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Utilization of Pre-Cervical Cancer Screening and Associated Factors Among Family Planning Service Users in Health Centers of Bahir Dar City, Ethiopia

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UTILIZATION OF PRE-CERVICAL CANCER SCREENING AND ASSOCIATED FACTORS AMONG FAMILY PLANNING SERVICE USERS IN HEALTH CENTERS OF BAHIR DAR CITY, ETHIOPIA

BY ESKEDAR AYALEW (BSC, PUBLIC HEALTH)

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BAHIR DAR, ETHIOPIA

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A THESIS SUBMMITED TO DEPARTMENT OF HEALTH SYSTEM MANAGEMENT AND HEALTH ECONOMICS, COLLEGE OF MEDICINE AND HEALTH SCIENCE FOR PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR MASTERS DEGREE IN GENERAL PUBLIC HEALTH

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FEBURARY 2021

BAHIR DAR

Declaration

This is to certify that the thesis entitled “Utilization Of Pre-Cervical Cancer Screening And Associated Factors Among Family Planning Service Users In Health Centers Of Bahir Dar City, Ethiopia ”, submitted in partial fulfillment of the requirements for the degree of Master of General public Health Department of Health System Management And Health Economics Bahir Dar University, is a record of original work carried out by me and has never been submitted to this or any other institution to get any other degree or certificates. The assistance and help I received during the course of this investigation have been duly acknowledged.

ESKEDAR AYALEW MELAKU	February 2021	Bahir Dar
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Approval of thesis for defense

I hereby certify that I have supervised, read, and evaluated this thesis titled "UTILIZATION OF PRE-CERVICAL CANCER SCREENING AND ASSOCIATED FACTORS AMONG FAMILY PLANNING SERVICE USERS IN HEALTH CENTERS OF BAHIR DAR CITY, ETHIOPIA"

By Eskedar Ayalew Melaku prepared under my guidance. I recommend the thesis be submitted for oral defense (mock-viva and viva voce).

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BAHIR DAR UNIVERSITY

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Approval of thesis for defense result

We hereby certify that we have examined this thesis entitled

"PRE-CERVICAL CANCER SCREENING AND ASSOCIATED FACTORS AMONG FAMILY PLANNING SERVICE USERS IN HEALTH CENTERS OF BAHIR DAR CITY, ETHIOPIA" by ESKEDAR AYALEW MELAKU. We recommend and approve the thesis a degree of "_____"

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Abstract

Background: Cervical cancer is abnormal multiplication of cervical cells primarily from the cervix. Globally, 569,847 women are diagnosed with cervical cancer and 311,365 die from the disease. In Ethiopia about 6294 new cases and 4884 deaths are estimated annually. Considering its increasing burden, the Federal Minister of Health in Ethiopia recommended integration of pre-cervical cancer screening in reproductive health to reach 80% women aged 30-49 years since 2015.However, utilization of pre-cervical cancer screening with family planning service users and associated factors were not well addressed in the study area.

METHODS: Institution based cross sectional study design was conducted among 547 family planning service users' in health centers of Bahir Dar city from December25//2020 to January15/, 2021. Systematic random sampling was used to select 547 study participants and data were collected via face to face interview using standard questionnaires. The data were coded and entered into the Epi-data version 3.1 and then exported to SPSS version 23 for analysis. Both descriptive and binary logistic regressions were employed. A binary logistic regression model was used to identify predictors of the outcome variable. Variables significantly associated with the outcome variable during bi-variable binary logistic regression at p-value <0.25 were included in the multiple binary logistic regressions. Those independent variables with P-values less than 0.05 were taken as statistically significant factors of pre-cervical cancer screening utilization.

RESULTS: Pre-cervical cancer screening utilization in this study was 56 (10.7%) with 95 %CI of (7.92.2-13.23). Women age 40-49 years old [AOR: 2.43, 95% CI: (1.00-5.92)], counseled by health professional's [AOR: 8.55, (95%CI: (4.08-17.91, age <18 years at first sexual intercourse [AOR:2.63,(95%CI:(1.28-5.39, had positive attitude [AOR: 5.11, 95%CI: (2.08-12.54)] and had multiple sexual partners [AOR: 0.44, (95%CI: (0.23-0.83) were significantly associated pre-cervical cancer screening utilization.

CONCLUSION: pre-cervical cancer screening utilization was low among women of planning users in this study. Women's age 40-49 years, informed by health provider, age <18 years at first sexual intercourse, had multiple sexual partner and had positive attitude were significantly associated pre-cervical cancer screening utilization. Creating awareness and intensifying health education provision and creating positive attitude for targeted women are recommended to improve pre-cervical cancer screening utilization in the study area.

Keywords: pre-cervical cancer screening utilization, factors, family planning users, Ethiopia

Table of Contents

List of Tables

List of figures

Abbreviations

AOR - Adjusted Odds Ratio

ART - Anti-retroviral Treatment

CI - Confidence Interval

COR - Crude Odds Ratio

FMOH - Federal Minister of Health

HIV - Human Immunodeficiency Virus

HPV - Human Papilloma Virus

STI - Sexually Transmitted Infection

VIA - Visual Inspection of cervix with Acetic acid

WHO - World Health Organization

1. Introduction

1.1 Background

Cervical cancer is abnormal multiplication of cervical cells primarily from the cervix. It is also preventable and curable if detected early and adequately treated. Yet, it remains one of most common cancers and the cause of cancer-related death in women across the world (1) . From (2018 to 2030) the annual number of new cases of cervical cancer is expected to increase from 570,000 to 700,000. During that same period the annual number of deaths will increase from 311,000 to 400,000 (2) . More than 85% of those affected are young, poor, undereducated women live in the world's poorest countries. Many are also mothers of young children whose survival is subsequently truncated by the premature death of their mother (3). The World Health Organization recommends cervical cancer screening tests to be included as part of well-planned and implemented screening programs in every country's health care (2).

In many parts of Africa, cervical cancer is not identified or treated until it has reached an advanced stage, Cervical cancer is a leading cause of mortality in Sub-Saharan Africa in large part because of inadequate coverage of screening and preventive treatment services (4) A number of programs have begun integrating cervical cancer prevention services into existing family planning or HIV/AIDS service delivery platforms, to rapidly expand "screen and treat" programs and mitigate cervical cancer burden(5). In Ethiopia about 6294 new cases and 4884 deaths estimated annually. Cervical cancer ranks as the 2nd leading cause of female cancer in Ethiopia.The estimated prevalence for pre-cervical cancer screening rate in Ethiopia was appeared to be 5.47% (95% CI: 4.66, 6.28) (6). Considering its increasing burden, to reach 80% women aged 30-49 years. Early screening of women at high risk for cervical cancer gives clinicians an opportunity to treat precancerous lesions when they are found(7). Federal Minister of Health in Ethiopia recommended integration of pre-cervical cancer screening services using visual inspection of the cervix with acetic acid in the following settings: reproductive and child health clinics, gynecology clinics, outpatient clinics, as well as care, treatment and outreach clinic since 2015 (8). The disease can be prevented primarily through vaccination for girls aged 9 to 14 years, the ages at which the vaccine has the highest immune response but not address all women especially on developing countries like Ethiopia (9). The most effective method of

prevention was early screening for eligible women aged (30-49 years) and early treatment for those with pre-cancerous lesions as recommended by WHO (10). Human papillomavirus (HPV) is a necessary cause of cervical cancer, but it is not a sufficient cause. Other cofactors are necessary for progression from cervical HPV infection to cancer. Tobacco smoking, high parity, long-term hormonal contraceptive use, and co-infection with HIV have been identified as established cofactors Women using hormonal contraceptives over a long time are among the most at risk of cervical cancer (11). Yet there is limited information about their screening status in Ethiopia.

1.2 Statement of the problem

Cervical cancer remains one of the gravest threats to women's lives worldwide ;globally, one woman dies of cervical cancer every two minutes (4). Cervical cancer is affected by socio-economic inequalities and health disparities across and within countries. While 81% of countries have cervical cancer screening policies and strategies, only 48% have an operational plan with funding (7) . Cervical cancer is a significant public health issue worldwide because it has significant health implications on patients and healthcare providers (12). Observed disparities in cervical cancer incidence and mortality are largely accounted by inequities in pre-cervical cancer screening utilization. Most women present with advanced stages of cervical cancer with poor prognosis(13).Even though cervical cancer is preventable, where there is no accesses to universal HPV vaccine coverage in our country (14). Early screening might decrease the mortality associated with it, most challenges faced by the patients and health care providers can be affected early detection. Too often, women access services such as family planning but walk away without education or screening to prevent cervical cancer (15). The majority of women in developing regions may be under-screened or have never been screened though affordable life-saving interventions are some available in their region(16). Considering cervical cancer is big public health issue Federal Minister of Health in Ethiopia integrate pre-cervical cancer prevention services in the reproductive and child health clinics, gynecology clinics, outpatient clinics, as well as care and treatment clinic mobile/outreach clinics are also encouraged to increase uptake of the program (10). Visual Inspection with Acetic Acid (VIA) is an evidence-based and affordable alternative approach for pre-cervical cancer screening in low-resource settings like Ethiopia (8).

In Ethiopia the major factor associated with low pre-cervical cancer screening are, inadequate knowledge about the disease. Many women do not know about cervical cancer screening and are not aware what types of services are available or where and when to seek them and client's negative attitude towards the procedure. 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 service (17). Another factor associated with low utilization of cervical cancer screening was organizational factors women did not offered for cervical cancer screening even they visit health institutions many times per year (15).

If you choose to have pre cervical Screening test after the birth of your baby, it is best to wait at least six weeks - it is ideal to wait three months. If you have a pre-cervical Screening test too soon after the delivery there is an increased rate of unsatisfactory results - for instance, there may not be enough cells in the sample taken, or the cells of the cervix may still be inflamed after the pregnancy and birth (18).

The general problem to be studied was the low screening rates for pre-cervical cancer among asymptomatic women (19). Gap identified, little is known about the relative incidence of pre-cervical cancer screening among family planning service users in Bahir Dar city including Ethiopia. The primary goal of pre-cervical cancer screening is timely reach apparently healthy women So, the information we will get contribute to better improvement of the service in the future.

1.3 Significance of the study

There is no direct short term benefit from this study to the study participants. But, in the long run we expect them to benefit from the interventions taken on the integration of pre -cervical cancer screening and family planning service. Understanding pre-cervical cancer screening is the key for identifying appropriate interventions for improvement of maternal health. Therefore, this study will provide more evidence on the integration of cervical screening to family planning service. The finding of this study will give an insight to Regional Health Bureau, Bahir Dar city Health Department and Health Centers to give attention how the integration works. Furthermore, it can help to policy makers for planning and implementation of maternal health programs. It will be used to increase the awareness of women on pre-cervical screening and as base line

information for researchers, health professionals, Government, Non-government organization (NGO) and as a whole the society to understand about the pre-cervical cancer screening

1.4 Objective of the study

• General Objective

• To assess pre-cervical cancer screening utilization and associated factors among family planning service users in public health centers of Bahir Dar city, Northwest Ethiopia, 2020.

• Specific Objectives

• To estimate the proportion of women screened for pre-cervical cancer among family planning service users in public health centers of Bahir Dar city, Northwest Ethiopia, 2020.

• To identify factors associated with utilization of pre-cervical cancer screening among family planning service users in public health centers of Bahir Dar city, Northwest Ethiopia, 2020.

2. Literature Review

2.1 Pre-cervical cancer screening service utilization

In developing countries, cervical cancer is not identified or treated until it has reached an advanced stage. Cervical cancer is a leading cause of mortality in Sub-Saharan Africa in large part because of inadequate coverage of screening and preventive treatment services (4).

A study conducted at different places out of Africa showed that the proportion of women who were screened for pre-cervical cancer was 96.8% in Poland (9). 54.7% in Japan (20), 85.7 % in Brazil (21), 31.2% in Jordan (22), and 2.1% in Pakistan (23).

A study conducted in Africa showed that the proportion of women screened for pre-cervical was41.4% in South Africa (24), 3% in Ghana (25), 43.8% in Cameron (19), 27.1% in Nigeria (26), 4.8% in Uganda (27), 16.4% in Kenya (28), 10.7 and in Kenya 32.7% (29).

A study conducted at different places in Ethiopia showed that the proportion of women screened 10.7% in Mekelle (30), 12.9 in Attamttu(17) , 10.3% % in Shebadino (31), 5.9% in Arebaminch (32), 3% in Fenote Selam (33), 4% in Dire Dawa (34), 17.8% in Sidama (35), 40.1% among women attending ART in Hawassa (36), 15.5% in Jimma (37), 25% among women attending ART in Bishoftu (38), 19.8% in Mekelle (39). 20 .9% in Debre Markos(40).

2.2 Factors associated with pre-cervical cancer screening service utilization

2.2.1 Socio demographic factors

The most important socio demographic factors identified in previous published studies associated with pre-cervical cancer screening were age, education level, occupation and religion marital status(28, 30, 36, 40, 41).

A study conducted in Korea showed that women aged 30-39 years were positively associated with pre-cervical cancer screening practice as compared to those who were aged 15-29 years (42). A study conducted in Poland revealed that age under 25 years, between 25 and 35 years and over 35 years revealed that younger women were less frequent participation in cervical cancer screening (9). A study conducted in South Africa individual aged 40 to 59 years had the highest odds for cervical cancer screening compared to 30-39 years(43) . Similarly a study conducted in

Nigeria showed that women aged 44 years and above were positively associated with pre-cervical cancer screening compared to those who were aged 15-44 years (26).A study conducted in Atamttu,South west Ethiopia revealed that women aged 40-49 years were positively associated with pre- cervical cancer screening compared to those who were aged 21-39 years (17). Similarly a study conducted in Dire Dewa, Ethiopia showed that women aged 40-49 years were positively associated with pre-cervical cancer screening practice than those who were aged 30-39 years(34) . A study conducted in Sidama Ethiopia, revealed that women aged 35-49 years were positively associated with pre-cervical cancer screening practice as compared to women aged 25-29 years (35). Similarly a study conducted in Mekele, Ethiopia showed that women who were 30-39 years were positively associated with pre-cervical cancer screening practice compared with those 21–29 years old (39). A study conducted in Debre Markos, Ethiopia revealed that participant's age 35-49 years old was positively associated with pre-cervical cancer screening compared with women aged 25-34 years (40).

A study conducted in Thailand showed that women with formal education were positively associated with pre-cervical cancer screening practice compared to no formal education (44). A study conducted in South Africa showed that women with higher educated were positively associated with pre-cervical cancer screening compared to women with primary and secondary school level (43). A study conducted in Sidama, Ethiopia, revealed that women with collage and above education level were associated with pre-cervical cancer screening practice compared to women with no formal education (35). Similarly a study conducted in Hawassa Southern Ethiopia showed that women with post primary education were positively associated with pre-cervical cancer screening utilization than no formal education (36).

A study conducted in Nigeria showed that skilled women were positively associated with pre-cervical cancer screening practice than semi-skilled and non-skilled women (45). A study conducted in Kenya revealed that Self-employed women and those were associated with pre-cervical cancer screening than not employed women (28). A study conducted in Dire Dewa, Ethiopia showed government employee were positively associated with pre-cervical screening practice compared to Non –governmental employed women (34). A study done in Jimma ,Ethiopia showed government employee women were positively associated with pre-cervical cancer screening practice compared to daily laborer ,merchants and house wives (37).

A study conducted in Thailand showed that those with being Animistic religious beliefs women were positively associated with pre-cervical cancer screening than Buddhist or Christian (46). A study conducted in India reveled that Non –Hindu religious followers women were more likely to screen than Hindu religious followers (47). A study conducted in Nigeria revealed that being Muslim women were positively associated with practiced pre-cervical cancer screening more than the others (48). A study conducted in Fenote Selam North West Ethiopia revealed that other religious followers' women were positively associated with pre-cervical cancer screening practice compared to Orthodox followers (33).

A study done Norway revealed that married women were positively associated with pre-cervical cancer screening practice than unmarried women (49). Similarly a study conducted in Addis Ababa, Ethiopia revealed that Married women were positively associated with pre- cervical cancer screening practice than those who were unmarried (50). In contrast a study conducted in Debere Markose revealed that women who were single/divorced/widowed were positively associated with pre-cervical cancer screening practice than those who were married (51).

2.2.2 Reproductive health characteristics

A study done in Japan revealed that women experienced more than five sexual partners in their lifetime were positively associated with pre- cervical cancer screening practice than those women experienced single sexual partner (20). A study conducted in Gurage Zone Southern Ethiopia showed that that women having history of multiple sexual partners were positively associated with pre-cervical cancer screening practice than those women with single sexual partner (52). Similarly a study conducted in Mekele Northen Ethiopia revealed that women having history of multiple sexual partners were posetively associated with pre-cervical cancer screening practice than those women with single sexual partner (39). A study conducted in Debere Markose revealed that women having history of multiple sexual partners were positively associated with pre-cervical cancer screening practice than those women with single sexual partener (51). In contrast a study conducted in Atmettu Karl Referral Hospital, South West, Ethiopia showed that women having multiple sexual partners were less likely to be screened for pre-cervical cancer compared to their counter parts(41).

A study conducted in India women who were experienced first sexual intercourse below the age of 18 were more likely to be screened for pre-cervical cancer screening compared to those

women who stared sexual intercourse for the first time greater than or equal to 18 years (47). A study conducted in Gurage Zone Southern Ethiopia showed that women who were started sexual intercourse for the first time less than 18 years were positively associated with pre-cervical cancer screening practice compared to those women started first sexual intercourse at18 years and above (52). A study conducted in Debere Markose revealed that women who had started sexual intercourse at the age of 16 years and below were more likely to utilize pre-cervical cancer screening as compared to those women who had started sexual intercourse after their age of 16 years (51).

A study conducted in Debere markose revealed that women who have had a history of STI were more likely to utilize cervical cancer screening as compared to those who did not have STI (51). Similarly another study in Debere markose revealed that women who had a history of sexually transmitted disease were more likely to be screened as compared to those participants who had no history of sexually transmitted disease (40). A study conducted in Fenote Selam, North West Ethiopia revealed that women with history of sexually transmitted disease more likely to have pre cervical cancer screening service uptake compared to those women who had no history of sexually transmitted disease (33).

A study conducted in Turkey showed that among women who were smokers, those who perceived their risk of cervical cancer to be high, primi parae and secondi parae were posetively associated with pre-cervical cancer screening practice compared to nullipara (53). A study conducted in Tigray region women having ever given birth were posetively associated with pre-cervical cancer screening practice compared to than those nullipara women (54). A study conducted in Areba Minch Southern Ethiopia showed that parity more than and equal to five children was associated with pre-cervical cancer screening than those less than five children (32).

A study conducted in Sidama Ethiopia, revealed that women who ever had HIV test were positively associated with pre-cervical cancer screening practice than those women who never screen for HIV (35). A study done in Jimma ,Ethiopia showed that women having previous history of gynecological examination that expose women genitalia for physician like examination during child birth, abortion procedure and examination for STI were posetively associated with pre-cervical cancer screening than those women who did not have having previous history of gynecological examination (37). A study conducted in Debere markose

revealed that women who had history of cervical cancer in their family were more likely to be screened as compared to their counterparts (40).

2.2.3 Knowledge about cervical cancer and pre-cervical cancer screening

A study conducted in Japan showed that women who knew sexual intercourse at young age was risk for cervical cancer, women who had pain/discomfort and those who had anxiety/depression were significantly more likely to have participated in cervical cancer screening within the past two years (20). A study conducted in Nepal showed that women mentioned as a risk factors for cervical cancer were multiparty, use of hormonal contraceptives Human Papilloma Virus, smoking history of STI, Abortion excessive, alcohol use, multiple sexual partners and family history of cervical cancer were considered as risky factors of cervical cancer (55).A study conducted in Texas showed that women who knew regular Pap smears could result in early detection of cervical cancer were associated with cervical cancer screening compared to their counterparts (56). Similarly Another study in Kenya also showed that women who aware on the use of Pap smear test was positively associated with pre-cervical cancer screening practice than those women who were not aware (28). A study conducted by approaching 388 females in the out-patient department of a tertiary care hospital in Karachi, Pakistan showed that 51.3% were aware of the term cervical cancer, and 34.2% knew about Pap smear as a screening test; only 40.2% women were familiar with HPV vaccination as prophylaxis against cervical cancer (23).

A study in Saudi Arabia among female healthcare workers showed that only 8.6% of the sample had that knowledgeable, As for preventing pre-cervical cancer, 90% of the participants were unaware of one could do or avoid to prevent pre-cervical cancer (57). A study conducted in Uganda showed that women who Knew someone who had ever been screened for pre-cervical cancer, knowing where screening services were offered , knew cervical cancer can be prevented and Knew someone who had ever been diagnosed with cervical cancer were associated with pre-cervical cancer screening than their counterparts (27). A study conducted in Congo Kinshasa showed that 80.0% of respondents were consult a medical doctor in case of abnormal bleeding between menstruations. In addition, 56.7% told the interviewers that they were regularly consult a physician for screening of cervical cancer (58). A study conducted in Saudi Arabia showed that the most common symptom mentioned by women was vaginal bleeding 51.4%, followed by

vaginal discharge 28.5%, and post-coital bleeding 13.9% were associated with cervical cancer respectively(59).

A study conducted in Wolaita Zone, Southern Ethiopia showed that knowledge of cervical cancer screening was 46.1% regarding symptom-related knowledge, 57.6% had a poor knowledge with the most known symptom mentioned by respondents being vaginal bleeding 66.8% and foul-smelling vaginal discharges 63.8% and 54.5% had poor knowledge of the prevention and risk factors of cervical cancer (60). A study done in Dire Dewa ,Ethiopia showed that women being knowledgeable and Knew the availability of screening service were associated with pre-cervical cancer screening compared to their counter parts (34) . A study conducted in Hawassa showed that women who knew about risk factors for cervical cancer were -more likely to screen than their counterparts(36). A study conducted in Guragie Zone showed that women having information about cervical cancer were more likely to screened compared to their counterparts(52). A study conducted in Jimma, Ethiopia showed that women knew someone who had ever screened was positively associated with pre-cervical cancer screening than women who did not know (37).

2.2.4 Attitude towards pre-cervical cancer screening service utilization

A study conducted in Congo Kinshasa revealed women who had favorable attitude were positively associated with pre-cervical cancer screening practice than their counterparts (58). A facility-based cross-sectional study conducted in Hospitals of Wolaita Zone, Southern Ethiopia showed that women who had a favorable attitude were screened for cervical cancer than women who had unfavorable attitude (60). A study done in Woliso ,Ethiopia revealed that women who had positive attitude had four times more likely to screened than those women who had negative attitude (41). A study conducted in Hawassa town, Ethiopia showed that among HIV positive women attending adult ART clinic women who had favorable attitude towards pre-cervical cancer screening were more likely to screened compared to their counter parts (36). A study conducted in Mekelle, Ethiopia among Nurses at Public Health Institutions showed that Nurses who had positive attitude towards pre-cervical cancer screening were more likely to screened compared to their counter parts (30). Similarly a study conducted in Debre Markos town, Northwest Ethiopia showed that attitude of participants was significant predictor of pre-cervical cancer screening. Participants who had positive attitude were more likely to be screened than

those participants who had negative attitude (51). In contrast a study at Saudi Arabia study showed that population included female healthcare workers with at least one year of clinical experience, including physicians, nurses, and allied health staffs showed that more than three-fourths of the participants disagreed with the statement "screening helps in prevention of carcinoma of the cervix (57).

2.2.5 Organizational factors

A study conducted in Poland revealed that the most common reasons for women for lack of Pap smear were: no subjective need to perform it, no doctor's recommendation and lack of gynecological care (9). A study done in Bugiri and Mayuge districts in Eastern Uganda of the 900 women, only 4.8% had ever been screened for pre-cervical cancer women who were requested by healthcare workers were posetively associated with pre-cervical cancer screening practiced than their counterparts (27). Similarly a study conducted in Kenya revealed that women who were recommended by health professionals were more likely to reported cervical cancer screening compared to their counter parts (28).

A study conducted in Dire Dawa Ethiopian showed that the women who visited the gynecology unit were almost four times more likely to undergo cervical cancer screening than women did not visit . Additionally, those who were counseled by healthcare providers about cervical cancer and those who used family planning were four and five times more likely to utilize cervical cancer screening respectively (34). A study done in Woliso town showed that among women 30 years and above 17.60% screened , women who were informed about pre-cervical cancer screening by health professional were six times more screened than those who were not informed (41). A study conducted in Jimma, Ethiopia showed that women getting advice from health care provider and not preferring gender of physician for gynecological examination were posetively associated with pre-cervical cancer screening than their counter parts (37). A study conducted in Bishoftu town, East Showa, Ethiopia showed that women who got healthcare provider advice were posetively associated with pre-cervical cancer screening than their counterparts (38). A study conducted in Debre Markos, Ethiopia revealed that women who were informed by health professionals about cervical cancer, visited health institution once or more in a year and visited health institution once or more in two years were posetively associated with pre-cervical cancer screening than their counterpart (40). In contrast unmatched case-control study conducted in

Bahir Dar, Northwest Ethiopia showed that among commercial sex workers, who had history of facility visiting greater than six times per year were failed to have pre-cervical cancer screening service. The major reasons for them never having pre-cervical cancer screening were Lack of convenient clinic time and Lack of provider recommendation were organizational factors (14).

2.3 Perceived barriers for pre-cervical cancer screening service Use

A study conducted in Nepal (n=360) more than 50% of the participant answered that screening was not needful without any symptoms. There were 46.1% women who did not go for screening due to lack of awareness. There were a significant number of women who thought screening was uncomfortable 24.3% and some answered they were too busy or careless 23.6% to go for screening. Similarly, other barriers were fear of vaginal examination 16.5%, lack of family support 9.9%, difficult access to the hospital 9.2%, not recommended by health professionals 8.5% or uncooperative health professionals were found to be barriers for cervical cancer screening (61). A study conducted in Nigeria, showed that the major barriers to the uptake of pre-cervical cancer screening were lack of information/counselling , lack of convenient clinic time and negative attitude of health workers were found to be the major barriers to the uptake of pre-cervical cancer screening (26). A study conducted in Ghana (n=200) revealed that unemployed women were less likely to have an interest in cervical cancer screening than those who were employed. a considerable number of the respondents 80% thought the screening was scary while about two thirds 74.5% of the respondents mentioned they were not susceptible to cervical cancer and thus will not screen. Almost all the respondents 78.5% mentioned they did not like male health personnel offering screening services and 86% and 66.5% alluded that long waiting time at the health facility and communication respectively may prevent them from seeking cervical cancer screening services A study conducted in Addis Ababa, Ethiopia showed that absence of symptoms 57%, a lack of knowledge about screening 56.3%, lack of a screening service in their living area 42.2% were the perceived barriers for screening uptake (25).

A study conducted in Addis Ababa, Ethiopia showed that absence of symptoms 57%, a lack of knowledge about screening 56.3%, lack of a screening service in their living area 42.2% were the perceived barriers for screening uptake(62). An unmatched case-control study conducted in Bahir Dar Ethiopia among commercial sex workers n=230 cases 46 control1 84) revealed that about 80.3% of commercial sex workers, who were failed to have Pap smear pre-cervical cancer

screening service .Fear of test result 19.65%, , Lack of female screener (provider) 1.73%, Shortage of time (being busy) 11.56%,Being healthy (not at risk) 70.52%, Lack of convenient clinic time 80.82% were the perceived barriers (14).

Conceptual Framework

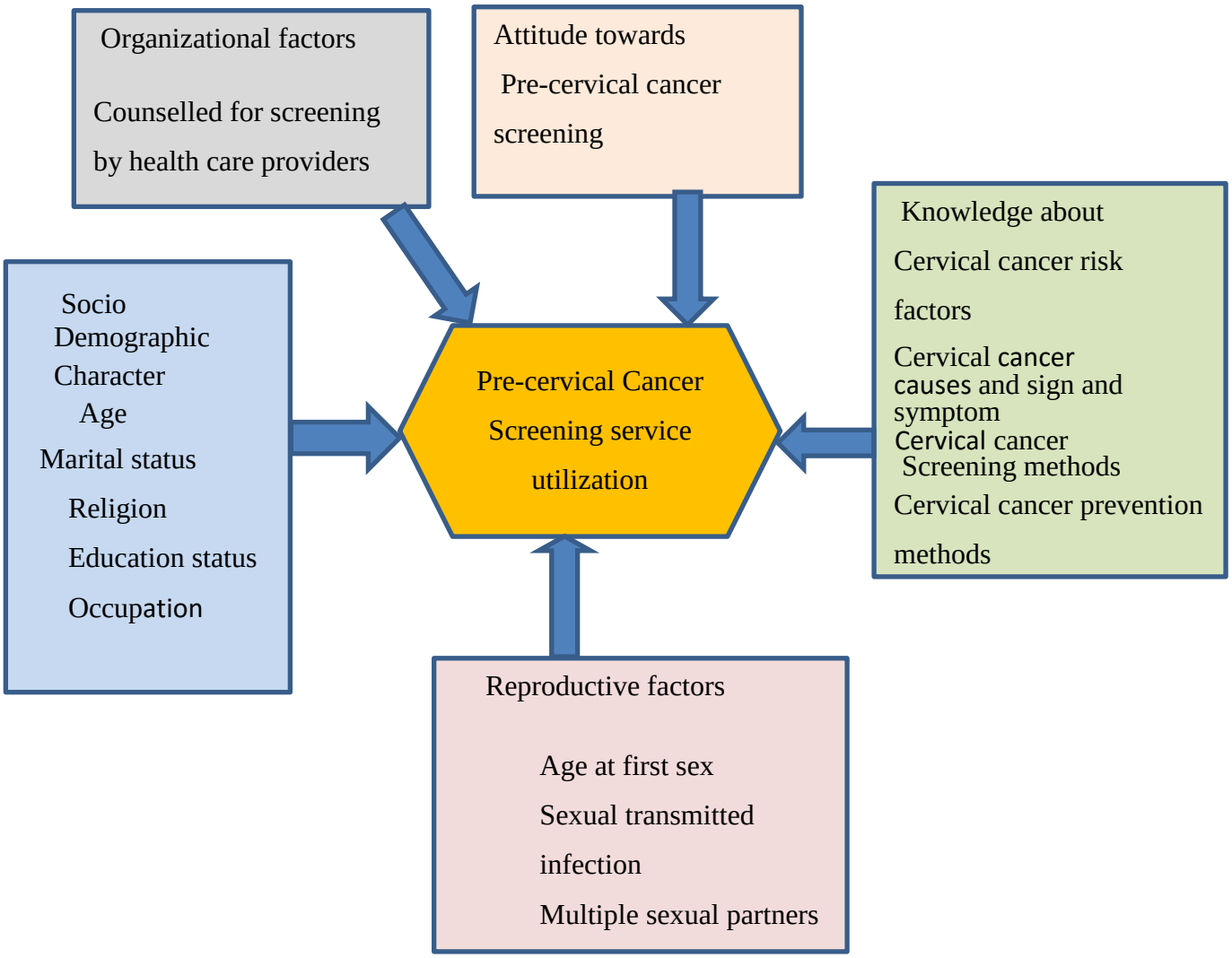

Figure 1: Conceptual framework to identify factors associated with pre-cervical cancer screening utilization among family planning service users in public health centers in Bahir Dar city (14, 41).

3. METHODS AND MATERIALS

3.1 Study design and period

An institution based cross-sectional study was conducted to assess pre-cervical cancer screening utilization among family planning service users women age 30-49 years in public health centers of Bahir Dar city, Northwest Ethiopia from Dec25/202 to January15/2021.

3.2 Study area and population

The study was conducted at public health centers of Bahir Dar city. Bahir Dar is the capital city of Amhara National Regional State which is located 560 Kilometers Northwest of Addis Ababa, the capital city of Ethiopia, at an elevation of 1800 above sea level and one of metropolitan city in the region. Administratively the city is structured into 6 sub cities (Fasilo, Dagmawi Minillik, Belay Zeleke, Gish Abay, Shimt and Dagmawi Tewodros) and 4 satelite kebeles Zenzelma,Meshenti, Zegi and Tisabay . In each subcity there is one Health Center (Bahir Dar health center, Dagmawi Minillik health center, Han Health center, Shumabo Health Center, Shimbit Health Center and Abay Health Center respectively. Health centers cover total populations of 27, 5723.Six health centers Shimbit , Dagmawi Minillik Zenzelma,Meshenti, Zegi and Tisabay health centers were excluded from the study due to their screening service were by linkage to other health sectors. Four health centers will be included in the study (63) **.**

3.3 Source population

The source populations were all family planning service user's age 30-49 years at four health centers of Bahir Dar city.

3.4. Study population

The study populations were women who were family planning service users aged 30-49 years at health centers of Bahir Dar city at the time of data collection.

3.5 Study participants

Study participants were all randomly selected woman who used family planning services age 30-49 years at public health centers in Bahir Dar.

3.6 Eligibility criteria

3.6.1 Inclusion criteria

All women aged 30-49 years who have currently family planning service users at public health centers in Bahir Dar city during the study period were included in the study.

3.6.2 Exclusion Criteria

All postpartum Women less than 12 weeks and family planning users' women age less than 30 years and greater than 49 years were excluded from the study. If you choose to have pre cervical Screening test after the birth of your baby, it is best to wait at least six weeks - it is ideal to wait three months. If you have a pre-cervical Screening test too soon after the delivery there is an increased rate of unsatisfactory results - for instance, there may not be enough cells in the sample taken, or the cells of the cervix may still be inflamed after the pregnancy and birth (18).

3.7 Variables

3.7.1 Dependent variable service use

Pre-cervical cancer screening utilization (yes=1, no=0)

3.7.2 Independent variables

- Socio-demographic characteristics of the women (age in years, ethnicity, religion, marital status, educational status occupational status).
- Reproductive characteristics age at first sexual intercourse ,given birth, HIV test status , ever sign and symptoms of STI, family history of cervical cancer , life time number of sexual partners, age started to use contraceptive,
- Knowledge about cervical cancer
- Attitude towards pre-cervical cancer screening
- Health facility, health provider related variables

3.8 Operational definition

Pre-cervical cancer screening utilization: those women reported ever had got pre-cervical cancer screening test at least once in the past five years.

Knowledge assessment: women who scored 6 and above from the eleven knowledge assessing questions were considered as having a good knowledge of cervical cancer and pre-cervical cancer screening.

Attitude assessment: eight questions measuring attitude were asked for the respondents and the mean score was calculated to use as a cut point for those respondent attitude as positive and negative .Positive attitude refers to for those scored the mean and above regarding attitude questions. Negative attitude refers to for those scored below the mean regarding attitude questions.

Counseling: bilateral discussion about pre-cervical cancer screening between health provider and woman who uses family planning service

Multiple sexual partners: those women who have ever had penetrative sexual intercourse with two or more partners.

3.9 Sample size determination

For the first objective: The sample size was determined based on the single population proportion formula:

$n= [(Z\alpha/2)^2 P (1-p)]/d^2$

With the assumption of a 95% confidence interval ($Z\alpha/2= 1.96$), Marginal error (d) of 5% P=20.9% from previous study conducted in Debre Markos (38).

With a 10% non-response rate, the required total sample size was **270.**

For the second objective: - factors associated with pre-cervical cancer utilization.

In this case, the sample size was calculated by using EPI Info version 7 software program by using different variables from different studies (considering power; 80%, 95% CI, ratio (unexposed: exposed), outcome in unexposed group (%), adjusted odds ratio and outcome in exposed group (%).The largest sample size calculated by Epi info compared to different associated factors with 10% non-respondent rate was **547.**

Table 1: Sample size determination for pre-cervical cancer utilization of family planning users' women by using associated factors.

No	*Associated factors*	*CL %*	*power*	*Unexposed to exposed Ratio*	*AOR and Confidence interval*	*Outcome in unexposed %*	*Outcome in exposed %*	*Sample size+10 %*	*Ref.*
1	Counseled by health professionals	95	80	2	4.1(1.5-11.3)	1.8	10.32	299+30= 329	(34)
2	Good Knowledge	95	80	2	4.8(1.5-15.5)	1.42	10.4	263+27= 290	(34)
3	Type of health facility(private)	95	80	2	8.9(2.8-28)	2	8	497+50= 547	(34)
4	History of STI	95	80	2	2.37(1.11-5.07)	14.4	59.45	47+5=52	(40)
5	Family history of cervical cancer	95	80	2	4.95(1.62-15.15)	16.83	75	30+3=33	(40)
6	Positive attitude towards pre-cervical cancer screening	95	80	2	3.38 (1.92-7.61)	6.6	40.6	62+7=69	(40)
7	Multiple sexual partners	95	80	2	1.635(1.094–2.443)	14.78	30.5	267+27= 294	(39)
8	Knowledgeable	95	80	2	2.355(1.155–4.802)	6.76	22.62	189+19= 208	(39)

From the above sample size determination by using the prevalence and associated factors the largest sample is **547.**

3.10 Sampling technique and procedures

A systematic random sampling technique was used to select study participant. The total sample size was allocated to each 4 Health Centers using proportional allocation based on total recent last one year family planning service user's women which was obtained from Bahir Dar health office. Then systematic random sampling method was used to select women attending family planning service for an exit interview. The first woman was selected by lottery method and then every 3 interval was included in the study.

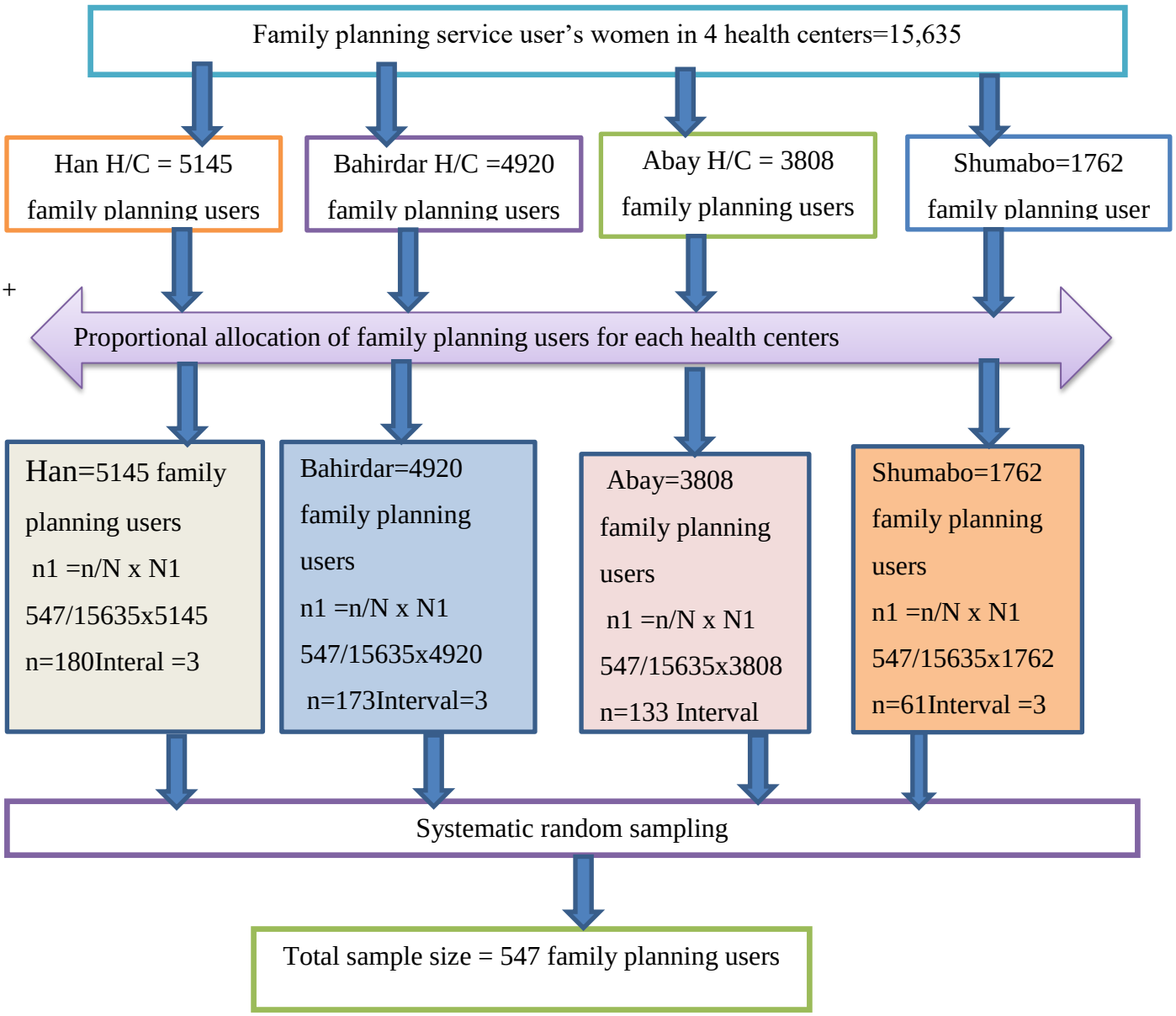

Figure 2: Schematic presentation of the sampling procedure of pre-cervical cancer screening utilization among family planning service users in Bahir Dar city, 2020.

3.11 Data collection procedures

The data were collected through a face to face interview using a pretested structured questionnaire. The questionnaire includes socio-demographic characteristics, obstetric and gynecological histories, knowledge about cervical cancer screening, attitude towards cervical screening and practice of cervical cancer screening. The questionnaire was first prepared in English and translated to Amharic and then, finally back-translated to English by language

experts to ensure the internal consistency of the study. Then, the data were collected through a face-to-face interview after taking the consent. Four trained diploma nurses were collect the data and supervised by one public health officer. Data were collected using structured interviewer administered questionnaire which was adapted from similar literatures (14, 41).

3.12 Data management and Analysis

Data were cleaned, coded and entered into EPI-DATA version 3.1 and exported to SPSS version 23 for analysis. Missing data was checked by observing frequency results. Descriptive statistics such as frequency, percentage, median and inter-quartile range were used. Bi-variable binary logistic regression was carried out to identify candidate variables ($p<0.25$) for multivariable binary logistic analysis.Then multivariable binary logistic regression analysis was performed using those candidate variables to investigate statistically significant predictors of pre-cervical cancer screening utilization by adjusting for possible confounders. Finally, Independent variables with P-values less than 0.05 from multivariable binary logistic regression were declared as statistically significant. An adjusted odds ratio with 95% confidence intervals was used to assess the strength of associations. The goodness of fit model was checked by Hosmer Lemeshow statistic and p-value greater than 0.05 was considered as a fit model. Results were presented using tables and described by narration.

3.13 Data quality assurance

To ensure the quality of this research, training was given to four diploma data collectors and one public health officer supervisors for two days on the objective, importance of the study, the confidentiality of information, respondent's rights and techniques of the interview. A Pre-test was conducted in 10 % of sample size among family planning service user's women in private or Non-Governmental health institutions of Bahir Dar city before the initiation of the main study to assess the validity of the questionnaire by trained data collectors to check the clarity of questions, ambiguity, the arrangement of questions, order & options for the questions and skipping pattern accordingly. Findings and experiences from the pre-test was utilized in modifying the data collection tool. The whole data collection procedures were closely supervised by field supervisors and investigators to ensure the completeness and reliability of the gathered information throughout the data collection process.

3.14 Ethical considerations

Ethical clearance was obtained from the collage of medicines and health sciences ethical review committee of Bahir Dar University and submitted to Bahir Dar city administration Zonal Health Department office to get permission. The purpose and importance of the study were explained at all levels and verbal informed consent was obtained from all family planning users. All family planning users' women were assured that the data collected had not any negative consequences on any aspects of their life. Confidentiality was kept by not exposing or shearing the information gathered from the respondents at all levels of the study. Participants who were not willing to participate and want to withdraw at any step of an interview in the study would be informed to do so without any restriction. Both data collectors and supervisors adhered to the WHO and Ethiopian Ministry of Health COVID-19 prevention guidelines during data collection. Participants will not have direct benefit but they will loss 20-25 minutes time to complete the interview. The data collector was given advice and health education about the benefit of pre-cervical cancer screening to eligible women who were not screened.

4. Result

4.1 Socio-demographic characteristics of participants

Out of the total participants, 521 responded to the questionnaire making the response rate of 95.2%. The median ages of the participants were 33 years with an inter-quartile range of 5 years. Four hundred seventy four (91%) of them were in the age group of 30-39 years. Of the total participants, 463 (88.9%) were orthodox Christian followers. Majority of the participants, 481 (92.3%) were married. (Table 2)

Table 2:Socio-demographic characteristics of family planning service user women age 30-49 years in Bahir Dar city public health centers Northwest Ethiopia 2021 (n=521)

Variables	**Categories**	**Frequency**	**%**
Age in years	30-39	474	91
	40-49	47	9
Ethnicity	Amhara	512	98.2
	Oromo	5	1
	Tigray	4	0.8
Religion	Orthodox	463	88.9
	Muslim	53	10.2
	Protestant	5	1
Marital status	Single	18	3.5
	Married	481	92.3
	Divorced	19	3.6
	Widowed	3	0.6
Educational status	Unable to read and	137	26.3
	Able to read and write	39	7.5
	Primary (1-8)	128	24.6
	Secondary (9-12)	127	24.4
	Collage and above	90	17.3
Occupational status	Farmer	31	6
	House wife	229	44
	Government employee	48	9.2
	Private employee	38	7.3
	Merchant	100	19.2
	Daily laborer	75	14.4

4.2 Reproductive health characteristics

Two hundred three family planning service users' women (39%) had sexual intercourse for the first time at the age of below eighteen. Majority of the family planning users women (438) had given birth and 90 (17.3%) had a history of oral contraceptive use. Three hundred seventy one (71.2%) participants admitted that they had history of multiple sexual partners during their life time. Five hundred eight (97.5%) of participants had HIV test and 20 (3.9%) of them were found to be positive. Twenty four (4.6%) participants had history of sign and symptoms of STI and all participants had no history of smoking. (Table3)

Table 3:Reproductive health characteristics of family planning service users women age 30-49 years in Bahir Dar city public health centers Northwest, Ethiopia 2021 (n=521)

Variables	**Categories**	**Frequency**	**%**
Age at first sexual intercourse	<18	203	39
	≥18	318	61
Ever gave birth	Yes	438	84.1
	No	83	15.9
Numbers of birth/child (n=438)	≤4	414	94.5
	>4	24	5.5
Ever tested for HIV	Yes	508	97.5
	No	13	2.5
HIV sero status (n=508)	Positive	20	3.9
	Negative	488	96.1
Sign and symptoms of STI	Yes	24	4.6
	No	497	95.4
Family history of cervical cancer	Yes	9	1.7
	No	512	98.3
Multiple sexual partner	Yes	371	71.2
	No	150	28.8
Age start to use contraceptive	<18	249	47.8
	≥18	272	52.2
Methods of contraceptive used previously	Oral	90	17.3
	Injectable	318	61
	Implants	107	20.5
	IUCD	6	1.2
How many years previously used	≤1	119	22.8
	1-4	252	48.4

	≥5	150	28.8
Currently used contraceptive methods	Oral	39	7.5
	Injectable	359	68.9
	Implants	113	21.7
	IUCD	7	1.3
	others	3	0.6
How many years used family planning currently	≤1	123	23.6
	1-4	261	50.1
	≥5	137	26.3

4.3 Knowledge about cervical cancer

Two hundred seventeen participants, 217 (41.7%) had good knowledge about cervical cancer and pre-cervical cancer screening. Out of the total participants 512 (98.2%) and 230 (44.1%) heard about cervical cancer and its screening respectively. The main source of information heard about cervical cancer were television 282 (55.1%), radio 91 (17.8%) and followed by health professional 82 (16%). Only thirteen participants (5.2%) knew that cervical cancer is the leading cause of death in women. Majority of the participants 411 (78.9%) didn't know cervical cancer is communicable 364 (69.9%), they knew that cervical cancer is preventable. One hundred one participants knew the risk factors of cervical cancer. Of those who knew the risk factors, 65 (64.4%) of them mentioned multiple sexual partner as risk factor for cervical cancer. (Table 4)

Table 4:Knowledge about pre-cervical cancer and its screening among family planning service users aged 30-49 years in Bahir Dar city public health centers Northwest Ethiopia, 2021 (n=521)

Variables	**Category**	**Frequency**	**%**
Ever heard about cervical cancer	Yes	512	98.3
	No	9	1.7
Knows most common causes of cervical cancer	Yes	466	89.4
	No	55	10.6
Cervical cancer is communicable	Yes	110	21.1
	No	411	78.9
Known risk factors of cervical cancer	Yes	101	19.4
	No	420	80.6
Know cervical cancer is preventable	Yes	364	69.9

	No	157	30.1
Heard any information about pre-cervical cancer screening to prevent cervical cancer	Yes	230	44.1
	No	291	55.9
Knows frequent time of screening for precancerous cervical lesion done	Yes	71	13.6
	No	450	86.4
Ever heard about pre-cervical cancer lesion treatment methods	Yes	187	35.9
	No	334	64.1
Knows symptoms of cervical cancer	Yes	105	20.2
	No	416	79.8
Knows health institution in Bahir Dar that do cervical cancer	Yes	180	34.5
	No	341	65.5
Cervical cancer is leading causes of death	Yes	421	80.8
	No	100	19.2
Knowledge about cervical cancer and pre-cervical cancer screening	Good	217	41.7
	Poor	304	58.3

4.4 Attitude towards pre-cervical cancer screening

Out of the total participants, 333 (63.9%) had positive attitude score regarding attitude measuring question towards cancer and pre-cervical cancer screening. Three hundred ninety one (75%) of the participants agreed that cervical cancer is a major health problem and 336 (64.5%) also strongly agreed that cervical cancer is a killer if not detected early. Less than half 206 (39.5%) of the participants agreed that cervical cancer is curable.

4.5 Perceived barriers to pre-cervical cancer screening utilization

Out of the total family planning service users women or participants 496 (90%) didn't have any perceived barriers to pre-cervical cancer screening utilization and 25 (10%) had perceived barriers for utilization of pre-cervical cancer screening. Among family planning users women who had perceived barriers for utilization of pre-cervical cancer screening, the main reason was unavailability of equipment in health facility two (4%), painful procedure one (4%), procedure is time taking one (4%), worry about privacy 13 (20%), fear of the result five (20%) and didn't know where the procedure takes place three (12%).

4.6 Health facility and health provider related characteristics

Majority of the family planning service users' women, (73.3%) of the participants had visited health institution every three month. Out of the participants, 81 (15.9%) were informed by health professional about pre-cervical cancer screening during family planning services. Ninety five (18.2%) of the participants knew a person with cervical cancer (Table 5).

Table 5: Health facility and health provider related characteristics about pre-cervical cancer and screening among family planning service users women age 30-49 years in Bahir Dar city public health centers Northwest Ethiopia 2021 (n=521)

Variables	**Categories**	**Frequency**	**%**
Visit for family planning services in health institution	At least every month	32	6.1
	At least every 3 month	382	73.3
	Once in a year or more	7	1.3
	Once in 2 years or more	35	6.7
	Once in 3 years or more	65	12.5
getting pre-cervical cancer screening counseling during family planning services currently	Yes	215	41.3
	No	306	68.7
Types of health organization receiving pre-cervical cancer screening counseling during family planning services (n=83)	Public	71	87.7
	Private	1	1.2
	NGO	9	11.1
Know a person with cervical cancer	Yes	95	18.2
	No	426	81.8

4.7 Utilization of pre-cervical cancer screening

Only, 56 (10.7%) with 95 % CI of (7.92-13.23) women reported being screened for cervical cancer. Of, those who was screening for pre-cervical cancer 12 (21.4%) were screened positive and 44 (78.6%) were screened negative. Among family planning users women who did not

screened for cervical cancer, the main reason for not screening was their feeling of being healthy 217 (46.7%), never recommended by health professionals 178 (38.3%), had no information about pre-cervical screening 57 (12.2%) and afraid a screening test would reveal cervical cancer 13 (2.8%)

Table 6: Indication for pre-cervical cancer screening among family planning service users in Bahir Dar2021.

Indication for pre-cervical cancer screening	Frequency	%
Ordered by health professionals	37	66.1
Friend imitation	11	19.6
Self-instated	7	12.5
Know someone who screened	1	1.8
Total	56	100

4.8 Factors associated with pre-cervical cancer screening utilization

Among the total variables included in the bi-variable binary logistic regression analysis ten variables: age of women, educational status, marital status, occupational, ever given birth, had multiple sexual partner, Age at first sexual intercourse, health professionals information provisions, knowledge status and attitude were associated with pre-cervical cancer screening utilization among family planning users at p-value <0.25. Then multivariable binary logistic regression analysis was performed using those candidate variables. In the multivariable binary logistic regression analysis age of women, had multiple sexual partner, Age at first sexual intercourse, health professionals information provisions and attitude were found to be significantly associated with pre-cervical cancer screening utilization among family planning users.

The odds of pre-cervical cancer screening utilization was about 2.43 [AOR: 2.43, (95% CI: (1.00-5.92; p-value=0.050)]times more likely among family planning users whose age were 40-49 years than those family planning users 30-39 years old.

The odds of pre-cervical cancer screening utilization was 8.55[AOR: 8.55, (95%CI: (4.08-17.91; p-value=0.0001)] times more likely among participants who were informed about cervical cancer screening by health professional than those who were not informed.

The odds of pre-cervical cancer screening utilization was 5.11 [AOR: 5.11, (95%CI: (2.08-12.54; p-value=0.0001)]times more likely among women who had positive attitude than those who had negative attitude about pre-cervical cancer screening utilization.

Family planning users women with two or more life time sexual partners were 0.44 [AOR: 0.44, (95%CI: (0.23-0.83; p-value=0.011)]. less likely to have pre-cervical cancer utilization compared to those who had less than two life time sexual partners.

The odds of pre-cervical cancer screening utilization was 2.63[AOR: 2.63, (95%CI: (1.28-5.39; p-value=0.008)] times more likely among family planning users women who had history first sexual intercourse at the age of less than eighteen than those who had history first sexual intercourse at the age of equal to or more than eighteen (Table 6).

Table 7: Multivariable binary logistic regression analysis of predictors for pre-cervical cancer and screening among family planning service users women age 30-49 years in Bahir Dar city public health centers Northwest Ethiopia 2021 (n=521)

Variables	Category	Pre-cervical cancer screening utilization		COR (95%CI)	AOR (95%CI)	P-value
		Yes	**No**			
Age	40-49	10	37	2.51 (1.03, 4.98)	2.43 (1.00-5.92)	0.050*
	30-39	46	428	1.00	1.00	
Educational status	Unable to	8	129	1.00	1.00	
	Able to read	4	35	1.84 (0.52, 6.48)	1.69 (0.40, 7.16)	0.478
	Primary (1-	15	113	2.14 (0.88, 5.24)	2.17 (0.77, 6.16)	0.144
	Secondary	17	110	2.49 (1.04,5.996)	1.61 (0.55, 4.73)	0.385
	Collage and	12	78	2.48 (0.9, 6.34)	0.52 (0.13, 2.02)	0.343
Marital status	Married	49	432	1.00	1.00	

	Single	1	17	0.53 (0.07, 4.07)	0.42 (0.04, 5.18)	0.501
	Divorced	5	14	3.21 ((1.11, 9.31)	2.00 (0.53, 7.56)	0.305
	Widowed	1	2	4.50 (0.4, 50.6)	2.14 (0.04, 110)	0.705
Occupational	Farmer	2	29	0.63 (0.12, 3.19)	1.33 (0.22, 7.94)	0.805
	House wife	16	213	0.83 (0.33, 2.07)	0.67 (0.23, 1.90)	0.378
	Government	8	40	1.94 (0.66, 5.76)	1.31 (0.39, 4.39)	0.176
	Private	9	29	3.02 (1.03, 8.87)	2.14 (0.61, 7.49)	0.104
	Merchant	14	86	1.58 (0.61, 4.14)	1.37 (0.47, 4.05)	0.547
	Daily	7	68	1.00		
Multiple sexual partner	Yes	31	340	0.46 (0.84, 2.60)	0.44 (0.23, 0.83)	0.011*
	No	25	125	1.00	1.00	
Age at first sexual intercourse	≥18	44	274	1.00	1.00	
	<18	12	191	2.56 (1.32, 4.97)	2.63 (1.28, 5.39)	0.008*
Professional counseling	Yes	46	169	8.06 (3.96, 16.38)	8.55 (4.08, 17.91)	<0.001*
	No	10	296	1.00	1.00	
Giving birth	Yes	49	389	1.37 (0.60,3.13)	1.66 (0.62,4.40)	0.311
	No	7	76	1.00		
Knowledge status	Good	29	188	1.58 (0.91, 2.96)	0.89 (0.45, 1.78)	0.744
	Poor	27	277	1.00	1.00	
Attitude status	Positive	50	283	5.35 (2.21, 12.51)	5.11 (2.08, 12.54)	<0.001*
	Negative	6	182	1.00	1.00	

*significant at p-value < 0.05, 1= reference category

COR crude odds ratio, AOR adjusted odds ratio, CI confidence interval

5. Discussion

This study found that only 10.8% with 95 % CI of (7.92-13.23) of women had pre-cervical cancer screening practice. Factors like women's Age , Health professional counseling , Positive attitude status, women who had First sexual intercourse at less than eighteen years and Having history of multiple sexual partners were significant predictors of pre-cervical cancer screening utilization among family planning service users women age 30-49 years in public health centers of Bahir Dar city2021.

Pre-cervical cancer screening utilization among family planning service users women age 30-49 years in public health centers of Bahir Dar city2021 was 10.8% with 95 % CI of (7.92-13.23) is the first report and there are no other studies that support those participants.

This study also identified factors that were associated with pre-cervical cancer utilization. This study showed that women age was one of the significant predictors of pre-cervical cancer screening utilization. The odd of pre-cervical cancer screening utilization was about 2.43 times more likely among family planning users whose aged were 40-49 years than those users aged 30-39 years old. This finding appeared to be consistent with those of other studies that noted statistically significant results for the same predictor variables. These studies includes Nigeria(26). Debre Markos AOR 3.21 (95% CI 1.40-7.39) (40), Atamttu,South west Ethiopia AOR 26.603 (95%CI8.16-86.662) (17), Mekele AOR 1.799 (95%CI1.182-2.739) (39). , Sidama AOR 5.2 (95% CI 2.6-4) (35), This is due to the fact that as age increases they may be multigravida and that may open the opportunity for maternal and child health care, while simultaneously they receive health information about cervical cancer and pre-cervical cancer screening.

The odd of pre-cervical cancer screening utilization was 8.55 times more likely among participants who were (counselled) informed about pre-cervical cancer screening by health professional than those who were not informed. The current finding was supported by studies done in Uganda AOR87.85 (95% CI 30.28-254.84) (27), Kenya (28). , Dire Dawa AOR4.1 (95% CI 1.5-9.8) (34). Weliso AOR 5.88 (95%CI1.59-21.82) (41), Jimma AOR 4.45(2.57-7.70) (37), , Debre Markos AOR 6.65(95% CI 3.64-12.15) (40), Bahir DarAOR 6.8(95% CI2.3-9.7) (14). This could be due to that women who had been providing counseling about pre-cervical cancer screening during family planning service might have a good opportunity to discuss with health

professional on different health concerns and had higher chance of getting more comprehensive information about pre-cervical cancer screening that initiates them to utilize the service. In addition, discussions conducted between the health care provider and the clients might be excellent opportunity to alleviate negative attitudes about cervical cancer and pre-cervical cancer screening utilization.

This study also identified having a positive attitude was another factor that was significantly associated with pre-cervical cancer screening utilization. Family planning users' women who had positive attitude were 5.11 times more likely to be screened for pre-cervical cancer than who had negative attitude this finding was consistent with previous studies done in Congo Kinshasa AOR 3.86 (95%CI 2.38-6.26)(64), Woliso 3.88(95% CI1.31-11.54) (41), Debre Markos AOR 322(95% CI 2.52-4.12 (51), However the finding was contradicted to a study done in Saudi Arabia women disagreed with the statement "screening helps in prevention of carcinoma of the cervix(65) . This might be related to the fact that human behavior is influenced by perceptions and attitude which are the driving forces for activities. This can be also explained as the attitude level of the women towards cervical cancer and pre-cervical cancer screening might enable to analyze the risk and benefits of utilizing the service, then as the same time the intention to utilize the service also increases.

Women who had first sexual intercourse at less than eighteen years were 2.63 times more likely to have pre-cervical cancer screening utilization compared to those who had first sexual intercourse at the age of equal to or more than eighteen years. This finding was supported by studies conducted in India AOR 1.85 (95% CI1.14-2.99) (47), Guragie AOR 6.05(95% CI 1.167-31.36) (52), and Debre Markos AOR 3.02 (95%CI 1.84-4.97)(51). The possible explanation for this might be women who started sexual intercourse at an early age, may have increased life time sexual partners which in turn increase the chance of being infected with different sexually transmitted diseases and acquired cervical cancer causative agents and resulted in its signs and symptoms which lead to visit health facilities.

This study finding showed that woman who had a history of multiple sexual partners was another important factor for utilization of pre-cervical cancer screening. Women with two or more life time sexual partners were 0.44 times less likely to have pre-cervical cancer utilization compared to those who had less than two life time sexual partners. However, the finding of this

study was inconsistent with results of studies that showed women who have had a history of multiple sexual partners were more likely to utilize pre-cervical cancer screening as compared to those who did not have multiple sexual partners. These include Arbaminch AOR 2.2(95% CI 1.1-6.06) (66), The possible explanation might be discrepancy could be influenced by lifestyle, characteristics of study subjects .educational status occupational status. Therefore, intervention programs that are aimed at improving cervical cancer screening practice among women should focus on the identified factors.

6. Conclusion, future direction and implication

Pre-cervical cancer screening utilization was found to be low compared to national program to reach 80% eligible women age 30-49 years. Women's age, informed by health provider, age at first sexual intercourse, having multiple sexual partner and attitude were positively and significantly associated with pre-cervical cancer screening utilization. For the future Health professionals inform women who are attending health facilities about screening program. Creating awareness and intensifying health education provision and creating positive attitude for targeted women using screening campaigns and assigning pre-cervical week for community mobilization.

This study is significant because it has broadened understanding on the screening status of family planning service users and one of the first study which assess how pre-cervical cancer screening service integrate with family planning in Bahir Dar city. This study brings about an increased interest in the study population. The understanding of the factors associated with pre-cervical cancer screening is useful for health workers and community health professionals to improve screening service. As findings from the study has revealed pre-cervical cancer screening rates is low among the study population., therefore the need to develop policies that are targeted at improving adherence to pre-cervical cancer screening. For researchers further study should be conducted at regional or country wide study with strong evidenced study design to assess pre-cervical cancer screening utilization and associated factors

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APPENDIX

I. Participant information sheet and consent form

a. Participant information sheet

Hello! My name is ----------I am one of the members of the research team, which has the objectives of pre-cervical cancer screening utilization and associated factors among family planning service users women in Bahir Dar city, North West Ethiopia. As the study is directly related to women who are currently using family planning, and you may be one of the women who will be selected to participate in this study, therefore you are kindly requested to participate in this study and provide the information required from you. Your participation in this study is completely on voluntary basis and you have the right to refuse from participating. Your responses will be kept confidential and there will be no way of linking your individual responses to the final results of the study findings. We would like to inform you that the responses that you provide to the questions are very essential, not only, for the successful accomplishment of this study, but also for producing relevant information which will be helpful improving the pre-cervical cancer screening service utilization.

b. Informed consent agreement form

Are you willing to participate in this study to give your responses based on the questionnaire?

I have been requested to take part in the research and the foregoing information has been read to me. I have had the opportunity to ask questions about it and any questions I have been asked have been answered to my satisfaction. I consent voluntarily to participate in this study and understand that I have the right to withdraw from the interview at any time without in anyway affecting my right

Yes_____ No_____

Name and Signature of data collector _____

Name and signature of supervisor _____

II. English and Amharic Questionnaire

ID NO……

1: Socio-demographic characteristics of the women

S.NO	Questions	Alternative answers	Skipping pattern	Code
101.	Age in years	……..		
102.	Ethnicity	1. Amhara 2. Oromo 3. Tigray 4. Other specify……		
103.	Religion	**1.** Orthodox 2. Muslim 3. Protestant 4. Catholic 5. Others (specify)……..		
104.	Marital Status	1. Married 2. Single 3. Divorced 4. Widowed 5. Other specify……..		
105.	Educational	**1.** Unable to read and write		

	Status	**2.** Read and write only **3.** 1-8 grade 4. 9-10 grade 5.11-12 grade 6. College and above		
106.	Occupational Status	1. Farmer 2. House wife 3.Government Employee 4. Private Employee 5. Merchant 6.Daily laborer 5 Other (Specify)……		

Section 2: Reproductive History

S.NO	Questions	Alternative answers	Skipping pattern	Code
201.	Age at first sexual intercourse	……		
202	Have you given birth?	1. Yes 2. No		

203.	If, your answer is yes, for question number 202, How many?	……		
204.	Have you ever tested for HIV?	1. Yes 2. No		
205.	If yes for Q no. 204, Are you willing to tell me your HIV result?	1.Yes 2.No		
206.	If Yes, for Q no. 204 what was the HIV result?	1.Positive 2. Negative		
207.	Do you have ever sign and symptoms of STI? (Abnormal vaginal discharge, genitalia ulcer and others specify).	1. Yes 2. No		
208.	Family history of cervical cancer (mother or sister)	1. Yes 2. No		
209.	Life time number of sexual partners	……		
210.	At what age did you start to use contraceptive?	……		
211.	Which method of contraceptive did you used previously? (Don't read, Respondent tells without	1.Oral contraceptive		

	solicitation), (Multiple responses possible)	2. Injectable 3. Implant 4.Intrauterine device 5.condom 6.Others (specify)		
212.	For how many years did you use contraceptive previously?	1…… 2…… 3…… 4…… 5…… 6…….. Sum…….		
213.	Which method of contraceptive do you currently use? (Don't read, Respondent tells without solicitation), (Multiple responses possible)	1.Oral contraceptive 2. Injectable 3. Implant 4.Intrauterine device 5.condom 6.Others (specify)		

214.	How many years you use current contraceptive? (Don't read, Respondent tells without solicitation),(Multiple responses possible)	1…… 2……		
215.	Ever history of smoking	1.Yes 2.No		
216.	If question no, 213 is yes, How many years?	…… …….		
217.	If question no, 213 is yes, How many packets per day?	…… ……..		

Section 3: Knowledge related questions about cervical cancer

S.NO	Questions	Alternative Answers	Skipping Code	Code
301.	Have you ever heard about cervical cancer?	1. Yes 2. No		
302.	If yes Q 301, from where you get the information? (Don't read. Respondent tells without solicitation) (Multiple responses are possible)	1. Radio 2. TV 3. Health profession 4. Relatives and friends 5. Other specify …….		
303	What is the most common cause			

	of cervical cancer?	…… …		
304	Do you know cervical cancer is communicable?	1 Yes 2.No 3 .I don't know		
305	Do you know risk factors for cervical cancer?	1 Yes 2.No		
306	If yes for Q no 305, what are they? (Don't read. Respondent tells without solicitation) (She will get one point, If she knows at least one factor.)	1. Family history 2. Multiple sexual partner 3. Smoking 4. STI infections 5. OCP use 6. Early sexual inter course before age 18 years 7. Other (specify ……		
307	Do you know cervical cancer is preventable?	1.Yes 2.No 3 .I don't know		
308	Have you heard any information about pre-cervical cancer screening to prevent cervical cancer?	1. Yes 2. No		
309	If yes for Q no 308, from where you get the information? (Don't read. Respondent tells without solicitation) (Multiple responses are possible)	1. TV 2. Radio 3.Health professionals 4. Relatives and friends 5. Others (specify		
310	Do you know screening methods of pre-cervical cancer lesion?	1.Yes 2.No		

311	If yes for Q no 310, which screening methods you know? (Multiple responses are possible)	1 .VIA 2.Pap smear 3.HPV DNA test 4.Other specify……		
312	How frequent is screening for pre-cancerous cervical lesion done?	…….		
313	Do you know pre-cervical cancer lesion treatment methods?	1 .Yes 2. No		
314	If yes for Q no 313, which treatment methods you know?	1. Cryotherapy 2. Loop Electrosurgical Excision Procedure (LEEP) 3.Conization 4. Other specify……		
315	Do you know symptoms of cervical cancer?	1. Yes 2. No		
316	If yes for Q no 314, Which one among these? (Don't read. Respondent tells without solicitation). (She will get one point, If she knows at least one symptom.)	1. Abnormal Vaginal bleeding 2. Post coital bleeding 3. Foul smelling vaginal discharge 4. Painful coitus 5. Others (specify) ……..		
317	Do you know any health institution in Bahir Dar city which provides pre-cervical	1.Yes 2. No		

	cancer screening?			
318	Cervical cancer is a leading cause of death in women?	1. Yes 2. No		

Section 4: Perceived Barriers to pre-cervical Cancer Screening utilization

S.NO	Questions	Alternative Answers	Skipping Code	Code
401.	Even if you wanted to get a screening, there is/are barrier /perceived barriers	1.Yes 2.No		
402	If your answer yes for Q no, 411 which of the following may prevent you to do so. (Don't read. Respondent tells without solicitation)	1.Unavailability of equipment in Health facility 2.Unavailability of skilled professionals in HF 3.The procedure is painful 4.The procedure is time taking 5.Worry about privacy 6.Fear of the result 7.I don't know where 8.Fear of vaginal examination 9.Lack of partner approval 10.Lack of information about pre-cervical cancer screening 11.Attitude of health provider		

		12.I am not at risk 13.Not recommended by health professionals 14.Other(specify		

Section 5: Attitude towards pre-cervical cancer screening

S.NO	Questions	Alternative Answers	Skipping Code	Code
501.	Do you believe cervical cancer is a killer if not detected early?	1.Strongly agree 2.Agree 3.Neutral 4.Disagree 5.Strongly disagree		
502.	Do you think that you can have cervical cancer but not	1.Strongly agree 2.Agree		

	symptoms?	3.Neutral 4.Disagree 5.Strongly disagree		
503.	Do you believe screening can detect treatable, precancerous lesions before they progress to cancer?	1.Strongly agree 2.Agree 3.Neutral 4.Disagree 5.Strongly disagree		
504.	Do you think that cervical cancer is a major health problem?	1.Strongly agree 2.Agree 3.Neutral 4.Disagree 5.Strongly disagree		
505.	Do you believe Screening causes no harm to the client?	1.Strongly agree 2.Agree 3.Neutral 4.Disagree 5.Strongly disagree		
506.	Do you think cervical cancer develops slowly and is preventable?	1.Strongly agree 2.Agree 3.Neutral 4.Disagree 5.Strongly disagree		
507.	Do you believe a screening test that is positive is not mean a woman will die?	1.Strongly agree 2.Agree 3.Neutral 4.Disagree 5.Strongly disagree		

508.	Do you think pre-cervical cancer in general can cure if treated early?	1.Strongly agree 2.Agree 3.Neutral 4.Disagree 5.Strongly disagree		

Section 6: Health facility, health provider and other questions

S.NO	Question	Alternative Answers	Skipping Code	Code
601.	How often do you visit for family planning service in health institution?	1.Once or more in a year 2.Once or more every two years 3.Once or more ≥ three years		
602.	Did your health provider council you about pre cervical cancer screening during family planning service?	1. Yes 2. No		
603.	If your answer is yes for question number 602 , which health organization would provide counselling service?	1, Public 2, Private 3,Non-Governmental		
604.	Do you know a woman who screened for pre-cervical cancer?	1. Yes 2. No		
605.	Does your husband know about pre-cervical cancer screening?	1. Yes 2. No 3. I don't know		

Section 7: Pre-cervical cancer screening utilization questions

S.NO	Questions	Alternative Answers	Skipping Code	Code
701.	Have you ever screened for pre-cervical cancer?	1. Yes 2. No		

702.	If yes for Q no 701, When was the last time you screened?	…….		
703	If yes for Q no 701, By which method were you screened? (Multiple responses are possible)	1 .VIA 2.Pap smear 3.HPV DNA test 4. Other specify……..		
704	If yes for Q no 701 What was the indication (Don't read. Respondent tells without solicitation	1.Self-initiate 2.Ordered by the health professionals 3.Partner initiation 4.Friends imitation 5.Know someone screened 6.Other (specify)		
705	If yes, for Q no. 701, Are you willing to tell me your screening result?	1. Yes 2. No		
706	If yes, for Q no 701, what was your screening result?	1.posetive 2. Negative		
707	If positive for Q no 706, What was your treatment option? (Multiple responses are possible)	1. Cryotherapy 2. Loop Electrosurgical Excision Procedure (LEEP) 3. Conization 4. Other specify…….		
708	If no for Q no 701, why? (Don't read. Respondent tells without solicitation) (Multiple responses are possible)	1.It may be painful 2.I am healthy 3.My husband would not agree 4.I am afraid a screening test would reveal cervical cancer		

		5.I haven't information about pre-cervical cancer screening 6.I have never recommended by health professionals 7.Other(specify)		

Thank you for your Participation.

የመረጃ መስጫና የስምምነት ማረጋገጫ ቅፅ

ለባህርዳር ከተማ ነዋሪዎች የቤተሰብ እቅድ አገልግሎት ተጠቃሚ ለሆኑ ሴቶች ቅድመ የማህፀን ጫፍ ነቀርሳ ምርመራ አጠቃቀም ሁኔታ እና ተያያዥ ተግዳሮቶች ዙሪያ ለማጥናት የተዘጋጀ መጠይቅ ጤና ይስጥልኝ፣ እኔ_____ እባላለሁ ለዚህ የጥናት ቡድን አባል ነኝ ። ይህ ጥናት በባህርዳር ዩኒቨርስቲ የህብረተሰብ ጤና አጠባበቅ በሁለተኛ ዲግሪ ተማሪ ለመመረቂያ የተዘጋጀ ነው ።ይህ ጥናትና ምርምር በባህርዳር ከተማ ነዋሪዎች የቤተሰብ እቅድ አገልግሎት ተጠቃሚ ና እድሜአቸው ከ30-49 አመት የሆኑ ሴቶችን ቅድመ የማህፀን ጫፍ ነቀርሳ ምርመራ አጠቃቀም ሁኔታ እና ተያያዥ ተግዳሮቶች ዙሪያ ለማጥናት የተዘጋጀ መጠይቅ ነው። ከዚህ ጥናት የሚገኘው ውጤት ባለሙያዎች በማስረጃ የተደገፈ እቅድ ለማቀድ እና በዚህ ዙሪያ ተመሳሳይ ጥናት ማከናወን ለሚፈልጉ አጥኚዎች እንደ መንደርደሪያነት ያገለግላል ተብሎ ይታሰባል። ይህንን በፍቃደኝነት ላይ የተመሰረተ መጠይቅ ለመሙላት 20 ደቂቃ የሚፈጅብዎት ሲሆን ለመሳተፍ ካልፈለጉ አይገደዱም፣ ለሚሰጡን መረጃ ስም የማይጻፍበትና ሚስጢሩ የተጠበቀ መሆኑን እያረጋገጥን መሳተፍ ከጀመሩ በኋላ ከፈለጉ በማንኛውም ጊዜ አቋርጠው መውጣት ይችላሉ። በዚህ ጥናት ውስጥ እንዲሳተፉ በአክብሮት እጠይቃለሁ። ለተጨማሪ መረጃ በስልክ ቁጥር 0974468975 ወይም በኢሜይ ል eskedarayalew1131@gmail.com ሊያገኙኝ ይችላሉ። በጥናቱ ለመሳተፍ ፈቃደኛነዎት ?

እሳተፋለሁ..... አልሳተፍም .....

ለመሳተፍ ፈቃደኛ ከሆኑ ወደ ቀጣዮቹ ጥያቄዎች ይለፉ ለመሳተፍ ፈቃደኛ ካልሆኑ አመስግነው ጥያቄውን ያቋርጡ ።

የመረጃ ሰብሳቢው ስም.....ፊርማ.....ቀን.....

የተቆጣጣሪው ስም.....ፊርማ..... ቀን .....

አማርኛ መጠይቅ መለያ ቁጥር.....

ክፍል1. የተጠያቂው አጠቃለይ ማህበራዊ መረጃ የተመለከተ መጠይቅ

ተ.ቁ	ጥያቄዎች	መልስ	እለ ፍ	ኮድ
101	እድሜ	……		
102	ብሔር	1. አማራ 2。 ኦሮሞ 3。 ትግሬ 4。 ሌላ ይግለጹ—————		
103。	ኃይማኖት	1. ኦርቶድክስ 2. እስልምና 3. ፕሮቴስታንት 4. ካቶሊክ 5. ሌላ ካለ(ይግለጹ)_____		
104	የጋብቻሁኔታ	1. ያገባ 2. ያላገባ 3. የተፋታ 4. በሞት የተለያየ		
105	የትምህርት ደረጃ	1. ማንበብና መፃፍ የማይችል 2 .ማንበብና መፃፍ የሚችል 3. ከ1ኛ-8ኛ ክፍል 4. ከ9ኛ-12ኛ ክፍል 5 .ኮሌጅና ከዚያ በላይ		
106	የሥራ ሁኔታ	1。 ግብርና 2。 የቤት እመቤት 3。 የመንግስት ሰራተኛ 4。 ነጋዴ 5。 ሌላ ይገለጽ.....		
	አማካይ ወርኃዊ ገቢ	.....		

107		.....ብር		
ክፍል2፡ የስነ -ተዋልዶ ጤናን የተመለከተ መጠይቅ				
201	የግብረ ስጋ ግንኙነት መጀመሪያ ጊዜ ሲጀመሩ እድሜዎ ስንት ነበር?	.....		
202	ልጅ ወልደዋል ?	አዎ አልወለድኩም		
203	ለጥያቄ ቁጥር 202 መልሰዎ አዎ ከሆነ ስንት ልጆች ወልደዋል ?	.....		
204	*የኤች ኣይቪ ኤድሰ ምርመራኣድርገው ያውቃሉ?*	1. አዎ 2。 አላውቅም		
205	*ለጥያቄ ቁጥር 204 መልሰዎ አዎ ከሆነ የምርመራ ውጤተዎን ሊነግሩኝ ይችላሉ ?*	1. አዎ እችላለሁ 2. አልችልም		
206	ለጥያቄ ቁጥር 204 መልሰዎ አዎ ከሆነ ውጤቱ ምን ነበረ ?	1. ፖዘቲቭ 2。 ኔጌቲቭ		
207	እስከ አሁን ድረስ የአባለዘርበሽታ ታመውያውቃሉ?	1。 አዎ 2。 አላውቅም		
208	ከቤተሰብዎ መካከል የማህጸን ጫፍ ካንሰር ያለበት ሴት አለች (ወይንም ነበረች)?	1. አዎ 2. የለም		
209	እስከ አሁን ድረስ ከስንት ሰዎችጋር የግብረ ስጋግንኙነትአድርገዋል?	..... .		
210	መቸ ነው የእርግዝና መከላከያ መጠቀም የጀመሩት?	.....		
211	የትኛዉን የእርግዝና መከላከያ መንገድ ነው የሚጠቀሙት ? (ዝርዝሩን አያንቡት፤ የምታውቀውን እንድትናገር ያድርጉ)	1.በእየቀኑ የሚዋጥ እንክብል 2. በመርፌየሚሰጠው 3. በክንዴ የሚቀመጠው 4. ሉፕ		

		5.ኮንደም 6.ሌላካለይገለጽ		
212	ከተራቁጥር 211. 1ኛዉ መንገድ የሚጠቀሙ ከሆነ ለምን ያህል ጊዜ ተጠቅመውታል?	.....		
213	ሲጋራ አጭሰው ያዉቃሉ?	1. አዎ 2. አላውቅምም		
214	ለጥያቄ ቁጥር 213 መልሰዎ አዎ ከሆነ ለምን ያህልጊዜ አጭሰዋል?	.....		
215	ለጥያቄ ቁጥር 213 መልሰዎ አዎ ከሆነ በቀን ምን ያህል ፓኬት ያጨሳሉ?	.....		
ክፍል 3፡ስለ ማህፀን ጫፍ ነቀርሳ ግንዛቤ የተመለከተ መጠይቅ				
301	ስለ ማህፀን ጫፍ ነቀርሳ ሰምተው ያዎቃሉ?	1. አዎ 2. አላውቅምም		
302	መልሰዎ አዎ ከሆነ ከየት ነው የሰሙት?	1. ከሬዲዎ 2。 ቴላቭዥን 3。ከጤና ባለሙያ 4。ከጓደኞች 5 .ሌላ ካለ ይገለጽ		
303	የማህጸን ጫፍ ነቀርሳ በሴቶች ላይ ገዳይ ከሆኑት በሽታዎች ግንባር ቀደሙ ነዉ?	1. አዎ 2. አይደለም		
304	ስለ ማህጸን ጫፍ ነቀርሳ ምርመራ ሰምተው ያዉቃሉ?	1. አዎ 2. አይደለም		
305	ለጥያቄ ቁጥር 304 መልሰዎ አዎ ከሆነ ከየት ነው የሰሙት? (ዝርዝሩን አያንቡት፤ የምታውቀውን እንድትናገር ያድርጉ)	1. ከሬዴዮ 2。ከቴላቭዥን 3。ከጤናባለሙያ 4。ከጓደኞች		

		5.ሌላ ካለ ይገለጽ		
306	የማህፀን ጫፍ ቅድመ ነቀርሳ ምርመራ በስንት ጊዜይደረጋል?	1。በ አመት አንድ ጊዜ 2。በ3 አመት አንድ ጊዜ 3。በ5 አመት አንድ ጊዜ		
307	የማህፀን ጫፍ ነቀርሳ ምልክቶችን ያዉቃሉ?	1. አዎ 2。አላውቅም		
308	ለጥያቄ ቁጥር 307 አዎ ከሆነ መልሰዎ ከእነዚህ ምልክቶች የትኞቹን ያዉቃሉ? (ዝርዝሩን አያንቡት፤ የምታውቀውን እንድትናገር ያድርጉ)	1。ከማህጸን የሚወጣ ደም 2。ከግብረ ስጋ ግንኙነት ጊዜ የሚወጣ ደም 3。ሽታ ያለው ማህጸን ፈሳሽ 4。በግብረ ስጋ ግንኙነት በጊዜ የሚኖር ህመም 5。ሌላ ካለ ይገለጽ		
309	ለጥያቄ ቁጥር 307 አዎ ከሆነ የማህፀን ጫፍ ነቀርሳ ተላላፊ ነው?	1. አዎ 2.አይደለም		
310	የማህጸን ጫፍ ቅድመ ነቀርሳ ምርመራ የሚያደርግ ተቋም ያዉቃሉ?	1。አውቃለሁ 2。አላውቅም		
311	የማህፀን ጫፍ ነቀርሳ መከላከል ይቻላል?	1。 አዎ 2。አይቻልም		
312	የማህፀን ጫፍ ነቀርሳ የሚያመጡ ምክንያቶችን ያዉቃሉ	1。አውቃለሁ 2。አላውቅም		
313	ለጥያቄ ቁጥር 312 መልሰዎ አዎ ከሆን፤ የትኞቹ ናቸው? (ዝርዝሩን አያንቡት፤ የምታውቀውን እንድትናገር ያድርጉ)	1. በዘር (በቤተሰብ) የሚመጣ 2 .ከብዙ ወንድ ጋር የግብረ ስጋ ግንኙነት መፈጸም 3 ሲጋራ ማጨስ 4. የአባለዘር በሽታ መያዝ 5. የሚዋጥ የእርግዝና መከላከያ መጠቀም 6.ከ 18 አመት በታች የግብረ ስጋ ግንኙነት መፈጸም 7. ሌላ ካለ ይገለጽ		

	ክፍል 4 ስለማህጸን ጫፍ ነቀርሳ ምርመራ ተግዳሮቶች			
401	ለማህፀን ጫፍ ነቀርሳ ምርመራ ማድረግ ቢፈልጉ እንዳይመረመሩ የሚያግደዎት ነገር አለ	1。 አዎ 2。 የለም		
4 02	ለጥያቄ ቁጥር412 መልሰዎ አዎ ከሆነ ምክንያቶች ምን ምንናቸዉ (ዝርዝሩን አያንቡት፤ የምታውቀውን እንድትናገር ያድርጉ)	1 .በጤና ተቋም የመመርመሪያ መሳሪያ ያለመኖር 2。 የሰለጠነ ባለሙያ ያለመኖር。 3。 ምርመራው ስለሚያም 4。 ምርመራው ጊዜ ስለሚፈጅ 5。 ማህጸኔን ለሰው ማሳየት አልወድም 6。 ውጤቱን ስለምፈራ 7。 የት እንደሚሔዴ ስለማላውቅ 8。 በማህፀን የሚደረግ ምርመራ ስለምፈራ 9。 ባለቤቴስ ለማይፈቅድልኝ 10。 ስለማህፀን ጫፍ ነቀርሳ ምርመራ መረጃው ስለሌለኝ 11 የጤና ባለሙያውአመለካከት 12。 ስለማይመለከተኝ 13.ሌላ ካለ ይገለጽ.....		
ክፍል5፡-ስለ ማህፀን ጫፍ ነቀርሳ ምርመራ አመለካከት የሚዳስስ መጠይቅ				
501	የማህፀን ጫፍ ነቀርሳ ቶሎ ካልታከመ ገዳይ ነዉ ብለው ያምናሉ?	1。 እስማማለሁ 2。 አልስማማም 3. እርግጠኛ አይደለሁም		
502	የማህጸን ጫፍ ነቀርሳ ኖሮ ምልክቶቹ ላይታዩ ይችላልብለው ያስባሉ?	1。 እስማማለሁ 2。 አልስማማም		

		3 እርግጠኛ አይደለሁም		
503	ቪ አይ ኤ የሚባለዉ ምርመራ የማህጸን ጫፍ ነቀርሳ ይከላከላል	1። እስማማለሁ 2። አልስማማም 3. እርግጠኛ አይደለሁም		
504	የማህፀን ጫፍ ነቀርሳ ዋነኛ የጤና ችግር ነዉ ብለው ያምናሉ?	1። እስማማለሁ 2። አልስማማም 3. እርግጠኛ አይደለሁም		
505	የማህፀን ጫፍ ነቀርሳ ምርመራ በቀላሉ የሚድኑና ነቀርሳደረጃ ያልደረሱ(ከመድረሳቸውበፊት) ይለያልብለውያምናሉ?	1። እስማማለሁ 2። አልስማማም 3. እርግጠኛ አይደለሁም		
506	የማህፀን በር ነቀርሳ በሂደት የሚመጣና መከላከል የሚቻል ነዉ ብለው ያምናሉ?	1። እስማማለሁ 2። አልስማማም 3. እርግጠኛ አይደለሁም		
507	የምርመራ ዉጤት ፖዘቲቭ ማለት አንዲት ሴት ትሞታችማለት አይደለም ብለው ያምናሉ ?	1። እስማማለሁ 2። አልስማማም 3. እርግጠኛ አይደለሁም		
508	በአጠቃላይ የማህፀን ጫፍ ነቀይድናል ብለዉ ያስባሉ？	1። እስማማለሁ? 2። አልስማማም 3. እርግጠኛ አይደለሁም		
ክፍል 6፡ ስለ ጤና ተቋም የጤና ባለሙያና ላሉት ተያያዥ ጉዳዮች የሚመለከት መጠይቅ				
601	የእርግዝና መከላከያ አገልግሎት ለማግኘት ወደ ጤና ተቋምበምን ያህል ጊዜ ልዩነት ይሔዳሉ?	1 . በየወሩ 2 በየ ሶስት ወሩ 3 በአመት አንድ ጊዜ ወይም ከዚያ በላይ 4። በሁለት አመት አንድ ጊዜ ወይም ከዚያ በላይ 5። በሶስት አመት እና ከዚያ በላይ አንድ ጊዜ ወይም ከዚያ በላይ		
602	ወደ ጤና ተቋም ሲሔዱ የጤና ባለሙያ ለለማህፀን	ነ። አዎ		

	ጫፍነቀርሳ ቅድመ ምርመራ አማክሮዎት ያዉቃል?	2. አያውቅም		
603	በማህጸን ጫፍ ነቀርሳ የተመረመረ ሰው ያዉቃሉ?	1. አዎ 2. አያውቅም		
604	ባለቤተዎ ስለማህፀ በር ነቀርሳ ያውቃሉ? (ላገቡ ሴቶች ብቻ የሚጠየቅ)	1. አዎ 2. አያውቅም 3. እርግጠኛ አይደለሁም		
ክ ፍል 7፡ስለ ማህፀን ጫፍ ነቀርሳ ምርመራ ተጠቃሚንት የሚመለከት መጠይቅ				
701	ለማህፀን ጫፍ ነቀርሳ ምርመራ አድርገው ያውቃሉ ?	1. አዎ 2. አያውቅም		
702	ለጥያቄ ቁጥር 7 01 ምልስዎ አዎ ከሆነ መቼ ነዉ?ለመጨረሻ ጊዜምርመራ ያካሄዱት	.....		
703	ተመርምረው የሚያዉቁ ከሆነ እንዲመረመሩ ያደረገዎ ምንድን ነው (ዝርዝሩን አያንቡት፤ የምታውቀውን እንድትናገር ያድርጉ)	1. በራስ ተነሳሽነት 2. በጤና ባለሙያ አነሳሽነት 3. በጓደኛ አነሳሽነት 4. የተመረመረ ሰው ስለማውቅ 5. ሌላ ካለ ይገለጽ----------		
704	ለጥያቄ ቁጥር 701 መልስዎ አዎ ከሆነ የምርመራ ውጤተዎን ሊነግሩኝ ፈቃደኛነዎት?	1. አዎ 2. አይደለሁም		
705	ለጥያቄ ቁጥር 704 መልስዎ አዎ ከሆነ ውጤቱ ምን ነበር?	1 .ፖዜቲቭ 2.ኔጌቲቭ		
706	ለጥያቄ ቁጥር 704 መልስዎ ፖዜቲቭ ከሆነ ምን አይነት የህክምና አገልግሎት ተሰጠዎት ?	1. ክራዮቴራፒ 2. ወደ ሆስፒታል ሪፈር 3 .ምንም አይነት የህክምናአገልግሎት አልተሰጠኝም		
707	ለጥያቄ ቁጥር 701 መልሰዎ አላውቅም ከሆነ ምክንያቱ ምንድን ነበር ?	1. ምርመራው ያመኘኛል ብየ ስላሰብኩ 2 . ጤነኛ ነኝ 3. ባለቤቴ ፈቃደኛ አይደለም		

		4.የማህጸን ነቀርሳ አለብሽ ቢሉኝ ስለምፈራ 5.ስለማህጸን ጫፍ ነቀርሳ ምርመራ መረጃው የለኝም 6 የጤና ባለሙያ ስላላዘዘልኝ 7 ሌላካለ ይገለጽ.....		

ጊዜዎን ስለሰጡን ከልብ እናመሰግናለን!!

THE END