ADDIS ABABA UNIVERSITY

COLLEGE OF HEALTH SCIENCES

SCHOOL OF PUBLIC HEALTH

ASSESSMENT OF THE SCREENING UPTAKE AND HEALTH FACILIY RELATED FACILITATORS, AND BARRIERS FOR CERVICAL CANCER SCREENING UPTAKE AT PRIMARY HEALTH CARE FACILITIES IN SOUTHEAST OROMIA: A MIXED METHODS STUDY

BY

MELAT AMBERBIR WONDIMAGEGNEHU (BSC)

A THESIS SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES OF ADDIS ABABA UNIVERSITY IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF PUBLIC HEALTH IN EPIDEMIOLOGY AND BIOSTATISTICS.

NOVEMBER, 2024

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APPROVED BY EXAMINING BOARD

I hereby, certify that I have read and evaluated this topic entitled **"Assessment of the screening uptake and health facility related facilitators, and barriers for cervical cancer screening uptake at primary health care facilities in southeast Oromia, Ethiopia"** which was prepared under my guidance. I recommend it be submitted as fulfilling the thesis requirement.

Dr. Muluken Gizaw (PhD)  02/10 /2024

Primary Advisor Signature Date

As a member of the board examiners of the MPH thesis open defense examination, I certify that I have read and evaluated the thesis and examined the candidate Melat Amberbir. I recommend that the thesis be accepted as fulfilling the thesis requirement for a degree of masters in epidemiology and biostatistics.

_____ _____ __ /__ /__

Internal Examiner Signature Date

_____ _____ __ /__ /__

External Examiner Signature Date

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ABBREVIATIONS AND ACRONYMS

ART	Antiretroviral therapy
CC	Cervical Cancer
CCS	Cervical Cancer screening
FMOH	Federal Ministry Of Health
GLOBOCAN	Global Cancer Observatory
HCP	Health care professional
HDI	Human Development Index
HPV	Human Papilloma Virus
MOHE	Ministry Health Ethiopia
PCL	Precancerous Cervical Lesion
PHC	Primary Health Care System
POR	Prevalence Odds Ratio
SSA	Sub Saharan Africa
STI	Sexually Transmitted Infections
VIA	Visual Inspection of the cervix with Acetic Acid
WHO	World Health Organization

ABSTRACT

Background: *Cervical cancer is the second most common cancer-causing morbidity and mortality among women in Ethiopia, yet screening uptake is low despite recommended decentralized approaches and awareness initiatives. The opportunistic screening strategy faces significant health facility barriers, including access issues, financial constraints, and inadequate provider training. These obstacles impede women's participation in screening programs. Consequently, many miss opportunities for early detection and treatment, negatively impacting health outcomes. Therefore, to maximize the uptake and meet the purpose of efforts to enhance cervical cancer screening uptake, it is necessary to know more about health facility related barriers and facilitators for cervical cancer screening uptake.*

Objectives: *To assess cervical cancer screening uptake and health facility related facilitators, and barriers for cervical cancer screening uptake at primary health care facilities in Ethiopia, 2024.*

Methods: *An explanatory sequential mixed study approach of qualitative interviews (n=16) and cross sectional study among 629 women was conducted from January to September 2024 at six health care facilities in southeast Oromia. Systematic random sampling was employed to recruit survey participants from the selected health facilities while purposive sampling was used for key informant interviews. Descriptive statistics were used to summarize the quantitative data and multivariable logistic regression was employed to identified health facility related facilitators, and barriers for cervical cancer screening uptake. Qualitative data were analyzed using thematic analysis approach through preparing themes and subthemes to change raw data to categorized form.*

Results: *Cervical cancer screening uptake among women in this study population was 15.6% (95% CI 12.9, 18.6). TV/Radio was the main source of information about cervical cancer and its screening. age group of 40-44 years (AOR= 3.34; 95% CI (1.27, 8.78)), completed college and above (AOR=4.14, 95% CI (1.1, 15.8)), income level of >7800 (AOR = 8.3; 95% CI (1.86, 35.54)), received CC counseling (AOR=6.52, 95% CI (3.1, 14.1)) and good knowledge (AOR = 6.53; 95% CI (3.2, 13.34)) were significantly associated with cervical cancer screening uptake. The qualitative findings identified feeling healthy, embarrassment, lack of recommendation by HCP, service interruption, availability of traditional treatment as barriers for cervical cancer screening uptake. Furthermore, availability of trained HCP, availability of equipment, and information dissemination through mass media, spousal support, and availability of female provider mentioned as facilitators for CC screening uptake.*

Conclusions and recommendation: *Cervical cancer screening uptake among eligible women was significantly lower in the study area. Age group, women education level, knowledge of women, income level, and availability of CC counselling were factors associated with screening uptake. Furthermore*

lack of recommendation by HCP and lack of resources including screening room and number of provider were identified as health system related barriers. Therefore, it is necessary to execute planned health education and awareness development at health facilities, particularly in primary health care, in order to increase the adoption of cervical cancer screening services. Additionally, all women who attend the health center for any service should get counselling regarding the advantages of CC screening.
Keywords: *Cervical cancer screening, health facility barriers, health system facilitators, primary health facilities, Ethiopia.*

1. INTRODUCTION

1.1. Background

Globally there were almost 661,021 new cases of cervical cancer and 348,189 women died of it(1). More than 85% of CC cases and deaths occur in Low- and Middle-Income Countries (LMIC) (2). The mortality-to-incidence ratios reported in Africa are still very high compared with developed countries (3, 4). The incidence and mortality age standardized rate for cervical cancer in eastern Africa is 40.4 and 28.9, in southern Africa 34.9 and 20.4 and in middle Africa 28.3 and 21.1 per 100,000 females (1). In sub-Saharan Africa, 22.2% of cancer afflicting women is projected to be cervical cancer(5). CC is the second most prevalent cancer in Ethiopia with an estimated 8,168 (10.2%) new cancer cases and 5,975 (10.9%) deaths each year (6).

The World Health Organization (WHO) recommends that every sexually active woman between the ages of 30 and 49 should have a cervical cancer screening using HPV at least once every five years. However, women and girls who are HIV positive and sexually active should begin screening at age 25 and should rescreen every three years(1). Ethiopia adapted WHO recommendation and recommended cervical cancer screening for the age between 30-49 years of age once every three years (7).

CCS has been effective in reducing the incidence and mortality of cervical cancer in developed countries. A study done in England found that owing to cervical cancer screening70% of cervical cancer death in all age were prevented due to the organized screening and if women attending cervical cancer screening regularly 83% of cervical cancer deaths could be prevented (8). In 2020 the WHO responded with a global strategy to eliminate CC, targeting Ninety percent (90%) of girls must be vaccinated against HPV by the age of 15, 70% of women must have at least two high performance test screenings by the age of 45, and 90% of women who are diagnosed with cervical cancer or precancerous lesions must receive treatment (9).

Cervical cancer screening coverage is very limited in low and middle income countries, as shown by a study that reported coverage of cervical cancer screening in developing countries to be 19% (on average) compared with 63% (on average) in developed countries. Data from the 2017 World Health Survey indicated that the coverage of cervical cancer screening was 10% in Sub-Saharan Africa(10). lack of capacity, poor organization of services, lack of knowledge, lack of promotion of screening, poor (negative and unfriendly) attitudes of healthcare workers with patients, limited staff, brief and rushed consultations, and shortage of equipment and materials were some of health facility related barriers for CC screening uptake(11).

1.2. Statement of the Problem

The "See and treat" approach is used in Ethiopia as part of routine care for women, including cryotherapy/thermal ablation as a treatment option and Visual Inspection under Acetic Acid (VIA) as a screening tool. The Ethiopian government introduced a cervical cancer screening program and increased funding for initiatives that aim to identify precancerous lesions early through collaboration with various partners, professionals, media, and academic institutions (7). Ethiopian cervical cancer screening rates are comparatively low, despite recommendations, service expansion, and advocacy initiatives (12), typically reported to be between 5% and 15% of eligible women compared to the national recommended coverage which is 90–70–90 aimed to be achieved by 2030.

The overall cervical cancer screening uptake in Ethiopia was 14% in 2021(13). Systematic study in Ethiopia identified lack of formal education , susceptibility to cervical cancer, lack of information on screening, feeling well as barrier for cervical cancer screening uptake (14). Other study also identified fear of screening, embarrassment, socioeconomic status and distance from facility (15) as main obstacles for cervical cancer screening uptake. Furthermore do not knowing the availability of the service, provider incompetency, miss-trust, lack of attention by a trained provider, and unsuitability of environment identified as health system related barrier for CC screening uptake(16). Conversely, awareness of cervical cancer, family history of the disease, experiencing signs and symptoms of the disease and history of STD were facilitators of its utilization (17).

In Ethiopia cervical cancer screening strategy is mainly opportunistic. Opportunistic screening refers to a woman voluntarily going to a medical institution to be screened or following a doctor's recommendation to undergo screening during a medical visit for various reasons. Study revealed that the probability of opportunistic screening in detecting CC in situ was approximately 25% higher than in organized screening(18).

Despite the fact that healthcare providers can encourage and support routine CC screening for more women since they are the primary, and credible source of information about CC screening (19, 20), most of previously conducted studies in the country emphasize on individual level factors like knowledge, attitude and perception (21) and These investigations indicated that although there was a decent degree of knowledge regarding CC screening and services were available, the screening practices were reported as being poor (22). Opportunistic screening is depend on individual willingness or provider recommendation so several health systems related factors would affect the willingness to participate in opportunistic screening for CC. There is a lack of comprehensive studies on health facility barriers to cervical cancer screening in Ethiopia. Furthermore, awareness among healthcare providers and potential patients about the importance of screening remains insufficiently researched. Addressing these areas is

crucial for improving screening uptake. Therefore, this study aims to assess the magnitude of screening uptake and explore health facility related facilitators, and barriers regarding women's adoption of cervical cancer screening in primary health care facilities in Ethiopia.

1.3. Significance of the Study

The investigation of facilitators, and barriers to cervical cancer screening uptake is crucial as it broadens our comprehension by identifying specific factors that promote or prevent women from participating in cervical cancer screening service. Furthermore, the identification of specific facilitators and barriers in this study can guide the design of more targeted and comprehensive intervention to address the underlying reasons behind low uptake. This research can serve as a foundation for future studies focusing on interventions to overcome barriers to cervical cancer screening, and strategies to enhance screening, and treatment uptake.

2: LITERATURE REVIEW

2.1. Burden of cervical cancer

Cervical cancer has been well-established to be primarily caused by the human papillomavirus (HPV), one of the most prevalent STDs in the world. There are over 200 different forms of human papillomavirus (HPV) that have been identified; 65 of these types are only or mostly found in the anogenital zone. In more than 70% of cases of cervical cancer, HPV-16 and HPV-18 are involved. With low-grade squamous intraepithelial lesions (LSIL) at 25.8% and high-grade squamous intraepithelial lesions (HSIL), the prevalence of HPV-16 and/or HPV-18 among women with no intraepithelial lesion (No-IL) is 3.9%, with low-grade squamous intraepithelial lesions (LSIL) is 25.8%, with high-grade squamous intraepithelial lesions (HSIL) is 51.9% (23).

Worldwide, cervical cancer is a public health concern. There were an estimated 569,681 new cases of cervical cancer and 311,299 deaths from the disease globally in 2018, making it the fourth most frequent malignancy among women over the age of 15(23). More than half of the world's cervical cancer cases occur in Sub-Saharan Africa, where cervical cancer is a leading source of morbidity and death (5). The age-standardized incidence and death rates of cervical cancer in East Africa were 25.3 and 34.5 per 100,000 women, respectively (24). In Ethiopia, the mortality rate for cervical cancer is 18.4 per 100,000 women, while the age-adjusted incidence rate is 26.4 (24).

2.2 Cervical cancer screening

The foundation for the Cancer Prevention and Control Plan was established by a four-year pilot screening program called Addis Tesfa (New Hope), which was implemented at fourteen sites between 2010 and 2014. It also showed that VIA is a workable and suitable screening tool for the Ethiopian environment. Subsequently, Roman Tesfaye Abneh, the former first lady of Ethiopia, openly supported the cause of preventing cervical cancer, bringing in funds and attention and creating a National Cancer Control Taskforce. More than 250 health facilities in Ethiopia have begun screening since the national screening program was launched in 2015, and the Ministry intends to grow that number to 800 in the next phase of scale-up (25).

The methodical use of a test to find cervical abnormalities in a population of people who do not exhibit symptoms is known as cervical cancer screening. Screening services can be offered in the form of organized, opportunistic or a mix of the two (25). Up until a few years ago, Pap smears and cytology were the only ways to screen for cervical cancer. Later, molecular HPV screening tests and visual inspection with acetic acid were developed as newer ways for screening for cervical cancer (26).

The incidence and mortality of cervical cancer have decreased because to screening initiatives, and public knowledge of cervical cancer prevention has increased. A higher quality of life and increased survival can be achieved by concentrating on screening(26). A 40% decrease in the incidence and death of invasive cancer can be achieved by treating the disease with greater success if detection occurs early (27).

Cervical cancer mortality and invasive cervical cancer incidence are decreased as a result of PCL therapy and CC screening, which also decreases cervical cancer morbidity. It has been predicted that 91% of cervical cancer occurrences might be prevented by screening women every five years and treating any precancerous lesions that are found (28).

2.3 Cervical cancer screening uptake

Dr. George Papanicolaou established cervical cancer screening using Pap smears or traditional cytology in the 1940s. This screening test was refined into liquid-based cytology in the early 2000s and had been widely used in national cervical cancer screening programs fifty years later. Liquid-based cytology offers HPV testing, lowers the rate of insufficient samples, boosts screening capacity through partially automated processing, and has sensitivity comparable to conventional cytology. Many countries, mostly high income ones like the UK, USA, and European nations, have reported a notable decline in the incidence of cervical cancer. According to recent data, just 44% of women in low and middle income countries (LMICs) have ever had a cervical cancer screening, with women in Sub-Saharan Africa reporting the lowest screening rate (16.9%) (29).

The pooled uptake of cervical cancer screening in Sub-Saharan Africa was 12.87%. Based on the subgroup analysis, screening uptake ranged from 7.65% in the southern Sub-Saharan African countries to 14.13% in the eastern countries (10). With regard to the usage of cervical cancer screening in Ethiopia, a systematic review and meta-analysis encompassing both published and unpublished studies revealed that the country's overall cervical cancer screening use was 14.79% (95% CI: 11.75, 17.83). The Amhara region had the lowest cervical cancer screening rate (13.62%), while the Southern Nations Nationalities and Peoples' region (SNNPR) had the highest rate (18.59%), Oromia area came next, at 16.00% (14).

2.4 Individual determinants for CC screening uptake

A cross-sectional study including 385 women between the ages of 21 and 65 that were carried out in Saudi Arabia from May to November 2021 revealed merely 33.4% of the 385 women who responded to the study reported having had a Pap smear at some point in their lives. In the univariate analysis, the following variables were found to be significantly correlated with the screening status (having a Pap

test): ageing, education level, monthly income, perceived risk of cervical cancer, source of information about Pap test, having a family doctor, family doctor recommendation to have Pap test, gynecological examination, previous visits to a gynecologist, history of gynecological complaints, and history of abortion. Only four variables were shown to be substantially correlated with the screening status in the multivariable analysis: age, monthly income, having previously had a gynecological examination, and the family doctor's suggestion, which had the highest impact (30).

A cross-sectional study of 297 WLHIV (women living with HIV) attending care and treatment centers (CTC) in northern Tanzania between August 21 and September 3, 2020, conducted in the Kilimanjaro region, revealed the key variables influencing the uptake of CC screening in the study area. According to the crude analysis, the following factors were significantly linked to cervical cancer screening among WLHIV: age, marital status, occupation, time since HIV diagnosis, source of information on cervical cancer screening, awareness of the signs and symptoms of the disease, awareness of risk factors and prevention of cervical cancer, and attitude toward screening (31).

Women living with HIV aged 35–44 had higher odds of cervical cancer screening than those under 35; they also had higher odds of being employed compared to jobless and divorced/separated/widowed compared to single women. Additionally, WLHIV had higher odds of screening if they were adequately informed about risk factors, prevention, and signs and symptoms of cervical cancer. They also had higher odds of screening if they had a positive attitude toward screening. Compared to women diagnosed more than three years ago, those diagnosed with HIV within the last three years had lower odds of screening for cervical cancer. In the adjusted analysis, time since HIV diagnosis, receiving information on cervical cancer screening from HCPs, and attitude towards screening were the only factors significantly associated with cervical cancer screening (31).

According to a systematic review study conducted in Nigeria screening is unnecessary(perception),family history of cervical cancer, history of STI, fear of screening outcome and procedure(fear of pain and discomfort), financial constraints, Misconception about cervical cancer and cervical cancer screening(like screening would expose women to STIs),Discrimination and Stigmatization, Modesty(embarrassment) and Personal attributes of women(women's socio-demographic characteristics) are the major factors associated with low cervical cancer screening uptake (32).

The overall prevalence of cervical cancer screening practices was found to be 13.8% in a community-based cross-sectional survey conducted between March and April 2020 among 460 females in Durame town, Kembata Tembaro Zone, southern Ethiopia. The factors linked to the practice of cervical cancer screening included a positive outlook, good knowledge, information about the disease from medical

professionals, an average monthly income of more than 3000 Ethiopian Birr (ETB), and a history of STDs (33).

In the capital of the west Shewa zone of western Ethiopia, Ambo town, from December 1, 2017 to January 30, 2017, 422 women aged 20 to 65 participated in a community-based cross-sectional study. The results showed that knowledge of age, history of early sexual initiation, knowledge of the consequences of advanced cervical cancer (bleeding and metastasis), knowledge of CC screening, and discussions with healthcare providers about cervical cancer were statistically significant factors associated with the uptake of cervical cancer (34). The pooled analysis also revealed that the most common reasons that hinder the use of cervical cancer screening were associated with women considered to be healthy (14).

Among women who met the age requirements, a cross-sectional survey was carried out in the Mekelle zone between February and June 2015. Only 235 (19.8%) of the 1186 age-eligible women in the research had undergone a cervical cancer screening. The following factors were found to be significant predictors of cervical cancer screening service uptake: age, history of many sexual partners, history of STDs, HIV status, and knowledge about cervical cancer and screening(35). Other study done in Debremarkos town, from July 1 to August 30, 2018 showed that family history of cervical cancer are other predictors of cervical cancer screening(36).

An unmatched, community-based case-control study was carried out in Ambo town from February 1 to March 30, 2020, with 195 randomly selected women in the 30-to 49-year-old age range. Cervical cancer screening use was substantially correlated with being in the 30-34 age range, being Para five and above, modern contraceptive utilization, and having high-level knowledge about the disease(37).

2.5 Barriers for CC screening uptake

A systematic review and meta-analysis was out in Cameroon between 2012 and 2022 indicates that leadership and governance, shortcomings in cancer prevention strategies, lack of oversight for screening initiatives, Collaborations or partnerships, bad method for referrals, lack of qualified health care professionals (HCPs), the health workforce, restricted expertise and abilities, the job description and the health care providers (HCPs') qualifications were barriers using the framework of WHO’s health system building blocks (38).

According to a study done in the administrative zones of Shewa, West Arsi, and Bale in Ethiopia, barriers to CC screening include policy, lack of space and materials for screening, attitudes toward CC screening, monitoring and evaluation, and maintaining screening programs from the perspective of healthcare providers (19). According to study conducted in hosanna town, Southern Ethiopia found that

feeling healthy, do not know what service is given in their facility, provider incompetency, miss-trust, lack of attention by a trained provider, and unsuitability of environment hindered female to uptake cervical cancer screening (16).

Other study conducted in Addis Ababa identified that inadequate public awareness, fear of the procedure, embarrassment, provider's gender, lack of male partner support, childcare, cultural factor, sign and symptoms as a major barriers for cervical cancer screening uptake (39). Disparities in access to screening and treatment between and within nations are reflected in differences in incidence and mortality rates; For instance, almost 50% of the variation in mortality worldwide might be explained by the Human Development Index (HDI) and poverty rates. In low HDI countries, the primary causes of cervical cancer screening failure are disorganized public health policies, inadequate infrastructure, resources, and low community awareness. In high HDI countries, on the other hand, non-participation, inadequate screening, and failure to follow up on abnormal results are the main causes of failure (29).

According to a systematic review study conducted in Nigeria lack of knowledge of cervical cancer and screening, health service factors included (difficulty in assessing screening, poor orientation and screening recommendations, no screening facility, unfriendly attitude of healthcare providers, poor quality of health services, and time constraint) (32). In Tanzania, distance from facility also other factor of women for not being screened. The likelihood of screening for cervical cancer was higher among women who lived closer to the nearest facility—less than 5 km—than among those who lived farther away(15). Other study conducted in Indonesia identified lack of knowledge/awareness, lack of confidence in screening, fear, fatalism and shame, time and transportation constraints, lack of husband approval and support, lack of skilled screening providers, lack of advocacy and health promotion, resource constraints, lack of supervision and support for health care providers as major barriers for cervical cancer screening uptake in the health facility (40).

2.6 Facilitators for CC screening uptake

According to study conducted in Hawassa from March 1 to April 30, 2022 among 299 stud participants identified dwellers of urban residences, used modern contraception, had discussion about cervical cancer with healthcare providers, being informed about cervical cancer by health professionals, had good comprehensive knowledge about cervical cancer as major facilitators for cervical cancer screening (41). Other study conducted in Asella, South central Ethiopia from December 2020 to February 2021 among 457 Antenatal Care mothers indicated Educational status of secondary and above, getting screened for any reproductive healthcare services as additional facilitators for cervical cancer screening uptake (42).

A study conducted in Ambo town, Ethiopia from December 01 to January 30, 2017 among 422 women aged 20–65 years indicated that knowing the availability of cervical cancer screening service in the

given facility as facilitator for CC screening uptake (34). Other study conducted in Assosa Zone, Benishangul-Gumuz, Ethiopia from 20 April 2022 to 20 July 2022 among reproductive-age women identified knowing someone diagnosed with cervical cancer or seeing screened and treated women, and feeling at risk as facilitators for CC screening uptake (43).

According to a narrative review study in Low- and Middle-income Countries among all age group women identified Having health insurance, having female service providers, religious and cultural beliefs, family and social support and spousal support as important facilitators for CC screening uptake(44). Similar study conducted in Uganda from paper b/n 2006 and 2019 among 4386 women identified Not being concerned about gender of provider as frequent facilitator for CC screening uptake(45).

Conceptual framework

The study encompasses various independent variables included socio-demographic profile, personal factors such as knowledge, Psychological and behavioral factors, and reproductive health history, and health system-related factors that may have an impact on the outcome variable. There are relationships between some independent variables, such as the impact of knowledge on behavioral factors and reproductive health characteristics. Furthermore, socio-demographic factors like Age, Education, Residence etc... Influence knowledge on CC and history of reproductive health.\

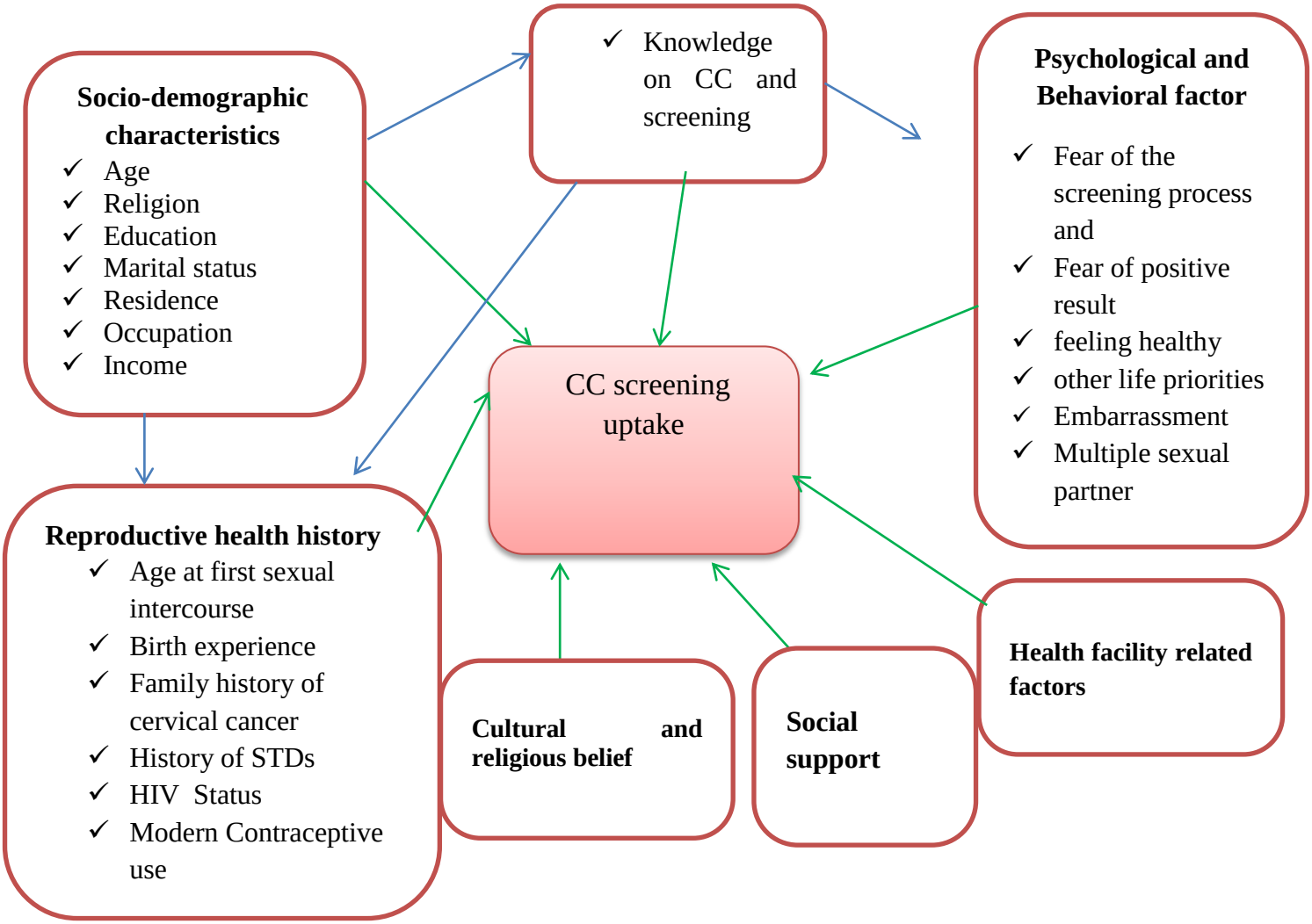

Figure 1: Adopted and modified conceptual framework for individual and health system related facilitators and barriers of cervical cancer screening at primary health care facilities, Ethiopia (44).

3: OBJECTIVES

3.1. General Objective

To assess cervical cancer screening uptake and health facility related facilitators, and barriers for cervical cancer screening uptake at primary health care facilities in Ethiopia, 2024.

3.2. Specific Objectives

1. To assess the magnitude of cervical cancer screening uptake among age eligible women who visit the designated facility in southeast Oromia region of Ethiopia, 2024
2. To identify health facility related facilitators, and barriers for cervical cancer screening uptake among age eligible women who visit the designated facility in southeast Oromia region of Ethiopia, 2024
3. To explore health facility related facilitators and barriers for cervical cancer screening uptake from provider perspective in selected primary health care facilities in southeast Oromia region of Ethiopia, 2024

4. METHODS

4.1. Study area and period

The study was conducted in primary health care settings in Adama, Asella and Gonde in Southeast Oromia region of Ethiopia from January to September, 2024. Adama is the capital city of Oromia region of Ethiopia. It is 99 kilometers southeast of Addis Ababa, the nation's capital. There are 76,336 (49.2%) females and 79,013 (50.8%) males in the estimated 155,349 population (46). Adama city has 19 districts. Those districts have a total of 13 primary health facilities but only three of them offered cervical cancer screening. The three medical facilities were:-Adama Health Centre, Boku shanen Health Centre and Geda primary health Centre.

Asella Town is a capital city of Arsi zone established in 1945. It is located 175 Km southeast of Addis Ababa. Official population estimates for mid-2022 put the total population at 139,537, of which 69,459 are male and 70,078 female (47). There were two main healthcare facilities in Asella. These were Halila and Asella primary health center. Additionally, Gonde is located close to Asella and has a single primary health center called Gonde Primary Health center.

4.2. Study design

An explanatory sequential mixed study approach of both quantitative and qualitative methods was conducted from January to September 2024. A cross sectional study was carried out to determine the prevalence and factors associated with cervical cancer screening uptake among age eligible women who visit the selected health facilities for any services. The qualitative interview was carried out to explore health facility related facilitators, and barriers for screening uptake.

4.3. Population

4.3.1 Source population

For the quantitative study; all age-eligible women who visited the health facilities for any type of services in Adama, Asella and Gonde located in Ethiopia's southeast Oromia region.

For qualitative study; screened and age eligible non-screened women, cervical cancer screening service providers, MCH focal, ART service providers or unit heads, and head of the health facilities in Adama, Asella and Gonde located in Ethiopia Oromia region.

4.3.2. Study Population

For quantitative: All age eligible women who visited the designed facility to receive any services at the selected health facilities during the data collection period. We included only those attending public health institutions since a larger proportion of the community attend the public institution where those services are provided for free.

For qualitative: Screened and age eligible non-screened women, cervical cancer screening service providers, MCH focal, ART service providers or unit heads, and head of the health facilities at the selected health facilities during the data collection period To explore health facility related facilitators, and barriers.

4.3.3 Sampling Frame

All clients who visited those facilities on that particular day for any service, meet the inclusion criteria, and provide their informed permission up until the point at which our sample size is fulfilled or proportionate allocation occurred.

4.3.4 Samples

All sampled women who visited the designed facility to receive services in the selected health facilities of Adama, Asella and Gonde, southeast Oromia region of Ethiopia during study period fulfilled the inclusion and exclusion criteria.

4.4. Sample size estimation

4.4.1 Quantitative study

The sample size was determined using single proportion formula for the first specific objective and double proportion formula for the second and the third specific objectives with significance level (α=5%), power (1-β) =80%, 95% confidence level and 5% non-response rate. Then we use maximum sample size for the study which is 635 (Table 1).

Table 1: **sample size estimation to assess the magnitude and identify health facility barriers and facilitators for cervical cancer screening uptake at primary health care facilities in Ethiopia.**

Objectives	Variables	Assumptions	Sample size	Design effect = 2
1.	Uptake	P=14.79 % (14) D=0.04 Non response rate= 5%	**317.8**	**635**[#]
	Distance from the facility	P_1=42.2% (Non-screened) (48) P_2=57.8%(Screened) CI=95% Power=80% Non response rate= 5%	**167.42**	**335**
	Educational status	P_1=67% (Non-screened) (14) P_2=33% (Screened) CI=95% Power=80% Non response rate= 5%	**31.5**	**63**
	Knowledge	P_1=37% (Non-screened) (34) P_2=63% (Screened) CI=95% Power=80% Non response rate= 5%	**56.7**	**114**

shows the maximum sample size that was determined and used in this investigation.

4.4.2 Qualitative study

A total of eight in-depth interviews were conducted with four screened, and four age eligible non-screened women. Eight key informant interviews with two cervical cancer screening service providers, two MCH focal, two ART service providers or unit heads, and two head of the health facilities were conducted. The actual data collection was ended when there was sufficient data, at which saturation level was occurred and no new ideas was emerged.

4.5. Sampling procedures

For the quantitative study: Adama has 19 total districts. Those districts have a total of 13 primary health facilities but only three of them offered cervical cancer screening, these were Adama Health Centre, Boku Shanen Health Centre and Geda Health Centre. There were just two main healthcare

facilities in Asella. These were Halila and Asella primary health center. Additionally, Gonde is located close to Asella and has a single primary health center called Gonde Primary Health center.

A multistage sampling technique was used to select the women who visited the designed facility in order to receive any services. Participants in the study were then chosen through the use of a systematic random sampling technique. The sampling interval (K) was determined by dividing the flow of women clients aged 30 to 49 who visited the health facilities for any services during the previous month by the total sample size, and the result was 3. After the first woman was selected at random using a lottery approach, a systematic sampling strategy was used to recruit every three women for the study. The number of study units' samples from each health facility was determined by using rule of probability proportional to size sampling (PPS) based on one month clients flow prior to the data collection. The final allocation of the number of participants was decided after looking at the client flow for the selected services and taking an average of one previous month from the date of the actual data collection (Figure 2).

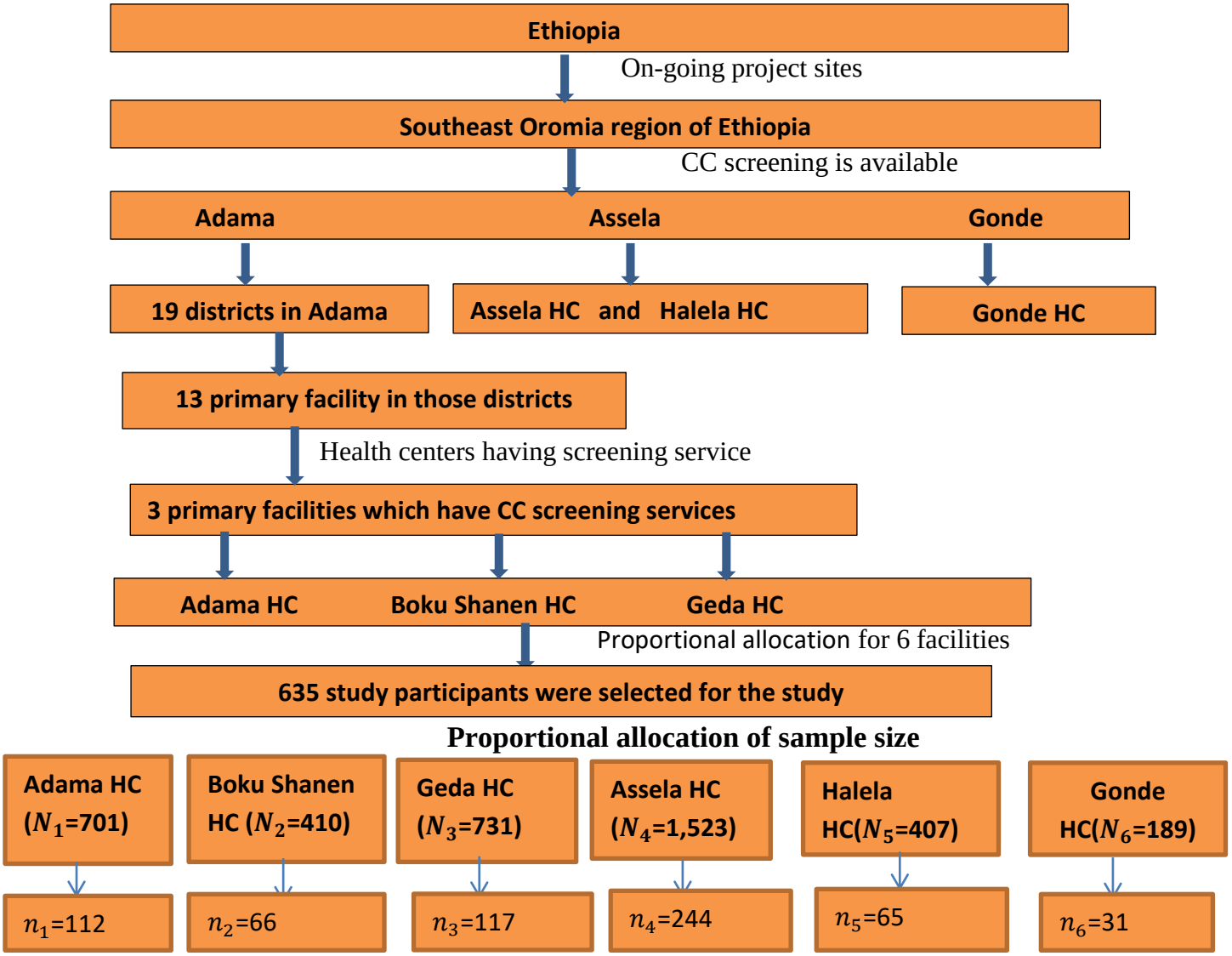

Figure 2: A schematic representation of the sampling process to choose study participants, Ethiopia (n = 629).

For the qualitative study: Purposive sampling was used to choose study participants who probably provided detail information about the health system related facilitators, and barriers based on their experiences were included until actual data saturation was reached out. Recruitment of the participants were included four screened and four age eligible non-screened women from the selected facilities for in-depth interview and two cervical cancer screening service providers, two MCH focal, two ART service providers or unit heads, and two head of the health facilities for key-informant interviews.

4.6. Data collection tool, and procedures

The quantitative study: data was collected by applying structured interviewer administered questionnaire which is adopted from other related literatures (17, 49, 50, 51) from April to May using kobo toolbox. The questionnaire was included socio-demographic characteristics, cervical cancer screening uptake status, and personal factors such as knowledge, behavioral factors, and reproductive health history and health facility related factors. The questionnaire was prepared first in English and translated to Amharic language and then to the local language oromifa.

To evaluate item clarity and determine whether the questionnaire successfully gathered the necessary data, a pre-test was conducted on 5% of the entire sample population in Akaki primary health center, Addis Ababa which is outside of the study area three weeks before the actually date of data collection. Correction was made based on the pre-test. Six data collectors were recruited as data collectors who were trained on the questions and the data collection techniques before the actual data collection. The supervision was carried out during the period of data collection time by the principal investigator, and one supervisor.

For the qualitative study: 8 in-depth interviews with four screened and four age eligible non-screened women who was part of the quantitative study, and 8 key informant interviews with two cervical cancer screening service providers, two MCH focal, two ART service providers or unit heads, and two head of the health facilities was conducted from June to July using audio record material. An interview (discussion) guide that had all important issues related to cervical cancer screening, individual and health system related barriers and facilitators in the form of open-ended questions were used to fully explore the gaps. Study participants had the discussion and interview in a separate room in order to be more neutral and to make the participants more comfortable. These questions were asked by two trained data collectors who have extensive experience in conducting qualitative research.

4.7. Eligibility criteria

Inclusion criteria

Women aged 30 to 49 who visited the designated facility to receive any service were included in accordance with the national cervical cancer screening guidelines, which focus on this specific age range as the highest limit.

Exclusion criteria

Women who were critically ill and unable to respond to questionnaires, as well as those who have had a hysterectomy, were excluded from the study.

4.8. Study variables

4.8.1. Dependent variables

CC screening uptake

4.8.2. Independent variables

1. Socio-demographic characteristics: Age, Religion, Marital status, Education, Residence, Occupation, income

2. Psychological, Behavioral and Reproductive history: Healthy feeling, Other life priorities, Embarrassment, Fear of screening procedures, fear of result, Multiple sexual partner, Modern Contraceptive use, Family history of cervical cancer, History of STDs, HIV status, Birth experience, Age at first sexual intercourse.

3. Knowledge towards CC and screening, Shortage of time, Transportation constraint and Distance

4. Cultural and religious belief and Social support

5. Health facility related factor: Sex of screening provider, Private sector, lack of privacy, recommendation by health care provider, provider incompetency, miss-trust and lack of attention by a trained provider, knowing location of the screening test, Service interruption, Program organization and implementation, Past experience in health care services, past relationship with health care providers, language constraint to communicate with health care provider, Follow up of the screening program, Lack of screening equipment and supplies, hygiene in healthcare services, lack of advocacy and health promotion, Lack of supervision and support for clients.

4.9. Operational Definitions

Cervical cancer screening uptake: refers to proportion of age eligible women who screened for the available screening service throughout their life time.

Distance from facility: refers to the physical or geographic distance between a particular location /their home and a facility. It was asked using 2 choices there are far, nearby (15).

- **Far:** if it is >5km to the facility
- **Nearby:** if it is ≤5km to the facility

Knowledge: the questioner had 23 "yes or no" response type items to measure knowledge about cervical cancer and screening. A perfect answer was allocated a score of 1, while an incorrect answer received zero. Following the addition of the scores, the participants were classified as having either poor or good knowledge based on whether their score was less than or equal to the median of 13 (52).

Cultural belief: A set of shared values and practices within a group that influences CC screening uptake.

Religious belief: Beliefs about the divine that prevent the community from seeking care at health facilities.

Social support: Refers to the social influence and support that women receive from family, friends, and husband.

Traditional treatment: Health practices rooted in the cultural and historical traditions of a specific community that encourage members to seek treatment at home rather than through formal healthcare facilities**.**

4.10. Data Management

For the quantitative study: After being checked and cleaned, the completed questionnaire's responses were exported from Kobo toolbox to Stata version 18 for analysis.

For the qualitative study: data was audio recorded, and field notes were stored in a separate file on a daily basis. Field notes were expanded and records were transcribed verbatim. After transcription was completed, the investigator independently read sample transcripts to ascertain consistency. Themes and sub-themes were developed to reduce the raw data and eventually interpretations and meanings were developed within the rubric of the original data (Table 2).

Table 2: **Themes and Subthemes for in-depth and key-informant interviews to identify health facility related barriers and facilitators for cervical cancer screening uptake at primary health care facilities in Ethiopia.**

In-depth interviews with patients	**Key-informant interviews with HCPs and patients**
Theme 1: Individual level	**Theme 1**: Knowledge and perception of CC
Subthemes: Knowledge and awareness of CC	**Subthemes**: Prevalence and Awareness of CC
Perceived susceptibility and severity	Importance of CC screening
Theme 2: Interpersonal level	**Theme 2**: Accessibility and challenges in CC screening uptake
Cultural and religious beliefs	Screening methods and its limitation
Stigma	Facilitators for CC screening uptake
Theme 3: Health system level	Barriers for CC screening uptake
Subthemes: Facilitators for CC screening uptake	
Barriers for CC screening uptake	

4.11. Data Analysis

For the quantitative study: Required assumptions for logistic regressions (binary outcomes, normality of the data, linearity, large sample size, multicollinearity, and outlier) were examined prior to conducting any sort of analysis. The existence of multicollinearity between each independent variables was checked and there were no multicollinearity among them (VIF <5). In order to assess if the regression model sufficiently fits the study's data, the Hosmer-Lemeshow goodness of fit test was used to evaluate the model. After that, the results were modified to account for the participants' socio-demographics and other characteristics.

The data analysis was ranged from the basic description to the identification of factors including potential health facility related factors associated with Cervical Cancer screening uptake. Women who had ever undergone cervical cancer screening were compared to those who had never undergone the procedure for all analytical purposes. First, the frequency distribution and proportion were described using descriptive statistics. The knowledge status and age of study participants was measured as categorical variables.

Crude odds ratios (COR) with 95% confidence intervals were generated from binary logistic regression as measures of associations for each socio-demographic characteristic and other variable which have $p \leq 0.25$ with cervical cancer screening uptake. A multivariable logistic regression was used to identify socio demographic, reproductive and health system related factors of cervical cancer screening uptake by controlling the possible confounder. Based on P-values less than 0.25 in bivariate analysis(53), consideration of multicollinearity and clinical significance which is reasonable to enter in to the final model(54), 18 variables were candidate to multivariable logistic regression analysis. Then statistical significance for the multiple logistic regression analysis was set at $p \leq 0.05$. The result was presented using tables, graphs and charts.

For the qualitative study: Qualitative thematic analysis was used to analyze and interpret the findings. ATLAS.ti version 9 software was used for both data reduction and analysis. Each interview was read thoroughly text by text and codes were labeled. Then, codes were categorized into different categories and finally, themes were formulated.

4.12. Data quality assurance

For the quantitative data: structured tool from previously conducted studies were developed. The questionnaire was prepared in English and later translated to Amharic language then to their local language oromifa by different translator to keep the consistency of the questionnaire. Pre-testing of the questionnaire on 5% of the total sample size (30 participants) had carried and the questionnaire was modified based on the result of the pre-test. The data was collected by experienced data collectors. One day training was provided about the objective, methodologies, tool and data collection techniques of the study. Data was intensively cleaned before running analysis. The Cronbach alpha > 0.7(55) confirmed internal consistency of the dimension, which was 0.78 for all questions.

For the qualitative data:

Credibility

Through open communication and a thorough familiarization with the study environment and participants, the researcher established trustworthiness. To guarantee clarity and comprehensiveness for the participants, the researcher and advisors reviewed and refined the interview instructions. The investigator allotted complete days over two weeks when participants were present in the designated facilities to fully engage in the process of gathering data. The MCH focal, screening providers, ART focals, the director of the facility and screend and non-screened patients with place & person triangulation of data were among the many data sources. Because of the researcher's background in data

collecting, the study's conclusions are more credible because of their nuanced comprehension of the data. Furthermore, the idea of data saturation was investigated in-depth and repeatedly.

Transferability

To ensure transferability, choosing a varied range of health care providers as well as screened and non-screened patients from the selected health facilities was part of the sampling procedure. After being written in English at first, the interview instructions were translated into Amharic and the local language, oromifa. To provide a complete record, the material was carefully gathered using audio recordings, transcripts, and translations.

Dependability

To ensure dependability, by providing codes to the participants, the researcher examined and cleaned the transcriptions. Then, the researcher read the transcriptions several times over to fully comprehend and spot any inconsistencies. To maintain consistency, every response is recorded in text and supported by audio recordings.

Confirm ability

The study's confirm ability is ensured by the implementation of the audit trail technique, which entails documenting the specifics of the data collecting, analysis, and interpretation processes. Writing with interpretation featured quotes from the participants that truly captured their emotions. The study's conversations with academic advisers during the data gathering stage were crucial because they provided insightful commentary that helped direct the investigation. Peer debriefings involved talking about the important findings, data analysis, and study methodology to get insightful input.

4.13. Ethical Consideration

Ethical approval was obtained from the Research Ethics Committee (REC) of the School of Public Health, College of Health Sciences of Addis Ababa University. A letter of support was submitted to the regional health office from Addis Ababa University School of Public Health to inform them about the study. Permission letter for each health facilities was taken from the regional health office to get authorization to carry out the study. Those respondents who agreed to participate in the study provided written consent for the qualitative investigation and oral consent for the quantitative study. The participants in this study did not experience any kind of physical or psychological harm.

4.14. Dissemination plan

The results of the study were presented to Addis Ababa University, College of Health. The study's findings were given to the school of public health at Addis Ababa University's College of Health Sciences. The research findings will be shared with various stakeholders who can help to enhance women's health and related services. Ultimately, attempts will be made to present at different workshops and seminars and to get the findings published in credible national and international publications.

5. RESULTS

5.1 Socio-demographic characteristics of the respondents

From the total 635 women, 629 agreed to participate yielding a response rate of 99%. The median age of respondents was 35 years with Inter Quartile Range (32-39) alongside 95% CI (35.7-36.5).The majority 279(44.4%) were in the age group of 30-34 years old. Most of the study participants 267(42.5%) were Muslim by religion. More than 75% of the respondents 526(83.6%) were urban dwellers and the rest of 103(16.38%) were rural residents (Table 3).

Majority of respondents 521(82.8%) were married and 40(6.4%) divorced. About 72(11.45%) respondents were unable to write and read and 165(26.2%) respondents were elementary school. Around 50% of the respondents 313(49.8%) were housewives. The median monthly income of respondents was 2,600 birr with IQR of 500-4,000 birr. The majority of participants, 315(50.1%) monthly income were less than 2,600 birr (Table 3).

Table 3: **Socio-demographic characteristics of the study participants, Southeast Oromia, Ethiopia 2024 (n = 629).**

Variables	Categories	Frequency	Percent
Age group (in years)	30-34	279	44.4
	35-39	193	30.7
	40-44	89	14.1
	45-49	68	10.8
Religion	Muslim	267	42.45
	Orthodox	244	38.79
	Protestant	114	18.12
	Wake feta	4	0.64
Residence	Urban	526	83.62
	Rural	103	16.38
Marital status	Married	521	82.83
	Divorced	40	6.36
	Single	37	5.88
	Widowed	31	4.93
Women education	Elementary/junior	165	26.23
	College and above	156	24.8
	High school	148	23.53
	Can read and write	88	13.99
	Unable to read and write	72	11.45
Occupational status	Housewife	313	49.76
	Private employee	87	13.83
	Government employee	82	13.04
	Self-employed	58	9.22
	Daily laborer	48	7.63
	Not employed	18	2.86
	Others [a]	12	1.91
	Student	11	1.75
Husband's educational status	College and above	187	35.89

(n = 521)	High school	130	24.95
	Elementary/junior	97	18.62
	Can read and write	67	12.86
	Unable to write and read	40	7.68
Husband's occupation (n = 521)	Self-employed	145	27.83
	Government employee	132	25.34
	Private employee	123	23.61
	Others [b]	68	13.05
	Daily laborer	51	9.79
	Not employed	2	0.38
Monthly income (in birr)	≤ 2600	315	50.1
	2601-5200	224	35.6
	5201-7800	59	9.4
	>7800	31	4.9

[a] is farmer, merchant, NGO, and garment, [b] is farmer, driver, soldier, pastor, and retire.

For the qualitative study in-depth (IDI) and key-informant interviews (KII) were conducted. In-depth interviews were conducted with 4 screened and 4 age-eligible non-screened women. Their mean age was 34.1 ± 4.9 years (most patients' ages fall ranged b/n 29 - 39 years). Seven of them were married and the rest was divorced. All of them had completed primary school and beyond.

Key-informant interviews were conducted with 8 health care providers including cervical cancer screener, MCH focal, ART service providers or unit heads and head of health facility. Their mean age was 36.8 ± 7.4 years (most providers' ages fall ranged b/n 29 - 44 years). Seven of them were women, and they were all married. They had been working for four to twenty-four years.

5.2 Reproductive characteristics of the respondents

More than 75% of the participants, 541(86%) had birth experience. Of this, about two third of the participants 361(67.3%) had two to four children. About one fourth of the participants, 148(23.5%) had a history of multiple sexual partners. Majority of the study participants, 447(71.1%) had started their first sexual intercourse after the age of sixteen. About half of the participants 355(56.44%) had not used modern contraceptives at the data collection time. Most of the study participants 508(80.8%) had no family history of CC.

Similarly, majority of the study participants 517(82.2%) had no history of STI. Regarding HIV status over 50% of study participants 446(70.9%) were HIV negative and about 7(1.1%) of participants were HIV Positive. Furthermore 176(28%) of participants were not know their HIV status (Table 4).

Table 4: **Reproductive characteristics of the study participants, Southeast Oromia, Ethiopia 2024 (n = 629).**

Variables	Categories	Frequency	Percent
Birth experience	Yes	541	86.1
	No	88	13.9
Number of children	1	95	17.6
	2-4	364	67.3
	≥ 5	82	15.1
Age at first intercourse	> 16	447	71.1
	≤ 16	182	28.9
Multiple Sexual Partner	No	481	76.5
	Yes	148	23.5
Recently used modern contraceptive	No	355	56.4
	Yes	274	43.6
Family history of cervical cancer	No	508	80.8
	Don't know	61	9.7
	Yes	60	9.5
History of STI	No	517	82.2
	Yes	66	10.5
	Don't know	46	10.6
HIV status	Negative	446	70.9
	Don't know	176	27.9
	Positive	7	1.1

5.3 Knowledge of respondents about cervical cancer and screening

About two-thirds of the study participants exhibited 417 (66.3%) poor knowledge scores (figure 3).

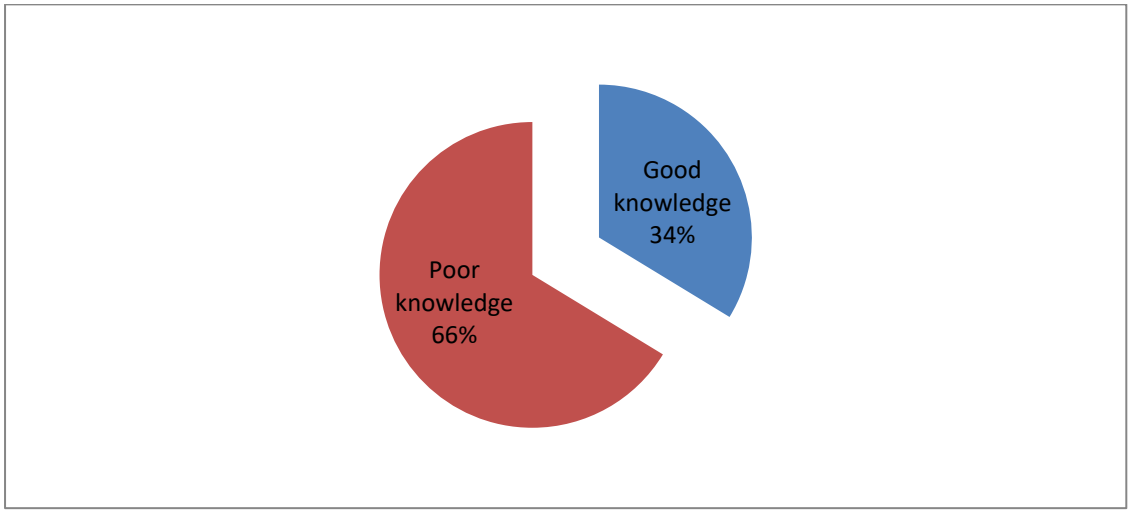

Figure 3: **Participants level of Knowledge on cervical cancer and it's screening in the selected health facilities of southeast Oromia, Ethiopia (n = 629**).

Regarding risk factors of cervical cancer, more than half of participants 342(54.4%) identified having multiple sexual partners as a risk factor for cervical cancer. Most study participants 354(56.3%) did not know early sexual intercourse is a risk factor and 333(52.9%) of total study participants also did not know that weakened immunity due to HIV/AIDS is a risk factor for cervical cancer. However, very few participants identified HPV infection as a risk factor for cervical cancer 186(29.6%). majority of participants 365(57.6%) did not mention cigarette smoking is a risk factor for cervical cancer. Regarding

symptoms of cervical cancer less than half of study participants 256(40.7%) identified offensive vaginal discharge as a symptom of cervical cancer.

Also, only 283(44.9%) of participants identified vaginal bleeding as a symptom of cervical cancer. Majority of participants knew that cervical cancer is preventable 355 (56.44%). About half of the participants 319(49.3%) identified screening as a cervical cancer prevention method and 274(43.6%) of participants did know the HPV vaccine as a prevention method. Regarding the treatment of cervical cancer, the majority of study participants identified cervical cancer is treatable 357(56.8%). However, only 154(24.5%) of them knew treatment methods. Concerning the frequency of screening for cervical cancer, the majority of study participants 419(66.6%) expressed that it would be more beneficial to screen once a year (Table 5).

Table 5: **Knowledge status of the study participants, Southeast Oromia, Ethiopia (n = 629).**

Variables	Categories	Frequency	Percent
Multiple sexual partners increase the risk of cervical cancer	Yes	342	54.4
	No	287	45.6
Early sexual intercourse is a risk of cervical cancer	Yes	275	43.7
	No	354	56.3
Acquiring HPV is a risk factor for cervical cancer	Yes	186	29.6
	No	443	70.4
HIV infection is a risk factor for cervical cancer	Yes	296	47.1
	No	333	52.9
Cigarette smoking is a risk of cervical cancer	Yes	267	42.5
	No	362	57.5
Vaginal discharge is a symptom of cervical cancer	Yes	256	40.7
	No	373	59.3
Vaginal foul smelling is symptom of cervical cancer	Yes	312	49.6
	No	317	50.4
Vaginal bleeding is symptom of cervical cancer	Yes	283	44.9
	No	346	55.1
Pain during coitus is a symptom of cervical cancer	Yes	250	39.8
	No	379	60.3
Cervical cancer is preventable	Yes	355	56.4
	No	274	43.6

In-depth interview participants articulated that they heard about cervical cancer, yet they lack detailed information about its causes, symptoms, and prevention. It was also mentioned that they are scared of discussing about cervical cancer since they don't know about its cause and outcome.

> *"I'm not familiar with all the details. However, I've heard that it can lead to breast and uterine cancer. My brain is disturbed when I hear about cancer. I frequently hear people state that cancer is a major cause of death. The moment I hear about cervical cancer, my attention is distracted. I ask God to keep me safe from this illness..." (Participant 1 from in-depth interviews)*

In comparison with non-screened women, respondents with screening history and those who had family history had some basic knowledge about cervical cancer and its cause.

"I have screened for cervical cancer because my mother passed away from this cancer without ever being examined for and given treatment. So, I know how painful it is. She would not have died from this disease if she had been checked and treated early..." (Participant 10 from in-depth interviews)

It was believed that cervical cancer was a terrible disease that could happen to anyone. Yet, they perceived that they had little risk of developing cervical cancer.

"Having cancer is an accident. Not every woman was assaulted by it. It presents by chance. It targets our uterus, bones, and brain. Although I'm not positive of the precise origin, I believe it comes from the wound." (Participant 11 from in-depth interviews)

In the other hand most of the respondents were recognized that untreated cervical cancer could lead to pain during intercourse, pregnancy problem, vaginal bleeding, organ damage and finally death. Particularly the screened women stressed the importance of early detection to prevented serious health consequences.

"My grandmother passed away from cervical cancer some years ago. When it comes up for discussion, the last step results in vaginal bleeding. It's also said that it's hard to quit once its spread throughout the entire body. After then, all we can do is count down the days, weeks, months, and minutes till we pass away." (Participant 11 from in-depth interviews)

Key-informants explained that cervical cancer is a significant public health concern in Ethiopia, ranking second after breast cancer. The majority of key informants stated that although cultural misconceptions about the disease still exist and some patients still see it as a curse, awareness has grown as a result of community education and media campaigns.

"Cervical cancer was not previously well understood. There wasn't much of a chance for screening before. Unlike other tumors now in existence, this one is treatable with early diagnosis and treatment. Subsequently, the majority of our community now has awareness through community education by professionals."(Participant 8 from key-informant interviews)

5.4 Source of information about cervical cancer and CC screening

Four hundred fifty-two (71.9%) have heard about cervical cancer and from those participants who had ever heard about cervical cancer 243(53.8%) of them heard from TV/Radio and 47(10.4%) heard from health care providers. Of the total respondents who ever heard about CC, 385(84.3%) heard about the presence of cervical cancer screening. Out of 385 participants who have heard about cancer screening, 219(56.9%) of them heard from TV/Radio and 48(12.5%) from health care providers.

Likewise, the in-depth interview participants also explained that, they gathered information from health care professional and mass Medias such as radio and television.

> *"I lacked detailed knowledge about it. But when I came for screening and reported by the media, I discovered some important information about it*". (*Participant 2 from in-depth interviews*)

5.5 Cervical Cancer screening status of study participants

Majority of study participants 291 (46.26%) visited the health facilities for OPD, 228 (36.25%) were for maternal and child services, 53 (8.43%) were for laboratory services and 57 (9.06%) were for others services. More than half of the study participants 394 (62.64%) were at a distance of less than 5 kilo meters (found nearby) from the health facility. The vast majority 406 (64.55%) of study participants said that there was no counseling related to CC and it's screening at the time of their visit to the facility.

Very few participants 124 (19.71%) told us there was CC screening counselling in OPD and MCH particularly ANC room. Of those 124 participants, 99(79.84%) were attended the counselling. Out of 99 study participants, only 59 (59.6%) were screened for CC. few participants 98 (15.6%) were screened before the data collection time. Out of 98 (15.6%) ever screened patients, 80 (81.63%) had negative screening result, about 16 (16.3%) tested positive and 2 (2.04%) were suspicious for CC. Furthermore 17 participants of them were done re-screening for more than one time (Table 6).

Table 6: **Cervical cancer screening status of the study participants at the selected health facilities in southeast Oromia, Ethiopia (n = 629).**

Variables	Categories	Frequency	Percent
Name of health center	Asella	244	38.4
	Adama	112	17.6
	Geda	117	18.4
	Boku-shanen	66	10.4
	Halila	65	10.2
	Gonde	31	4.8
Reason of current health facility visit	OPD	291	46.3
	MCH	228	36.3
	Others[s]	57	9.1
	Laboratory service	53	8.4
Availability of CC counseling	No	406	64.5
	Yes	124	19.7
	Don't know	99	15.7
Attend and informed about it (n = 124)	Yes	99	79.8
	No	25	20.2
Have you ever screened in the past 7 years	No	531	84.4
	Yes	98	15.6
Distance from facility	Far (> 5km)	235	37.36
	Nearby (≤ 5km)	394	62.64

[s] shows attendant, emergency, Bp measurement, ultrasound.

As shown in the figure, among the total of 629 study participants, 98 (15.6%) were ever screened for cervical cancer. Among ever screened participants 90 (14.7%) were screened before 5 years ago.

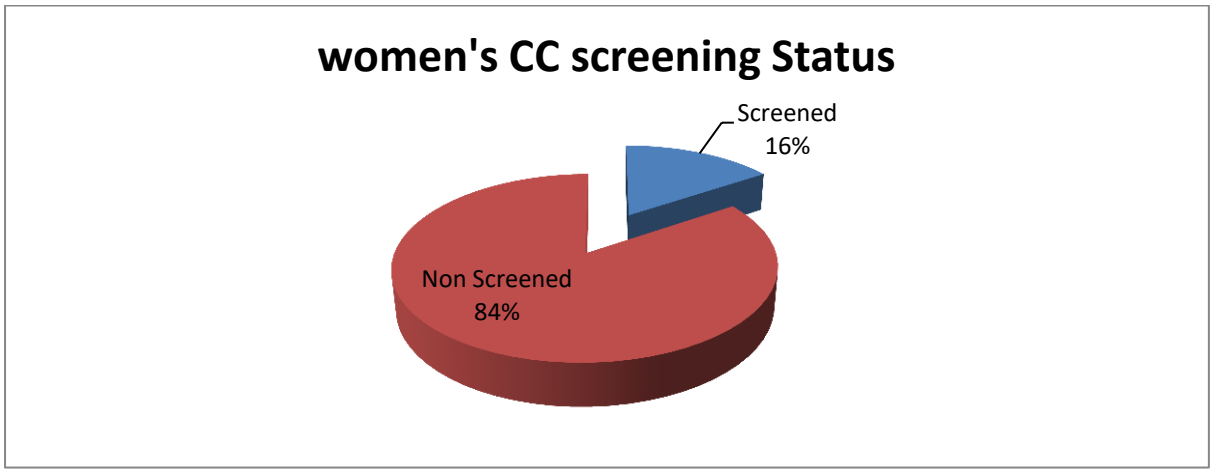

Figure 4: Ever screening for cervical cancer among study participants in the selected health facilities of southeast Oromia, Ethiopia (n = 629).

Of those who were screened, over half had already undergone screening one year prior (figure 5).

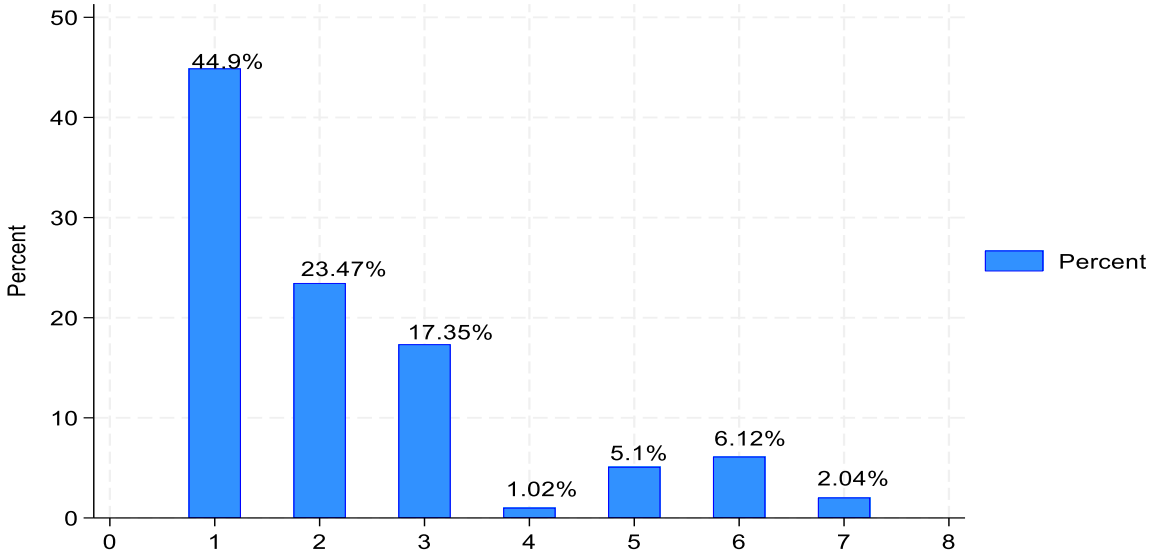

Figure 5: A period during which participants examined cervical cancer screening before, Southeast Oromia, Ethiopia (n = 629).

In-depth interview participants in the qualitative study explained about the importance of early detection to prevented serious health consequences.

> *"As I counseled, if cancer is not treated quickly, it may become unbearably painful during intercourse and cause internal genital injuries. Death will arrive right away if you remain silent about yourself without seeking screening…." (Participant 10 from in-depth interviews)*

Key-informants also mentioned that early screening is crucial for reducing maternal mortality and morbidity. It allowed for timely treatment of precancerous lesions, significantly improving health

outcomes. Government initiatives had enhanced training for healthcare providers and increased access to screening services.

> *"The advantage is that individuals can receive care before contracting advanced illness. The majority of people won't be impacted by the diseases if they screen and receive prompt treatment." (Participant 7 from key-informant interviews)*

The majority of key informants explained that Visual Inspection with Acetic Acid (VIA) and, in certain cases, HPV-DNA testing was routine screening techniques used in those facilities. Thermal ablation was a frequently used treatment. Although VIA was widely available and efficient, more sophisticated testing alternatives for high-risk populations were acknowledged to be necessary.

> *"VIA is screening method which is available here. The outcome is precise, it doesn't require electricity, and it is easily portable. Furthermore, the equipment is reasonably priced and accessible to a large number of individuals. No need high education level. Acetic acid used during procedure is inexpensive, results are seen right away, and for screening doesn't need cutting tissue. Higher education and electricity might be necessary for others." (Participant 15 from key-informant interviews)*

5.6 Health facility related facilitators for CC screening

Among the total of 629 study participants, majority of respondents 430(68%) identified being informed about CC screening by health care professional at the time of their visit as primary facilitator to uptake CC screening and minimum number of participants 152(43%) as compared with others, identified abundance of screening equipment as last facilitator to uptake CC screening. This is a result of patients not realizing that a lack of equipment might prevent them from getting screened, as the majority of institutions have the necessary equipment to provide the services. (Figure 6)

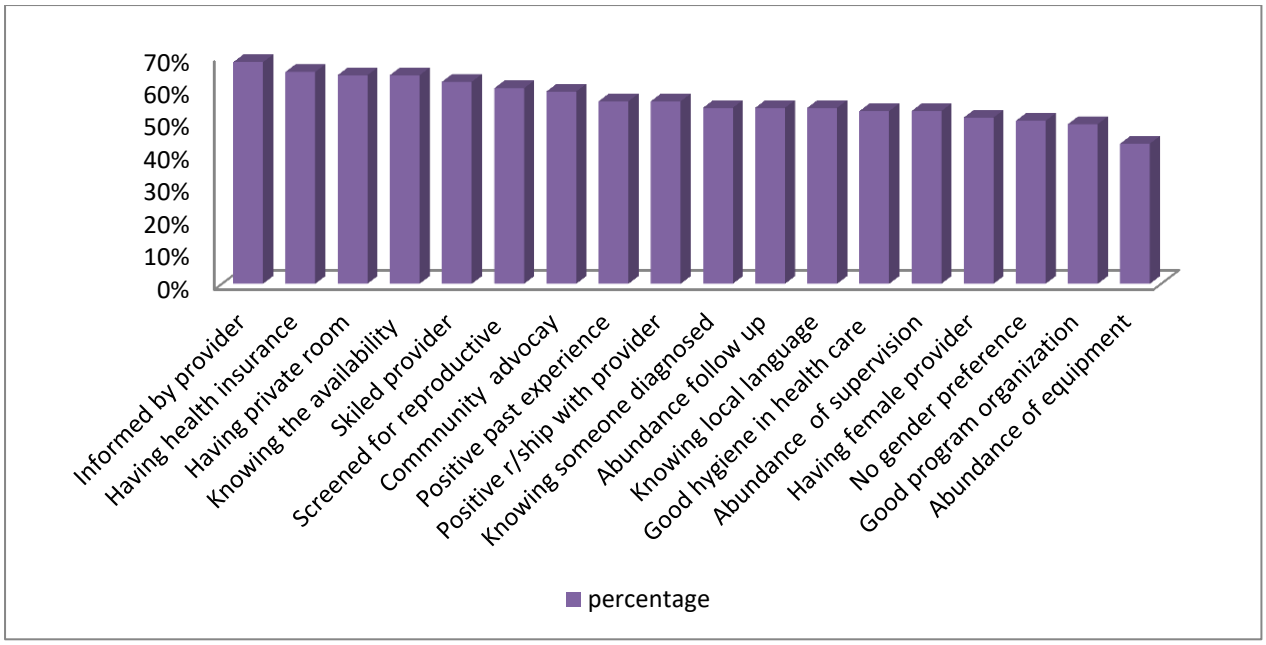

Figure 6: Health system related facilitators to cervical cancer screening uptake, Southeast Oromia, Ethiopia (n = 629).

In the qualitative study both screened and non-screened study participants explained that counseling was emphasized as a key facilitator. They suggested having awareness campaign activities through media and community outreach to educate the public about the severity of cervical cancer and the benefits of early screening. Screened women explained that encouragement from health care provider, service accessibility, availability of female health care provider, awareness creation campaigns, health education through mass media, family or spousal support and social support were facilitators for cervical cancer screening uptake.

> *"I went for screening right away after the health care provider recommendation while I went to the facility for another case…" (Participant 10 from in-depth interviews)*

> *"The provider (a nurse) is one of the factors that made us decide to screen. She visited our company when we were working on the "safety net" and gave us advice on how to show up and be seen. Upon consulting her about myself, she advised me to visit their health facility. I arrived with authorization from the "safety net" at work…." (Participant 1 from in-depth interviews)*

Key-informants explained that primary facilitator is awareness. Health extension workers played a vital role in enhancing awareness, community engagement, encouraging women to seek screening and treatment.

> *"The primary facilitator is raises awareness in each and every OPD. Health extension workers offer counseling to the community by visiting homes and referring clients to the health center.*

Once they arrived at our institution, we screened them and provided treatment. In this sense, encouraging our health extension workers to refer patients to the health center is our best course of action." (Participant 6 from key-informant interviews)

5.7 Health system related barriers for CC screening

Among the total of 629 study participants, majority of participants 382(61%) identified unaware of the location of the screening test as primary barrier for low uptake of CC screening and minimum number of participants 152(24%) identified provider incompetency as last barrier for low uptake of CC screening. More than half of participants 340(54%) had time and transportation problem to access any services including screening in the health facility. Around 235(37.36%) participants were lived far (>5 kilo meters) from the health center. Even if participants came from far place, because of transportation problem most of them 305(48.5%) were used their foot to visit the facility and small number of participants 44(7%) were used private motor or car (Figure 7).

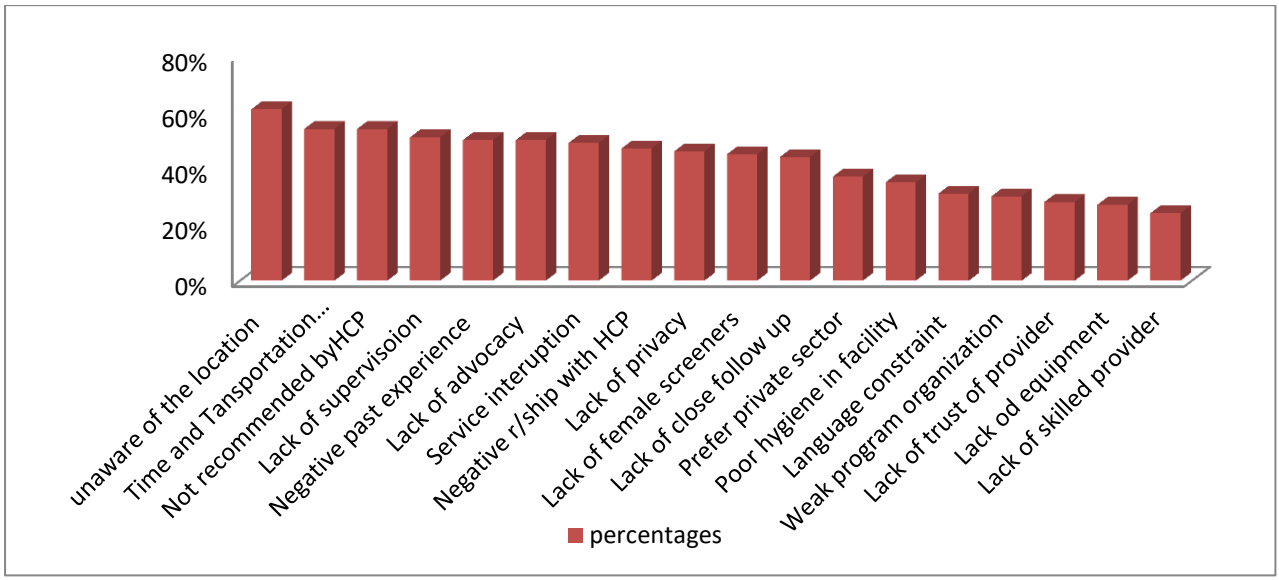

Figure 7: Health system related barriers to cervical cancer screening uptake, Southeast Oromia, Ethiopia (n = 629).

From in-depth interview participants mentioned that one of the main obstacles for screening uptake was the overall lack of knowledge in the community about cervical cancer and its screening. Participants identified poor patient provider communication, fear of screening procedure and positive result, mistrust on HCP, stigma, negligence and embarrassment to expose their body for male provider as additional barriers for CC screening uptake. Furthermore, non-screened participants identified financial constraint to go to the health facility, feeling healthy or being asymptomatic, preference for traditional treatment and service interruption as additional barriers for CC screening uptake.

"I thank God that I haven't been to the hospital yet. Why do I visit the hospital when I'm well and don't experience any pain? This is the reason why I haven't had a test for this illness

yet……" (Participant 13 from in-depth interviews)

"Many people decide against having screening the disease because they fear experiencing discomfort during the examination, they can also have mistrust for the service and the provider. The other worried about getting a positive result during screening." (Participant 10 from in-depth interviews)

Nevertheless, all of screened and non-screened participants explained traditional beliefs and reliance on alternative healing practices can deter women from seeking medical care.

"I firmly believe in God and our religion, which instructs us to visit "Tsebel" in times of illness. I also think that "Tsebel" will completely cure me. And also, there are traditional remedies produced from different leaves to treat the illnesses. For example, in our location, there are about 21 different types of leaves that can be used to treat 21 different diseases." (Participant 11 from in-depth interviews)

Likewise, key informants explained that resource constraints like equipment and supplies, limited space in health facilities, which can disrupt service delivery, and patient fears related to positive results or embarrassment during exams were major barriers for cervical cancer screening uptake.

"As far as I can see the challenge is human resource. There is only one person who worked on cervical cancer. Thus, she needs to take a break, which will cause a disruption in service…" *(Participant 5 from key-informant interviews)*

"When we inform them of their positive result after the screening, they get fearful as they believe it to be a curse or God's wrath. Some feel embarrassed to expose their bodies to the healthcare practitioner, and they fear being tested after the machine enters their body." (Participant 15 from key-informant interviews)

5.8 Factors associated with cervical cancer screening uptake

Age group, marital status, women educational status, women occupation, husband education, income, parity, multiple sexual partner, family history of CC, History of STI, Knowledge status, CC counseling, Distance from facility, Service interruption, Having female service provider, Community engagement, Knowing the availability of the service, knowing someone diagnosed with CC were candidate variables associated with screening uptake using p-value less than or equal to 0.25 to select and transferred variables in to multi-variable logistic regression analysis.

From the above candidate variables age, women education, monthly income, CC counseling and knowledge of study participants were significantly associated with cervical cancer screening uptake.

After controlling the effect of other covariates, women aged 40-44 years had three times more likely to undergo cervical cancer screening as those aged 30-34 years (AOR = 3.34; 95% CI 1.27, 8.78). After controlling for other variables, women who completed college or higher were four times more likely to participate in CC screening than those who were not educated (AOR= 4.14, 95% CI 1.1, 15.8). Furthermore, women with a monthly income greater than 7800 birr were approximately eight times more likely to receive CC screening than those with a monthly income less than 2600 birr (AOR = 8.3, 95% CI 1.86, 35.54).

Additionally, women with good knowledge of CC and CC screening were about six times more likely to have CC screening than those with poor knowledge (AOR= 6.53, 95% CI 3.2, 13.34). Similarly, women who received cervical cancer (CC) screening counseling during their visit were approximately about seven times more likely to have CC screening than those who did not receive the education (AOR = 6.52, 95% CI 3.1, 14.1) (Table 7).

Table 7: Factors associated with cervical cancer screening uptake among age-eligible women in the selected primary health facilities of Southeast Oromia, Ethiopia (n = 629).

Variables		Screened (n = 98) n (%)	Non screened (n = 531) n (%)	COR	AOR (95% CI)	P-value
Age group (in years)	30-34	30(30.6)	249(46.9)	Ref(1)		
	35-39	27(27.5)	166(31.3)	1.35	1.1(0.46 - 2.2)	.982
	40-44	25(25.5)	64(12.01)	3.24#	3.34(1.27 - 8.78)	.014*
	45-49	16(16.4)	52(9.8)	2.55#	1.59(0.55 - 4.63)	.393
Marital Status	Married	79(80.6)	442(83.2)	Ref(1)		
	Single	4(4.1)	33(6.2)	0 .69		
	Divorced	9(9.1)	31(5.8)	1.62#		
	Widowed	6(6.1)	25(4.7)	1.34		
Women's educational Status	No formal education	18(18.4)	142(26.7)	Ref(1)		
	Primary education	19(19.4)	146(27.5)	1.03	1.49(0.48 - 4.6)	.488
	Secondary education	22(22.5)	126(23.7)	1.38	1.75(0.51 - 6.1)	.370
	College and above	39(39.7)	117(22.1)	2.63#	4.14(1.1 - 15.8)	.037*
Women's occupation	Not employed	1(1.1)	28(5.3)	Ref(1)		
	Government employee	21(21.4)	61(11.5)	9.64#	1.56(0.13 - 18.3)	.722
	House Wife	41(41.8)	272(51.2)	4.22#	3.48(0.33 – 35.8)	.293
	Private employee	35(35.7)	170(32.1)	5.76#	3.07(0.3 – 31..3)	.343
Husband educational Status	No formal education	3(3.8)	37(8.4)	Ref(1)		
	Primary education	21(26.6)	143(32.4)	1.81	1.35(0.27 - 6.75)	.714
	Secondary education	14(17.7)	116(26.2)	1.49	1.19(0.21 - 6.88)	.838
	College and above	41(51.9)	146(33)	3.46#	0.49(0.08 - 2.91)	.434
Income	≤ 2600	37(37.8)	278(52.4)	Ref(1)		
	2601-5200	33(33.7)	191(35.9)	1.29	0 .95(0.45 - 1.99)	.885
	5201-7800	13(13.3)	46(8.7)	2.13#	2.5(0.83 - 7.56)	.101
	>7800	15(15.3)	16(3.1)	7.05#	8.3(1.86 - 35.54)	.005*
Parity	1 Children	19(19.4)	76(14.3)	Ref(1)		
	2-4 Children	48(48.9)	255(48.1)	0 .75	0.92(0.39 - 2.16)	.846
	>4 Children	31(31.6)	200(37.6)	0.62#	0.86(0.29 - 2.51)	.777

Multiple sexual partner	No	70(71.4)	411(77.4)	Ref(1)		
	Yes	28(28.6)	120(22.6)	1.37#	0.73(0.32 - 1.64)	.445
Family history of CC	No	66(67.4)	442(83.3)	Ref(1)		
	Yes	22(22.5)	38(7.2)	3.87#	1.53(0.58 - 3.99)	.383
	Don't know	10(10.2)	51(9.5)	1.31	1.1(0.35 - 3.39)	.878
History of STI	No	70(71.4)	447(84.2)	Ref(1)		
	Yes	24(24.5)	42(7.9)	3.65#	2.2(0.87 - 5.55)	.094
	Don't know	4(4.1)	42(7.9)	0.61	0.25(0.05 - 1.17)	.079
Knowledge	Poor knowledge	23(23.5)	394(74.2)	Ref(1)		
	Good knowledge	75(76.5)	137(25.8)	9.38#	6.53(3.2 - 13.34)	.000*
Distance from facility	Far	30(30.6)	205(38.6)	Ref(1)		
	Nearby	68(69.4)	326(61.4)	1.43#	0.81(0.36 - 1.78)	.599
CC counseling	No	27(27.5)	379(71.4)	Ref(1)		
	Yes	56(57.1)	68(12.8)	11.56#	6.52(3.1 -14 .1)	.000*
	Don't know	15(15.3)	84(15.8)	2.51#	2.37(0.91 - 6.23)	.080
Knowing someone diagnosed with CC	No	31(31.6)	214(40.3)	Ref(1)		
	Yes	60(61.2)	278(52.4)	1.49#	2.11(0.99 - 4.5)	.051
	Don't know	7(7.2)	39(7.3)	1.24	0.61(0.14 - 2.51)	.492
Service interruption	No	35(35.7)	226(42.6)	Ref(1)		
	Yes	57(58.1)	254(47.8)	1.45#	1.01(0.51 - 2.1)	.979
	Don't know	6(6.1)	51(9.6)	0.76	0.44(0.11 - 1.74)	.244
Having female service provider	No	31(31.6)	227(42.8)	Ref(1)		
	Yes	61(62.2)	260(48.9)	1.72#	1.06(0.53 - 2.13)	.861
	Don't know	6(6.1)	44(8.3)	0.99	1.36(0.33 - 5.52)	.662
Community engagement	No	21(21.4)	131(24.7)	Ref(1)		
	Yes	67(68.4)	303(57.1)	1.38#	1.4(0.61 - 3.22)	.423
	Don't know	10(10.2)	97(18.3)	0.64	0.37(0.11 - 1.29)	.121
Knowing the availability of CC service	No	26(2.3)	141(2.6)	Ref(1)		
	Yes	62(63.3)	341(4.2)	0.99	0.48(0.22 - 1.08)	.051
	Don't know	10(10.2)	49(9.2)	1.11	1.04(0.29 - 3.69)	.492

#those candidate for multivariable logistic regression (p<0.25), *shows P<0.05(significant association), OR, adjusted OR; COR, crude OR; Ref, reference group; Prob > chi2 = 0.59 (gof).

6. DISCUSSION

The purpose of this study was to evaluate the uptake of cervical cancer screening and related factors among age eligible women in southeast Oromia primary health facilities. WHO recommends screening for all women aged 30-49 years to spot the metastatic tumor lesion. 80% of cervical cancers are often prevented if early treated and screened(56). The study found that cervical cancer screening uptake by women who visited the selected health facilities for any services were 98(15.6%). which is below the national target of 80% of cervical cancer screening(57).

Unaware of the location of the screening test and being informed about cervical cancer by Health care professionals were the most common barrier and facilitator for CC screening uptake respectively. Age group, Women education, Monthly income, CC Counseling and Knowledge was significantly associated with cervical cancer screening uptake. The study also found that for eligible women, CC counseling service is supposed to be available at the respective health facilities. Out of 629 women's only 124(19.7%) women received this service so we can say most of the participants were non-opportunistic. This study found that cervical cancer screening uptake by study participants were low 98(15.6%). The study's results aligned with previous research, indicating that 16.4% of Kenyan women received cervical cancer screenings in 2018 (58), 16.1% in Uganda 2017 (59), 15.5 % in Jimma 2019(60) and 15.2% in Wolaita Zone, Sodo Town 2020 (61).

Even while the study's findings on cervical cancer screening uptake are low in itself, it is higher than those of the prior uptake study in Ambo town 8.7% by 2019 (34), 7.2% in Asella 2021(42), 4% in Dire Dawa 2017 (62), 10% in Gondar 2016 (63),3.8% in Gurage zone 2019(64), 7.9% in Tanzania 2016 (65), 7.2% in Nigeria 2021(66) and 6.2% in Burkina Faso 2013(67). The possible reasons for the difference in the findings could be due to different study locations, number of facilities, the tools used for data collection and different sample sizes. Furthermore, the difference in the finding could be due to different study populations whereby the current study interviewed all age eligible women who visited the health facility for any services while the study in Gondar interviewed only HIV positive women and in Asella interviewed only eligible women who are attending only ANC.

The nation's current initiatives to prevent and promote cervical cancer, making awareness for health extension workers, media concern, improved expansion and access of screening centers, another reason for this discrepancy could be the duration of the research in between and the women's sensitization implementation activities.On the contrary, the results of this study is lower than the study findings in Kellam Wollega zone 2021 (20.1%) (68), 38.7% in Jimma zone 2019(69), 40.1% in Hawassa 2019(70),25.5% in Addis Ababa 2015(71), 72.5% in Côte d'Ivoire 2017(72), 25.6% in Kenya 2019(73),

27.4% in Edo state, Nigeria 2015 (74), 44.8% in Zambia 2021(75), 32.3% in Thailand 2013(76), 33.4% in Saudi Arabia 2021(77) and 32.2% in Nepal 2020(78).

The possible reason for this variation could be due to differences in socio-demographic, socio cultural and economic status of the study respondents(developed countries give more attention for early detection than developing countries like us) as well as governmental concern to cervical cancer prevention and control, poor registration system, level of knowledge, and attitude of the participants and study period.

Another explanation for the decline in the use of screens could be because of non-availability of more trained health providers, unequal allocation of screening services facilities. In contrast to other health care models, primary care and specialty physicians are readily available in Canada, where everyone has universal access to healthcare. In a similar vein, Kenya's CCS program is stronger, which has raised awareness of CC and its screening. Moreover, variations in the methods used to gauge the uptake of cervical cancer screening may account for the difference (self-report), type of screening material, study population for example most of the above studies done among HIV patients and among all reproductive age group of women, as we know HIV patients visit the health facility more likely than other patients, this may increase the screening uptake.

In this study, women's age was one of the significant factors for cervical cancer screening uptake. The study revealed that women in the age between 40-44 years were three times more likely to utilize cervical cancer screening as compared to those women in the age of 30-34 years. This finding was supported by the studies done in Debremarkos town(79), in Ambo town(80),in Dire Dawa(62),in Kenya(81). The possible explanation for this might be increasing risk with women's age leads the women to have more contact with health facilities so the probability of getting information about cervical cancer and its screening will be increased which leads them utilized cervical cancer screening service.

Women educational status also the other significant variable which associated with CC screening uptake. Educated women who had completed college and above were four times more likely to uptake CC screening than their counterparts. This is in line with research conducted in Debremarkos Town, which shows that the likelihood of cervical cancer screening uptake increases with education level(79), in Tanzania similar finding also reported (15). This implies that women with low levels of education might not have taken part in the cervical cancer screening program.

Furthermore, women who had Good knowledge about cervical cancer and its screening were about six times more likely to uptake CC screening than their counterparts. This finding was supported by other studies in Dire Dawa(62), in Debremarkos town(79), in Ambo town(80). Those studies demonstrated that knowledge of cervical cancer and its screening raises the likelihood of screening uptake. This is due

to Understanding the importance of screening provides women with a valid reason for seeking this service. Monthly income was the other factor that was significantly associated with low CC screening uptake. Women who got more than 7,800 birr monthly income were eight times more likely to uptake CC screening than their counterparts. This finding was supported by other studies in Ontario(82), in Belgrade(83). Cervical screening is actually free in Ethiopia, but low-income women are unable to use it for a variety of reasons, including transportation costs and the necessity of often visiting follow-up appointments.

Similarly the qualitative study gives related result. From both in-depth and key-informant interviews financial constraint to go to the health facility, feeling healthy (no experience symptom), availability of traditional treatment, service interruption, lack of encouragement by health professional, fear of screening procedure and positive result, mistrust on HCP, stigma, negligence and embarrassment were barriers for cervical cancer screening uptake. This result is supported by study in hosanna (16) and Uganda (45). In other hand encouragement from health care provider, campaign education, information dissemination through mass media, family or spousal support and social support, HCP recommendation and accessibility of nearby health service, organized community education and availability of female screener in health facility were facilitators for cervical cancer screening uptake. This result is also supported by study in Addis Ababa (48).

7. STRENGTH AND LIMITATIONS OF THE STUDY

Strength

The study was used mixed study design and the quantitative finding was supported by qualitative result. The data was gathered by trained and experienced data collectors from participants who were visited the health facility for any services by utilizing a computerized technology called Kobo Toolbox, which improves the quality of data and also we tried to maintain the confidentiality of participant's. After their service was completed, the study employed a face-to-face interviewing technique to collect data, which allowed study participants to ask clarifying questions and assured that high-quality data was collected.

Limitations

HIV status and CC screening uptake in the study were documented based on the participants' self-report responses during the interview; this means we were not going to check their result using patient card. Some of data collectors were health care professionals, this might result interviewer (information) bias.

8. CONCLUSION AND RECOMMENDATIONS

8.1 Conclusion

Low prevalence of cervical cancer screening uptake was discovered by this study among age eligible women in six primary health facilities found in Asella and Adama. The findings of this study suggested that Age group, Women educational status, monthly income, CC counseling and Knowledge was predictors of cervical cancer screening uptake. Therefore, it is necessary to execute planned health education and awareness development at health facilities, particularly in primary health care, in order to increase the adoption of cervical cancer screening services. Additionally, all women who attend the health center for any service should get counselling regarding the advantages of CC screening.

In qualitative study, using in-depth interviews participants mentioned financial constraint to go to the health facility, feeling healthy (being asymptomatic), availability of traditional treatment, service interruption, lack of encouragement by health professional, fear of screening procedure and positive result, mistrust on HCP, stigma, negligence and embarrassment as barriers for cervical cancer screening uptake. In the other hand participants using key-informant interviews identified budget constraint for community health education, transportation constraint, lack of enough education, shortage of room, inadequate number of trained providers, lack of updated training for providers, lack of female screener etc as barriers for screening uptake.

Similarly in qualitative study, using in-depth interviews participants mentioned encouragement from health care provider, campaign education, information dissemination through mass media, family or spousal support and social support, HCP recommendation and accessibility of nearby health service, organized community education and availability of female screener in health facility as facilitators for cervical cancer screening uptake. In the other hand participants using key-informant interviews identified resource availability, presence of skilled health care providers, peer encouragements etc as facilitators for screening uptake. Therefore, by placing a high priority on removing those obstacles connected to the health facility, we can raise cervical cancer screening uptake, particularly among those who live in remote areas.

8.2 Recommendation

The low screening level found in this study suggests that in order to reach the national standard screening coverage, a significant amount of work needs to be done by responsible entities. The following are important recommendations:

- **For Healthcare Programs**: integrate education in each services including cervical cancer awareness in MCH, immunization, and HIV education initiatives.
- **For Healthcare Facilities**: establish peer support groups for women to share experiences and reduce stigma around cervical cancer discussions.
    - ✓ Increase the number of female healthcare providers in the facilities.
    - ✓ Improve Facility Infrastructure to minimize service interruptions.
    - ✓ Enhance communication skills training for providers to address patient fears and misconceptions effectively.
- **For Program Managers and Evaluators**: monitor and evaluate initiatives to assess the effectiveness of educational campaigns and use feedback for continuous improvement.

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11: ANNEX

Annex I: Participant's Information sheet

Title: Assessment of the screening uptake and health facility related facilitators, and barriers for cervical cancer screening uptake at primary health care facilities in Southeast Oromia, Ethiopia.

Principal Investigator: Melat Amberbir

Organization: Addis Ababa University School of Public Health

Sponsor: Addis Ababa University School of Public Health

Greetings! My name is..... I am a data collector for this research. I am here on behalf of Melat Amberbir student of public health at Addis Ababa University. She is conducting a research on cervical cancer screening uptake for the partial fulfillment of second degree, because it is essential to identify what the possible factors are contributing for cervical cancer screening uptake and for implementing possible and important intervention to overcome the problem. You are chosen to participate in this study. The choice is made randomly. Before you decide whether to participate or not in this study, I would like to explain to you the objective of the study, any risks, benefits, procedure and what is expected from you.

Objective of the study: the study will assess the magnitude and facilitator, and barriers of cervical cancer screening uptake.

Benefit of the study: There is no direct benefit to study participants but the result of the study will be disseminated to concerned bodies including the health facilities, regional health bureau, Addis Ababa University, Ministry of health and different non-governmental organization working on cervical cancer in order to take action on the problem related with cervical cancer screening.

Risk (harm) of the study: There is no harm in participating in this study but part of your time (average of 40 minutes) will be consumed to answer the questions.

Rights of participants: completely free to take part or not in this study. If you decide that you do not want to be part of the study, this will not be held against you and you will not be disadvantaged in any way. You are also free to withdraw from the study at any time if you feel that you cannot proceed. You can ask any question which is not clear for you.

Confidentiality: All information you give me will be strictly confidential and will be kept safe and secure place. Your name should not appear anywhere on the questionnaire to ensure anonymity. Only the principal investigator and advisors will know the details.

Would you want to take part in the study?

1- No (say thank you) 2- Yes (take oral informed consent)

Contact Address: You can use the following contact address if you want to ask any questions at any time about the study.

The investigator: Melat Amberbir
Phone number: +251901253507
E-mail address: melatamberbir@gmail.com
Primary advisor: Dr.Muluken Gizaw
Phone number: +251966809345
E-mail address:muluken.gizaw@yahoo.com

Annex II: Informed consent

The objective, benefits, harms, procedures and confidentially of the study has been read and explained to me in the language I comprehend. I further understand that, taking part in this study and withdraw from participating in any time without having reason is purely voluntary.
I agree to participate in this study.

Name of facility/hospital/health center…….

Date: _____/_____/_____

Signature of the study participants..... Date.....

Data collector name…… Signature……..Date…….

Supervisor's name …… Signature……..Date……

Annex III: Interviewer administered questionnaire for quantitative study

Part 1. Questions to asses socio-demographic characteristics of study participants

S.no.	Questions	Response
1.	How old are you?	**_____years**
2.	What is your religion?	1. Orthodox 2. Muslim 3. Protestant 4.Others(specify) _____
3.	Your place of residence?	1.Urban 2.Rural
4.	What is your marital status?	1. Single 3. divorced 2. Married 4. Widowed
5.	What is your educational status?	1.Illiterate 2.Can read and write 3.Elementary/junior 4.Highschool 5.tertiary school(12+)
6.	What is your occupation/ what kind of work do you mainly do/?	1. House wife 2.Not employed 3. Government employee 4. private employee 5. Student 6. Daily labourer 7.self-employed 8.Other(specify)
7.	If married in **Q. 4,** What is your husband's educational status?	1.Illiterate 2.Can read and write 3.Elementary/junior 4.Highschool 5.tertiary school(12+)
8.	If married in **Q. 4,** What is your husband's occupation?	1.Not employed 2. Government employee 3. private employee

		4. Student 5. Daily laborer 6.self-employed 7.Other(specify)
9.	Monthly income (in Ethiopian birr)	_____birr

Part 2: Individual and Reproductive characteristics of women

S.no	Questions	Response
10.	Have you had any birthing experience? **If no,skip to Q.12**	1.Yes 2.No
11.	If yes in **Q. 10,** How much parity do you have?	_____
12.	Age at first sexual intercourse in years	_____years
13.	History of multiple sexual partner	1.Yes 2.No
14.	Ever used modern contraceptive method in the life time	1.Yes 2.No
15.	Modern contraceptive use during data collection **If no,skip to Q.17**	1.Yes 2.No
16.	If yes, what type of modern contraceptive are you using?	1.Injection 2.Pill 3.Loop 4.Implant 5.Other
17.	Is there a history of cervical cancer in the family?	1.Yes 2.No 3.Don't know
18.	Self-reported history of STI during life time	1.Yes 2.No 3.Don't know
19.	Self-reported HIV sero status	1. positive 2. negative 3. Don't knows

Part 3: Questions assessing women's source of information on cervical cancer and CC

screening

S.no	Questions	Response
20.	Have you ever heard about cervical cancer? **If no,skip to part 4**	1.Yes 2.No
21.	If yes from where did you heard it at last time?	1.Tv/radio 2.Friend 3.Neighbour 4.Family/close relative 5.Husband 6.Health care provider 7.Other, specify
22.	Have you ever heard about cervical cancer screening?	1.Yes 2.No
23.	If yes, from where did you hear it at last time?	1.Tv/radio 2.Friend 3.Neighbour 4.Family/close relative 5.Husband 6.Health care provider 7.Other, specify

Part 4: Questions assessing women's Knowledge on cervical cancer and CC screening

S.no	Questions	Response	
		1. Yes	2.No
	Risk factors of cervical cancer		
24.	Multiple sexual partners increase the risk of cervical cancer.		
25.	Early sexual intercourse is a risk of cervical cancer		
26.	Acquiring HPV is a risk of cervical cancer		
27.	Reduced immunity as a result of HIV/AIDS is a risk of cervical cancer		
28.	Cigarette smoking is a risk of cervical cancer		
	Symptom of cervical cancer		

29.	Vaginal discharge is a symptom of cervical cancer		
30.	Vaginal foul smelling is symptom of cervical cancer		
31.	Vaginal bleeding is symptom of cervical cancer		
32.	Pain during coitus is a symptom of cervical cancer		
	Prevention of cervical cancer		
33.	Cervical cancer is preventable		
34.	Avoiding multiple sexual partners prevents cervical cancer		
35.	Avoiding early sexual intercourse prevents cervical cancer		
36.	Quitting smoking prevents cervical cancer		
37.	HPV vaccination prevents cervical cancer		
38.	Screening prevents cervical cancer		
	Treatment for cervical cancer		
39.	Cervical cancer can be cured in its earliest stages		
40.	Do you know about a cervical cancer therapy method **If no,skip to Q.44**		
41.	Surgery is a treatment modality for cervical cancer		
42.	Chemotherapy is a treatment modality for cervical cancer		
43.	Radiation is a treatment modality for cervical cancer		
	Screening Frequency		
44.	Screening frequency for women 30-49 years old is once a year		
45.	Screening frequency for women 30-49 years old is every 3 years		
46.	Screening frequency for women 30-49 years old is every 5 years		

Part 5. Questions to asses Cervical Cancer screening status of study participant

S.no	Questions	Response
47.	Reason of current health facility visit	1.maternal and child health services 2. Laboratory service 3.OPD 4. Others……

48.	Were there CC screening education/counseling services during your visit in the Facility? **If no,skip to Q.52**	1.Yes 2.No 3. Don't know
49.	If yes, have you been present and informed about it?	1. Yes 2. No
50.	If No, what is your reason? **and skip to Q.52**	_____
51.	If yes, did you screen after that?	1. Yes 2. No
52.	Have you ever screened in the past? **and skip to part 6**	1. Yes 2. No
53.	When did you screen?	_____
54.	Distance from our home to health facility	1. Far 2. Near by
55.	If yes how many time did you under gone screening	1. One 2. Two 3. Three 4. More than three
56.	If the women performed the test, what was the test result?	1.positive 2.negative 3.suspecious for pre-cancerous
57.	If you have experienced screening, in what type of clinics have you done it? (Choose all that apply)	1. private clinic 2. public facilities 3. NGO clinic in town

Part 6: Health facility related barrier for CC screening at the selected facilities (for both screened and non-screened women)

S.no	Questions	Response		
	What do you think the reasons behind women refusing to have cervical cancer screenings?	Yes	No	Don't know
58.	Lack of female screeners			
59.	I want to do it in the private sector			
60.	Lack of privacy			

61.	Not recommended by health worker			
62.	A skilled provider is not available/ provider incompetency			
63.	Lack of trust/Miss-trust and lack of attention by a trained provider			
64.	Unaware of the location of the screening test			
65.	Shortage of time			
66.	Transportation problem			
67.	what is your transportation method to reach for the health facility	1.foot 2.Public bus 3.Taxi 4.Private motor bicycles, own car 5.Other method		
68.	Service interruption	Yes	No	Don't know
69.	weak program organization and implementation			
70.	Negative past experiences in healthcare services			
71.	Negative relationship with healthcare provider			
72.	Other life priorities			
73.	Language constraint to communicate with the provider			
74.	Lack of close follow-up of the screening program			
75.	Lack of screening equipment and supplies			
76.	Embarrassment			
77.	Fear of the screening process/pain			
78.	Fear of positive result/fatalism			
79.	Low social support			
80.	Cultural differences/cultural beliefs			
81.	Social stigma about women's health			
82.	Traditional healer			
83.	Religious beliefs			
84.	Feeling healthy			
85.	Emotional discomfort about the screening test			
86.	Poor hygiene in healthcare services			

87.	Lack of advocacy and promotion of screening program			
88.	Lack of supervision and support for patients			

Part 7: Health facility related facilitator for CC screening at the selected facilities (for both screened and non-screened women)

S.no	Questions	Response		
	What do you think the reason for women agreeing to get screened for cervical cancer?	Yes	No	Don't know
89.	Having female service providers			
90.	Not being concerned about gender of service providers			
91.	Having health insurance			
92.	Availability of skilled provider			
93.	Being informed about cervical cancer by health professionals			
94.	Getting screened for any reproductive healthcare services			
95.	knowing the availability of cervical cancer screening service			
96.	knowing someone diagnosed with cervical cancer			
97.	Feeling at risk			
98.	Experiencing signs / symptoms of CC			
99.	Provider knowing local language			
100.	Family or spousal support			
101.	Having private room			
102.	Emotional comfort about the screening test			
103.	Good hygiene in healthcare services			
104.	Good program organization and implementation			
105.	Positive past experiences in healthcare services			
106.	Positive relationship with healthcare provider			
107.	Abundance of screening equipment and supplies			
108.	Abundance of close follow-up of the screening program			
109.	Abundance of community engagement, advocacy and promotion of screening program			

110.	Abundance of supervision and support for patients			

Thank you for your time!

Annex IV: qualitative interview guide for screened or age eligible non-screened women

Name of HF		
Age		
Marital status		
Education status		
Occupation		

Thank you for taking the time to talk with me. I want to learn more about the facilitators and barriers for cervical cancer screening.

1. Can you tell me why you come to this facility?

1) Individual level

I. Attitudes, awareness and knowledge about cancer/cervical cancer

2. Have you ever heard about cervical cancer and What is the first thing that you think when you hear the word cancer (Probe: your knowledge, cause)
3. Where can you go for testing and treatment if you see sign and method of screening and treatment do you know?(probe: benefits of early cervical cancer screening)

II. Perceived susceptibility

4. What do you think the risk of having cervical cancer? (Probe: Why, early detection, frequency of screening, cause(HPV))
5. Can you share your experience of being screened for cervical cancer? (Probe: did you face any challenges, pain? how was it explained to you/did you understand the process?)

III. Perceived severity

6. What do you know about the complications of cervical cancer? (Probe: do you know anyone who died of cervical cancer?)

IV. Perceived barriers

7. What are your/others difficulties/challenges that prevent you/them from going for cervical cancer screening?

8. What are the reasons that facilitates or help you to seek for cervical cancer screening?

2) Interpersonal level

I. Cultural and religious belief

9. Does your culture/religion hold any beliefs about cervical cancer? (Probe: what are they? how is it diagnosed, how is it treated)

II. Stigma

10. What people belief about CC and What would your/others reaction/belief if you hear that a close friend/relative was diagnosed with cervical cancer?

- Any additional suggestions or idea you want to share with me or if there is anything you want to add?

Thank you for your time

Annex V: qualitative interview guide for health care providers (doctors, nurses, and administrators like medical director)

Name of HF		
Age		
Sex		
Marital status		
Education status		
Profession/Occupation		
Work experience		
Setting or ward		

1. What can you tell me about cervical cancer in Ethiopia? (Probes: perception of HCP and patients)
2. What do you think the importance of cervical cancer screening in Ethiopia and how do you feel about the government's efforts?
3. What types of screening/treatments are available/ common here in your health facility? (Pros and cons of those methods?)
4. What do you think on the preference of screening method for the clients? (Probing: what measures taken to comply with their preferences? What influences the provider not to fulfill client preference?
5. What are the health system related enablers for providers and patients to offer cervical cancer screening in your the health system?(probe: if there is best practice that you share with us)
6. What are health system related barriers for providers and patients to offer cervical cancer screening in your facility?
7. What recommendations /suggestions would you raise to make for the country to enhance cervical cancer screening uptake specifically at the primary health system?

- Do you have any additional suggestion you want to tell me about health system related facilitators, and barriers for cervical cancer screening uptake?

Thank you for your time

ክፍል አንድ፡- የጥናት ማብራሪያ (መረጃ) ቅፅ

***ርዕስ**: በኦሮሚያ፣ ኢትዮጵያ ውስጥ በሚገኙ የመጀመሪያ ደረጃ የጤና አጠባበቅ ተቋማት ውስጥ በሴቶች የማህፀን በር ካንሰር ቅድመ ምርመራ የማድረግ መጠን እና ለምርመራው ከጤና ሰርዓቱ ጋር ተያያዥ አመቻቾች እና እንቅፋቶችን መገምገም።*

ዋና ተመርማሪ፡ ሜላት አምበርብር

***ድርጅት:** የአዲስ አበባ ዩኒቨርሲቲ የህብረተሰብ ጤና ትምህርት ቤት*

ጤና ይስጥልኝ! ስሜ _____ይባላል። እኔ ለምርምር መረጃ ሰብሳቢ ነኝ። እዚህ የተገኘሁት በአዲስ አበባ ዩኒቨርስቲ የህብረተሰብ ጤና ተማሪ በሆነችው ሜላት አምበርብር ምትክ ነው። ተማሪዋ የማህፀን በር ካንሰር ቅድመ ምርመራ ስለማድረግ በተመለከተ ህክምና መስጫ ክሊኒኮች ውስጥ ክትትል በማድረግ ላይ ያሉ ሴቶች ላይ የሁለተኛ ዲግሪ ማሟያ ጥናት በማካሄድ ላይ ትገኛለች። ይህም የማህጸን በር ካንሰር ቅድመ ምርመራ ስለማድረግ ጠቋሚ ምልክቶች ምን እንደሆኑ ማወቁ ጠቃሚና ተግባራዊ ሊሆኑ የሚችሉ የመፍትሔ እርምጃዎችን ለመውሰድ ስለሚያስችል ነው። እርስዎ በዚህ ጥናት ላይ እንዲሳተፉ ተመርጠዋል። ምርጫው የተካሄደው በግምታዊ አመራረጥ ነው። በጥናቱ ውስጥ ለመሳተፍ ወይም ላለመሳተፍ ከመወሰነዎ በፊት የጥናቱን ዓላማ፣ ማንኛውም ችግሮች፣ ጥቅማጥቅሞች፣ ሒደትና ከእርስዎ የሚጠበቀው ምን እንደሆነ ልገልፅለዎት እወዳለሁ።

የጥናቱ አላማ፡- በኦሮሚያ በሚገኙ የመጀመሪያ ደረጃ የጤና አገልግሎት መስጫ ተቋማት የማህፀን በር ካንሰር ቅድመ ምርመራ ለማድረግ በተመለከተ የጤና ተቋምን የተመለከቱ ምቹ ሁኔታዎች ወይም መሰናክሎችን ማጥናት

የጥናቱ ሒደት፡- ጥናቱ የሚከናወነው ፊት ለፊት በሚደረግ ቃለ-መጠይቅ ሲሆን ቃለ መጠይቅ አድራጊውም ጥያቄዎችን ከስልክ እያየ የሚጠይቅዎት ይሆናል። እርስዎ እንደፈቀዱ በጥናቱ ለመሳተፍ መስማማትዎን በስምምነት ፎረሙ ላይ ከፈረሙ በኋላ ቃለ መጠይቅ አድራጊው ከመጠይቁ ላይ ጥያቄዎችን ተራ በተራ እያነሳ በመጠየቅ የሚሰጧቸውን ምልሾች በመጠይቁ ላይ የሚፅፍ ይሆናል። ቃለ-መጠይቁ አርባ ደቂቃዎች ያህል ሊወስድ ይችላል።

የጥናቱ ጥቅማጥቅም፡- በጥናቱ በመሳተፍዎ የሚያገኙት ቀጥተኛ ጥቅማ ጥቅም የለም። ሆኖም ግን የጥናቱ ውጤት በማህፀን ጫፍ ካንሰር ላይ ለሚሰሩ ተቋማት ማለትም ለሆስፒታል፣ ለ ጤና ቢሮ፣ አዲስ አበባ ዩኒቨርስቲ እና ሌሎች የጤና ጥበቃ ሚኒስቴርና መንግስታዊ ያልሆኑ ድርጅቶች የሚደርስ ሲሆን ይህም የማህፀን ጫፍ ካንሰር ምርመራ ስለማድረግ ጠቃሚ እርምጃዎችን እንዲወስዱ ያግዛቸዋል።

የጥናቱ ጉዳት፡- በዚህ ጥናት ላይ በመሳተፍዎ ምንም አይነት ጉዳት የለም። ሆኖም ግን ጥያቄዎችን ለመመለስ አርባ ደቂቃ ያህል ልንወስድብዎት እንችላለን።

የተሳታፊዎች መብት፡- በዚህ ጥናት ውስጥ ለመሳተፍ ወይም ላለመሳተፍ ሙሉ ነፃነት አለዎት። የጥናቱ አካል ለመሆን ካልፈለጉ በእርስዎ ላይ ምንም የሚያመጣው ጉዳት የሌለ ከመሆኑም በላይ ምንም አይነት ጥቅም የሚያሳጣዎም አይደለም። በጥናቱ ላይ መቀጠል የማይችሉበት ነገር ከገጠመዎት በየትኛውም ሰዓት አቋርጠው መውጣት ይችላሉ። እነደዚሁም ግልጽ ያልሆነልዎት ነገር ካለ በየትኛውም ሰዓት መጠየቅ ይችላሉ።

ምስጢራዊነት፡- ለእኔ የሚሰጡኝ መረጃዎች ሁሉ በጥብቅ ምስጢር የሚጠበቁ ሲሆን በተጨማሪም በአስተማማኝና ደህንነቱ በተጠበቀ ስፍራ ይቀመጣሉ፡፡ ይህንኑም ለማረጋገጥ ሲባል ስምዎትም ሆነ ሌላ መለያዎ በየትኛውም የመጠይቁ ክፍል ላይ አይሰፍርም፡፡ ዋነኛው የጥናቱ አጥኚ ብቻ ዝርዝር መረጃዎችን የሚያውቅ ሲሆነ ጥናቱ እንዳበቃም የሚሰረዝ ይሆናል፡፡

በዚህ ጥናት ላይ ለመካተት ፈቃድዎ ነውን?

አይ (አመሰግኖ መሰናበት) 2. አዎ (ወደ ቃል ስምምነት ማለፍ)

አድራሻ፡ስለ ጥናቱ በማንኛውም ጊዜ ማንኛውንም ጥያቄ መጠየቅ ከፈለጉ የሚከተለውን አድራሻ መጠቀም ይችላሉ፡፡

የጥናቱ ባለቤት ሰም፡ ሜላት አምበርብር

ሰልክ ቁጥር፡+251901253507

የመጀመሪያ አድቫይዘር ስም፡ ዶክተር ሙሉቀን ግዛው

ሰልክ ቁጥር፡+251966809345

ክፍል ሁለት፡ የስምምነት ቅፅ

የጥናቱ ዓላማ፣ ጥቅማጥቅም፣ ጉዳቶች፣ ሒደቶችና ሚስጥራዊነት በሚገባኝ ቋንቋ ተነቦልኝ ተረድቻለሁ፡፡ በተጨማሪም በጥናቱ መሳተፍ ሆነ ከጥናቱ በአስፈለገኝ ሰዓት መውጣት ሙሉ በሙሉ በእኔ ፈቃደኝነት ላይ የተመሰረተ መሆኑን ተረድቻለሁ፡፡

በዚህ ጥናት ላይ ለመሳተፍ ተስማምቻለሁ፡፡

ተሳታፊ፡

ፊርማ (ፊርማ ወይም የጣት አሻራ) _____ ቀን_____

የተቋሙ/የሆስፒታል/የጤና ጣቢያ ስም.....

ቀን፡- _____/____/____

የመረጃ ሰብሳቢ ስም..... ፊርማ.....ቀን.....

የተቆጣጣሪው ስም..... ፊርማ.....ቀን.....

Amharic version tool

አማርኛ መጠይቅ

ክፍል 1፡ ማህበራዊ ስነ-ሕዝብ ባህሪያት

ተ.ቁ	ጥያቄ	ምላሽ
1.	ስንት አመትህ ነው?	_____አመት
2.	ሃይማኖትህ ምንድን ነው?	1.ኦርቶዶክስ 2. መስሊም 3. ፕሮቴስታንት 4. ሌላ(ግለጽ)
3.	የመኖሪያ ቦታዎ?	1. ከተማ 2. ገጠር 1. ያላገባ 2. ያገባ 3. የተፋቱ 4. ባል የሞተባት
4.	የጋብቻ ሁኔታዎ?	1. ያላገባ 2. ያገባ 3. የተፋቱ 4. ባል የሞተባት
5.	የትምህርት ደረጃዎ ምን ያህል ነው?	1. ያልተማረች 2. መጻፍ እና ማንበብ የሚችል 3. አንደኛ ደረጃ 4. ሁለተኛ ደረጃ 5. ከፍተኛ ትምህርት ቤት(12+)
6.	ስራዎ ምንድን ነው?	1. የቤትእመቤት 2. ስራ አጥ 3. የመንግስት ሰራተኛ 4. የግል ሰራተኛ 5. ተማሪ 6. ቀን ሰራተኛ 7. የግል ንግድ 8. ሌላ(ግለጽ)
7.	በ ተ.ቁ 4 ላይ ካገባሽ የባልሽ የትምህርት	1. ያልተማረ

	ደረጃ ምን ያህል ነው?	2. መጻፍ እና ማንበብ የሚችል 3. አንደኛ ደረጃ 4. ሁለተኛ ደረጃ 5. ከፍተኛ ትምህርት ቤት(12+)
8.	በ ተ.ቁ 4 ላይ ካገባ የባልሽ ስራ ምንድን ነው?	1. ስራ አጥ 2. የመንግስት ሰራተኛ 3. የግል ሰራተኛ 4. ተማሪ 5. ቀን ሰራተኛ 6. የግል ንግድ 7. ሌላ(ግለጽ)
9.	ወርሃዊ ገቢ (የኢትዮጵያ ብር)	_____ብር

ክፍል 2: የሴቶች ግለሰባዊ እና የመራቢያ ባህሪያት

ተ.ቁ	ጥያቄ	ምላሽ
10.	የመውለድ ልምድ አሎት?	1.አዎ 2.አይ
11.	በ ተ.ቁ 10 አዎ ከሆነ፣ ምን ያህል የልጅ ብዛት አለዎት?	_____
12.	የግብረ ሥጋ ግንኙነት የጀመሩበት ዕድሜ	_____ ዓመት
13.	የበርካታ ወሲባዊ አጋሮች ታሪክ አሎት	1.አዎ 2.አይ
14.	በህይወት ዘመን ዘመናዊ የእርግዝና መከላከያ ዘዴዎችን ተጠቅመዋል	1.አዎ 2.አይ
15.	መረጃ በሚሰበሰብበት ጊዜ ዘመናዊ የእርግዝና መከላከያ ዘዴዎችን ተጠቅመዋል	1.አዎ 2.አይ
16.	አዎ ከሆነ፣ ምን አይነት ዘመናዊ የእርግዝና መከላከያ እየተጠቀሙ ነው?	1. መርፌ 2. ክኒን 3. ሉፕ 4. እምፕላንት 5. ሌላ
17.	በቤተሰብ ውስጥ የማኅጸን በር ካንሰር ታሪክ አለ?	1. አዎ 2. አይ

		3. አላቀውም
18.	በህይወት ጊዜ የአባለዘር በሽታ ታሪክ አሎት	1. አዎ 2. አይ 3. አላቀውም
19.	ኤች አይ ቪ በደምሽ ውስጥ አለ	1.አዎ 2.የለም 3.አላውቅም

ክፍል 3: የማህፀን በር ካንሰር እና ቅድመ ምርመራን በተመለከተ የሴቶችን የመረጃ ምንጭ የሚገመግሙ ጥያቄዎች

ተ.ቁ	ጥያቄ	ምላሽ
20.	ስለ የማህፀን በር ካንሰር ሰምተው ያዉቃሉ?	1.አዎ 2.አይ
21.	አዎ ከሆነ ለመጨረሻ ጊዜ ከየት ሰሙ?	1.ቲቪ/ሬዲዮ 2. ጓደኛ 3. ጎረቤት 4. ቤተሰብ / የቅርብ ዘመድ 5. ባል 6. የጤና ባለሙያ 7. ሌላ, ይግለጹ
22.	ስለ የማህፀን በር ካንሰር ቅድመ ምርመራ ሰምተው ያዉቃሉ?	1.አዎ 2.አይ
23.	አዎ ከሆነ፣ ለመጨረሻ ጊዜ ከየት ሰሙ?	1.ቲቪ/ሬዲዮ 2. ጓደኛ 3. ጎረቤት 4. ቤተሰብ / የቅርብ ዘመድ 5. ባል 6. የጤና ባለሙያ 7. ሌላ, ይግለጹ

ክፍል 4: በማህፀን በር ካንሰር እና ቅድመ ምርመራ ላይ የሴቶችን እውቀት የሚገመግሙ ጥያቄዎች

ተ.ቁ	ጥያቄ	ምላሽ	
		1. አዎ	2. አይ
የማህፀን በር ካንሰር ስጋት ምክንያቶች			
24.	ብዙ የግብረ-ሥጋ ግንኙነት አጋሮች የማህፀን በር ካንሰር አደጋ ይጨምራሉ		
25.	የግብረ ሥጋ ግንኙነት ቀደም ብሎ መጀመር ለማህፀን በር ካንሰር መያዝ ምክንያት ነው		
26.	ኤች ፒ ቪ ለማህፀን በር ካንሰር መያዝ ምክንያት ነው		
27.	በኤችአይቪ/ኤድስ ምክንያት የመከላከል አቅም መቀነስ ለማኅጸን በር ካንሰር መያዝ ምክንያት ነው		
28.	ሲጋራ ማጨስ ለማህፀን በር ካንሰር መያዝ ምክንያት ነው		
የማህፀን በር ካንሰር ምልክት			
29.	የሴት ብልት ፈሳሽ የማህፀን በር ካንሰር ምልክት ነው		
30.	የሴት ብልት መጥፎ ሽታ የማህፀን በር ካንሰር ምልክት ነው		
31.	የሴት ብልት ደም መፍሰስ የማህፀን በር ካንሰር ምልክት ነው		
32.	በግብረ ሥጋ ግንኙነት ወቅት ህመም የማህፀን በር ካንሰር ምልክት ነው		
የማህፀን በር ካንሰር መከላከል			
33.	የማህፀን በር ካንሰር መከላከል ይቻላል		
34.	ብዙ የግብረ ሥጋ ግንኙነት አጋሮችን ማስወገድ የማህፀን በር ካንሰርን ይከላከላል		
35.	ቀደሞ ሚጀመር የግብረ ሥጋ ግንኙነትን ማስወገድ የማህፀን በር ካንሰርን ይከላከላል		
36.	ማጨስ ማቆም የማህፀን በር ካንሰርን ይከላከላል		
37.	የኤች ፒ ቪ ክትባት የማህፀን በር ካንሰርን ይከላከላል		
38.	የማህፀን በር ካንሰር ቅድመ ምርመራ ማድረግ የማህፀን በር ካንሰርን ይከላከላል		
የማህፀን በር ካንሰር ሕክምና			
39.	የማህፀን በር ካንሰር በመጀመሪያዎቹ ደረጃዎች ሊድን ይችላል		
40.	ስለ ማህፀን በር ካንሰር ሕክምና ዘዴ አላውቅም		
41.	ቀዶ ጥገና የማህፀን በር ካንሰርን ለማከም የሚደረግ ሕክምና ነው።		
42.	ኪሞቴራፒ የማህፀን በር ካንሰርን ለማከም የሚደረግ ሕክምና		

	ነው።		
43.	ጨረራ የማህፀን በር ካንሰርን ለማከም የሚደረግ ሕክምና ነው።		
የማህፀን በር ካንሰር ቅድመ ምርመራ ድግግሞሽ			
44.	ከ30-49 አመት ለሆኑ ሴቶች የማጣሪያ ድግግሞሽ በዓመት አንድ ጊዜ ነው		
45.	ከ30-49 አመት ለሆኑ ሴቶች የማጣሪያ ድግግሞሽ በየ 3 ዓመቱ ነው		
46.	ከ30-49 አመት ለሆኑ ሴቶች የማጣሪያ ድግግሞሽ በየ 5 ዓመቱ ነው።		

ክፍል 5፡ የጥናት ተሳታፊውን የማህፀን በር ካንሰር ቅድመ ምርመራ ሁኔታን ለመገምገም የሚቀርቡ ጥያቄዎች

ተ.ቁ	ጥያቄ	ምላሽ
47.	የወቅቱ የጤና ተቋም ጉብኝት ምክንያት	1. የእናቶች እና የህፃናት ጤና አገልግሎቶች 2. የላብራቶሪ አገልግሎት 3. የተመላላሽ ታካሚ 4. ሌላ
48.	በተቋሙ ውስጥ ባደረጉት ጉብኝት የማህፀን በር ካንሰር ቅድመ ምርመራ ትምህርት/የምክር አገልግሎት ነበር?	1. አዎ 2. አይ 3. አላቀውም
49.	አዎ ከሆነ፣ ተገኝተው ስለ ጉዳዩ መረጃ አግኝተዋል?	1. አዎ 2. አይ
50.	አይ ከሆነ, የእርስዎ ምክንያት ምንድን ነው?	
51.	አዎ ከሆነ፣ ከዚያ በኋላ ምረመራውን አድርገዋል?	1. አዎ 2. አይ
52.	ከዚ በፊት ምርመራዉን አድርገው ያውቃሉ?	1. አዎ 2. አይ
53.	መቼ ነው ምርመራዉን ያደረጉት?	_____
54.	ቤትዎ ከጤና ተቋሙ ያለው ርቀት	1. ሩቅ

		2.አቅራቢያ
55.	አዎ ከሆነ ምን ያህል ጊዜ ምርመራ አርገዋል?	1. አንድ ጊዜ 2. ሁለት ጊዜ 3. ሶስት ጊዜ 4. ከዛ በላይ
56.	ምርመራውን ካደረጉ የምርመራው ውጤት ምን ነበር?	1. አዎንታዊ 2. አሉታዊ 3.ለቅድመ-ካንሰር ተጠርጣሪ
57.	ምርመራዉን አድርገው ከሆነ በየትኛው የህክምና መስጫ ተቋም ውስጥ አደረጉ?	1. የግል የህክምና መስጫ ተቋማት 2. የመንግስት የህክምና መስጫ ተቋማት 3. በከተማ ዉስጥ የሚገኙ ኤን ጂ ኦ የህክምና መስጫ ተቋማት 4. ከከተማ ዉጭ ያሉ የህክምና መስጫ ተቋማት

ክፍል 6 ፡ በተመረጡት ፋሲሊቲዎች ለማህፀን በር ካንሰር ቅድመ ምርመራ ከጤና ስርዓት ጋር የተያያዙ መሰናክሎች (ለሁሉም ተሳታፊ)

ተ.ቁ	ጥያቄ	ምላሽ		
	ሴቶች የማህፀን በር ካንሰር ቅድመ ምርመራ ለማድረግ ፈቃደኛ ማይሆኑበት ምክንያቶች ምን ይመስላችኋል?	አዎ	አይ	አላቀውም
58.	ምርመራውን የሚሰጡ ሴት ባለሞያዎች እጥረት			
59.	በግሉ ዘርፍ ውስጥ ማድረግ እፈልጋለሁ			
60.	የግላዊነት እጦት			
61.	በጤና ባለሙያ ምክር አልተሰጠኝም			
62.	ችሎታ ያለው አገልግሎት አቅራቢ አይገኝም			

63.	በሰለጠነ አቅራቢ አለመተማመን እና ትኩረት ማጣት			
64.	ምርመራው ያለበትን ቦታ አለማወቅ			
65.	የጊዜ እና የመንገግ ገደብ			
66.	ወደ ጤና ተቋሙ ለመድረስ የእርስዎ የመንገግ ዘዴ ምንድነው?	1.እግር 2. የህዝብ አውቶቡስ 3. ታክሲ 4. የግል ሞተር ብስክሌቶች, የራሱ መኪና 5. ሌላ ዘዴ		
67.	የአገልግሎት መቆራረጥ			
68.	ደካማ የፕሮግራም አደረጃጀት እና አተገባበር			
69.	በጤና አጠባበቅ አገልግሎቶች ውስጥ ያለፉ አሉታዊ ልምዶች			
70.	ከጤና ባለሙያው ጋር አሉታዊ ግንኙነት			
71.	ሌሎች የህይወት ቅድሚያዎች/ለሌሎች ነገሮች ቅድሚያ መስጠት			
72.	ከጤና ባለሙያው ጋር ለመግባባት የቋንቋ ገደብ			
73.	የቅድመ ምርመራ ፕሮግራሙ ላይ የቅርብ ክትትል አለመኖር			
74.	የቅድመ ምርመራ መሳሪያዎች እና አቅርቦቶች እጥረት			
75.	የማፈር ስሜት			
76.	የቅድመ ምርመራ ሂደቱን /ህመሙን መፍራት			
77.	አዎንታዊ ውጤትን መፍራት/በሽታው አለቦት መባልን መፍራት			
78.	ዝቅተኛ ማህበራዊ ድጋፍ			
79.	የባህል ልዩነቶች / የባህል እምነቶች			
80.	ስለ ሴቶች ጤና ማህበራዊ መገለል			
81.	ባህላዊ ህክምና			
82.	ሃይማኖታዊ እምነቶች			

83.	ጤናማ ነኝ ብሎ ማሰብ			
84.	በስሜት ደረጃ በቅድም ምርመራ ላይ ምቾት ማጣት			
85.	በጤና አጠባበቅ አገልግሎት ደካማ ንጽህና መኖር			
86.	የቅድመ ምርመራ ፕሮግራም ማስተዋወቅ እጥረት			
87.	ለታካሚዎች ክትትል እና ድጋፍ እጥረት			

ክፍል 7: በተመረጡት ፋሲሊቲዎች ለማህፀን በር ካንሰር ቅድመ ምርመራ ከጤና ስርዓት ጋር የተያያዙ አመቻች ሁኔታዎች (ለሁሉም ተሳታፊ)

ተ.ቁ	ጥያቄ	ምላሽ		
	ሴቶች የማህፀን በር ካንሰርን ለመመርመር የሚስማሙበት ምክንያት ምን ይመስሎታል?	አዎ	አይ	አላቀውም
88.	ሴት አገልግሎት ሰጭዎች መኖር			
89.	ስለ አገልግሎት ሰጪዎች ጾታ አለመጨነቅ			
90.	የጤና ኢንሹራንስ መኖር			
91.	የሰለጠነ አቅራቢ መገኘት			
92.	ስለ የማህፀን በር ካንሰር በጤና ባለሙያዎች ማሳወቅ			
93.	ለማንኛውም የስነ ተዋልዶ ጤና አገልግሎት ምርመራ ማድረግ			
94.	የማህፀን በር ካንሰር ምርመራ አገልግሎት መኖሩን ማወቅ			
95.	የማህፀን በር ካንሰር ያለበትን ሰው ማወቅ			
96.	የተጋላጭነት ስሜት			
97.	የማህፀን በር ካንሰር ምልክቶችን ማስተዋል			
98.	ባለሙያው በአካባቢው የሚነገረውን ቋንቋ መቻል			
99.	የቤተሰብ ወይም የትዳር ጓደኛ ድጋፍ			
100.	የግል ክፍል መኖር			
101.	በስሜት ደረጃ በቅድም ምርመራ ላይ ምቾት መኖር			
102.	በጤና አጠባበቅ አገልግሎቶች ውስጥ ጥሩ ንፅህና መኖር			
103.	ጥሩ የፕሮግራም አደረጃጀት እና አተገባበር			
104.	በጤና አጠባበቅ አገልግሎቶች ውስጥ ያለፉ አዎንታዊ ልምዶች			
105.	ከጤና እንክብካቤ አቅራቢ ጋር አዎንታዊ ግንኙነት			
106.	የምርመራ መሳሪያዎች እና አቅርቦቶች በበቂ ሁኔታ መኖር			

107.	የቅድመ ምርመራ ፕሮግራም ቅርብ ክትትል መኖር			
108.	በቂ የማህበረሰብ ተሳትፎ ና የቅድም ምርመራ መርሃ ግብር ማስተዋወቅ			
109.	ለታካሚዎች ክትትል እና ድጋፍ መኖር			

አመሰግናለሁ::

የኳሊታቲቭ ጥያቄ

አባሪ አራት፡ ዕድሜያቸው ብቁ የሆኑ የማህጸን በር ካንሰር ቅድመ ምርመራ ያረጉ ወይም ያላረጉ ሴቶች የቃለ መጠይቅ መመሪያ

የጤና ማእከል ስም		
ዕድሜ		
የጋብቻ ሁኔታ		
የትምህርት ሁኔታ		
የሥራ ሁኔታ		

ከእኔ ጋር ለመነጋገር ጊዜ ስለወሰድሽ አመሰግናለሁ:: ስለ የማኅጸን በር ካንሰር ምርመራ አመቻቾች እና እንቅፋቶች የበለጠ ማወቅ እፈልጋለሁ::

1. ለምን ወደዚህ ተቋም እንደመጣህ ልትነግረኝ ትችላለህ?

<u>1) የግለሰብ ደረጃ</u>

I. ስለ ካንሰር/የማህፀን በር ካንሰር ያለ አመለካከት፣ ግንዛቤ እና እውቀት

2. ስለ የማህፀን በር ካንሰር ሰምተህ ታውቃለህ እና ካንሰር የሚለውን ቃል ስትሰማ በመጀመሪያ የምታስበው ነገር ምንድን ነው (መመርመሪያ: የእርስዎ እውቀት በዚ ጉዳይ, ሰለምክንያቱስ)

3. ምልክቱን ካዩ ለምርመራ እና ለህክምና የት ይሄዳሉ? ሰለማኅጸን በር ካንሰር ቅድመ ምርመራው እና የሕክምና ዘዴዉ ምን ያዉቃሉ?(መመርመሪያ፡ የማኅጸን በር ካንሰር ቅድመ ምርመራው ጥቅሞች ምን ይመሰላችሁኟል)

II. የተጋላጭነት ስሜት

4. የማህፀን በር ካንሰር የመያዝ እድሎ ምን ያክል ይመስሎታል? (መመርመሪያ፡ ለምን፣ ቀደም ብሎ ማወቅ ወይም ቅድመ ምርመራ ማረግ ያልው ጥቅም፣ የቅድመ ምርመራዉ ድግግሞሽ፣ መንስኤ(HPV))

5. የማህፀን በር ካንሰር ቅድም ምርመራ ልምድዎን ማካፈል ይችላሉ? (መመርመሪያ፡ ማንኛውም ፈተና/ችግር አጋጥሞህ ነበር?፣ ህመም ነበረው? ሂደቱን ተረድተዉታል? ሂደቱን እንዴት ትገልጹታላችሁ?)

III. የከባድነት ግንዛቤ

6. የማጎጸን በር ካንሰር ስለሚያስከትላቸው ችግሮች ምን ያውቃሉ? (መመርመሪያ፡ በማህፀን በር ካንሰር የሞተ ሰው ያውቃሉ?)

IV. የተገነዘቡ መሰናክሎች

7. እርስዎን/ሌሎች ሴቶችን ለማህፀን በር ካንሰር ቅድመ ምርመራ እንዳትሄዱ/እንዳይሄዱ የሚከለክሏቸው የእርስዎ/የሌሎች ሴቶች ችግሮች/ተግዳሮቶች ምንድናቸው? (መመርመሪያ፡ ስሜታዊነት ወይም ከግላዊነት ጋር በተያያዘ)

8. የማህፀን በር ካንሰር ቅድመ ምርመራ ለማድረግ የሚያመቻቹ ወይም የሚያግዙ ምክንያቶች ምንድን ናቸው?

2) በግለሰቦች ደረጃ

I. ባህላዊ እና ሃይማኖታዊ እምነት

9. ባህልዎ/ሃይማኖትዎ ስለ ማጎጸን በር ካንሰር ህመም ምን ዓይነት እምነት አላቸው? (መመርመሪያ፡ ምንድን ናቸው? እንዴት ነው የሚመረመረው፣ እንዴት ይታከማል)

II. መገለል

10. ሰዎች ስለማጎጸን በር ካንሰር ህመም ምን ያምናሉ እና የቅርብ ጓደኛዎ/ዘመድ የማጎጸን በር ካንሰር ህመም እንዳለበት ከሰሙ እርስዎ/ሌሎች ምን ምላሽ ይሰጣሉ?

- ከእኔ ጋር ማጋራት የምትፈልጉት ተጨማሪ ጥቆማዎች ወይም ሀሳብ ወይም ማከል የምትፈልጉት ነገር ካለ?

አመሰግናለሁ::

አባሪ አምስት፡ የቃለ መጠይቅ መመሪያ ለጤና እንክብካቤ አቅራቢዎች (ዶክተሮች፣ ነርሶች እና አስተዳዳሪዎች እንደ ሕክምና ዳይሬክተር)

የጤና ማእከል ስም		
ዕድሜ		
ጸታ		
የጋብቻ ሁኔታ		
የትምህርት ሁኔታ		
የሙያ/የስራ ሁኔታ		
የስራ ልምድ		
ማዋቀር ወይም ዋርድ		

1. በኢትዮጵያ ስላለው የማህፀን በር ካንሰር በሽታ ምን ሊነግሩኝ ይችላሉ? (*መመርመሪያ*፡ ስለ ጤና ባለሞያዎች እና ታካሚዎች ግንዛቤ)

2. የማህፀን በር ካንሰር ቅድመ ምርመራ በኢትዮጵያ ያለው ጠቀሜታ ምን ይመስልዎታል እና በዚ ጉዳይ ላይ የመንግስት ጥረትን እንዴት ያዩታል?

3. በጤና ተቋምዎ ውስጥ ምን አይነት የማህፀን በር ካንሰር ቅድመ ምርመራ /የህክምና አይነቶች ይገኛሉ? (*መመርመሪያ*፡ የእነዚያ ዘዴዎች ጥቅሞች እና ጉዳቶች?)

4. ስለታካሚዎች የማህፀን በር ካንሰር ቅድመ ምርመራ ዘዴ ምርጫ ምን ያስባሉ? (*መመርመሪያ*፡ምርጫቸውን ለማክበር ምን እርምጃዎች ተወስደዋል? አቅራቢው/የጤና ባለሞያዉ የታካሚ ምርጫን እንዳያሟላ ምን ተጽዕኖ አሳድሮበታል?

5. የማህፀን በር ካንሰር ቅድመ ምርመራ በጤና ተቋም ውስጥ እንዲካሄድ ለጤና ባለሞያዎች እና ታካሚዎች የሚረዱ ከጤና ስርዓቱ ጋር የተያያዙ አበረታች ምክኒያቶች ምን ምን ናቸው?

6. የማህፀን በር ካንሰር ቅድመ ምርመራ በጤና ተቋም ውስጥ እንዳይካሄድ ለጤና ባለሞያዎች እና ታካሚዎች የሚያረጉ ከጤና ስርዓቱ ጋር የተያያዙ እንቅፋቶች ምን ምን ናቸው?

7. በመጀመሪያ ደረጃ ጤና ተቋም ውስጥ የማህፀን በር ካንሰር ቅድመ ምርመራን ለማካሄድ የሚደረገውን ጥረት ለማጎልበት ለሀገሪቱ/ለባለ ድርሻ አካላት ምን አይነት ምክሮች/አስተያየት ይሰጣሉ?

- **የማኅጸን በር ካንሰር ቅድመ ምርመራን ለማካሄድ ከጤና ስርዓቱ ጋር የተያያዙ እንቅፋቶች እና አበረታች ነገሮችን በተመለከተ ሊነግሩኝ የሚፈልጉት ተጨማሪ አስተያየት አለዎት?**
- **አመሰግናለሁ::**

Dabalata

Kutaa Tokkoffaa: Ibsa Qo’annoo (Odeeffannoo) Jildii

Mata-duree: Sadarkaa qorannoo kaansarii gadameessaa dubartoota dhaabbilee eegumsa fayyaa sadarkaa duraa Oromiyaa, Itoophiyaa, fi haala mijeessitootaa fi gufuulee qorannoo sirna fayyaa waliin walqabatan madaaluu.

Qorataa Muummee: Melat Amberbir

Dhaabbata: Yuunivarsiitii Addis Ababa Mana Barumsaa Fayyaa Hawaasaa

Fayyaa naaf kenni! Maqaa koo jedhama. Ani qorannoof nama daataa walitti qabuudha. Yunivarsiitii Addis Ababaatti barattuu fayyaa hawaasaa kan taate Melat Amberber bakka bu'ee as jira. Barattuun kun dubartoota kilinika keessatti hordofamaa jiran irratti qorannoo kaansarii gadameessaa irratti qorannoo digirii lammaffaa gaggeessaa jirti. Kunis mallattoolee kaansarii gadameessaa jalqabaa beekuun tarkaanfii tarkaanfii fudhachuuf si gargaaruu danda’a. Qorannoon kun akka hirmaattuuf filatamteetta. Filannoon kun filannoo tasaa gaggeeffameera. Qorannicha irratti hirmaachuu fi dhiisuu murteessuu kee dura kaayyoo qorannichaa, rakkoolee, faayidaa, adeemsaa fi maaltu sirraa eegamu ibsuu barbaada.

Kaayyoon qorannichaa: Dhaabbilee eegumsa fayyaa sadarkaa duraa Oromiyaa keessatti dhukkuba kaansarii gadameessaa dafanii adda baasuu ilaalchisee haala mijataa ykn gufuuwwan sirna fayyaa waliin walqabatan qorachuu.

Adeemsa Qorannoo: Qorannoon kun af-gaaffii fuula-fuulatti kan raawwatamu yoo ta’u, gaaffii fi deebii kan godhu bilbilaan gaaffii si gaafata. Unka hayyamaa qorannicha irratti hirmaachuuf walii galte erga mallatteessitee booda, gaafatamaan gaaffii tokko tokkoon si gaafatee deebii kee gaaffilee irratti barreessa. Af-gaaffiin gara daqiiqaa afurtamaa fudhachuu danda’a.

Faayidaa Qorannichaa: Qorannicha irratti hirmaachuudhaan faayidaan kallattiin argamu hin jiru. Haa ta’u malee, bu’aan qorannoo kanaa dhaabbilee kaansarii gadameessaa irratti hojjetan kanneen akka hospitaalota, biiroowwan fayyaa, Yuunivarsiitii Addis Ababa, fi ministeerota eegumsa fayyaa biroo fi dhaabbilee miti mootummaaf kan dhiyaatu yoo ta’u, kunis qorannoo kaansarii gadameessaa irratti tarkaanfiiwwan barbaachisoo akka fudhatan isaan gargaara .

Miidhaa qorannichaa: Qorannicha kana irratti hirmaachuun miidhaa hin qabu. Haa ta’u malee, gaaffiiwwan deebisuuf hanga daqiiqaa afurtamaa fudhachuu dandeenya.

Mirga hirmaattotaa: Qo’annoo kana irratti hirmaachuu fi hirmaachuu dhiisuuf bilisummaa guutuu qabda. Qaama qo’annaa sanaa ta’uu yoo hin barbaanne, miidhaa ykn faayidaan siif hin

jiru. Qo’annoo itti fufuu akka hin dandeenye yoo argite, yeroo barbaaddetti ofirraa baasuu dandeessa. Gaaffii yoo qabaattan yeroo barbaaddanitti gaafachuu dandeessu.

Iccitii: Odeeffannoon isin naaf kennitan hundi iccitii cimaa ta’ee kan eegamu yoo ta’u, bakka nageenya qabuu fi nageenya qabutti ni kuufama. Kana mirkaneessuuf maqaan keessanis ta’e adda baastuu biroo kamiyyuu kutaa gaaffilee kamiyyuu keessatti hin galfamu. Yeroo qorataan ijoo qorannichaa qofti bal'ina isaa beeku akkuma qorannichi xumurameen ni haqama.

Qorannoon kun akka hammatamtu hayyama kee ti?

Lakki(galatoomaa fi nagaa) 2. Eeyyee (Gara waliigaltee jechootaatti ce'uu) .

Teessoo: Yeroo barbaaddetti waa’ee qorannichaa gaaffii kamiyyuu gaafachuu yoo barbaadde, teessoo armaan gadii fayyadamuu dandeessa.

Barreessaan qorannichaa: Melat Amberbir

Lakkoofsa bilbilaa: +251901253507

Maqaa Gorsaa Jalqabaa: Dr. Muluken Gizaw

Lakkoofsa bilbilaa: +251966809345

Kutaa Lammaffaa: Unka Hayyama

Kaayyoon, faayidaan, miidhaan, hojimaata fi iccitiin qorannichaa afaan mijaawaa ta’een akka naaf dubbifame nan hubadha. Dabalataanis yeroo kamiyyuu qorannicha irratti hirmaachuu fi qo’annoo irraa of baasuun guutummaatti kan koo akka ta’e nan hubadha.

Qorannoon kana irratti hirmaachuuf walii gala.

Hirmaataa:

Mallattoo (mallattoo ykn ashaaraa qubaa)_____ guyyaa_____

Maqaa Dhaabbatichaa/Hospitaala/Giddugala Fayyaa.....

guyyaa - _____/____/____

Maqaa Walitti qabaa Odeeffannoo..... Mallattoo…….. Guyyaa…….

Maqaa suppervaayizara……..Guyyaa…….

Afan Oromo version tool

Dabalata Sadii: Qo’annoo baay’inaaf gaaffilee af-gaaffii kenne

Kutaa 1. Gaaffilee amala hawaas-dimoogiraafii hirmaataa qo’annichaa madaaluuf.

S.lakk.	Gaaffilee	Deebii
1.	Umuriin kee meeqa?	_____ waggoota
2.	Amantiin keessan maali?	1. Ortodoksii 2. Muslima 3. Pirootestaantii 4.Kanneenbiroo(ibsi) _____
3.	Bakka jireenyaa keessan?	1. Magaalaa 2. Baadiyyaa
4.	Haalli gaa'ela keessanii maali?	1. Qeenxee 2. kan fuudhe 3. wal hiikan 4. dubartii abbaan manaa irraa du'e
5.	Haalli barnootaa keessan maali?	1. Dubbisuu fi barreessuu kan hin dandeenye 2. Dubbisuu fi barreessuu ni danda'a 3.Sadarkaa tokkoffaa/junior 4.Mana barumsaa sadarkaa lammaffaa 5.mana barumsaa sadarkaa olaanaa(12+)
6.	Hojiin kee maali/ baay'inaan hojii akkamii hojjetta/?	1. Haadha manaa 2. Hin qacaramne 3. Hojjetaa mootummaa 4. hojjetaa dhuunfaa 5. Barataa 6. Hojjetaa guyyaa 7. ofiin of hojjechiisu 8. Kan biroo(ibsi) . _____

7.	Yoo gaa'ela godhatte G. 4, Haalli barnootaa abbaan manaa keetii maali?	1. Dubbisuu fi barreessuu kan hin dandeenye 2. Dubbisuu fi barreessuu ni danda'a 3. Sadarkaa tokkoffaa/junior 4. Mana barumsaa sadarkaa lammaffaa 5. mana barumsaa sadarkaa olaanaa(12+)
8.	Yoo fuudhe G. 4, Hojiin abbaa manaa kee maali?	1. Hin qacaramne 2. Hojjetaa mootummaa 3. hojjetaa dhuunfaa 4. Barataa 5. Hojjetaa guyyaa 6. ofiin of hojjechiisu 7. Kan biroo(ibsi) . _____
9.	Galii ji'aa (birrii Itoophiyaatiin)	_____ birrii

Kutaa 2: Amaloota dhuunfaa fi walhormaataa dubartootaa

S.lakk.	Gaaffilee	Deebii
10.	Muuxannoo da'umsaa qabdaa?	1. Eeyyee 2. Lakki
11.	Yoo eeyyee ta’e G. 10 keessatti, Parity meeqa qabda?	_____
12.	Umuriin yeroo walqunnamtii saalaa jalqabaa waggoota keessatti	_____ waggoota
13.	Seenaa hiriyaa saalqunnamtii dacha	1. Eeyyee 2. Lakki
14.	Bara jireenyaa keessatti mala ittisa ulfaa ammayyaa fayyadamee beeka	1. Eeyyee 2. Lakki
15.	Fayyadama ittisa ulfaa ammayyaa yeroo odeeffannoo walitti qabuu	1. Eeyyee 2. Lakki
16.	Yoo eeyyee ta'e, gosa ittisa ulfaa ammayyaa akkamii fayyadamaa jirta?	1. Lilmoodhaan naqachuu 2. Kiniinii 3. furgaasuu 4.implant gochuu 5. kan biraa
17.	Maatii keessatti seenaan kaansarii gadameessaa ni jiraa?	1. Eeyyee 2. Lakki 3. Hin beeku
18.	Seenaa STI yeroo jireenyaa ofumaan gabaase	1. Eeyyee 2. Lakki 3. Hin beeku
19.	Haala seroo HIV ofumaan gabaafame	1.hiv pozaatiivii qaba 2.hiv negaatiivii ta’uu isaati 3. Hin beeku

Kutaa 3: Gaaffiiwwan madda odeeffannoo dubartootaa kaansarii gadameessaa fi qorannoo CC madaalan

S.lakk.	Gaaffilee	Deebii
20.	Waa'ee kaansarii gadameessaa dhageessanii beektuu?	1. Eeyyee 2. Lakki
21.	Yoo eeyyee ta'e yeroo darbe eessaa dhageessanii?	1.TV/raadiyoo 2. Hiriyaa 3. Ollaa 4. Maatii/fira dhiyoo 5. Abbaa warraa 6. Dhiyeessaa eegumsa fayyaa 7. Kan biroo, ibsi
22.	Waa'ee qorannoo kaansarii gadameessaa dhageessanii beektuu?	1. Eeyyee 2. Lakki
23.	Yoo eeyyee ta'e yeroo darbe eessaa dhageessanii?	1.TV/raadiyoo 2. Hiriyaa 3. Ollaa 4. Maatii/fira dhiyoo 5. Abbaa warraa 6. Dhiyeessaa eegumsa fayyaa 7. Kan biroo, ibsi

Kutaa 4: Gaaffiiwwan Beekumsa dubartootaa kaansarii gadameessaa fi qorannoo CC irratti qaban madaalan

S.lakk.	Gaaffilee	Deebii	
		1. Eeyyee	2.lakki
Sababoota balaa kaansarii gadameessaa			
24.	Hiriyoonni saalqunnamtii hedduun carraa kaansarii gadameessaa ni dabalu.		
25.	Walqunnamtiin saalaa dafanii raawwachuun carraa kaansarii gadameessaa qaba		
26.	HPV argachuun carraa kaansarii gadameessaa ti		
27.	Sababa HIV/AIDSiin dandeettii dhukkuba ofirraa ittisuu hir'achuun carraa kaansarii gadameessaati		
28.	Sigaaraa xuuxuun carraa kaansarii gadameessaa qaba		
Mallattoo kaansarii gadameessaa			
29.	Dhangala'aan qaama saalaa mallattoo kaansarii gadameessaati		
30.	Urgaa fokkisaa qaama saalaa mallattoo kaansarii gadameessaati		
31.	Dhiigni qaama saalaa mallattoo kaansarii gadameessaati		
32.	Dhukkubbiin yeroo walqunnamtii saalaa mallattoo kaansarii gadameessaati		
Ittisa kaansarii gadameessaa			
33.	Kaansariin gadameessaa ittifamuu danda'a		
34.	Hiriyoota saalqunnamtii hedduu irraa fagaachuun kaansarii gadameessaa ittisa		
35.	Walqunnamtii saalaa dafanii gochuu irraa fagaachuun kaansarii gadameessaa ni ittisa		
36.	Tamboo xuuxuu dhiisuun kaansarii gadameessaa ni ittisa		
37.	Talaalliin HPV kaansarii gadameessaa ittisa		
38.	Sakatta'iinsi kaansarii gadameessaa ittisa		
Wal'aansa kaansarii gadameessaa			

39.	Waa'ee mala wal'aansa kaansarii gadameessaa hin beeku		
40.	Kaansariin gadameessaa sadarkaa jalqabaa isaa irratti fayyuu danda'a		
41.	Baqaqsanii hodhuun mala wal'aansa kaansarii gadameessaati		
42.	Keemooteraapiin mala wal'aansa kaansarii gadameessaati		
43.	Raadiyeeshiniin mala wal'aansa kaansarii gadameessaati		
Irra deddeebiin Sakatta'iinsaa			
44.	Irra deddeebiin qorannoo dubartoota waggaa 30-49 waggaatti al tokko ta'a		
45.	Irra deddeebiin qorannoo dubartoota waggaa 30-49 waggaa 3tti al tokko		
46.	Irra deddeebiin qorannoo dubartoota waggaa 30-49 waggaa 5tti al tokko		

Kutaa 5. Gaaffiiwwan haala qorannoo Kaansarii Gadameessaa hirmaataa qorannichaa madaaluuf

S.lakk	Gaaffilee	Deebii
47.	Sababni daawwannaa dhaabbata fayyaa yeroo ammaa	1. tajaajila fayyaa haadholii fi daa'immanii 2. Tajaajila laabraatoorii 4. Dhukkubsataa mana yaalaa alaa 5. Kaan ……
48.	Yeroo daawwannaa Dhaabbaticha keessatti gootan tajaajilli barnoota/gorsa qorannoo CC turee?	1. Eeyyee 2.lakki 3. Hin beeku
49.	Yoo eeyyee ta'e, argamtanii waa'ee kanaa odeeffannoo argattaniittuu?	1. Eeyyee 2.lakki

50.	Lakki yoo ta'e sababni kee maali?	_____
51.	Yoo eeyyee ta'e sana booda screen gootaniittuu?	1. Eeyyee 2.lakki
52.	Qormaata kanaan dura hojjetteettaa?	1. Eeyyee 2.lakki
53.	Yoom screen gootan?	_____
54.	Fageenya mana keessan irraa gara dhaabbata fayyaa	1. Fagoo 2. Dhiyoo
55.	Yoo eeyyee ta'e yeroo meeqa under gone screening goote	1. al tokko 2. al lama 3. yeroo sadii 4. Sadii ol
56.	Dubartoonni qorannoo kana yoo raawwatan bu'aan qorannoo maal ture?	1. qajeelaa 2. nagatiiva 3. kaansarii duraatiin shakkamaa
57.	Yoo sakatta'iinsa muuxannoo qabaatte, kilinika gosa akkamii keessatti hojjetteetta? (Kanneen ilaallatu hunda filadhu)	1.kilinika dhuunfaa 2.dhaabbilee ummataa 3. Kilinika dhaabbilee miti mootummaa magaalattii

Kutaa 6: Sababni Kaansarii Gadameessaa hin qoratamne (Hirmaattota hundaaf)

S.lakk.	Gaaffilee	Deebii		
	Sababoonni dubartoonni qorannoo kaansarii gadameessaa taasifamuu irraa duubatti jedhan maali jettanii yaaddu?	Eeyyee	Lakki	Hin beeku
58.	Hanqina ogeeyyii dubartootaa qorannoo kana kennan			
59.	Damee dhuunfaa keessatti hojjechuu barbaada			
60.	Iccitii dhabuu			
61.	Ogeessa fayyaatiin hin gorfamne			
62.	Dhaabbanni tajaajila gahumsa qabu hin jiru			
63.	Dhiyeessitoota leenji'an irratti wal amantaa dhabuu fi xiyyeeffannoo kennuu dhabuu			
64.	Bakka qorannoon itti gaggeeffamu beekuu dhabuu			
65.	Yeroo fi geejjibaa daangessuu			
66.	dhaabbata fayyaa bira ga'uuf malli geejjibaa keessan maali	1.miilla 2.Otobusii ummataa 3. Taaksii 4. Mootar biskileetii dhuunfaa, konkolaataa mataa 5. Mala biraa		
67.	tajaajila addaan cituu			
68.	Gurmaa'ina sagantaa fi raawwii gaarii dhabuu			
69.	Muuxannoo gadhee tajaajila eegumsa fayyaa keessatti darbe			
70.	Hariiroo hamaa ogeessa fayyaa waliin qabu			
71.	Jireenya keessatti dursa kennuu/wantoota biroof			

	dursa kennuu			
72.	Ogeessa fayyaa waliin walqunnamuuf afaan daangessuu			
73.	Sagantaa qormaata duraa irratti hordoffii cimaa gochuu dhabuu			
74.	Hanqina meeshaalee fi dhiyeessii qormaata duraa			
75.	Miira qaanii			
76.	Sodaa adeemsa/dhukkubbii adda baasuu duraa			
77.	Sodaa bu'aa gaarii/ sodaa dhukkuba qabaatta itti himamuu			
78.	Deeggarsa hawaasummaa gadi aanaa			
79.	Garaagarummaa aadaa / amantaa aadaa			
80.	Fayyaa dubartootaa irratti maqaa balleessii hawaasummaa			
81.	qoricha aadaa			
82.	Amantaa amantii			
83.	Fayyaa qaba jedhee yaaduu			
84.	Qormaata duraa irratti sadarkaa miiraatiin mijataa ta'uu dhabuu			
85.	Tajaajila eegumsa fayyaa keessatti qulqullina gaarii dhabuu			
86.	Sagantaa qorannoo duraa guddisuu dhabuu			
87.	Hordoffii fi deeggarsa dhukkubsattootaaf taasifamuu dhabuu			

Kutaa 7: Haala mijeessituu sirna fayyaa waliin walqabatee qorannoo CC dhaabbilee filatamanitti (Hirmaattota hundaaf)

S.lakk.	Gaaffilee	Deebii		
	Sababni dubartoonni kaansarii gadameessaa akka qorataman walii galaniif maali jettu?	Eeyyee	Lakki	Hin beeku
88.	Argamuun tajaajila kennitoota dubartootaa			
89.	Waa'ee saala tajaajila kennitootaa yaadda'uu dhiisuu			

90.	Inshuraansii fayyaa jiraachuu			
91.	Dhiyeessaa leenji'e jiraachuu			
92.	Waa'ee kaansarii gadameessaa ogeessota fayyaatiin odeeffannoo kennuu			
93.	Tajaajila fayyaa walhormaataa kamiyyuu qorachuu			
94.	Tajaajilli qorannoo kaansarii gadameessaa jiraachuu beekuu			
95.	Nama kaansarii gadameessaa qabu waliin wal baruu			
96.	Miira saaxilamummaa			
97.	Mallattoolee kaansarii gadameessaa hubachuu			
98.	Ogeessi fayyaa afaan naannoo sanaa dubbachuu danda'uu qaba			
99.	Deeggarsa maatii ykn haadha warraa			
100.	Kutaa dhuunfaa qabaachuu			
101.	Qormaata jalqabaa irratti miira tasgabbii qabaachuu			
102.	Tajaajila eegumsa fayyaa keessatti qulqullina gaarii			
103.	Gurmaa'ina sagantaa fi raawwii gaarii			
104.	Muuxannoo gaarii tajaajila eegumsa fayyaa keessatti darbe			
105.	Hariiroo gaarii dhiyeessaa eegumsa fayyaa waliin			
106.	Meeshaaleen adda baasuu fi dhiyeessiin gahaan jiraachuu			
107.	Hordoffii cimaa sagantaa qorannoo			
108.	Hirmaannaa hawaasaa gahaa fi sagantaa dafanii adda baasuu guddisuu			
109.	Hordoffii fi deeggarsa dhukkubsattootaaf taasifamuu			

Galatoomaa!

Dabalata afur: Qajeelfama af-gaaffii dubartoota umuriin isaanii ulaagaa guutee fi qorannoo kaansarii gadameessaa qabaniifi hin qabneef

Maqaa buufata fayyaa		
Umurii		
haala gaa'elaa		
Haala barnootaa		
Haala hojii		

Yeroo fudhattee na haasofsiisuu keetiif galatoomi. Waa'ee haala mijeessitootaa fi gufuulee qorannoo kaansarii gadameessaa caalaatti beekuu barbaada.

1. Maaliif gara dhaabbata kana akka dhufte natti himuu dandeessaa?

I) Sadarkaa dhuunfaa

I. Ilaalcha, hubannoo fi beekumsa waa'ee kaansarii/kaansarii gadameessaa

2. Waa'ee kaansarii gadameessaa dhageessanii beektuu jecha kaansarii jedhu yeroo dhageessan wanti jalqaba isinitti dhaga'amu maali?

3. Mallattoolee yoo argitan qorannoo fi yaala argachuuf eessa deemta? Waa'ee kaansarii gadameessaa dursanii adda baasuu fi mala wal'aansaa maal beektu?

II. Miira saaxilamummaa

4. Carraan kaansarii gadameessaa qabamuu keessan maal fakkaata jettanii yaaddu? (Qorannoo: maaliif, faayidaa dafanii adda baasuu ykn dafanii qorachuu, irra deddeebiin qorannoo dafanii, sababa (HPV))

5. Muuxannoo kaansarii gadameessaa dafanii adda baasuu irratti qabdan nuuf qooduu dandeessu? (Qorannoo: Qormaata/rakkoon si mudatee? Dhukkubsataa turee? Adeemsa isaa hubattee? Adeemsa isaa akkamitti ibsita?)

III. Hubannoo ciminaa

6. Rakkoolee kaansarii gadameessaatiin dhufu maal beektu? (Qorannoo: Nama kaansarii gadameessaatiin du'e beektaa?)

IV. Gufuulee hubataman

7. Rakkoon/qormaatni dubartoota keessanii/kan biroo isin/dubartoonni biroo qorannoo kaansarii gadameessaa akka hin deemne isin dhorkan maali? (Inspeekshinii: yaaddoo miiraa ykn dhuunfaa)

8. Wantoonni kaansarii gadameessaa dafanii adda baasuuf haala mijeessan ykn gargaaran maali?

2) Sadarkaa namoota dhuunfaa

I. Amantaa aadaa fi amantii

9. Aadaan/amantiin keessan waa'ee kaansarii gadameessaa ilaalchisee amantaa akkamii qaba? (Diagnosis: Isaan maali? Akkamitti adda baafama, akkamitti yaala)

II. Addaan baafamuu

10. Namoonni waa'ee kaansarii gadameessaa maal amanu, hiriyyaan kee/firri kee dhiyoo kaansarii gadameessaa akka qabu yoo dhageesse ati/warri kaan akkamitti deebii kennitu?

- Yaada dabalataa ykn yaada ykn waan itti dabaluu barbaaddan kan naaf qoodu barbaaddan qabduu?

Galatoomaa.

Dabalata Jahaffaa: Qajeelfama Af-gaaffii Dhiyeessitoota Eegumsa Fayyaa (Doktoroota, Narsootaa fi Bulchitoota kan akka Daayirektaroota Meedikaalaa).

Maqaa buufata fayyaa		
Umurii		
Koorniyaa		
haala gaa'elaa		
Haala barnootaa		
Haala Hojii/Hojii		
muuxannoo hojii		
setup ykn kutaa		

1. Waa'ee kaansarii gadameessaa Itoophiyaa maal natti himuu dandeessu? (Qorannoo: Ilaalcha Ogeessota Fayyaa fi Dhukkubsattootaa)
2. Barbaachisummaan qorannoo kaansarii gadameessaa Itoophiyaa keessatti maal jettanii yaaddu fi tattaaffii mootummaan dhimma kanarratti godhu akkamitti ilaaltu?
3. Dhaabbata fayyaa keessan keessatti gosoota qorannoo/wal'aansi kaansarii gadameessaa akkamii ni argamu? (Qorannoo: Faayidaa fi miidhaa maloota Sanaa?)
4. Dhukkubsattoonni waa'ee filannoo mala qorannoo kaansarii gadameessaa maal yaadu? (Qorannoo: Filannoo isaanii kabajuuf tarkaanfiiwwan maaltu fudhatame? Dhiyeessaan/ogeessi eegumsa fayyaa filannoo dhukkubsataa kabajuu dhiisuu irratti dhiibbaa akkamii qaba ture?
5. Ogeeyyiin fayyaa fi dhukkubsattoonni dhaabbata fayyaa keessatti qorannoo kaansarii gadameessaa akka raawwatan kaka'umsi sirna fayyaa wajjin walqabatee jiru maali?
6. Dhaabbata fayyaa keessatti qorannoon kaansarii gadameessaa akka hin raawwatamneef ogeeyyii fayyaa fi dhukkubsattoonni sirna fayyaa waliin walqabatan maal fa'a?
7. Dhaabbilee fayyaa sadarkaa duraa keessatti qorannoo kaansarii gadameessaa gaggeessuuf tattaaffii taasifamu guddisuuf yaada/yaada akkamii biyyattiif/qooda fudhattootaaf kennitu?

- **Gufuulee fi dandeessistoota qorannoo kaansarii gadameessaa sirna fayyaa wajjin walqabatan ilaalchisee yaada dabalataa naaf qooduu barbaaddan qabduu?**

Galatoomaa!

Approval

I, the undersigned, MPH student declare that this thesis is my original work in partial fulfillment of the requirement for the Master of Public Health in epidemiology and biostatistics.

Name of the student: Melat Amberbir

Date._____ Signature _____

Approv al of the primary advisor and examining board

This thesis work has been submitted with our approval as university advisor and examining board.

Name of the primary advisor: Dr. Muluken Gizaw

Date._____ Signature _____

Name of external examiner:

Date._____ Signature _____

Name of internal examiner:

Date._____ Signature _____

Curriculum Vitae

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Education and training Assistance lecturer I in Arsi University

Title of qualification awarded Bachelor of Science Degree in Statistics from October 2018–September 2021