ADDIS ABABA UNIVERSITY

COLLEGE OF HEALTH SCIENCES

SCHOOL OFNURSING AND MID WIFERY

DEPARTMENT OF NURSING

CERVICAL CANCER SCREENING BEHAVIOR AND ASSOCIATED FACTORS AMONG WOMEN ATTENDING GYNECOLOGY OUT - PATIENT DEPARTMENT AND MATERNAL AND CHILD HEALTH ATDILLA UNIVERSITYREFERRALHOSPITAL, ETHIOPIA, 2018

PRINCIPAL INVESTIGATOR:

RUHAMA MEKURIA

A RESEARCH THISIS SUBMITTED TO ADDISABABA UNIVERSITY COLLEGE OF HEALTH SCIENCES, SCHOOL OF NURSING AND MIDWIFERYDEPARTMENT OFNURSING, IN PARTIAL FULFILLMENT FOR THE REQUIREMENT OF MSC DEGREE IN ONCOLOGY NURSING

ADVISORS: -1. BOKA DUGASSA (BSC, MSC)

2. TEFRA MULUGETA (BSC, MSC, PHDCANDIDATE)

JUNE 2018

ADDIS ABABA, ETHIOPIA

ADDIS ABABA UNIVERSITY

COLLEGE OF HEALTH SCIENCES

SCHOOL OF NURSING AND MIDWIFERY

DEPARTMENT OFONCHOLOGY NURSING

Name of investigator	Ruhama Mekuria (BSCN)
Name of Advisor Name of co-advisor	Boka Dugassa (BSC, MSC) Tefra Mulugeta (BSC,MSC,PHD CANDIDATE)
Full title of the research project	Cervical cancer screening behavior and associated factors among women attending gynecology out -patient department and maternal and child health at Dilla university referral Hospital, Southern, Ethiopia, 2018.
Study Area	Dilla University Referral Hospital, Southern, Ethiopia, 2018.
Total Cost of the project	27,772.5 Ethiopian Birr
Source of Funding	Addis Ababa University
Address of investigator	Cell phone: +251(0)913853054
	Email: **jmahitedo@gmail.com**

ACKNOWLEDGEMENT

First I would like to express my gratitude to Addis Ababa University (AAU), college of health science (SAHS), and Department of oncology nursing for selection of this thesis to develop. My sincere gratitude goes to my research advisors, Ato Boka Dugassa (BSC, MSC) and Ato Tefra Mulugeta (BSC, MSC, PHD CANDIDATE) for their relentless support and valuable advice in this proposal from the inception to the final. And next, I would like to thank all concerned bodies whose contribution was vital to go through the development of this proposal. My heartily gratitude also goes to families and friends whose daily moral support gave me the strength to keep going throughout the work.

ABBREVIATIONS AND ACRONYMS

AA	Addis Ababa
AAU	Addis Ababa University
AAPBCR	Addis Ababa population based cancer registry
CC	Cervical Cancer
CCS	Cervical Cancer Screening
CI	Confidence Interval
GP	General Practitioner
HPV	Human Papiloma Virus
MOH	Ministry of Health
ETB	Ethiopian Birr
VIA	Visual Inspection with Acetic Acid
PaP	Papanicolaou test
SPSS	Statistical Packages for Social Sciences
WHO	World Health Organization

Contents

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

Introduction: Globally, Cervical cancer is the greatest threat to women's health, which is the fifth cause of death accounting for all types of cancer deaths among women. Globally, 528000 new cases each year and the second most common in developing countries around 445,000 new cases develop cervical cancer each year. Cervical screening behavior is the recommended for effective methods for prevention and early detection of cervical cancer.

Objective: To assess cervical cancer screening behavior and associated factors among women attending gynecology out -patient department and maternal and child health at Dilla university referral Hospital, Southern, Ethiopia, 2018.

Methods: Institutional based cross-sectional study was carried among 321 patients. Systematic random sampling was applied to select study subject and descriptive analysis were employed to describe the percentages and number distributions of the respondents for socio-demographic characteristics. The data was entered EPI data version 4.2 and analyzed by using SPSSS version 20. Bivariate analysis was also used to see the association of independent with the dependent variable.

Result: In this study a total of 321 clients were participated in the study. The mean age was 35.79 with SD±11.46. The majority of participants 225(70.1%) were not intended cervical cancer screening while 96 (29.9%) were intended cervical screening respectively. Age≥50(AOR=26.603;95%CI=8.167,86.662), smoking(AOR=0.179;95CI=0.087,0.369), women's who had STD (AOR=0.169; 95%CI=0.82, 0.347), multiple sexual partner of the husband (AOR=1.221; 95%CI=0.687, 2.200) and were used contraceptive (AOR=0.172; 95%CI=0.070, 0.422) were found to have association with cervical screening behavior.

Conclusion and Recommendation: According to this finding, the overall rate of those participants who had good screening for cervical cancer behaviors were about 29.9%. Maternal age, using smoking, using contraceptives, presence of STD, and having multiple sexual partner of the husband are predominantly stated factors associated with cervical screening behaviors so, this needs intensive awareness creation campaigns on cervical cancer to complement health education in health facilities

Keyword: Cervical cancer, screening behavior, associated factor.

CHAPTER1: INTRODUCTION

1.1. Background of the Study

Globally, cervical cancer is always the greatest threat to women's health, it is the fifth cause of death accounting for all types of cancer deaths among women(1).Globally,528000 new cases cervical cancer each year and the second most common in developing countries around 445,000 new cases develop cervical cancer each year(2).

The cervical cancer screening is to create access to early detection of cervical cancer and preventative therapy for millions of women worldwide(3). Global studies showed that early detection and treatment can prevent 75 per cent of cancers in developing countries, like other screening tests (3). Early detection through screening and treatment of pre-cancerous lesions remains the best possible protection against cervical cancer(4). Globally evidence shows that utilization of screening for prevention is very poor in developing countries. Unfortunately, it is estimated that one in every three U.S. adults is not getting screened as recommended(3, 5).In the US Screening for cervical cancer, which diagnosed in more than 12,990 women in 2016, can both detect cancer at early stage(6)

Prevalence and mortality rates are highest in developing countries; particularly sub-Saharan African nations estimated 528,000 new cases of cervical cancer. Cervical cancer commonly occurs in women aged ranged from 25-65 years(7). It is caused by infection by human papilloma viruses that transmitted from individuals to individuals by sexual intercourse which may infect the areas around the cervix, anus, mouth and throat (6).Of all the cancers, cervical cancer is the only one that has both an effective vaccine and screening program that can prevent disease and death (8).Cervical cancer, which is a malignant neoplasm, can be asymptomatic sometimes in early stages(9).The symptoms that can be seen normally in advanced stages are persistent pelvic pain, unexplained weight loss, unusual bleeding during periods, bleeding and pain after sexual intercourse (10) .

Cervical screening behavior is recommended effective methods for prevention and early detection of cervical cancer(11). However, awareness and knowledge about cervical screening behavior is lacking among lower socio-economic status and high cost and low awareness were

found to be the primary barriers to cervical cancer(12). Cervical cancer screening is recommended in Ethiopia, but due to the limited resources, awareness and knowledge is not yet easily available(13).

To increase the awareness of cervical cancer screening behavior, health education is pivotal in any prevention program aimed in reducing the overall prevalence of cervical cancer in the community. For health education to be effective and have an impact and good outcomes on cervical screening behavior(6)

1.2. Statement of the Problem

The incidence of cervical cancer screening varies greatly between developing and developed countries, where cervical cancer cases have been considerably abridged since the implementation of effective screening programs in developed countries(14). However, in developing countries, the burden from cervical cancer remains high because of the difficulty in implementing cytology-based screening programs (Pap smear, AVI)(15).

There are several barriers to the uptake of cervical cancer screening in low and middle-income countries (LMICs), which include low levels of knowledge of cervical cancer, limited awareness of prevention and early detection methods, fear of stigma associated with cancer diagnosis, concerns about spousal disapproval of screening, and concerns about violations of religious and cultural obligations of modesty during screening procedures(4).Even though there is no national Cancer registry in Ethiopia, a survey from federal Ministry of Health and Addis Ababa Cancer registry shows that 64,000 new cases of Cancer occur annually where Cervical and Breast Cancer constitute the significant majority of these cases. The problem rose from too little people's awareness about cancer, very limited treatment facilities and too little governments and other stakeholder's intervention(16).

Most of the women in the country visit health institution already with the advanced stage of cervical Cancer when they show up at the Hospitals. Cervical cancer is the leading cause of cancer mortality among Ethiopian women over the age of 30(17). On the other hand, the other study records show that 7600 Ethiopian women are diagnosed annually with cervical cancer and of these, 6000 die of the disease each year. Cervical cancer screening has been shown as the most effective way to decrease cancer mortality among all women (10).

In Ethiopia, only 0.6% of all women, 1.6% of urban and 0.4% of rural women aged 18-69yrs screened every 3yrs (18, 19).The major factors associated with cervical cancer screening are inadequate knowledge about the disease process, and Pap smear testing and clients negative attitude towards the procedure (12, 20). Besides, poor knowledge about cervical cancer, and lack of awareness of available screening methods have been identified as the most important factors hindering the use of available cervical cancer screening services. Cervical cancer screening services are available in some areas of in Ethiopia(21), but screening is mostly

conducted only when a woman seeks medical care for other reasons. Sometimes, screening is offered only if the woman presents with symptoms(22).Despite the evidence that universal screening is important, women without symptoms are not routinely screened in many locations in Ethiopia. In Ethiopia methods for screening are different in compared to high-resource countries(23).Gap identified in Ethiopia is most of the women have no awareness about cervical cancer screening behavior.Little is known about the relative incidence of cervical cancer screening behavior .

So this study is aimed to assess cervical screening behavior among women attending at Dilla university referral Hospital, Southern, Ethiopia, 2018.

1.3. Significance of the Study

Understanding cervical cancer screening behavior is the key for identifying appropriate interventions for improvement of maternal health.

Therefore, this study will provide more evidence on the screening behavior of cervical Cancer. The Finding of this study will give an insight to policy makers on cervical Cancer screening behavior and subsequent planning and implementation of maternal health programs in the Ethiopian communities. It will be used to increase the awareness of women on cervical screening behavior and as base line information for researchers, health professionals, NGOs and as a whole the society to understand about the cervical cancer screening.

CHAPTER2. LITERATURE REVIEW

2.1 Cervical Cancer Screening

Prior to WHO's recommendation to use Visual Inspection with Acetic Acid (VIA) as screening methods in low resource countries, multiple research studies examined VIA for their accuracy and sensitivity in detecting Cervical Cancer(24). Both these tests were established to be convenient, affordable, and accurate(25). Descriptive study found in Tanzania that VIA has a higher accuracy than Pap test for detection of precancerous lesions of the cervix, and affirmed that this test is adequate and cost-effective. VIA screening also has been found to be as sensitive and accurate in detecting any precancerous cells, which are identified by the Pap test and confirmed by cervical biopsy(26).

According to study done in Ethiopia, early screening for cervical cancer is a key intervention in reduction of maternal deaths. Health care workers have a significant contribution to improve cervical cancer screening practice among women and inexpensive, "screen and treat" approach to cervical cancer prevention(27, 28).Universal screening is not yet available for women, the services that are available may not be utilized to their full potential(29). The high prevalence of morbidity and mortality associated with cervical cancer among Ethiopian women underscore the importance of identifying the factors that contribute to the current low utilization of available screening services(10).

In Ethiopia studies identifies cervical cancer screening as an effective strategy to prevent and cure for women in low-resource countries(6). To prevent suffering, death, and other consequences that can result from Cervical cancer, effective education and intervention programs to increase cervical cancer screening essential(30). If education and intervention are to be effective, it is essential to investigate, identify, and incorporate the predictive belief factors of Ethiopian women that impact cervical cancer screening implementation(31). While it is understandable that women may not undergo cervical cancer screening when there are structural barriers(32). It is imperative to investigate the belief factors that may contribute to their behavior when the structural barriers are mitigated. The findings of the present study will help reveal the belief factors that predict or influence the utilization of cervical cancer screening, potentially increasing the effectiveness of current education and intervention

efforts. The association between belief factors and cervical cancer screening acceptance has been studied with various populations in different countries(33).

Ethiopia has a population of 29.43 million women ages 30 years and older who are at risk of developing cervical cancer. Current estimates indicate that every year 7600 women are diagnosed with cervical cancer and 6000 die from the disease. Cervical cancer ranks as the 2nd most frequent cancer among women in Ethiopia and the leading cause of cancer related deaths among Ethiopian women (8). Several barriers to cancer screening have been reported; these include a lack of awareness of the importance of screening, inadequate access to healthcare, aversion to the discomforts of screening, fear of finding cancer and logistic barriers such as having to take time of work for screening(32).

However, there is a little study conducted on cervical cancer screening behavior in Ethiopia. Some findings of the study conducted in Tigray begin the development of evidence needed to improve the utilization of cervical cancer screening and thereby decrease cervical cancer incidence among women in Ethiopia(34).

It is also expected that the number of new Cancer cases could rise to 70 % over the next two decades that is from 14 million to 22 million in 2030. Unfortunately more than 60 % of the world's total new Cancer cases occur in developing countries like Ethiopia (35). Lack of screening in this low-resource country could be related to structural factors, such as affordability, accessibility, and availability(36, 37)Most of the services that are available, especially in hospital settings, are opportunistic at best. Opportunistic screening refers to services provided, such as Cervical cancer screening, only when a woman presents to seek medical care for other reasons(36).

2.2Cervical Cancer Screening Behavior

According to the study done in China on cervical cancer screening behavior and its predictors among women aged 50 years or above. A population based sample of 959 women selected, and examine the factors independently associated with cervical screening behavior. Nearly half the sample (48%) had never had a cervical smear test. Multivariable analyses showed that age, educational level, marital status, family history of cancer, smoking status has direct

related to behavior of CC. Misconceptions concerned with menopause may reduce women's perceived susceptibility to cervical cancer, especially if they are 50 or above, and exert a negative effect on their screening behavior(38).

Cross sectional study done in Zimbabwe revealed low knowledge levels, negative beliefs about the risk of developing cervical cancer and poor screening behaviors among health workers in Mudzi district. Training in cervical cancer, therefore, recommended for the health workers. However, the training should be combined with setting up facilities for cervical cancer screening behavior(39)

According to study done in Ethiopia various factors including cultural, and beliefs about the disease and the health care system were found to affect the treatment seeking behavior for CC. One of the barriers included: stigma associated with disease, limited access to health services, the lack of awareness, and the asymptomatic nature of the disease. Major barrier to seeking treatment is the stigma and discrimination affected women experienced by their family and the community. As the community commonly believes the cause of CC is due to unacceptable social behaviors, women are therefore reluctant to disclose their condition due to the social consequences(10)

2.3 Factors Associated with CC Screening Behavior

There are several factors influencing CC screening behavior. Involve Personal, demographic, and organizational factors. These predictable factors overlap in influencing CCS participation.

2.3.1 Personal Factor.

More than 85% of the global burden occurs in developing countries, where it accounts for 13% of all female cancers for example High-risk regions are Eastern and Western Africa it is greater than 30 per 100,000, South America 23.9 per 100,000 Rates are lowest in Northern America and Australia/New Zealand(ASRs less than 6 per 100,000)(40).

According to the study conducted in Kenya when asked about risk factors associated with the development of cervical cancer, previously screened women believed vaginal bleeding (15%), having multiple sex partners (30%), smoking (10%), having sexually transmitted diseases

(10%), or use of contraceptives (20%) were associated with cervical cancer. Nearly all previously screened women (92%) believed that cervical cancer was curable if detected early, and 86% felt that screening should be conducted annually(41)

According to the study conducted in Ethiopia there were several personal factors associated with poor utilization of cervical cancer screening. These include smoking, multiple sexual partners, high parity, age at first intercourse, age at first marriage, immune-suppression, and long-term use of contraceptives(23). Additionally, the consequence may include detecting Cervical Cancer at stage when it is difficult or impossible to treat(27). Thus, a lack of screening can also be considered an underlying attribute contributing to the diagnosis of Cervical Cancer in Ethiopia has the highest age-standardized incidence and mortality rate of Cervical Cancer (16)

Therefore, a woman has to seek CCS when she is healthy and asymptomatic. If the pre-cancerous cells are treated, then the CC may be prevented (18). Although research has established that HPV vaccine is one of the most effective measures in preventing CC, its use in Ethiopia is challenging due to low public awareness and high cost (5). In other words, even though there may be occasional vaccination programs, HPV vaccination is reported to be impractical for Ethiopia due to resource scarcity (19).

Study done showed Arbaminch the respondents had low awareness of cervical cancer and was not utilizing the services. There was also a lack of understanding of risk factors for cervical cancer. The major factors identified by the women that influence screening utilization were lack of knowledge about the need for cervical screening, fatalistic attitudes about cervical cancer and other aspects of health, low perceived susceptibility, having many contending issues, financial constraint, and emotional barriers (fear of having a positive result, embarrassment and anticipated shame(42)

2.3.2 Organizational Factor

United States' standards recommend that women must have CCS by 21 years of age and be screened at least every two years there are marked differences in guidelines for coverage of CCS between high-resource and low resource settings(8).In Colombia, researchers assessed

the accuracy of VIA and concluded that VIA are a “good alternative” for screening. A review of the literature clearly indicates that VIA are cost-effective, accurate, and valid tests. Even with the accurate and cost-effective method for screening and established guidelines, however, the utilization of services that are available is not nearly optimal(43).The study done in Nepal the lack of resources contributes to lower screening rates in low-resource countries **(**36)

In Tanzania, evaluated the feasibility and performance of screening for CC using VIA or VILI with a sample size of 10,378 and found that both screening tests were accurate(44). These barriers involve structural, and belief factors. These predictable factors overlap in influencing CCS participation. The literature suggests there is a pattern of structural factors influencing the CCS participation or behavior, by first influencing women’s perceptions and beliefs (23).

Finding of study done in Ethiopia based screening programs is problematic in low-resource settings due to barriers such as difficulties in contacting patients ,transportation availability and cost, clinic hours, and childcare needs(19). Three general categories of barriers to cervical cancer screening have been identified in literature the first category includes the structural barriers, some of which include availability, accessibility, and affordability. The second category includes the demographic attributes, and the third category includes the belief factors (45).

2.3.3 Socio-economic Factors.

The study done in china states that respondents in older age groups were less likely to have had a cervical smear test Odds Ratios (OR) for women aged 60–69, 70–79 and 80 or above. Study reported in Zimbabwe that age, income, smoking status, and education were significant predictors of adherence to CCS (23).

Further, while investigating women’s knowledge of the perceived barriers to CCS, the thematic analysis identified that interplay of social and personal barriers influenced women’s poor presentation for CCS. In another quantitative study conducted in Nigerian women aware of CCS (N=3,712) to evaluate reasons behind failure to participate in CCS, researchers found that knowledge of CC, education, income and age made a significant impact on CCS(46)

According to the study done in Ethiopia among the total participants (209), 167(79.90%) were between 20-24 years of age with a mean age of 21(SD ± 1.60) years. more than half of the respondents were orthodox (53.59%) and 118 (56.46%) were Amhara in ethnicity. Regarding to marital status the majority 187(89.47%) was single. Most of the respondent, (59.33%) had monthly income of 200- 500 birr**(47).**

According to study done in hosanna the median age of the study subjects was found to be 28 years with standard deviation of ±6.83. Most of the respondents, 366 (62.8%), were currently married. Majority of the respondents, 127 (21.8%), were government employees in their occupation. the minimum and maximum monthly income of study participants was 297 and 5600 respectively(48).

2.6 Summary of the Literatures

Early screening for cervical cancer is a key intervention in reduction of maternal deaths. Health care workers have a significant contribution to improve cervical cancer screening practice among women and inexpensive, “screen and treat” approach to cervical cancer prevention. Cervical cancer screening as an effective strategy to prevent and cure for women in low-resource countries. Cervical cancer screening behavioral factors including cultural, and beliefs about the disease and the health care system were found to affect the treatment seeking behavior for CC. One of the barriers included: stigma associated with disease, limited access to health services, the lack of awareness, and the asymptomatic nature of the disease. Therefore, the purpose of this study is to assess Cervical cancer screening behavior and associated factors among women attending gynecology out -patient department and maternal and child health at Dilla university referral Hospital, Southern, Ethiopia, 2018.

Health Belief Model (**HBM**) is model developed to explain and predict health-related behaviors, particularly in regard to the uptake of health services. The health belief model was developed in the 1950s by social psychologists and remains one of the best known and most widely used theories in health behavior research. The health belief model suggests that people's beliefs about health problems.

Conceptual Framework

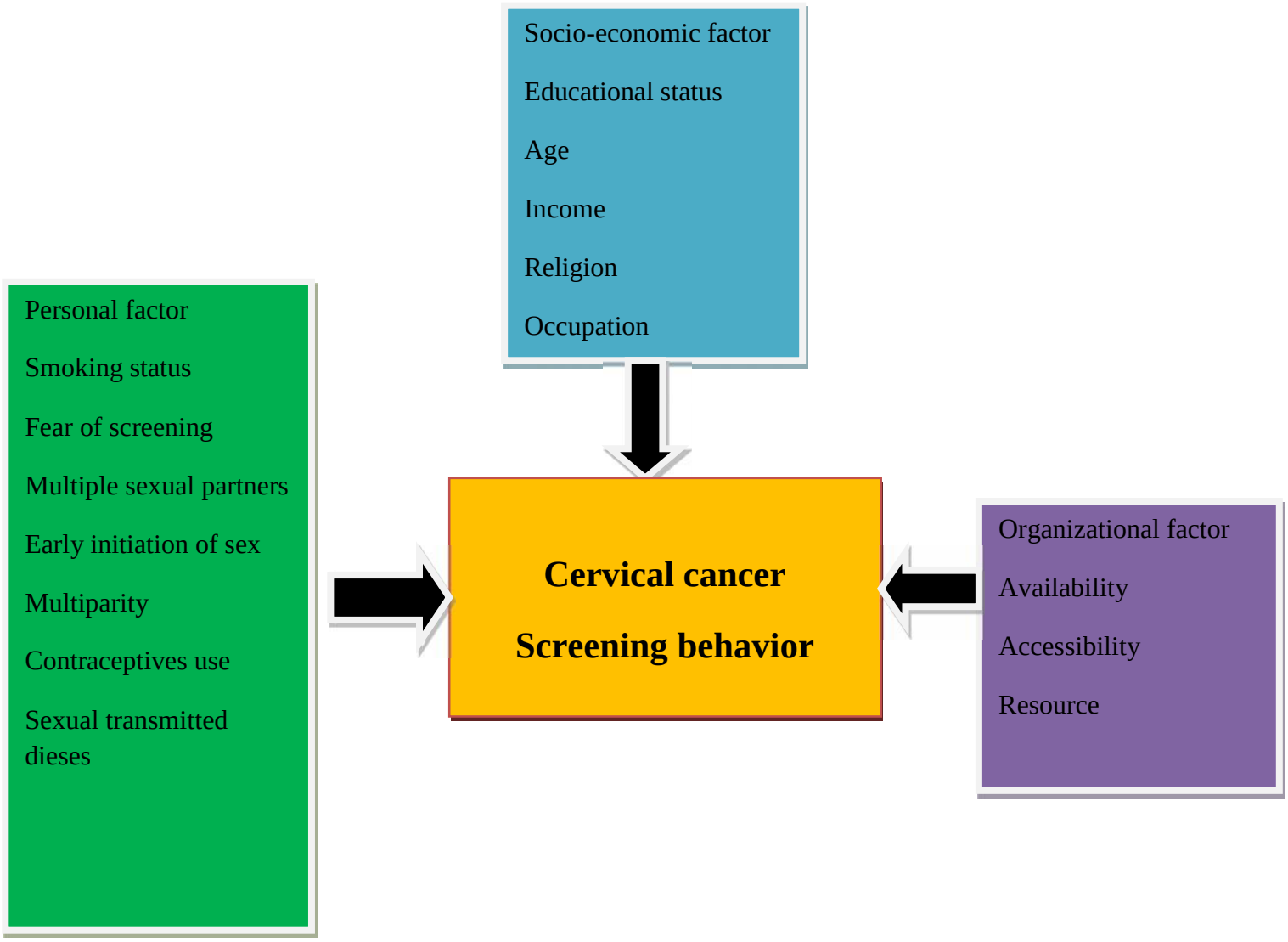

Figure 1:: Cervical cancer screening behavior conceptual frame work modified from heath belief

CHAPTER3: OBJECTIVE

3.1. General objective

To assess Cervical cancer screening behavior and associated factors among women attending gynecology out -patient department and maternal and child health at Dilla university referral Hospital, Southern, Ethiopia, 2018.

3.2. Specific objectives

1. To assess the cervical cancer screening behavior among women attending GYN OPD and MCH at, Dilla university referral Hospital, Southern**,** Ethiopia, 2018
2. To identify factors associated to cervical cancer screening behavior among women attending GYN OPD and MCH at Dilla university referral Hospital, Southern**,** Ethiopia, 2018

CHAPTER4: METHODLOGY

4.1 Study area and period

The study was conducted in Dila university referral hospital, Dilla town of Gedeo zone, SNNPR Ethiopia from February-June, 2017 G.C. Dilla, which is established in 1911 /12 E.C, is located at 360kms south from A.A & 90 km from Hawassa. The town is bounded by Sidama zone in the east & the rest 3 sides by Oromia region. It sits at 1,600 meter above sea level. The town has 03 kifleketemas & 09 kebeles (03 in each K.K). The total population of the town is 84,930 and registered total households in the town are 17,332. The health coverage of the town is 50% & education coverage is 70%. It has one government referral hospital.

4.2 Study Design

Institutional based cross sectional study design was used to assess cervical cancer screening behavior and associated factors among women attending Gynecology, out -patient department and maternal and child health at Dilla referral hospital.

4.3 Source of Population.

All women's who came to Dilla referral hospital outpatient department for all service during data collection period.

4.4 Study populations

All women patients who visiting to Gynecology out -patient department and maternal and child health at Dilla referral Hospital during data collection period.

4.5 Inclusion and Exclusion Criteria

4.5.1 Inclusion Criteria

All women attending gynecological out patients at the time of data collection

4.5.2. Exclusion Criteria

Women who are acutely sick at the time of data collation and age less than 21

4.6 Sample Size Determination

Sample size calculation is based on single population proportion formula as follow

$$n = \frac{(z\alpha/2)^2\, p\,(1-p)}{d^2}$$

$$n_o = \frac{(1.96)^2 0.572(1-0.572)}{(0.05)^2}$$

$$n = 376$$

- Since the total population is less than 10,000, correction formula is used as follows:

$$n = \frac{no}{1 + \frac{no}{N}}$$

$$n = \frac{376}{1 + \frac{376}{1306}}$$

$$n = 292$$

Then, considering 10% non-response rate:

$$n = 292 \times 10\% + 292$$

$$n = 321$$

Where:

- n = Sample size required for the study
- Zα/2 = 1.96, standardized normal distribution curve value for the 95% confidence interval

- p = 0.572 from previous study
- d= 0.05 degree of margin of error
- N = Total population for the study

4.7 Sampling and Sampling Procedure

Dilla referral hospital is selected for this study, Gynecology outpatient department and MCH is selected purposively from the hospital. Total sample size is allocated to each compartment proportionally. Finally, the actual study participants are selected by systematic random sampling technique which is K= N/n = 1306/321=4, then 2 is randomly selected. Then individual patients were selected every 4 by considering their order of visit as sampling frame.

Proportional allocation,

$$n_j = \frac{n \times N_j}{N}$$

Where: nj =is the sample size of the jth unit

Nj =is population size of the jth unit

n= n1+ n2+n3+n4... is the total sample size (321)

N=N1+N2+N3+N4+N5... is total population size (1306)

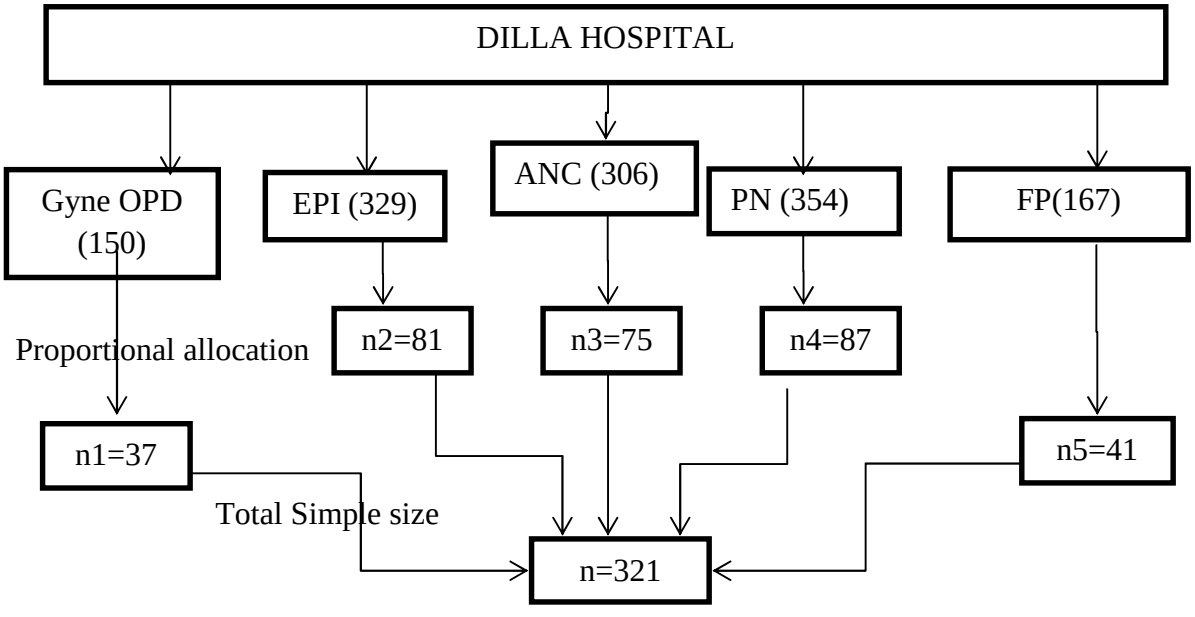

Figure 2:.Sampling procedure on: cervical cancer screening behavior and associated factors study.

4.8 Variables

4.8.1 Dependent variables

•cervical cancer screening Behavior

4.8.2 Independent variables

- Socio demographic factors
  - Age
  - Sex
  - Income
  - Marital Status
  - Ethnicity
  - Religion
  - Educational status
- Personal factor
  - Multiple sexual partners
  - Early initiation of sex
  - Multiparity
  - Contraceptive use
  - Fear of screening
  - Smoking status
- Organizational factor
  - Availability
  - Accessibility
  - Resource

4.9 Operational Definitions

For the purpose of this study, the following definitions will be applied and used within the context in which they are explained:

Cervical cancer- Means a disease in which cancer cells grow in the cervix. .

Cervical cancer screening - Means procedure used to detect abnormal cells of the cervix. In this study, screening procedures refer to VIA or a Pap smear

Cervical cancer screening behavior: Those who ever had got a Pap/VIA test once in a life time considered as having good screening behavior And those who never screened were regarded as having not good screening behavior.

Multiple sexual partners: Having lifetime partners greater than two. **Multiparity**: Having parity greater than two

Early initiation of sex: Starting first sexual intercourse before the age of 18 years

Contraceptive use: Defined as use either of the contraceptives: oral contraceptives (pills), inject able, implants, IUCD for more than or equals one-month period.

Organizational barriers; Organizational barriers were factors which affected the accessibility of healthcare services to the women.

Sexually transmitted diseases (STDs): Are infections that are passed from one person to another through sexual contact.

4.10 Data Collection Technique

An interviewer administered semi structured questionnaire was adapted by reviewing similar studies (50). Data was collected by 6 trained nurses for 2 days. Data was collected from the clients after getting verbal consent through informed consent in the health facility. Data was collected using structured interviewer administered questionnaire was prepared in English after reviewing literatures of similar surveys that have been carried out previously then final modified English questionnaire was translated to Amharic. The interview was taken 20 to 30 minutes

4.11. Data Quality Assurance

The questionnaires were pre-tested on 5% of the sample size at Hawassa referral Hospital to avoid any confusion during actual data collection period. The data collectors were trained before actual data collection and the principal investigator was supervising the data collector

closely. During data collection, both principal investigator and data collectors were check the data for its completeness and missing information at each point. Furthermore, the data was coded, checked and cleared during entry.

4.12DataAnalysis

After the collection of data, the questionnaire was checked for completeness and consistency. Then, the data template format was prepared, coded and entered in to Epi Data version 4.2. Then data was exported to SPSS version 21 for analysis. Descriptive analysis was employed to describe the percentages and distributions of the respondents for socio-demographic characteristics. Bivariate and multivariate analysis was used for association of independent variable with dependent variable. Crude and adjusted odds ratios with the corresponding 95% confidence intervals were computed. P-value <0.05 was considered statistically significant in this study. Then, the results were presented in the form of tables, graphs and charts

4.13 Ethical considerations.

Paper of approval and letter for permission was obtained before the beginning of data collection from review board of School of Nursing and Midwifery, College of Health Sciences, Addis Ababa University. Permission letter was provided for Dilla university referral hospital. After that, participants were explained clearly about the purpose and procedure of data collection, and then confidentiality and privacy were guaranteed. It is also cleared that participation was fully based on the willingness of participants using verbal consent.

4.14 Dissemination plan

The result of this study will be disseminated to Addis Ababa University College of health science library and universities included in the study. Possible publication on international reputable peer reviewed journals will be sought and concerned bodies.

CHAPTER 5 RESULTS

5.1. Socio-Demographic Characteristics

This study assessed cervical cancer screening behavior and associated factors. The 321 clients was participated in the study giving a response rate of 100% and (34.0%) of the respondents were in the age range between 21-29 years, 112(34.9%) were in 30-39 years, 68(21.2%) were in 40-49 years and 32(10.0%) were in ≥50 with the mean age was 35.79 with SD±11.46. Regarding to religion, the majority of the participants 169(52.6%) were protestant Christian and the least covers for catholic 33(10.3%). All the socio demographic characters are presented in the table below (table1).

Table 1: Socio-demographic characteristics among women attending gynecology OPD and MCH at Dilla University referral hospital, 2018

Socio demographic variables		Frequency(n)	Percent (%)
Age	21-29	109	34.0
	30-39	112	34.9
	40-49	68	21.2
	≥50	32	10.0
Level of education	Don't write and read	67	20.9
	Only read and write	36	11.2
	primary(1-4)	48	15.0
	primary(5-8)	46	14.3
	secondary(9-10)	44	13.7
	Preparatory	26	8.1
	Diploma	32	10.0
	Higher	22	6.9
Marital status	Single	43	13.4
	Married	165	51.4
	Widowed	41	12.8
	Divorced	41	12.8
	Separated	31	9.7
How old when you first marriage?	≤15	18	5.6
	15-17	49	15.3
	≥18	211	65.7
Average moth income	<450	5	1.6
	451-900	116	36.1
	≥901	200	62.3
Occupation	House	89	27.7
	Merchant	57	17.8
	daily laborer	52	16.2
	Governmental	44	13.7
	Private	48	15.0
Religion	Orthodox	63	19.6
	Muslim	56	17.4
	Protestant	169	52.6
	Catholic	33	10.3

5.2. Reproductive health characteristic

Among the study participant, 253(78.8%) currently use contraceptives, among the reported, the majority of the participants 117(36.4) % were used implant as shown in the figure below.

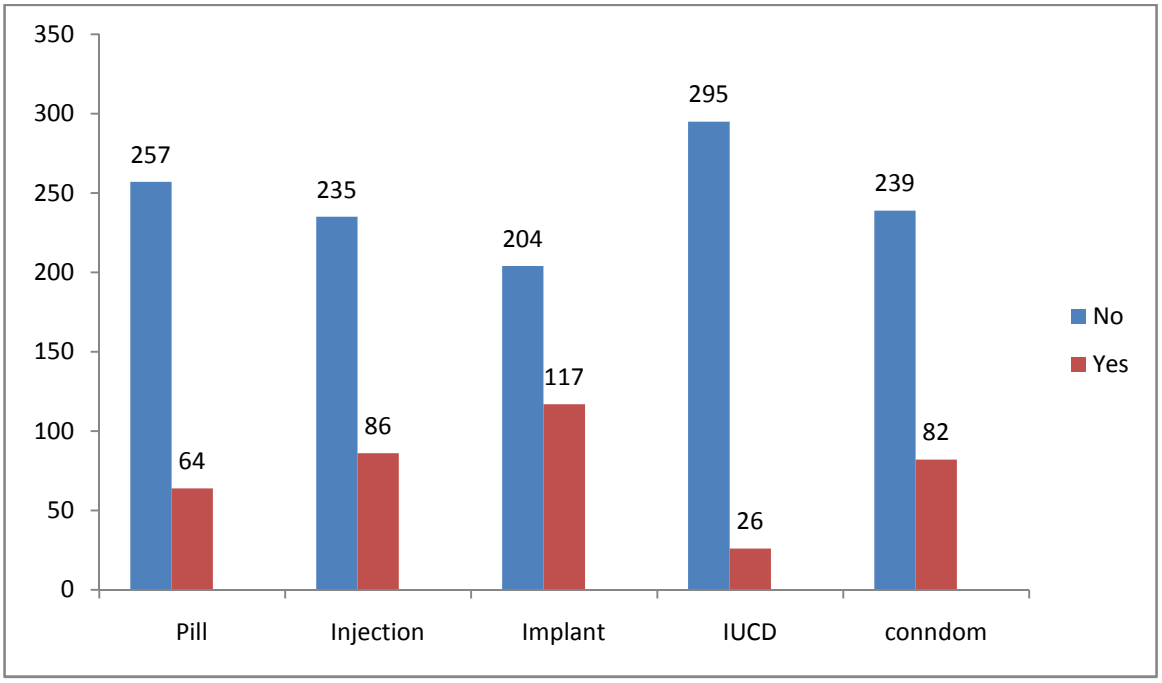

Figure 3: Bar Chart Description of women's contraceptive usage among women attending gynecology OPD and MCH at Dilla University referral hospital, 2018

Among the study subjects, 147(45.8%) had regular menstrual history, and the least 28(8.7%) were no menses. The majority of respondents 184(57.3%) of their age at menarche were ≤ 12, 24(7.5. %) 15 and above years, respectively. Regarding coital bleeding the majority of participants 228(71.0%) had bleeding. Among the study subjects, 133(41.4%) had parity 2-4, were 58(18.1%)of the study participants had parity >5.Age of the respondents when they gave birth to their first child, 160(49.8%) was less than 20 years old, in the mean and standard deviation of age at first birth 1.59±0.814years respectively. In addition, 199(62.0%) had average birth interval less than two years, were 52(16.2%) had average birth interval 2-3years.Among the participants 6(1.9%) had history of abortion and 127(39.6%) had family history of cervical cancer (see table 2).

Table 2: related to reproductive health characteristics usage among women attending gynecology

Variables		Frequency(n)	Percentage (%)
How old were you menarche	≤12	184	57.3
	13-14	113	35.2
	≥15	24	7.5
Menstrual history	Regular	147	45.8
	sometimes	98	30.5
	Always irregular	48	15.0
	No menses	28	8.7
Coital bleeding	No	228	71.0
	Yes	93	29.0
Have you ever give birth	No	49	15.3
	Yes	272	84.7
How old when you give first birth	<20	160	49.8
	20-25	71	22.1
	26-30	33	10.3
	>31	8	2.5
Average birth interval	<2	199	62.0
	2-3	52	16.2
	.>3	22	6.9
Experience abortion	No	218	67.9
	yes	103	32.1
How many times do You have abortion	1	82	25.5
	2-4	133	41.4
	>5	58	18.1
Family history	No	194	60.4
	Yes	127	39.6

5.3. Behavior to use cervical cancer screening and barriers characteristics of women screened for cervical cancer

The majority of participants 225(70.1%) were not intended cervical cancer screening behavior while 96 (29.9%) were intended cervical screening respectively.

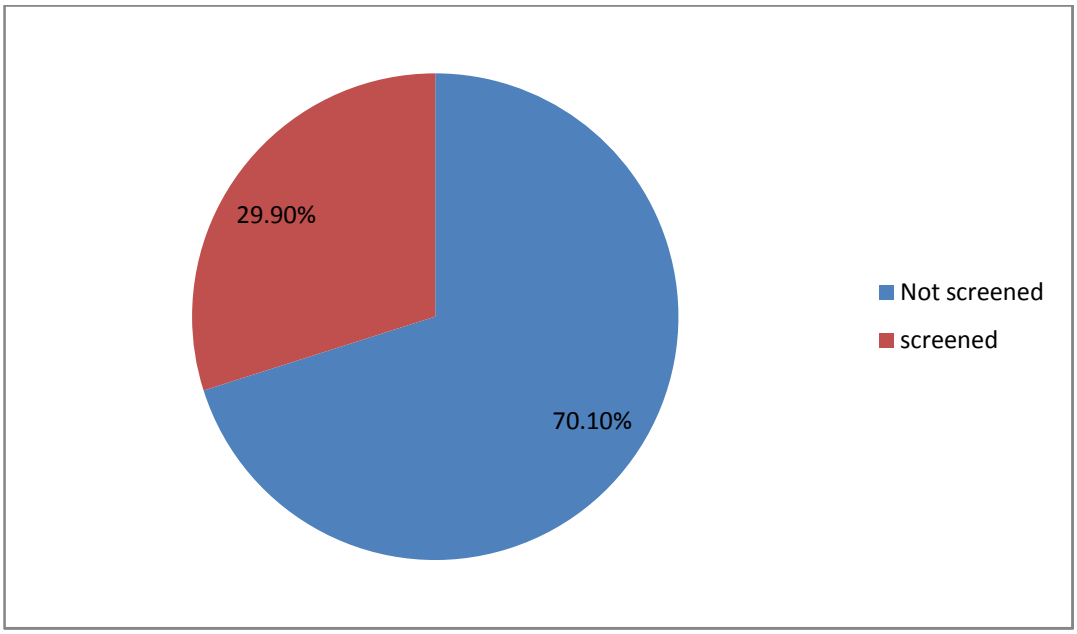

Figure 4: Pie Chart. Behavior to use cervical cancer screening and barriers characteristics of women screened for cervical cancer

Among women who had cervical screening test, 49(15.3%) were positive and 46(14.3%) were negative. Regarding the main reason, for not intending to have cervical screening was lack of health education programs in this area 70(21.8%) while 37(11.5%) were due to the cost of price. Among participants, 147(45.8%) had cervical cancer screening plan as shown in the table below.

Table 2: Behavior to use cervical cancer screening and barriers characteristics among women attending gynecology OPD and MCH at Dilla University referral hospital, 2018

Variables		Frequency(n)	Percentage (%)
Screening test	Positive	49	15.3
	negative	46	14.3
Barrier of cervical cancer screening	1.The screening site far from where I live	38	11.8
	2.I think the price is coasty	37	11.5
	3. Health education programs to promote screening	70	21.8
	4. I am afraid a screening test would reveal cervical	43	13.4
Do you have a plan for cervical screening	Yes	147	45.8
	No	63	19.6

5.4. Lifestyle and sexual behavior factors barriers characteristics of women screened for cervical cancer

Among the study participants 53(16.5%) had history of smoking. Concerning age for first sex, at the age of 17years old and above 249(77.6%) of the respondents had started sex and 72(22.4%) were age at first sex less than 16 years old. Among the study participants, 178(55.5%) had history of pelvic infection, 53(16.5%) had history of STI, and 51(15.9%) had history of STI in their husband (see Table 4).

Table 3:lifestyle and sexual behavior factors barriers characteristics of women screened for cervical cancer in Dilla, Southern, Ethiopia, 2018

Variables		Frequency(n)	Percentage(%)
Have you ever smoke	No	268	83.5
	yes	53	16.5
How old were you when you first had sex	<16	72	22.4
	>17	249	77.6
Pelvic infection	No	143	44.5
	yes	178	55.5
Do you have STD	No	268	83.5
	yes	53	16.5
Does your partner ever have history of STD?	No	270	84.1
	yes	51	15.9
How many sexual partners have you had in your lifetime?	1	178	55.5
	2	136	42.4
	≥3	7	2.2
Does your partner have other partner?	No	212	66.0
	Yes	109	34.0
If yes haw many	0	212	66.0
	1	49	15.3
	≥2	60	18.7

5.5: Factors of cervical cancer screening behavior

Bivariate analysis revealed that fourteen out of thirty-one variables showed a significant association with cervical cancer screening behavior at a 5% level of significance. For further analysis, all independent variable which fulfilled the minimum requirement for multivariable logistic regression (had significant association at a p <0.25) were entered. The highest risk factors for not good cervical cancer screening behavior was found in those individuals with educational level do not write and read 67 (20.9%), ≥901average monthly income 200(62.3%), age≥18 at first marriage 211(65.7%), <2 average birth interval

99(62.0%). However, bad cervical cancer screening behavior was not statistically different among the above variables (P>0.05).

The study participants those who have age greater than or equal to 50 were fourteen times more likely have bad cervical screening behavior (COR=13.830,95% CI 5.466,34.990) than those who have age 21-29 years. The participants who were use contraceptive had odds of 0.206 times cervical cancer screening (COR=0.206,95%CI=0.094 ,0.447) than those who did not use contraceptive.

The participants who were smoking of had 23.9 times cervical cancer screening with (COR=0.239;95%CI=0.130,0.438) than not practicing smoking, Women who had history of sexual transmitted diseases of had odds0.109 times cervical cancer screening with (COR=0.109;95%CI=0.56,0.212) compared to those who did not have history of sexually transmitted diseases and Having two or more life time sexual partners of the husband had odds 0.754 times bad cervical cancer screening behavior with (COR=0.754;95%CI=0.352,1.6160) compared to those individuals who had one sexual partner.

Those participants who had age ≥50 were about twenty six times more likely (AOR=26.603;95%CI=8.167,86.662),age between 40-49 (AOR=4.152,95%CI=1.630,10.576) were four times more likely and age between 30-39 three times more likely had bad cervical screening behavior compared to those age between 21-29. In this study individuals who had smoking practices were a factor of 0.179 times less likely with(AOR=0.179;95CI=0.087,0.369) had bad cervical cancer screening than those who had no smoking practices. Participants who were used contraceptive with a factor of 0.172 times less likely had cervical cancer screening behavior with (AOR=0.172; 95%CI=0.070, 0.422) compared to those who were not used any contraceptive. In addition, women's who had STD were more likely had association with cervical cancer screening behaviors with (AOR=0.169; 95%CI=0.82, 0.347) than who had no STD and respondents who had two or more life time sexual partners of the husband had a factor of one times more likely at risk for cervical cancer screening behavior with (AOR=2.973; 95%CI=1.414-6.247) compared to those respondents who had one sexual partner of the husband.

Table 4: Results of bivariate and multivariate analysis for Cervical cancer screening behavior and associated factors among women attending gynecology out -patient department and maternal and child health at Dilla university referral Hospital, Southern, Ethiopia,2018.

P<0.05*, P<0.01**, P<0.001***

Variable		Cervical screening		COR(95%CI)	AOR(95%CI)
		Yes, n (%)	No, n (%)		
	21-29	23(71.9%)	9(28.1%)	1	1
	30-39	33(29.7%)	79(70.3%)	2.261(1.171, 4.364)	**3.227(1.396-7.461)***
	40-49	23(33.8%)	45(66.2%)	2.766(1.345,5.689)	**4.152(1.630-10.576)****
Age	≥50	17(15.6%)	92(84.4%)	13.830(5.466,34.990)	**26.603(8.167-86.662)*****
Marital status	Single	16(37.2%)	27(62.8%)	1	1
	Married	37(28.7%)	128(71.3%)	2.032(0.715,5.775)	2.952(0.828-10.525)
	Widowed	23(56.1%)	18(43.9%)	0.991(0.396,2.482)	0.928(0.328-2.624)
	Divorce	13(31.7%)	28(68.3%)	4.381(1.543,12.44)	2.586(0.760-8.800)
	Separated	7(22.6%)	24(77.4%)	1.592(0.547,4.634)	0.945(0.279-3.202)
Used contraceptive	Yes	90(93.7%)	6(6.3%)	0.206(0.094,0.447)	**0.172(0.070-0.422)*****
	No	163(72.4%)	62(27.6%)	1	1
IUCD	Yes	15(15.6%)	81(84.4%)	0.278(0.122,0.630)	0.477(0.149,1.526)
	No	11(4.9%)	214(95.1%)	1	1

	Regular	38(25.8%)	109(74.2%)	1	1
	Sometimes	26(26.5%)	72(73.5%)	0.165(0.069,0.396)	0.685(0.350-1.343)
Ministerial history	Always irregular	13(27.1%)	35(72.9%)	0.171(0.069,0.425)	0.779(0.336-1.805)
	No menses	19(67.8)	9(32.2)	0.176(0.064,0.486)	4.731(1.796-12.459)
Coital bleeding	Yes	42(43.7%)	54(56.3%)	0.377(0.226,0.627)	0.390(0.215-0.415)
	No	51(22.7%)	174(77.3%)	1	1
	1	22(25.6%)	60(74.4%)	1	1
Parity	2-4	30(22.6%)	103(77.4%)	0.367(0.180,0.151)	0.817(0.394-1.694)
	≥5	29((50%)	29(50%)	0.291(0.746,0.56)	2.128(0.941-4.808)
Experience abortion	Yes	50(52.1%)	46(47.9%)	0.283(0.171,0.470)	0.399(0.192,0.830)
	No	53(23.6%)	172(76.4%)	1	1
Smoking	Yes	31(32.3%)	65(67.7%)	0.239(0.130,0.438)	**0.179(0.087,0.369)****
	No	22(9.8%)	203(90.2%)	1	1
Pelvic infection	Yes	81(84.4%)	15(15.6%)	0.140(0.076,0.258)	0.259(0.109,0.616)
	No	97(43.1%)	128(56.9%)	1	1
Presence of STD	Yes	38(39.6%)	58(60.4%)	0.109(0.109,0.212)	**1.769(0.082_0.347)*****
	No	15(6.6%)	210(93.4%)	1	1
Partner STD	Yes	36(37.5%)	60(62.5%)	0.119(0.061,0.232)	0.193 (0.090-0.415)
	No	15(6.7%)	210(93.3%)	1	1
Sexual partners of the women	1	51(24.5%)	157(75.5%)	1	1
	≥2	45(39.8%)	68(60.2%)	0.491(0.300,0.803)	1.221(0.678,2.200)
Other lifetime sexual partners of the husband	0	43(21.7%)	155(78.3%)	1	1
	1	21(30%)	49(70%)	0.200(0.109,0.368)	**1.745(0.804-3.786) ***
	≥2	32(60.4%)	21(39.6%)	0.754(0.352,1.6160)	**2.973(1.414-6.247)****

CHAPTER6 DISCUSION

The broad purpose of this research was to better understand cervical cancer screening behavior and associated factors among women attending Gynecology, out -patient department and maternal and child health at Dilla referral hospital. Among the total of study participant 321, the current study found that the participation rate in screening for cervical cancer is about 29.9%. However, this finding is higher than 9.6% in Gamo Gofa, 19.8% in Mekele and less than another study conducted in Uganda 48% (51, 52, 53). This may partly be due to difference in socio-demographic characteristic of the subjects of the studies and sample size difference. According to the current study, the main reason of not taking cervical cancer screening service is lack of health education.

Factors associated with cervical cancer screening were also assessed. This study reveals that women's age, contraceptive usage, intending smoking, presence of STD and multiple sexual partner of the husband were found to be associated factor for cervical cancer screening behaviors. In this study age group of ≥50 years 26.603 times had association with cervical cancer screening behavior with(AOR=26.603;95%CI=8.167,86.662) compared to age between 21-29, while age 30-39 years 3.227 times had significant association cervical cancer screening behavior(AOR=3.227,95%CI=1.396,7.461) compared to age between 21-29. There are also researches with the same findings in Mekele, Ethiopia, which showed that all other age groups of women years were have association with cervical screening behavior compared with age ≥50. Additionally, study conducted in northwest Ethiopia showed that, woman in the age range of 30-39 were 1.78 times (AOR = 2.78, 95% CI= 1.71–7.29) higher than women age 21-29 had significantly associated with cervical cancer screening behavior (52, 54).

This study also revealed that women's who had intended smoking were found to be17.9% times associated factors for bad cervical cancer screening behavior with (AOR=0.179;95CI=0.087,0.369). Similar studies conducted in Kenya and this study showed that those participants who were used contraceptive had significant association cervical cancer screening behavior with (AOR=0.172; 95%CI=0.070, 0.422) than those who had no contraceptive usage. This is comparable with similar study conducted in Kenya showed that

those individuals who were used contraceptive had significant association with cervical screening behavior (41)

Another finding of the current study is having history of multiple sexual partner of the husband also found to have2.973times association for cervical cancer screening behavior with (AOR=2.973; 95%CI=1.414-6.247)compared to having one sexual partner of the husband while having one sexual partner of the husband also found to have one times association for cervical cancer screening behavior than not having multiple sexual partner of the husband. The same result reported from mekelle showed that women who have history of multiple sexual partners were 1.635 times association for cervical cancer screening behavior with (AOR = 1.635, 95%CI = 1.094–2.443) Also study conducted in Yirgalem showed that having multiple sexual partner of the husband had significant association with cervical cancer screening behavior with (AOR=40; 95% CI: 22.44,70.204) (52, 55).

In this study having history of sexual transmitted disease wastimes0.169 more likely had association with cervical cancer screening behavior with (AOR=0.169; 95%CI=0.82, 0.347). In addition, similar findings of study conducted in Finote Selam Town North west Ethiopia showed that having history of STDs were nearly2.75 times had association with cervical cancer screening behavior with(AOR= 2.75, 95%CI: 1.24, 6.04)same result was also reported from Mekelle, where women with history of sexually transmitted disease were4.129 times had significant association with the cervical screening behavior with (AOR = 4.129, 95%CI = 2.281–7.476)(56, 52).

CHAPTER7. STRENGTHS AND LIMITATIONS OF THE STUDY

7.1. Strengths

- Data quality control was maintained thoroughly by giving intensive training.
- This study to assess cervical cancer screening behavior is conducted for the first time in this area.
- The study might be useful for planning new intervention or education for cervical cancer screening.
- Multiple logistic regression was used to control the possible confounding factors in order to assess the relative effect of independent variables

7.2. Limitations

- As the respondents had to remember when they had performed cervical cancer screening, there might have been recall bias.
- Being a cross sectional study; it cannot show cause-effect relationship between the variables studied.
- As in other behavioral studies, respondent's might not reply openly to sensitive and private questions.

CHAPTER 8. CONCLUSIONS AND RECOMMENDATIONS

8.1. Conclusions

According to this finding, the overall rate of those participants who had screening behavior for cervical cancer behaviors were about 29.9%. Maternal age, using smoking, using contraceptives, presence of sexually transited disease, and having multiple sexual partner of the husband are predominantly stated factors associated with cervical screening behaviors**.**

8.2. Recommendations

- Gedeo Zone health beruae
  - Focus preventive health measures for cervical cancer screening behavior prevention.
  - Should provide awareness campaigns targeting illiterate groups can be conducted in community so that they become motivated towards cervical cancer screening
  - Should provide educational interventions to improve uptake of cervical screening with time and to increase self-efficacy and perceived focus of control about cervical cancer.
  - Should done on awareness creation and sensitization of health workers on cervical cancer screening and sustaining national screening programs widely**.**
- Dilla Hospital health professionals who are assigned to cervical cancer screening clinics and Gedeo Zone community health workers
  - Health workers need to be marked at first since they have role in any potential screening activities in order to achieve screening coverage in the community.
  - Conduct health education programs to the women eligible for screening attending gynecological clinic regarding prevention of cervical cancer and importance of cervical cancer screening.
  - Should provide women with choice from whom they want to be screened
- Ministry of Health together with other stakeholders

- To embark on intensive awareness creation campaigns on cervical cancer to complement health education in health facilities.
- Ethiopian Cancer Association and other health groups should be reading materials as well as different campaign for awareness creation.

CHAPTER9 Reference

1.SocietyAC.ACScancerdetectionguidelines.Retrieved fromhttp://www.cancer.org/docroot/ped/content/ped_2_3x_acs_cancer_detection_guidelines_36.asp.journal . (2014).

2. Ferlay J SI, Dikshit R, Eser S, Mathers C, Rebelo M, Parkin DM, Forman D, Bray F. Cancer incidence and mortality worldwide: sources, methods and major patterns.; 136: E359-E386 [PMID: 25220842 DOI: 10.1002/ijc.29210] International journal, 2015. 2015.

3. Harcourt N, Ghebre RG, Whembolua G-L, Zhang Y, Osman SW, Okuyemi KS. Factors associated with breast and cervical cancer screening behavior among African immigrant women in Minnesota. Journal of immigrant and minority health. 2014; 16(3):450-6.

4. Guvenc G, Akyuz A, Açikel CH. Health belief model scale for cervical cancer and Pap smear test: psychometric testing. Journal of advanced nursing. 2011;67(2):428-37.

5. Debbie S. DS, Herschel W., Maureen K., ShaliniL., Joanna C., et al... American Cancer Society,American Society for Colposcopy and Cervical Pathology, and American Society for Clinical PathologyScreening Guidelines for the Prevention and Early Detection of Cervical Cancer.journal for clinician 2012; 8:62:147-72.

6. Solomon D, Breen N, McNeel T. Cervical cancer screening rates in the United States and the potential impact of implementation of screening guidelines. CA: A Cancer Journal for Clinicians. 2007;57(2):105-11.

7. Lee HY, Koopmeiners JS, Rhee TG, Raveis VH, Ahluwalia JS. Mobile phone text messaging intervention for cervical cancer screening: changes in knowledge and behavior pre-post intervention. Journal of medical Internet research. 2014;16(8).

8. Adewole IF, Abauleth YR, Adoubi I, Amorissani F, Anorlu RI, Awolude OA, et al. Consensus recommendations for the prevention of cervical cancer in sub-Saharan Africa. Southern African Journal of Gynecological Oncology. 2013;5(2):47-57.

9. report G. Human papillomavirus (HPV) and related cancers in the Global Alliance for vaccinesand immunization. November 2012.

10. Carmen W. H. Chan 1, Kai Chow Choi 1, RSW. Examining the Cervical Screening Behavior ofWomen Aged 50 or above and Its Predicting Factors:A Population-Based Survey.Journal. 2016.

11. Birhanu Z, Abdissa A, Belachew T, Deribew A, Segni H, Tsu V, et al. Health seeking behavior for cervical cancer in Ethiopia: a qualitative study. International journalforEquity in health. 2012;11(1):83.

12. Catherine McCarey DP, Pierre Marie Tebeu, Michel Boulvain, Anderson Sama, PetignatDaP. Awareness of HPV and cervical cancer prevention amongCameroonian healthcare workers,BMC, 2011.

13. Gebremariam T. Human papillomavirus related cervical cancer and anticipated vaccination challenges in Ethiopia. International journal of health sciences. 2016;10(1):137.

14. Bruni L, Barrionuevo-Rosas L, Albero G, Aldea M, Serrano B, Valencia S. Human papillomavirus and related diseases. The World: Ico Information Centre OnHpv and Cancer (Hpv Information Centre). 2016.

15. Chang C-C. Understandingthescreeningbehavior in mothers and adolescent daughter's human papillomavirus vaccine uptake-the transtheoretical model.IJHSR. 2014;4:228-34.

16. WHO. Comprehensive cervical cancer control: a guide to essentialpractice (2nd edn.), Geneva. Journal. 2014.

17. Ferlay J, Shin HR, Bray F, Forman D, Mathers C, Parkin DM. Estimates of worldwide burden of cancer in 2008: GLOBOCAN 2008. International journal of cancer. 2010;127(12):2893-917.

18. T. s. KNOWLEDGE, ATTITUDE, PRACTICE OF CERVICAL CANCER SCREENING ANDITS ASSOCIATED FACTORS AMONG FEMALE STUDENTS IN HAWASSAUNIVERSITYCOLLEGE OF MEDICINE AND HEALTH SCIENCE HAWASSA. Journal. 2015.

19. Li-Wei Wu L-PL, Si-Fan Chen, Shang-Wei Hsu, Ching-HuiLoh, Chia-Ling Wu,, Jin-Ding Lin. Knowledge and attitudes regarding cervical cancer screening among womenwith physical disabilities living in the community. BMC Health Services Research. 2011;2.

20. EBABEKELA. ASSESSMENT OF KNOWLEDGE AND ATTITUDE OF CERVICALCANCER AND SCREENING AMONG PRIMARY HEALTH CAREWORKERS OF WEST WOLLEGA ZONE, ETHIOPIA, 2016.

21 MAREE J.E. LMWSCD. combining breast & cervical screening in attemptto increase cervical cancer screening up take. An intervention study in a South Africancontext, EuropeanJournal of Cancer care. 2011;30(211).

22. Gebrie MH BM, Lemlem SB, Woreta HK-, 6156.1000569. Knowledge, Preventive Practice and

Associated Factors of Female Nurses' Towards Cervical Cancer in the Selected GovernmentHospitals in Addis Ababa, Ethiopia. Journal. 2015;6(569).

23. Abate S. Trends of cervical cancer in Ethiopia. Cervical Cancer. 2015;1(1):1-4.

24. Ali F KR, Wassie. Understanding cervical cancer in the context of developing countries. Ann Trop Med Public Health. 2012;5.

25. Nor Masitah Mohamed Shukri and Dr. Gheena S. AWARENESS AND KNOWLEDGE OF HPV AND CERVICAL CANCER. 2017;10(162).

26. Mosavel M SC, Oakar C, Meyer Cervical cancer attitudes and beliefs-a CapeTown community responds on World Cancer Day. journal 2010;9.

27. Lyimo FS, Beran TN. Demographic, knowledge, attitudinal, and accessibility factors associated with uptake of cervical cancer screening among women in a rural district of Tanzania: three public policy implications. BMC public health. 2012;12(1):22.

28. Dulla1 D, Daka2 D, Wakgari1 n. Knowledge about cervical cancer screening and

its practice among female health care workersin southern Ethiopia: a cross-sectional study. 2017.

29. WHO/ICO. Summary report on HPV and cervical cancer statistics in Ethiopia; 2015.

30. Mihret. G NG, Asefa1, Semarya. B., Northern Ethiopia. Factors affecting the practices of cervicalcancer screening among female nurses at public health institutions in Mekelle Town. journal. 2014;7.

31.AddisTesfa. Pathfinder International and the Ethiopian Federal Ministry of Health (FMOH).Combating Cervical Cancer in Ethiopia. 2010.

32. college r. progress in cervical screening in UK. 2016;7(8).

33. Africa.Woof. Cervical cancer risk factors and prevention. Journal. 2015.

34. Ferlay J, Soerjomataram I, Dikshit R, Eser S, Mathers C, Rebelo M, et al. Cancer incidence and mortality worldwide: sources, methods and major patterns in GLOBOCAN 2012. International journal of cancer. 2015;136(5).

35. Jung K-W, Won Y-J, Kong H-J, Oh C-M, Cho H, Lee DH, et al. Cancer statistics in Korea: incidence, mortality, survival, and prevalence in 2012. Cancer research and treatment: official journal of Korean Cancer Association. 2015;47(2):127.

36. Satyal K. Cervical cancer screening behavior among Nepalese women: George Mason University; 2013.

37. aC.Determinants of acceptance of cervical cancer screening in Dar es Salaam, Tanzania.BMC Public Health 2012.

38. Fatjonakamber GT, YllkaBilushi and Diana Cuberi. An overview ofcervicalcancerknowledge and screening among female healthcare practitioners. Europeanscientific journal. 2014.

39. Carmen W. H. Chan 1, Kai Chow Choi 1, Rosa S. Wong 1, Ka Ming Chow 1, Winnie K. W. So 1, Doris Y. P. Leung 1 WWTLaWG. Examining the Cervical Screening Behavior of Women Aged 50 or above and Its Predicting Factors: A Population-Based Survey Journal. 2016.

40.TARWIREYI ZC, RUSAKANIKO. Cancer of the cervix: knowledge, beliefs and screening behavioursof health workers in Mudzi District in Mashonaland East Province, Zimbabwe Journal. 2015.

41. F. k. HPV Vaccine and Prevention of Cervical Cancer in Africa. African Journalof Reproductive Health. Journal. 2010.

42. stacLsudenga AFR. knowledge, attitude, practice and perceived risk of cervical cancer, Keniya. HHS journal. 2014.

43. Gebru Z1 GMaDA.Barriers to Cervical Cancer Screening in Arba Minch Town, Southern Ethiopia. 20016;6.

44. AhmedinJemal FB, Melissa M. Center, Jacques, Ferlay, Elizabeth Ward, David Forman. Global cancer statistics, A Cancer Journal for Clinicians. Journal. 2011;61.

.

45. Remes P SV, Changalucha J, et al. A Qualitative study ofHPV vaccine acceptability among health workers, teachers, parents,female pupils, and religious leaders in northwest Tanzania. Vaccine.

. 2012;13.

46. Jemal A, Bray F, Forman D, O'brien M, Ferlay J, Center M, et al. Cancer burden in Africa and opportunities for prevention. Cancer. 2012;118(18):4372-84.

47. O. Babatunji A. YSJ AMO BJS. Assessment of the knowledge, attitude and practice of

rural women of northeast Nigeria on risk factors associated with cancer of the Cervix. Journal. 2013;9(1367-71).

48. KebadnewMulatu, AyalewMotma, and MS, Tadesse M. Assessment of Knowledge, Attude and Pratce on Cervical Cancer Screening among Female Students of MizanTepi University. Journal. 2016.

49. YitagesuHabtu Aweke1SYA, Tariku Laelago Ersado3. Knowledge, attitude and practice for cervical cancer prevention and control among womenof childbearing age in Hossana Town, Hadiyazone, Southern Ethiopia: Community-basedcross-sectional study plos journal. 2017.

50. zewdieMfA. prevalency and factor associated among clients screened at family guidance association, Jimma, Ethiopia AJIH. 2015;8(618).

51.Tinsae Seyoum1, AmanYesuf.Utlizaton of Cervical Cancer Screening andAssociated Factors among Female HealthWorkers,Workers in Governmental Health Insttutonof Arba Minch Town and Zuria District, Gamo Gofa Zone, Arba Minch, Ethiopia**,** 2017

52, Hinsermu Bayu1, YibrahBerhe,Cervical Cancer Screening Service Uptake and Associated Factors among Age EligibleWomen in Mekelle Zone, Northern Ethiopia,2015

53.Rawlance Ndejjo1, Trasias Mukama,Uptake of Cervical Cancer Screening and Associated Factors among Women in RuralUganda,2015

54. Daniel Asfaw Erku1, Adeladlew Kassie, Comprehensive knowledge and uptake of cervical cancer screening is low among women living with HIV/AIDS in Northwest Ethiopia,2017

55. Tesfahun Hailemariam1, Bizunesh Yohannes2, Prevalence of Cervical Cancer and Associated Risk Factors among Women Attending Cervical Cancer Screening and Diagnosis Center at Yirgalem General Hospital, Southern Ethiopia,2017

56, AlehegnBishaw Geremew1, Abebaw Addis Gelagay1 and Telake Azale,Comprehensive knowledge on cervical cancer, attitude towards its screening and associated factors among women aged 30–49 years in Finote Selam town,northwest Ethiopia,2017

CHAPTER 10. ANNEX

Annex 1. English Version Information Sheet:

Principal Investigator: **Ruhama Mekuria**

Addis Ababa University

College of Allied health sciences

Department of oncology nursing

Dear participant! Here, I the undersigned, at Addis Ababa University College of Health Sciences, Department of nursing, currently I will be undertaking research on a topic entitled as Cervical cancer screening behavior and associated factors among Women attending Gynecology out -patient department and Maternal and child health at ,Dilla university referral Hospital, Ethiopia, 2018.

For this study, you will be selected as a participant and before getting your consent, you need to know all necessary information related to the study which will be detailed as follows.

Introduction

Privacy is the state of being free from intrusion, and in the context of health care it concerns the responsibility of a care provider to protect a client from any disclosure (i.e., discovery by others), even unintentional, of personal health data, by providing security to the patient and the patient's records. Confidentiality, in contrast, is the limiting of information to only those for whom it is appropriate. Therefore, this information sheet briefly provides the necessary guide to be considered during the study.

Objective: To assess Cervical cancer screening behavior and associated factors among women attending gynecology out -patient department and maternal and child health at Dilla university referral Hospital, Southern, Ethiopia, 2018.

Participants to be included all women patients who came to the Dilla university referral Hospital during data collection period

Risks and discomfort: There is no risk in participating in this study. However, there might be some discomfort in answering questions, which will take a few minute (about 30 minutes).

Benefits: -There is no immediate benefit in participating in this study. However, your participation will contribute in improving the health delivery system service provided in the future.

Incentive: -There is no financial or material incentive in participating in this study.

Confidentiality: The information that we will collect from this research project was kept confidential. Information about you that was collected from the study will be stored in a file, which will not have your name on it, but a code number assigned to it. Which number belongs to which name was kept under lock and key, and it will not be revealed to anyone except the principal investigator**.**

Participant Rights

Your participation is entirely voluntary and up to you to decide. There is no penalty if you do not agree to participate. Also you have the right not to answer any questions you do not want to. You may also withdraw from the study at any time. If in the middle you decide to stop filling questions and no longer participate, you can stop without worry.

Persons to contact:

If you have any question, you can ask at any time. If you have additional questions about the study, you can contact the: Principal investigator: **RuhamaMekuria** cell phone-0913853054, E-mail **jmahitedo@gmail.com**

Thank you for your cooperation.

If you are voluntary to participate in the study, we kindly request you to provide your response for the questionnaire in the next page.

Annex 2. Consent form (English Version)

In undersigning this document, I am giving my consent to participate in the study cervical cancer Screening behavior and associated factors among Women attending GYN OPD and MCH at ,Dilla university referral Hospital, Southern**,** Ethiopia. I have been informed that the purpose of this study. I have understood that participation in this study is entirely voluntarily. I have been told that my answers to the questions will not be given to anyone else and no reports of this study ever identify me in any way. I have also been informed that my participation or non-participation or my refusal to answer questions will have no effect on me. I understood that participation in this study does not involve risks. I understood that Ruhama Mekuria is the contact person if I have questions about the study or about my rights as a study participant.

Respondent's signature_____

Interviewer Name _____Signature _____Date_____

Annex 3: Questionnaire (English Version)

General information

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

1. Participant's code number: _____

Part 1: Socio-demographic characteristics

Ser. no	Question	Response	Skip
1.1	How old are you?	_____	
1.2	What is your level of education?	A. Don't write and read B. Only read and write C. Primary(1-4) D. Primary (5-8) E. Secondary(9-10) F. Preparatory G. Diploma or technical/vocational H. Higher(bachelor degree and above)	
1.3	What is your marital status?	A. Single B. Married C. Widowed D. Divorced E. Separated	
1.4	How old were you when you first marriage? (If she is already married once)	_____	
1.5	How much is your family average monthly income(ETB)	_____	
1.6	What is your current occupation status?	A. House wife B. Merchant C. Daily laborer D. Governmental employee E. Private/NGO employee	
1.7	What is your religion?	A. Orthodox Christian B. Muslim C. Protestant	

		D. Catholic	

Part 2: Questions related to reproductive health factors

2.1	Do you use contraceptive?	A. Yes B. No	2.3
2.2	If answer for Q 2.4 yes, which type of contraceptive do you use? (you can choose more than one choice)	A. Pill B. Inject able C. Implant D. IUCD	
2.3	How old were you when your menarche?	_____	
2.4	How was your menstrual history?	A. Regular B. Sometimes irregular C. Always irregular D. No menses	
2.5	Have you ever-experienced post coital bleeding?	A. Yes B. No	
2.6	Have you ever give birth?	A. Yes B. No	2.10
2.7	If answer for Q 2.12 yes, how many times?	_____	
2.8	How old were you when you first birth?	_____	
2.9	What is the average birth interval between your births? (if she have two or more births)	_____	
2.10	Have you ever-experienced abortion?	A. Yes B. No	2.12
2.11	If answer for Q 2.17 yes, how many times?	_____	
2,12	Family history	A. Yes B. No	

Part-3 Intention to use cervical cancer screening and barriers

Ser. no	Question	Response	Skip
3.1	Have you ever been screened for cervical cancer before?	A. Yes B. No	3.4
3.2	What was the result of that screening test?	A. Positive B. Negative	
3.3	What where barriers to have cervical screening?	1.the screening site are too far from where I live. 2 I think the price is coasty 3there are no health education programs to promote screening. 4. I am afraid a screening test would reveal cervical	
3.4	Do you have plan to have cervical cancer screening?	1. Yes 2. No	

Part 4: Questions related to lifestyle and sexual behavior factors

4.1	Have you ever smoked?	A. Yes B .No	4.3
4.2	How old when you first had sex?	_____	
4.3	Have you ever been told you that you had a pelvic infection or treated by health professionals?	A .Yes B .No	
4.4	Have you had a sexual transmitted infection in your life time?	A .Yes B .No	
4.5	Does your partner ever have history of STD?	A. Yes B .No	
4.6	How many sexual partners have you had in your life time?	_____	
4.7	Does your partner have other partner?	A .Yes B .No	
4.8	If answer for Q4.7 yes , how many	_____	

Annex IV: Questionnaire (Amharic version)

ክፍልአንድ: መረጃመስጫወረቀት

አዲስ አበባ ዩኒቨርስቲ ጤና ሳይንስ ኮሌጅ የጤና አጠባበቅ ትምህርት ቤት የማህፀን ጫፍ ቅድመ ካንሰር ጠንቆች በሴቶች ዲላ ሆስፒታል የሚደረግ ጥናት ነው። ጤና ይስጥልኝ ፤ስሜ----------ይባላል።እኔ በአዲስ አበባ ዩኒቨርሲቲ የጤና አጠባበቅ ትምህርት ቤት የማስተርስ ድግሪ የማጠና ተማሪ ከአዲስ አበባ ዩኒቨርሲቲ መምህራን ጋር በመታገዝ በዲላ የማህፀን በር ቅድመ ካንሰር ተያያዥ ምክንያቶች ለማጥናት በተዋቀረው ቡድን ውስጥ አባልነኝ። ጥናታችንም ወደ ጤና ተቋም ለወሊድ ክትትል ምርምራ የሚመጡ ሴቶችን በመጠየቅ የሚከናወን ነው። እርሶም በጥናት ቡድን አማካኝነት ጥናቱ ላይ ተሳታፊ እንዲሆኑ ተመርጠዋል።እርሶ የሚሰጡትን መረጃ ከሌሎች ምንጮች ጋር ተዳምሮ የማህፀን በር ቅድመ ካንሰር ተያያዥ ምክንያቶች ለይቶ ለማወቅ ወይም የሚሻሻልበት ሁኔታ ለመፍጠር ታልሞ የተዘጋጀ ጥናት ነው። በሂደታችን ውስጥ በጥናቱ ላለመሳተፍ ከወሰኑ በማኛውም ሰዓት መጠይቁን እናቆማለን፡ ፡በጥናቱ ውስጥ ላለመሳተፍ በሚወስኑት ውሳኔ የተነሳ የሚደርስቦት አንዳችም ሁኔታ የለም።በቃለ መጠይቁ ወቅት የሚሰጡት መረጃዎች ለጥናቱ ዓላማ ብቻ የሚውሉና ሚስጢራዊነቱ ሙሉ በሙሉ የተጠበቀ ነው።በዚህ መጠይቅ ውስጥ ስሞትን እና እርሶን ለመለየት የሚያገለግል ነገር አይጻፍም። ቃለ መጠየቁ የሚወስድብዎት ግዜ ከ15-20 ደቂቃ ብቻ ነው። ግልጽ ያልሆ ነነገር ካለጠይቁን የጥናቱ መሪ የሆኑትን ወ/ሮ ሩሀማ መኩርያ በስልክ ቁጥር0913853054 ማግኘት ይችላሉ።ስለተባበሩን እና መሰግናለን።

በቃለ መጠይቁ ተስማምቻለሁ_____ወደ የስምምነት ቅጽ ይለፉ

በቃለ መጠይቁ አልተስማማሁም _____ አመስግነው በዚህ ያብቁ

Annex IV: Consent Form (Amharic version)

ክፍልሁለት: የስምምነትቅጽ

ተመራማሪዋ የጥናቱን አላማ በሚገባ ግልጽ በሆነ ቋንቋ አስረድተውኛል። በዚህም መሰረት የጥናቱን አላማ ስለተረዳሁ ለመሳተፍ ውሳኔዬን በሚከተለው መንገድ አረጋግጣለሁ።

የመረጃ ሰብሳቢ ፊርማ በቃል ስምምነት መስጠቱ ያረጋግጣል።
የመረጃ ሰብሳቢ ስም ---------- ፊርማ ---------- ቀን --------
አስታውስ፤ተሳታፊዋ በግድ በጥናቱ እንዲሳተፍ አያስገድዱ።

Annex VI: Questionnaire (Amharic version)

ክፍል ሶስት: ቃለ መጠይቅ

የተሳታፊዋ መለያ ቁጥር _____

ክፍል I. የማህበራዊ: ኢኮኖሚያዊና ዲሞግራፊያዊ ሁኔታዎች

ቁጥር	ጥያቄ	ምላሽ	ዝለል
1.1	ዕድሜ	_____	
1.2	የትምህርት ደረጃዎ?	ሀ. መፃፍና ማንበብ የማትችል ለ. መፃፍና ማንበብ ብቻ የምትችል ሐ. የመጀመሪያ ደረጃ (1-4) መ. የመጀመረያ ደረጃ(5-8) ረ. ሁለተኛ ደረጃ (9-10) ሰ. መሰናዶ፣ ቴክኒክ እና ሙያ (10+) ሸ. ዲፕሎማ ቀ. ከፍተኛ (ዲግሪ እና ከዛ በላይ)	
1.3	የጋብቻ ሁኔታዎ?	ሀ. ያላገባች ለ. ያገባች ሐ. ባሏ የሞተባት መ. የተፋታች ረ. ተለያይተው የሚኖሩ	
1.4	የመጀመሪያ ጋብቻ ሲፈጽሙ እድሜዎት ስንት ነበር?(ያገቡ ከሆነ)	_____	
1.5	ጠቅላላ የቤተሰብዎ ወርሀዊ ገቢ ስንት ነው?	የብሩን መጠን _____	
1.6	ስራዎ ምንድን ነው?	ሀ. የቤት እመቤት ለ. ነጋዴ	

		ሐ. ቀን ሰራተኛ መ. የመንግስት ሰራተኛ ረ. መንግስታዊ ያልሆነ	
1.7	ሐይማኖት	ሀ. ኦርቶዶክስ ለ. ሙስሊም ሐ. ፕሮቴስታንት መ. ካቶሊክ	

ክፍል II: ስለ ተዋልዶ ጤና ጥያቄዎች

2.1	የወሊድ መከላከያ ተጠቀመው ያውቃሉ?	ሀ. አዎ ለ. አልጠቀምም	→ 2.4
2.2	የወሊድ መከላከያ እየተጠቀሙ ከሆነ ወይም ከነበረ የትኛውን ዓይነት ነው የሚጠቀሙት? (ከአንድ በላይ መምረጥ ይቻላል)	ሀ. የሚዋጥ ኪኒ ለ. በመርፌ የሚሰጥ ሐ. በክንድ የሚቀበረውን መ. በማህጸን ውስጥ የሚቀመጥ ረ. ኮንዶም	
2.3	በስንት ዓመትዎ ነው የመጀመሪያውን የወር አበባ ያዩት?	_____	
2.4	የወር አበባዎ ዑደት እንዴት ነው?	ሀ. በየወሩ በትክክል ይመጣል ለ. አንዳንዴ ይዛባል ሐ. ብዙ ግዜ ይዛባል መ. የወር አበባ አላይም	

2.5	ከግብረ ስጋ ግንኙነት በኋላ ደም የማየት ነገር አለ።ት?	ሀ. አዎ ለ. የለኝም	
2.6	ልጅ ወልደዋል?	ሀ. አዎ ለ. አልወለድኩም	→ 2.10
2.7	አዎ ካለ· ምን ያህል ልጅ ወልደዋል?	_____	
2.8	በስንት አመትዎ ነው የመጀመሪያውን ልጅ የወለዱት?	_____	
2.9	በአማካይ በልጆችዎ መካከል ያለ የእድሜ ልዩነት ስንት ነው?(ሁለት እና ከዛ በላይ ልጅ ከወለደች)	_____	
2.10	ውርጃ ኖሮት ያውቃል ?	ሀ. አዎ ለ. አያውቅም	→ 2.12
2.11	አዎ ካለ· ስንት ግዜ?	_____	
2.12	በቤተሰብ የማህፀን ካንሰር ያለበት ሰው አለ?	ሀ. አዎ ለ. የለም	

ክፍል III: የማህፀን ጫፍ ካንሰር ቅድመ ምርመራ ለማድረግ ያለው ተነሳሽነትና ችግሮቹ፡፡

3.1	ከዚህ በፊት የማህፀን ጫፍ ካንሰር ተመርምረው ያውቃሉ?	ሀ. አዎ ለ. አላውቅም	→ 3.3
3.3	የምርመራው ውጤቱ ምን ነበር?	ሀ. ፖዘቲቭ ለ. ነጋቲቭ	

3.3	የማህጸን ጫፍ ካንሰር ቅድመ ምርመራ ማድረግ ያልቻሉበት ምክንያቶች ምን ምን ናቸው?	ሀ.አገልግሎቱ የሚሰጥባቸው ቦታዎች ከመኖርያ አከባቢየ የራቀ በመሆናቸው· ለ. የምርመራው ዋጋ ውድ ስልሚመስለ ሐ.የማህፀን ጫፍ ካንሰር ቅድመ ምርመራ ለማድረግ የሚያስችሉና የሚያበረታቱ የጤና ት/ት ፕሮግራሞች አለመኖር መ. ካንሰር አለብሽ የሚል የምርመራ ውጤት መስማት ስለምፈራ	
3.4	የማህፀን ጫፍ ካንሰር ቅድመ ምርመራ ለማድረግ እቅድ አለዎት?	ሀ. አዎ ለ. የለም	

ክፍል IV. ስለ ግል ባህርያት የሆኑት ጥያቄዎች

4.1	ሲጃራ ኣጭሰው ያውቃለ?	ሀ. አዎ ኣላጨሰም	ለ. → 4.3
4 2	ግብረ ስጋ ግንኙነት ለመጀመሪያ ግዜ ማድረግ ሲጀመሩ እድሜዎት ስንት ነበር?	_____	
4.3	የማህፀን ኢንፈክሽን ኣለቦዎት ተብለው ወይም ታክመው ያውቃለ?	ሀ. አዎ ኣላውቅም	ለ.
4.4	የኣባላዘር በሽታ ኣለብዎት ተብለው ወይም ታክመው ያውቃለ?	ሀ. አዎ ኣላውቅም	ለ.
4.5	ባለቤትዎ ወይም የፍቅር ጓደኛዎ የኣባለዘር በሽታ ኣለበት ተብለው ያውቃለ?	ሀ. አዎ ኣያውቅም	ለ.
4.6	እስከ ኣሁን ድረስ ከስንት ወንዶች ጋር ግብረ ስጋ ግንኙነት ኣድርገው ያውቃለ?	_____	
4.7	ባለቤትዎ(የፍቅር ጓደኛዎ) ከሌላ ግብረ ስጋ ግንኙነት ኣለው ወይም ነበረው ?	ሀ. አዎ የለውም	ለ.
4.8	አዎ ካለ ከምን ያህል ሰው?	_____	