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ASSESSMENT OF KNOWLEDGE AND ATTITUDE TOWARDS CERVICAL CANCER AND SCREENING AMONG FEMALE STUDENTS AT MENLIK II HEALTH SCIENCE COLLEGE, ADDIS ABABA, ETHIOPIA.

BY:

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APPROVED BY THE BOARD OF EXAMINERS

This thesis by **Haile-Michael Hailu** is accepted by the Board of Examiners as satisfying thesis requirement for the Degree of Master of Science in Maternity and Reproductive Health Nursing.

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LIST OF ACRONYMS AND ABBREVIATIONS

CIN	Cervical Intraepithelial neoplasm
GOP	General outpatient department
HPV	Human papiloma virus
HIV	Human immuno deficiency virus
LEEP	Loop electrosurgical excisions procedure
SA	South Africa
VIA	Visual inspection with acetic acid
VILI	Visual inspection with lugols iodine

ABSTRACT

Background: Cervical cancer is the second most common cancer among women worldwide. About 83% of the cases occur in developing countries, representing 15% of female cancers .In Ethiopia, prevalent cancer among women between 15 and 44 years of age with age specific incidence rate of 15.6/1000.

Carcinoma of the cervix is a preventable disease; its prevention, among other ways, is through screening and detection of premalignant stages of the disease and treatment. Detection of the cervical cancer however requires knowledge of the disease and cervical cancer screening procedure so that people can be aware and positive towards screening but in Ethiopia little has been explored about knowledge and attitude of women towards cervical cancer screening.

Objective: To assess knowledge and attitude of Female Students aged ≥18 years towards Cervical Cancer Screening in Menlik II Health Science College of Addis Ababa, Ethiopia from March 23 to April 30 2015.

Methods: A cross-sectional institutional based study was conducted on a sample of 292 Female Students aged ≥18 years in Menlik II Health Science College of Addis Ababa Ethiopia using simple random sampling method .Data on knowledge status of mothers regrinding cervical cancer screening, attitude of female students towards cervical cancer screening and other pertinent variables were collected using self-administered questionnaires .The gathered data was analysis the software SPSS version 20.

Results Generally the knowledge was poor, attitude was positive to majority of respondents. The results showed that 65(22.2%) had poor knowledge, 180(61.4%) had satisfactory knowledge and only 48(16.4%) had good knowledge. Overall 168(57.7%) of the respondents were positive about cervical cancer screening.

Conclusions and recommendations: The study has shown that there is a lack of knowledge on cervical cancer towards screening for premalignant cervical lesion.

There is a need to promote cervical cancer screening among women by Informing or teach them on their susceptibility to cervical cancer and encouraging a belief that active and regular screening can detect cervical cancer at the pre-cancerous stage, hence enabling them early treatment and prevention of cancer development. There is also a need

for provision of Affordable screening services all over the country to enable women, after being motivated, to go for screening.

KEY WORDS:
Knowledge, attitude, Female, Students, Addis Ababa, Ethiopia

1. INTRODUCTION

1.1. Background

Cancers that originate in the female reproductive system are called women's reproductive cancers. These include cancer of the cervix, breast, ovaries, vagina, vulva and endometrium (1). Breast and cervical cancer are the most frequently occurring type of reproductive cancers in women worldwide (2). Cervical cancer, a complication of Human Papillomavirus (HPV) infection, is the second most common cancer in women with 529,000 new cases each year worldwide. Eighty percent of the cases occur in low-resource countries like Africa, Latin America and Southeast Asia (3). It is also a leading cause of mortality worldwide with 270 000 women every year. But, 85% of these deaths occur in the developing world (4).

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 (5). Despite this fact, very few women receive screening services in Ethiopia (6). Although there is no national cancer registry, reports from retrospective review of biopsy results have shown that cervical cancer is the most prevalent cancer among women in the country followed by breast cancer (7). Low level of awareness, lack of effective screening programs, over shadowed 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 (8).

One major determinant for the prognosis of cervical cancer is the stage at which the patient presents .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 (9).

1.2.Statement of the problem

Cervical cancer is a leading cause morbidity and mortality in women especially in sub-Saharan African countries. Globally, it is the second commonest cancer in women with 529,828 new cases being diagnosed every year; 85% of which are in developing countries. It is estimated that more than 275,000 women die yearly from the disease in developing countries (10).

The most important risk factor in developing countries is infrequent cervical screening or lack of accessible cervical screening services. Another very important risk factor in the development of cervical cancer is infection with a high-risk strain of human papilloma virus (HPV). The prevalence of HPV is very high among young, sexually active adult women. The primary determinant of level of sexual activity in a given population is its sexually transmitted disease (STD) rate. The National Institutes of Health in America (1996) stated that HPV is transmitted through sexual intercourse, with peak prevalence in women of the 22-25 year age group. While many college students underestimate their risk of contracting various STDs, HPV has become a common sexually transmitted infection on college students . College women have a greater risk of acquiring STD than the general population because of the high-risk sexual in which they engage. One study found that as many as 60% of college-age women had some form of HPV which is causally linked to cervical cancer (11).

Another study found that there was a high prevalence of the major risk factors for cervical cancer among the respondents, and these included initiation of coitus before 18 years(53.3%), multiple sexual partners (73.6%), male partner with other partners (37.7%), previous history of STDs (42.2%), and vulval warts(4.7%) (12) These risky behaviors, a lack of knowledge and lack of preventative care, such as a regular Pap test, are leading to the high incidence of HPV infection among college women that lead to cervical cancer later (12).

A lack of HPV knowledge, coupled with misperception about susceptibility, impacted on college students' attitude and behaviors regarding cervical cancer prevention. Vail-Smith and White found that 72% of female university students in an American study had never heard of HPV infection (11).

HPV infection and development of cervical cancer can be prevented by health education, vaccination and early screening and treatment. Cancer of the cervix can be prevented by

providing widespread and regular cervical screening services for all women who have been sexually active. This is done by The Pap Smear test or the Visual Inspection of the Acetic Acid painted cervix (VIA) which is affordable and more sensitive. Vaccination against the Human Papilloma Virus in women before the onset of sexual activity also prevents the disease (10).

In Ethiopia, although there is no national cancer registry, reports from retrospective review of biopsy results have shown that cervical cancer is the most prevalent cancer among women Knowledge of Ethiopian women regarding cervical cancer is limited; the lack of previous assessments limit the development and effectiveness of cancer prevention efforts. Provision of baseline information about the level of knowledge about cervical cancer among women in the community can assist program planners and health educators to target and tailor prevention programs.

Therefore, the objective of this study is to assess knowledge, attitude and screening towards cervical cancer on female college students in Menlik II Health Science College Addis Ababa.

1.3.Significance of the study

Carcinoma of the cervix is a preventable disease; its prevention, among other ways, is through detection of premalignant stages of the disease and treatment. In recent years a screening test for cervical precancerous and cancerous lesions using visual inspection aided by acetic acid has been a suitable low-cost and a feasible alternative modality for control of cervical cancer in resource poor setting. Detection of the premalignant lesions requires knowledge on the disease so that people are aware and hence have positive attitude towards practice of screening for premalignant cervical lesions.

Knowledge of the disease is important, so that people should be aware through motivation and they can have positive attitude towards screening for premalignant cervical lesions. Not much is known about Ethiopian women knowledge, attitude and practice towards cervical carcinoma and screening for cervical lesion. This study aimed at looking on how knowledgeable these women are, what is therefore their attitude and what is their practice on screening for cervical premalignant lesions which is the key factor for prevention of cervical cancer.

Information obtained from this study should alert authorities so that proper measures can be taken to save the lives of Ethiopian women by educating them and provide screening services in many places. In Ethiopia there was a recent attempt to introduce cervical cancer diagnosis and treatment services (control programs in general) after the development of the national reproductive health strategy in 2006. As there is limited knowledge of the awareness of providers, available infrastructure and referral systems, this study will contribute to plan a cervical cancer control program.

2. LITERATURE REVIEW

2.1. Epidemiology

Cervical cancer is the second most common cancer in women globally and the leading cause of cancer deaths in women in low income countries. It is a disease of unfortunate inequities but also of unprecedented opportunities (13). In the year 2005, there were, according to World Health Organization (WHO) projections, more than half-million incident cases of cervical cancer, of which over 90% were in developing countries. Current estimates show that over one million women worldwide have cervical cancer; most of them haven't been diagnosed, nor have no access to diagnostic or therapeutic services that could cure them or prolong their life (14). The highest incidence rate in the world is reported from Recife, Brazil and Cali, Colombia (70/100,000) (15). In most of the countries in North America and Western Europe, the incidence of cervical cancer has been declining, although recently at a much slower rate. However, in many low and middle income countries the incidence of cervical cancer has changed little, with the exception of those countries that have achieved the epidemiological transition with increasing affluence from industrialization (16). 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. The reduction in mortality in North America and Europe with the implementation of different control strategies in the past few decades shows the huge opportunity to save the lives of millions of women than in low income countries.

The disease is among the major causes of cancer related mortality in the continent which is mainly due to late presentation and poor access to diagnosis and treatment.

In Ethiopia studies on the epidemiology of cancer in general and cervical cancer in particular are scarce. The institutional recording and reporting of cancer related mortality and morbidity lacks completeness. In the year 2010, Ethiopia had an estimated population of 20.9 million women aged 15 years and older who were at risk of developing the disease (17). In the same year, the age-specific incidence of cervical cancer in Ethiopia was higher than the world average for women of age 55 and above. According to a recent WHO report, cervical cancer ranks as the second most common cancer among women in

Ethiopia. Currently, it is estimated that 4648 women are diagnosed with cervical cancer and 3235 die from the disease annually (17).

2.2.Natural history of cervical cancer

Cervical cancer begins with abnormal cervical epithelial cell change which is known as cervical intraepithelial neoplasia1 (CIN) which subsequently transforms to malignancy. Human papilloma virus (HPV) is the main etiologic factor in the development of CIN (18). HPV is sexually transmitted with the highest risk of infection occurring soon after the start of sexual activity as result of immature cervical epithelial cells which can easily be breached by the virus. CIN is classified by degree of severity namely mild (CIN I), moderate (CIN II) and severe (CIN III). In addition to the degree of dysplasia, it is likely that the course of a specific lesion is also .influenced by a number of other factors, such as HPV type (number 16, 18, 31, 39, 45, 56, 58, 59, & 68 being the high risk), the patient's immune competence, or smoking habits (18, 19). These early lesions, if undetected and untreated, may continue traversing the basement membrane and ultimately invade cervical stroma over a period of 5-20 years with possible distant metastasis through lymphatic and blood vessels (19). Individuals who have persistent HPV infections, especially with high viral loads, have a higher chance of developing CIN and subsequent cervical cancer. However, over 90% of women with normal immunity will have a spontaneous resolution of their HPV infection over a two year period and only about 5% will have cytological detectable CIN

2.3.Clinical presentation

CIN usually has no signs and symptoms and the diagnosis is usually based on biopsy findings following an abnormal routine cervical cytology smear. The most common symptom of invasive cancer is abnormal vaginal bleeding and may take the form of leukorrheal1 discharge mixed with blood, minute or profuse bleeding. A history of bleeding after sexual intercourse may be elicited on specific questioning. A unilateral pelvic pain which radiates to the hip or thigh is a manifestation of advanced disease, as is the involuntary loss of urine or feces through the vagina, a sign of fistula formation (14, 18). Anemia, weight loss and weakness are usually the characteristic of far advanced disease, although acute blood loss and anemia may occur in an ulcerating early stage

lesion (14). On physical examination, infiltrative cancer produces enlargement, irregularity, and a firm or hard consistency of the cervix and eventually of the adjacent structures (18).

2.4. Diagnosis

Biopsy and microscopic examination of tissue obtained are crucial for the diagnosis of cancer or its therapy. Where to biopsy is important. As dead tissue and inflammatory elements are present in bleeding, possibly invasive cancer of the cervix, biopsies from an ulcerative area may be useless or difficult to interpret. Therefore, it is wise to obtain biopsies from the edge of the lesion, where normal and malignant tissue gives a contrast. This may be facilitated by the Schiller test which is based on the fact that aqueous solutions of iodine stain the surface of the normal cervix brown due to the glycogen content of normal cervical epithelial cells. Malignant cells within the epithelium over the cervix do not contain glycogen, and will not be stained when Schiller's solution or Lugol's solution is applied. Subsequent biopsy of Schiller-positive lesions as well as granular, nodular or papillary lesions usually will confirm invasive cancer when it is present. The use of colposcopy may identify possible early invasive carcinoma in an area of CIN thus useful for staging (20).

2.5. Treatment

Treatment of CIN is based on the available resources, results of the cervical cytology smear, and findings at colposcopy, biopsy, and endocervical curettage results, as well as individual patient characteristics, such as HIV infection, pregnancy and the likelihood of compliance with management recommendations (14, 18). In general the treatment falls into one of two main categories: procedures that destroy the abnormal tissue and do not produce a tissue specimen for additional pathological examination and procedures that excise the area of abnormality, allowing for further histological study. If the intraepithelial lesion is limited to the ectocervix, treatment options such as cryotherapy, laser ablation, or a superficial excision by the loop electrosurgical excision procedure (LEEP) are suitable. If the lesion goes further into the cervical canal, the endocervical curettage contains dysplastic epithelium, or the colposcopic examination is otherwise

unsatisfactory, the endocervical canal must be included in the treatment by a deeper LEEP or cone biopsy (18).

Treatment of invasive cancer depends on the stage. At an earlier stage, the disease can possibly be treated with either radical hysterectomy plus pelvic lymphadenectomy or with primary radiation with concomitant chemotherapy. Patients with locally advanced cervical cancer are best treated with primary radiation with concomitant chemotherapy. Disseminated disease is mainly treated by chemotherapy despite its drawbacks (18).

2.6. Prevention

Primary prevention can be accomplished by avoiding exposure to the virus through abstinence from sexual activity or through mutual monogamy forever, provided both partners are consistently monogamous and were not previously infected. HPV is highly infectious and scrotal and labial contact may suffice for transmission. As a result, the protective efficacy of condoms when used correctly and consistently is about 70%. Vaccination against HPV is also another mode of primary prevention. Currently vaccines are not widely used due to high cost, several challenges and uncertainties around ‘’who’’ and ‘’when’’ to vaccinate (13, 19).

Secondary prevention is achieved through screening and treatment of detected premalignant lesions. Screening is directed towards sexually active - or formerly active - women to determine whether they are at increased risk of developing cervical cancer. This can be made by microscopic examination of the exfoliated cells of the cervix using the Papanicolaou (pap) smear, examining the surface layer of the cervix through visual inspection using different reagents, or detecting HPV DNA. There are two kinds of visual tests to identify premalignant cervical lesions: visual inspection with acetic acid (VIA) and visual inspection with Lugol’s iodine (VILI) (16).

Very few women in sub-Saharan Africa are ever screened for cervical cancer. Low levels of Awareness and poor knowledge of cervical cancer coupled with unavailability and inaccessibility of cervical cancer screening services are responsible for the very small number of women being screened in sub-Saharan Africa and in other developing countries.

The most common risk factor mentioned was Acquiring HPV virus This finding is different from the finding in a study done in Dar es salaam where the most common mentioned risk factors were early marriage and multiparty (31). In a Niger survey, twenty two percent of the respondents could not list any risk factor for cervical carcinoma (27), while in a study done in Ghana(32) , the commonly mentioned risk factor by half of the respondents was multiple sexual partners, . The knowledge on risk factors is an important element in the prevention of cervical carcinoma. Knowing the risk factors can make someone avoid them and hence prevent herself from acquiring the disease. Knowledge on Risk factors was poor in this study and hence education on this important part with respect to prevention should be provided

Study conduct in South Africa, on Knowledge and attitude towards cervical cancer among female university students found that less than half (42.9%) of the participants had heard about cervical cancer. Of those who had heard about cervical cancer, almost a quarter (22%) had heard from community health workers. Only 19% had heard about it from the media. Students were asked to name the risk factors for cervical cancer. Risk factors such as early onset of sexual activity, sex with multiple partners, and smoking, family history of cervical cancer, HPV, and vulval warts were considered as correct. Twenty-six (15.6%) of 167 participants who had heard of cervical cancer, did not know any risk factors for cervical cancer and only one respondent (0.6%) knew all the risk factors. Almost half (48.5%) of the respondents knew that HPV causes cervical cancer. Study show in Ghana that Two (1.2%) students said cervical cancer cannot be prevented and another 96 (58.6%) participants did not know that it is preventable (11).

2.7.Knowledge on Pap smear test

A study done in Malaysia on women aged 21-56 years and with the aim to explore their knowledge and awareness of cervical cancer and its screening, showed that there is a lack of knowledge on Pap smear test. Many women did not have a clear understanding of the meaning of an abnormal cervical smear and the need for the early detection of cervical cancer.

Many believed that the purpose of the Pap smear test was to detect existing cervical cancer, leading to the belief that Pap smear screening is not required because the

respondents had no symptoms. Despite considerable awareness of a link between cervical cancer and sexual activity, as well as the role of a sexually transmitted infection, none of the respondents had heard of the human papilloma virus (21). In Kuwait in one study done regarding cervical cancer screening among Kuwaitian women found that the knowledge about the test was adequate in 147 (52.3%) (22).

Study conduct in South Africa indicates that 41.9% participants had heard about the Pap smear test. Of those who had heard about the Pap smear,45 (17.7%) had heard from the media and another 38 (23.3%) respondents had heard from a friend. That the Pap smear test is used for detection or prevention of cervical cancer was known to 62 (38%) of the respondents. Most of them gave incorrect answers for the uses of the Pap smear such as cleaning of the womb, treatment of sexually transmitted infection and infertility. Furthermore, only10 (6.1%) mentioned that the first Pap smear should to be done at the age of 30 years (according to national policy of SA). Forty-three respondents (26.4%) knew that at least three Pap smears should be done in their life time and every 10 years they should repeat the testify test results were normal. Therefore, the majority of the participants didn't know how many times and/or how often they should have a Pap smear test (11).

A study in Gaborone, Botswana found that previous cervical screening was more common among women that were older, had higher incomes, or had heard of cervical cancer,

Cervical cancer is a major health burden for women in sub-Saharan Africa, yet less than one-third of the women surveyed had ever heard of cervical cancer. Previous Pap smear screening prevalence in this cohort (6%) was considerably lower than other previous studies in sub-Saharan Africa (12%-27%), yet consistent with the Kenyan Ministry of Health's estimate of 3.2% for women 18 to 69 years old

Another study done in Lagos, 81.7% of 139 patients with cervical cancer had never heard of cervical cancer before, and 20%, 30% and 10% respectively thought the symptoms they had were due to resumption of menses, lower genital infection and irregular menses(25). In Nigeria, a cross sectional study done in the General outpatient, department of a tertiary hospital in Ibadan, Nigeria, women aged 20 to 65 years attending or visiting the GOP department in a University Teaching Hospital were studied. Of the

respondents, only 15%had heard cervical cancer (25). A cross-sectional survey among college women in a university in Ghana showed that only7.9% were aware of the link between human papillomavirus and cervical cancer (26).

Knowledge is also poor among health professionals where in Niger a survey of 144 female health professionals at two referral hospitals with facilities for Pap smear carcinoma (27). Practice towards screening for cervical carcinoma is poor to even those with knowledge of the disease and knowledge on the importance of screening. In developed countries majority went for screening as compared to developing countries.

Knowledge is also poor among health professionals where in Niger a survey of 144 female health professionals at two referral hospitals with facilities for Pap smear showed that twenty two percent could not list any risk factor for cervical carcinoma (27).

Tanzania reported very poor knowledge of the disease in a study done among female inpatients at Muhimbili between August 1999 and January 2000. It was a case control study to assess knowledge of cervical cancer symptomatology and prevalence. The study showed that more that 90% of patients presented with invasive cervical cancer, while the knowledge ranged between 30 and 50% among cases and controls respectively. Many patients thought the symptoms were due to bewitchment, husbands' extramarital affairs, or husbands making love to their daughters.

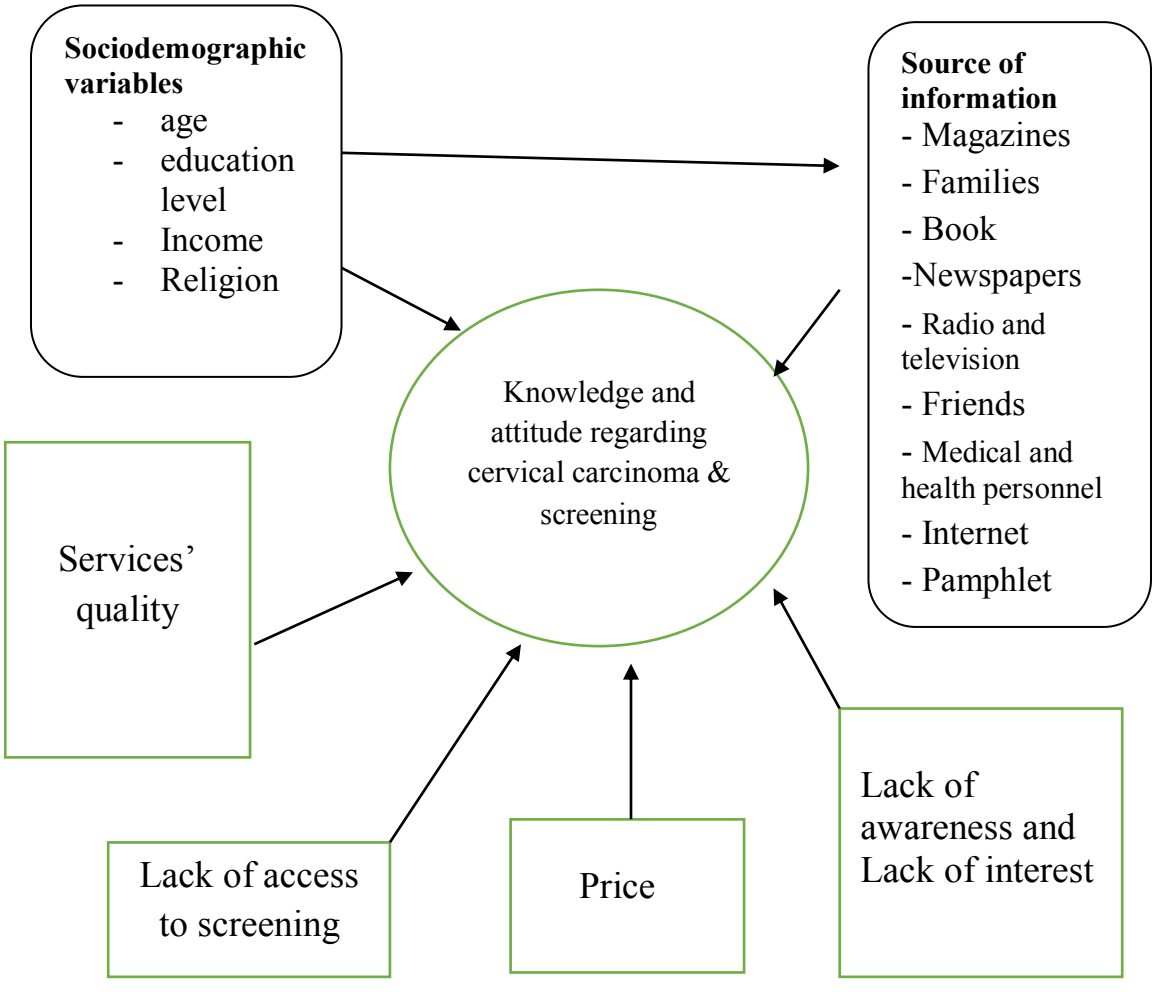

Figure1. Conceptual framework of knowledge and attitude towards cervical cancer and screening. The conceptual frame work is developed by the investigator after reviewing different literatures.

3. OBJECTIVES

3.1. General objective

To assess knowledge and attitude of Female Students aged ≥18 years towards Cervical Cancer Screening in Menlik II Health Science College of Addis Ababa, Ethiopia from March 23 to April 30 2015

3.2. Specific objectives

1. To assess level of knowledge of Female Students aged ≥18 years regarding Cervical Cancer Screening in Menlik II Health Science College
2. To assess attitude of Female Students towards Cervical Cancer and Screening in Menlik II Health Science College
3. To determine the perceived barriers on screening for premalignant cervical lesions among female students in Menlik II Health science college students >18 years.

4. METHODS AND MATERIALS

4.1.Study area

The study was conducted in Menelik II Health Science College. It was the first health training school in Ethiopia. The former auxiliary health workers training school, the then Menelik II Health Science College) was established in 1941E.c the college is located in Menelik II Hospital compound. In 1997 it launched new training programs in Junior Clinical Nursing, Public Health, Midwifery, Medical Laboratory Technology, Pharmacy and Radiography in certificate level.

In 2008 the School has upgraded itself into Menelik II Health Science College and become the health sector Higher Education Institution of the Addis Ababa City Government. The year 2014 is a landmark in the history of the college in that it has inaugurated the opening of new Undergraduate degree programs in five departments both in regular and extension division

Currently, the college has a student population of 1329 consisting of 427 males (32.1%) and 902 females (67.9%).

4.2.Study Period:

The study was conducted within the period from April to June, 2015

4.3.Study Design:

The study has utilized a Quantitative type Institution based cross sectional study design.

4.4. Source Population

The Source population of the study were all female students aged ≥ 18 years who are registered in Menelik II College of Health Science.

4.5. Study population

The study subjects were comprised of all selected students who were fulfilling the inclusion criteria.

4.6. Inclusion and exclusion criteria

4.6.1. Inclusion

The study was including all selected female students aged ≥ 18 years and willing to participate, present on time of data collection.

4.6.2. Exclusion criteria

The study was excluded those who were not given their consent to participate in the study and absent during the period of data collection.

4.7. Sample Size Determination

The total sample size was determined using single population proportion formula to estimate the minimum number of students required for the study.

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

Where: -

- n = the required minimum sample size
- Level of confidence 95%, which gives the percentile of the normal distribution,
- Za/2 = 1.96
- d = Margin of error, assumed to be 5%
- p = Prevalence of perception taken as 50%
- Estimated non-response rate = 10%

$$n = \frac{(1.96)^2\ 0.5(1-0.5)}{0.05^2}$$

$$n = 384$$

Since the number of total population is 902 which is less than 10,000 the study employed correction formula

N= 902

n= 384

$$\frac{n}{1+\frac{n}{N}} = \frac{384}{1+\frac{384}{902}} = 269 + 27\ (10\%) = 296$$

Based on the above assumptions a total of 296 Female students aged 18 and above attending their education in Menelik II Health Science College will be required for the study.

4.8.Sampling method

To obtain a representative sample, stratified random sampling was applied to select study participants from the source population. First the students were divided in to 2 practical strata, which are Diploma and Degree. Diploma strata divided in to 3 practical strata which are year one, year two and year three. From each stratum, participants were selected by simple random sampling based on the proportion of the number of female students in each stratum that was 260 diploma (year one (120), year two (57) and year three (83)) and 36 Degree health science students were obtained from Menelik II College of Health Science registrar office's student list.

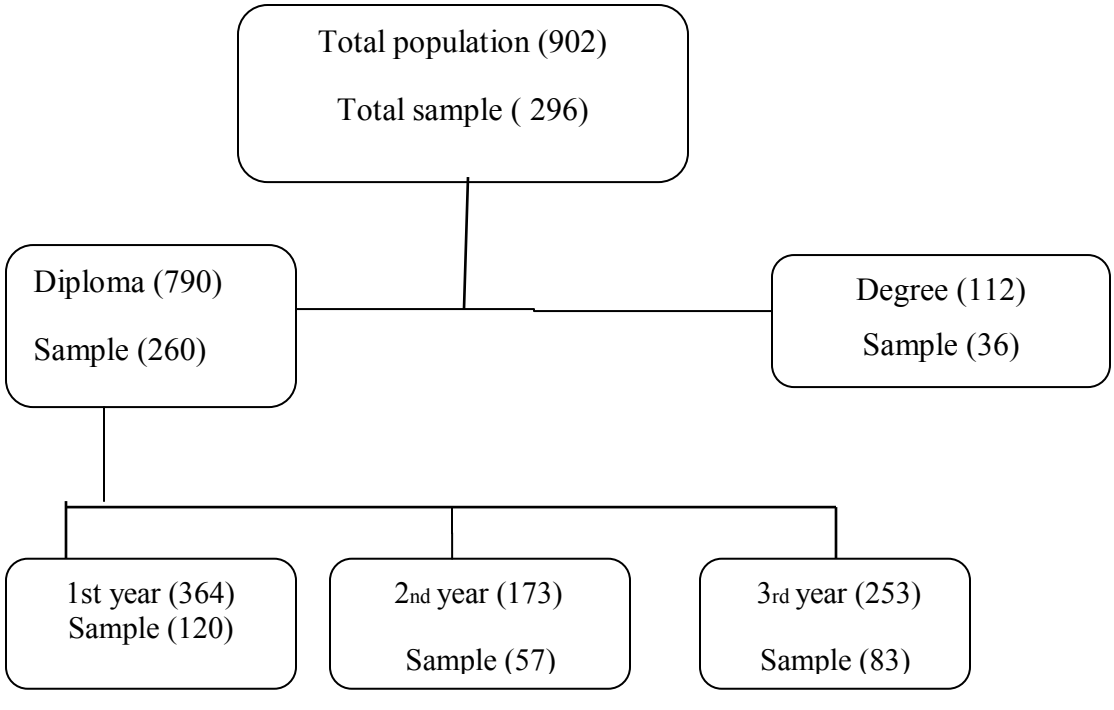

Figure 2: sample distribution

4.9. Variables

4.9.1. Independent variables: -

- Age,
- marital status,
- Educational status (year of study and type of study),
- Religion,
- Information Access,
- Personal interest and
- access to screening services,
- screening Service Cost,
- Screening services' quality

4.9.2. Dependent variable:-

- Knowledge and
- Attitude regarding cervical cancer and screening

4.10. Operational definition

Knowledge: respondents' understanding that have about carcinoma of the cervix with respects to the correct response to that of knowledge questions that includes symptoms, risk factors, prevention and treatment, screening method classified into three categories: Good (with a score of 80 – 100% of knowledge related questions), Satisfactory (with a score of 50 – 79%) and Poor (with a score of less than 50%) knowledge (28).

The total score possible ranges from 0 to 20. Scores ranging from 0-9, 10-18 and 19-20 were used to rate the knowledge as Poor, Satisfactory and good respectively (28)

Attitude: the respondents' belief and feeling toward cervical Cancer and screening and classified into two Categories by mean score calculation:

Positive attitude: the mean score and scored above the mean to that of attitude questions

Negative attitude: those score below the mean towards attitude questions (28).

4.11. Methods and tools of Data collection

4.11.1. Tools for Data collection

Data were collected using structured closed ended self-administered questionnaire adopted from similar studies (41) and modified after reviewing literatures

The data collection instrument consists of socio-demography data, knowledge and attitude about cervical cancer and screening.

The knowledge questions are 20 items accounts 0 to 20 points of knowledge of carcinoma of the cervix and screening for premalignant cervical lesion. There were eight multiple choice questions that carried a total of 12 correct responses. Each correct response will give a score of 1 and a wrong response a score of 0. Total points to be scored were 12 and the minimum was 0.

Attitude was assessed by 7 questions put on Liker's scale. The questions on Liker's scale had positive and negative responses that ranged from strongly agree, agree, neither agree nor disagree, disagree and strongly disagree. The scoring system used with respects to respondents' responses will as follows: strongly agree scored 5, agree 4, neither agree nor disagree 3, disagree 2, strongly disagree 1. The highest score will be expected to be 35 and the lowest score to be 7.

4.11.2. Method of data collection

Data was collected using self-administered structured Amharic version questionnaire

4.11.3. Data quality control

The quality of the data was ensured through careful design standard data collection tool, translation and retranslation and

Pretesting of the questionnaire was done 7 days before the actual data collection days on similar setting in Addis Ababa Health Science College on women aged $\geq$18 years by considering 5 % of the total sample size and based on the finding of the pre-test necessary adjustment was done to data collection tool.

Proper training for supervisors and data collector was considered, close supervision of the data collectors and proper handling of the data. It was monitored frequently both in the field and during data entry that is all completed questionnaire was examined for its completeness and consistency during at the end of each day. Data entry was also done carefully by the principal investigator.

4.12. Data organization and analysis

Data were entered into SPSS database program version 20 and analyzed using it. The result was presented in text and frequency tables.

4.13. Ethical consideration

Ethical approval and clearance was obtained from Addis Ababa University, College of Health Science, School of Allied Health Science and Department of Nursing and Midwifery institutional review board committee. Permission also obtained from Addis Ababa Health Bureau and the respondents was explained in detail about the research; the respondents were let to decide on whether to participate or not in the study and this ensured the right of self-determination and autonomy. The respondents who agreed to participate had been given a verbal consent. The data obtained was treated privately with no name tag on it. The respondents were treated with respects and their rights to privacy and confidentiality had been respected.

4.14. Dissemination of the result

The result of this study was submitted to respected department in the form of hard and soft copies. All necessary efforts will be exerted to publish the result on repeatable journal and organizing work shop, presentation on professional association conference also considered.

5. RESULTS

5.1. Socio-demographic characteristics of the study participants

A total of 296 female Menelik II Health Science College Students participated in the study. However, 4 questionnaires were not completed hence not used for analysis, making the response rate 98.6 %. The mean age of the female student was 23.9 years (SD=4.2) and ranges from 18 to 45 years.

Most of the respondents 208 (71%) were orthodox Christian by religion and Amhara 15(52.9%) by ethnicity. A significant number 212(72.7%) of the respondents were diploma student among them 99(33.8%) are first year diploma student. More than half were un married (72.7 %) (Table 1).

Table 1: Socio-demographics characteristics of the female students, Menelik II College of Health Science Addis Ababa, Ethiopia from March to April 2015

Variables	Frequency (N= 297)	Percent (100%)
Age		
18-22	120	41.0
23-27	132	45.1
28-32	27	9.2
>33	14	4.8
Mean (Std. Deviation)	23.9(±4.2)	
RELIGION		
Orthodox	208	71.0
Protestant	46	15.7
Muslim	32	10.9
Catholic	2	0.7
Others	5	1.7
ETHINICITY		
Amhara	155	52.9
Oromo	80	27.3
Gurage	28	9.6
Tigre	21	7.2
Others	9	3.1

MARITAL STATUS		
Never married	213	72.7
Currently married	75	25.6
Divorced	5	1.7
Level of education and department		
First year Degree		
Midwifery	42	52.2
Nursing	13	16.2
Medical laboratory	18	22.5
Neonatal nursing	7	8.8
First year Diploma		
Midwifery	98	99
Nursing	1	1
Second year Diploma		
Midwifery	24	82.8
Nursing	5	17.2
Third year Diploma		
Nursing	28	22.9
Medical laboratory	21	24.7
Pharmacy	19	22.4
Midwifery	17	20

5.2. Knowledge on Cervical Cancer Screening

Regarding the status of the study subjects' knowledge, the results showed that the majority 180 (61.4%)) of people had satisfactory knowledge while 68 (22.2%) and 48 (16.4%) of them had poor and good knowledge respectively. The mean knowledge score was 11.70 (SD 2.744), the minimum knowledge score was 2 and maximum score was 17. The result depicted in Table 3 show the proportion of women who correctly responded to the knowledge question regarding the Cervical Cancer Screening. More than 96.2 % of the women knew that Cervical Cancer screening prevent cervical.

Table: 3 Distribution of knowledge scores of the respondents, Menelik II Health Science Collegeof Addis Ababa, Ethiopia from March to April 2015

Variables	Frequency	Percent
Heard of about cervical cancer		
yes	283	96.6
no	10	3.4
seen a patient with cervical cancer		
no	201	68.6
Yes	92	31.4
cervical cancer can be prevented		
yes	223	76.1
no	70	23.9
cervical cancer can be treated		
yes	259	88.4
no	34	11.6
symptoms of cervical cancer		
Vaginal bleeding	96	32.8
Vaginal foul smelling discharges	112	38.2
Do not know	80	27.3
Other	5	1.7
the risk factors for cancer of the cervix		
Acquiring HPV virus	151	51.5
Don't know	56	19.1
Having multiple sexual partners	40	13.7
Cigarette smoking	25	8.5
Early sexual inter course	16	5.5
Other	5	1.7
women prevent getting cancer of the cervix		
Through vaccination of HPV vaccine	83	28.3
Don't know	75	25.6
Avoid multiple sexual partener	51	17.4
Quit smoking	38	13.0
Avoid early sexual inter course	38	13.0
Other	8	2.7
in earliest stage cervical cancer can be cured		
Yes	243	82.9
No	13	4.4
Don't know	37	12.6
treatment of cervical cancer		
Herbal remedies	1	0.3
Surgery	102	34.8
Specific drugs given by hospital	25	8.5
Radiotherapy	90	30.7
Do not know	75	25.6

The price of treatment in this country		
It is free of charge	12	4.1
It is reasonably priced	25	8.5
It is somewhat/moderately expensive	15	5.1
It is very expensive	74	25.3
Don't know	167	57.0
screening prevent cervical cancer		
No	11	3.8
Yes	282	96.2
procedures to detect premalignant cervical lesion		
No	47	16.0
Yes	246	84.0
procedures used in screening for premalignant cervical lesions		
Visual inspection of the cervix with acetic acid (VIA).	4	1.4
Visual inspection of the cervix with lugol's iodine (VILI).	7	2.4
Pap Smear	173	59.0
Never used	107	36.5
Other	2	0.7
frequency of screening for premalignant lesion		
Once every year	241	82.3
Once every three years	23	7.8
Once every 5 years	10	3.4
Other	19	6.5
Women of screening		
Women of 25years and above	174	59.4
commercial sex worker	48	16.4
Elderly women	33	11.3
Others	38	13.0
heard of pap smear test		
No	98	33.4
Yes	195	66.6
Knowing about pap smear taking from the cervix		
From a friend	33	11.3
From family members	18	6.1
From a nurse/doctor	153	52.2
From a community health worker	89	30.4
HPV vaccine prevent cervical cancer		
No	180	61.4
Yes	113	38.6
Barriers for Screening		
Lack of awareness	146	49.8
Lack of interest	42	14.3
Lack of access to screening services	65	22.2
Too expensive	23	7.8
poor quality of health services	12	4.1
others	5	1.7

Regarding source of information about Cervical Cancer Screening. Among the respondents, only 283(96.6%) of them heard about cervical cancer and their main sources of information were health worker (34.8%) and news media (31.4%) the details is showed on table 2.

Table 2: Source of information about Cervical Cancer Screening among female students, Menelik II Health Science College Addis Ababa, Ethiopia, June 2015

Variables	Frequency [N=283]	Percent [100%]
News Media	88	31.1
Brochures, posters and other printed materials	8	2.8
Health workers	103	36.4
Family, friends, neighbors and colleagues	55	19.4
Religious leaders	16	5.7
Teachers	10	3.5
Others	3	1.1

5.3. Attitude toward Cervical Cancer Screening

The results of the subjects' attitude toward cervical cancer screening showed that the attitude of 57.7% was positive and only 42.3 % had a negative attitude toward this phenomenon. For example, more than 96.2 % of the women agreed with the fact that screening helps in prevention of carcinoma of the cervix woman's life, or more than 61.7 % of them agreed carcinoma of the cervix cannot be transmitted from one person to another(see table 4).

1. Table 4: Distribution scores of attitude of the respondents, Menelik II Health Science Collegeof Addis Ababa, Ethiopia from March to April 2015

Variables	Frequency	Percent
Carcinoma of the cervix is highly prevalent in our country. Also, is a leading cause of deaths amongst all malignancies in Ethiopia?		
strongly agree	111	37.9
agree	113	38.6
neither agree nor disagree	46	15.7
disagree	18	6.1
strongly disagree	5	1.7

Any adult woman including you can acquire cervical carcinoma		
strongly agree	88	30.0
agree	132	45.1
neither agree nor disagree	39	13.3
disagree	26	8.9
strongly disagree	8	2.7
Carcinoma of the cervix cannot be transmitted from one person to another		
strongly agree	81	27.6
agree	100	34.1
neither agree nor disagree	31	10.6
disagree	71	24.2
strongly disagree	10	3.4
Screening helps in prevention of carcinoma of the cervix		
strongly agree	185	63.1
agree	97	33.1
neither agree nor disagree	6	2.0
disagree	4	1.4
strongly disagree	1	0.3
Screening causes no harm to the client		
strongly agree	143	48.8
agree	93	31.7
neither agree nor disagree	25	8.5
disagree	24	8.2
strongly disagree	7	2.4
Screening for premalignant cervical lesions is not expensive		
strongly agree	32	10.9
agree	90	30.7
neither agree nor disagree	69	23.5
disagree	85	29.0
strongly disagree	17	5.8
If screening is free and causes no harm, I will be screened		
strongly agree	167	57.0
agree	103	35.2
neither agree nor disagree	7	2.4
disagree	6	2.0
strongly disagree	8	2.7

6. DISCUSSION

In this study, knowledge, attitude, and barriers towards cervical cancer and screening were identified. Among all the respondents in this study, about (96.6%) heard about cervical cancer. These indicate most of the women are heard about cervical cancer. This is inconsistent with study done in Lagos, showed that (81.7%) of the respondents never heard about cervical cancer screening (24). Whereas a study done in South Africa where (42.9%) of the respondents heard about cervical cancer screening (11). This difference in awareness about cervical cancer screening might be due to source of information and the research area where in Lagos and South Africa the study had been conducted on patients where as this study was done on health science college students.

The level of knowledge was found to be low in this study, only 48 (16.4%) of respondents were knowledgeable about cervical cancer screening. This is inconsistent with study done in Kuwait 52.3% of the respondents had good knowledge (22). The finding in this study shows that there is a difference in level of knowledge between developed and developing countries could be due to different levels of intervention such as mass media campaigns to popularize cervical screening which are effectively done in developed than developing countries. The health system in developed countries is well organized, people are well motivated, sensitized and there is full access to health care services. The difference can also be due to cultural barriers where women in developing countries do not discuss diseases affecting the sexual organs as it is considered to be private and women feel shy to discuss anything about it.

Knowledge on symptoms was also poor. Almost two third of the respondents (30%) didn't know the symptoms for carcinoma of the cervix. Vaginal bleeding (32%) and vaginal foul smelling discharge (38.2%) was the commonly mentioned symptom among study participants. Whereas a study done in Lagos (25) where (20%) of the respondents know resumption of menses as a symptom of cervical cancer, 30% of the respondents know lower genital infection is a symptom of cervical cancer and 10% of the respondents know irregular menses is a symptom of cervical cancer. These similar in the knowledge of common symptoms between the two studies might be due to similarity in economic status and source of information.

The most common risk factor mentioned was Acquiring HPV virus (51.5%).This finding is different from the finding in a study done in Dar es salaam where the most common mentioned risk factors were early marriage and multiparty (31). In a Niger survey, twenty two percent of the respondents could not list any risk factor for cervical carcinoma (27), while in a study done in Ghana(32) , the commonly mentioned risk factor by half of the respondents was multiple sexual partners. The knowledge on risk factors is an important element in the prevention of cervical carcinoma. Knowledge on Risk factors was poor in this study.

Women's knowledge of who should receive cervical cancer screening was good, more than two third (87%) respondent in this study knew (according to WHO) which one has to undergo screening and 13% of the respondents mentioned any woman irrespective of her age is eligible for screening. More than half of the respondents (63.5%) who were aware of cervical carcinoma knew that carcinoma of the cervix can be screened and majority (59%) mentioned Pap smear, which is inconsistent with a study finding that is reported in South Africa **(32).** These differences between the two studies might be due to difference in source of information.

This study also looked at the respondent's attitude towards cervical cancer screening. Overall more than half of the respondent (57.7%) had a positive attitude towards cervical cancer screening. However, (42.3%) respondent's had negative attitude in this study. Majority (96.2%) of respondents agreed that screening is important in prevention of cervical carcinoma. This finding was rather similar to the finding in a study in South Africa where 98.8% of respondents agree d that screening is important (11).

A significant number of women (11.6%) expressed felling of healthy to cervical cancer and therefore believed it was unnecessary for them to have any screening done. A similar finding in a study done in Ghana showed that 48% of women expressed lack of susceptibility to cervical carcinoma (33).

More than three quarters (92.2%) of the respondents in this study agreed that they could avail themselves to screening if they were knowledgeable and if screening was free of charge and causes no harm. This means that if some barriers are eliminated many women could go for screening.

Reasons (barriers) hindering cervical cancer screening have been shown to exist in many countries. The greatest reason in this study was the inadequate knowledge about the disease and screening tests which was mentioned about 49.8% of respondents. The other reasons were Lack of access to screening services (22.2%), Lack of interest (14.3%), thought it was expensive (7.8%) and poor quality of health services (4.1%). In other studies barriers toward screening were embarrassment, pain, or the procedure being bothersome. Others were psychological fear and physiological pain (14).

7. STRENGTH AND LIMITATIONS OF THE STUDY

Self-administer questioners was given to the students almost all the questioner responded well the study was random selection; questionnaires were pre tested and necessary corrections made. Six different departments, were possessed to collect the data. The findings of the study can be used as base line information for other researchers. Utilization of appropriate data collection procedures and statistical methods played a role in minimizing bias

However, since the study involved questions of personal sensitive issues related to cervical cancer, it might have introduced some social desirability bias and creates limitation of the study, refusal of some respondents to be interviewed were the limitations of this study.

8. CONCLUSIONS

Among the respondents, majority of the women had ever heard about cervical cancer screening. Most of the respondents had satisfactory knowledge about cervical cancer screening. With regard to the knowledge about risk factors of cervical cancer and knowledge about obvious symptoms of cervical cancer screening such as vaginal bleeding and Vaginal foul smelling discharges the women had poor knowledge.

Women's attitude was generally positive as most of them showed a positive attitude towards cervical cancer screening.

The greatest barriers in this study was the inadequate knowledge about the disease and screening tests which was mentioned by respondents were Lack of access to screening services, Lack of interest, thought it was expensive and poor quality of health services.

9. RECOMMENDATIONS

Efforts to reduce cervical cancer mortality should focus on reaching out to the women all over the country and provide health education, barrier-specific counseling as well as community based interventions.

Women Efforts to promote cervical cancer screening among women should focus on informing women of their susceptibility to cervical cancer and encouraging a belief that active and regular screening can detect the pre-cancerous stage, hence enabling early treatment and prevention of cancer development. Women should be encouraged to take responsibility for their own health and be active participants in the screening programme.

In addition, effective delivery methods, such as the use of local celebrities (as used in HIV no more campaign) as role models to champion the uptake of screening, can increase public attention as well as effect behavioral change in screening practices among women .Opportunistic screening can increase screening rates. A woman undergoing gynecological examination or seeking reproductive healthcare is more likely to receive recommendation for a screening procedure.

At the same time, healthcare providers such as general practitioners and gynecologists 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.

The local community should also be taught, by health extension workers, health professionals, of the importance of discussing cervical cancer screening related issues with their family members so as to increase women's knowledge and attitude.

The government should play its part by increasing health care budgets and put priority on cervical cancer prevention by establishing a national awareness campaign, spreading screening services all over the country using cheap screening procedures that have shown to have reasonable sensitivity and specificity. Mainly this study give knowledge about cervical cancer disease ,treatment and prevention to menlik II health science college female students indirectly to teach to their familes ,relatives and community.

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ANNEXES

Annex 1: Information sheet

1. **INTRODUCTION**: Addressing/ ensuring maternal health problems and related issue are important you are warmly invited to participate in the study entitled: To assess knowledge and attitude of Female Students aged ≥18 years towards Cervical Cancer Screening in Menlik II Health Science College of Addis Ababa. This study aimed at looking on how knowledgeable these women, what is their attitude towards cervical cancer screening and which is the key factor that affect knowledge and attitude of the women towards cervical cancer screening such as Source of information, Poor quality services, Cost, Sociodemographic variables etc.the study will help us to understand the magnitude of associated factors.
2. **Objective**: To assess knowledge and attitude of Female Students aged ≥18 years towards Cervical Cancer Screening in Menlik II Health Science College of Addis Ababa, Ethiopia
3. **Participation Procedure and Guideline:**
   A. The information you provide will be kept completely anonymous.That is, your name will not be indicated on any of the forms.
   B. It will take about 25 minutes to complete the questionnaire. Nevertheless if you do not want to participate in the study it is.Your right and has no influence on the teaching and learning process in this teaching institution or other areas.
   C. Since the questions are prepared in Amharic, the discussion will be in Amharic.

4. **Participation Benefits and Risk:**

   A. **Risk: -** Your participation in this study does not involve risks to you than those you experience in your daily life. You might feel some mild discomfort in responding question and the time you spent.

   B. **Benefits:-**You may experience some benefits from participating in the project. These benefits might be positive feelings from helping with important research project and your response will assist. Their knowledge and attitude of the women towards cervical cancer screening in menlik II Health Science College.

   C. **Incentives/payment for participation**:-No payment will be given in this study.

5. **Confidentiality:** - the information gathered from you will be confidential and will not be exposed to anybody. The name of the participant will not be written and will never be used in connection of any information.

6. **Right to refuse or withdraw: -**your participation is voluntary, and there is no penalty for you not wanting to participate. These means that you are free to stop fully or choose not to answer any particular question or all questions.

7. **Right as a participant: -** you have a right to have any questions about this research project answered. Please direct any question to **Haile-Michael Hailu.**

Call phone 0911415074 E-Mail hailemichaelhailu@gmail.com

Ethical clearance will be obtained from IRB of Addis Ababa University Health Science College Allied Health Sciences School of Nursing and Midwifery Department

Annex 2: English version of consent form and Questionnaire.

Addis Ababa University

College of health science allied school of health sciences

Department of nursing and midwifery

Questionnaire On Assessing Of Knowledge, And Attitude Towards Cervical Cancer Screening Among Menlik II Health Science College Female Students Aged ≥18 Years, Addis Ababa, Ethiopia. 2015

Addis Ababa University, College of Health Science, School of Allied Health Science and Department of Nursing and Midwifery Questionnaire for Assessing Of Knowledge, And

Attitude Towards Cervical Cancer Screening Among Menlik II Health Science College Female Students Aged ≥18 Years, Addis Ababa, Ethiopia.

Identification.

Ser .No _____ Date ____/_____/_____

Time at the beginning of interview _____Time at the end of interview _____

001. Questionnaire identification number /__/ __/__/

002. sub city_____

003. woreda/__/ __/

006. Interviewer code /____/____ Name _____

Informed verbal consent form before conducting the interview

Guideline for interviewers

Hello! My Name is _____. I am a member of the research team from Addis Ababa University, College of Health Science, School of Allied Health Science and Department of Nursing and Midwifery. I would like to inform you that you and I would have a short discussion concerning this study. Before we go to our discussion, I will request you to listen carefully to what I am going to read to you about the purpose and general condition of the study and tell me whether you agree or disagree to participate in this study.

Read the following paragraph for the selected respondent.

The purpose of conducting a study is to assessof Knowledge, And Attitude towards Cervical Cancer Screening among Menlik II Health Science College Female Students Aged ≥18 Years, Addis Ababa, Ethiopia.

We are kindly requesting you for a little of your time, about 25 minutes, to be involved in this study. In the end, it is hoped that the information you give us could help to design appropriate reproductive health services forKnowledge, And Attitude towards Cervical Cancer Screening among We would like to assure you that your name will not be used and your responses, to any of the questions, will not be given to anyone else and no reports of the study will ever identify you. If a report of results is published, only information about the total group will appear. The interview is voluntary. Your participation, non-participation or refusal to respond to the questions will have no effect now or in the future on services that you or any member of your family may receive from any service providers. Only volunteers will participate in this study.

Are you willing to participate in this study?

[ ] Yes [ ] No

Supervisor'sname_____Signature_____Date_____

Part one: Sociodemographic characteristics.

S.No	Questions.	Alternative choices for response.
Q101	How old are you? (Enter number)	___ Years.
Q102	What is your religion?	Orthodox Muslim Protestant Catholic Others, (specify) --------
Q103	To which ethnic group do you belong?	Oromo Amhara Gurage Tigre Others, (specify) ---------
Q104	What is your marital status?	Never married Currently married Divorced Separated Widowed
Q105	What is your level of education?	**Degree program** First year **Degree** Second year **Degree** Third year **Degree**
		Diploma program First year **Diploma** Second year **Diploma** Third year **Diploma**
Q106	In which Department are you learning?	Clincal nursing Midwifery Radiography Medical laboratory Mental health Pharmacy OR/ pre-operative care Emergency nursing care Neonatal nursing care

Part two: Knowledge on some important concepts of cervical cancer screening

Q201	Have you ever heard about cervical cancer?	1. Yes 2. No
Q202	Have you ever heard about cervical cancer?	News Media Brochures, po sters and other printed materials Health workers Family, neighbors friends, Religious leaders Teachers Other, (specify) ---------
Q203	Have you ever seen a patient with cervical cancer	1. Yes 2. No
Q204	Is cervical cancer preventable?	1. Yes 2. No
Q205	Is cervical cancer treatable?	1. Yes 2. No
Q206	What are the symptoms of carcinoma of the cervix?	Vaginal bleeding Vaginal foul smelling discharges Do not know Other, (specify) ---------
Q207	What are the risk factors for cancer of the cervix?	Having multiple sexual partners Early sexual intercourse Acquiring HPV virus Cigarette smoking Do not know Other, (specify) ---------
Q208	How can a person prevent getting cancer of the cervix?	Avoid multiple sexual partners Avoid early sexual intercourse Quit smoking through vaccination of HPV vaccine Do not know Other, (specify) ---------
Q209	Can cancer of the cervix be cured in its earliest stages?	Yes No Don't know
Q210	How can someone with cancer of the cervix be treated?	Herbal remedies Surgery Specific drugs given by hospital Radiotherapy Do not know

		Other:
Q211	How expensive do you think cancer of the cervix treatment is in this country?	It is free of charge It is reasonably priced It is somewhat/moderately expensive It is very expensive dont know
Q212	Can screening prevent cervical cancer	Yes No
Q213	Are there screening procedures to detect premalignant cervical lesion?	Yes No
Q214	Is disease curable if detected early?	Yes No
Q215	How frequent is screening for premalignant cervical lesion done?	Once every year Once every three years Once every 5 years Other, (specify) ---------
Q216	Who should be screened?	Women of 25years and above Prostitutes Elderly women Others, (specify) ---------
Q217	Can you mention any of the procedures used in screening for premalignant cervical lesions?	Visual inspection of the cervix with acetic acid (VIA). Visual inspection of the cervix with lugol's iodine (VILI). Pap Smear don't know Other, (specify) ---------
Q218	Ever heard of pap smear test?	Yes No
Q219	How did you know about pap smear	From a friend From family members From a nurse/doctor From a community health worker Others
Q220	Dose HPV (human papilloma virus) vaccine helps prevent cervical cancer?	Yes No
Q221	What are your barriers not to have screening?	1 Lack of awareness 2 Lack of interest 3 Lack of access to screening services 4 Too expensive 5 poor quality of health services 6 others,(specify)

Part three: Attitude on some important concepts of cervical cancer screening

S.No	Questions.	Alternative choices for response.
Q301	Carcinoma of the cervix is highly prevalent in our country and is a leading cause of deaths amongst all malignancies in Ethiopia.	5 -strongly agree 4 - agree 3 -neither agree nor disagree 2 -disagree 1 -strongly disagree
Q302	Any adult woman including you can acquire cervical carcinoma	5 -strongly agree 4 - agree 3 -neither agree nor disagree 2 -disagree 1-strongly disagree
Q303	Carcinoma of the cervix cannot be transmitted from one person to another	5 -strongly agree 4 - agree 3 -neither agree nor disagree 2 -disagree 1 -strongly disagree
Q304	Screening helps in prevention of carcinoma of the cervix	5 -strongly agree 4 - agree 3 -neither agree nor disagree 2 -disagree 1 -strongly disagree
Q305	Screening causes no harm to the client	5 -strongly agree 4 - agree 3 -neither agree nor disagree 2 -disagree 1 -strongly disagree
Q306	Screening for premalignant cervical lesions is not expensive	5 -strongly agree 4 - agree 3 -neither agree nor disagree 2 -disagree 1 -strongly disagree
Q307	If screening is free and causes no harm, will you screen	5 -strongly agree 4 - agree 3 -neither agree nor disagree 2 -disagree 1 -strongly disagree

Annex 3: Amharic version of the consent form and Questionnaire

በአዲስአበባዩኒቨርሲቲየጤናሳይንስኮሌጅአላይድየጤናሳይንስትምህርትቤት

የሚድዋይፍናነርሲንግትምህርትክፍል

በሚኒልክ ጤና ሳይንስ ኮሌጅ የሚገኙእድሜያቸዉከ≥18አመት የሆኑሴት ተማሪዊች ስለማህፀን ካንሰር ምርመራ ዘዴያላቸዉንየእዉቀትናአመለካከትደረጃለመገምገምየተዘጋጀመጠይቅ፣

አዲስአበባ፣ኢትዮጵያ፣2007

በአዲስአበባዩኒቨርሲቲየጤናሳይንስኮሌጅአላይድየጤናሳይንስትምህርትቤትየሚድዋይፍናነር ሲንግትምህርትክፍል፡፡በሚኒልክ ጤና ሳይንስ ኮሌጅ የሚገኙእድሜያቸዉከ≥18 አመት የሆኑሴት ተማሪዊች ስለማህፀንካንሰር ምርመራ ዘዴ,ያላቸዉንየእዉቀትናአመለካከትደረጃለመገምገምየተዘጋጀመጠይቅ፡፡

መለያ

ሴሪቁ. _____ ቀን _____/_____/_____

ቃለመጠይቁየተጀመረበትሰአት _____ቃለመጠይቁየተጠናቀቀበትሰአት _____

001. የመጠይቅመለያቁጥር /__/ __/__/

002. ክፍለከተማ_____

003. ወረዳ/__/ __/

004. የጠያቂዉ/ዋመለያቁጥር /_____/_____ ስም _____

ቃለመጠይቁከመጀመሩበፊትየኢ-መደበኛየቃልስምምነትመጠየቂያቅጽ

የጠያቂዉመመሪያ

ጤናይስጥልኝስሜ----------

ይባላል፡፡የመጣሁትበአዲስአበባዩኒቨርሲቲየጤናሳይንስኮሌጅአላይድየጤናሳይንስትምህርትቤ ትየሚድዋይፍናነርሲንግትምህርትክፍልየተማራማሪዎችቡድንአባልነኝ፡፡በቅድሚያስለምሰራ ዉጥናትትንሽላስተዋዉቅዎትናከዛበኋላለጥናቴየሚረዳኝመረጃለማግኘትአጭርየዉይይትጊዜ ይኖረናል፡፡ዉይይታችንንከመጀመራችንበፊትግንአሁንየማነብልሽን፣ስለጥናቴአላማናአጠቃላ ይሁኔታየሚገልጸዉንጽሁፍሳነብልሽበጥሞናበማዳመጥበሃሳቡበጥናቴዉስጥለመሳተፍእንደ ምትስማሚወይምእንደማትስማሚትገልጭልኛለሽ፡፡

የዚህጥናትአላማበሚኒልክ ጤና ሳይንስ ኮሌጅ የሚገኙእድሜያቸዉከ≥18 አመት የሆኑሴት ተማሪዊች ስለማህፀንካንሰር ምርመራ ዘደ.ያላቸዉንየእዉቀትናአመለካከትደረጃመገምገምነዉ።።

ስለሆነምካለሽጊዜላይበዚህጥናትለመሳተፍ፣ሰላሳደቂቃቆይታእንዲኖረንፈቃድሽእንዲሆንበት ህትናእጠይቃለሁ።።ለጥናቱየምትሰጪዉመረጃበአጠቃላይስለማህፀንካንሰርምርመራዘደ.ሴቶ ችንበተመለከተበስነተዋልዶጤናዘርፍበሚደረገዉእቅድስለሚጠቅምበቅድሚያእናመሰግናለን፡ ፡በዚህጥናትላይየምትሰጭዉመረጃእንዲሁምስምሽበሚስጥርየሚጠበቅሲሆንበሌላሰዉእጅም ተላልፎአይሰጥምከዚህጥናትዉጭምአገልግሎትላይአይዉልም።።የዚህጥናትዉጤትለህትመ ትቢበቃእንኳንበአጠቃላይምርምርስለተደረገበትቡድንእንጂየግለሰቦችስምናመረጃበፍጹምአይ ጠቀስም።።ቃለመጠይቁበፈቃደኝነትላይየተመሰረተነዉ።።በዚህጥናትላይመሳተፍሽ፣ለመሳተፍ አለመፍቀድሽ፣ወይምመቃወምሽወደፊትአንቺወይምከቤተሰቦችሽአንዱከአገልግሎትሰጪተቋ ማትየሚያገኘዉወይምየሚያጣዉምንምነገርየለም።።በዚህጥናትየሚሳተፉትበፍላጎትብቻነዉ።። በዚህጥናትለመሳተፍፈቃደኛነሽ?

[ ] ፈቃደኛነኝ [ ] ፈቃደኛአይደለሁም

የተቆጣጣሪዉስም----------ፊርማ----------ቀን----------

ክፍል 1. የጥናቱ ተሳታፊዎች አጠቃላይ ማህበራዊ መረጃዎች

ተቁ.	ጥያቄ	አማራጭ መልሶች
101	እድሜሽስንትነዉ;	---------አመት.
102	የምን ሀያማኖት ተከታይ ነሽ;	1. ኦርቶዶክስ 2. ሙስሊም 3. ፕሮቴስታንት 4. ካቶሊክ 5. ሌላካለይግለጹ---------
103	ብሄር;	1. ኦሮሞ 2. አማራ 3. ጉራጌ 4. ትግሬ 5. ሌላካለይግለጹ---------
104	የጋብቻሁኔታ	1. ያላገባ 2. ያገባ 3. የፈታች 4. በሞትየተለየ
105	በትምህርት ስንተኛ አመት ነሽ	**በዲግሪ ፕሮግራም** የመጀመሪያ አመት ሁለተኛ አመት ሶስተኛ አመት
		ዲፕሎማ ፕሮግራም የመጀመሪያ አመት ሁለተኛ አመት ሶስተኛ አመት
106	በየትኛው የትምህርት አያነት ውስጥ ትማሪያለሽ	1. በነርሲንግ ትምህርት 2. በአዋላጅ ነርስ ትምህርት 3. በፍክስ ፈይ ትምህርት 4. በላቦራቶሪ ትምህርት 5. ሥነ አእምሮ ትምህርት 6. በፋርማሲ

		7. በቅደመ ቀዶ ጥገና ትምህርት 8. በድንገኛ ዝግጅት እርዳታ 9. በጨቅለ ህጻናት እርዳታ ትምህርት

ክፍል ሁለት ስለማህፀንካንሰርያላት/እውቀት

ተ ቁ.	ጥያቄ	አማራጭ መልሶች
201	ስለማህጸንካሰርበሽታከዚህበፊትሰምተሽታውቂያለሽ ? .	ሀ. ሰምቻለሁ ለ. አልሰማሁም
202	ለመጀመሪያጊዜስለማህፀንካንሰርበሽታየሰማሽውየትነ ው?	ሀ. በዜናማሰራጫ ለ. በበራሪወረቀቶች ሐ. በጤናባሙያዎች መ. ከጓደኞቼ ሰ. ከጎረቤት፣ከቤተሰቤ... ረ. ከሐይማኖትአባች ከመምህራኖች ከተለያዩቦታዎች...
203	ለመጀመርያ ጊዜ በማህጸን ካንሰር የተጠቃ ህመምተኛ አያተሽ ታወቂያለሽ?	ሀ. አዎ ለ.የለም
204	የማህጸን ካንሰርን ማስወገድ ይቻላል፡፡	ሀ. አዎ ለ. አያቻለሁ
205	የማህጸን ካንሰርን ማካም ይቻላል	ሀ. አዎ ለ. አያቻልም

206	የማህፀንበሽታምልክቶቹምንምንድንናቸው?	ሀ. ከብልትደምመፍሰስ ለ በሽታያለውየማህፀንፈሳሽ ሐ አላውቅም መ. ሌላምልክትካለብትገልጪ----------
207	ለማህፀን ካንሰር ሰበቦቹ ምንድን ናቸው	ሀ. ካንድ ጓደኛ በላይ ግንኙነት ማድረግ ለ. በአፍላ ወጣትነት ግዜ የግብረ ሥግ ግንኙነት ማድረግ ሐ. በማህጸን ካንሰር ቫይረስ (HPV) መጠቃት መ. ሲጋራ ማጨስ ሠ. አላወቅም ረ. ሌላ ካለ ይገላጽ
208	የማህፀንካንሰርበሽታንእንዴትማስወገድይቻላል	ሀ). ካንድበላይየሆነጓደኛአለማፍራት ለ)በለጋዕድሜየግብረሥጋግንኙነትአለማድረግ ሐ). ሲጋራማጨስንማቆም መ). ለማህፀንካንሰርናበሽታክትባትበመከተብ ሠ). አላውቅም ረ). ሌላካለቢገለጽ

209	የማህፀንካንሰርበሽታንበቅድመመከላከልደረጃማዳንይቻላል	ሀ. ይቻላል ለ. አይቻልም ሐ. አላውቅም
210	አንዲትበማህፀንካሰርየተያዘችህመምተኛንእንዴትማዳንይቻላል	ሀ. በባህላዊህክምና ለ. በቀዶጥገና ሐ. በኪኒንመሰልበሐኪምየታዘዘ መ. በህክምናበጨረርመሰል ሠ. አላውቅም ረ. ሌላካለቢገለጽ
211	በዚህሀገር (ኢትዮጵያ) የማህፀንካሰርለማከምበዋጋደረጃስንትያስከፍላል	ሀ. በነጻነው ለ. ተመጣጣኝዋጋአለው ሐ. በመጠኑዋጋውየተወደደነው መ. በጣምውድነው ሠ. አላውቅም
212	ቅድመ ምርመራ ማድረግ የማህፀን ካንሰር በሽታ ማስወገድ	ሀ. አዎ ለ. አይቻልም
213	ስለማህፀንካሰርበሽታለማህፀናካንሰርበሽታየቅድመምርመራመሰናዶዎችአሉ?	ሀ. አለ ለ. የለም
214	ለማህጸን ካንሰር ቅድመ ምርመራ የምታወቂመሰናዶዎች ከትገልጪ	ሀ. አሌቲክ አሲድ በሚባ ኬሚካል በመጠቀም የማህጸን መመልከት ለ. ሎጎል አዩደን ኬሚካል ለመጠቀም ማህጸንን

		መመልከት ሐ. ከማህጸን ላይ ናሙና ተወሰቅ ምርመራ ማድረግ መ. አላወቅም ሠ. ሌላ ካለ ከትገልጪ
215	ለማህጸንካሰርበሽታበየስንትግዜውቅድመምርመራመደረግአለበት?	ሀ. በየዓመቱ ለ. በየሶስትዓመቱ ሐ. በየአምስትዓመቱ መ. ሌላካለበጊለጽ
216	ቅድመምርመራማድረግያለበትማነው ?	ሀ. ከሀያአምስትዓመትበላይየሆነ ለ. ሴተኛአዳሪዎች ሐ. በዕድሜየገፉሴቶች መ. ሌላካለበጊለጽ
217	ከማህጸን ላይ ናሙና ተወስዶ ምርመራ ማድረግ ለዚህ ምርመራ ሰምታሽ ታወቂያለሽ?	ሀ. አዎ ለ. አላውቅም
218	ከማህጸን ላይ ናሙና ተወስዶ ስመርመራ እንዴት አወቅሽ ?	ሀ. ከጓደኛ ለ. ከቤተሰብ ሐ. ከነርስ /በሀኪም መ. ከአባባዩ ከሚገኝ የጤና ግለሰብ

219	የማህጸን ካንሰር ክትባት በሽታውን ያስወግዳል	ሀ. አዎ ለ. የለም
220	ቅድመ ምርመራ እንዳታደርጊ መሰናክሎቹ ምንድን ናቸው?	ሀ.የግንዛቤ ማጣት ለ.የፍላጎት ማጣት ሐ.ለቅድመ ምርመራ መንግዶች መታጣት መ.ምርመራው ውድ ስለሆነ ሠ.ጥራት የሌለው የህክምና አገልግሎት መኖር ረ.ሌላ ካለ ብትገልጪ

ክፍል 3 ስለማህፀንካንሰርያላትአመለካከት

ተ ቁ.	ጥያቄ	አማራጭ መልሶች
301	የማህጸን በሽታ በሀገራችን በከፍተኛ ሁኔታበመሰራጨትላይይገኛልበቀደምትነትምየ አሀገራችንንዜጎችህይወትእየቀጠፈይገኛል።	ሀ. በጣምእስማማለሁ ለ. እስማማለሁ ሐ. ልስማማምላስስማማምእችላለሁ መ. አልስማማም ሠ. በጣምአልስማማም
302	ማንኛውም ሴት አንችንም ጨምሮ በማህጸን ካሰር በሽታ ልትለከፊ ትችያለሽ?	ሀ. በጣምእስማማለሁ ለ. እስማማለሁ ሐ. ልስማማምላስስማማምእችላለሁ

		መ. አልስማማም ሠ. በጣምአልስማማም
303	ማህፀንካሰርበሽታተላላፊአይደለም	ሀ. በጣምእስማማለሁ ለ. እስማማለሁ ሐ. ልስማማምላስስማማምእችላለሁ መ. አልስማማም ሠ. በጣምአልስማማም
304	ቅድመምርመራበማድረግየማህጸንካንሰርበሽታንለመከላከልይረዳል?	ሀ. በጣምእስማማለሁ ለ. እስማማለሁ ሐ. ልስማማምላልስማማምእችላለሁ መ. አልስማማም ሠ. በጣምአልስማማም
305	ቅድመምርመራበማድረግተመርማሪውንለጉዳትአይዳርግም	ሀ. በጣምእስማማለሁ ለ. እስማማለሁ ሐ. ልስማማም ላልስማማም እችላለሁ መ. አልስማማም ሠ. በጣምአልስማማም
306	ለማህጸንካሰርበሽታቅድመምርመራማድረግበዋጋደረጃውድአይደለም	ሀ. በጣምእስማማለሁ ለ. እስማማለሁ ሐ. ልስማማምላልስማማምእችላለሁ መ. አልስማማም ሠ. በጣምአልስማማም
30	ቅድመምርመራለማህፀንካሰርበሽታማድረግለጉ	ሀ. በጣምእስማማለሁ

7	ዳት·አሳልፎካልሰጠኔምእመረመራሁ	ለ. እስማማለሁ ሐ. ልስማማምላልስማማምእችላለሁ መ. አልስማማም ሠ. በጣምአልስማማም

Annex4: Declaration

I, the undersigned declare that this thesis is my original work and has not been presented for a degree in this or any other university and that all sources of materials used for this thesis have been duly acknowledged.

Name of the principal investigator: Haile-Michael Hailu(BSc, MSc candidate)

Date: _____Signature: _____

Confirmation of the advisor

Name of the Advisor: Endalew Gemechu (BSc, MSc, RN)

Date: _____Signature: _____