COLLEGE OF MEDICINE AND HEALTH SCIENCE;

DEPARTMENT OF PUBLIC HEALTH

CERVICAL CANCER SCREENING UTILIZATION AND ASSOCIATED FACTOR AMONG WOMEN OF 30-65 AGE BUTAJIRA CITY, SNNPR,ETHIOPIA

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ABSTRACT

Background: - One of the greatest dangers to women's lives is cervical cancer. Nearly 1.5 million cases of cervical cancer with a clinical diagnosis exist worldwide. 85 percent of these are found in underdeveloped nations like Ethiopia. The majority of the women have neither received a diagnosis nor do they have access to any treatments that might help them get better or live longer. The prevention, early diagnosis, and treatment of cervical cancer can all be greatly aided by increased public and individual awareness. Since the cervical cancer screening Butajira city is not clearly known, the current study aimed to evaluate the use of cervical cancer screening and related factors.

Objective: The study's goal was to evaluate the cervical cancer screening service utilization among women of 30-65 years of age and associated risk factors in Butajira city, Gurage Zone, South Ethiopia in 2023.

Methods: Community based cross sectional study was carried out on 442 women of 30-65 age. The women were interviewed at household level by trained data collectors. Data was entered into SPSS version 21 for analysis. Frequencies, proportions and summary statistics were used to describe the study population in relation to relevant variables. Variables which had p-value less than 0.25 in bivariate analysis were considered as candidate for multivariable logistic regression model. P-value <0.05 were used as a cutoff point to determine statistical significance in multiple logistic regressions for the final model. Written and verbal consent was gained from concerned bodies

.**Results:** Of the 442 women, only 30.1% were screened for cervical cancer.Multipara mothers were 4.8 times more likely to utilize cervical cancer screening service than primiparas. For women who had negative partner support has 1.74 times not to be screened than positive support.

Conclusions; This study showed there is still low rate of screening for premalignant cervical lesions. The analysis shows that low screening rate had low educational level, negative partner support, and prim parity.

Recommendation: Governmental and non-governmental organizations: Emphasis on female education. Health centers and clinics should focus on accessibility of permanent screening time

the government should play its part by increasing health care budgets and put priority on screening practice for researchers and healthcare providers such as general practitioners and nurses need to do their part in promoting cervical cancer screening.

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Abbreviations	Definition
CA	Cancer
CC	Cervical Cancer
DNA	Deoxyribo-Nucleic Acids
EDHS	Ethiopia Demographic Health Survey
FGAE	Family Guidance Associations Ethiopia
FMOH	Federal Ministry of Health
HPV	Human papilloma virus
PAP	Papanicolau
PI	Principal investigator
SSA	Sub-Saharan Africa

Chapter One: Introduction

Background

Cervical cancer is a malignant tumor of the cervical region that is the fourth most prevalent malignancy globally (1), is one of the leading causes of cancer-related mortality in Ethiopia. Paradoxically Cervical cancer is both preventable and, in most cases, treatable if found in its early stages.(2) Vaginal bleeding, contact bleeding, or (rarely) a vaginal lump may indicate the existence of malignancy when the cancer has advanced stages. In industrialized countries, its frequency has decreased by more than 70% over the past 50 years, but the burden seems to be growing in less developed countries. Between 2012 and 2016, it is expected that the number of cases of cervical cancer in developing countries would rise from 444,546 to 588,922 (3).

Although early detection and awareness of cervical cancer may reduce the mortality rate linked with it, most women who report to the hospital have an advanced stage of the disease. And even while cervical cancer incidence and mortality have decreased over the past 20 years in developed nations, the same important indicators have not changed significantly in low resource settings.(4,5,6).The Cervical Cancer Crisis Card 2013 reports that there are 500,000 new occurrences of cervical cancer worldwide, and that it kills an estimated 275,000 women annually. The majority of women who die from this wholly preventable disease do so in their prime years, making it the second most common cancer killer of women in low- and middle-income nations. Mortality rates demonstrate this (7).

However, cervical cancer is quickly detectable and treatable when caught early. Unfortunately, only 5% of women in developing nations receive cervical cancer screenings, compared to over 40% in industrialized nations and 70% or higher in nations where the incidence and prevalence of cervical cancer have significantly decreased. Therefore, it is not unexpected that the majority of women in Africa, where screening rates are quite poor, present at advanced stages of invasive disease. (8) The lack of routine cervical cancer screening and follow-up of anomalies is frequently linked to the rising incidence of cervical cancer.(9,10) Previous research also demonstrated a reduction in the incidence of cervical cancer with regular participation in cancer screening and follow-up(7,11 and 12).

A cross-sectional study conducted in 2009 showed that the uptake of cervical cancer screening has remained very low while the mortality and morbidity associated with cervical cancer has remained high (13, 14, and15). On the uptake of Pap smears, there has been no significant increase in the number of Pap smears for the past ten years, as it has constantly ranged from 350,000 to 400,000. The coverage of the Pap smear screening program in 1996 was only 26%(15–17).

Given the current situation in Malaysia, this study was conducted to determine the perceived susceptibility to cervical cancer (16). Cervical cancer is the most frequent form and leading cause of cancer mortality among Ethiopian women, which account with an overall mortality of 70 %.(17). Cervical cancer is often at an advanced stage by the time they seek screening services. Records show that of the nearly 22 million Ethiopian women over the age of 19, approximately 7,600 are diagnosed with cervical cancer and roughly 6,000 women die of the disease each year(18,19) .Even though cervical cancer screening is proven to reduce cervical cancer incidence, many factors influence the screening uptake among women.

Factors such as poor awareness of the benefits of the Pap smear test, lack of knowledge about cervical cancer and its risk factors, fear of being embarrassed by health care workers, fear of pain and fear of getting a positive result, have become major hindering factors in cervical cancer screening(7,18,20).Over the year's awareness and uptake of cervical cancer screening services has remained poor despite all the studies on cervical cancer screening. Various studies indicate that cervical cancer screening services is poorly utilized and the awareness of the need for it is very low but can be treated if detected early(19,20). Problems associated with cervical cancer incidence include late reporting, ignorance and cultural issues relating to cervical cancer screening. The barriers identified by were "ignorance about cervical cancer, cultural constraint/beliefs about illness, economic factors, domestic gender power relations, alternative authoritative sources of reproductive health knowledge and unfriendly health care services". (21)

Women in developing countries like Ethiopia seem to utilize reproductive health services more during pregnancy. They also use reproductive health services for post natal checkup and family planning or when faced with various gynecological problems. It is important to ensure that these women are screened in order reduce incidence of cervical cancer. Their visit to the clinics provides opportunity to give them information on the importance of the screening and where to

get the services. The researchers observed that many women attending various health facilities have not been screened. Thus the need to identify the factors influencing utilization of cervical screening services among women of Butajira city, south Ethiopia.

1.2. Statement of the problem

According to the Cervical Cancer Crisis Card 2013, cervical cancer kills an estimated of 275,000 women every year and 500,000 new cases are reported worldwide. This entirely preventable disease is the second largest cancer killer of women in low and middle-income countries, with most women dying in the prime of life. Mortality rates highlights that, Africa is the most affected region with highest rate of cervical cancer. According to data from the WHO, United Nations and the World Bank , Ethiopia ranked 20th next to Japan with mortality rate of 14 per 100,000 with a total death of 3,235 due to cervical cancer in 2013 (6,7). Every year in Ethiopia, between 60 to 81 women die from cervical cancer, and age at which women are dying seemed to be getting younger with the youngest between the age-group 20 to 24. Low level of awareness, lack of effective screening programs, overshadowed by other health priorities (such as AIDS, TB, malaria) and insufficient attention to women's health are the possible factors for the observed higher incidence rate of cervical cancer in the country(7,8). While numerous tools and technologies exist to prevent cervical cancer, these interventions remain largely inaccessible to girls and women who need them most. Despite the proven link between the Human Papillomavirus (HPV) and cervical cancer, HPV vaccines are not yet widely available and screening rates remain low in much of the world. Lack of awareness and deep seated stigma associated with the disease also pose significant barriers to access (7, 9). Projections show that by 2030, almost half a million women will die of cervical cancer, with over 98% of these deaths expected to occur in low and middle-income countries (9). If the world followed Australia's example of rolling out comprehensive vaccination, screening and treatment, we would see morbidity rates and the death rates dramatically reduce. For early screening of pre-cancers the Pap-smear (colonoscopy), visual inspection with acetic acid (VIA) and HPV testing can help to diagnose early cancerous cells (10)..

According to a research conducted in 2012, the main factors affecting the non- participation of women in cervical cancer screening is place of residency, age of 30-34, educational status, and occupation and the main reason for not attending the screening program in Butajira city are

reported being busy with other activities or having no time to go for screening, and not thinking one is at risk, and fear of receiving bad news are the main reason (14, 15).

Women in developing countries like Ethiopia seem to utilize reproductive health services more during pregnancy. They also use reproductive health services for post natal checkup and family planning or when faced with various gynecological problems(34). It is important to ensure that these women are screened in order reduce incidence of cervical cancer. Their visit to the clinics provides opportunity to give them information on the importance of the screening and where to get the services. The researchers observed that many women attending various health facilities have not been screened. Thus the need to identify the factors influencing utilization of cervical screening services among women of 30-65 age in Butajira city.

1.3. Significance of the study

Cervical cancer is one of the most common malignancies affecting women worldwide and a major public health problem facing women in Ethiopia .However little is known about the practice and factors associated with cervical cancer screening among women in Ethiopia. Therefore, understanding of the factors associated with underutilization of the cervical cancer screening among women is important in order to increase overall cancer screening rates.

The findings of this study inform policy to design targeted and tailored strategies to increase understanding of the factors associated with the utilization of the cervical cancer screening among reproductive age women and potentially increase cervical cancer screening uptake. At the end of the study recommendation will be given to the concerned bodies to fill the gaps based on the findings, it will also help as a base line for further researches.

Chapter two

Literature review

Screening for cervical cancer is the most preventive measure and the purpose of the screening is to detect the early pre-cancerous lesions and treat them before they can develop into invasive cervical cancer(22). Among all the cancers, cervical cancer is the only type that can be totally prevented if there is regular screening and treatment of its pre-cancerous lesions(11,23). Every woman should be screened at every opportunity of contact with a health professional, at postnatal clinics, STI clinics and gynecological clinics. For women who are sexually active, annual screening from age 18 to 35 years is advised; thereafter every 3 to 5 years, provided the test results remain negative(24).

In developed countries where resources are allocated to prevention initiatives, the prevalence and mortality of cervical cancer has fallen between 30% and 75%(17). However, the success of cervical cancer screening initiatives depend on high participation of the targeted group, which is also determined by the women's knowledge, perceptions, attitudes and other socio-cultural issues. Regular Pap smear testing has been utilized to identify cervical cancer at early stages, and have been shown to be effective in decreasing cervical cancer deaths(22). The success and effectiveness of an organized cancer screening program is largely dependent on obtaining high participation rates through effective recruitment and retention strategies. However, cervical cancer screening rates are consistently low among Asian women, both in Asian and Western countries.

In the United States, Asian Americans and Pacific Islanders have the lowest cervical screening rates among all ethnic groups(2). A study published in 2000 reported that compared with21% Asian women (28%) Chinese, 8% Japanese, 15% Filipino, 25% Korean, 36% Vietnamese, and 26% Asian Indians) never had a Pap test compared with only 5% of white women in the sample(18). Similar cervical cancer screening rates for Asian women have been reported in

countries such as Canada, UK and Australia(2,25). Many authors agree that a screening program is important in improving uptake; they strongly argue that other factors like knowledge; attitude of both women and health workers, socioeconomic, cultural beliefs and other supporting institutional factors like sufficient and trained staff supersedes just the availability of an organized screening program(10,26).

Analysis of data from a study conducted in Netherlands showed that women's beliefs about cervical cancer screening and attendance are the best predictors of uptake of the service, even when organizational aspects are taken into account(27,28). In countries like Chile, Colombia, Costa Rica, Cuba and Mexico which have been having organized screening programs in place, mortality due to cervical cancer has remained the same or even increased. The reasons for this were reported to be other underlying factors such as inadequate infrastructure, insufficient human resource and lack of education among the masses. The countries have had to go back on the drawing board to address some of those challenges(19,26).

In a cross-sectional study conducted among clinic attendees in Trelawney, Jamaica in 2007, 18% of women who had never had a Pap smear reported that it was not necessary as it would only increase a woman's anxiety if the results were found to be suggestive of cervical cancer. A survey in Thailand concluded that Asian women, in particular Thai women, believe that it is more beneficial to do Pap smears if one is married, compared to being unmarried(15,22) Several challenges face cervical cancer screening programs and help-seeking for cervical cancer in sub Saharan Africa. The majority of cervical screening programs are opportunistic and are faced with challenges including poor physical access to cervical screening facilities, low level or lack of knowledge about cervical cancer screening and its benefits (10), low level of self-perceived risk for cervical cancer, and understaffed and poorly equipped health facilities and long distances to screening facilities and high transport costs(29).Furthermore, inadequate training and few human resources that are poorly distributed affects effectiveness of cervical screening and management in developing nations(30).

Persistent stress related to challenging working environments with cancer patients often leads to burnout and poor quality of car(9) as well as low morale and distress to the healthcare professionals. Likewise, lack of knowledge, misconceptions about disease and lack of skills in management of a disease among health professionals may lead to suboptimal care(11).There are

limited data from operational healthcare providers on barriers and proposed remedies for cervical cancer care, yet the healthcare providers are well placed to contribute context specific strategies that can catalyze policies on cervical cancer early detection and control. Understanding of local factors influencing care is critical to design of targeted interventions to promote help seeking (31).

For Asian women, barriers to cancer screening utilization include cognitive barriers (knowledge about screening, understanding the purpose of the test, or benefits of testing for early detection), emotional barriers (fear/social stigma), economic barriers (time, taking time off work, insurance coverage), logistic barriers (lack of consistent physician, limited office hours, childcare, transportation, waiting times, language barriers) and social barriers (support of family and friends, support within the physician's office.(2,9) Socioeconomic disparities influenced participation, and women with lower educational levels and lower household income were less likely to be screened. Despite public health efforts, the rate of cervical cancer screening may not be uniform across groups with different socioeconomic status and socioeconomic disparities existed in cancer screening rates, and, in particular, global evidence suggested that the cervical cancer screening rate was influenced by socioeconomic factors as well as demographic factors such as race (17,23).

Studies in the United States and Korea also showed that socioeconomic disparities constant in cervical cancer screening participation, though there has been an improvement in overall screening rate(25,32). Previous studies have shown that individuals who believed they had risk factors for cervical cancer and perceived vulnerability to an illness were more likely to take action to prevent an adverse outcome subsequent to getting the disease(15). The perception that one is not at risk of cervical cancer has been verified in previous studies as a reason for not obtaining Pap smear tests(33). The importance of high perceived susceptibility will influence positive perception of the importance of preventive measures. In another cross-sectional survey of (2003), it was found that only 40.0% of participants had Pap smear tests and that the major barriers to obtaining Pap smear tests included inadequate knowledge about the benefits of Pap smear screening, insufficient information about the Pap smear screening procedure, provider's attitudes, and limited access to physicians(7,20).

As cross sectional study conducted in China in 2013 women who were willing to undergo screenings had higher knowledge levels. ‘‘Anxious feeling once the disease was diagnosed’’ (47.6%), ‘‘No symptoms/discomfort’’ (34.1%) and ‘‘Do not know the benefits of cervical cancer screening’’ (13.4%) were the top three reasons for refusing cervical cancer screening.

Women who were younger than 45 years old or who had lower incomes, positive family histories of cancer, secondary or higher levels of education, higher levels of knowledge and fewer barriers to screening were more willing to participate in cervical cancer screenings than women without these characteristics(34). A cross sectional study was conducted with a sample of 354 women aged 18 to 69 years of Tanzania in 2012 less than one quarter (22.6%) of the participants had obtained cervical cancer screening. The following characteristics, when examined separately in relation to the uptake of cervical cancer screening service, were significant: husband approval of cervical cancer screening, women's level of education, women's knowledge of cervical cancer and its prevention, women's concerns about embarrassment and pain of screening, women's preference for the sex of health provider, and women's awareness of and distance to cervical cancer screening services.

Knowledge of cervical cancer and its prevention and distance to the facility which provides cervical cancer screening were significantly associated with screening uptake.(35) The study conducted in UK and South Asia show that cultural beliefs and perceptions influence uptake of cervical cancer screening(23,36). The studies revealed that black minority ethnic groups in United Kingdom and South Asian women consider cervical cancer as being caused by promiscuity; therefore it is considered a taboo, or a just punishment from God. As a result of these beliefs, a big proportion of women shy away from screening because they do not want to be associated with such a disease that is considered a curse from God. Many other studies have also reported embarrassment when seen seeking care for cervical cancer, stigma, and lowered self-esteem when one receives a negative result(31,36). Also, a UK based study reported that women had fear of getting abnormal screening results because of worry associated with such results(6). The women claimed that abnormal results would have severe effect on day to day functioning leading to depressed mood, decreased libido and feeling of less attractive, tarnished, defiled or contaminated and dirty feelings.

Some cultural/religious belief such as Muslim women can only be seen naked by their husbands; who influenced their preference for female general practitioners especially for cervical smears. Also in this study, it was revealed that Pakistani Muslims were not comfortable attending to a doctor from the same cultural background they would only go along for a smear test if the doctor was not of the same cultural background for fear of being found out(31).

Additional studies that explored culture show that cultural gender roles and behaviors of women, may also affect the uptake of cervical cancer screening(9). The exploratory study was conducted in Uganda revealed that cervical cancer is being a condition affecting women's sexual and reproductive health was likely to be shrouded in silence since these are issues that are socially and culturally perceived to be private and cannot be openly discussed in public(11,17).

Therefore, women found difficulty in accessing information even when they experienced cervical cancer like symptoms .Other social gender roles and behaviors that hindered cervical cancer screening include inability to leave house-hold chores, pre-occupation with family problems and lack of approval from husbands(17) argues that, if women and communities were educated and understood the importance of having a cervical cancer screening, and the importance of further follow up, culture would not be a bigger hindrance since the results of her study showed that, women's general attitude was positive towards cervical cancer screening (9,18).Institutional factors have also been shown by different studies to be influencing uptake of cervical cancer screening.

According to International Agency for Research on cancer Organization (2003), uptake of screening is increased when the governments ensure that there is an organized screening program in place. Mortality due to cervical cancer reduced drastically in developed countries which had sustained organized screening program that were equipped with infrastructure, trained human resource, organized follow up and surveillance systems(20,25,37). A review of five qualitative studies that were conducted in Mexico, Peru and Ecuador showed that the main barriers to increasing uptake of cervical cancer included inaccessible and unavailability of high-quality health services, the lack of comfort and privacy in facilities, and unfriendly health worker(6,37) .The study conducted in Queensland Women described the bearers for screening participation is reminder factor and practitioner characteristics, particularly for women who did not attend screening(38).

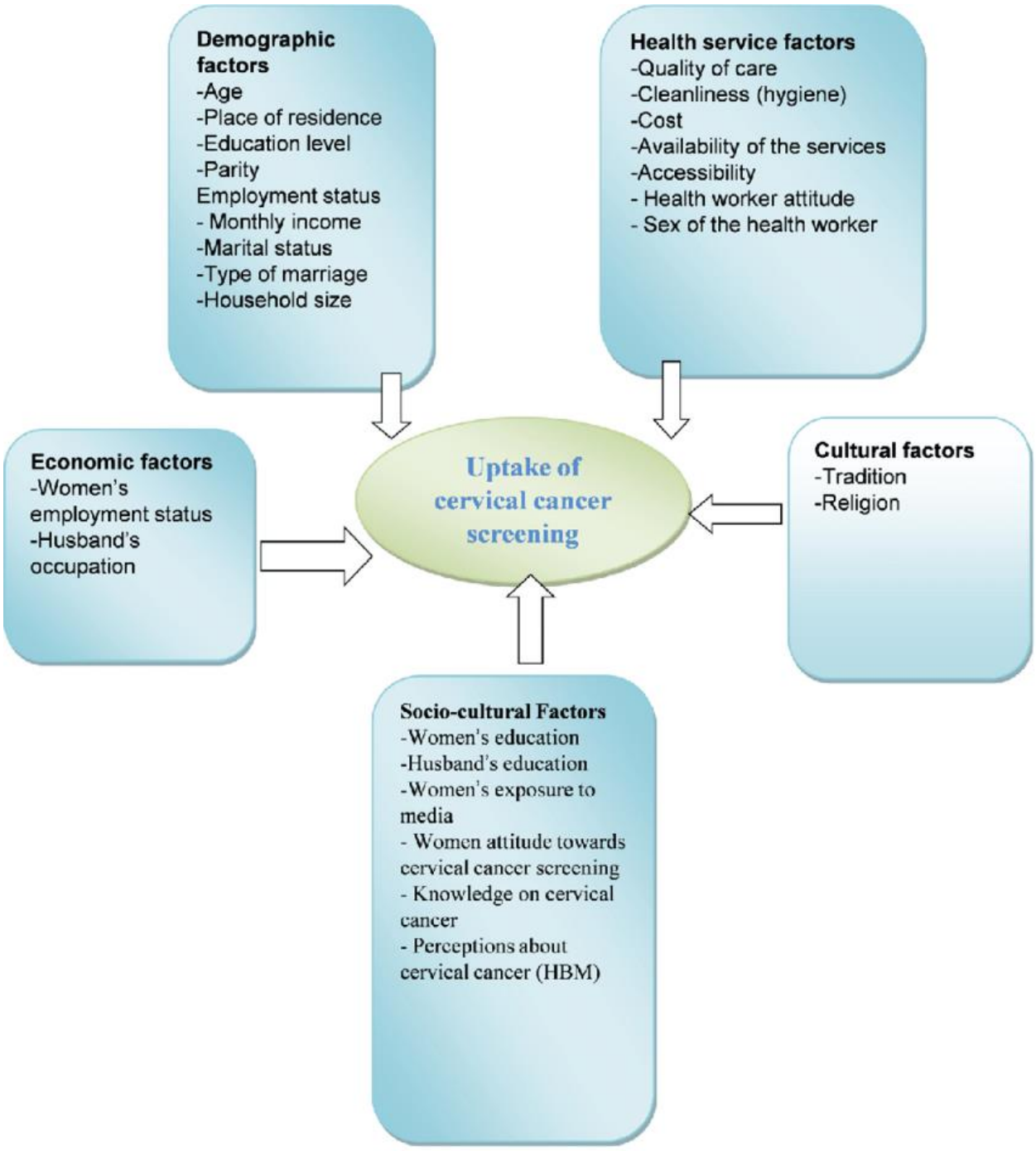

Figure 1 conceptual framework on cervical cancer screening and associated factors adopted from the internet

Chapter Three

Objective of the study

3.1. General Objective

The general objective of the study was to assess cervical cancer screening service utilization and associated factors among women of 30-65 ages in Butajira city, South Ethiopia, 2023 G.C.

3.2. Specific objectives

- To assess the cervical cancer screening service utilization among women of 30-65 years of age in Butajira city, south Ethiopia 2023.
- To identify factors affecting cervical cancer screening service utilization among women of 30-65 age in Butajira city, south Ethiopia 2023.

Chapter Four

Methods and Materials

4.1. Study area and Period

The study was conducted from June 20 to august 5, 2023 in Butajira city .The city is 109 km far from Addis Ababa (south west), 117 km from Hawassa and 107.8 km far from the Wolkite Town.

The altitude of the Butajira city is 2131 m above sea level and the average temperature is 24 c°. According to Butajira health center, the city has five kebeles which are kebele 01, kebele 02,kebele 03,kebele 04 and 05 and the total population of Butajira city is 114,156 from this, 57,468 are males' and 56,688 are females. Among this 21,458 are females of 30-65 years of age.

4.2. Study Design

Community based cross-sectional study was conducted from June 20 – August 5 among women 30-65 age in Butajira city, South Ethiopia

4.3Source population

All women of 30-65 age found in Butajira city

4.4. Study population

All selected women of 30-65 ages who lives in the selected kebele of Butajira city

4.5. Study unit

Women of 30-65 ages were our study unit.

4.6 Eligibility Criteria

4.6.1. Inclusion criteria

All women of 30-65 years of age and willing to participate in the study were included in this specific study. Moreover, women's who fulfill the criteria of study subject took a part.

4.6.2 Exclusion criteria

Those who were critically ill during data collection period and unable to communicate were excluded from this study.

4.7 Sampling method and sampling technique

4.7.1. Sample size

The appropriate sample size was calculated using single proportion formula based on 95% confidence interval and P=15.5%, taken from the study conducted in Jimma(which revealed the prevalence of cervical cancer screening utilization was 15.5%)(39) .At the marginal error of 5%.

Sample size was calculated using single proportion formula.

$n = 1.96^2 [(p (1 – p)]/0.05^2$

Where

n = the required sample size

Z = the critical value associated with the level of significance

P = the estimated prevalence cervical cancer screening (19.8)

d = degree of precision chosen for the study i.e. 0.05 degree of precision

$n = 1.96^2 [(0.155 (1 – 0.155)]/0.05^2$

n= 3.8416[0.155x 0.852]/0.0025

n=201

Add 10% non-respondent rate which is equal to 10/100*201=20

Total sample is 201+20= 221

n=221

But in order to compensate the randomness of the cluster sampling, we have doubled the sample size to 442.

4.8 Sampling Procedures

A Cluster sampling was used to select a single kebele out of the five kebeles randomly which is Kebele 01 and individual samples were selected from the selected kebele.

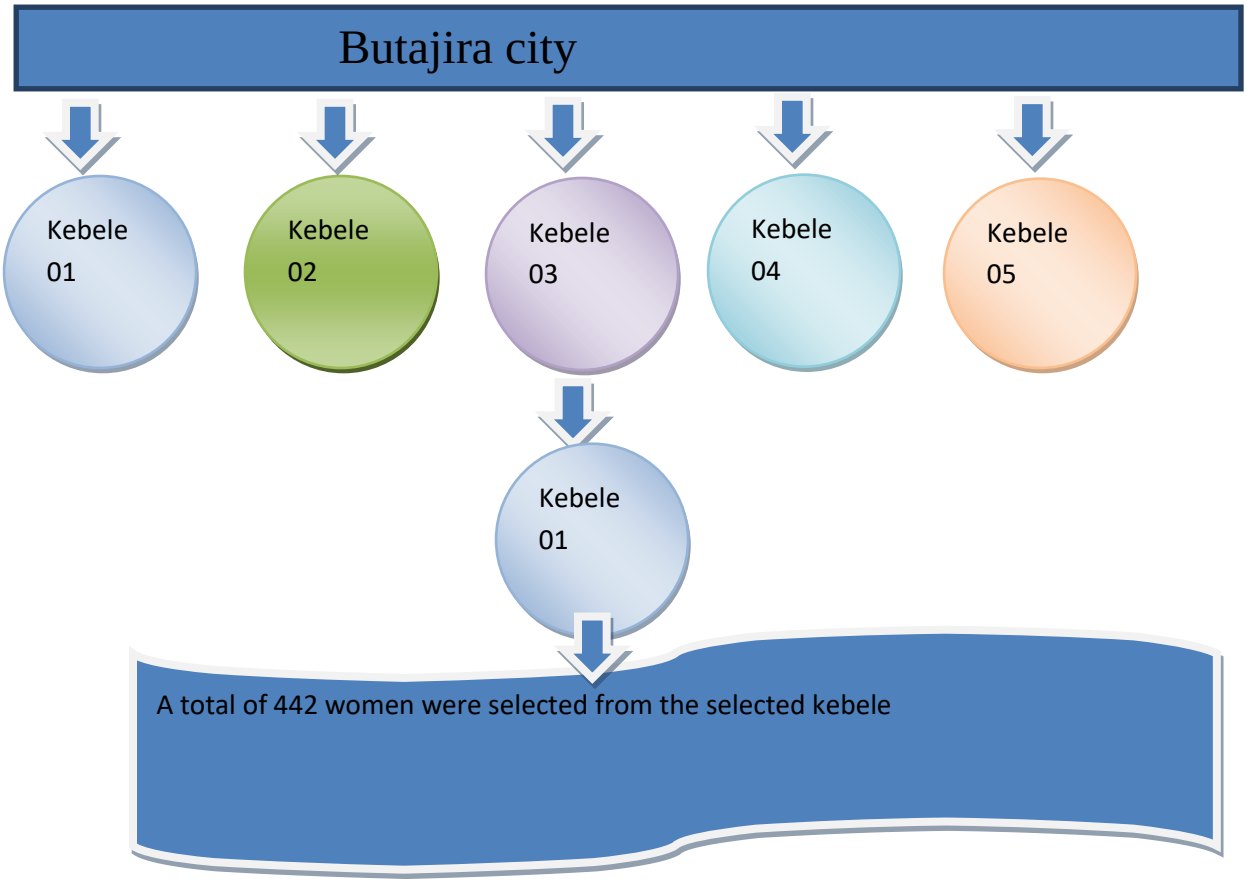

Figure 2 a diagram showing the sampling method

4.9 Data collection tools and Measurement

Data collection tools were developed and adapted after review of various relevant literatures. Study questionnaire for each item were adapted from previously conducted similar study (32) and were modified to the local context. The instrument contains five parts: starting from socio demographic status of the clients (10 items), (Cervical cancer knowledge (10 items), cervical cancer attitude(10 items) and social factors (three items) and cervical cancer screening practice, reminder and health system related factors were included. a combination of response formats of multiple responses and 'Yes and No' 'assuming score of 'yes'=1, or 'No' =0 and for every correct item there was a reversed incorrect item . all of which eliciting responses on a five-point

Liker's scale format ranging from 'strongly disagree' to 'strongly agree' was included. Each of the responses were scored: strongly disagree'=1, 'disagree'=2,'undeciced/not sure'=3,'agree'=4 and 'strongly agree'=5.After reversed for negatively worded items to positively worded items, score will be summed up for each respective factors and construct validity was ensured.

4.10. Data collection procedure

The data were collected by using semi- structured questionnaires. It is collected in Amharic language in face to face interview during the study.As well as the ethical considerations to minimize information bias. After an explanation of the purpose of the study and obtaining written and oral consent from the study participants the data collection were started and the data collectors introduced themselves to the participants and underscore that their participation were voluntary and that they would not be victimized in any way. Confidentiality was strictly assured by ensuring that their names did not appear anywhere in the questionnaire. The interview questioner were prepared by English and translated to Amharic for those proficient by both languages then back to English for analysis purpose. Last but not least, the data collectors were trained before actual data collection period.

4.11Study variables

4.11.1 Dependents variables

Cervical Cancer Screening service Utilization

4.11.2. Independents variables

1) Socio demographics

- ✓ Age
- ✓ parity
- ✓ Marital status
- ✓ Educational level
- ✓ Occupational
- ✓ Income

Individual factors

- ➢ Awareness/Knowledge about cervical cancers

- Attitude toward cervical cancers screening

Social factors

- Spouse support
- Family related factors
- Peer pressure

Health system factors

- Cost
- Accessibility
- Perception of client on Provider's attitude about screening,
- Provider gender (Being Woman)

Remainder factor

- Mass media (Newspaper, magazine, etc)
- Cervical cancer screening post card
- Illness of family member

4.12 Operational definition and Measurements

- **Cervical Cancer Screening Utilization:** those who ever had got a test in a life time were considered as having screening practice and those who never screened was regarded as having no screening practice. In our research this variable measured by one items with 'Yes' scored '1' and 'no scored '0''answer question. Thus, the highest score was 1and the minimum score is 0. The scores from 0-1 was considered a dichotomous variables; and those scored 1 is considered as having cervical CCA practicing or otherwise they were considered as not having cervical CA practicing.
- **Knowledge**: The knowledge of cancer of the cervix and screening for premalignant cervical lesion were assessed using a 10 points scale. Each correct response was given a score as 1 and a wrong response score of zero. The Study participants' cervical cancer/screening knowledge scores were converted into a dichotomous categorical variable of knowledge levels using above and below average (mean) knowledge scores.

- **Poor Knowledge** refers to for those scored below the mean.
- **Knowledge** refers to for those scored below the mean.
- **Attitude toward CCA (cervical Ca screening):** the belief and feeling of the respondents about screening for premalignant cervical lesions. It measured by Likert scale with the score of 1 to5.
- **Favorable attitude**: - refers to for those scored the mean (average) and above
- **Non-favorable attitude**: - refers to for those scored below the mean.
- **Social support:** support and advice from partner, family and friends were reported as important factors that encouraged compliance and participation in recommended cervical CA screening programs among the participants. These were measured by using Liker's scale with a total of 5 items.
- **Health system factors**- assessed by yes/no items. Cost, lack of accessibility of services, and waiting time for care captured the structural characteristics of the health care system that may affect screening intention. A single item-question with a yes/no response was used to assess women's perceptions about the influence of these health care system factors on screening.
- **Cost of screening.** The financial constraints imposed by user payments may negatively affect participants' attitudes towards screening. Indirect costs such as outpatient cards and transportation fees shall be considered as additional barriers. Each correct response was given a score of 1 and wrong responses a score of zero if the respondent answer yes this problem affecting this service.
- **\Client perception on Attitudes of health professionals/Approach:** was the attitude that health professionals have toward CCA screening practice. This item-question with a yes/no Each correct response was given a score of 1 and a wrong response a score of zero (0)if the respondent answer yes this problem was affecting this crevice but no (0) answer not affecting this carves.
- **Reminder factor**: - remainder factor for this study focused on the facilitator factors to CCA screening test. This includes Mass media, Reminder post card, illness of family member or Friend, Newspaper, magazine article and others.
- **Reminder postcards-** such as postcards to remind client's memories to come to health institution for cervical screening check-up.

4.13 Data processing and analysis

Each questionnaire were checked for completeness, missed values and unlikely responses and then manually cleaned up on such indications before analysis. Data was coded and checked for consistency and accuracy, and after clearing exported to SPSS version 21 for statistical analysis. Frequency, percentages, proportions, measures of central tendency and dispersions, tables and charts were used to show the descriptive part of the finding. Multivariable logistic regression were used to assess the relative effect of independent variables on the dependent variable to control the possible confounders and to select significant predictors of utilization of cervical cancer screening that was included in the final model.

4.14 Data Quality Assurance/control

Regular check-up for completeness and consistency of the data were made on daily basis. Training was given for data collectors on the purpose of study and procedures of data collection prior to actual study carried out. The issue of confidentiality and privacy were stressed in much depth during the training session. Pre-testing was conducted prior to data collection process and appropriate modifications were made after reviewing the pre-test result and overall supervision was made by our advisers.

4.15. Ethical consideration

All respondents were asked for their willingness of participation in the study and written and verbal consent were obtained from respondents for issues of confidentiality. Questionnaire was labeled with ID number in order to keep its confidentiality. Names of interviewees were not used at any stage of the data collection process. Pre-determined identification numbers were used on data collection form.

4.16 Dissemination of the plan

The finding of the study will be disseminated to Wolkite University, college of medicine and health science, department of public health and to relevant stakeholders and effort will be made to make presentations on appropriate forums and get published upon well recognized scientific journal.

CHAPTER FIVE – RESULTS

5.1. Socio-demographic and Economic Characteristics

The total number of women included in this study were 442; making the response rate of 100%.. Majority of the women were multiparas 367(83.0%) and 121(27.4%) of them were women of 55-59 age. And also 78(17.6%) of them didn't have formal education. Majority of the study participants were Gurage 286(64.7%) in ethnicity and Muslims 185(41.9%) in religion and also 118(26.7%) were house wife in Occupation .The mean age was 46.6 with standard deviation of 10.027 and the minimum age was 30 and the maximum age was 65.

Table 1 the socio demographic data of the respondents

Characteristics		Frequency (N)	Percent (%)
Age	30-34	38	8.6
	35-39	49	11.1
	40-44	33	7.5
	45-49	38	8.6
	50-54	115	25.6
	55-59	121	27.4
	60-65	50	11.3
Parity	Deliver once	75	17
	Deliver two and above	367	83
Marital status	Married	406	91.9
	Single	20	20
	Widowed	6	6
	Divorced	10	2.3
Educational level	Can't read and write	78	17.6
	Elementary	132	29.9
	high school	108	24.4
	TVT(collage)	75	17
	University	49	11.1
Religion	Orthodox	159	36
	Muslim	184	41.6
	Protestant	66	14.9
	Catholic	32	7.2
	Others	1	0.2
Ethnicity	Gurage	286	64.7
	Amhara	87	19.7
	Oromo	40	9
	Tigray	13	2,9
	Other	16	3.6
Occupation	House wife	118	53.8

	Farmer	71	20.6
	Private employee	110	5.4
	Government employee	57	12.9
	Daily laborer	31	7
	Merchant	1	0.2
Monthly Income	<1000	133	30.1
	1000-2000	112	25.3
	2000-3000	112	25.3
	3000-5000	38	8.6
	>5000	47	10.6
Monthly expenditure	<500	133	30.1
	500-1500	134	30.3
	1500-3000	99	22.4
	3100-5000	42	9.5
	>5000	34	7.7

5.2 Factors affecting cervical cancer screening

5.2.1 Knowledge of respondents on cervical cancer screening

Respondents were asked about their Knowledge towards screening for cervical cancer and 176 (39.8%) of the respondents had poor Knowledge towards screening for premalignant cervical lesion. The mean knowledge score was Mean 4.2 the minimum knowledge score was 0and maximum score was 10.

Table 2 showing the proportion of women having knowledge on cervical cancer

Variable knowledge		Frequency	Percent (%)
Knowledge on cervical cancer	poor Knowledge	176	39.8%
	Knowledgeable	266	60.2%

5.2.2 Attitude of respondents on cervical cancer screening:

Almost half of the respondents 222(50.2%) had favorable attitude and the rest 220(49.8%) had unfavorable attitude towards cervical cancer. The mean value for the attitude of the respondent was 21.5 with minimum scored value of 12 and maximum value of 37.

Table 3 distribution scores of attitude of the respondents towards cervical cancer

Variable		Frequency(N)	Percent (%)
Attitude of respondents on cervical cancer screening	negative Attitude	220	49.8%
	positive Attitude	222	50.2%

5.2.3 Prevalence of cervical cancer screening utilizations

Out of 442 women participated only 133 of them ever screened for cervical cancer, the rest have never screened

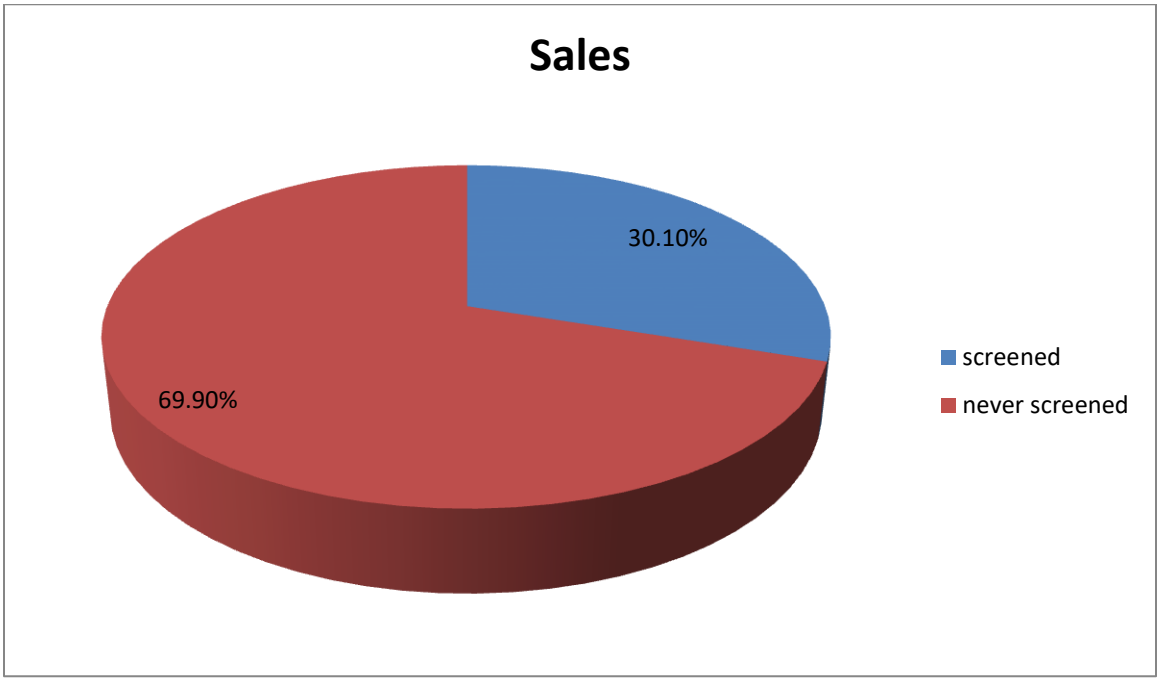

Figure 3 cervical cancer service utilization among 30-65 years of ages in Butajira city

5.3.3 Social factor

Majority of the respondents Disagree on family support which is 223(50.5%) followed by Disagree on partner support 221(50%).

Table 4 social factors of the respondents on cervical cancer screening service utilization in Butajira city

Variable Social factor		Frequency(N)	Percent (%)
My partner have recommended to screening	Strongly disagree	139	31.4
	Disagree	221	50
	Not sure	33	7.5
	Agree	32	7.2
	Strongly agree	17	3.8
My family have advised me to go doctors	Strongly disagree	132	29.9
	Disagree	223	50.5
	Not sure	27	6.1
	Agree	33	7.5
	Strongly agree	27	6.1
My friends have talked to me about the importance of getting	Strongly disagree	217	49.1
	Disagree	114	25.8

checked for cancer	Not sure	27	6.1
	Agree	54	12.2
	Strongly agree	30	6.8

5.3.4 Reminder factors/ Cues to action

Among the reasons for screening of cervical cancer in mothers were from Nurses or doctors accounting about 38(8.6%) of women and health extensions about 23(6.9%).

Majority of the respond said the best to reach women with cervical cancer is health facilities 202 followed by at health facilities 71 (32.1%).

Table 5 reminder factor towards cervical cancer screening service utilization in Butajira city, Ethiopia 2023 G.C

Variables		Frequency(N)	Percent (%)
Reminder Factors	Family members	13	3
	Illness of family member or friend	14	3.16
	Friends	18	5.4
	Nurses/doctors	38	8.6
	Radio/TV	11	2.5
	Reminder post card	4	0.9
	Magazine/newspaper	12	3.6
	Health extension workers	23	6.9

5.3.5 Health system factor of respondents on cervical cancer screening

The reason behind not utilize CCA screening were 334 (77.6%) lack of female screeners, not suggested by health workers (59.3%),and lack of designated rooms for screening purposes.

Table 6 health system factor on cervical cancer screening service utilization

Reasons for not utilizing the CCA screening		Frequency	Percent (%)
a) Not suggested by the health care workers	Yes	180	40.7
	No	262	59.3
b) Lack of female screeners at the health facility	Yes	343	77.6
	No	99	22.4
c) poor Provider's attitude about screening, on client	Yes	262	43.9
	No	180	56.1
d) Lack of convenient and long Waiting	Yes	194	59.3

time of clinic time	No	248	40.7
e) Lack of designated rooms for screening at health facility (privacy)	Yes	208	47.1
	No	234	52.8
f) Not offered at the nearest health facility	Yes	89	20.1
	No	353	79.9
j) Long distances to a health facility	Yes	194	43.9
	No	248	56.1

5.4 Bivariate analysis

Association between socio-demographic characteristics and cervical cancer screening that, religion, marital status, and ethnicity were not associated with cervical cancer screening. In bivariate analysis age, parity, incomes were significantly associated with cervical cancer screening of the respondents and were a candidate for multivariate analysis.

Association between Cervical Cancer Screening with health institution factor according to health institution factor like poor providers attitude and facility not offered to screening is significantly associated..

Regarding of social factor partner support of cervical cancer screening utilization significantly associated towards cervical cancer screening utilization.

Table 7 bivariate analysis for cervical cancer screening service utilization and associated factors

Variables	Categories	Cervical cancer screening utilization		Crude odd ratio
		YES (%)	NO (%)	
Age	30-34	8(6%)	30(9.7%)	1
	35-39	11(8.3%)	38(12.3%)	1.200(.369-3.903)
	40-44	6(4.5%)	32(10.4%)	1.422(.441-4.582)
	45-49	6(4.5%)	32(10.4%)	.418(.176-.995)
	50-54	44(33.1%)	69(22.3%)	.418(.176-.995)
	55-59	47(35.3%)	45(35.3%)	.420(.177-.994)
	60-65	11(8.3%)	39(12.6%)	.945(.338-2.642)
Parity	Primiparas	44(33.1%)	89(66.9%)	1
	Multipara	31(10%)	278(90%)	4.433(2.645-7.441)
Income	<500	52(39.1%)	81(26.2%)	1
	1000-2000	32(24.1%)	80(25.9%)	1.605(.937-2.748)
	2000-3000	26(19.5%)	86(27.8%)	2.123(1.213-3.718)
	3000-5000	10(2.5%)	28(9.1%)	1.798(.806-4.007)
	>5000	13(9.8%)	34(11.0%)	1.679(.811-3.477)

Respondent attitude toward screening	Non-favorable	80(60.6%)	142(46%)	.553(.365-.837)
	Favorable	52(39.4%)	167(54%)	1
Partner support	Negative support	91(68.4%)	171(55.5%)	1.736(1.130-2.666)
	Positive support	42(31.6%)	137(44.5%)	1
Poor approach of health workers	Yes	91(68.4%)	171(55.3%)	1.749(1.139-2.685)
	No	42(31.6%)	138(44.7%)	1

5.5 multivariable analyses

Multivariable Logistic regression analysis was also performed to examine the association between cervical cancer screening utilization and certain variables. In bivariate logistic regression, analysis, age, parity, Income, attitude towards the subject and partner support and poor providers approach were significantly associated with the study towards cervical cancer screening. Most importantly, in multivariate analysis indicated parity was significantly associated with the respondent's cervical cancer screening utilization. A woman who delivered twice and above has 4.8 times more likely to use the cervical cancer screening service a woman who has delivered only once. And women who earn more than ETB 2000.00 are twice more likely to utilize the cervical cancer screening service than women who have less than ETB 500 as an income. Regarding social factor a women who have positive partner support has 1.74 times to be screened than negative support.

Table 8 Multivariate analysis for cervical cancer screening service utilization

Variables	Categories	CCA Utilization		COR	AOR	P – value
		Yes (%)	No (%)			
Age	30-34	8(6%)	30(9.7%)	1	1	**0.009**
	35-39	11(8.3%)	38(12.3%)	1.200(.369-3.903)	.371(.114-1.210)	
	40-44	6(4.5%)	32(10.4%)	1.422(.441-4.582)	.401(.103-1.560)	
	45-49	6(4.5%)	32(10.4%)	.418(.176-.995)	.780(.209-2.909)	
	50-54	44(33.1%)	69(22.3%)	.418(.176-.995)	.336(.121-.932)	
	55-59	47(35.3%)	45(35.3%)	.420(.177-.994)	.258(.093-.711)	

	60-65	11(8.3%)	39(12.6%)	.945(.338-2.642)	.630(.182-2.175)	
Parity	Primipara	44(33.1%)	89(66.9%)	1	1	**0.000**
	Multipara	31(10%)	278(90%)	4.433(2.645-7.441)	4.838(2.619-8.938)	
Income	<500	52(39.1%)	81(26.2%)	1	1	**0.003**
	1000-2000	32(24.1%)	80(25.9%)	1.605(.937-2.748)	1.437(.774-2.668)	
	2000-3000	26(19.5%)	86(27.8%)	2.123(1.213-3.718)	2.750(1.405-5.381)	
	3000-5000	10(2.5%)	28(9.1%)	1.798(.806-4.007)	2.244(.861-5.850)	
	>5000	13(9.8%)	34(11.0%)	1.679(.811-3.477)	2.834(1.130-7.105)	
	Favorable	52(39.4%)	167(54%)	.553(.365-.837)	.605(.370-.991)	
Partner support	Yes	91(68.4%)	171(55.3%)	1.749(1.139-2.685)	1.745(1.071-2.842)	**0.025**
	No	42(31.6%)	138(44.7%)	1	1	

CHAPTER SIX- DISCUSSION

Prevalence of cervical cancer screening utilization in the study area was 30.1% which was relatively higher than the study done in Tanzania in which 22.6% (33) of the respondents were screened for cervical cancer). In contrast, a study conducted in Asia showed that about 89% of the women were screened for cervical cancer (2, 8). This dispersion may be due to low educational status of and low access for health care for African women.

In addition, the study conducted in Korean women's is very high (58.5%) compared to this study. This may be due to the difference in economic status (4). Similarly a cross-sectional study conducted among clinic attendees in Trelawney, Jamaica in 2007, revealed that majority (82%) of women were screened for cervical cancer. This might be due to the poor visibility and accessibility of the services in this resources limited country.

A review of five qualitative studies that were conducted in Mexico, Peru and Ecuador showed that the main barriers to increasing uptake of cervical cancer include inaccessible and unavailability of high-quality health services, the lack of comfort and privacy in facilities, and unfriendly health workers, but this factors are not significantly associated with prevalence of cervical cancer screening utilization in this study area(4, 7) This might be due to difference in study methods used and socio-cultural difference between the two country.

Also from the social factors, family support was found to have a statistical significant association with the screening practice. This is similar with a study done in Uganda in which spousal support were considered to be very important to women's ability to access services (38).

CHAPTER SEVEN

CONCLUSIONS AND RECOMMENDATIONS

7.1. Conclusion

This study showed that 30.1% of women of 30-65 age women in Butajira city utilize cervical cancer screening service and majority of them had good knowledge on cervical cancer. And almost half of the respondents had favorable attitude towards the subject. Also the practice of cervical cancer screening was generally associated with age, parity, income, attitude towards the subject and social factors like partner and family support.

7.2. Recommendations

Governmental and non-governmental organizations: Emphasis on female education. Efforts to promote cervical cancer screening among women should focus on informing that active and regular screening can detect the pre-cancerous stage, hence enabling early treatment and prevention of cancer development.

Health centers and clinics should focus on accessibility of permanent screening time and should create awareness regarding cervical cancer screening since screening services.

The government should play its part by increasing health care budgets and put priority on screening practice for researchers- to conduct further researches regarding this issue by using strong study designs like longitudinal studies.

For health provider: healthcare providers such as general practitioners and nurses need to do their part in promoting cervical cancer screening. They should disseminate information that focus on educating the women about cervical cancer risks, prevention and early detection to enhance uptake of screening practices

Strength of the study

- ✓ openly asking them about cervical cancer screening service utilization
- ✓ high response rate showing favorable environment for further studies
- ✓ we used primary data

Limitation of the study

- ➢ Social desirability bias since any reproductive health illness may associate with social discrimination and denial or other social issues
- ➢ Pre-testing of the questionnaires conducting in the same in community it may be led to information contamination

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$π$o$ι$ó$τ$$η$$τ$$α$ς $ζ$$ω$ής $α$$σ$$θ$$ε$$ν$ώ$ν$ $μ$$ε$ $κ$$α$$ρ$$κ$ί$ν$ο $τ$ο$υ$ $μ$$α$$σ$$τ$ού $α$$ρ$$χ$$ι$$κ$ώ$ν$ $σ$$τ$$α. To B$H$$M$$A$ ToY A$Σ$$K$$Λ$$H$$Π$$IOY$. 2010;9(1):76–99.

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Annex 1

Questionnaire (English version)

Informed Consent

Participant information sheet and consent form

My name is _____. I am here to study assessment of cervical cancer practices and associated factors among women attending on marry stop and FGEA model clinic.

You are selected to participate in this study. The information you provide will help to plan on prevention of cervical cancer lesion. The interview takes an average of 30 minutes to complete. Whatever information you provide was kept strictly confidential and will not be shown to other persons. Your name will not be written on this form, and will never be used in connection with any of the information you tell me. Participation in this survey is voluntary and you can choose not to answer any individual question or all of the questions. However, we hope that you will participate fully in this survey since your views are important

Are you willing to participate in th e study? Yes ____ No ____ Ok thanks

Yes may I begin the interview now? YES –Continue

Place of data collection: ----------

Date of data collection _____

Name of the data collector_____ Signature_____

I certify that I have filled this questionnaire in accordance with the training I was given and instructions stated in it. I confirm that the information in it is correct.

Name of Supervisor _____ Signature _____Date Checked

_____Questionnaire ID: _____ Date: ___/___/_____ Sub Location: _____

Part 1: demographic information

1. How old are you? _____

2. Parity (Number of previous deliveries)_____
   1, primi-Para 2, multipara
3. What is your marital status?

1) Single (never married) (2) Married (Living with partner
3) Married (separated) 4) Divorced

5) Widowed

4. What is your current educational status?

1) can,t read write 2) Elementary4. TVT (colleges)
3) highschool 5. University

5. Religion?

1) Orthodox 2) .Muslim
3) Catholic 4) Protestan
5).Other (specify)

6. What is your Ethnicity?

1. Gurage 2. amhara
3. oromo 4. Kebena
5. Other specify

7. Occupation

1. House wife 3. Private employee
2.. Farmer 4. Government employee
5. Daily laborer 6. Merchant
7. Others (specify)

8. Monthly income in birr_____

9. Monthly expenditure in birr_____

Part 2: Knowledge about cervical cancer

10. The following are the warning sign of cervical cancer. Please tick "yes", or "no" for all that Apply.

Question	YES	NO
a. Can cervical cancer is prevented	1	0
b. Can Vaccination with HPV vaccine prevent cervical CA	1	0
c. Can Routine Screening prevent cervical CA	1	0

d. Can Limiting the number of sexual partners prevent cervical CA	1	0
e. Can Not smoking and avoiding secondhand smoke prevent cervical CA	1	0
f. Can Using a condom if one is sexually active prevent cervical CA	1	0
g. Can Following up on abnormal screening results prevent cervical CA	1	0
h. do you know vaginal bleeding between menstrual periods could be sign Of cervical CA	1	0
i. do you know persistent lower back pain could be sign of cervical cancer	1	0
j. do you know persistent unpleasant vaginal discharge could be sign of Cervical cancer	1	0
k. do you know discomfort or pain during sex could be sign of cervical cancer	1	0
l. do you know menstrual period that is heavier and longer than usual could be sign of cervical cancer	1	0
m. do you know persistent diarrhea could be sign of cervical cancer	1	0
n. do you know vaginal bleeding during, before and after menopause could be sign of cervical cancer	1	0
o. do you know vaginal bleeding during or after sex could be sign of cervical cancer	1	0
p. do you know blood in the stool and urine could be sign of cervical cancer	1	0
q. do you know unexplained weight loss could be sign of cervical cancer	1	0

B. **Attitude toward CCA Utilization**

11. How strongly agree or disagree the following may increase woman chance of developing Cervical Cancer?

Thick that matches your choice of agreement from 1 to 5 or strongly disagrees to strongly agree continuum.

	Strongly Disagree	**Disagree**	**Note sure**	**agree**	**Strongly agree**
1) Smoking cigarettes	1	2	3	4	5
2) Having a weakened immune system	1	2	3	4	5
3) Long-term use of contraceptive pill	1	2	3	4	5
4) Infection with sexually transmitted infections	1	2	3	4	5
5) Having a sexual partner who is not circumcised	1	2	3	4	5
6) Starting to have sex at young age	1	2	3	4	5
7) Having many sexual partners	1	2	3	4	5
8) Having many children (>5)	1	2	3	4	5
9) Having a sexual partner with many previous sexual partners	1	2	3	4	5
10) Not going for regular cervical CA screening)	1	2	3	4	5
11) Good health practices can help to prevent cervical cancer.	1	2	3	4	5
12) Screening can detect treatable precancerous lesion before progress cancer.	1	2	3	4	5
13Cervical cancer develop slowly and preventable.	1	2	3	4	5
14 women's age 30and older are more likely develop cervical cancer than younger women	1	2	3	4	5
15Women in their 30s 40s old be screened at list once.	1	2	3	4	5
16) the screened procedure relatively simple quick and not pan full	1	2	3	4	5
17) the screened test that is positive not death	1	2	3	4	5

Part 3: social factor

12. Now, I am going to ask you some questions about your Social factors (Please circle one answer for each of the following questions)

	Strongly Disagree	**Disagree**	**Note sure**	**agree**	**Strongly agree**
My partner, have recommended for me to get checked for cancer.	1	2	3	4	5
My family have advised me to go to a doctor to check for cancer	1	2	3	4	5
My friends have talked to me about the importance of getting checked for cancer.	1	2	3	4	5

Part 4: Cervical Cancer screening practices

13. Have you ever heard of cervical cancer screening?
a) Yes 1 b) No 0

14. Have you ever been screened for cervical cancer? If yes skip to part three, if no to 12
a) Yes 1 b) No 0

15. Below are some of the reasons women do not go for screening. Select all that apply?

Question	Choice	
a) Little understanding of cervical cancer	1	0
b) Cervical cancer screening is painful	1	0
c) Not thinking that one is at risk	1	0
d) Fear of a vaginal exam	1	0
e) Not knowing where to go for screening	1	0
f) Lack of husband/partner approval	1	0
g) Not allowed by religion/culture	1	0

4.1. Reminder factors

16. How did you know and performing to you screened for cervical cancer lesion? Tick all that apply

a) Family members 1
b) Illness of family member or Friend 2 ,

c) Friends 3
d) Nurse 4
e) Doctor 5
f) Radio/TV 6
g) Reminder post card 7
h) Magazine / Newspaper 8
i) Health extension worker 9

17. The best place to reach women with cervical cancer screening messages?

a) Local women's groups
b) Places of worship (church/mosque) 2
c) Health facilities 3
d) At home) Markets 4

4.2 Health system factor

18. Below are some of the reasons women do not go for screening. Select all that apply?

Question	**choice**	
a) Not suggested by the health care workers	1	0
b) Lack of female screeners at the health facility	1	0
c) poor Provider's attitude about screening, on client	1	0
d) Lack of convenient and long Waiting time of clinic time	1	0
e) Lack of designated rooms for screening at health facility (privacy)	1	0
f) Not offered at the nearest health facility	1	0
j) Long distances to a health facility	1	0
K) The screening is expensive	1	0