WOLKITE UNIVERSITY

COLLEGE OF MEDICINE AND HEALTH SCIENCES

DEPARTMENT OF PUBLIC HEALTH

ASSESSMENT OF KNOWLEDGE, ATTITUDE AND PRACTICE towards CERVICAL CANCER SCREENING AMONG WOMEN ATTENDING ANC AT WUSTH, WOLKITE, ETHIOPIA 2023.

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ACRONYMS AND ABBREVATION

FMOH	Federal ministry of health
HIV	Human Immunodeficiency Virus
HR	High Risk
HPV	Human Papilloma Virus
LR	Low Risk
OPD	Out Patient Department
SNNPR	South nation, nationalities and people region
TASH	Tikur anbesa specialized hospital
WHO	World Health Origination
WKU	Wolkite university
WUSTH	Wolkite University specialized and teaching hospital

SUMMARY

Background:. The majority of cervical cancer related deaths occur in the developing world which is mainly the result of weak or non-existent cervical cancer control strategies. Cervical screening is the process of detecting and removing abnormal tissue or cells in the cervix before cervical cancer develops. By aiming to detect and treat cervical neoplasia early on, cervical screening aims at secondary prevention of cervical cancer.

OBJECTIVE: The objective of the study was to assess the knowledge, attitude and practices towards cervical screening among women attending ANC at WUSTH, Wolkite, SNNPR Ethiopia, 2023.

METHOD: An institution based cross-sectional study was conducted from June to August with total sample size of 255 participants to assess knowledge, attitude and practice towards cervical cancer screening among women attending ANC in WUSTH, Wolkite, SNNPR, Ethiopia 2023. The study participants was selected using Quta Sampling technique. Data was enterered, coded and analysed using Epi info.

RESULT

63.1% of the respondent know about presence of cervical cancer screening .from those the major source of information was television
104(40.8%),23(9%),10(3.9%),15(5.9%),4(1.6%),5(2%) were radio, health professional, cervical cancer patient ,friend or relatives ,others respectively

About 222(87.1%) of the respondent had believed early detection of cervical cancer, improve the chance of survival, . About 205(80.8%) of participants had planned for cervical cancer screening and 49(19.2%) were bad attitude about cervical cancer screening.11.8% of the respondent were screened for cervical cancer from those 5.9% of the respondent were age less than 18

conclusion

Knowledge and attitude of screening for cervical cancer are good in our study .however the practice women to undergo the screening was poor the main reason for low practice of screening was not knowing where to go to screen

recommendation

health education and awareness creation regarding cervical cancer should be created and implemented at public health facilities. Moreover, there is a need to disseminate cervical cancer screening information and offer cervical cancer treatment during health care appointment.

Table of Contents

Contents

List Tables

List of figure

1. Introduction

1.1. Background

Cancer is a general term used to refer to a condition in which the body's cells begin to grow and reproduce in an uncontrollable way. These cells can then invade and destroy healthy tissue, including organs. Cancer sometimes begins in one part of the body before spreading to other parts. Cancer is a group of more than 100 different diseases that are characterized by uncontrolled cellular growth, local tissue invasion, and distant metastases. It is now the leading cause of mortality in Americans younger than age 85 years(1).

Breast and cervical cancers are the leading cancers among women in developing countries, with estimated annual new cases of 882,900 and 444,500 respectively. More than 324,300 and 230,400 women die from these cancers every year, respectively (1). Cervical cancer is the most common gynecologic cancer in women. Most of these cancers stem from infection with the human papillomavirus, although other host factors affect neoplastic progression following initial infection. Compared with other gynecologic malignancies, cervical cancer develops in a younger population of women. Thus, screening for this neoplasia with Pap smear sampling typically begins in adolescence or young adulthood (1, 2).

Most early cancers are asymptomatic, whereas symptoms of advancing cervical cancer may include bleeding, watery discharge, and signs associated with venous, lymphatic, neural, or ureteral compression (3). Diagnosis of cervical cancer usually follows histologic evaluation of biopsies taken during colposcopic examination or biopsies from a grossly abnormal cervix (3,4).

This cancer is staged clinically. Treatment varies and is typically dictated by this staging. In general, early-stage disease is effectively eradicated surgically by either conization or radical hysterectomy. However, for those with advanced disease, chemoradiation is primarily selected (4). As expected, disease prognosis differs with tumor stage, and stage is the most important indicator of long-term survival.

Women with stage I disease typically have high survival and low recurrence rates, whereas those with advanced disease have a poorer long-term prognosis (2,4).

Prevention lies mainly in identifying and treating women with high-grade dysplasia. For this reason, regular Pap smear screening is recommended. It is hoped that the human papillomavirus (HPV) vaccines will prove effective in reducing the incidence of cervical cancer in the future (5).

Cervical cancer is common worldwide and ranks third among all malignancies for women. In 2008, an estimated 529,000 new cases were identified globally, and 275,000 deaths were recorded. In general, higher incidences are found in developing countries, and these countries contribute 85% of reported cases annually. Economically advantaged countries have significantly lower cervical cancer rates and add only 3.6% of new cancers. This incidence disparity highlights successes achieved by cervical cancer screening programs in which Pap smears are regularly obtained (6,8).

Within the United States, cervical cancer is the third most common gynecologic cancer and the 11th most common solid malignant neoplasm among women. In the United States, women have a 1 in 147 lifetime risk of developing this cancer (7). In 2011, the American Cancer Society estimated that there will be 12,710 new cases and 4290 deaths from this malignancy. Of U.S. women, African-Americans and women in lower socioeconomic groups have the highest age standardized death rates from this cancer, and Hispanic and Latino women have the highest incidence rates. This trend is thought to result mainly from financial and cultural characteristics affecting access to screening and treatment. The age at which cervical cancer develops is in general earlier than that for other gynecologic malignancies, and the median age at diagnosis is 48 years. In women aged 20 to 39 years, cervical cancer is the second leading cause of cancer deaths (6,10).

In addition to demographic risks, behavioral risks have also been linked with cervical malignancy. Most cervical cancers originate from cells infected with the human papillomavirus (HPV), which is sexually transmitted. Early coitarche, multiple sexual partners, and increased parity are associated with a substantially greater incidence of cervical cancer. In addition, smokers are at greater risk, although the mechanism underlying this risk in not known. The greatest risk for cervical cancer is the lack of regular Pap smear screening. Most communities that have adopted such screening have documented decreased incidences of this cancer (13,14).

1.2. Statement of the problem.

In developing countries, it accounts for about 85% of both its morbidity and mortality. According to the report from World health organization, globally in 2012, cervical cancer incidence was 7.9%, mortality 7.5% and five-year prevalence was 9%. In sub-Saharan Africa the incidence was 25.2%, mortality 23.2% and five-year prevalence was 27.6% (9).

In Ethiopia, cancer accounts for about 5.8% of total national mortality. Although population based data do not exist in the country except for Addis Ababa, it is estimated that the annual incidence of cancer is around 60,960 cases and the annual mortality is over 44,000. Although there is no national cancer registry in Ethiopia, reports from a retrospective review of biopsy results have shown that it is the most prevalent cancer among women. A study from Gondar indicated that among 243 cancer cases, cervical cancer accounted for 12.8% of all cancers and 65.9% of female genital tract (10,12).

According to the 2009 World Health Organization (WHO) report in Ethiopia is 35.9 per 100,000 patients with 7619 annual number of new cases and 6081 deaths every year. Despite this fact, very few women receive screening services in Ethiopia.

Most of these Ethiopians often are 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 15, approximately 7,600 are diagnosed with cervical cancer and roughly 6,000 women die of the disease each year.

In Ethiopia, patients often present with advanced stages of cancer. Cancer research in Ethiopia is not commensurate with the magnitude of the problem. This is due to inadequate funding and training facilities in cancer research. There is also no comprehensive cancer surveillance system, and population-based cancer registry limited to the Addis Ababa region at present (10).

In study done in TASH in 2015, it found that due to the inefficient attention paid to cervical cancer, prevention mechanisms and treatment were found to be largely inadequate and underdeveloped. The lack of proper data and other competing health care needs have been stated as the main reason behind the lack of attention paid to cervical cancer. Though steps are currently being taken to expand screening, pre-cancer treatment and invasive cancer treatment sites, the study found all the steps being taken to be in preliminary stages

In other study done in same year in TASH, a total of 16,622 new cases of cancer in the TASH registry data set were diagnosed between 1997 and 2012. Out of these 5293 (prevalence = 31.8%) were cervical cancer patients. There was also an average numerical increment yearly between 1997 and 2012. The proportion of women diagnosed at advanced stages of cervical cancer was higher than those diagnosed at an earlier stage. The increase in number of cases from year to year may be due to the increase in the awareness of the people to be diagnosed or the increment of cases annually. The main finding of the study is that the new case of cervical cancer has increased over the period of last sixteen years. The study also confirmed that out of these gynecological malignancies cervical cancer took the lion share (14).

According to the 2009 World Health Organization (WHO) report, the age-adjusted incidence rate of cervical cancer in Ethiopia is 35.9 per 100,000 patients with 7619 annual number of new cases and 6081 deaths every year. Despite this fact, very few women receive screening services in Ethiopia there was increasing cervical cancer incidence yearly and this may due to poor awareness of people to; vaccination against HPV, early screening diagnosis and treatment or more cancerous patients are there in the country and inadequate control measure to stem its morbidity due to diversion of the health care system (14,15) .

Most patients in developing countries including Ethiopia present late with advanced stage disease, in which treatment may often involve multiple modalities including surgery, radiotherapy, chemotherapy, and has a markedly diminished chance of success. Several factors such as educational status, financial capability, location, presence of health care facilities determine the stage at which patients with cancer present to the health facility (15).

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 knowledge, attitude and practice on cervical cancer screening among women in Ethiopia. Therefore, understanding of knowledge, attitude and practice on cervical cancer screening among women is important in order to increase overall cancer screening rates.

The findings of this study also will help to inform policy to design targeted and tailored strategies to increase understanding of knowledge attitude and practice 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.

2. LITERATURE REVIEW

2.1. Prevalence of cervical cancer and cervical cancer screening

Breast and cervical cancers are the leading cancers among women in developing countries, with estimated annual new cases of 882,900 and 444,500 respectively. More than 324,300 and 230,400 women die from these cancers every year, respectively (16). Cervical cancer is common worldwide and ranks third among all malignancies for women. In 2008, an estimated 529,000 new cases were identified globally, and 275,000 deaths were recorded. In 2018, an increase in new cases was estimated of 570,000 representing 6.6% of all female cancers. In general, higher incidences are found in developing countries, and these countries contribute 85% of reported cases annually. Economically advantaged countries have significantly lower cervical cancer rates and add only 3.6% of new canceincidence disparity highlights successes achieved by cervical cancer screening programs in which Pap smears are regularly obtained (16,17).

Scientific and public health advances have made cervical cancer one of the most preventable and treatable malignancies. Cytology-based screening (Pap smear test) has significantly reduced cervical cancer incidence and mortality in developed countries. Yet it has had limited success in Ethiopia and other resource-poor countries, as it requires repeated testing, laboratory analysis, and proper diagnostic, treatment, and follow-up protocols. Ethiopia has invested little in the infrastructure, training, and laboratory capacity required for successful Pap smear screening. As a major public health problem, the disease disproportionately affects the countries most vulnerable: poor, rural, and HIV-positive women.

The cervical cancer screening coverage in Ethiopia in 2003 was 0.6 for age 18-69 whereas 0.8 for age 25-64. In the rural part of the country, the coverage was 0.4 & in the urban 1.6 (17).

2.2. Knowledge on cervical cancer and cervical cancer screening

In study done in India majority of the women have poor knowledge about cervical cancer (81.9%) and its screening (58.5%). Few (7.2%) women had undergone screening for cervical cancer. The reasons for not getting screened getting screened was as follows: absence of disease symptom (18.1%), not suggested by health professionals (16.9%), lack of time (4.8%), fear of having bad result (3.6%), fear of pain (1.2%), financial reason &

embarrassment (1.2%). Employed women and women with college education had better knowledge about cervical cancer and its screening as compared to housewives and those with some schooling. Though women have approached the doctors in the last 1-5 years' time frames, very few women were educated about cervical cancer and its screening.

In our country, in study in Addis Ababa, 42.7% had heard of cervical cancer screening and 27.7% women had adequate knowledge of cervical cancer screening. The reasons for the poor screening knowledge were similar to that of Indian (18).

2.3. Attitude towards cervical cancer and cervical cancer screening

The attitude towards cervical cancer and its screening was poor. According to 58.7% of women, intermenstrual bleeding should not be considered as normal, 55.3% of women said that a woman should not bear her first child by the age of 20 years. 60.7% of women were in favour of women not bearing 5 or more children to increase family strength. 50.7 % realized the importance of gynaecological examination at least every 3 years. 53.3% women would not keep a distance from a neighbourhood female suffering from cervical cancer. 58.0% were willing to be screened for cervical cancer if offered a free cervical cancer screening. In other study in china, 96.0% was expressed a positive attitude towards cervical cancer screening.

2.4. Human papilloma virus & natural history

The causative role of this virus in the genesis of essentially all cervical neoplasia and a variable but significant portion of vulvar, vaginal, and anal neoplasia is firmly established. HPV infects human squamous or metaplastic epithelial cells primarily. HPV types and subtypes are distinguished by degree of genetic homology. Approximately 130 genetically distinct HPV types have been identified. Of these types, 30 to 40 primarily infect the lower anogenital tract. Clinically, HPV types are classified as high-risk (HR) or low risk (LR) based on their oncogenicity and strength of association with cervical cancer. Low-risk HPV types 6 and 11 cause nearly all genital warts and a minority of subclinical HPV infections. Low-risk HPV infections are rarely, if ever, oncogenic. In contrast, persistent HR HPV infection is a requirement for the development of cervical cancer. HR HPV types, including 16, 18, 31, 33, 35, 45, and 58 as well as other less common types, account for approximately 95 percent of cervical cancer cases worldwide. HPV 16 is the most

carcinogenic of these, likely due to its increased tendency toward persistence compared with other HPV types (19,20,22) .

Transmission of genital HPV results from direct, usually sexual, contact with the genital skin, mucous membranes, or body fluids of a partner with either warts or subclinical HPV infection. Genital HPV infection causes a variety of outcomes. Infection may be latent or expressed. Moreover, expression may be productive, leading to formation of new virus, or may be neoplastic, causing preinvasive disease or malignancy. Most productive and neoplastic infections are subclinical, rather than clinically apparent, as with genital warts or obvious malignancy. Neoplasia is the least common result of genital HPV infection.

Infection with HPV, predominantly HR types, is very common soon after initiation of sexual activity. Most HPV lesions, whether clinical or subclinical, spontaneously regress, especially in adolescents and young women. Estimates of short-term risk of progression from incident HPV infection to high-grade neoplasia in young women range from 3 to 31%.

The risk of progression to high-grade neoplasia increases with age, as HPV infection in older women is more likely to be a persistent infection.

lesions and the results of cytology, histology, and colposcopy, all of which are subjective and often inaccurate. In addition, serology is unreliable and unable to distinguish past from current infection. Therefore, a sure diagnosis can be made only by the direct detection of HPV DNA. This can be done histologically by in situ hybridization, by nucleic acid amplification testing, by polymerase chain reaction (PCR), or by other techniques. Currently, two products are approved by the U.S. Food and Drug Administration (FDA) for clinical use. The Digene HC2 High-Risk HPV DNA Test uses a mixture of RNA probes for the detection of 13 oncogenic HPV types. The newer Cervista HPV HR test uses DNA amplification to detect the same 13 HPVs as Digene HC2, plus one an additional high-risk HPV type (HPV 66). The indications to treat HPV-related lower genital tract disease are symptomatic warts that cause physical or psychologic discomfort, high-grade neoplasia, or invasive cancer (23).

2.5. Prevention & vaccination of human papilloma virus

There are three levels of prevention for cervical cancer

- Primary prevention (vaccination & behavioral intervention)

- Secondary prevention(screening)
- Tertiary prevention (surgical intervention)

Primary prevention: One of the preventive mechanism is behavioral Interventions like Sexual abstinence, delaying coitarche, and limiting the number of sexual partners.

HPV Vaccines: Recent and on-going development of vaccines offers the greatest promise for prevention of HPV infection and perhaps for limiting or reversing its sequelae in those already infected are logical strategies to avoid or limit genital HPV infection and its adverse effects. Prophylactic vaccines elicit the production of humoral antibodies that neutralize HPV before it can infect host cells. They do not prevent transient HPV positivity or resolve pre-existent infection. However, they do prevent the establishment of new and persistent infection and subsequent development of neoplasia.

Currently, two vaccines are FDA approved for prevention of incident HPV infections and cervical neoplasia. Gardasil is a quadrivalent vaccine against HPV types 6, 11, 16, and 18. Cervarix is a bivalent vaccine against HPVs 16 and 18. Each contains a different adjuvant that boosts the immune response of the recipient to the vaccine antigens. Administered in three intramuscular doses during a 6-month period, both vaccines are extremely safe and well tolerated. Vaccination strategies should emphasize administration prior to initiation of sexual activity, when the potential benefit is greatest. However, a history of previous sexual intercourse or HPV-related disease is not a contraindication to vaccine administration. This is because previous exposure and the magnitude of natural immune response to the HPV types targeted by the vaccines cannot be determined for any individual (25).

According to the Ethiopian cervical cancer guideline of 2015, adolescent girls of age 9 – 13 years are the current target for HPV vaccinations. Vaccination is also recommended for 13- to 26-year-old individuals, ideally before potential exposure through sexual contact. Vaccination can be given to lactating women but should not be given during pregnancy (Category B) (24,25).

2.6. Cervical cancer screening

2.6.1. **Bimanual pelvic exam.**

In this examination, the doctor will check a woman's body for any unusual changes in her cervix, uterus, vagina, ovaries, and there nearby organs. This exam typically takes a few minutes and is done in an examination room at the doctor's office.

2.6.2. **HPV test**

This test is done on a sample of cells removed from the woman's cervix, the same sample used for the Pap test. This sample is tested for the strains of HPV most commonly linked to cervical cancer. HPV testing may be done by itself or combined with a Pap test. This test may also be done on a sample of cells collected from a woman's vagina, which she can collect herself.

2.6.3. Visual inspection with acetic acid (VIA).

VIA is a screening test that can be done with few tools and the naked eye. During VIA, a dilution of white vinegar is applied to the cervix. The health care provider then looks for abnormalities on the cervix, which will turn white when exposed to vinegar. This screening test is very useful in places where access to medical care is limited. Visual Inspection with Acetic Acid (VIA) screening is the simplest method of screening with the lowest cost and relative ease of use.

2.7. Impact of sociocultural on cervical cancer screening & attitude towards cervical cancer

Study from Jimma, Ethiopia found that the participants had very little knowledge of cervical cancer. The participants' views of the diseases severity, however, significantly increased when the symptoms were detailed. It used to be thought the violating social norm or acting inappropriately was what caused cervical cancer. As a result relatively few people realised the advantage of modern medicine, and various barriers to receiving any sort of treatment were discovered, including a lack of knowledge and access to adequate health care. Access to services for diagnosis and treatment was constrained because of a variety of psycho-social and health system related variables. Most participant in Addis ababa study had heard of cancer, but no one willingly mentioned cervical cancer (32,33).

2.8. Barriers to cervical cancer screening

The barriers to prevention and treatment include a broad lack of awareness of cervical cancer and the consequent burdens of bleeding, bowel and bladder dysfunction, fistulas, and pain and suffering that result from advanced disease. This lack of awareness is further complicated by cultural sensitivities that prevent discussion of uniquely women's cancers and the sexual transmission of HPV. The absence of cancer registries and data in many developing countries perpetuates this gap and inhibits the positive influence that demonstrating improvements in public health can have to enhance the support of and demand for health services.

Other barriers come from limited resources. Sometimes the barrier is resistance to lower level providers providing services and a lack of acceptance of practical technologies for screening where technology such as cytology is not feasible. Treatment options must be tailored to the availability of healthcare funding, trained personnel, health infrastructure and portability of technology, as well as to the accessibility of populations in need. Barriers to primary prevention through vaccination, and secondary prevention through screening and treatment of precancerous lesions, are not dissimilar. Competing healthcare needs may also contribute to under_prioritization of cervical cancer control. Moreover, the fact that women with pre _invasive disease are typically symptom_free may result in delayed presentation to care, particularly in regions of the world where cervical cancer screening has yet to be established (34,35).

2.9. Implications for Practice

There is an immense need for a public health education program to inculcate the practice of cervical cancer screening among women to minimize the fear, denial, myths and misconceptions. Message and recommendation about cervical cancer screening must be clear and the recognized barriers will take into consideration for maximization of the outcome. Every effort will take to encourage the practice of cervical cancer screening not only among women but also among men, as there is visible effect for the heath of women's.

Healthcare professionals including grass root level health workers have to play a significant role in educating the public especially the high-risk women and involvement of community, family especially parents and spouse will facilitate to maximize the

understanding of cervical cancer screening. Non-governmental organizations will be rope in rural area for this initiative.

Concurrently, family physicians will be encouraged to raise awareness, offer clear and specific instructions on practice of cervical cancer screening and promote referral as well (36).

2.10. Implications for Research

It is essential to plan and conduct community-based studies to find the knowledge, attitude and practices of cervical cancer screening among women and men, as it will aid in identification of the perceived barriers. Further study will need to explore what customized interventions will implement to improve the uptake and practice of cervical cancer screening and other methods for early cervical cancer detection. Result derives from these studies will help the program managers and healthcare professionals to modify / emphasize / strengthen the existing strategies so that the greatest challenge of late presentation will be cure and the chances of survival will be improving (37).

3. OBJECTIVE OF THE STUDY

3.1. **General objective**

To assess knowledge attitude and practice towards cervical cancer screening among women attending ANC at WUSTH, Wolkite, SNNPR, Ethiopia 2023.

3.2. **Specific objectives**

- ✓ To assess the level of knowledge among women attending ANC towards cervical cancer
- ✓ To assess the attitude of women towards cervical cancer screening who have attending ANC
- ✓ To assess cervical cancer screening practice among women attending ANC

4. METHODS

4.1. Study area and study period

The study would be conduct from June and Augest 2023 in Wolkite University specialized and teaching hospital, Wolkite, Ethiopia. Wolkite is a town and separate woreda in south-western Ethiopia. The administrative center of the Gurage Zone of the Southern Nations, Nationalities and Peoples' Region (SNNPR), this town has a latitude and longitude of 8°17′N 37°47′E and an elevation between 1910 and 1935 meters above sea level. It is surrounded by Kebena and Abeshghe woredas, and Cheha woreda . According to the statistics obtained from Wolkite's Town Municipality, the population is 70,796 out of which35, 848 are males and 34,948 females.This hospital provides full health care service for population guraghe zone and its surrounding. The total number of staff of the hospital is 406 including 6 general surgeon, 5 gynecologist- obstetrician, 6 internist,45 general practitioners, 10 health officers, 5 anesthetists, 1dentist, 128 nurses, 23 laboratory technologists and 24 pharmacists. There are a total of 174 beds in the surgical, medical, gynecology-obstetrics, and pediatrics wards of the hospital.

4.2 Study design and period

An Institution based cross-sectional study designs was conducted from be used.

4.3 population

4.3.1 Sources of population

All women who have attended the ANC in WUSTH.

4.3.2 Study population

The study population is all Non randomly selected women attended the regular ANC of WUSTH at the time of the study.

4.3.3 Inclusion & exclusion criteria

4.3.3.1 Inclusion criteria

Women's who have attended ANC in WUSTH during the study period were included in the study and Women who have volunteered to participate in the study.

4.3.3.2 Exclusion criteria

Women who are severely ill.

4.4 Sample size determination

Before sample size, determination literature would review to get information on the prevalence of cervical screening practice from similar studies. The prevalence for practice of cervical cancer screening from Gurage Zone, Southern Ethiopia Survey, 2019 was 0.21 for age 18-69, will be utilize to estimate the sample size(13).

Assuming number of the study subjects as n, the standardized normal distribution curve value for 95% confidence level (1.96), taking 21% of population proportion and taking the margin of error to be 5% and then applying single population proportion formula for a cross-sectional survey.

$n=z^2p\ (1-p)/d^2$, where

p= the prevalence of cervical screening practice among Women

d =margin of error considered to be 5%

Z α/2= Z-value for 95% confidence level which is 1.96.

n = the required sample size

There for: $n=z^2p\ (1-p)/d^2$

= (1.96) 2x 0.21(1-0.21) / (0.0025) = 255

Considering 10% non-response rate, the total sample size will be = 271

4.5 Sampling procedure

An individual participant would include in to the study as long as she comes in the selected during the allotted data collection period. The study participants would select quota Sampling Technique we were collect the data consecuatively until the quota was filled

4.6 Data collection procedure

Structured questionnaire was developed after reviewing relevant literatures to collect data. The questionnaire was initially prepared by review different literature and then translate to Amharic and would translated back to English to check inconsistency. For data collectors and supervisors training was given by the investigators to make them familiar with the data collection tool. Pre-test was conduct on 5% of the sample size in health facilities not included in the actual study, and based on the result necessary modification would reflect.

The questionnaire contained five parts, comprising of socio demographic, history of cervical cancer, Knowledge, and attitude about cervical cancer screening and practice of cervical cancer screening.

Data was collected after obtaining informed consent from the study participants by interviewers and use separate room and place for interview to keep the privacy of the women. Completeness of questionnaire would check and final reviewed questionnaire would return to the investigators.

4.7 **Operational definitions**

- **Knowledge:** participant who have scored greater than or equal to 4 correct answars from 8 knowledg quations were considered to have good knowledg,and those how had scored less than 4 answers were considerd to have poor knowledge
- **Attitude**: participant who have scored greater than or equal to 4 correct answars from 8 attituede quations were considered to have good attitude,and those who had scored less than 4 answers were considerd to have poor attitudes
- **Practice:** women whether they had gone for screening or those who had gone for screening were considered to have practiced cervical cancer screening

- **Regular cervical cancer screening practice**:

A woman who performed cervical cancer screening every 2 years between ages 21 and 29. At age 30, women at average risk for cervical cancer screened at 3-year intervals till 65-70 years of age.

4.8 **Data processing and Analysis procedures**

After complete data collection, data was reviewed, cleaned, filtered, and organized manually. Then analysed using personal computer running the EPI Info software. Frequency with Percentage mean and standard deviation was used to summarize the descriptive statistics of the data.

4.9 Data quality control

There was discussion among team members about the data collection tool and data collection procedure to have a common understanding and figure out potential problems that may arised during data collection procedure. Check-up of data collection process, accuracy and completeness was carried out on daily bases. Information collection was checked, cleaned before and after data entry.

4.10 Ethical considerations

Ethical clearance would obtain from Wolkite University Research Ethics committee. Official letter of cooperation wouldl write to select health facilities. The respondent wouldl inform about the objective of the study in order to obtain their consent. Before administering questionnaire, the respondent will assure that their name would not be state. The Data wouldl keep confidentially and anonymous and it would be used only for research purpose. We would have also informed that they have full right to participate or not to participate in the study as well as to withdraw any time.

4.11 Dissemination of the result

the result of the study would submit to wolkite university college of Medicine and Health Science, department of Public Health. The result would present during thesis defense in department of public health.

5 RESULT

5.1 SOCIO DEMOGRAPHIC FACTORS

A total of 255 participants were included in the study which was resulting in a response rate of 100% .of this, 87 (34.5%) were age from 18-23. 65(25.5%) were 23-29years old, 45(17.6%) were between 30-35 years and 58(22.7) were >35 years old. Among the participants; 243(95.3%) were married, 4(1.6%) were single, 6(2.4%) were divorced & 2(0.8%) were widowed. table 1 shows demographic data for the participant. from those 115(45.1%) were married below 18 years old and 140(54.9%)were above 18 year. 32.9%were did not had formal education,(22.7%),(20.4%),(23.9%)primary secondary and

degree and above respectively. Majority,(49.4%) of the respondent were self-employ and (40%) of the respondent were average monthly income between (2000-3000).

Table 1: socio-demographic characteristics of women attended ANC at WKUSTH ,Gurage Zone,2023.

Variable	Category	Frequency	Percentage
Age	18-23	87	34.1
	24-29	65	25.5
	30-35	45	17.6
	>35	58	22.7
Marital status	Single	4	1.6
	Married	243	95.3
	Divorced	6	2.4
	Widowed	2	0.8
Age of married	<18	115	45.1
	>18	140	54.9
Educational level	No formal education	84	32.9
	Primary	58	22.7
	Secondary	52	20.4
	Degree and above	61	23.9
Job	Student	26	10.2
	Self-employee	126	49.4

	Government employee	51	20
	Private company employee	11	4.3
	No job	38	14.9
	Others	3	1.2
Monthly income	<2000	89	34.9
	2000-3000	102	40
	>3000	64	25.1

5.2 History of cervical cancer

Majority (66.3%) of the respondent had heard about cervical cancer. majority (69.8%) of the respondent had no family history of cervical cancer and (30.2%) the respondent had family history of cervical cancer and none of the respondent had personal history of cervical cancer.

Table 2 **knowledge toward cervical cancer** of women attended ANC at WKUSTH ,Gurage Zone,2015.

Variable	Category	Frequency	Percent %
Is cervical cancer preventable	Yes	168	65.9
	No	17	6.7
	I don't know	70	27.5
Mode of prevention	Vaccination	132	51.8
	Barrier protections	7	2.7
	Screening	36	14.1
Treatment of cervical cancer	Yes	145	56.7
	No	29	11.4
	I don't	81	31.8
Sign of cervical cancer	Yes	137	53.3
	No	34	13.3
	I don't know	84	32.9
Do you perceive susceptibility of getting cervical cancer	Yes	137	53.3
	No	37	14.5
	I don't know	82	32.2

5.3 Knowledge toward cervical cancer screening

63.1% of the respondent know about presence of cervical cancer screening. from those the major source of information was television 104(40.8%),23(9%),10(3.9%),15(5.9%),4(1.6%),5(2%) were radio, health professional, cervical cancer patient ,friend or relatives ,others respectively. Most 107(42%)of the respondent had didn't know about cervical cancer screening techniques and 55.3% of the respondent know about vaccination was protect against cervical cancer,.33.7% of the respondent had vaccination offer above 18 year ,.54.1% of the respondent know adulthood had recommended for cervical cancer screening,42.7% were adolescent and 3.1% were childhood.36.1% of the respondent had recommend >3 times cervical cancer screening

Table 3 knowledge about cervical cancer screening among women attended ANC at WKUSTH ,Gurage Zone,2015

Variable ___	Category	Frequency	Percentage %
Do you know presence of cervical cancer screening	Yes	161	63.1
	No	94	36.9
Where did you hear	Television	104	40.8

	Radio	23	9
	Health professional	10	3.9
	Cervical cancer patient	15	5.9
	Friends	4	1.6
	Others	5	2
Do you know types of cervical cancer screening techniques	Yes	53	20.8
	No	110	43.1
Age of screening	<18	30	11.8
	>18	86	33.7
	I don't know	47	18.4
Is there vaccination is protect against cervical cancer	Yes	141	55.3
	No	32	12.5
	I don't know	82	32.2
Age of vaccination	<18	78	30.6
	>18	92	36.1
	I don't know	85	33.3
Which group of women do you recommend	Childhood	13	5.1
	Adolescence	111	43
	Adulthood	131	51.4
How frequently	1	22	8.6

	2	65	25.5
	>3	92	36.1
	I don’t know	76	29.8

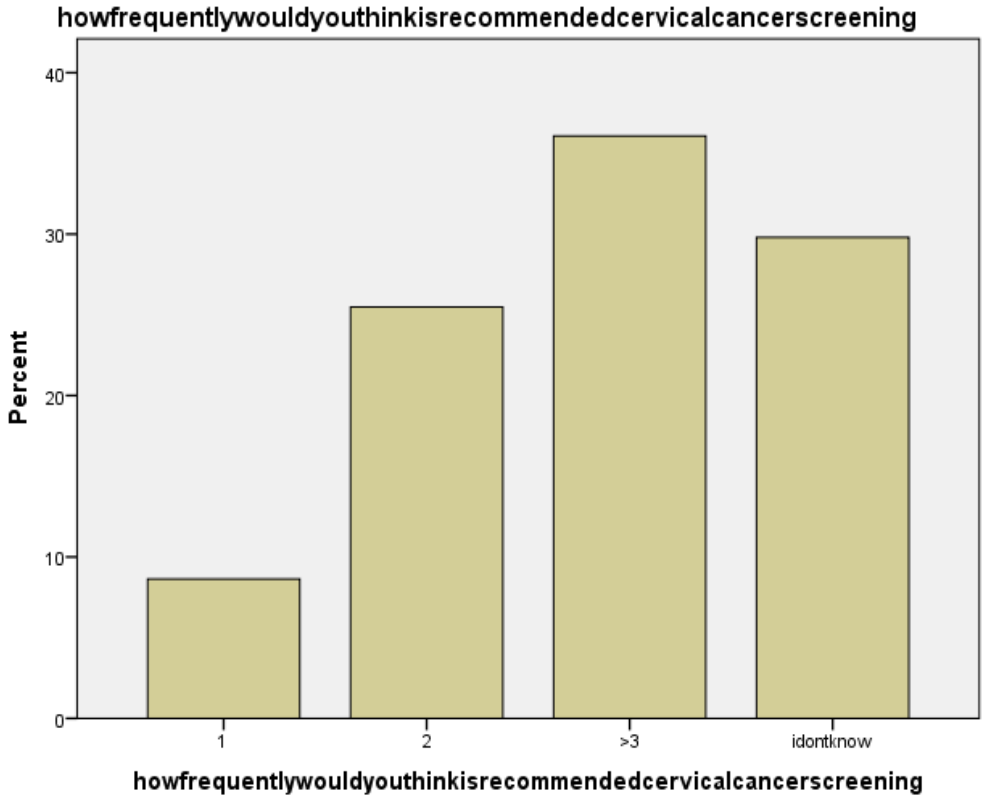

Figure 1 shows how frequency of cervical cancer screen recommend women attended ANC at WKUSTH ,Gurage Zone,2015

5.4Attitude toward cervical cancer screening

About 222(87.1%) of the respondent had believed early detection of cervical cancer, improve the chance of survival, . About 205(80.8%) of participants had planned for cervical cancer screening and 49(19.2%) were bad attitude about cervical cancer screening .197(77.3) had good attitude to detect cervical cancer screening before symptoms appear . 63.5% of the respondent had good attitude about cervical cancer screening among all women .58.4% of the respondent had poor attitude toward recommend of cervical cancer screening only when a women developed symptoms and 25.9% were no and 15.7% were I don’t know.46.7% of the respondent had poor attitude towards recommendations of cervical cancer screening for a

women who is no sexually active. 61.6% participants had good attitude towards a cervical cancer public health problems in Ethiopia context. 54. % of the respondent didn't know about level of cervical cancer in Et

Table 4: attitude towards cervical cancer screening women attended ANC at WKUSTH ,Gurage Zone,2015

Variable	Category	Frequency	Percentage(%)
Early detection of Cervical cancer screening improve chance of survival	Yes	222	87.1
	No	19	7.5
	I don't know	14	5.5
Undergo cervical cancer screening	Yes	206	80.8
	No	49	19.2
Do you believe cervical cancer screening can detect cervical cancer even before symptoms appears	Yes	197	77.3
	No	20	7.8
	I don't know	38	14.9
All women should undergo screening of cervical cancer	Yes	162	63.5
	No	17	6.7
	I don't know	76	29.8
Recommend cervical cancer screening only when a women developed a symptom	Yes	66	25.9
	No	149	58.4
	I don't know	40	15.7
Recommend cervical cancer screening for a	Yes	119	46.7

	No	38	14.9
	I don't know	98	38.4
Do you believe cervical cancer is a public health problem in Ethiopia context	Yes	157	61.6
	No	10	3.9
	I don't know	88	34.5
Do you believe level of cervical cancer is high in Ethiopia	Yes	95	37.3
	No	20	7.8
	I don't know	140	54.9

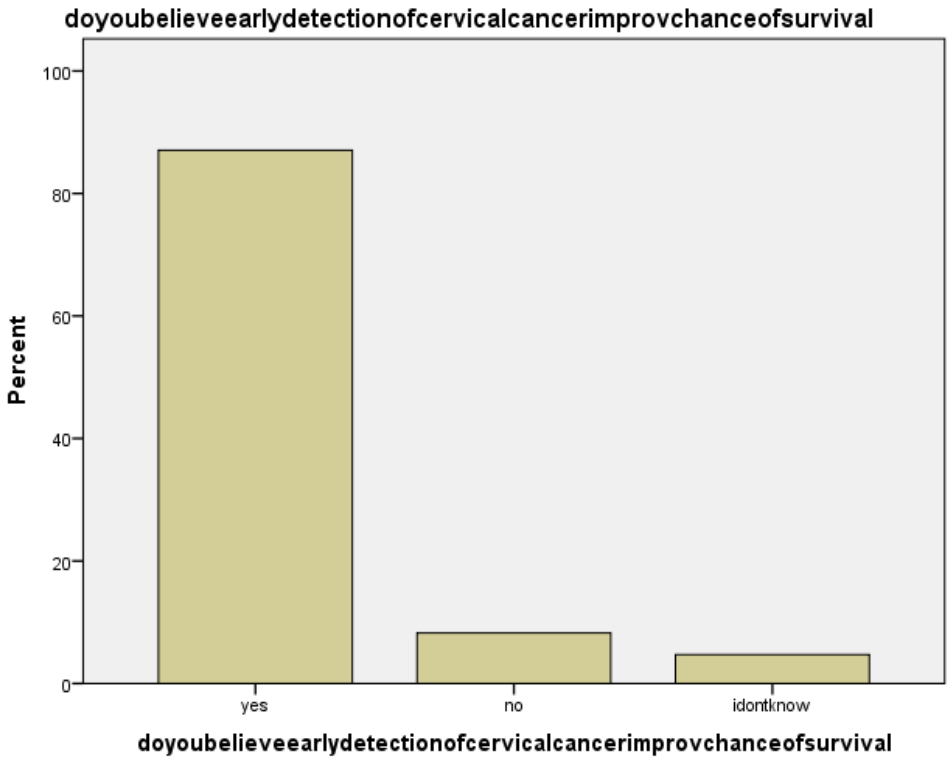

Figure 2 shows chance of survival of cervical cancer screening in women attended in ANC In WUSH,2015

5.5 Practice towards cervical cancer screening

Only 11.8% of the respondent were screened for cervical cancer from those 5.9% of the respondent were age less than 18 and 5.5% were age greater than 18. 9.8% of the respondent were screened one times and 1.6% were two times. 88.2% had not screened, the main reason of (47.8%) of the respondent were due to not knowing where to go for screen

Table 5 practice toward cervical cancer screening in women attended ANC in WUSH at 2015

Variable	Category	Frequency	Percentage
Have you ever had cervical cancer screening	Yes	30	11.8
	No	225	88.2
At what age your first screening done	>18	15	5.9
	<18	14	5.5
How frequent	1	25	9.8
	2	4	1.6
	>3	0	0
Why was you haven't screened yet	Fear of vaginal examination	48	18.8
	Not knowing where to go for screen	122	47.8
	Lake of husband or parent approval	53	20.8
	Not allowed by religion or culture	0	0

6 DISCUSSION

In this study knowledge, attitude and practice about cervical cancer screening were examined. In this study, (63.1%) of the participants heard about cervical cancer screening, . This finding is higher than the finding in ambo towen centeral Ethiopia(50.7%) . The main source of information was mass-media which agrees with a study done in Sweden (17). This indicates that media can play an important role in educating women regarding cervical cancer. Medias like TV are now days accessible in many households where information can simply reach to the wide community without any additional cost. Contrary, to this a study done in Kenya reported that, the main sources of information were health care providers (24) and in Addis Ababa 2008, the main source of information was health institutions (11). The difference could be due to the study subjects and the study place, the respondents were reproductive health client. The overall good knowledge score of the respondents was 63.3%. The finding is very much lower than study finding in Yemen which reported 80.6 %. (20). Concerning prevention of cervical cancer, over a half of of the participants knew that cervical cancer is prevent by vaccination while in a study done in Sweden reported that 62% of cervical cancer can be prevented by early screening and HPV vaccination (17). This disparity may be due to the developed nations like Sweden, early screening and availability of HPV vaccination could be affordable for most of the population at every facility.

About two third of the respondents perceived that any woman can acquire cervical cancer. Nearly three quarter (87.1%) of the respondents agreed that screening improve chance of cervical of cervical cancer. (80.8) of the respondents were planned to be screened .above (52.5%) had negative attitude and the remaining (47.5%) had positive attitude towards cervical cancer screening this study higher than study done from hossaina,34.8%(11) and wolaita,45.5%(12).

The practice of cervical cancer screening among participants of this study was 11.8%. the finding was higher than a study conducted in hossaina,9.9%.The main reasons mentioned for not screened were not knowing where go for screen. Compared to our study main reason in hassaina was lack of knowledge This study found out that level of knowledge of cervical carcinoma was associated with positive attitude but not with practice of screening. Those respondents with poor knowledge had good perception toward cervical screening than those who had good knowledge score. The reasons could be attributable due to not knowing where go to screen. Almost all of the respondents with poor knowledge did not have cervical cancer screening.

7 Limitations of the study

The main limitation faced in the study was that the study evaluated only women who attended ANC.

Social desirability bia may be introduced

8 conclusion

Knowledge and attitude of screening for cervical cancer are good in our study .however the practice women to undergo the screening was poor the main reason for low practice of screening was not knowing where to go to screen.

9 recommendation

health education and awareness creation regarding cervical cancer should be created and implemented at public health facilities. Moreover, there is a need to disseminate cervical cancer screening information and offer cervical cancer treatment during health care appointment.

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8. APPENDICES

APPENDIX I: survey questionnaire (English)

Part I- Consent form

You have been randomly selected to be part of this study and we would, therefore, like to give you a questionnaire which is going to be filled by yourself. The aim of the survey is to analyse the knowledge of cervical cancer, attitude & practice towards cervical cancer screening. I would like to ask you to fill this questionnaire that takes 20 to 30 minute of your time. No harm is imposed to you except the time you commit for interview but some of the question may look too personal but it is helpful for the study. In addition, there is no

payment for participation even though the result of the study may benefit as a citizen. The questionnaire Participation in this study is voluntary, you have the right to refuse or with draw from the study at any time for any reason without penalty. However, your honest answers to these questions are important since it provide relevant information to design interventions that aims to improve the practice of cervical cancer screening among women.

The information you give is undoubtedly confidential and will not be disclosed to anyone. It will be used only for research purposes.

Signing this consent shows that you understand what will be expected of you and are willing to participate in this survey.

Are you willing to participate in this study? 1. Yes ☐ 2. No ☐

Signature of data collector certifying verbal informed consent_____

Thank you for your time & cooperation.

Section 1: Background characteristics

S.No	questions	response	Skip
1	Age	……. years	
2	Marital status	1 single 2 married 3 divorced 4 widowed	If you are not married go to question number 4
3	At what age you were married?	…….years	
4	Educational level	1 no formal education 2 primary(grade1-8) 3 Secondary(9-12) 4 degree & above	
5	What is your job?	1 Student 2. Self-employed 3.Government employee 4.Private company Employee 5.No job 6.Others	

6	What is your average monthly income?	……..Ethiopian birr

Section 2 History of cervical cancer

SR	**Question**	**Response**	**Skip**
7	Have you ever heard about cervical cancer?	1.Yes 2.No	
8	If yes do you have any family history of cervical cancer (mother, sister, grandmother, aunt)?	1.Yes 2.No 3. I don't know	If no skip to 11
9	If yes, who is affected	1. mother 2.grand mother 3. sister 4. aunt	
10	Do you have personal history of cervical cancer?	1.Yes 2. No 3. I don't know	
11	Do you know someone suffering from cervical cancer?	1.Yes 2.No	

Section 3: Knowledge towards cervical cancer

S.No	questions	Response	Skip
12	Is cervical cancer preventable?	1.Yes 2. No 3.I don't know	If your answer is no or I don't know, skip to 14

13	What modes of prevention do you know?	1.vaccination 2.Barrier protection 3.screening	
14	Can Cancer of the cervix have treatment?	1.Yes 2. No 3.I don't know	
15	Do you know the following could be sign of cervical cancer? 1.vaginal bleeding between period 2.unpleasant vaginal discharge 3.pain during sex	1.Yes 2.No 3.Idon't know	
16	Do you perceive susceptibility of getting cervical cancer?	1.Yes 2. No 3.I don't know	

Section 4: Knowledge towards cervical cancer screening, recommended age and screening intervals

S.no	Question	Response	skip
17	Do you know about presence of cervical cancer screening?	1.Yes 2. No	If no, skip to 21
18	From where did u hear about cervical cancer screening	1. Television 2. Radio 3.Magazines/newspapers 4. Health professionals 5. cervical cancer patient 6.Friends/relatives 7. Others specify……. …….……..…	

19	Do you know types of cervical cancer screening techniques?	1 .yes 2 .no	
20	At what age are women first invited for cervical cancer screening in Ethiopia?	1. <18 2. >18 3. I don't know	
21	As far as you are aware, is there a vaccination to protect against cervical cancer?	1.Yes 2. No 3.I don't know	If no, skip to 23
22	At what age is the vaccination offered?	1.<18 2 >18 3. I don't know	
23	In which groups of women do you recommend cervical cancer screening?	1.Childhood 2.Adolescence 3.Aduthood	
24	How frequently would you think is recommended cervical cancer screening?	1.1 2. 2 3.>3 4. I don't know	

Section 5: Attitude towards cervical cancer screening

S. No	Questions	response	Skip
25	Do you believe early detection of cervical cancer improve chance of survival?	1.Yes 2. No 3.I don't know	
26	Will you undergo screening for cervical cancer?	1.Yes 2. No 3.I don't know	

27	Do you believe cervical cancer screening can detect cervical cancer even before symptoms appear?	1.Yes 2.No 3.I don't know	
28	Do you think all women should undergo screening for cervical cancer?	1.Yes 2. No 3.I don't know	
29	Do you recommend cervical cancer screening only when a woman developed a symptom?	1.Yes 2. No 3.I don't know	
30	Do you recommend cervical cancer screening for a woman who is not sexually active?	1.Yes 2. No 3.I don't know	
31	Do you believe Cervical cancer is a public health problem in Ethiopia context?	1.Yes 2. No 3.I don't know	
32	Do you believe level of cervical cancer is high in Ethiopia?	1.Yes 2. No 3.I don't know	

Section 6: Practice towards cervical cancer screening

S.No	Questions	response	skip
33	Have you ever had a Cervical Cancer screening?	1. Yes 2.No	If no skip to 36
34	At what age was your first screening done?		
35	How frequent have you screened for cervical cancer?		
36	Why was you haven't screened yet?	1.fear of vaginal	

		examination 2.not knowing where to go for screen 3.lake of husband or parent approval 4.not allowed by religion or culture	

Thank you for your time & cooperation