ADDIS ABABA UNIVERSITY
COLLEGE OF HEALTH SCIENCES
SCHOOLOF PUBLIC HEALTH

SELF-INITIATED UTILIZATION LEVEL OF CERVICAL CANCER CYTOLOGY SCREENING AND DETERMINANTS AMONG WOMEN OF REPRODUCTIVE AGE GROUP AT ARSHO MEDICAL LABORATORIES IN 2020

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Self-initiated utilization level of cervical cancer cytology screening and determinants among women of reproductive age group at Arsho medicallaboratories in 2020

A thesis submitted to School of Graduate Studies of Addis Ababa University, College of Health Sciences, and School of Public Health in Partial Fulfillment of the Requirements for the Degree of Masters of Public Health

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APPROVED BY THE BOARD OF EXAMINERS

A thesis research advisor and co-advisor, we hereby certify that we have read and evaluated this thesis prepared under our guidance by TizitaAshenafi,entitled Self-initiated utilization level of cervical cancer cytology screening and determinants among women of reproductive age group at Arsho medicallaboratories in 2020.We recommended that it will be submitted as fulfilling the thesis requirement.

_____ _____ _____

Major advisor Signature Date

DECLARATION

By my signature below I declare and affirm that this thesis is my own work. I have followed all ethical principles of scholarship in the preparation,data collection,data analysis, and completion of the thesis. All scholars' matter that is included in the thesis has been givenrecognition through citation.I affirm that I have cited and referenced all sources in the document. Every serious effort has been made to avoid any plagiarism in the preparation of the thesis.

The thesis is submitted in partial fulfillment of the requirement for a master of public health degree to Addis Ababa University health Science College,school of public health.I would like to declare that this thesis has not been submitted to any other institution anywhere for the award of any academic degree,diploma and certificate.

Name_____ Signature_____

Advisorname_____Signature_____

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ABBREVIATION AND ACRONYMS

CAP College of American Pathologists

CCS Cervical Cancer Screening

CDC Center for Disease Control

CIN CervicalIntraepithelial Neoplasia

HPV Human Papilloma Virus

HIV HumanImmunodeficiencyVirus

IRB Institution Review Board

LBC Liquid Based Cytology

PAP Papanicolaou Smear

PI Principal Investigator

RIQAS Radox International Quality Assessment Scheme

STD Sexually Transmitted Disease

TB Tuberculosis

VIA Visual Inspection with Acetic Acid

WHOWorld Health Organization

ABSTRACT

Background: Cervical cancer is the third most frequent cancer of women around the world.As WHO recommendation women should screen once in a lifetime and it's better to have cervical screening every three years from 15-49 years.Screening is an individual's decision that is reached upon self-perception and deliberations on the importance of such a service.But self-initiated cervical cancer screening rate seems very low compared to the clinical recommendation and symptomatic referral. **Objectives:**To assess self-initiated utilization level of cervical cancer screening and determinants among women of the reproductive age group in Arsho medicallaboratories 2020.

Methods: Institution-based prospective cross-sectional study design was conducted at the Arsho medicallaboratories locatedat Addis Ababa from May1-June 30/2020.The consecutive study sampling method was used to select study subjects, based on sample size calculation 275 women were enrolled.Self-initiated cytology-based cervical cancer screening rates and determinants were assessed with the interview-based semi-structured questioner to measure the research objective.All the questionnaires were entered, edited, coded, and cleaned into Epi-data and exported to SPSS version 25 software for analysis. Relationships between each independent variable and outcome variable were investigated using a binary logistic regression model. Those variables with P- value less than 0.25at the bivariable level was included in a multivariable logistic regression model for controlling potential confounding effects.In the multivariable analysis, the degree of association between independent and dependent variables was assessed using odds ratio, 95% confidence interval and P-value ≤0.05 to be considered as significant.

Results: Out of 275 women age between 15-49 years, the mean age was36 with SD±6.6.The self-initiated cervical cancer cytology screening level was 37%.Among the total variables which were included in the analysis, variables show association with self-initiated CCS were,orthodox Christian followers [AOR=2.01 95% of CI (1.94 - 4.22)],Women from urban area [AOR=3.25 95% of CI (1.08-9.81)].< 1-year health facility visit frequency [AOR=4.16 95% of CI (2.18-8.12)] having a history of STD

[AOR=2.295% of CI (1.07-4.51)] and women's havingclinician counseling[AOR=5.47(95%OF CI (3.18-9.42)].

CONCLUSION: Based on the finding self-initiated cytology-based cervical cancer screening was low compared to symptomatic referral. Being from an urban area hasa good opportunity to have CCS. Frequent health facility visit also has great contribution along with previous clinician counseling.Thesexually transmitted disease was significantly associated with cervical cancer screening that should be considered as a parallel service in the future.

Keyword:Self-initiated,Cervical cancer,screening,Utilization, prevention

CHAPTER ONE

1. INTRODUCTION

1.1 BACKGROUND

Canceris a disease in which cells in the body grow out of control. Cancer is always named for the part of the body where it starts, even if it spreads to other body parts later. When cancer starts in the cervix, it is called cervical cancer. All women are at risk for cervical cancer. Human papillomavirus.HPVis the main cause of cervical cancer and a common virus that is passed from one person to another by body fluid. At least half of sexually active people will have HPV at some point in their lives, but few women will get cervical cancer(1).

Cervical cancer is the third most frequent cancer of women around the world. WHO report showed that 570,000 new cases around the world that are representing 6.6% of all female cancer .from those new cases 311, 000 deaths were recorded & approximately 85% of death reported from low and middle-income countries(2). Social, economic, and political inequalities are mentioned as a reason for the highest-burden in undeveloped countries.

The high mortality rate from cervical cancer globally could be reduced through a comprehensive approach that includes prevention, early diagnosis, and effective screening and treatment programs. Most western countries have been prevented cervical cancer with cervical cancer screening, HPV vaccination,and early diagnosis to reduce complications and death. When cervical cancer is found early, it is highly treatable and associated with long survival and good quality of life. If cervical cancer prevention, screening, and treatment are not urgently scaled up, experts estimate that by 2040 there could be a 50% increase in deaths over 2018 levels(3).

Screening aims to detect precancerous changes which if not treated may lead to cancer. Women who are found to have abnormalities on screening need follow-up, diagnosis, and treatment, to prevent the development of cancer or to treat cancer at an early stage. Screening should be performed at least once for every woman in the target age group (21-49 years) and every three years for those sexually active women. HPV testing, cytology

and visual inspection with acetic acid (VIA) is all recommended screening test Regardless of the approach used, the key to an effective program is to reach the largest proportion of women at risk with quality screening and treatment. (4).

Women who come for cervical cancer screening are either because of self-initiation and motivation or physician recommendation. Self-initiated cervical cancer screening is women come to screening sites with their knowledge gained from communication with people, health education, and mass media, and so on. But physician recommendation for cervical cancer screening has symptomatic referral or risk associated reasons to screen based on clinician recommendation.

A population-based cohort study done in Germany shows that for having successful cervical cancer screening regular participation of eligible women is important. in the study three group was involved. One with a personal invitation letter for CCS,the second with the additional brochure and without any invitation.The result shows that women who were invited to CCS in the study were more likely to participate within 3 years than those who were not invited (OR 2.69, 95% CI 2.15–3.37)(5).A meta-analysis including studies from the USA, Canada, Australia,and the United Kingdom also revealed that invitations in the form of mailed letters increased participation in CCS as compared to those who did not receive the intervention (OR 1.64, 95% CI),this will transfer opportunistic cervical cancer screening to national programmatic schedule(6).

1.2 STATEMENT OF THE PROBLEM

The majority of cervical cancer (over 80%) in sub-Saharan Africa are detected at a late stage, predominantly due to lack of information about cervical cancer and a dearth of prevention services. The late-stage disease is associated with low survival rates after surgery or radiotherapy. Besides, these treatment modalities may be lacking/limited, or too expensive and inaccessible, for many women in low-resource countries, including Ethiopia. This is the result of late symptomatic referral instead of self-initiated cervical cancer screening. Cervical cancer is potentially preventable, unlike other reproductive organ cancers(7). In high-income countries, regular screening with a Pap smear has been shown to lower the risk for developing invasive cervical cancer, through detecting precancerous changes(8). As WHO recommendation women should screen once in a lifetime and it's better to have cervical screening every three years from 15-49 years of age for those having sexual exposure, but the estimated coverage of cytology-based cervical cancer screening in Ethiopia is 1.6% in urban settings and 0.4% in rural areas (WHO, 2003).Very few numbers of women receive cervical cancer screening programs.Low level of awareness, lack of effective screening program, overshadowed screening program by other priorities (TB, HIV) &social, political, and economic inequality are mentioned as a reason (8).

Thehigh volume of the patient is a determinant factor for poor clinician counseling for women who are asymptomatic but at risk for cervical cancer. On the other hand, self-initiated cervical cancer screening is not well promoted to overcome this gap.

An expert does not recommend using Pap test results to determine whether unvaccinated females should receive the HPV vaccine, nor do they recommend using vaccine receipt to inform cervical cancer screening practices(9).For self-initiated cervical cancer screening is becoming overshadowed by symptomatic referral this makes late diagnosis and difficult treatment and end up in death after unsuccessful treatment.

A most studies done on the uptake of cervical cancer screening mentioned as cervical cancer cytology study with clinician recommendation and referral takes the highest percentage compared to self-initiated cervical cancer screening. This might be due to the fact that these women were more responsive to health providers who educate them about the disease and preventive measures (10). Women who were informed by health

professionals about cervical cancer were 6.65 times higher to take pre-cervical cancer screening as compared to those who were not informed or who come by self-initiation; this may the main reason for missed uptake of cytology-based cervical cancer screening for those age-eligible women (11).In a country like Ethiopia with a shortage of clinicians, self-initiated screening should promote with all communication channels, but there is no continuous health education and also there is poor media coverage about cervical cancer.

1.3 SIGNIFICANCE OF THE STUDY

This study assessed self-initiatedutilization of cervical cancer and determinants for CCS especially in those women who live in Addis Ababa with better access but low uptake of scheduled-basedscreening behavior insteadofclinicianrecommendation. Self-initiated utilization needs cooperative social, political, and economic support fromboth governmental and non-governmental organizations. The FMOH recommends that information and education strategies should be directed towards women who have never been screened before, and towards their partners and family members who can encourage them to solicit screening and comply with follow-up instructions. Healthcare providers should pass on clear and consistent messages in a language that is understood by the audience. Counseling should be structured to educate the woman, review the results of screening and follow-up, present alternative services and procedures, and discuss any follow-up she may need. This will give the woman the tools she needs to make rational decisions for herself.Despitethisfact,the policymakersandresearchersdonotgiveattentionto self-intiated cervical cancer screening.Therefore this study help as baseline data for policymakers to fill the gap of sustainable self-initiated utilization of cervical cancer screening to make new approaches to overcome the gap b/n service provider and illegible women for screening.

CHAPTER TWO

2. LITERATURE REVIEW

2.1 MAGNITUDE OF CERVICAL CANCER AND SCREENING RATE

High incidence and mortality rate has been registered in Africa specifically in east Africa. In Ethiopia in 2010 there was an estimation of 20.9 million women at risk of cervical cancer .by 2025 it's projected that the burden will double with7,619 the annual number of new cases and 6,081 deaths every year. It accounted for 25.8% - 32% of all female malignancies in sub-Saharan Africa over 80% of the case was detected in late-stage w/c is a common reason of death from cervical carcinoma because of lack of facility for management of invasive carcinoma, economical issues and other factors women's end up with death (9).

The incidence and mortality from cervical cancer in Ethiopia are 26.4 and 18.4/100,000 respectively. These figures are probably lower than the actual number of cases, given the low level of awareness, cost, and limited access to screening services, and lack of a national cancer registry(1).

Self-initiated cytology-based cervical screening is critically low with <1% total coverage of cervical cancer screening in Ethiopia.Asareason lack of awareness about cervical cancer ,low advocacy and social mobilization about cervical cancer screening can be the reason for low level screening on self intiated cervical cancer screening and referral compared to symptomatic referral .Early detection and screening could reduce complication and death from cervical cancer screening.

2.2 IMPORTANCE OF SELF-INITIATED CERVICAL CANCER SCREENING

Cervical cancer screening has an important role to detect abnormal cells in the area of the cervix.Providing screening opportunities and creating awareness for cervical cancer is indeed one of the most effective ways of promoting access and utilization of these services. Screening is an individual's decision that is reached upon self-perception and deliberations on the importance of such a service (12).

A study was done in Andorra pradis;show that the success and benefit of a public health program to control and prevent cervical cancer will depend to a great extent on the level of awareness of the potential beneficiaries about different basic aspects of the disease

Comprehensive health education programmers are more likely to be beneficial to encourage screening. Therefore, nurses have an important task of imparting information on risk factors, detection of early signs of cervical cancer, and encourage women to perform cervical cancer screening regularly.This can be achieved by conducting additional education programmers for nurses.Currently, scanty information isavailable on the knowledge base of the Indian nurses on cancer of the uterine cervix (13).Obstacles to seeking cervical cancer screening in Jamaica include inadequate cervical cancer knowledge; lack of knowledge of where to seek screening; fear of pain or embarrassment from the procedure; limited access to quality health services, especially in rural and low-resource communities; lack of healthcare provider recommendations; and staff shortages in government laboratories that cause delays in receiving test results, lengthen the time between diagnosis and treatment, and lead to patients being lost to follow-up (14).

Most African countries including Kenya have limited cervical cancer screening and treatment programs. In Kenya, cervical cancer accounts for 20% of reproductive cancers in women. It is estimated that in Kenya, the risk of getting cancer before the age of75 years is 14% while the risk of dying of cancer is estimated to be 12%, but less than 5% of women undergo cervical cytology screening within five years of period (15).

There are determinants for reduced uptake for scheduled based cervical cytology screening as reviewed from literature.A study shows that recent doctors visit can increases the CCS than those who don't visit within one year's period. In Latin American countries,adjusting for other socioeconomic covariates, women were between 47% and 244% more likely to have received a recent Pap smear screening if they had had a recent doctor's visit compared who had not.Besides, health care providers may disseminate Pap smear knowledge and encourage screening, although a recent study of direct clinical observation in Peru found opportunities to educate patients on Pap smear screening were often missed by health care providers (16, 17).

Other determinants are reviewed below.

2.3 SOCIO-DEMOGRAPHIC BEHAVIOR

2.3.1 AGE

A study done in Cameroon on the uptake of cervical cancer screening found that there is no relation b/n cervical cancer screening uptake and age(18). a study was done in Ethiopia by WHO coverage and screening rate of cervical cancer out of 195 participants 91 were b/n 30-40(9).A cross-sectional study was done in DebreMarkos; Ethiopia shows that women b/n age group of 35-49 years were 3.21 times more likely to take cervical cancer screening than those age from 15-24(11). Women in their 30's were 1.8 times more likely to be screened compared to women in their 20s (AOR = 1.799, 95%CI = 1.182–2.739). The lower screening rates among younger (21–29 years) women is not unique to Ethiopia; there are also researches with the same findings from elsewhere in Africa and developed countries. According to the study done in one African country, women in the age range of 35–39 were 3 times more likely to be screened compared to those in their 20s(19).

2.3.2 RELIGION

Women who followed Christianity have the highest rate of cervical cancer screening compared to Muslims followed by the Hindu religion (20).A study was done in Kenya; about 89% of the total respondents said that their religion allowed uptake of cervical cancer screening while 4% said religion doesn't allow it. 7% showed that they were uncertain on whether their religion allows or does not allow cervical cancer services. Some of the reasons given by those who said religion does not allow cervical cancer observed that there is no need for screening for cervical cancer since it is only God who can show the truth about such diseases and not human beings who are sinners (21).

2.3.3 EDUCATION

A study done in India shows that education matters to have cervical screening. women who complete 2ndary education >12 grades have a higher rate of 37.1 to have cervical cancer screening compared to 9-12 which is 36.9% and no education account 24.7% (20)&(22). Knowledge of Pap smears may derive indirectly from greater educational attainment. Women with greater education may have a greater awareness of and reap

greater benefits from preventive medicine, exercise greater autonomy, and face lower cultural barriers to screening(17).

2.3.4 PLACE OF RESIDENCE

Urban women's CSS was more than rural women's. Living in an urban area was 2.5 times higher rate than the rural area (23). Other studies mentioned as a majority of the respondents (88%) were urban dwellers and 119 (34.8%). residence in a rural or urban area (unadjusted PR = 1.05, 95% CI = 1.01–1.08)(24)&(25).

2.4 SOCIOECONOMIC FACTORS AFFECTING SELF-INITIATED CERVICAL CANCER SCREENING

2.4.1WOMEN'S INCOME& PARTNER OR RELATIVE SUPPORT

Women's income can determine women's cervical screening rate. a study done in Ethiopia showed thathaving a household annual income of more than 23,300 to 30,000 ETB was 2.1 times and having a household annual income of more than 30,000 ETB were7.1 more likely to be screened for cervical cancer than their counterparts(11).A study done in less than one-third of all women had a net household income of >2,500 Euro per month and less than one-fifth had an income of under 1,500 Euro per month(5).Women who had a family history of cervical cancer were 4.5 times higher to use pre-cancer screening when compared to have a relative history of cervical cancer(11).

2.4.4 SERVICE COST

Distance to the service site, time for screening, and cost of service are mentioned as a determinant factor for cervical cancer screening uptake .most of the participants mentioned the service cost is expensive to spend for screening(18).

2.5 KNOWLEDGE ABOUT RISK FACTOR OF CERVICAL CANCER

Source of awareness, a majority of respondentsare told that they gain knowledge from health care workers, followed by mass media, family, friends, teachers as a source of information. Being the least source. As a risk factor for cervical cancer was assessed on women's come for screening having multiple sexual partners mentioned as the highest risk factor to screen cervical cancer .abdominal pain mentioned as the highest symptom to screen cervical cancer (18).

Cigarette smoking, alcohol consumption, taking a pill for birth control, history of the sexually transmitted disease can be mentioned as a common risk factor for cervical cancer (18)&(23).Women were between 1.47 and 3.44 times more likely to have received a recent Pap smear if they had a recent doctor's visit. Even the poorest women with a recent doctor's visit were more likely to screen than the richest women without a recent visit(17).

2.6 REPRODUCTIVE STATUS OF WOMEN

2.6.1 MARITAL STATUS

Current married women have the highest screening prevalence followed by widowed women then divorced ones; unmarried women have a lower rate of cervical cancer screening rate compared to others (9)&(26). A study done in Cameroon mentioned as a majority of the respondents, 40.71% (n=103) were married, 29.64% (n=75) single and 12.25% (n=31) living together, 11.07% (n=28) widowed, 3.16% (n=8) divorced, and the rest of the respondents 3.16% (n=8) were separated this can show that married women's are more prone to have self-initiated cervical cancer screening(27).

2.6.2PARITY OF WOMEN

Cervical cancer screening based on the party has seen that most women having more than two children have a higher rate of cervical cancer screening compared to null parity and also >2 children (20). The parity of the respondents, most of them 47.04% (n=119) had given birth at least 1-4 times, 29.64% (n=75) from five times and above while the rest 23.32% (n=59) have never given birth(27).

2.6.3 AGE AT FIRST SEXUAL INTERCOURSE

Age at first sexual intercourse <18 years considered as a risk factor for cervical cancer screening study done in Arbaminch mentioned as sex at age ≥ 18 year were (56%), married at age ≥ 18 year (44%)(15).study findingsof Initiation of sexual intercourse at an early age were mentioned by 52.5% of respondents(13).

2.7 CONCEPTUAL FRAMEWORK

This conceptual framework shows the relationship betewen dependent and independent variable on self-initiated cervical cancer screening rate and determinant factors developed by reviewing different literature works on cervical cancer screening based on reference (8, 9, 15, 16, 17, and 18).

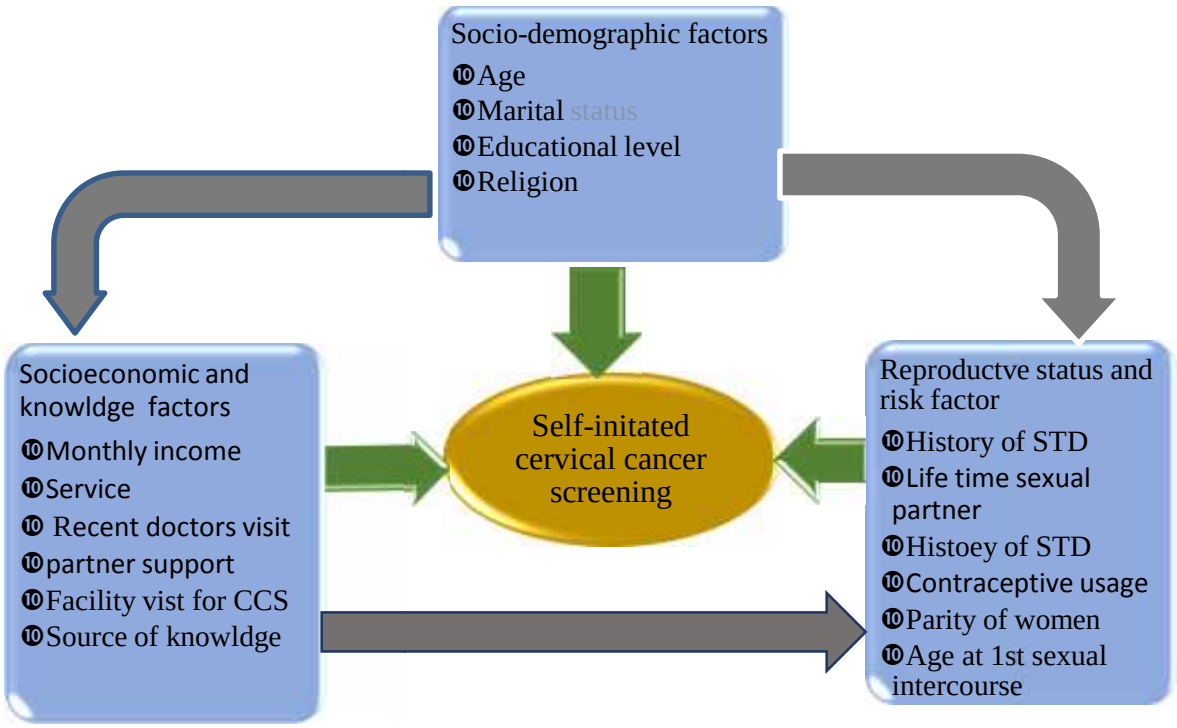

Figure -1Conceptual framework on determinants of cervical cancer screening

CHAPTER THREE

3. OBJECTIVE

3.1GENERAL OBJECTIVE

To assess self-initiated utilization level of cervical cancer cytology screening and determinants among women ofreproductive age group atArsho medicallaboratories 2020.

3.2 SPECIFIC OBJECTIVES

- To describe self-initiated utilization level of cervical cancer cytology screening.
- To assess factors associated with cervical cancer cytology screening

CHAPTER FOUR

4. METHODS

4.1STUDY AREA AND PERIOD

The study was conducted from May1 to June 30,2020, at Arsho medical laboratories.Arsho Medical Laboratories is a registered trademark of private diagnostic laboratory practice in Addis Ababa Ethiopia. It is focused on delivering quality diagnostic testing most cost-effectively.The general services render by Arsho medical laboratory are clinicalchemistry,pathology,histoandcytopathology,microbiology,moleculardiagnostics,serology,virology tests.The geographical area served by Arsho Medical Laboratories is distributed in Addis Ababa Sub-Cities including Arada, Addis Ketema, Bole, Kirkos, and Yeka. From all collected cites pathology test Pap smear is served in Arada sub-city around CatedralSchool called Catedral branch and Piazza branch.

4.2STUDY DESIGN

An institution-based cross-sectional study design was conducted from May1-June 30/2020.

4.3 SOURCE POPULATION

All women who visit Arsho medicallaboratoriesduring the study period at Addis Ababa, Ethiopiawas taken as a source population.

4.4STUDY POPULATION

Women who are in the reproductive age group and come for cervicalscreeningduring the study period.

4.5 ELIGIBILITY CRITERIA

4.5.1INCLUSION CRITERIA

All women who come for cervical cancer screening at reproductive age

- All women who come for cervical cancer screening during the study period.

4.5.2EXCLUSIONCRITERIA

- Women who are on known cervical cancer follow up.
- Those women who were unwilling to participate

4.6 SAMPLE SIZE DETERMINATION

The total population for sample size was determined by usingthe formula below is to calculate sample size by considering 95%level of confidence,5% margin of error, and proportion of cervical cancer screening was 20.9% considering recent cervical cancer screening rate proportion (11) and used 10% non-response rate.

$$\underline{n = Z^2 \times Pexp\ (1\text{-}Pexp)}$$

$$d^2$$

Wheren =required samplesize

Pexp = expected prevalence

d =desiredabsoluteprecision

Z1-α/2 = 1.96

Level of significance =0.05 (95% confidenceinterval) Marginal oferror(d)=5%

P=20.9% CCS from a study done in Debremarkos town

\n =(1.96)2x0.207(1-0.207)/0.0025= 250

Contingency = 10%

Total Samplesize =275

The samplesizeforthesecondspecificobjectiveiscalculatedby usingthe EPIINFOversion7with the assumptions:Confidence interval= 95%,Power oftest= 80%

Table -1Sample size calculation for the second objective

Variable	Outcome in exposed group	Odds ratio (AOR)	Power	Sample size (n)	Totalsample size With 10 %nonresponserate	Reference
Educational status	32.2%	2.8	80%	127	139.7	(23)
Party of women	79%	0.21	80%	71	78.1	(15)
Women's Income	32.2%	1.4	80%	91	100.1	(17)

Comparing the sample size with the first objective and the second objective; the first objective yields the largest sample size, which is 275 so, it is the representative and appropriate sample size for both objectives.

4.7 SAMPLING PROCEDURE

All women inthe reproductive age group whohave visited Arsho medicallaboratoriesforcervical cancer screening fulfilling inclusion criteria were enrolled within the study period.Arsho medical laboratories have 2 cytology-based collection sites in Addis Ababa based on the sample size determination study subject were selected with consecutive study sampling method; considering low customer flow because of the epidemic of COVID-19.

Informed consent was collected from every subject in the study and work accordingly with the ethical procedure.

4.8 DATA COLLECTION AND PROCEDURES

Data collection was done at two sites of Arsho medicallaboratories. Two recruitednurse who has previous data collection experience was assistedin data collection and two supervisors have controlled the collection process.A brief description ofthe research objective, data collection, and also ethical consideration was given by the principal investigator (PI),discussthe questioner was minimized information bias. A Pretest was conducted at International clinical laboratories; which give parallel service of laboratory-based cytology screening on 5% of a calculated sample size before the data collection period. Based on the pretest, appropriate modifications were made before the actual data collection.Throughout the whole process, the principal investigator was on the duties of control, monitor, and gave technical support for data collectors.

4.9 MEASUREMENT VARIABLES

4.9.1 DEPENDENT VARIABLE

- Self-initiated cervical cancer screening rate

4.9.2 INDEPENDENT VARIABLE:-

- Socio-demographic factor:-Age, Religion, education, residence
- Socioeconomic factors: - income, service and transportation cost, health care visit, partner support
- Behavioralriskfactor for cervical cancer: - Contraceptive use,lifetime sexualpartner.
- Reproductive status of women:-sexually transmitted disease, age of first sexual intercourse, parity of women
- Knowledge about cervical cancer:-Information source about CCS,factor affecting cervical cancer screening.

4.10 MEASUREMENT AND DATA COLLECTION

Self-initiated cytology-based cervical cancer screening rate and determinant were assessed with the interview-based semi-structured questioner to measure research objective based on previous literature done before. ’The Questioner was written in the English language and then translated to Amharic language w/c is the local language of a

study area then it will be translated back to English. The final questionnaire had five parts include social demographic and socio-economic factors, Knowledge source,risk factors, and reproductive health characteristics.

4.11 OPERATIONAL DEFINITIONS

4.11.1 SELF-INITIATED CERVICAL CANCER SCREENING

Women's of the reproductive age group who are willing to undergo cytology-based cervical cancer screening without clinician recommendation and symptomatic referral to know their status about cervical cancer with acceptance of the importance of screening for cervical cancer based on their knowledge gained from health education, community mobilization,mass media and so on.

4.11.2 LIQUID-BASED CYTOLOGY SCREENING METHOD

This method is used for the collection of cells from the cervix, which are then transferred to a vial containing preservative solution instead of being fixed on a slide, thus enabling uniform distribution of the collected clinical material. Since only a portion of the sample is used for cytology, the rest can be employed for further testing, including HPV testing. (28).

4.11.3PUBLIC HEALTH EDUCATION

Public health education measures and implement the most effective strategies for health promotion through different mass media, socialgazerign, using broachers with all possible communication channels.

4.11.4Transportation cost for cervical cancer screening

The amount of money a women spent form transportation fee that is from home to screening facility,time she spent in the facility compaired with monthly income.

4.11.4Survice cost for cervical cancer screening

The amount of money a women spent for screening survice compared with monthly income.

4.12 DATA QUALITY MANAGEMENT

To ensure data quality, Pre-testing of the questionnaire was carried out at international clinical laboratories which give the same service as Arsho medical laboratory; which latter was not included in the study. Data collectors were selected based on their educational background and experience in data collection. The training was given to data collectors. Additionally, Data was cleaned after generated and exported by checking the validity and completeness of the data. The data was exported from the latest and validated version database which allows generating the required data at the required time with standard format.

4.13DATA PROCESSING AND ANALYSIS

Data were entered and cleaned using Epi dataand analyzed using the SPSS version 25 software package. Mean and Standard deviation was used to describe continuous variables descriptive statistics were analyzed and presented using tables and figures. Frequencies and proportions were computed for a description of socio-demographic and other variables. The normality distribution of the data was checked by skewness and kurtosis of variable distribution.

The Strength of statistical associations was determined using the adjusted odds ratio with a 95% confidence interval. Relationships between each independent variable and outcome variable were investigated using a binary logistic regression model. Those variables with P- value less than 0.25at the bivariable level was included in a multivariable logistic regression model for controlling potential confounding effects. In the multivariable analysis, variables with a p-value < 0.05 were considered as associated factors

4.14 ETHICAL CONSIDERATION

Principles of Ethics were considered. Data was collected unlinked anonymously, without any personal identifiers. The information participant providedas confidential. No

information will identify one person in particular. The findings of the study will be general for the study community and will not reflect anything particular of a person. The questionnaire was coded to exclude showing names for data collection, informed consent was obtained from the study participants before administering the questioner and objectives of the study were explained to the participants by the data collectors. Consent was obtained from every participant. The risk of participating in this study was very minimal, but only takes 10-20 minutes of participant time. There would not be direct payment for participating in this study. But the findings from this research may reveal important information for the local health planners. Participation in this study will be fully voluntary. They have the right to declare to participate or not participate in the study. If they decide to participate, every participant had the right to withdraw from the study at any time and does not have to answer any question that does not want to answer. This will not label any loss of benefits on the service.Ethical clearance and approval were obtained first from the Addis Ababa University Department of public health, second from the Arsho medicallaboratories Institutional review board (IRB).

4.15DISSEMINATION OF RESULTS

The findings will be presented in open defense and submitted to Addis Ababa University andArsho medicallaboratories Efforts will also be made to publish in peer-reviewed journals and will be presented in different national and international conferences and seminars.

CHAPTER FIVE

5. RESULTS

5.1SOCI-DEMOGRAPHIC CHARACTERSTICS :A total of 275 women between 15-49 years of age were targeted for the study, of which 275 responded making the response rate 100%.The mean age of the study participants was 36 years with an SD of 6.6.andmost of the participants,216(78.3%)were in the age group of 31-49 About 251 (91.3%) were from the urban area, 199(72.4%)of study participants were married and the dominant religion was orthodox Christian which was 186(67.6%).Diploma and above are made up the largest proportion 101(36.1%).

Table- 2 Socio-demographic characteristics of women who came for CCS at Arsho medical from May1 to June30/2020

Variables		Frequency	Percentage
Age	15-25	17	6.2%
	26-30	42	15.3%
	31-49	216	78.3%
Residence	Urban	251	91.3%
	Rural	24	8.7%
Religion	Orthodox	186	67.6%
	Protestant	26	9.5%
	Catholic	10	3.6%
	Muslim	53	19.3%
Marital status	Unmarried	24	8.7%
	Married	199	72.4%
	Divorced	9	6.9%
	Widowed	27	9.8%
	Separated	6	2.2%
Education status	Unable to read and write	35	12.7%
	Able to read and write	19	69%
	Primary education	49	17.8%
	Secondary education	71	25.8%
	Diploma and above	101	36.7%

5.2 INFORMATION SOURCE

About 152 which is 55.2% got a source of knowledge frompublic health education including different mass media,it was the highest proportion compared toknowledge gained from the health facility and also from relatives pressure to screen which is about 93(33.8%) and 30 (10.9%) respectively.

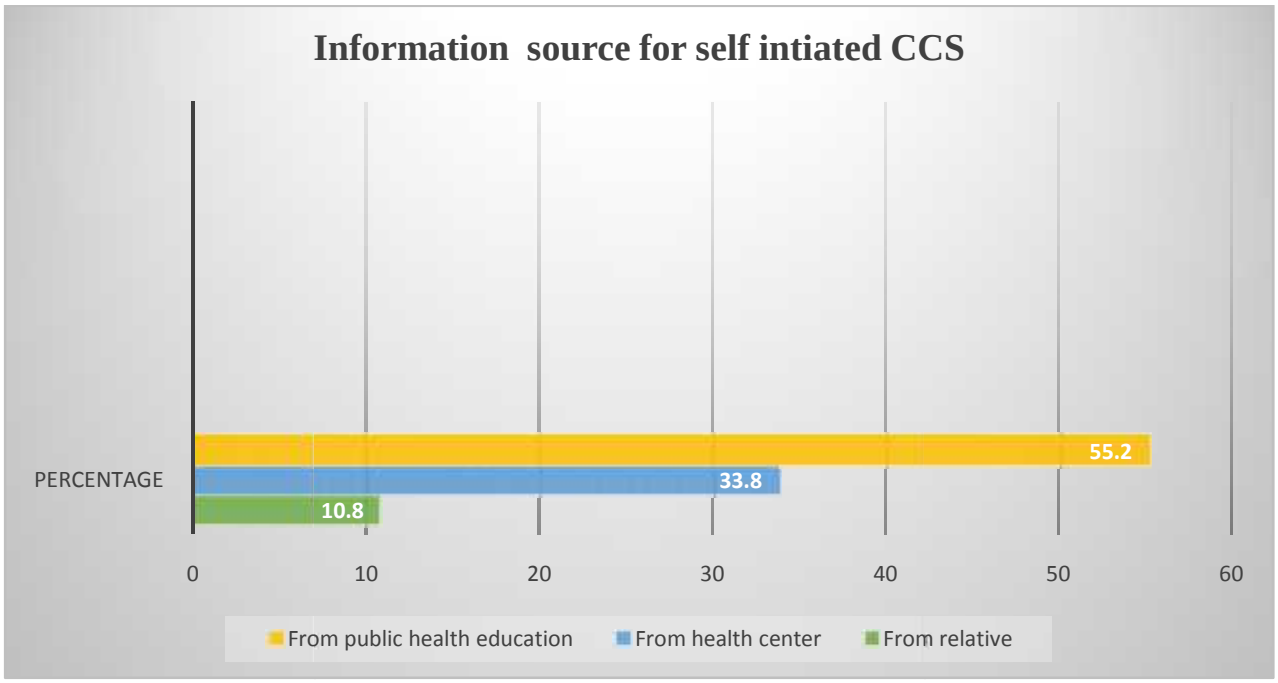

Figure-2Women'sinformation source about cervical cancer screening at Arsho medical laboratories from May1to June 30/2020.

5.2.1FACTOR INFLUNICING CCS SERVICE

Women who know any relatives with cervical cancer were 44 or about 16% .Health facility visit b/n 1-2 years also contributes about 104(37.8%) to have the highest number to have cervical screening.women having cliniciancounseling for cervical cancer screening were 46.9%,but the rest 51.6% were not been counseled by a health professional. After cervical cancer screening, only 15.3% were scheduled for the next CCS.From those scheduled women 10.5% had been scheduled time with < 1 year were 10.5% followed by 1-2 years gap for next schedule were8.7% and > 5-year gap was less than 1%.

Table-3knowledge factors for cervical cancer screening at Arsho medical laboratories from May1toJune30/2020

Variables		Frequency	Percentage
Know anyone with cervical cancer	Yes	44	16.1%
	No	231	84.2%
Health facility visit frequency	< 1 years	76	27.6%
	1-2 years	104	37.8%
	>5 years	95	34.5%
Clinician counseling during the health care visit	Yes	129	46.9%
	No	142	51.6%
Scheduled for next cervical cancer screening	Yes	42	15.3%
	No	67	24.4%
Schedule time b/n two CCS	< 1 years	29	10.5%
	1-2 years	24	8.7%
	2-4 years	11	4.0%
	5 years	8	2.9%
	>5 years	8	2.9%

5.2.2 SELF-INTIATED CYTOLOGY BASED CCS LEVEL

Self-initiated cervical screening level among 275 with 95% confidence interval is about 103 which is 37% of women came for cervical cancer screening. The rest 63% were visited the screening facility with the symptomatic referral.

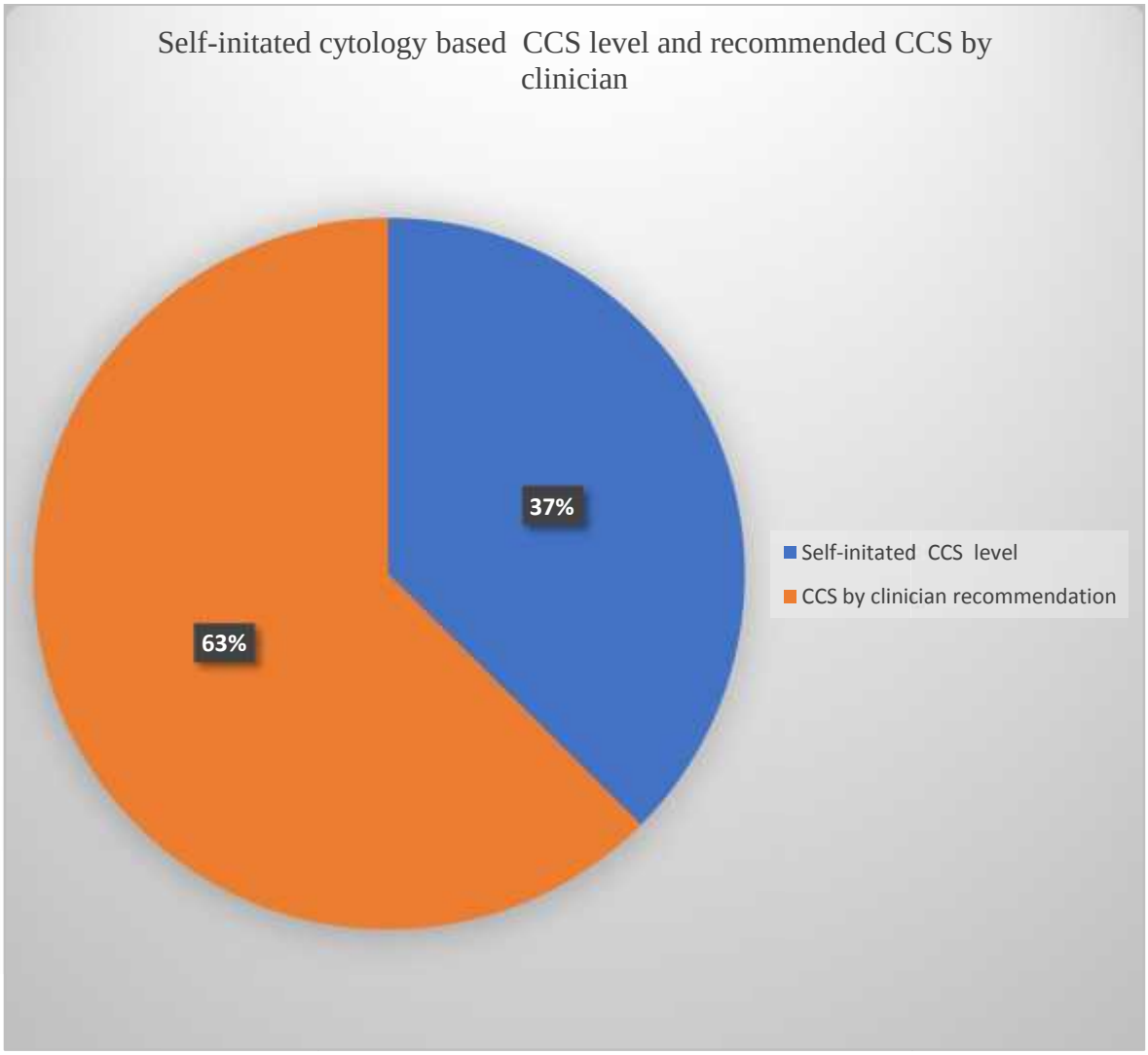

Figure-3 Self-initiated CCSlevel at Arsho medical laboratories from May 1to June 30/2020

The private healthfacility was the most visited health facilityfor self-initiated cervical cancer screening which is about 215 (78.2%). From personal experience, the time gap b/n two consecutive cervical cancer screening was a1-2years gap with around 40(14.5%) of the respondent. the same with women with clinician scheduled time for CCS.

Table-4 health facility type and time gap for HF visit among women who visit Arsho medical laboratories from May1 to June 30/2020

Most visited a health facility for CCS	Government health facility	60	21.8
	Private health facility	215	78.2
The time gap for cervical screening based on personal experience	>1 years	18	6.5
	1-2 years	40	14.5
	2-4 years	25	9.1
	5 years	12	4.4
	>5 years	8	2.9

5.3 SOCIOECONOMIC CHARACTERSTICS

Women with a monthly income of 500-5000 have the highest frequency 189(68.7%) for having self-initiated cervical cancer screening. Cytological CCS test service and transportation cost for cervical cancer screening were mentioned as fair with most women 184(66.9%) and 167(60.7%) respectively. Around 68% ofwomen have partner support to have cervical cancer screening.

Table-5 Socio-economic status of women who came for CCS at Arsho medical laboratories from May1 to June 30/2020.

Variables		Frequency	Percentage
Monthly income	500-5000	189	68.7%
	5100-10000	70	25.4%
	10100-16000	8	2.9%
	16100-21000	8	2.9%
Service cost for cervical cancer screening	Very expensive	6	2.2%
	Expensive	48	17.5%
	Fair	184	66.9%
	Cheap	37	13.5%
Transportation cost for cervical cancer screening	Very expensive	9	3.2%
	Expensive	57	20.7%
	Fair	167	60.7%
	Cheap	42	15.3%
Partner support	Yes	187	68%
	No	88	32%

5.4 REPRODUCTIVE STATUS AND RISK FACTOR OF WOMEN

Among 275 women having children of 1-3 is the highest number 169(61.5%).Around 106 or (38.5%) have their 1st sexual intercourse before eighteen years old.among 169(61.5%) family planning users 127(46.2%) were using OCP.20 out of 127 OCP users take this method for >5 years this can be mentioned as a risk factor for cervical cancer. Around

95.2% have 1-3 lifetime sexual partners&only 35(12.5%)have sexually transmitted diseases but the rest did not have STD. That reproductive status may be considered as a risk factor for cervical cancer.

Table-6 Reproductive and a risk factor for cervical cancer among women came for screening at Arsho medical laboratories from May1-June30/2020

Variable		Frequency	Percent
Number of children	No child	34	12.4%
	1-3	169	61.5%
	4-6	44	16.0%
	7-10	28	10.2%
Age at 1st sexual intercourse	<18 years	106	38.5%
	18-30	163	59.3%
	>30 years	6	2.2%
Do you use family planning	Yes	169	61.5%
	No	106	38.5%
Do you use OCP	Yes	127	46.2%
	No	67	24.4%
How long do you use OCP	<5 years	95	34.5%
	5 years	12	4.4%
	>5 years	20	7.3%
Life time sexual partner	1-3	262	95.2%
	4-5	7	2.5%
	6-7	6	2.2%
History of STD	YES	35	12.7%
	NO	240	87.3%

5.5 FACTOR ASSOCIATED WITH CERVICAL CANCER

Different factors were tested for utilization of cervical cancer screening using logistic regression analysis.Residence,previous history of STD,health facility visit frequency,previous knowledge about cervical cancer,physician recommendation,religion,usage of OCP,and scheduled for self-initiated cervical cancer screening has been associated with screening for cervical cancer in binary logistic regression.Other independent variable monthly income,services, and transportation cost,age,education,number of children,lifetime sexual partner,knowing anyone with cervical cancer,partner support is not associated with cervical cancer screening.By multivariable analysis, only religion,residence,healthfacility visit frequency,history of STD,and ever been counseled by a health professional is significantly associated with self-initiated cervical cancer screening with a p-value less than 0.05.

Being orthodox Christianswere 2 times more likely to have self-initiated cervical cancer screening than other religions [AOR=2.01 (1.9 - 4.2)].The odds of women came for screening is 3 times higher for women who came from urban areas [AOR=3.25(1.08-9.81)].< 1-year health facility visit 4 times more likely to have cervical cancer screening{AOR=4.16(2.18-8.12)] and hasa history of STD mentioned as factor 2 times to have cervical cancer screening compared to not have STD before (AOR=2.21(1.07-4.51).The odds of having cervical screening is 5times higher for those gain councilfromclinician than those who do not.

Table-7Factor associated cervical cancer screening at Arsho medical laboratories from May1-June 30/2020

Variable	Self-initiated cervical cancer screening frequency %		COR (95%CI)	AOR (95%CI)
	YES	NO		
Residence				
Urban	99(36%)	152(55.2%)	0.36(0.1-0.9)**	3.27(1.08-9.8)**
Rural	4(1.4%)	20(7.2%)	1	1
Religion				
Orthodox	75(27.2%)	111(40.4%)	0.48(0.2-0.96)**	2.01(1.9-4.2)**
Protestant	12(4.3%)	14(5%)	0.37(0.14-1.02)	2.62(0.97-7.17)
Catholic	3(1.09%)	7(2.5%)	). 0.71(0.01-3.36)	1.42(0.29-5.80)
Muslim	13(4.7%)	40(14.5%)	1	
History of STD				
Yes	19(6.9%)	16(5.8%)	2.21(1.07-4.5)**	2.21(1.07-4.5)**
No	84(30.5%)	156(56.7%)	1	1
Health facility visit				
< 1 years	39(14%)	37(13.5%)	0.24(0.12-0.472)**	4.16(2.18-8.17)**
1-2 years	45(16.6%)	59(21.5%)	0.33(0.19-0.627)**	3.01(1.62-5.61)
>5 years	19(6.9%)	75(27.4%)	1	
Have clinician counseling				
Yes	74(27.3%)	55(20.3%)	0.18(0.16-0.24)**	5.47(3.18-9.42)**
No	28(10.3%	114(42%)	1	1
Usage of OCP				

** The test statistic aresignificant at the p-value of ≤ 0.05

CHAPTER SIX

6. DISCUSSION

This study was identified aself–initiated cervical cancer screening level and factors associated with cervical cancer screening uptake as a facility-based study in Arsho medical laboratoriesin Addis Ababa;Ethiopia. The study found that the level of self-initiated cervical cancer screening without symptomatic referral and clinical referral was 37%.This is similar when we compare to 37% or 50 of them have cervical cancer screening by themselves. It's slightly higher than a facility-based study that was done in Addis Ababa in 2019 found that self-initiated cervical cancer screening to be33.3%.This difference may be explained by the setting difference between the study facility and study method difference (29).Another study was done in Hawassa;Ethiopia was reported as 60.5%of study participant was mentioned as recommended by a health provider to have cervical cancer screening the rest 39.5 %(135) doesnot recommend for CCS.Amongthose who do not recommend by a physician,this study revealed HIV-positive women with having study population difference(24).

About 78.5%were in the age group of 31-49 but a study done in Mekelle townfound that the highest age to have cervical cancer was age b/n 21-29 taking about 51.8% which means 614out of 1186,this can be explained by recall bias to remember the exact age (19).In other studies done in Cameroonand Germany the highest frequent age group were 25-34 and 30-65 respectively.This can be explained by geographical and methodology differences(27)&(5).

Most of the study participant was from the urban area.It's about 251(91.3%) but the rest 24(8.7%) wasfrom a rural area of Ethiopia.Women from urban areas are 3times more likely to have cervical cancer screening when compared to women who come from rural areas.Population-based WHO steps study have a similar result with cervical cancer screening rate being from urban is about 3 times more likely to utilize the service(30). This is because the accessibility of screening facilities is better than in rural areas.

Religion wasalso associated with self-initiated cervical cancer utilization.Orthodox Christian women have more likely to have self-initiated cervical cancer screening than

other religions [AOR=2.01 (1.9 - 4.2)].This percentage is the same when compared to the community-based study done in Addis Ababa andMekelle town(19)&(24). This can be explained the majority of women were orthodoxChristianity followers.There is no association between education and self-initiated cervical cancer screening in this study; which is adifferent finding from a study done in Hawassa town on HIV patients mentioned that post-primary education has 5 times more to have cervical cancer screening (24).This can be explained by the study population difference compared to the current study.

Health facility visit frequency <1 year and between 1- 2 year health facility visit frequency have significantly associated with cervical cancer screening4 and 3 timeshigher than health frequency visit more than 5 years. This result is similar toa study done in Latin America among 10 different Latin Americancountries. The result explained that women were between 1.47 and 3.44 times more likely to have received a recent Pap smear if they had a recent doctor's visit. This similarity can be explained by recent doctors' visits were important to have cervical screening. Even the poorest women with a recent doctor's visit were more likely to screen than the richest women without a recent visit.when it's classified for Latin American countries the probability of this type of screening among those who had was 48% higher in Bolivia (95% CI, 39%–59%); 241% higher in Brazil (95% CI, 182%–312%); 98% higher in the Dominican Republic (95% CI, 85%–113%); 77% higher in Guatemala (95% CI, 3%–125%); and 94% higher in Nicaragua (95% CI, 67%– 129%)(17).The highest gap of two consecutive screenings was 1-2 years is about 8.7%.Only 42(13.2%) were appointed by a health professional for the next follow-up.

Evaluating the source of awareness, in this study the most frequent source of knowledge was from public health educationwhich accounts for 55.2%,followed by health care workers and relatives.however a study done in Cameroon mentioned that majority of the respondents n=80 (31.6%) revealed that they had heard about cervical cancer from the HCW, followed by the mass media n=39 (15.4%), families and friends n=38 (15.1%) with printed materials and teachers as a source of information being the least sources of information n=10 (3.9%) on cervical cancer(27).

The most chosen health facility type for self-initiated cervical cancer screening is private health facilities about 78.2% compared with governmental health facility 21.8%.This finding is similar to other studies done in different studies.This can have many reasons forthe program approach,accessibility, and so on.Previous clinician recommendations for cervical cancer screening rateswere strongly associated with cervical cancer screening.It's 5 times more when we compare to those who are not previously recommended by the physician. In addition to an individual's use of other healthcare services, factors related to healthcare providers'recommendationswere also consistently positively associated with screening.These factors include providing recommendations for Papanicolaou testing.Several studies also demonstrated the association between patient-provider communication and cervical cancer screening. A studywas done in china also showed that a positive association of clinician recommendation with cervical cancer screening rate.Increasing Pap smear screening in Latin America may depend on two key efforts: raising awareness of preventive care within the community, and encouraging health care providers to advocate more effectively for this type of screening during their patient's visits(17),(3)&(31).

Women with a history of STD have 2 times more to have self-initiated cervical cancer screening than those who do not have a history of STD.This finding is similarto a cross-sectional study done in Uganda;having a previous history of STD significantly associated with cervical cancer screening 1.23 [1.15–1.33]. Another study showed that womenwho haveever experiencedsexuallytransmitted disease wereabout 1.635 times morelikely toundergo cervical cancerscreening when compared to thosewhohavenotexperienced thedisease (AOR =1.635,95%CI =1.094–2.443)(19), (25).The similarity of study findings shows that women having STD have awareness about self-initiated cervical cancer screening.

Another risk factor for cervical screening such as women having children of 1-3 is the highest number 169(61.5%).most of the women have 1st sexual intercourse at the age of 18-30 having 163(59.3%).But around 107 or (38.9%) have their 1st sexual intercourse before eighteen years old. Among 169(61.5%) family planning users 127(46.2%) were using OCP.15.7% of OCP users take for greater than 5 years this can be mentioned as a

risk factor for cervical cancer.But in this study, there is no significant association with self-initiated cervical cancer screening.

Partner support also not associated with self-initiated cervical cancer screening but other study done in Hawasa&Saudi Arabia have mentioned that partner support has 5 times more to have cervical cancer screening compared with women's not having partner support {AOR=4.7, 95% CI: (2.3, 9.4)};this difference can be explained by sample size and study area difference (32)&(24).

WHO survey study in Ethiopia showed that having a household annual income of more than 30,000 ETB were 7.1 more likely to be screened for cervical cancer than their counterparts(9).But in this study, there is no association of monthly income of women,service cost,transportation cost with cervical cancer screening. Sample size difference may be considered as a reason for the difference in the outcome.

7. STRENGTH AND LIMITATION OF THE STUDY

7.1STRENGTH OF THE STUDY

- Since the principal investigator and supervisor of the study were supervising the daily data collection activity to minimize possible data collection errors
- The study help to plan, review and make recommendations to the Ministry of Health (MoH) on the continuous approach of health education for CCS.
- This study could generate new ideas for further studies

7.2 LIMITATION OF THE STUDY

- Consecutive sampling method was used to get study population because it was a very rare event to found women who came to a health facility to have cervical cancer screening with the epidemic of coronavirus and also study area was done in a private health facility that didn’t show the figure of the government health facility.
- Since the study used across-sectional study design,it is difficult to show the temporal relationship on factor assessment.

CHAPTER SEVEN

8. CONCLUSION AND RECOMMENDATION

8.1 CONCLUSION

Based on the study finding self-initiated cervical cancer screening was low compared to symptomatic referral.This leads to missed cervical cancer screening of early-stage cervical cancer diagnosis. Women's came from urban areas have high opportunities to have screening than from rural area.religion wasa very significant factor for cervical cancer screening .being orthodox Christians were significantly associated with cervical cancer screening compared to other religions who were included .this can lead to conclude religious leader education about cervical cancer screening should be considered as a new approach for health education.

Frequent health facility visits also have a great contribution to cervical cancer screening compared to those who have rare health facility visits.This can conclude that clinicians have agreat role in regular health education about cervical cancer screening on early detection of cervical cancer screening. Additionally, women with sexually transmitted diseases were significantly associated with cervical cancer screening.This shows that sexually transmitted diseases can be useful to give parallel cervical cancer screening programs along with STD treatment.

8.2 RECOMMENDATIONS

Based on the study findings and the conclusion the following recommendation is made

- It is better to educate age-eligible women about cervical cancer screening with a regular health checklist in every health department unit along with STD.
- Screening facilities should be available for those women who live in a rural setting.
- Religious leaders should help in encouraging church members to participate in cervical cancer screening services.
- The ministry of health and other relevant authorities to help sensitize and create awareness on the importance of cervical cancer screening with frequent health education about cervical cancer screening using different media to increase self-

initiation cervical cancer screening women's participation for those women with the rare frequency of visit to the health facility.

- For researchers, it’s better to investigate the psychological impact of cervical cancer screening for women who have undergone self-initiated cervical cancer screening

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10. ANNEXES

10.1ANNEX I

10.1.1PARTICIPANT INFORMATION SHEET AND INFORMED CONSENT

Good morning/afternoon dear participant! My name is ……. I am working as a data collector for the study being conducted at Arsho medicallaboratories by TizitaAshenafi, who is studying for her master's degree at Addis Ababa University, School of public health. I kindly request you to give me your attention to explain to you about the study and being selected as the study participant.

THE STUDY TITLE: Self-initiated utilization rate of cervical cancer cytology screening and determinants for reduced uptake on scheduled based screening service among women of reproductive age group atArsho medicallaboratories in 2019

PURPOSE OF THE STUDY: The findings of this study help to show that the importance of self-initiated cervical cancer screening and determinants for reduced uptake to show the problem with demographic, economic, reproductive characteristics to promote, advocate cervical cancer screening with the collaboration of governmental and nongovernmental organization to overcome gaps.

PROCEDURE AND DURATION: Interview based semi-structured questioner will be conducted. It will take 20-25munites.The Questioner will be interviewed after taking informed consent from May-June 2020.

RISKS AND BENEFITS: The risk of participating in this study is very minimal, but only takes 10-20 minutes from your time. There would not be direct payment for participating in this study. But the findings from this research may reveal important information for the local health planners.

CONFIDENTIALITY: The information you provide for us will be confidential. There will be no information that will identify you in particular. The findings of the study will be general for the study community and will not reflect anything particular of an individual person. The questionnaire will be coded to exclude showing names. No reference will be made in oral or written reports that could link participants to the study.

RIGHTS: Participation in this study is fully voluntary. You have the right to declare to participate or not in the study. If you decide to participate, you have the right to withdraw from the study at any time and this will not label you for any loss of benefits that you otherwise are entitled to. You do not have to answer any question that you do not want to answer.

CONTACT ADDRESS: If there are any questions or enquires any time about the study or the procedure, please contact through the following address:

Principal investigator:
TizitaAshenafi
Mobile number: - +251913692060.
Email:-TizitaAshenafi

10.2ANNEX II

10.2.1PARTICIPANT'S INFORMATION SHEET

I have read/ was read to me the participant information sheet. I have clearly understood the purpose of the research, the procedures, the risks and benefits, issues of confidentiality, the rights of participating and the contact address for any queries. I have been given the opportunity to ask questions for things that may have been unclear. I was informed that I have the right to withdraw from the study at any time or not to answer any question that I do not want. Therefore; I declare my voluntary consent to participate in this study with my initials (signature) as indicated below.

Name of participant: _____ Signature of participant: _____.

Name of Data collector _____ Signature of Data collector_____.

Result of the interview:

1. Completed
2. Partially completed
3. The interviewee refused
4. Others----------

10.3ANNEX III

10.3.1 ENGLISH VERSION QUESTIONNAIRE

Instruction

The questioner is two types which arepreceded and open one .for precoded one ask as its and for open questions record the response on the space next to the questioner .

PART ONE: SOCIO DEMOGRAPHIC INFORMATION

Table 4:- Questioner

NO	Question	Possible response	Code
101	Age	…….	
102	Residence	Urban Rural	
103	Education level	cannot read and write can read and write primary education secondary school collage/university	
104	Religion	Orthodox Protestant Catholic Muslim Other ……..	

PART TWO: - WOMEN'S REPRODUCTIVE HEALTH STATUS

201	Marital status	Single Married Divorced Widowed Separated	
202	How many children do you have	……..……	
203	Have ever had history of STD	Yes No	
204	Number of lifetime sexual partner	……	

PART THREE.AWARENESS OF CERVICAL CANCER SCREENING

301	Have you ever screen for cervical cancer without clinician recommendation before?	Yes No	
302	How do you know about cervical cancer screening?	From clinician From mass media Community health education From relatives	
303	If your answer is Yes for question no 301 how long was the most recent time you were screened?	<1 year 1 year 2years 2-4 years 5 years	

		>5 years	
304	Do you ever scheduled for cervical cancer by a clinician	Yes No	
305	If your answer is yes for the above question what is the time b/n two consecutive screening based on your experience	<1 every year Once every 2 years Once every 3years Once every 5 years Above 5 years	
306	Where do you frequently go to screen cervical cancer?	Government hospital Private facility	
307	Do you know anyone who has history of cervical cancer	Yes No	
308	How frequent you have you visit health institution	<1 year 1-2yaer >5 year	
309	Do you ever recommend cervical cancer screening from a health worker	yes No	If your answer is yes please skip no.310
310	If your answer is no what doyou think the possible reason	……	

PART FOUR: SOCIO-ECONOMIC CHARACTERISTICS

401	How much is your monthly income	.....	
402	What would you say about the service cost of cervical screening?	Very expensive Expensive Fair Cheap Very cheap	
403	Transportation cost to have screening service	Very expensive Expensive Fair Cheap Very cheap	
404	Did your partner support you in your decision on cervical cancer screening?	Yes NO	
405	How frequently did you visit a health care	<1 year 1-2 years >5 years	

Part-five Sexual Health risk factors characteristics

501	Age at first sexual intercourse?	……	
503	Do you have the Previous history of contraceptive use	Yes NO	
504	If “Yes” for question 503 do you ever use oral contraceptive?	Yes NO	
505	If you used OCP, for How long?	<5 years 5 years >5 years	

10.4ANNEX IV

10.4.1 **የአማርኛቋንቋመጠይቅ**

ጥናትአድራጊ፡-ትዝታአሸናፊ

ርዕስ፡-

በግልተነሳሽነትበአዋቂሴቶችየሚደረግየማህጸንጫፍካንሰርምረምራመጠንናየማህጸንጫፍካን ሰርቅድመምርመራጋርበተያያዘተጸናየሚፈጥሩሁኒታዎችንበአርሾሜዲካልላብራቶሪስውስጥ ማጥናት፡፡

ጤናይስጥልኝ! ስሜ ……..

እኔዛሬእዚህየተገኘሁትየአዲስአበባዩኒቨርስቲየህብረተሰብጤናተማሪየሆነችውንትዝታአሸናፊ ንበመወከልሲሆንጥናቱምበአርሾሜዲካልላብራቶሪስከላይበተጠቀሰዉርዕስላይጥናትእያደረገ ችሲሆንይህምየማስተርስዲግሪዋንለማግኘትየሚጠቅማትነው፡፡ከዚህበታችጥናቱላይለመሳተ ፍከመወሰኖህበፊትየጥናቱንአላማ፣ጥናቱላይበመሳተፎየሚያገኙትጥቅምእናጉዳትእንዲሁም ደግሞከእርሶየሚጠበቀውንእገልጽሎታለሁ፡፡

አላማ፡-

በግልተነሳሽነትበአዋቂሴቶችየሚደረግየማህጸንጫፍካንሰርምረምራመጠንናየማህጸንጫፍካን ሰርቅድመምርመራጋርበተያያዘተጸናየሚፈጥሩሁኒታዎችንበአርሾሜዲካልላብራቶሪስውስጥ ማጥናትነው

ቅደምተከተል፡-

የስምምነትወረቀቱንከፈረሙበኃላመረጃሰብሳቢዉአግባብያላቸዉንጥያቄ፤የተዋቀረመጠይቅበ መጠቀምፊትለፊትይጠይቆታልምላሽዎንምበቃለመጠይቁላይያሰፍራል፡፡ቃለመጠይቁ 20-25 ደቂቃይወስዳል፡፡ከግንቦት -ሰኔ 2020 መጠይቅየሚቀጥልይሆናል፡፡

ለተጠያቂውየሚሰጠውጥቅም፡-

ለተጠያቂውቀጥተኛጥቅምላይኖረውይችላል፡፡ነገርግንጥናቱከተካሄደበኋላየጥናቱውጤትየተ ሳታፊዎቹንከማህጸንጫፍካንሰርጋርበተያያዘያለቸውንእውቀትእንዲሁምየማህፀንጫፍካንሰር ምርመራለማድረግአጋችሁኔታዎችለማወቅይረዳል፡፡ይህምህግአዉጪዎችእናየተለያዩበማህ ፀንጫፍካንሰርላይየሚሰሩግብረሰናይድርጅቶችየማህጸንጫፍካንሰርወረርሽኝንለመከላከልእር ምጃእንዲወስዱይረዳል፡፡ለሰጡትመረጃምንምአይነትየገንዘብክፍያአይከፈሎትምነገርግንማን

ኛዉምየጥናቱተሳታፊከማህጸንጫፍካንሰርጋርተያይዞላለዉጥያቄትምህርትይሰጣል፡፡የጥናቱ ዉጤትለሚመለከተዉክፍልይሰራጫል፡፡

ጥናቱሊያስከትልየሚችለዉጉዳት፡-

በጥናቱላይመሳተፍምንምአይነትጉዳትአያስከትልም፡፡ነገርግንጥያቄዎችንሲመልሱሰዓቶትን ልንወስድእንችላለን፡፡

የተጠያቂውመብቶች:-

የእርሶተሳትፎፈፅሞበፍላጎትላይየተመሰረተነዉ፡፡አንድተሳታፊጥናቱላይመሳተፍምለመሳተ ፍምይችላል፡፡ጥናቱላይመሳተፍባይፈልጉምንምአይነትጥቅምአይከለከሉም፡፡ማንኛዉምያልተ ረዱትጥያቄካለመረጃሰብሳቢዉንመጠየቅይችላሉ፡፡

ምስጢራዊነት፡-

ሁለምመረጃምስጢራዊነቱየተጠበቀሲሆንየእርሶንስምባለመፃፍምስጢራዊነቱንለመመጠበቅየ ምስጢርቁጥርየምንጠቀምይሆናል፡፡

በዚህጥናትላይለመሳተፍፍቃደኛነዎት

1.አይደለሁም…… 2.አዎ……

ስምምነት

ከላይየጥናቱአላማ፣ጥቅሙ፣ጉዳቱ፣እንዲሁምሚስጥራዊነቱበሚገባኝእናበምረዳዉቋንቋተገ
ልጾልኛል።በተጨማሪምበጥናቱላይለመሳተፍብስማማምእንኳንምንምአይነትማብራሪያመስ
ጠትሳያስፈልገኝበፈለኩትጊዜአቋርጬመዴድእችላለሁ።በዚህጥናትላይተሳትፎዬፈፅሞበፍላጎ
ትላይየተመሰረተነዉ።በጥናቱላይላሉኝጥያቄዎቸበተሰጠኝአድራሻመጠየቅእንደምቸልተነግሮ
ገኛል ::

በዚህጥናትላይለመሳተፍተስማምቻለሁ።

ፊርማቀን (መረጃሰብሳቢ) ……..

ፊርማቀን (ጥናትአድራጊ)……..

ለሚኖርዎትጥያቄየሚጠቀሙትአድራሻእናየጥናትአድራጊዋመረጃ

የጥናትአድራጊዋስም፡ትዝታአሸናፊ

ስልክቁጥር0913692060

ኢ-ሜይሌ፡ tizuashe@gmail.com

የጠያቂውስምእናፊርማ._____

የተጠየቀበትቀን (በኢትዮጵያአቆጣጠር) -------/----------/--------

የጥናቱውጤት

1. ተጠናቋል……

2. መጠየቅአልፈለጉም……..

3. በከፊልየተጠናቀቀ……

4.ሌላ……

በጥናትአድራጊዋተረጋግጧልስም ----------ፊርማ----------

ቀን_____

10.5 ANNEX V

የአማርኛመጠይቅ

ክፍልአንድ:ማኅራዊዳሰሳ

ተ.ቁ	መጠይቅ	መልስ	ምርምራ
101	እድሜዎስንትነው?	.....	
102	አድራሻዎየትነዉ?	ከተማ ገጠረ	
103	የትምህርትደረጃዎንይንገሩኝ;	ማንበብናመጻፍየማይችል ማንበብናመጻፍየሚችል መጀመሪያደረጃትምህርት ሁለተኛደረጃትምህርት ዲፕሎማናዲግሪከዛበላይ	
104	የሚከተሉትሃይማኖትምንድንነው?	ኦርቶዶክስ ፕሮቴስታንት ካቶሊክ ሙስሊም ሌላከሆነይጥቀሱ	

ክፍል 2፡ የስነተዋልዶዳሰሳ

201	የጋብቻሁኔታ?	ያላገባች ያገባች የፈታች ባሏየሞተባት የተለያየች	
202	ስንትልጆቸአሎት?	……	
203	ከዚህበፊትየአባላዝርበሽታአጋጥሞትያውቃል?	አዎ አያዉቅም	
204	እስካሁንስንትየፍቅርጉደኛነበሮት	……	

ክፍል 3፡ስለማህጸንጫፍካንሰርምርመራየሚደረግዳሰሳ

301	ያለጤናባለሙያጥቆማየማህንጫፍምርምራአድርገው ያዉቃሉ	አዎ አላዉቅም እርግጠኛአደለሀ
302	ስለየማህጸንጫፍምርምራእንዴትሊያውቁቻሉ	ከጤናጣቢያ ከሚደያ ክማህበረሰብየጠ ቤተሰብ ሌሎች……
303	ለጥያቄቁጥረ 301 መልሶአዎከሆነክዚህበፊትበቅርብያደርጉትመቼነበረ	ከ 1 አመትበታ

		1 አመት 2 አመት 2-4 አመት 5 አመት >5 አመትበላይ
304	በጤናባለሙያለቀጣይምርመራተቀጥረውያዉቃሉ	አዎ አላዉቅም
305	ካሳለፉትልምዶትበምንያህልተቀጥረውያዉቃሉ	በየአመቱ በየ 2 አመቱ በየ 3 አመቱ በየ 5አመቱ .ክ 5 አመትበ
306	ብዙጊዜየማህጫፍምርምራለማድረግወደኦትይሄዳሉ	1.የመንግስትጠ 2.የግልየጤናተ 3.በሌላካለ.....
307	በቤተሰብዎ፣በንደኛዎወይምበጎረቤቶዉስጥየማህፀንጫፍካንሰርየነበረበትሰዉያዉቃሉ?	አዎ 2.አላዉቅም
308	በየስንትጊዜወደጤናተቁምይሔዳሉ	ከ1 አመትበታ 1-2 አመት >5 አመትበላይ
309	በጤናባለሙያስለማህፀንጫፍካንሰርምርመራጥቆማወይምምክርተሰቶትያቃል	አዎ

		አያዉቅም
310	ለጥያቄቁጥር 309 አያዉቅምከሆነመልሶምክንያቱምንይመስሎታል	……

ክፍል 4 ፡ የ አገልግሎትክፍያናየገቢመጠንዳሰሳ

401	በወርዉስጥየቤተሰብገቢዎምንያህልይሆናል	…… .(የኢ/ት-ብ
402	የማህፀንጫፍካንሰርምርመራአገልግሎትክፍያመጠን	በጣምዉድነዉ ዉድነዉ ተመጣጣኝነዉ ርካሽነዉ በጣምረካሽነዉ
403	ክቤትወደማህፀንጫፍካንሰርምርመራአገልግሎትጣቢያለመምጣትያወጡትወጪ	በጣምዉድነዉ ዉድነዉ ተመጣጣኝነዉ ርካሽነዉ በጣምረካሽነዉ
404	የፍቅርጎአደኛዎየማህፀንጫፍካንሰርምርመራማድረጎንይደግፋሉ	አዎበድንብ አይደግፍም

ክፍል 5፡ለማህፀን ካንሰርየሚያጋልጡሀኔታዎችዳሰሳ

501	የመጀመሪያየየፍቅርግንኙነትሲጀምሩእድሜስንትነበረ	……	

503	የቤተሰብምጣኔመቆጣጠያወስደዉያዉቃሉ	አዎ አላዉቅም	አላዉቅምከሆነመልሶ 504 ንይለፉት
504	መልሶአዎከሆነበእክብልየሚወሰድመከላከያወስድዉያዉቃሉ	አዎ አላ□ቅም	
505	መልሶአዎከሆነበእክብልየሚወሰድመከላከያለምንያህልጊዜወሰዱ	ከ 5 አመትበተች ለ 5 አመት ከ 5 አመትበላይ	

CURRICULUM VITAE

1. Personal Information

- NAME:-TizitaAshenafi
- GENDER:-Female
- DATE OF BIRTH :-April/29/1991G.C
- PLACE OF BIRTH:- Addis Ababa
- NATIONALITY:- Ethiopian
- ADDRESS Tel: +251-91-3692060, +251-91-2074118(mobile)
- E-mail: tizuashe@gmail.com

2. Summary of qualification

- Graduated as public health officer in 2013 from Gondar University

3. Educational and Background

- 2010-2013 Bachelor of Science degree in public health with CGPA 3.13 from Gondar University.
- 2008-2010 Medhanialem secondary school
- 2006-2008 Dill ber secondary school by a score of 3.4

5. Computer Skills:

- Use of micro-computer software and MS- Windows's application
- Word processing (MS-Word), Spreadsheet (EXCEL), Graphics (PowerPoint),SPSS, AND Oracle.
- Polytec software

6. Languages:

- Amharic (read, write & speak fluently)
- .English (read, write & speak fluently)

7. Interest:

- ❖ Reading different kinds of books, participating in humanitarians, idea sharing with friends, and watching movies.

8. Other achievements: Member at Ethiopian public health association since 2013.

- Taken customer service training given by glimpse experimental business communication trading.
- Family planning training
- Tb and HIV training held atthe University of Gondar in 2013 before graduation
- Updated Working license

9. Reference :

- Degefechmugoro wellness department manager;Tel+251911816016
- Atoakilew Public health coordinator at University of Gondar ;Tel+251918035392
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