongly agree 2. Agree 3. Undecided 4. Disagree 5. Strongly disagree	
402	Any reproductive-age women including you, are at risk of developing cervical cancer?	1. Strongly agree 2. Agree 3. Undecided 4. Disagree 5. Strongly disagree	
403	Screening is important in preventing cervical cancer.	1. Very important 2. Important 3. Moderately important 4. Slightly important 5. Unimportant	
404	All eligible women should be screened for cervical cancer.	1. Strongly agree 2. Agree 3. Undecided 4. Disagree 5. Strongly disagree	
405	You can have cervical cancer but no symptoms	1. Always true 2. Usually true 3. Occasionally true 4. Usually not true 5. Never true	

406	Cervical cancer is not communicable	1. strongly agree 2. agree 3. Undecided 4. disagree 5. strongly disagree	
407	Screening cause no harm to the client	1. strongly agree 2. agree 3. Undecided 4. disagree 5. Strongly disagree	
408	Cervical cancer screening can find changes in the cervix before they become cancer	1. strongly agree 2. agree 3. Undecided 4. disagree 5. strongly disagree	
409	If Cervical Changes Are Found Early from Cervical Cancer Screening, They Are Easily Curable.	1. strongly agree 2. agree 3. Undecided 4. disagree 5. Strongly disagree	
410	Cervical cancer develops slowly and is Preventable.	1. strongly agree 2. agree 3. Undecided 4. disagree 5. strongly disagree	

Part V: Reproductive and health service related factors

501	Age at first sexual intercourseyears	
502	Ever had a history of STI?	1. Yes 2. No	
503	Does your partner have other partners	1. Yes 2. No	
504	Do you have another sexual partners	1. Yes 2. No	
505	Do you have family history of cervical cancer	1. Yes 2. No	

506	Have you ever known women who screened for cervical	1. Yes 2. No	
507	Has your physician ever recommended cervical cancer screening	1. Yes 2. No	
508	Even if you wanted to get screening, is there a barrier	1. Yes 2. No	
509	If yes mention	1. Unavailability of health facilities 2. Unavailability of health professional health facilities 3. I can't pay the service fee 4. The procedure is painful 5. Fear of vaginal examination 6. Lack of partner approval 7. Attitude of health provider 8. I am not at risk	Yes/No
510	Time taken from home to health facilities	_____hrs	

Annex III: -Questionnaire (Amharic version)

ለእንዳንዱ ጥያቄ ተገቢውን መልስ ክበቡ

የተሳታፊው ኮድ ቁጥር-----

የተሳታፊው የምርመራ ውጤት ጋዝ ነገ

የማህጸን በር ካንሰር የተመረመሩ የማህጸን በር ካንሰር ያለተመረመሩ

ክፍል 1:-ማህበራዊይና አካባቢያዊ ሁኔታን በተመለከተ

ተ ቁ	ጥያቄ	ምላሽ	ዝልል
101	ስንት አመትሽ ነው	.	
102	የትምህርት ደረጃ	<ol style="list-style-type: none"> 1. ማንበብና መጻፍ የማይችል 2. ማንበብና መጻፍ የሚችል 3. መደበኛ ትምህርት ከ1-12 ኛ ክፍል 4. ድፕሎማ ና በላይ 5. ከፍተኛ (ድግረሪ ና ከዚያ በላይ) 	
103	የትዳር ሁኔታ	<ol style="list-style-type: none"> 1. ያላጋባች 2. ያጋባች 3. ባሏ የሞተባት 4. የተፋታች 5. የተለያየች 	
104	ስራሽ ምንድነው	<ol style="list-style-type: none"> 1. የቤት እመቤት 2. ነጋዴ 3. የቀን ሰራተኛ 4. መንግስት ሰራተኛ 5. የግል ጠቀጣሪ 6. ሌላ ካለ ይገለፅ 	
105	የመኖሪያ ቦታ	<ol style="list-style-type: none"> 1. ገጠር 2. ከተማ 	
106	ወርሃዊ ገቢ ስንት ነው	በብር-----	

ክፍል 2:-

ህክምና መፈለግ ላይ ተፅዕኖ የሚፈጥሩ ነገሮች: ለህፃናት ህመም መንስኤዎች፣ ምልክቶች እና በህመሙ ክብደት ያላቸው አመለካከት::

ተ ቁ	ጥያቄ	ምላሽ	ዝልል
201	ቢያምሽ በባህላዊ ህኪም ትታከሚያለሽ?	<ol style="list-style-type: none"> 1. አዎ 2. አይደለም 	አይደለም ከሆነ 204
202	ጥያቄ 201 መልስዎ አዎ ከሆነ	1. ከዘመናዊ ህክምና ምንም እርዳታ	

	በባህላዊ ሀኪም ለምታከም ዋናው ምክንያትሽ ምንድነው?	<ul style="list-style-type: none"> 1. ስለማይገኝ 2. የባህል ህክምና ወጪው ርካሽ ስለሆነ 3. የባህል ህክምና ሰጪዎች አክብሮት ስላላቸው 4. ህክምናውን ወዲያው (በፍጥነት) ስለሚሰጡ 5. ህክምናው ፍቱን ስለሆነ 6. ምስጢር ስለሚጠብቁ 7. በህክምናው ወቅት ማንም ሰው ስለሌለ 8. ቤተሰባችን ሁሉ ስለሚያምንበት 9. በቅርቡ ስለሚገኝ 10. ሌላ(ይጠቀስ)---- 	
203	መልስዎ ለጥያቄ 202 አዎን ከሆነ የሚያገኙት የህክምና አይነት የቱን ነው?	<ul style="list-style-type: none"> 1. መታሸት 2. የሚጠጣ የባህል መድሃኒት 3. የመበጣት/መተልተል 4. ፀሎትና መንፈሳዊ ፈውስ 5. ምክር 6. ሌላ ካለ (ይጠቀስ....) 	
204	ቢታመሙ በአፋጣኝ ወደ ጤና አገልግሎትመሄድ ጥቅም አለው?	<ul style="list-style-type: none"> 1. አዎ 2. የለም 	
205	በጤና ድርጅት መታከም የማይችል ህመም አለ?	<ul style="list-style-type: none"> 1. አዎ 2. የለም 	
206	መታመማዎን ለማወቅ ምን ይጠቀማሉ?	<ul style="list-style-type: none"> 1. በእርስዎ ላይ በሚታዩ ተደራራቢ ምልክቶች 2. ምግብ አለመመገብ/ፍላጎት መቀነስ/ማቆም 3. ህመሙ ለረጅም ጊዜ መቆየቱ 4. ሌላ ካለ (ይጠቀስ....) 	
207	መታመማዎን ቶሎ ማወቅ ምን ጥቅምአለው?	<ul style="list-style-type: none"> 1. ህክምናዎ ላይ ለመወሰን 2. የህመሙን ምክንያት ለማወቅ 3. ሌላ ካለ(ይጠቀስ....) 	
208	ለማህፀን በር ካንሰር ምክንያት ሊሆኑ የሚችሉ ነገሮች ምንድን ናቸው?	<ul style="list-style-type: none"> 1. የሰው ዓይን (ቡዳ) 2. ሁማን ፓፒሎማ ቫይረስ 3. የበሽታ አምጪ ተህዋሲያን 4. የአምላክ ቁጣ 5. ተበከለ ምግብ መመገብ እና ወሃ መጠጣት 6. ሌላ ካለ(ይጠቀስ....) 	
209	በእርስዎ እምነት የማህፀን በር ካንሰር ህመም ለማከም በጣም የሚያወቀው ማነው?	<ul style="list-style-type: none"> 1. ቅጠላቅጠል ቀማሚ 2. ጠንቋይ 3. ወጌሻ 4. መንግስታዊ ያልሆኑ የጤና ድርጅቶች 5. የሚሰሩ የጤና ባለሙያዎች 6. መንግስታዊ ከሆኑ የጤና ድርጅቶች የሚሰሩ የጤና ባለሙያዎች 7. ሌላ ካለ(ይጠቀስ....) 	
210	ሲታመሙ ህክምና ማግኘት	<ul style="list-style-type: none"> 1. የቤት ወስጥ እንክብካቤ 	

	የሚገባዎትክዩት ነው?	2. ከአካባቢ አዋቂዎች 3. ከባህል ህክምና 4. ከግለሰብ ጤና ድርጅቶች 5. ከመንግስት ጤና ድርጅቶች 6. ሌላ ካለ (ይጠቀስ....)	
211	ሲታመሙ ስለ ህክምናው ለመወሰን መጀመሪያ የሚያማክሩት ማንን ነው?	1. ከዚህ በፊት ልምድ ያላቸውን 2. የቤተሰብ አባላትን(ባለቤቱን) 3. ጎረቤቶችን 4. የሐይማኖት አባቶችን 5. የጤና ባለሙያን 6. ሌላ ካለ (ይጠቀስ....)	

ክፍል 3:-አውቀትን መሰረት ያደረገ ጥያቄዎች

ተ ቁ	ጥያቄ	ምላሽ	ዝልል
301	ከዚህ በፊት ስለ ማህጸን በር ካንሰር ሰምተው ያውቃሉ?	1. አዎ 2. አይደለም	አይደለም ከሆነ 303
302	ጥያቄ 301 መልስዎ አዎ ከሆነ ስለ በሽታው ለመጀመሪያ ጊዜ የሰሙት ከማነው?	1. ከሚድያ /ቴሌቪዥን እና ሬድዮ/ 2. ከህትመት ውጤቶች 3. ከጤና ባለሙያዎች 4. ከቤተሰብና ጓደኞች 5. ሌላ(ይጠቀስ)----	
303	ከዚህ በፊት ስለ ማህጸን በር ካንሰር ምርመራ ሰምተው ያውቃሉ	1. አዎ 2. አይደለም	አይደለም ከሆነ 305
304	ጥያቄ 303 መልስዎ አዎ ከሆነ ስለ በሽታው ለመጀመሪያ ጊዜ የሰሙት ከማነው?	1. ከሚድያ /ቴሌቪዥን እና ሬድዮ/ 2. ከህትመት ውጤቶች 3. ከጤና ባለሙያዎች 4. ከቤተሰብና ጓደኞች 5. ሌላ(ይጠቀስ)----	
305	የማህጸን በር ካንሰር ምርመራ ያውቃሉ?	1. አዎ 2. የለም	
306	የማህጸን በር ካንሰር ምልክቶች ምንምን ናቸው?	1. በማህጸን በኩል ደም መፍሰስ 2. በማህጸን የሚወታ ሽታ ያለው ፈሰሽ 3. በግንኙነት ጊዜ ደም መፍሰስ	
307	የማህጸን በር ካንሰር በጊዜ ቢታከም ሊድን ይችላል?	1. አዎ 2. አይደለም	
308	የማህጸን በር ካንሰር እንደት ሊታከም ይችላል?	1. በቅጠላቅጠል 2. በቀዶ ህክምና 3. በሆስፒታል በሚሰጡ ልዩ መድሃኒቶች 4. በራድዮቴራፒ	
309	ለማህጸን በር ካንሰር ምርመራ ጥቅም ሰምተው ያውቃሉ?	1. አዎ 2. አይደለም	
310	የማህጸን በር ካንሰር ምርመራ በየስንት ጊዜው ይደረጋል?	1. በየመቱ 2. በየ 3 አመቱ 3. በየ 5 አመቱ	

311	የማህፀን በር ካንሰር ምርመራን መውለድ ያለበት ማነው?	1. ከ25 አመት በላይ ያሉ ሴቶች 2. የተደፈሩ ሴቶች 3. እድሜያቸው የገፉ ሴቶች	
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ክፍል 4:- የአመለካከት መመዘኛ መጠይቅ

ተ ቁ	ጥያቄ	ምላሽ	ዝላል
401	የማህፀን በር ካንሰር ገዳይ ነው::	1. በጣም እስማማለሁ 2. እስማማለሁ 3. አልወሰንኩም 4. አልስማማም 5. በጣም አልስማማም	
402	ሁሉም በመውለድ እድሜ ክልል ውስጥ ያሉ ሴቶች እርስዎን ጨምሮ ለማህፀን በር ካንሰር ተጋላጭ ናቸው ብለው ያስባሉ::	1. በጣም እስማማለሁ 2. እስማማለሁ 3. አልወሰንኩም 4. አልስማማም 5. በጣም አልስማማም	
403	የማህፀን በር ካንሰርን ለመከላከል ምርመራ ስፈልጋል ::	1. በጣም ያስፈልጋል 2. ያስፈልጋል 3. በከፊል ያስፈልጋል 4. በጥቂቱ ያስፈልጋል 5. አያስፈልግም	
404	ሁሉም ለምርመራ ብቁ የሆኑ ሴቶች መመርመር አለባቸው::	1. በጣም እስማማለሁ 2. እስማማለሁ 3. አልወሰንኩም 4. አልስማማም 5. በጣም አልስማማም	
405	ምንም ዓይነት ምልክት ሰይኖር የማህፀን በር ካንሰር ሊኖር ይችላል::	1. ሁልጊዜ ትክክል 2. አበዛኛውን ጊዜ ትክክል 3. አልፎአልፎ ትክክል 4. አብዛኛውን ጊዜ ስህተት 5. በፍፁም ስህተት	
406	የማህፀን በር ካንሰር ተላላፊ አይደለም::	1. በጣም እስማማለሁ 2. እስማማለሁ 3. አልወሰንኩም 4. አልስማማም 5. በጣም አልስማማም	
407	የማህፀን በር ካንሰር ምርመራ በደንበኛው ላይ ምንም አይነት ጉዳት አያደርስም::	1. በጣም እስማማለሁ 2. እስማማለሁ 3. አልወሰንኩም 4. አልስማማም 5. በጣም አልስማማም	
408	የማህፀን በር ካንሰር ምርመራ በሽታው ከመከሰቱ በፊት በማህፀን በር ላይ ያልውን ለውጥ ማወቅ ያስችላል::	1. በጣም እስማማለሁ 2. እስማማለሁ 3. አልወሰንኩም	

		4. አልስማማም 5. በጣም አልስማማም	
409	በማህፀን በር ላይ ያልውን ለውጥ ቀድመን ካወቅን በቀላሉ ታክሞ መዳን ይችላል።	1. በጣም እስማማለሁ 2. እስማማለሁ 3. አልወሰንኩም 4. አልስማማም 5. በጣም አልስማማም	
410	የማህፀን በር ካንሰር ቀስበቅስ የሚከሰት በሽታና መከላከል የምንችለው በሽታ ነው ።	1. በጣም እስማማለሁ 2. እስማማለሁ 3. አልወሰንኩም 4. አልስማማም 5. በጣም አልስማማም	

ክፍል 5:- የስነ-ተዋልዶ መሰረት ያደረጉ ጥያቄዎች

ተ ቁ	ጥያቄ	ምላሽ	ዝልል
501	ለመጀመሪያ ጊዜ የግበረ ስጋ ግንኙነት ያደረግሽው በስንት አመትሽ ነው?	-----አመት	
502	ከዚህ በፊት የአባላዘር በሽታ ታመሽ ታውቁያለሽ?	1. አዎ 2. አይደለም	
503	የትዳር አጋርሽ ሌላ የትዳር አጋር አለው ?	1. አዎ 2. አይደለም	
504	አንችስ ከሱ ሌላ የወንድ ጓደኛ አለሽ	1. አዎ 2. አይደለም	
505	በቤተሰብ ውስጥ የማህፀን ካንሰር የታመመ ሰው ነበር?	1. አዎ 2. አይደለም	
506	ከዚህ በፊት የማህፀን ካንሰር ምርመራ ያደረገ ሰው ጣውቁያለሽ	1. አዎ 2. አይደለም	
507	የማህፀን ካንሰር ምርመራ እንድታደርገህ የመከረሽ ሀኪም አለ ?	1. አዎ 2. አይደለም	
508	የማህፀን ካንሰር ምርመራ ለማድረግ ብትፈልገህ መሰናክል አለብሽ?	1. አዎ 2. አይደለም	አይደለም ከሆነ 510
509	አዎ ካሉ ምንምን	1. የጤና ተቋም አለመኖር 2. በጤና ተቋም ውስጥ የሰለጠነ ባለሙያ አለመኖር 3. ለአገልግሎት ክፍያ የመክፈል አቅም መጣት 4. ምርመራው ህመም ስላለው 5. የማህፀን ምርመራውን መፍራት 6. የትዳር ጓደኛ ፍቃድ አለማግኘት 7. የጤና ባለሙያው አመለካከት 8. ተጋላጭ ስላልሆነኩ	
510	ከቤት አስከ ጤና ተቋም ያለው ርቀት በሰዓት ምን ያህል ነው	-----ሰዓት	

Annex IV: Afan Oromo Version questioner

Kutaa I: - Gaaffilee odefannoo dhuunfaa ilaallatan

Lakk	Gaffilee	Koodaata Gartuulee	Utaali
101	Umrii	-----	
102	Sadarkaa Barnoota	1. Kan hin baratiin 2. Bareessuu fi dubbisuu 3. Kutaa 1-12 4. Diiplooma fii technically 5. Sadarka olaanaa	
103	Gaaila ilaalchise	1. Heerumte 2. Hin heerumte 3. Kan hiikte 4. Kan irraa du'ee 5.	
104	Hojii	1. Haadha manaa 2. Hojii guyyaa guyyaa 3. Hojjetu sivilservisii (hojjettuu mootuma) 4. Daldaltun 5. Barattuu 6. Kan biraa (ibsi)	
105	Gandii ishin jiratu	1. Baadiyaan 2. Magaalla	
106	Fayya qabatuman ishe mal fakkata	Wolitiin-----	

Kutaa II: - Amala fayyaaf yaala barbaaduu

Lakk	Gaffilee	Koodaata gartuulee	Utaali
201	Kan si dhukubu yoo itahe dawa aadadhan hin yaalanufi	1. Eyyeen 2. Lakkii	
202	Gaffi 201 Eyyeen yoo jette halla kamin qorichi aadan si fayysui fayysie?	1. hin argane 2. Baayee waau hin keninef 3. wan nama kabajanif 4. yeroo baayee wan nu hen fursifnef 5. qorchichif gudaan wann ta'eff 6. wan wal amanuuf 7. Icti wan eganif	Lakkii yoo jette 204
203	Gaffin 201 eyyeen yoo jettan qoricha Aada a kami biffan	1. Dhidhibu 2. Qorcha Aada 3. Qama ofii tumachuu 4. Gorsa kennu 5. Degarsa amantafi Aufu 6. Gorsa kenuu	

204	Dursa yoo si dhukkube fayidha Qaba jetti yadda?	1. Eyyeen 2. Lakkii	
205	Yoo dhiben jiratu kan durirra foyya insa qaba jette yaadda	1. Eyyeen 2. Lakki	
206	Dhibe qama sala haala kora kamin adda basnii	1. Mallatoo dhukubun 2. yoo nyaachu dhadabdu 3. yeroo dheradhef kan dhukubsin yoo itate 4. kaan biraa yoo jiratee_____	
207	Halaa dhukubcha durssee yoo ada basame mali yada'a	1. Murtesudhaaf 2. Ada basuuf 3. kaan biraa yoo jiratee	
208	Dhibeen kaanseri balbala dhufatin isa mali jettee	1. ija namaa 2. Jermii 3. dhekamsa rabii 4. Nyaata balfamenyachu	
209	Esaa kamii kan era chalati na yalaa jettee yaddu	1. Baala 2. Toshitu 3. Tuntu 4. Mana qorchaa dhunguf 5. Kaan biraa yoo.....	
210	Yoo si dhukubu yaala essa kan argattu	1. yaala maana 2. Qorcha aada 3. Qorcha ganda 4. Bufata fayya dhunfa 5. Bufata fayya motuma 6. Kaan biraa yoo jira.....	
211	Yoo si dhukubu eenyuu wajiin kan mariatto	1. Kana dura tajajila qabda 2. Itti gafatamuman wajiin 3. Abbooti qabenyan 4. Ogessotu	

Kutaa III:-gaaffii waa'ee beekumsaa kaanseri balbala gadameessaa

Lakk	Gaffilee	Koodaata Gartuulee	Utaali
301	Wa'e dhiba kaanseri balbala dhagasse beekafa	1. Eyyeen 2. lakii	
302	Gaffi 301 Eyyeen yoo jette Dhibe dhukkuba kaanseri balbala yeroo jal qabaaf essa dha gesse?	1. Televisinii irra 2. Radyoo irra 3. Waraqa irra 4. Barreffuan 5. Ojessotu fayya irra 6. Hirayyan ofii fi maatii irra	lakii Yoo jette 303
303	Dhibeen kaanseri balbala isoo hin umamin dhagesse?	1. Eyyeen 2. Lakkii	
304	Weroo jal qabatif dhibe kana essa dhadesse?	1. Televisinii irra 2. Radyoo irra 3. Waraqa irra	

		4. Barreffuan 5. Ojessotu fayya irra 6. Hirayyan ofii fi maatii irra	
305	Qoranno dursa dhibe kaanseri balbala dhagesse beekta?	1. Eyyeen 2. Lakki	
306	Mallatton isani mal mali?	1. Dhijuu qama sala 2. kan aji'uti kan dhanjala'a qabu 3. Dhijja tutuqaan	
307	Dhukkuba kaanseri balbala yeroo dha yoo yaaletemate nan faya jette yadda?	1. Eyyen 2. Lakki	
308	Namni dhukubni kaanseri balbala yoo nama kabuu akamitii yalemaa?	1. Qoricha aada 2. Baqasiu 3. Qorchicha beekmu tale 4. Sadarka hospitalitii kan 5. Radiyo terafidhan	
309	Dhibe dhukubaa kaanseri balbala dhagesse beekta?	1. Eyyeen 2. Lakki	
310	Turtii yeroo meeppa booda qoranno yaala kan qotu?	1. Waggatti 2. Wagga 3ti 3. Wagaa 5tii	
311	Kan qorafafamu kabu enyuu jette yadda?	1. Dubarti 25 olli jirtu 2. Dubarti dirqisiisamta 3. Dubartoota dullomaniran	

Kutaa IV: - Ilaalcha kaanseri balbala gadameessaa fi dursanii qorratamuu

Lakk	Gafillee	Koodaata Gartuulee	Utalli
401	Dhukubiin kaanseri balbala lubuun nama qalate tae?	1. Heddu waliffin gae'e 2. Walifin gae'e 3. Hin murtessin 4. Walif hin galu 5. Gonkuma walif hin gale	
402	Dubartiin sadarkan hormata'e idde jituun sihin babalaten dhukube kan seri kaanseri balbala tif saaxiloxa?	1. Heddu waliffin gae'e 2. Walifin gae'e 3. Hin murtessin 4. Walif hin galu 5. Gonkuma walif hin gale	
403	Kanseriin kaanseri balbala ittisuf yaalensi barbachisadha.	1. Hedduu barbachisa 2. Barbachisaa 3. Giddu galessa barbachisadha 4. Hala ta'e barbachisadha 5. Hin barbachisan	
404	Dubartoonii yaalensaf qaban lundo yaalamuu qaba	1. Heddu waliffin gae'e 2. Walifin gae'e 3. Hin murtessin 4. Walif hin galu 5. Gonkuma walif hin gale	

405	Dhukkubniin kaanseri balbala jiratuu malattooni hin agersisu?	1. Yeroo hundda dhugadha 2. Yeroo baaye dhyaadha 3. Yeroo ctokko tokko dhihan 4. Yeroo bayee dhihane	
406	Dhukkubnii kanserii kaanseri balbala hin dadarbee?	1. Heddu waliffin gae'e 2. Walifin gae'e 3. Hin murteessin 4. Walif hin galu 5. Gonkuma walif hin gale	
407	Yaalachisu kaanserii kaanseri balbala dubartotii teesissu lifamu?	1. Heddu waliffin gae'e 2. Walifin gae'e 3. Hin murteessin 4. Walif hin galu 5. Gonkuma walif hin gale	
408	Yaalenchisa kanserii balbala kessatii dubartootaa oso garii kesaniitti hinjijirt aada bassu ni dandahane?	1. Heddu waliffin gae'e 2. Walifin gae'e 3. Hin murteessin 4. Walif hin galu 5. Gonkuma walif hin gale	
409	Yeroo yaalunsa kanserii kaanseri balbala dubartottaa yoo kanserii kaanseri balbala kesiitii	1. Heddu waliffin gae'e 2. Walifin gae'e 3. Hin murteessin 4. Walif hin galu 5. Gonkuma walif hin gale	
410	Dhukkubnii kaanseri balbala dubartootasukeen suledha	1. Heddu waliffin gae'e 2. Walifin gae'e 3. Hin murteessin 4. Walif hin galu 5. Gonkuma walif hin gale	

KuttaV:- Gaffilee hormaatae waliin wel ferbate

Lakk	Gaffilee	Koodaata gartuulee	Utalii
501	Umrii yeroo jaletebatif wal-qunamtii saals saalaitii goote	-----baree	
502	Dhukkubni wal-kaanseriti balbala salaa hindadda ofbuu qabu	1. Eyeen 2. Lakki	
503	Abba mana kee sinmalee jartii biraa qabaa?	1. Eyeen 2. Lakkii	
504	Kan nama tekka abbi wahilla kabdda?	1. Eyyeen 2. Lakkii	
505	Nameyoo kesaani kanserii wan argmne jiraa?	1. Eyeen 2. Lakkii	
506	Kana duraa namnii dhukuba mahisenii inii futetee bektaa?	1. Eyeen 2. Lakkii	
507	Namnii sithimee jiraa kan temeremeruu?	1. Eyeen 2. Lakkii	
508	Kan temeremrtuu yoo fetee kan si ageduu	1. Eyeen	

	jiraa?	2. Lakkii	
509	Eyeen yoo jeteen mali mali?	<ol style="list-style-type: none"> 1. hakimmoni yoo injireen 2. Fogoo tahefaa 3. Qarshii isanii bayedha 4. Mermerchii kun Namaa dhukubaa 5. Irsii koo hinfedhu 	

Annex V: Declaration

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

Name of the student Firdows Yimam Abdu

Date _____ Signature _____

Approval of the advisor: This thesis has been submitted with my approval as University advisor.

Name of the advisors:

1. _____

2. _____

Date _____ Signature _____