

Chapter One

Introduction

1.1 Background to the study.

Cervical cancer is the most common cause of cancer-related deaths in females in low and middle income countries¹, and the 2nd most common cause of death in females. It is the 4th most common cancer and cause of cancer-related deaths in women with an estimated 570,000 new cases and 311,000 deaths¹. Africa has the highest incidence and mortality rates of cervical cancer in the world, which is ten times higher than that seen in western countries.

Cervical cancer is one of the most common cancers in the women¹ and 80% of cases occur in the developing world. It is the leading cause of mortality from cancers among women living in developing countries².

Cervical cancer screening enables the detection of abnormal cervical cells, including precancerous cervical lesions, as well as early stage cervical cancer. Routine cervical screening has been shown to reduce both the incidence and mortality of the disease. However, over 80% of invasive cervical cancers worldwide occur in developing countries, largely as a result of the challenges in establishing effective screening programs. The World Health Organization estimates that only about 5% of women have been screened for cervical cancer in resource-poor countries, compared to 40–50% in the developed world. In Sub Sharan Africa (SSA), there have been efforts to improve awareness and the availability of cervical screening services. However, the coverage still remains low and the incidence and mortality rates associated with the disease are high in this region³⁸

In 2012, new cases of cervical cancer were estimated at 528,000 globally and deaths estimated at 266, 0003. In sub-Saharan Africa, 34.8 new cases of cervical cancer are diagnosed per 100,000 women annually and 22.5 per 100,000 women die from the disease. In comparison, in North America the figures are much lower: 6.6 per 100,000 women new cases and 2.5 per 100,000 women deaths⁴. According to the Cervical Cancer Global Crisis Card, Nigeria ranks 5th among countries with regards to death count from cervical cancer, after India, China, Brazil and Bangladesh⁴. Figures from the Ibadan Population Based Cancer Registry (IBCR) covering a 2 year period 2009/2010 show that cervical cancer age standardized mortality rate (ASR) was 36.0 per 100,000⁵ which is higher than in most developed countries. Cervical cancer can have very high human, social and economic costs. It has devastating effects and commonly affects women in their prime⁶. Fortunately, there are measures that offer prevention for this cancer that devastates families, which include screening approaches and vaccines that are efficacious in preventing the infections and precancerous changes that can lead to cervical cancer². Cervical cancer screening tests for precancerous lesions and cancer in women at risk, most of whom have no symptoms⁷. This includes the conventional Papanicolaou (Pap) test, liquid based cytology, visual inspection with acetic acid or lugols iodine (VIA or VILI) and Human papiloma virus (HPV) testing for high risk HPV types⁷. Three types of vaccines against HPV infection are currently available on the market - gardasil, gardasil and cervarix. They protect against high risk HPV types⁸. Women living in urban slums are mostly of low socioeconomic status and this has been shown to be associated with a higher risk of cervical cancer, poor health knowledge and poor access to health services

In Nigeria, cervical cancer is the 2nd most common cancer and, it accounts for 21% of all female malignancies with an incidence rate of 14943. ^{1, 2, 3}. The premalignant phase of cervical cancer is

between 10 and 20 years, and this allows for the possibility of early detection. Even though these are majorly asymptomatic, they are easy to detect during a routine screening³.

The screening has been shown to be effective in detecting precancerous and early cancer. Screening for high-risk human papilloma virus (HPV) alone every 5 years or co-testing with both is supported by the current evidence-based recommendation⁴. The majority of cervical cancers are caused by the human papilloma virus. The incidence of cervical cancer has decreased in developed countries over the past several decades. Increased awareness and more effective screening and prevention strategies are attributed to this. The administration of the vaccine has led to a decline in the incidence of the disease. Three types of tests are used for the screening of cancer. The tests include a Pap test, a visual inspection with acetic acid or Lugol's iodine. Public awareness of these tests is limited in developing countries. Most of the cervical cancers worldwide are caused by the two most common subtypes of the human papilloma virus, known as the "HPV 16 and 18"^{4, 5, 6}. The association of the two diseases implies that the vaccine can be used to prevent the disease. The vaccine for the human papilloma virus has been developed. In Saudi Arabia, females between the ages of 11 and 26 years were able to get two vaccinations against the human papilloma virus⁷.

Knowledge of Cervical Cancer Screening

Almost all cervical cancers are caused by persistent infection with the human papilloma virus (HPV). A combination of vaccination with the HPV vaccine and regular Pap tests can help prevent the cancers.

Based on data from the 2012 BRFSS, the percentage of women age 18 and older in Minnesota who reported that they had a Pap test in the previous three years was 81 percent. Based on the race categories provided by BRFSS, African American women were the most

likely to report having been screened in the past three years, followed by white women. Self-reported screening prevalence was lower for Hispanic women and other women. Each of the race groups had at least 99 BRFSS participants. The likelihood of having a Pap test in the past three years is strongly associated with education. Only 64 percent of women who didn't complete high school reported being screened, 71 percent of those who graduated from high school, 82 percent of those with some post-high school education, and 90 percent of college graduates were screened³⁶.

It is important that screening programs are quick and accurate so that every woman with cervical cancer gets the treatment needed.

The World Health Assembly endorsed the World Health Organization's (WHO) global strategy for cervical cancer elimination in 2020, which calls for 70% of women to be screened for cervical cancer with a high performance test. More than 62 million deaths from cervical cancer can be prevented in the next 100 years if the global strategy is implemented³⁷.

It is important that the benefits of the prevention and screening of cervical cancer are utilized by all women, including those living in the developing countries. Good knowledge and awareness will help prevent the disease burden from increasing⁵.

Most patients with cervical cancer in Saudi Arabia and other developing countries present at advanced stages, leading to adverse outcomes⁶. It has been found that treating late-stage cervical cancer is more likely than early-stage cervical cancer. Screening can help detect cancer at an early stage when it can be treated more effectively.

1.2 Statement of the Problem

Cervical cancer is the second most frequent cancer and cause of cancer-related death among women⁷. Current estimates indicate that every year 14, 943 women are diagnosed with cervical cancer and 10,403 die from the disease in Nigeria. In 2018, it accounted for 12.9%

incidence and 14.8% mortality of cancer cases. In furtherance, it was reported that there were 12,075 new cases and 7,968 deaths in 2020. In terms of risk and exposure, it is estimated that over 50.33 million women aged 15 years and above are at risk of developing the disease in Nigeria.

1.3 Justification of the Study

This study aimed at providing information that could be useful to policy makers in shaping cervical cancer screening programmes in Nigeria, it also aimed at bridging the practice gap for cervical screening among Nigerian women.

1.4 Aim and Objectives of the Study

The aim of this research is to study women's knowledge, practice and barriers to cervical cancer screening, prevention and treatment amongst women of childbearing age in Yagba west L.G.A.

The specific objectives are to:

1. Assess the knowledge of women in Yagba-West Local Government Area of Kogi State on cervical cancer.
2. Assess whether women in Yagba-West local government area practice cervical cancer screening.
3. To assess the barriers to cervical cancer screening among women of reproductive age in Yagba West local Government area
4. Identify factors influencing good knowledge of cervical cancer screening in Yagba West local government area.

1.5 Research Questions

1. What is the level of knowledge of women in Yagba West LGA about cervical cancer?
2. Do women in Yagba West LGA practice cervical cancer screening?
3. What are the barriers to cervical cancer screening among women of reproductive age in Yagba West local government area
4. What are the factors influencing good knowledge of cervical cancer screening in Yagba West local government area.

1.6 Significance of the Study

This research will be of benefit to women of reproductive age to increase their awareness about the disease and how treatment can be instituted if they are found to have it. It will also allow the women of reproductive age access health care opportunities which will in turn reduce morbidity and mortality rate through early detection and treatment. This study will assist in exploring and evaluating the evidence about knowledge and practice of cervical cancer screening in Nigeria.

1.7 Scope of the Study

This study is carried out to know the knowledge, attitude and practice of women ages 15 to 49 years and also identifying those barriers to accessing early diagnosis/treatment of cervical cancer in Yagba West local government area of Kogi State. The majority of the people in

Yagba-West are in their reproductive age, according to the 2016 census. The goals of the study are to see if the knowledge of the women on prevention and treatment will improve their health outcomes.

1.8 Limitation of the Study

The respondents were hesitant for fear of stigmatization.

The area of study has poor roads.

1.9 Operational Definition of Terms

Cervix- It is a cylinder-shaped neck of tissue that connects the vagina and uterus. It is located at the lowermost portion of the uterus; it is composed primarily of fibro-muscular tissue. (It can be called the entrance of the womb in lame man language)

Cervical cancer – it is a cancer of the cells in the cervix.

Cancer screening - is a procedure to detect cancer before symptoms appear. This may involve blood tests, or medical imaging

Attitude – Is a psychological construct, a mental and emotional entity that inheres in or characterizes a person, or their approach to something, or their personal view on it. It involves mindset, outlook and feelings.

Practice: The actual application or use of an idea, belief, or method, as opposed to theories relating to it.

Human papilloma virus: a virus responsible for cervical cancer

Endnotes

- Bray, Freddie, Jacques Ferlay, Isabelle Soerjomataram, Rebecca L. Siegel, Lindsey A. Torre, & Ahmedin Jemal. “*Global Cancer Statistics 2018: Globocan Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries.*” **CA: A Cancer Journal for Clinicians** 68, no. 6, 2018: 394–424.
- Momenimovahed, Zohre, & Hamid Salehiniya. “*Incidence, Mortality and Risk Factors of Cervical Cancer in the World.*” **Biomedical Research and Therapy** 4, no. 12, 2017: 1795.
- Shulman, L.P. “*Prophylactic Efficacy of a Quadrivalent Human Papillomavirus (HPV) Vaccine in Women with Virological Evidence of HPV Infection.*” **Yearbook of Obstetrics, Gynecology and Women’s Health** 2018: 183–184.
- Adegoke, Olusola, Shalini Kulasingam, & Beth Virnig. “*Cervical Cancer Trends in the United States: A 35-Year Population-Based Analysis.*” **Journal of Women’s Health** 21, no. 10, 2022: 1031–1037.
- Bray, Freddie, Anja H. Loos, Peter McCarron, Elizabete Weiderpass, Mark Arbyn, Henrik Møller, Matti Hakama, & D. Max Parkin. “*Trends in Cervical Squamous Cell Carcinoma Incidence in 13 European Countries: Changing Risk and the Effects of Screening.*” **Cancer Epidemiology, Biomarkers & Prevention** 14, no. 3, 2015: 677–686.
- M. Stead, PESCE European Research Team, Angus K, Holme I, et al. . *Factors influencing european GPs’ engagement in smoking cessation: a multi-country literature review.* **Br J Gen Pract.** 2009;59(566):682–690. – PMC – PubMed

- N.H Chavannes, Meijer E, Wind LA, et al. . *Herziene richtlijn 'behandeling van tabaksverslaving en stoppen met roken ondersteuning*. Ned Tijdschr Geneesk. 2017;161:D1394. – PubMed
- R. Borland, Li L, Driezen P, et al. . *Cessation assistance reported by smokers in 15 countries participating in the international tobacco control (ITC) policy evaluation surveys*. *Addiction*. 2012;107(1):197–205. – PMC – PubMed
- K. Pirie, Million Women Study Collaborators, Peto R, Reeves GK, et al. . *The 21st century hazards of smoking and benefits of stopping: a prospective study of one million women in the UK*. *Lancet*. 2013;381(9861):133–141. – PMC – PubMed
- C. Senore, L. Giordano, Bellisario C, et al. *Population based cancer screening programmes as a teachable moment for primary prevention interventions*. A review of the literature. *Front Oncol*. 2012;2:45. – PMC – PubMed
- S. Hall, Reid E, Ukoumunne OC, et al. . *Brief smoking cessation advice from practice nurses during routine cervical smear tests appointments: a cluster randomised controlled trial assessing feasibility, acceptability and potential effectiveness*. *Br J Cancer*. 2007;96(7):1057–1061. – PMC – PubMed
- Brown KF, Rungay H, Dunlop C, et al. . *The fraction of cancer attributable to modifiable risk factors in England, Wales, Scotland, Northern Ireland, and the United Kingdom in 2015*. *Br J Cancer*. 2018;118(8):1130–1141. – PMC – PubMed
- Roura E, Castellsague X, Pawlita M, et al. . *Smoking as a major risk factor for cervical cancer and pre-cancer: results from the EPIC cohort*. *Int J Cancer*. 2014;135(2):453–466. – PubMed
- Holschneider CH, Baldwin RL, Tumber K, et al. . *The fragile histidine triad gene: a molecular link between cigarette smoking and cervical cancer*. *Clin Cancer Res*. 2005;11(16):5756–5763. – PubMed

Hiscock R, Murray S, Brose LS, et al. . Behavioural therapy for smoking cessation: *the effectiveness of different intervention types for disadvantaged and affluent smokers*. *Addict Behav.* 2013;38(11):2787–2796. – PMC – PubMed

Faulkner K, Sutton S, Jamison J, et al. *Are nurses and auxiliary healthcare workers equally effective in delivering smoking cessation support in primary care?* *NICTOB.* 2016;18(5):1054–1060. – PMC – PubMed

Katz DA, AHRQ Smoking Cessation Guideline Study Group, Brown RB, Muehlenbruch DR, et al. . *Implementing guidelines for smoking cessation: comparing the efforts of nurses and medical assistants*. *Am J Prev Med.* 2004;27(5):411–416. – PubMed

Internet sources

Kingdom of Saudi Arabia Saudi Health Council Saudi Cancer Registry, “*Cancer incidence report Saudi Arabia 2014*,” 2014, <https://nhic.gov.sa/eServices/Documents/2014.pdf>. View at: Google Scholar

ICO/IARC Information Centre on HPV and Cancer, “*Saudi Arabia human papillomavirus and related cancers, fact sheet 2017*,” 2017, http://www.hpvcentre.net/statistics/reports/SAU_FS.pdf. View at: Google Scholar

Global strategy towards eliminating cervical cancer as a public health problem. Geneva: World Health Organization; 2020 (<https://www.who.int/initiatives/cervical-cancer/strategy>).

National Cancer Control Plan 2018 – 2022. Abuja: Nigeria Federal Ministry of Health; 2018 (https://www.iccp-portal.org/system/files/plans/NCCP_Final%20%5B1%5D.pdf, accessed 22 October 2020).

Jannamike L. World Cancer Day: Minister urges Nigerians to engage in physical exercises [World cancer Day Speech 2018]. Vanguard Media Limited (Nigeria). 4 February 2018 (<https://www.vanguardngr.com/2018/02/world-cancer-day-minister-urges-nigerians-engage-physical-exercises/>, accessed 22 October 2020).

Cancer Today: data visualization tools for exploring the global cancer burden in 2018 [website]. Lyon: Cancer Today – IARC; 2018 (<https://gco.iarc.fr/today/home>, accessed 22 October 2020).

Nigerian Fact Sheet 2018 [website]. Geneva: UNAIDS;2020 (<https://www.unaids.org/en/region-scountries/countries/Nigeria>, accessed 22 October 2020)

Bruni L Albero G Serrano B Mean M G Mez D, Mu oz J et al. HPV information centre on HPV and cancer [HPV information centre]. Human papillomavirus and related diseases Nigeria .summary report 17 June 2019 [<http://www.hpvcentre.net/statistics/report/nga.pdf>, accessed 22 October 2020]

WHO cervical cancer prevention and control costing [C4P] tool . in; WHO/immunization ,vaccines and biological/vaccines and diseases [websites].Geneva ;world health organisation 2020 [http://www.who.int/immunization/diseases/hpv/cervical_cancer_costing_tool/, accessed 22 October 2020]

Immunization coverage; WHO /unicef estimates of natural immunization coverage in ;who /immunization ,vaccines and biological /monitoring systems [websites].Geneva; world health organization ;2019 [http://www.who.int/immunization/monitoring_surveillances/routines/coverage/en/index4.html, accessed 22 October 2020]

World Health Organization / departmental news/research for impact/human reproduction program/6/7/2021

Chapter Two

Literature Review

2.0 Introduction

This chapter reviews the related literatures; cancer can be defined as when cells divide uncontrollably. It is the result of changes in the genes. Instructions for development, growth and reproduction are contained in the cell's hereditary material, deoxyribonucleic acid. Human and many other organisms have genes that are passed from one generation to the next. Cancer can cause changes in the genes⁴. These changes are referred to as genetic changes. Errors that occur as cells divide or damage to the DNA caused by certain environmental exposures can cause genetic changes that can cause cancer, radiation, pollution, and infections.

There are more than 100 types of cancer, and they are usually named for organs or tissues.

A type of cancer that starts in the cervix is called cervical cancer⁵. Women's uterus and vagina are connected by cells in the women's cervix, which can lead to cervical cancer. This cancer can affect the deeper tissues of their cervix and may spread to other parts of their body⁸.

Human papillomaviruses (HPV), which is preventable with a vaccine, are the cause of most cases of cervical cancers. Human Papilloma virus (HPV) is a sexually transmittable pathogen

that is the main cause of cervical cancer. There are effective interventions that can prevent the disease³.

Sometimes there is time to find and treat cervical cancer before it becomes a serious problem. Thanks to improved screening through Pap tests, fewer and fewer women are killed each year. Women 35 to 44 years old are most likely to get it. More than 15% of new cases are in women over the age of 65⁸.

The cervix is the entrance to the uterus from the vagina, the majority of cancer cases are linked to infections with high-risk human papilloma viruses. It is not uncommon for infections with the human immunodeficiency virus to cause cancer in women. It is the fourth most common cancer in women. More than 300 000 women died from the disease and an estimated 570 000 women were diagnosed with it in the last year⁶.

Cervical cancer screening enables the detection of abnormal cervical cells, including precancerous cervical lesions, as well as early stage cervical cancers. Routine cervical screening has been shown to reduce both the incidence and mortality of the disease. However, over 80% of invasive cervical cancers worldwide occur in developing countries, largely as a result of the challenges in establishing effective screening programs. The World Health Organisation estimates that only about 5% of women have been screened for cervical cancer in resource-poor countries, compared to 40–50% in the developed world. In Sub Sharan Africa (SSA), there have been efforts to improve awareness and the availability of cervical screening services. However, the coverage still remains low and the incidence and mortality rates associated with the disease are high in this region³⁸

Most cervical cancer cases will be prevented by effective primary and secondary prevention approaches. As long as it is detected early and managed effectively, cervical cancer is one of the most successfully treatable forms of cancer. Proper treatment and care can be given to

late stage cancer⁹. It can be eliminated as a public health problem within a generation with a comprehensive approach to prevent, screen and treat.

Many women with the precancerous lesion or cervical cancer don't realize they have it until it's too late. Common conditions like menstrual periods and urinary tract infections are easily mistaken for symptoms¹⁰. The symptoms of cervical cancer are similar; in between periods, after sex or after menopause, there are unusual bleedings, it looks or smells different than usual, there is pain in the abdomen, it's frequent urination, there is pain during urination⁹.

2.1 Conceptual Review

The knowledge of women about cervical cancer screening

In the developed world like USA and UK; women are knowledgeable about cervical cancer screening. The study conducted in India shows that the majority of the women didn't know about the screening for the cancer. Most of the women weren't aware of facilities for screening. Poor understanding of symptoms is a reflection of lack of knowledge. Mass media was the main source of information. The majority of the women who approached the doctors in the last year and a half were not told about the cancer. Education about screening was only provided to 9.6% of the women.

A study conducted in a tertiary institution in Lagos shows that despite a 78.5% awareness rate, the knowledge of women regarding symptoms and risk factors of cancer was poor. The awareness rate for Pap smear was very low (22.9%), with an awareness rate of 55.1%. Lack of awareness and non-recommendation of the test by doctors/nurses were the reasons for not having a Pap smear. It was found that prior counseling by doctors/nurses and knowing someone with the disease increased the knowledge of the disease, but not its use.

A study conducted in Zanzibar, Tanzania shows that inadequate awareness of and insufficient preparations for screening programs both contribute to ineffective screening results. The study showed that only 6% of women had ever been screened for cervical cancer while the majority of the women perceived that they were susceptible to cervical cancer and were willing to accept screening if it were made available⁷⁰.

Knowledge of women about cervical cancer prevention

Cervical cancer is a preventable disease, despite that, a lot of women are still dying from it especially black and Hispanic women. There are still an estimated 11,900 new cases of cervical being diagnosed in the U.S. each year⁶⁷.

A retrospective case series study was conducted in the United States of America to evaluate the general knowledge about the risk factors for cancer in a group of women who were treated for the disease. The majority of the women who participated in the study had been diagnosed with cancer, but only a small number had correctly identified the primary risk factor for the disease. The finding is in line with previous reports that only a small fraction of women have knowledge of the risks associated with the human papillomavirus. The women who were part of the study were all diagnosed with carcinoma insitu of the cervix and had knowledge about it. Women who had multiple interactions with their health care providers, because of their diagnoses and treatments, had multiple opportunities for education about HPV, were found to be the only factor associated with knowledge accuracy in this study. The influence of physicians in educating women and motivating them to take more active roles in their health care interventions is advocated by various models of disease prevention³³. In a study conducted in Uganda; almost all women had heard about cancer. Radio, health centers, and networks of friends and family members were the main sources of information. The majority of respondents stated that early detection of the disease was helpful in the treatment of the disease, while a majority knew that the disease was curable if detected early. 625 of

the respondents said that the disease could be prevented with at least one preventive measure. Only 7% of respondents knew the recommended frequencies for screening for the disease, and 743 people stated at least one symptom of the disease. Out of the 900 women, 499 had high knowledge about the disease.

The two most important things that should be done in the prevention of cervical cancer is to get HPV vaccine and test regularly

PREVENTION AND TREATMENT

Comprehensive cervical cancer control includes the following prevention steps

- 1st** → Vaccination against Human Papilloma Virus (HPV)
- 2nd** → Screening and treatment of pre-cancer lesions in women is a cost-effective way to prevent cervical cancer
- 3rd** → Treatment of invasive cervical cancer and palliative care

The infographic features a teal ribbon on the left and an illustration of a doctor in a white coat and a patient in a teal top sitting at a desk with a laptop. A large, faint watermark 'NIGERIA' is visible in the background.

Source; ekta Shakti foundation

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Steps to Prevent Cervical Cancer



The U.S. Department of Health and Human Services recommends the following steps to help prevent cervical cancer:



Get the human papillomavirus (HPV) vaccine. Girls should get the vaccine beginning at age 11 or 12. Some women through age 45 who did not get the shots when younger may still benefit from getting them. Talk to your health care provider about options.



Be sure children get the HPV vaccine. A 2017 – 2018 Centers for Disease Control and Prevention report indicated that, despite clinical recommendations, there has been no recent increase in HPV vaccinations for adolescent girls.



Encourage women to get a physical every year. Make the appointment, keep it, and bring questions to ask.



Ask your provider if any special instructions are needed before getting a cervical screening test. A variety of factors may cause an inaccurate result.



Ask if it is time for a Pap test and/or HPV test and complete the tests after consulting with a provider. These tests can help find cervical cells that are infected with HPV or have other abnormalities *before* they turn into cervical cancer.



If either test shows any abnormalities, consult with a physician to discuss a plan moving forward.

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Sources:

Healthfinder.gov, "Get Screened for Cervical Cancer," Office of Disease Prevention and Health Promotion, November 30, 2018, <https://healthfinder.gov/HealthTopics/Category/diagnostic-vitals/screening-tests/get-screened-for-cervical-cancer>.

E.J. Mandell, "HPV Vaccination Rate in U.S. Girls Has Stalled," HealthDay, August 22, 2019, <https://consumer.healthday.com/cancer-information-5/cervical-cancer-news-95/19p-vaccination-rate-in-u-s-girls-has-stalled-745585.html>.

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Knowledge of women on cervical cancer treatment

In a study conducted in North-central Ethiopia, women living in rural areas not attending formal education, low-income, and parity less than 4 were negatively associated with good knowledge of women on cervical cancer. This is possible because women who were living in urban may have access for health workers that can give health education for their clients; in addition to this, women who attend any formal education may have the ability to read different leaflet and other printed materials that are a key source of information about cervical cancer. If you have more than four children, the health facilities that provide antenatal care may be close to you. The integration of health services with cancer services would increase awareness among women. Awareness creation activities should be accessible for women who live in rural areas to learn more about the disease and prevention measures.

Women who belonged to the lower socio-economic category were less knowledgeable about the prevention of the disease compared to women who were in the high socio-economic category.

General awareness on cancer of cervix, screening knowledge and knowledge of places to visit for services were all below 40% in South East part of Nigeria¹². Study done on South African university students shows that 33% of the participants heard of screening for cancer of cervix and 33% knew that screening for cancer of cervix can prevent it¹³. A research done in South Africa, nearly half 49% of those investigated mentioned to have heard of Pap smear exam. And of the 51% slightly more than half of the 43% were mentioned to have gotten information on inspection cervix cancer majorly from physicians. South Africa has a national policy on pap smear¹⁴. In Ethiopia, community based study done in Gonder by Getahun¹⁵, 47% of its participants had no knowledge of risk factors of cancer of cervix, 39.6% did not know about the symptoms, 36.1% didn't know the preventive measures, 33.9% did not know

treatment options and 63.9% know it can be prevented. As per the study 13.7 percent of womenfolk respondents mentioned having gotten information regarding Papanicolau test¹⁶. The results of this research indicated that comprehension regarding cancer of the cervix was low, however, most women were aware of the illness. Knowledge regarding the symptoms, signs and risk factors was particularly low. Instruction and awareness about cancer of cervix should comprise message on symptoms and signs as well as risk factors for cancer of cervix¹⁷. In Addis Ababa a majority of the interviewed 81.2% mention not have received any information regarding Pap exam. Among those who received message on pap test, more than half 38 of the 52 had thorough comprehension regarding Pap smear test¹⁸. A study KAP on Pap Test conducted among Nurses in Addis, Ethiopia revealed little understanding amongst the healthcare workers¹⁹. In Addis Ababa, Ethiopia, the respondents knew of cancer however nobody could state cancer of cervix naturally. Interviewees from the 18 rural had dismal knowledge regarding cancer of whatever type. Knowledge on cancer of cervix was particularly missing²⁰. Cancer of cervix has been relegated into a less health concern sub-Saharan Africa and precedence put on illnesses such tuberculosis, respiratory infections, malaria, diarrheal illnesses as well as HIV/AIDS which have clear prevention and management plans. A number of research depict low awareness of cancer of cervix in Africa and this is reflected across diverse level of literacy. A paltry 4.3 % of 500 women visiting clinics for treatment of children and women were established as having some knowledge of cancer of cervix²¹. Still in Lagos Nigeria in the year 2004, 81.7% of 139 patients with high grade cancer of cervix were established to know nothing about cancer of cervix before and 20%, 30% and 10% correspondingly held the belief that it was as result of menstrual recurrence, lower abdominal and menses that were irregular. A majority of the women 98% held the view that the illness was treatable, 12% did not view it as anything of concern and a paltry 9% knew it was cancer and hence a terrible disease²². In a comparable research in Tanzania and Kenya similarly showed the knowledge of the illness among patients to be very

low²³. Health care providers as well as patients have been reported to have very limited knowledge about the disease. In Lagos Nigeria, untimely referral for cancer of cervix cases was the basis presenting at referral facility with cancer at advanced stage. An average of 9 to 12.9 months is what the health professionals would take in detecting cancer in women and do a referral a hospital for further care²⁴. Increased awareness and uptake for prevention against cancer of cervix is attributed to proper education. In a research conducted in amongst 375 female students in a university in Northern Nigeria as regards cancer of cervix awareness and HPV vaccine acceptability 133 of 375 (35.5%) were found to be knowledgeable of HPV, 202 (53.9%) of the interviewed had gotten message on cancer of cervix from some sources and a majority 74%, 277 were ready to take up the vaccine for HPV²⁵. In a study on beliefs and knowledge about cancer of cervix screening among 157 college students over 18 years in Accra, Ghana,²⁶ established that the interviewed appreciated that screening for cancer of cervix was beneficial.

Practice of cervical cancer screening among women of reproductive age

It is documented that several factors contribute to inefficient screening for cervical cancer and determine the stage at presentation among patients with cervical cancer in low income countries. The absence of a national screening system and low access to the service have been reported to contribute to inefficient testing and late diagnosis and treatment.³⁹

The study conducted among female health workers in Ethiopia on knowledge of cervical cancer screening and its practice found that the type of health profession was associated with perception and uptake of the screening. Health care workers are more likely to be screened for cancer than physicians are. The majority of physicians who participated in the study were general practitioners with less working experience than other health sciences. People with more working experience are more likely to be screened for the disease. It was found that

working in a screening center was associated with a higher risk of cancer. People who work in a screening center are less likely to be screened for the disease. In Ethiopia, physicians often performed the screening for the disease. The fear of a positive result could also be a factor, as those physicians might have felt shy to be screened by their friends. Beliefs about self-care, being negligent, and fear of pain would be additional explanations. Lack of trust and confidence could be one of the reasons³⁶.

Based on data from the 2012 BRFSS, the percentage of women age 18 and older in Minnesota who reported that they had a Pap test in the previous three years was 81 percent. Based on the race categories provided by BRFSS, African American women were the most likely to report having been screened in the past three years, followed by white women. Self-reported screening prevalence was lower for Hispanic women and other women. Each of the race groups had at least 99 BRFSS participants. The likelihood of having a Pap test in the past three years is strongly associated with education. Only 64 percent of women who didn't complete high school reported being screened, 71 percent of those who graduated from high school, 82 percent of those with some post-high school education, and 90 percent of college graduates were screened⁴⁰.

Cervical cancer control policy

The population based screening programme or cervical cancer control policy in Nigeria which is highly needed has been neglected and abandoned which has resulted into high increase of cervical cancer.

Overview of cervical cancer disease burden

Cervical cancer age-standardized incidence rate in 2018	27.2 per 100,000 women
Cervical cancer age-standardized mortality rate in 2018	20.0 per 100,000 women

HPV prevalence in adult women	10.2-43.5%
HIV prevalence (females aged 15-49)	1.8%

The human papillomavirus (HPV) vaccine is currently fully subsidized by Gavi in Nigeria and so its cost (assumed at US\$ 4.50 per dose) is included in the economic costs but not the financial cost. However, vaccine cost is the largest contributor to the vaccination delivery costs. As Nigeria “graduates” from Gavi support, the difference between the economic and financial costs will close. That is, the portion represented by actual outlays by the government will grow. Nevertheless, the vaccination investment will continue to constitute a small fraction of the overall cervical cancer program costs, and primary prevention of cervical cancer through vaccination will remain highly cost effective for long run health outcomes and health system utilization⁵⁶.

The vaccination cost per fully immunized girl (FIG) is lower through fixed health facilities than through school or outreach campaigns, and this report reflects an increasing shift towards delivery at fixed facilities and thus decreasing average costs per FIG. To extend the coverage rate of 78%, achieved in year 5, to the 90% of the elimination strategy target, the average cost per FIG may increase as most of the population easiest to reach in the high-volume catchment areas may already have been vaccinated, and outreach and catch-up school campaigns are necessarily implemented, including to low volume areas⁶⁶.

Federal Ministry Of Health (FMoH) is encouraged to review the financial and logistical feasibility of the rapid scaling-up of screening and pre-cancer treatment to reach the 80% coverage target set in the 2017-2021 plan, which would meet and even exceed the 2030 global elimination target for screening. While welcoming the ambitious targets, we caution that the current costing model does not take into account additional investment required to build capacity or retrain healthcare workers

on new techniques such as HPV DNA testing or the of thermal ablation to treat pre-cancerous lesions. Costs are therefore understated for this level of scale-up⁸⁰.

In line with the target framework expressed by the elimination strategy, the FMoH may consider expressing the expansion of cancer treatment services in terms of coverage so that progress may be more easily evaluated.

The causes of cancer

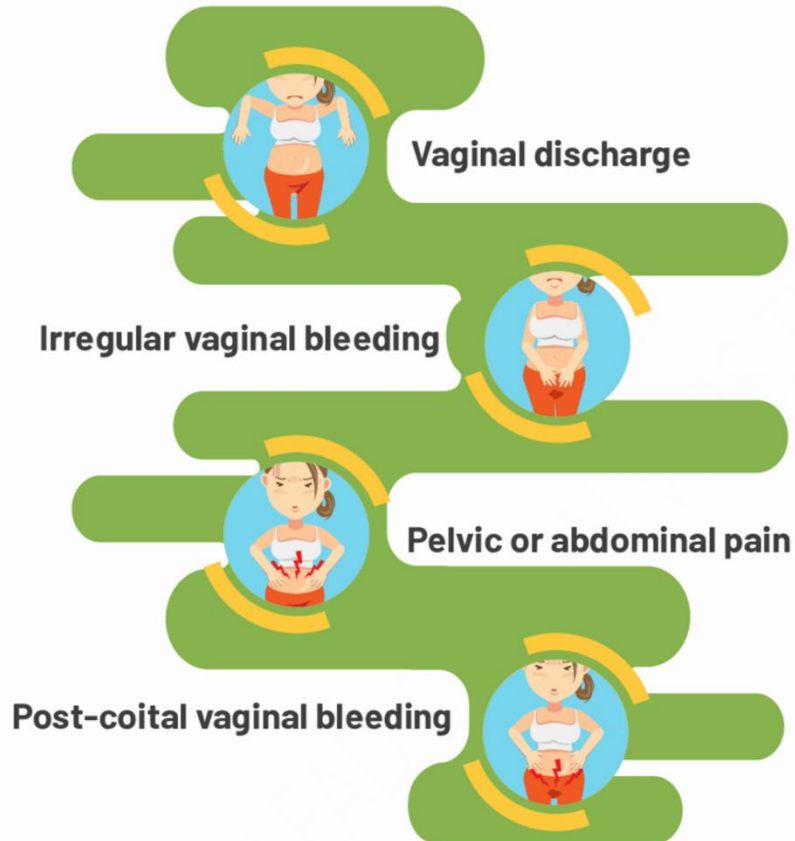
The most common cause of cancer in women is the sexually transmitted human papillomaviruses. The same virus causes genital warts³.

There are 100 different strains of the human papilloma virus. Only certain types of cancer can cause it. The two types that cause the majority of cancer are human papilloma virus-16 and human papilloma virus-18¹.

Being diagnosed with a cancer-causing strain of the human papilloma virus doesn't mean it will progress into cervical cancer. The immune system eliminates the majority of infections within two years.

The human papilloma virus can cause other cancer in women and men. They include: Vulva cancer, vaginal cancer, penile cancer, anal cancer, rectal cancer, cancer of the throat.

WHAT ARE THE CERVICAL CANCER SYMPTOMS?



IN ADVANCED STAGES



Symptoms of Cervical Cancer



Pelvic pain



Pain during intercourse



Bleeding post-menopause



Blood along with vaginal discharge



Strong odour with vaginal discharge



Bleeding between periods

Source; www.nhib.com

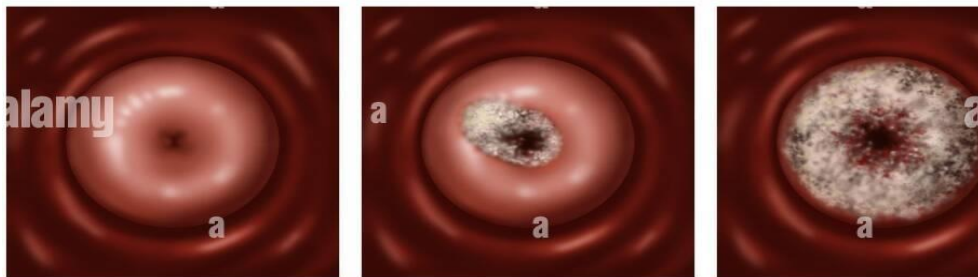
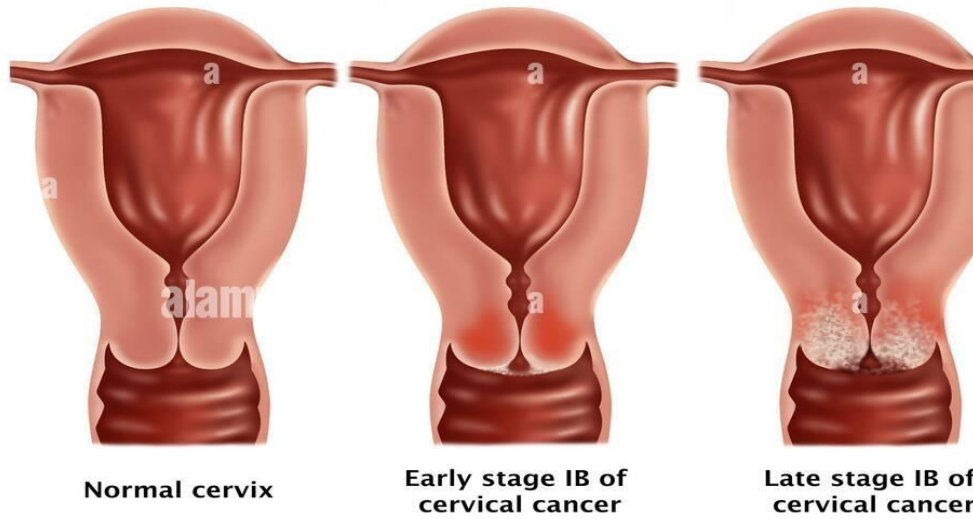
The four stages of cervical cancer are:

The cancer is small in stage 1. It could have spread to the body. It has not spread to other parts of the body.

The cancer is larger in stage 2. It may have spread to other parts of the body. It hasn't reached the other parts of the body.

Stage 3: The cancer has spread to the lower part of the vagina. The ureters are tubes that carry urine from the kidneys to the bladder. It has not spread to other areas of your body.

Stage 4: The cancer may have spread to other parts of the body.



Source; www.alamy.com

There are different types of cervical cancer.

There is more than one type of the disease; there is a cell carcinoma in the lining of the cervix. It can be found in up to 85% of cases. The cells that produce mucus contain a form of adenocarcinoma. There are features of the two other types. ⁶

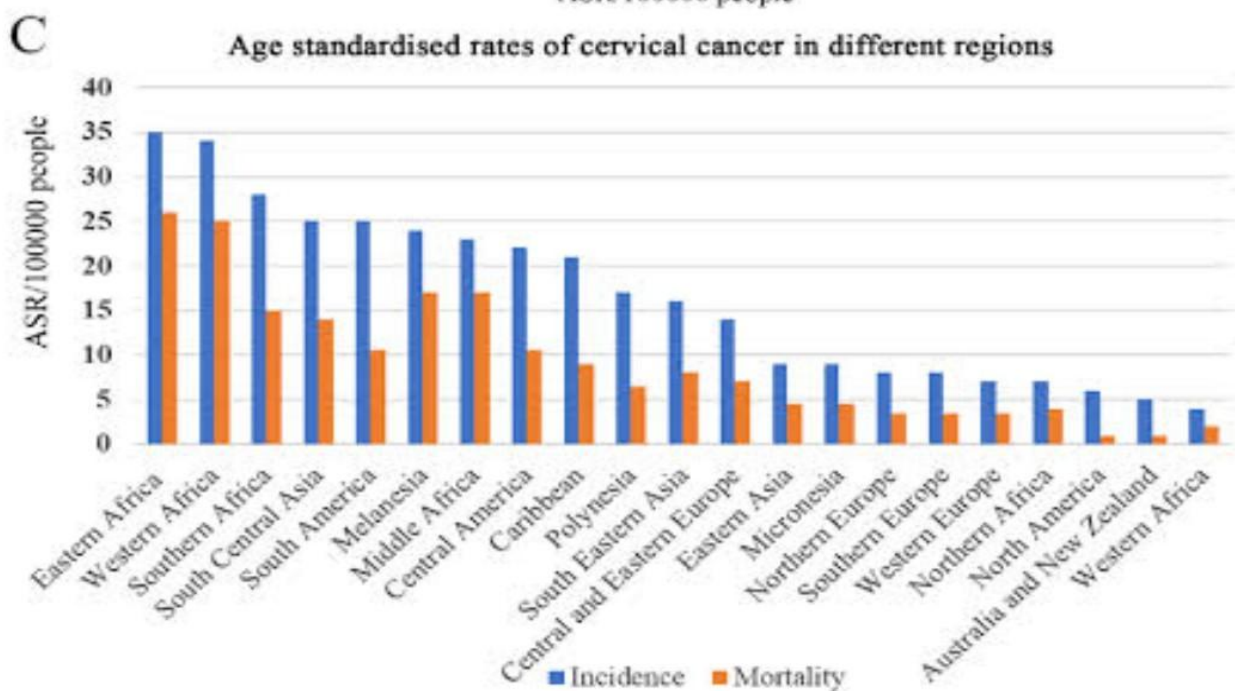
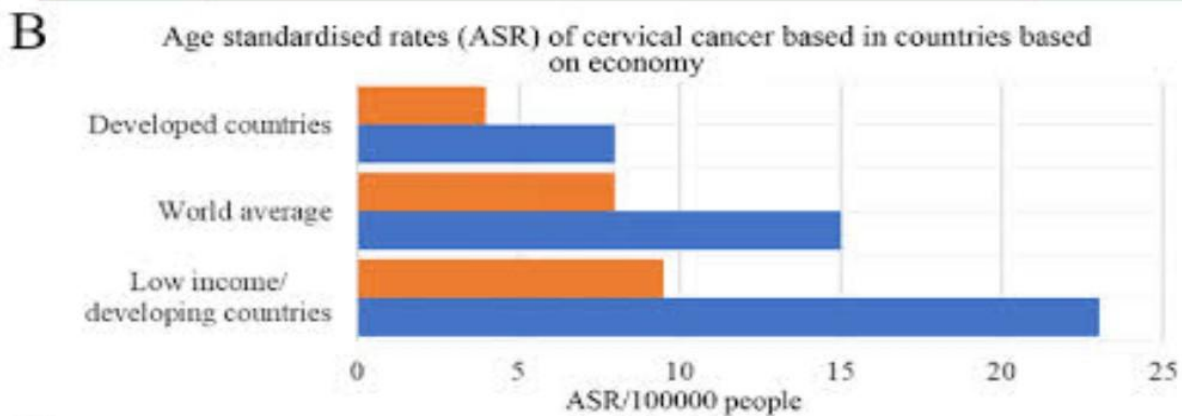
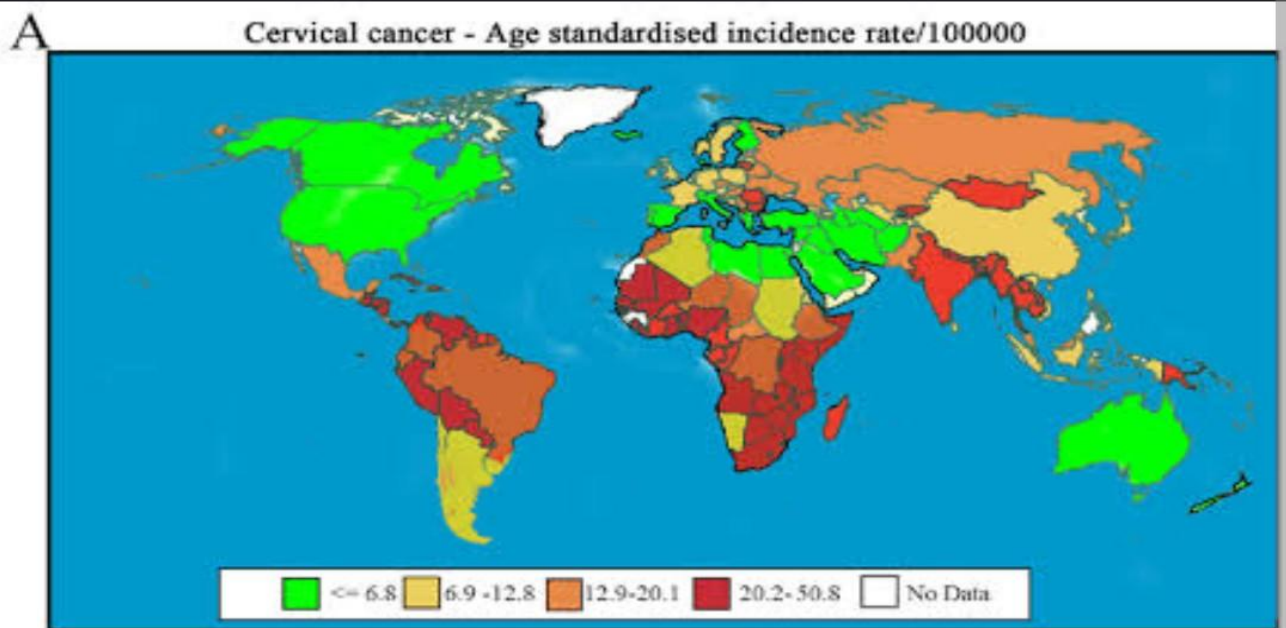
Risk factors to cervical cancer include the following: if sex has started before the age of 16 or a year after menstruation, if there are multiple sexual partners, if one has been on birth control pills for more than 5 years, people that are smoking cigarettes, having a weakened immune system, if there is untreated sexually transmitted disease.

If diagnosed early, proceeding to cervical cancer is very rare. The treatments are as follows: Surgery, radiation therapy, chemo-therapy, targeted therapy, cry therapy, or sometimes these treatments are combined to make them more effective. As much of the cancer as possible can be removed in surgery. The doctor can remove the cancer cells from the cervix. The cervix and other organs may be removed during surgery for cancer that is more widespread.

Cervical Cancer Prevalence

Cervical cancer prevalence Cancer of cervix is preventable as well as cost effectively treatable, when screening for early, timely diagnosis in asymptomatic females⁷. Cancer of cervix prevalence in the developed nations is very low but very high in less developed where it is a key health concern. While the incidence is going down in the developed states, it is going high in less developed states. The burden of cancer is high in Sub-Sahara Africa globally affecting women at the prime of their age. There is lack of programs for screening for early recognition of cancer in most states in Sub Sahara Africa. Most programs are undertaken as pilots and close when the pilot period is over. Only South Africa runs a

nationwide intervention for screening in sub Saharan Africa. The program has been since 2001 however focus is wanting and impact is not known⁸. The increased cancer of cervix incidence has been attributed to rise in HIV/AIDS epidemic in the sub region. This has been made worse by the unavailability of resources. In some regions like Ibadan in Nigeria, cervical cancer is second in all forms of cancer that afflict womenfolk⁹. About 75 percent of female that contract cancer of cervix in sub Saharan African reside in the rural. Due to unavailability of access to services as well as lack of finances, most of the women do not get treatment. More years are lost by Women in sub-Saharan Africa owing to cancer of cervix compared to any other form of cancer and this affects them when they are most productive socially and economically and required for stability of family¹⁰. Actual statistics for cervix cancer in many nations in Africa is unknown. not known because of under-reporting. Cancer registries in most countries are lacking and documentation wants 10 where available. A number of statistics in literature reviews are informed by hospital registries which accounts to a small proportion of women with cancer of cervix. Most of the women have no access to hospital and would die at home. Eastern African has a mortality rate of 35 per 100,000 whereas the developed states are barely more than 5 per 100,000 women¹⁰.



Source; research gate

Radiation therapy

Cancer cells are killed by high-energy X-ray beams. There is a machine that can deliver it outside the body. A metal tube can be placed in the uterus or vagina to deliver it. Drugs are used to kill cancer cells. The doctors give this treatment. The client gets the treatment for a while and later stop the treatment to give the body time to heal. Avastin is a newer drug that works in a different way than other drugs. New blood vessels are important to the growth and survival of cancer. The drug is given for the cancer treatment to prevent further growth of new cancer cells. It is possible to treat a precancerous cell if it is discovered on time.

Radiation therapy uses energy beams to kill cancer cells on your cervix. There are two types of radiation therapy:

External beam radiation (EBRT): Aims high-powered radiation at cancer from a machine outside your body.

Brachytherapy: Puts the radiation in or just near cancer

Chemotherapy

Chemotherapy (chemo) uses drugs that are injected through your veins or taken by mouth to kill cancer cells. It enters your blood and is effective for killing cells anywhere in your body. There are several drugs used for chemo and they can be combined. Chemo is often given in cycles. The length of the cycle and the schedule or frequency of chemotherapy varies depending on the drug used and where cancer is located.

Surgery

Different kinds of surgery are used to treat cervical cancer. Some of the most common kinds of surgery for cervical cancer include:

Laser surgery: This surgery uses a laser beam to burn off cancer cells.

Cryosurgery: This surgery freezes cancer cells.

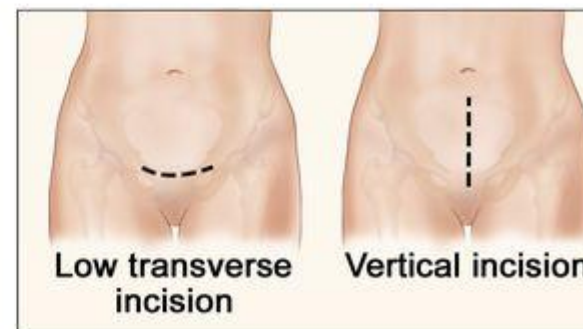
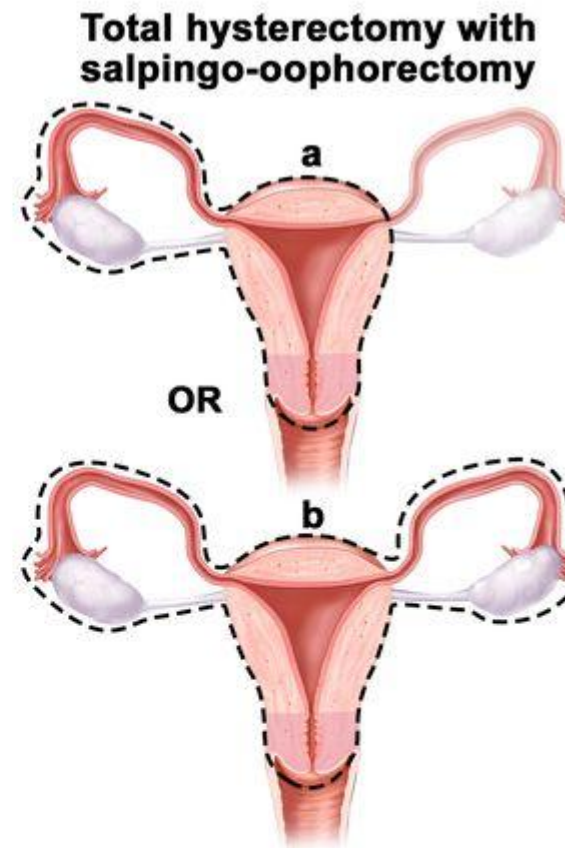
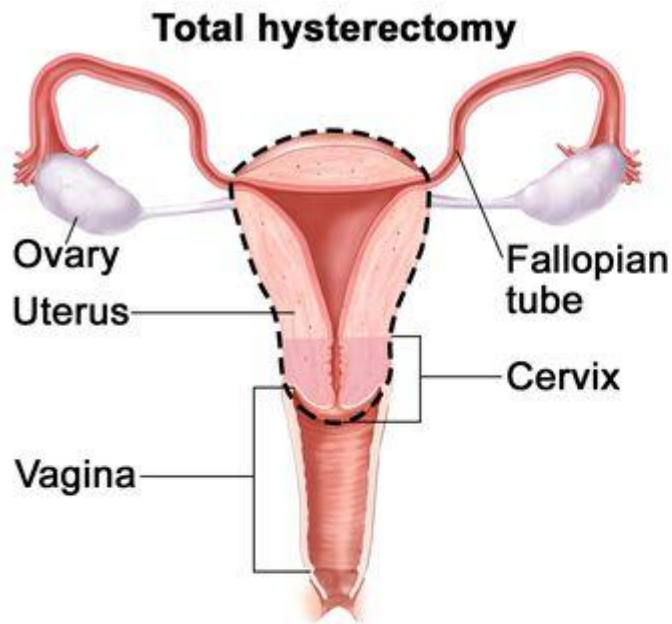
Cone biopsy: A surgery in which a cone-shaped piece of tissue is removed from your cervix.

Simple hysterectomy: This surgery involves the removal of your uterus but not the tissue next to your uterus. Your vagina and pelvic lymph nodes aren't removed.

A hysterectomy is surgery to remove the uterus. As a treatment for cervical cancer, the cervix, and sometimes the surrounding structures, are removed. Several types of hysterectomy may be used to treat cervical cancer:

Total hysterectomy removes the uterus and the cervix. When the surgery is done entirely through the vagina (with no incisions on the abdomen) and the uterus and cervix are removed through the vagina, the operation is called a total vaginal hysterectomy. If the surgery is done through a large incision on the abdomen (either vertical or horizontal) and the uterus and cervix are removed through this incision, the operation is called a total abdominal hysterectomy. If the surgery is done through small incisions on the abdomen, the operation is called a total laparoscopic hysterectomy.

The uterus and cervix are usually taken out through the vagina, although sometimes an abdominal incision is made to remove the uterus and cervix. Enlarge



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Hysterectomy. The uterus is surgically removed with or without other organs or tissues. In a total hysterectomy, the uterus and cervix are removed. In a total hysterectomy with salpingo-oophorectomy, (a) the uterus plus one (unilateral) ovary and fallopian tube are removed; or (b) the uterus plus both (bilateral) ovaries and fallopian tubes are removed. In a radical hysterectomy, the uterus, cervix, both ovaries, both fallopian tubes, and nearby tissue are removed. These procedures are done using a low transverse incision or a vertical incision.

Radical hysterectomy removes the uterus, cervix, part of the vagina, and a wide area of ligaments and tissues around these organs. The ovaries, fallopian tubes, or nearby lymph nodes may also be removed.

Modified radical hysterectomy removes the uterus, cervix, upper part of the vagina, and ligaments and tissues that closely surround these organs. This type of surgery removes fewer tissues and/or organs than radical hysterectomy. The ovaries, fallopian tubes, or nearby lymph nodes may also be removed ⁷².

Radical hysterectomy with pelvic lymph node dissection: With this surgery, your uterus, surrounding tissue called the parametrium, your cervix, a small portion of the upper part of your vagina and lymph nodes from your pelvis are removed.

Trachelectomy: This procedure removes your cervix and the upper part of your vagina but not your uterus.

Pelvic exenteration: This is the same as a radical hysterectomy but includes your bladder, vagina, rectum and part of your colon, depending on where cancer has spread.

In its earliest stages, the disease is curable by removing the cancerous tissue. In other cases, your provider may perform a simple hysterectomy or a radical hysterectomy.

Some people may have a combination of treatments. Your provider may use radiation or chemotherapy to treat cancer that has spread or come back (recurred). Sometimes your provider will use radiation and chemotherapy before or after surgery.

Targeted therapy

Targeted drug treatment destroys specific cancer cells without damaging healthy cells. It works by targeting proteins that control how cancer cells grow and spread. As scientists learn more about cancer cells, they're able to design better-targeted treatments that destroy these proteins.

Immunotherapy

Immunotherapy uses medicine to stimulate your immune system to recognize and destroy cancer cells. Cancer cells can also avoid being attacked by your immune system by sending off a signal. Immunotherapy helps to target these signals so the cancer cells can't trick your body into thinking it's a healthy cell.

Clinical trials are another treatment option. They're controlled research studies to test new treatments for cancer. Talk to your oncologist if you'd like to participate in a clinical trial.

Some people use alternative treatments like diet, herbs, acupuncture and other methods to supplement their cancer treatment. Talk to your healthcare provider about alternative methods that claim to relieve cancer symptoms. Some may help, but others could be harmful.

Cryotherapy

A procedure to destroy abnormal tissue in the cervix is called cervix cryosurgery. Freezing and destruction of abnormal tissue is what cryosurgery is about. Tissue is frozen in order to destroy it. This procedure can be used to treat cervicitis.

Compressed nitrogen gas flows through a cryo probe making the metal cold enough to freeze and destroy the abnormal cervical tissue



Cervix as viewed through speculum with patient in lithotomy position

Cryotherapy procedure

A cancer test

There is a test used to diagnose cancer. A sample of cells from your cervix is collected for the test.

The cells are sent to a lab for testing.

A colposcopy may be suggested if there are changes found. This procedure is used to examine the cervix. A sample of the cells may be taken during the test.

The United States of America suggests a screening schedule for women.

It is recommended that a woman get a Pap smear once every three years.

If a woman is over the age of 30 she should get a Pap smear once every three years, or a high-risk HRHPV test every five years.

There are risk factors for colon cancer.

The biggest risk for cancer is the human papilloma virus. Other factors can also increase the risk. e.g. Human papilloma virus is related to HIV, Chlamydia, if a person is smoking, obesity, if there is a family history of the disease, a diet low in vegetables and fruits, long term use of birth control pills, having three full-term births, being younger than 17 years when you have a baby, the presence of any of these factors is a predisposing factor to cervical cancer.

In low- and middle-income countries, cervical cancer is the 2nd most common cause of cancer-related deaths in females, and it is a huge public health burden. It was the fourth most common cancer and cause of cancer-related deaths in women with an estimated 570,000 new cases and 311,000 deaths. Africa has the highest incidence and mortality rates of cancer in

the world, which is ten times higher than the western countries. In Nigeria, cervical cancer is the 2nd most common cancer in the country and in women, where it accounts for 21% of all female malignancies in 2018, with 14,943 new cases.²

The premalignant phase of cervical cancer is between 10 and 20 years and this allows for the possibility of early detection. Even though these are majorly asymptomatic, they are easy to detect during a routine screening. The screening has been shown to be effective in detecting precancerous and early cancer. Screening for high-risk human papilloma virus (HPV) alone every 5 years is supported by the current evidence-based recommendation.^{1,5,6.}

According to the human papilloma virus information center, every year, 316 women are diagnosed with cervical cancer and 158 die as a result of the. Almost all cervical cancers are caused by the human papilloma virus. The incidence of cancer has decreased in developed countries over the past few decades. Increased awareness and more effective screening and prevention strategies have been employed. The incidence rate of cancer has fallen because of the vaccine. Three different types of tests are used for the screening of cervical cancer. The tests include the Papanicolaou test, a Pap test, and a visual inspection with acetic acid. In developing countries, public awareness of the tests is limited. Most of the cervical cancers worldwide are caused by the two most common subtypes of the human papilloma virus, known as the “HPV 16 and 18”. The association of the two diseases implies that the vaccine can be used to prevent the disease. The vaccine for the human papilloma virus has been developed¹³. In Saudi Arabia, girls between the ages of 11 and 26 years were able to get two vaccinations against the human papilloma virus.

It is important that the benefits of these developments are utilized by all women, including those living in the developing countries. Good knowledge and awareness can help prevent

the disease burden from increasing. Most patients with cervical cancer in Saudi Arabia present at advanced stages leading to bad outcomes.

The cost of treating late-stage cancer is more expensive than that of early-stage cancer. Screening can help detect cancer at an early stage when it can be treated more effectively. Lack of knowledge and awareness could be to blame for the late presentation of patients with cervical cancer in Saudi Arabia. The decision to undergo screening depends on the healthcare professionals involved as well as the patient. According to the results of World Health Survey Plus, only 7.6% of women in the 25- to 49-year-old age group in Saudi Arabia had a Pap smear test done.

There is a chronic non-communicable disease caused by the Human Papilloma Virus. The previous global study report estimated over half a million cases of cancer. One of the leading causes of death and morbidity in the world is cervical cancer. Women with the disease don't usually notice symptoms in the early stages. The presentation of cancer in late-stage includes vaginal bleeding, invasion, and poor prognosis. In addition to presenting a significant burden in terms of morbidity and mortality, cervical cancer also increases economic risk, which imposes very high direct costs on health systems, communities, households and lost productivity of patients. In high-income countries, the occurrence of cancer-related death is very rare.

The risk of dying from the disease is three times higher in resource-poor countries than in more developed ones. The leading cause of morbidity and mortality among African women is cervical carcinoma. The mortality is high. It is 50% globally due to late presentation, advanced stage of

the disease, and lack of access to cervical cancer screening programs in most developing countries.²²

A study in the Tikur Anbessa showed that a third of all cancer patients were identified as patients of the disease. There were 7619 new cases in Ethiopia every year and 6081 deaths. More than half a million women over the age of 15 living with HIV in Ethiopia are at risk of developing the disease. In Ethiopia, very few women get screening services⁹.

The current incidence and mortality of cervical cancer under the age of 30 years is rare, and age is the best predictor of high risk. Younger women tend to present with low-grade lesions, which often spontaneously return to normal. The regression rate goes down in older women. Women younger than 30 years old should not be screened for cancer. In the study area, there was limited evidence related to knowledge and attitude with the practice of screening. The purpose of the study was to assess the level of knowledge attitude and practice of screening for cancer among females in the reproductive age group⁸.

80% of cervical cancer cases occur in developing countries, which is why it is the second most common cancer in women. The second most common cancer in Nigeria and fifth in the United Kingdom is cervical cancer. In Nigeria, it is the most common cancer among females. In 2007, it was reported that 36.59 million women in Nigeria are at risk of developing the disease. Each year there are 9922 cases diagnosed and 8030 deaths. The prevalence of HPV is 24.8%. There are 250 to 100,000 women who are affected by the disease in Nigeria.

Market women constitute an important group/economic driving force in the country and therefore it is important to know whether knowledge, attitude and practice of cervical cancer screening among female market population is associated with or determined by certain socio-demographic factors.

The vagina and uterus are connected by the cervix, which is a cancer. The majority of it is caused by the human papillomaviruses. There are effective interventions that can prevent the spread of the human immunodeficiency virus¹⁷.

The third most common form of cancer among women after breast and colorectal cancer is cervical cancer, which is preventable. The women of poorer communities are more affected by the disease. Approximately 83% of the world's new cases and 85% of all cervical cancer deaths are from developing countries¹⁵.

The highest incidence rate of the disease was seen in the country of Guinea, with 6.5% of women developing it before the age of 75 years. It affects women more than the other major cancers. In Eastern and Central Africa, it is the leading cause of cancer deaths. Universal access to comprehensive cervical cancer prevention and control programs can potentially reach all girls who are at risk with screening and treatment for pre-cancer and can prevent most of these deaths.

About 70% of the total cases of cancer are caused by infections with the high-risk types. Multiple sexual partners, younger age at first sexual intercourse, poor diet, immune suppression, and cigarette smoking are some of the risk factors for the persistent infection and progression to cancer of the human papilloma virus.

According to the human development index, cervical cancer is more common than both breast and liver cancer. The study suggests that rapid socio-economic transition in many countries might reduce infections. An increasing number of new cases may be related to reproductive, diet, and hormonal factors¹².

The burden of cancer is low in the developed countries. The situation is quite different in developing countries. The incidence is decreasing in the former but increasing in the latter. In Sub-Saharan Africa, South America, the Caribbean, and Southern Asia, cervical cancer is the leading cause of cancer death and premature death among women¹⁰.

Sub-Saharan Africa has the highest incidence of cervical cancer in the world with high mortality affecting women at their prime. The fact that the disease is preventable and curable using current methods is a source of concern. The HIV/AIDS epidemic that is highest in the region has also raised the problem of cervical cancer to a serious level.

According to the world health organization report, the second most common cancer among women in Ethiopia is cervical cancer. The outpatient cost for patients with cancer in Ethiopia is \$400. The mean cost for hospitalized patients was also estimated. The average direct cost was \$329 and for every additional day of hospital stay there was an estimated daily incremental cost of \$4.2. It is hard for many patients to get treatment if they are poor.

There are differences in women's knowledge and attitude regarding the prevention and treatment of cancer. In developing countries, women have a poor level of knowledge about the disease. There was a direct relationship between women's knowledge and attitude towards cervical cancer and its prevention, and their subsequent use of Pap smear test in some studies⁹.

In low and middle-income countries, there is a very low rate of screening for the disease. A study on health-seeking behavior of patients with cervical cancer in Ethiopia also revealed that women had a very low awareness of the disease and prefer traditional remedies as a treatment option for the early stages of the disease. Lack of awareness and access to proper health services were identified as barriers to seeking treatment. Women with cancer were excluded from society and received poor emotional support.

In terms of morbidity, mortality, cost, and suffering, cervical cancer is a growing problem in Ethiopia. There is no national cancer control program and no cancer registration process. There is no morbidity and mortality data to convince policymakers¹³.

Ethiopia is trying to expand its cancer treatment centers in different parts of the country. There is limited research on women's knowledge and attitude about the disease in Ethiopia.

Cancer of the cervix is one of the most common types of women's cancer, with more than 90% of new cases occurring in developing and resource-limited countries.

It is associated with a higher rate of mortality with over 150,000 global mortality reported only in 2012 of which 87% of death occurred in developing countries.

The second most common cause of death from cancer in women is cervical cancer.

Almost all of the new cases and deaths in adult women occur in low-income countries where access to pre-cancer screening and treatment is limited. The incidence and mortality in sub-Saharan Africa are among the highest in the world and account for 70% of the global cervical cancer burden.

In Ethiopia, it is the most common cancer among women and causes over 5000 deaths each year. 33.6% of women in the general population are estimated to be carrying the human papilloma viruses at a given time.

In low-income countries, it was the most common female cancer, with over half a million new cases and over one million deaths from the disease. Mortality from the disease varies 18-fold between the different regions of the world, with most of the deaths occurring in the less developed areas.

The countries with the highest burden of cervical cancer are those that are not able to implement the vaccine due to its high costs and lack of infrastructure, expertise and so on.

Almost all of the world's cases and deaths of cervical cancer are found in developing countries. Women in developing countries often present with advanced cases of cancer that are not treated when it is detected. Of the 275,000 deaths caused by cervical cancer in 2008, 53,000 were in Africa, 31,700 were in Latin America and the Caribbean, and 159,800 were in Asia.

In Ethiopia, cervical cancer is the second most common cancer in women and the leading cause of death. 33.6% of women in the general population are estimated to be carriers of the human papillomaviruses.

A study done in Finote Selam town, northwest Ethiopia, found that nearly one third of the women knew about the disease.

The proportion of health-seeking behavior for cervical cancer among the study participants was only 83. The participants who showed health-seeking behavior did so because other people recommended the service to them.

In a study conducted in the North West of Ethiopia, 78.7% of them had heard about the disease, but only 195 were knowledgeable about it.

In Ethiopia, very few women receive cancer screening. There are 23 and 24 items. It has been shown that screening for the disease reduces the incidence rate and mortality from the disease.²⁵ Poor infrastructure, staff, and lack of knowledge about the disease make it hard for women who live in places where the screening facilities are available to get their Pap tests. Lack of access to health services and laboratories, no screening programs, limited or nonexistent awareness among populations, and poor referral and follow up are some of the challenges of cervical cancer screening in developing countries.²⁶ Despite the decreasing number of cancer cases in Ethiopia, there is still low knowledge and poor attitude towards screening. Increasing the knowledge and screening practice of women are important. Information about the level of knowledge, the risk factors, and screening behavior of the study subjects is important to provide targeted intervention. Information about knowledge and attitude towards screening of the disease is limited in the country. The findings from this study will provide the necessary information to fill the gap in the primary care system to tackle the growing public health problem.

The study helps policymakers and programmers to strengthen the existing screening programs in the country to improve the lives of the women by giving them information about the level of knowledge, attitude, and practice. The study gave insight and serve as baseline data for researchers and planning of another intervention plan.

The factors that influence a woman's use of health-care services are as follows: socio-demographic characteristics, economic stability or poverty, level of urbanization, insufficient transportation, unexplained need for care, lack of social needs, ignorance, misconception and religious beliefs, the cost of screening is related to affordability, there isn't a lot of female health workers, there is a fear of outcome, inaccessibility of health care services is an issue, there is excessive waiting time, health workers have a discriminatory attitude, there is a quotient of illness.

Cervical cancer Prevention

The treatment of precancerous lesions detected by microscopic inspection of cells scraped from the cervix has been the paradigm of secondary prevention of cervical cancer for half a century

Although cytological screening has undoubtedly led to a major decline in cervical cancer burden in several resource-rich countries, the method might have reached its limits, with reports from several countries with longstanding high-quality Pap smear-based programmes indicating that trends have either stabilized or began to rise. Meta-analyses and pooled analyses of randomized trials have shown that screening with HPV tests protects better against future cervical precancerous lesions and invasive cancers than screening by cytology and, therefore, virological screening programmes are becoming increasingly recommended.

Given the availability of these new preventive tools, public health experts are challenged to define comprehensive integrated strategies that combine HPV vaccination and cervical cancer screening that fit the target populations within the limits of cost-effectiveness. In 2018, in a greatly changing preventive landscape, the WHO Director-General launched an ambitious call to all nations of the world to mobilize resources to make an end to suffering from cervical cancer. Now more than ever, effective cervical cancer control planning requires access to accurate statistics. According to WHO, one of the fundamental steps in the action plan for non-communicable diseases is to establish a high-quality surveillance and monitoring system that provides, as a minimum standard, reliable population-based statistics data on the major non-communicable diseases? Using the 2018 estimates of the worldwide cancer burden compiled by the International Agency for Research on Cancer (IARC) on the basis of available cancer registry and vital statistics data, we describe in this study the existing patterns of cervical cancer incidence and mortality rate alongside HPV prevalence data, thus allowing a comprehensive baseline assessment of the global cervical cancer burden.

Social factors of health

People are born, grow, work, live and age in these conditions. The conditions of daily life are influenced by the larger set of forces and systems. It was a person's health; functioning and quality of life are affected by this. If all individuals are provided with equal access to social/ or economic resources, health inequality could be avoided. It was social status and income, the environment is physical, the social environment has a lot to do with it, employment, there are conditions at the workplace, literacy and education, there are childhood experiences, social supports, there are skills for dealing with grief, healthy behaviors, it's possible to get access to health care services, the endowment for biology and genetics, there is a gender, it is a culture, it is tradition. From generation to generation, a group's beliefs and behaviors are passed down. The structure and foundation of the families and society are formed by tradition. Influence of culture.

The social behavior and norms found in human societies include knowledge, beliefs, arts, laws, customs, capabilities, and habits of individuals. Culture has a large influence on health. It has an effect on the perception of health, illness and death. It affects what people think about the causes of disease. The approach to health promotion is affected by it. It affects how illness and pain are experienced. Where patients seek help is influenced by this. The type of treatment is determined by culture. Cancer patients have beliefs and values. Cancer is seen as negative by African culture. It carries a lot of stigma, myths and taboos. Cancer can be seen as a death sentence. Cancer treatment is worse than the illness. A religious belief that God is in control of life, illness and death has a positive effect on cancer treatment. The cornerstone of a family's overall health is women's health. Ensuring that women have access to quality care can improve the health of children and families²¹.

Meeting the WHO global strategy

In November 2020, the World Health Organization launched a Global Strategy aim at speeding the elimination of cervical cancer as a public health problem.

The Strategy proposes an elimination threshold of 4 cases per 100,000 women in order to achieve the triple intervention targets. The vaccine is recommended for girls by age 15. 70% of women are screened for high performance tests by 35 and again by 45 years. The majority of women with cancer receive adequate treatment.

Over the next century, a total of 62 million women's lives could be saved if this identified Strategy is implemented worldwide. The global effort upholds health as a human right.

How to eliminate cancer in a sustainable way

Goal 1: "End poverty in all its forms everywhere". Extreme poverty will end by the year 2030.

Goal 2 is "ensure healthy lives and promote well-being for all at all ages".

Goal 3 is to reduce premature mortality from non- communicable diseases through prevention and treatment.

Universal access to sexual and reproductive health care services, including family planning information and education, and the integration of reproductive health into national strategies and programs, is the third goal.

Universal health coverage includes financial risk protection, access to quality essential health- care services, and access to safe, effective, quality and affordable essential medicines and vaccines for all.

The goal is to achieve gender equality and empower all women and girls.

The goal is to achieve gender equality and empower all women and girls²⁶.

The theory of self-care, the self-care deficit theory, and the theory of nursing systems are all interrelated.

Self-care theory.

The performance of activities that individuals initiate and perform on their own behalf to maintain life, health, and well-being is the focus of this theory.

Self-care questions

Self-care requirements are actions directed toward the provision of self-care. There are three categories for it.

There are universal self-care requisites.

The maintenance of the human structure and functioning integrity are associated with universal self-care.

A sufficient intake of air can be maintained. There is maintenance of a sufficient intake of water. There is maintenance of a sufficient intake of food. The elimination process has an associated provision of care. There is a balance between activity and rest. A balance of solitude and social interaction is maintained.

Hazards to human life, human functioning and human well-being can be prevented. The promotion of human functioning and development within social groups in accordance with human potential, known human limitations and the human desire to be normalcy.

Normalcy is used in the sense of that which is essentially human and that which is in accord with the genetic and constitutional characteristics.

Self-care is dependent on the development of the person.

There are either specialized expressions of universal self-care requisites that have been particularized for developmental processes or they are new requisites derived from a condition or associated with an event.

Health deviations self-care requirements

Health deviation self-care is required in certain conditions of illness, injury, or disease, or may result from medical measures required to diagnose and correct the condition.

Seeking and securing medical assistance.

Being aware of and paying attention to the effects and results of conditions.

It is possible to effectively carry out medically prescribed diagnostic, therapeutic and rehabilitative measures. Being aware of and controlling the effects of prescribed medical measures. In accepting oneself as being in a particular state of health and in need of specific forms of health care, it is possible to modify the selfconcept and self-image. Learning to live with the effects of diseases and states, as well as the effects of medical diagnostic and treatment measures, in a lifestyle that promotes continued personal development.

The theory of self-care deficit

The theory shows when nursing is needed. When an adult is incapable of or limited in self-care, nursing is required. Orem found 5 ways of helping.

It is acting for and doing for others, helping others, supporting another person

Personal development is promoted in an environment that meets future demands, teaching another.

Nursing system Theory

The theory is the result of relations between legitimate nurse and legitimate client. When the client's therapeutic self-care demand exceeds the available self-care agency, the system is activated.

Wholly compensated nursing system

There is a situation in which the individual is unable to engage in those self-care actions requiring self-directed and controlled ambulation and manipulative movement or the medical prescription to refrain from such activity.

The care of a newborn, the care of a client recovering from surgery, and the care of a client in a post-anesthesia care unit are examples.

Partial compensatory system.

There is a situation in which the patient or the nurse may have a major role in the performance of care measures.

The nurse can help the client in ambulating and bring a tray of food for the client to eat.

Supportive education

This is also known as a supportive system. The person can perform or can but cannot do it on their own.

Example; A nurse guides a mother on how to feed her baby, counseling a client on how to cope with stress, and educating a woman on screening for precancerous cells.

2.4 Theoretical Review

The bulk of theories applicable to health-related behaviors are mostly based on social and behavioral sciences³². Theories that have been applied to health promotion, and that will be used in this study include the Health Belief Model (HBM) and the PRECEDE-PROCEED model (PPM)³³. Each of these theories explains the factors and processes that influence health related behaviours including cancer screening, stopping smoking, exercise, and health promotion behaviours in general³⁴.

Three categories of health behaviour theories are frequently used to predict and explain behaviours at different levels: intrapersonal theories, interpersonal theories, and community/group level models³⁵. Intrapersonal theories concentrate on the individual's cognitive assessment of health problems and how to resolve them. The interpersonal theories assume that at the interpersonal level, an individual's behaviour and health outcomes are influenced by their interaction with factors within their social and/or physical environment. The community and group level theories concentrate on using social change to explain health behaviours of a population³⁶.

The Health Belief Model - The Health Behaviour Model (HBM) is part of the intrapersonal categories of health behaviour theories as it focuses on cognitive and behavioural factors³⁷. The authors' state that the HBM is among the oldest, most frequently used and most reliable models used to explain health behaviours³⁸. The HBM has been extensively applied within cervical cancer screening and has been effective in predicting women's health behaviours³⁹.

The HBM was created in the 1950s by social psychologists⁴⁰. It is frequently used to predict preventive health behaviours, and it can explain both individual nonengagements with preventive health measures⁴¹. The HBM is composed of four concepts, namely perceived susceptibility, perceived severity, perceived barriers, and perceived benefits⁴².

Perceived susceptibility occurs when an individual is aware that s/he is susceptible to a potential health problem (such as cervical cancer). When individuals are aware

that the health problem may have serious outcomes, this is known as perceived severity. They are likely to take preventive action if they see few obstacles in the way of doing so (perceived barriers) and if they are convinced that the preventive action will minimize the risk, then this is referred to as perceived benefits. These concepts may further influence individual self-efficacy (believing that they have the ability to take preventive action) and action (which may be stimulated by cues to action, such as media adverts or prompting from health professionals⁴³. Although the HBM focuses on the individual, as the individual is the building block of communities and institutions, cervical screening cannot be accomplished only by individual action.

The flaw in the HBM is that it overlooks the influence of interpersonal, social and contextual factors⁴⁴. The interplay between socio-cultural factors affects health behaviours of individuals. Therefore socio-cultural factors have to be taken into account in developing effective cervical cancer screening programs. However, the HBM focuses on one-off individual decisions to participate in preventive health, such as vaccination⁴⁵. However, cervical cancer screening may require repeated participation, extending over years, so the HBM may not appropriately describe cervical cancer screening.

The Precede-Proceed Model (PPM) - The PPM was developed by Green et al., and it has since grown from a diagnostic tool into a multi-phase model that incorporates environmental health factors and assessments into an intervention process⁴⁶. The acronym PRECEED within the PRECEDE-PROCEED Model

(PPM) stands for Predisposing, Reinforcing and Enabling Constructs in Educational/Environmental, Diagnosis and Evaluation, while PROCEED stands for Policy, Regulatory and Organizational Constructs in Educational and Environmental Development, which concentrates on implementing and evaluating interventions⁴⁷.

The PPM compensates for the shortcomings of the HBM as it views health promotion from an ecological perspective⁴⁸. It is an interpersonal model, as health is conceived as a product of individual interaction with the environment⁴⁹. The PPM applies environmental factors to a community setting, thus it does not view health prevention participation as an individual decision, but instead as a result of environmental forces. Therefore, interventions are aimed at all elements of an individual's environment including individual behaviour, cognition and skill – Crosby and Noar rather than at the individual alone. This allows the health personnel to assess multiple levels of environmental influence and relationships.

While the HBM explains and predicts individual behaviour, the PPM can be used to design an entire preventive health intervention in a community⁵⁰. Such a planning model can entirely transform health interventions in a community. The PPM is a foundation upon which health behaviour change programs can be built⁵¹.

The most recent iteration of the PPM is a logical model which aims at identifying the factors which lead to a health outcome⁵².

This recent version is a streamlined planning model which combines two of the nine phases of the PPM, and allows implementers to skip phases if there is

preexisting evidence⁵³. The PPM applies to a specific community ecological tool to resolve a specific health problem within that community⁵⁴. The PPM analyses the entire situation, including attitudinal, behavioural and educational problems, the intended outcome, the context of the client, and the identification of potential barriers that could affect the intended outcome. The PPM is multidimensional, as it includes elements of behavioural and social science, administration, education and epidemiology⁵⁵.

The limitations of the PPM include the fact that it does not consist of testable, falsifiable theories. Instead it facilitates the application of theories to intervention programs⁵⁶. Indeed, no single theory or conceptual framework governs all practice and research in healthcare⁵⁷. Both aspects of the PPM and HBM will be used in the current study to interrogate barriers to cervical cancer and screening practices among women in Yagba West Local Government.

Dorothea Orem's theory about self-care deficit. Sometimes patients are encouraged to bring out the best in themselves despite being ill. In rehabilitation settings, patients are entitled to be more independent after being cared for by doctors and nurses. The Orem Model of Nursing was developed by Dorothea Orem. The grand nursing theory covers a broad scope with general concepts applicable to all instances of nursing.

Dorothea Orem defined nursing as the act of assisting others in the provision and management of self-care to maintain or improve human functioning at the home level of effectiveness. Without the ability to maintain continuously that amount and quality of self-care which is therapeutic in sustaining life and health, in recovering

from disease or injury, or in dealing with their effects, the existence of a requirement for nursing in an adult is not valid. A condition with children is the parent's inability to maintain continuity for the child the amount and quality of care that is therapeutic

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Assumptions about the self-care deficit.

Humans engage in constant communication and connect with their environment in order to stay alive and functional. The power to act deliberately is used to make decisions. Mature human beings experience privations in the form of action in care of self and others that involve making life-sustaining and function-regulating actions. Human agency is used to discover, develop, and transmit to others ways and means to identify needs for and make inputs into self and others. Group of human beings with structured relationships allocate responsibilities for providing care to group members. The major concepts of the Self-Care Deficit Theory are defined in this section.

Nursing

Nurse practitioners give special assistance to people with disabilities in order to meet self-care needs. The nurse is involved in the care the individual receives from the doctor.

Humans

Humans are defined as “men, women, and children cared for either singly or as social units” and are the “material object” of nurses and others who provide direct care.

The environment

There are physical, chemical, and biological features to the environment. The family, culture and community are included.

Health

Human health is the ability to reflect on oneself, symbolize experience, and communicate with others as well as being structural and functionally whole or sound.

Self-care

Self-care is the performance or practice of activities that individuals initiate and perform on their own behalf.

A self-care agency

Basic conditioning factors affect the human's ability to engage in self-care.

The basic conditioning factors are age, gender, developmental state, health state, socio-cultural orientation, health care system factors, family system factors, patterns of living, environmental factors, and resource adequacy and availability.

The demand for therapeutic self-care

Orem's Self-Care Theory.

The totality of self-care actions to be performed for some duration to meet known self-care requirements by using valid methods and related sets of actions and operations is called Therapeutic Self-care Demand.

The self-care deficit

When nursing is needed, the self-care deficit is shown. When an adult is incapable of or limited in self-care, nursing is required.

Nursing agency

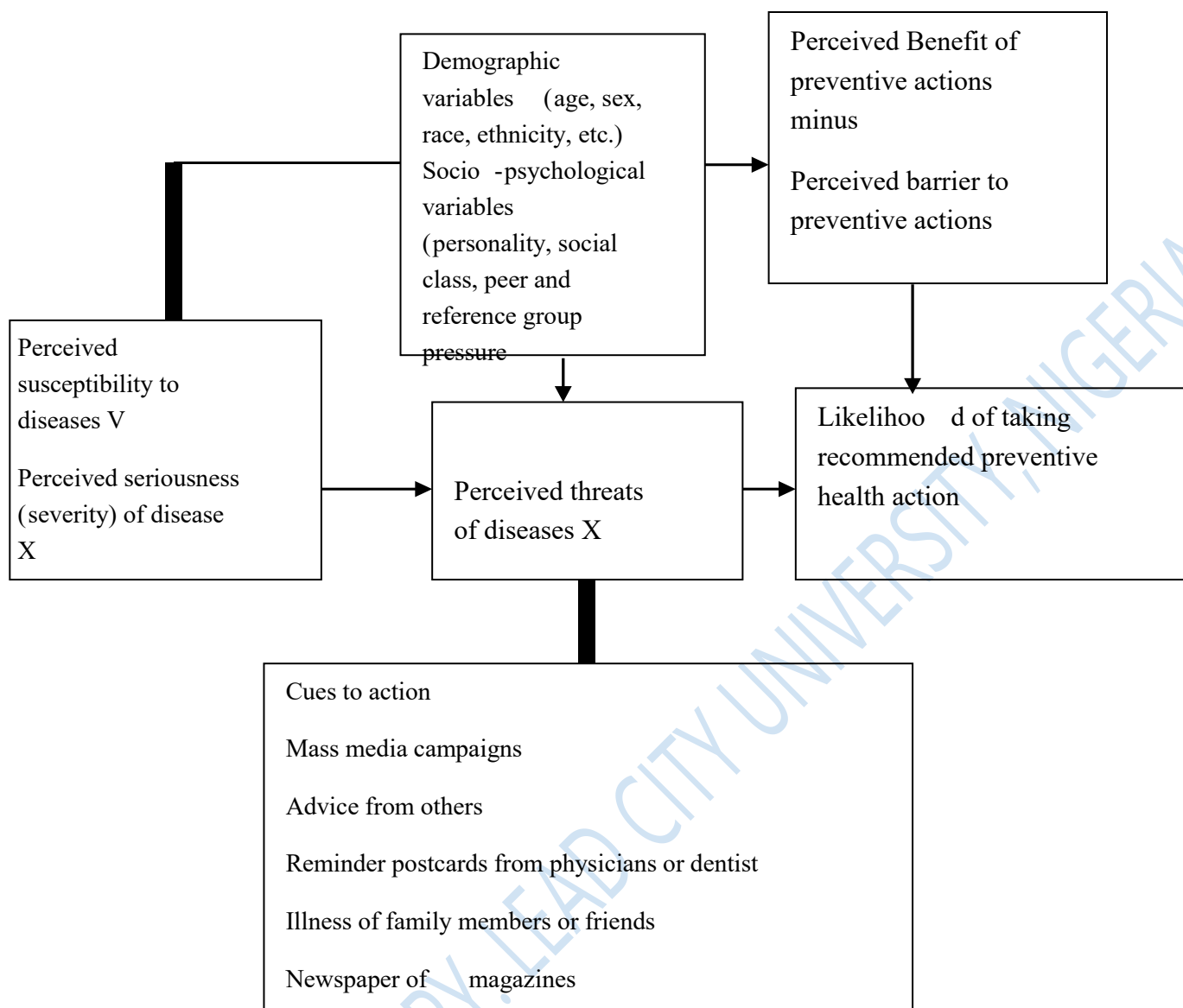
A nursing agency is a complex property or attribute of people educated and trained as nurses that enables them to act, know, and help others meet their therapeutic self-care demands by exercising or developing their own self-care agency.

The system of Nursing

The product of relations between legitimate nurse and legitimate client is the

Nursing System. The system is activated when the client's therapeutic self-care demand exceeds the available self-care agency.

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Source: Health belief model (Becker & Haefner, 1977) **Modifying factors**

Knowledge, age, culture, educational level, marital status, parity, social support and social status affect perceptions about cervical cancer susceptibility and severity, and cervical cancer screening benefits and barriers.

Perceived susceptibility

Perceived susceptibility to cervical cancer is the belief about being at risk of cervical cancer. A woman may not be interested in cervical cancer screening unless considers herself susceptible to this disease.

Perceived severity

Perceived severity of cervical cancer is a woman's feelings about the medical harm (death, disability, pain) or social damage (effects on work, family and social life) for developing cervical cancer or not utilizing cervical cancer screening/treatment.

Perceived benefits

Perceived benefits of cervical cancer screening are the belief in positive attributes of screening. Cervical cancer susceptibility and severity may be perceived, but the likelihood of screening uptake is influenced by the perceived benefits.

Perceived barriers

Perceived barriers are negative aspects of cervical cancer screening, non-conscious cost effective analysis by a woman, involving measuring the expected benefits of screening (*it could help me*) against perceived barriers (*but it may be painful, embarrassing, expensive, and time consuming*), which influence screening uptake.

Cues to action

Mass media campaign, advice from people, reminder from doctors, illness of a relation or friend which appeals to the brain's interpretation of perceived susceptibility, severity, benefits and stimulates readiness for cervical cancer screening uptake are cues.

Perceived self-efficacy

Perceived self-efficacy is the belief or confidence that makes women go for cervical cancer screening to prevent the disease.

Cervical cancer prevention service delivery

Cervical cancer prevention service delivery includes screening, counseling, diagnosis, treatment and follow-up of clients by health workers putting into perspective accessibility, availability, affordability, acceptability and quality which influence the likelihood of cervical cancer screening uptake

The health beliefs concerning cervical cancer in this study consist of perceived threat of cervical cancer, perceived benefits of Pap smear test attendance, and perceived barriers to Pap smear test attendance, as follows: Perceived threat of cervical cancer consists of perceived severity of cervical cancer and perceived susceptibility to cervical cancer. Perceived severity of cervical cancer many women strongly believe that cervical cancer leads to death, pain, suffering, fear, loss of hope and purpose for life, can affect their work, and their family life

explored 330 adult females' perceptions and practices regarding cervical cancer by sexual orientation. The researchers found that most of the women had strong beliefs that cervical cancer lead to death and pain. This is consistent with Phipps, who studied cancer knowledge, beliefs, and attitudes among Cambodian and Vietnamese women living in Philadelphia, Pennsylvania. The finding shows that the almost women believed cervical cancer to be a serious disease that means you will die soon, "a painful disease", "you will be crying in pain." The researchers suggested that educational efforts about cancer need to first identify beliefs about cancer that may impact on participation in cancer screening. Jennings studied focus group responses of African American and Latina women about getting a Pap smear. The researcher found that in response to the question, "When you think about the word cancer' what comes to mind?" the majority 21 of the informants answered with thoughts of death and dying, pain and suffering, fear, and loss of hope and purpose of life. Informants believed that people with cancer lost their hair, suffered the loss of body parts, had long hospitalizations, were sterile or infertile, and were anorexic. Jirowong and Manderson studied the beliefs and behaviours about Pap smear test and breast self-examination among Thai immigrant women in Brisbane, Australia. Item analysis of the women's perceived severity of cervical and breast cancers. The majority of women knew that cervical and breast cancers caused death if left untreated; the disease could disseminate to other organs; they can cause suffering, pain, anxiety and unhappiness (97%) and they require costly treatment for cervical cancer (97%) and breast cancer (94%). This is consistent with Kavila and Rungsesuwan who found that Thai women had strong beliefs that cervical cancer leads to death and can affect their work and family life. Perceived susceptibility to cervical cancer most women believed themselves to have a low susceptibility to cervical cancer because they did not have any family history of cancer⁵⁸. Other women believed that women who are susceptible to cervical cancer will be those women who

do not take care of the perineum and married women are more susceptible to cervical cancer than unmarried women, regardless of their sexual activity⁵⁹.

The women's beliefs of susceptibility regarding cervical cancer seem to focus on beliefs of a low susceptibility to cervical cancer. Schulmeister and Lifsey surveyed the knowledge, beliefs, and practices of cervical cancer screening of 22 Vietnamese women. The majority of women in this study believed that it was unlikely that they would ever be diagnosed with cervical cancer and cited not having "cancer in the family" as the primary reason for their perceived low risk. Also, that married women are more susceptible to cervical cancer than unmarried women regardless of their sexual activity. The researchers suggested that the low rate of Pap test utilization by women in this study could be attributed to Vietnamese cultural beliefs and perception of low susceptibility and severity, and the presence of many barriers to Pap testing. Price examined 330 adult females' perceptions and practices regarding cervical cancer by sexual orientation. The researchers found that the majority of respondents (70%) perceived that all women, regardless of sexual orientation, are equally likely to develop cervical cancer. This may indicate a belief that the development of cervical cancer is a natural developmental process of women, a process beyond personal control. The denial of personal control over any form of cancer with behavioral risk factors may again be a method of dealing with cognitive dissonance. Another study that addressed women's perceived susceptibility to cervical cancer was by Jennings who studied focus group responses of African American and Latina women about getting a Pap smear test. The researcher found that the majority of women believed that cervical cancer affected women who did not keep themselves clean, or was a problem only among no monogamous, younger women. This is consistent with Jirowong, Manderson who studied Thai women and found that they thought that not taking care of their perineum and vulva would increase their chance of getting cervical cancer.

2.3 Review of Empirical Studies

Although cervical cancer is preventable, and knowledge of the condition and early screening might decrease the mortality associated with it, most women report to the hospital with an advanced form of the disease due to lack of awareness and community level interventions to encourage screening. Some empirical studies in cervical cancer screening in Ghana have been carried out in urban and university settings and among women who attended hospitals. For instance, some studies examined the knowledge and attitudes of college students regarding cervical cancer screening. Studies conducted by Abotchie and Shokar and Adanu have suggested that women did not have adequate information on what cervical cancer screening was about as well as local screening initiatives. As a result, only half of the study samples perceived themselves to be at risk. In addition, Quentin argued that the high cost of screening and treatments were important barriers toward seeking cervical cancer screening tests in Kumasi, Ghana. To date, no study has exclusively studied the knowledge, practice, and barriers regarding cervical cancer screening among women in Ghana. Empirical studies on cervical cancer screening have suggested that women lack sufficient information on cervical cancer screening; hence, lack awareness and knowledge of cervical cancer, its prevention and screening³¹.

Since knowledge and belief held about a disease play significant roles in predicting if the individual would adopt positive health behaviour towards treatment and prevention of the disease, the researchers considered it pertinent to find out the knowledge and belief of women

of Taraba in North-East Nigeria about cervical cancer. It was considered equally important to establish the prevailing practices of the women with regards to cervical cancer screening and prevention as this would serve to identify intervention needs. Furthermore, as established by the HBM, this study believes that demographic variables can affect cervical cancer screening and prevention behaviour directly and indirectly by affecting knowledge and belief about cervical cancer.

2.4 Conceptual Framework

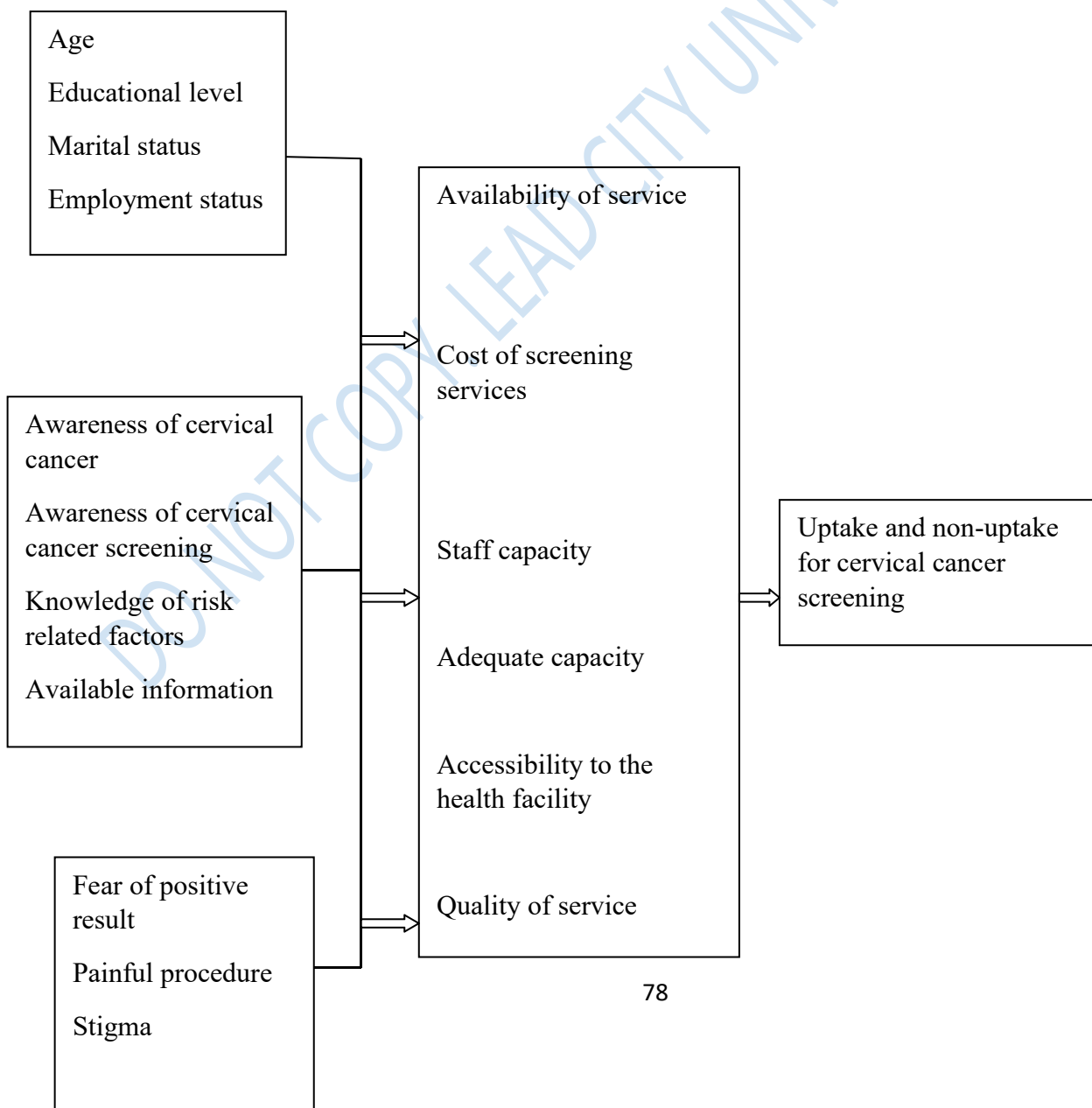
The conceptual framework demonstrates the inter linkage amongst between the independent and dependent variables, the awareness level cervical cancer and examination determines the accessibility of the primary health care services among the women, negative attitude towards the screening for precancerous lesions amongst women determine their level of interest for attending the primary health care facilities. With a positive attitude towards some activity, it is likely that this is accompanied with positive intents of participating in these activities. Similarly, the positive altitudes may influence knowledge about the cancer of cervix and screening amongst the women in age of reproduction. Finally perceived barriers for the cervical cancer among women influence their choice to attend the primary health care services. The women in age of reproduction. Finally perceived barriers for the cervical cancer among women influence

their choice to attend the primary health care services.

Endnotes

Books

Adesokan F.O Reproductive Health for All Ages third Edition, Akure, Bosoms. Nigeria



Bay. O Nursing Fundamental Caring and Clinical Decision Making. Second Edition. Philadelphia 2022

British Medical Association Illustrated Medical Dictionary. Second Edition, London 2022

Brunner M. and Shulders .O. Textbook of Medical Surgical Nursing 13th Edition, Philadelphia. 2014

A. Diedrich J.T. Lonkey N.M Guidor .O. (2014) Textbook of human Obstetrics is and Gynecology. 2nd edition England

Chirenje, J.R, and Chanamed .J. Textbook of Preventive and Society Medicine. 2nd edition India 2016

Waller .O , Textbook on Human Development on Cervical Cancer, 2nd edition, United Kingdom 2019

Fraser D.M, Textbook of Human Development on Cervical Cancer, 2nd edition, 2015

Rowlands, P.K., & A. de Barros Lopes. “*Invasive Carcinoma of the Cervix.*” **Current Obstetrics & Gynaecology** 11, no. 3, 2021: 172–177.

Journal

Bray, Freddie, Jacques Ferlay, Isabelle Soerjomataram, Rebecca L. Siegel, Lindsey A. Torre, & Ahmedin Jemal. “*Global Cancer Statistics 2018: Globocan*”

Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries. CA: A Cancer Journal for Clinicians 68, no. 6, 2018: 394– 424.

Kingdom of Saudi Arabia Saudi Health Council Saudi Cancer Registry, “Cancerincidence report Saudi Arabia 2014,” 2014, <https://nhic.gov.sa/eServices/Documents/2014.pdf>. View at: Google Scholar
World Health Organization. World Health Organization, n.d. Accessed November 9, 2022. <https://www.iarc.who.int/>.

Z.Momenimovahed and H.Salehiniya, “Incidence, mortality and risk factors of cervical cancer in the world,” *Biomedical Research and Therapy*, vol. 4, no. 12, pp. 1795–1811, 2017. View at: Publisher Site | Google Scholar

K.P.Braaten & M.R.Laufer, “Human papillomavirus (HPV), HPV related disease, and the HPV vaccine,” *Reviews in Obstetrics & Gynecology*, vol. 1, no. 1, pp. 2–10, 2008. View at: Google Scholar

Adegoke, Olusola, Shalini Kulasingam, & Beth Virnig. “Cervical Cancer Trends in the United States: A 35-Year Population-Based Analysis.” *Journal of Women's Health* 21, no. 10, 2022: 1031–1037.

F.Bray, A.H.Loos, P.McCarron et al., “Trends in cervical squamous cell carcinoma incidence in 13 European countries: changing risk and the effects of screening,” *Cancer Epidemiology Biomarkers & Prevention*, vol. 14, no. 3, pp. 677–686, 2005. View at: [Publisher Site](#) | [Google Scholar](#) Okuofua F. Human Papilloma Virus vaccine of cervical cancer in African retrieved from //http:ww.njeponliil.com on March, 2014.

Gichangi, P., B. Estambale, J. Bwayo, K. Rogo, S. Ojwang, A. Opiyo, and M. Temmerman. “Knowledge and Practice about Cervical Cancer and Pap Smear Testing among Patients at Kenyatta National Hospital, Nairobi, Kenya.” *International Journal of Gynecological Cancer* 13, no. 6 2022: 827–833.

Getachew Mullu, Rahel Nega. “Nurses’ Attitude, Practice and Barriers toward Cancer Pain Management, Addis Ababa, Ethiopia.” *Journal of Cancer Science & Therapy* 6, no. 12, 2022.

Meissner, Helen I., Arnold L. Potosky, & Rena Convissor. "How Sources of Health Information Relate to Knowledge and Use of Cancer Screening Exams." **Journal of Community Health** 17, no. 3, 2022: 153–165.

Hoque, M, E Hoque, & SB Kader. "Risk Factors for Anaemia in Pregnancy in Rural KwaZulu-Natal, South Africa: Implication for Health Education and Health Promotion." **South African Family Practice** 51, no. 1, 2019: 68–72.

He, Yulong, Iiro Rajantie, Katri Pajusola, Michael Jeltsch, Tanja Holopainen, Seppo Yla-Herttuala, Thomas Harding, Karin Jooss, Takashi Takahashi, & Kari Alitalo. "Vascular Endothelial Cell Growth Factor Receptor 3– Mediated Activation of Lymphatic Endothelium Is Crucial for Tumor Cell Entry and Spread via Lymphatic Vessels." **Cancer Research** 65, no. 11 2015: 4739–4746.

Hay, Jennifer L., Tamara R. Buckley, & Jamie S. Ostroff. "The Role of Cancer Worry in Cancer Screening: A Theoretical and Empirical Review of the Literature." **Psycho-Oncology** 14, no. 7, 2015: 517–534.

"Awareness and Utilization of Cervical Cancer and Pap Smear Services among Market Women in North-Central Nigeria" (n.d.).

Waller, Jo, Marta Bartoszek, Laura Marlow, & Jane Wardle. "Barriers to Cervical Cancer Screening Attendance in England: A Population-Based Survey." **Journal of Medical Screening** 16, no. 4, 2019: 199–204.

"Knowledge, Attitude, and Practice towards Cervical Cancer Screening among HIV Positive Women in Addis Ababa, Ethiopia." **Journal of Gynecology & Reproductive Medicine** 6, no. 2, 2022.

La Ruche, Guy, Bruno You, Isabelle Mensah-Ado, Christine Bergeron, Crépin Montcho, Rosa Ramon, Karidiata Touré-Coulibaly, Christiane Wellfens-Ekra, François Dabis, & Gérard Orth. "Human Papillomavirus and Human Immunodeficiency Virus Infections: Relation with Cervical Dysplasia/Neoplasia in African Women." **International Journal of Cancer** 76, no. 4 2018: 480–486.

Blumenthal, Paul D., Lynne Gaffikin, Sylvia Deganus, Robbyn Lewis, Mark Emerson, & Sydney Adadevoh. "Cervical Cancer Prevention: Safety, Acceptability, and Feasibility of a Single-Visit Approach in Accra, Ghana." **American Journal of Obstetrics and Gynecology** 196, no. 4, 2017.

Cox, Richard J. "The Web of Records: Blogs and the Records Professions." *Records & Information Management Report* 23, no. 10 (2007): 01–11.

Moodley, M., J. Moodley, & I. Kleinschmidt. "Invasive Cervical Cancer and Human Immunodeficiency Virus (HIV) Infection: A South African Perspective." **International Journal of Gynecological Cancer** 11, no. 3 2021: 194–197.

Muñoz, Nubia, Silvia Franceschi, Cristina Bosetti, Victor Moreno, Rolando Herrero, Jennifer S Smith, Keerti V Shah, Chris JLM Meijer, & F Xavier Bosch. "Role of Parity and Human Papillomavirus in Cervical Cancer: The IARC Multicentric Case-Control Study." **The Lancet** 359, no. 9312, 2022: 1093–1101.

Mutyaba, Twaha, Francis A Mmiro, & Elisabete Weiderpass. "Knowledge, Attitudes and Practices on Cervical Cancer Screening among the Medical Workers of Mulago Hospital, Uganda." **BMC Medical Education** 6, no. 1 2016.

Pyatt, Robert, Robert B. Chadwick, Cheryl K. Johnson, Clement Adebamowo, Albert de la Chapelle, and Thomas W. Prior. "Polymorphic Variation at the Bat-25 and Bat-26 Loci in Individuals of African Origin." *The American Journal of Pathology* 155, no. 2 (1999): 349–353.

Povey, Rachel, Mark Conner, Paul Sparks, Rhiannon James, and Richard Shepherd. "Application of the Theory of Planned Behaviour to Two Dietary Behaviours: Roles of Perceived Control and Self-Efficacy." *British Journal of Health Psychology* 5, no. 2 (2000): 121–139.

Roberts, AA, OO Ayankogbe, TF Osisanya, AO Bamgbala, AT Ajekigbe, BS Olatunji, and VA Inem. "Knowledge of Cervical Cancer Risk Factors among Refugee Women in Oru Camp." *Nigerian Medical Practitioner* 46, no. 4 (2005).

Rogo, K.O., J. Omany, J.N. Onyango, S.B. Ojwang, and U. Stendahl. "Carcinoma of the Cervix in the African Setting." *International Journal of Gynecology & Obstetrics* 33, no. 3 (1990): 249–255.

Roland, Katherine B., Vicki B. Benard, Mona Saraiya, Nikki A. Hawkins, Heather Brandt, & Allison L. Friedman. "Assessing Cervical Cancer Screening Guidelines in Patient Education Materials." **Journal of Women's Health** 18, no. 1, 2019: 5–12.

Sahasrabudde, V V, M H Mwanahamuntu, S H Vermund, W K Huh, M D

59 Lyon, J S Stringer, & G P Parham. "Prevalence and Distribution of HPV Genotypes among HIV-Infected Women in Zambia." **British Journal of Cancer** 96, no. 9 (2007): 1480–1483.

Sankaranarayanan, Rengaswamy, Pulikkottil Okkuru Esmey, Rajamanickam Rajkumar, Richard Muwonge, Rajaraman Swaminathan, Sivanandam Shanthakumari, Jean-Marie Fayette, & Jacob Cherian. "Effect of Visual Screening on Cervical Cancer Incidence and Mortality in Tamil Nadu, India: A Cluster-Randomised Trial." **The Lancet** 370, no. 9585 (2007): 398–406.

Samoff, Erika, Emilia H. Koumans, Lauri E. Markowitz, Maya Sternberg, Mary K. Sawyer, David Swan, John R. Papp, Carolyn M. Black, & Elizabeth

R. Unger. "Association of Chlamydia Trachomatis with Persistence of High Risk Types of Human Papillomavirus in a Cohort of Female Adolescents." **American Journal of Epidemiology** 162, no. 7, 2015: 668–675.

Schiffman, M. H., H. M. Bauer, R. N. Hoover, A. G. Glass, D. M. Cadell, B. B. Rush, D. R. Scott, "Epidemiologic Evidence Showing That Human Papillomavirus Infection Causes Most Cervical Intraepithelial Neoplasia." **JNCI Journal of the National Cancer Institute** 85, no. 12, 2022: 958–964.

Singh, Jasvinder A., Daniel E. Furst, Aseem Bharat, Jeffrey R. Curtis, Arthur F. Kavanaugh, Joel M. Kremer, Larry W. Moreland, "2012 Update of the 2008 American College of Rheumatology Recommendations for the Use of Disease-Modifying Antirheumatic Drugs and Biologic Agents in the Treatment of Rheumatoid Arthritis." **Arthritis Care & Research** 64, no. 5 2022: 625–639.

Segnan, N. "Cervical Cancer Screening. Human Benefits and Human Costs in the Evaluation of Screening Programmes." **European Journal of Cancer** 30, no. 6, 2022: 873–875.

Suarez, Lucina, Rich Ann Roche, Donna Nichols, and Diane M. Simpson. "Knowledge, Behavior, and Fears Concerning Breast and Cervical Cancer among Older Low-Income Mexican-American Women." **American Journal of Preventive Medicine** 13, no. 2, 2022: 137–142.

Suba, Eric J., Sean K. Murphy, Amber D. Donnelly, Lisa M. Furia, My Linh Huynh, & Stephen S. Raab. "Systems Analysis of Real-World Obstacles to Successful Cervical Cancer Prevention in Developing Countries." **American Journal of Public Health** 96, no. 3 (2006): 480–487.

Arif, Moh Erfan, Rila Anggraeni, & Nadiyah Hirfiyana Rosita. "Analysis of Behavioral Intentions of Health Protocol Discipline during the COVID-19 Pandemic Using Theory of Planned Behavior (TPB) and Health Belief Model (HBM)." **Asia Pacific Management and Business Application** 010, no. 03 2022: 261–274.

Internet sources

Arlinghaus, K. R., & Johnston, C. A. (2017). Advocating for behavior change with education. *American Journal of Lifestyle Medicine*, 12(2), 113–116. 10.1177/1559827617745479 - DOI - PMC - PubMed

Awich, L. (2019). Cancer prevalence rate per county. *The Star*. <https://www.the-star.co.ke/news/2019-07-30-cancer-prevalence-rate-per-co...>

Bray, F., Ferlay, J., Soerjomataram, I., Siegel, R. L., Torre, L. A., & Jemal, A. (2018). *Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries*. *CA: A Cancer Journal for Clinicians*, 68(6), 394–424. 10.3322/caac.21492 - DOI - PubMed

Bruni, L., Albero, G., Serrano, B., Mena, M., Collado, J. J., Gómez, D., Muñoz, J., Bosch, F. X., & de Sanjosé, S., & ICO/IARC Information Centre on HPV and Cancer (HPV Information Centre). (2021). Human papillomavirus and related diseases in Kenya. Summary report. <https://hpvcentre.net/statistics/reports/KEN.pdf>

Chan, C. K., Aimagambetova, G., Ukybassova, T., Kongrtay, K., & Azizan, A. (2019). *Human papillomavirus infection and cervical cancer: Epidemiology, screening, and vaccination—Review of current perspectives*. *Journal of Oncology*, 10, 3257939. 10.1155/2019/3257939 - DOI - PMC - PubMed

Chang, H. K., Myong, J.-P., Byun, S. W., Lee, S.-J., Lee, Y. S., Lee, H.-N., Lee, K. H., Park, D. C., Kim, C. J., Hur, S. Y., Park, J. S., & Park, T. C. (2017). *Factors associated with participation in cervical cancer screening among young Koreans: A nationwide cross-sectional study*. *BMJ Open*, 7(4), e013868. 10.1136/bmjopen-2016-013868 - DOI - PMC - PubMed

Donkor, A., Lathlean, J., Wiafe, S., Vanderpuye, V., Fenlon, D., Yarney, J., Opoku, S. Y., Antwi, W., & Kyei, K. A. (2015). Factors contributing to late presentation of breast cancer in Africa: A

systematic literature review. *Archives of Medicine*, 8(2.2), 1–10. <https://www.archivesofmedicine.com/medicine/factors-contributing-to-late...>

Dozie, U. W., Elebari, B. L., Nwaokoro, C. J., Iwuoha, G. N., Emerole, C. O., Akawi, A. J., Chukwuocha, U. M., & Dozie, I. N. S. (2021). Knowledge, attitude and perception on cervical cancer screening among women attending ante-natal clinic in Owerri west L.G.A, South-Eastern Nigeria: A cross-sectional study. *Cancer Treatment and Research Communications*, 28, 100392. 10.1016/j.ctarc.2021.100392 - DOI - PubMed

Gatumo, M., Gacheri, S., Sayed, A. R., & Scheibe, A. (2018). Women's knowledge and attitudes related to cervical cancer and cervical cancer screening in Isiolo and Tharaka Nithi counties, Kenya: A cross-sectional study. *BMC Cancer*, 18(1), 745. 10.1186/s12885-018-4642-9 - DOI - PMC - PubMed

George, J. (2021). Factors influencing utilization of cervical cancer screening services among women – A cross sectional survey. *Clinical Epidemiology and Global Health* 11(1), 100752. <https://www.sciencedirect.com/science/article/pii/S2213398421000567> - PMC - PubMed

Ghosh, S., Mallya, S. D., Shetty, R. S., Pattanshetty, S. M., Pandey, D., Kabekkodu, S. P., Satyamoorthy, K., & Kamath, V. G. (2021). Knowledge, attitude and practices towards cervical cancer and its screening among women from tribal population: A community-based study from southern India. *Journal of Racial and Ethnic Health Disparities*, 8(1), 88–93. 10.1007/s40615-020-00760-4 - DOI - PMC - PubMed

Huchko, M. J., Ibrahim, S., Blat, C., Cohen, C. R., Smith, J. S., Hiatt, R. A., & Bukusi, E. (2018). Cervical cancer screening through human papillomavirus testing in community health campaigns versus health facilities in rural western Kenya. *International Journal of Gynecology & Obstetrics*, 141(1), 63–69. 10.1002/ijgo.12415 - DOI - PMC - PubMed

Huchko, M. J., Olwanda, E., Choi, Y., & Kahn, J. G. (2020). HPV-based cervical cancer screening in low-resource settings: Maximizing the efficiency of community-based strategies in rural Kenya. *International Journal of Gynecology & Obstetrics*, 148(3), 386–391. 10.1002/ijgo.13090 - DOI - PMC - PubMed

ICO/IARC Information Centre on HPV and Cancer . (2021). Kenya, human papillomavirus and related cancers, fact sheet 2021. HPV Information Centre. <https://hpvcentre.net/>

Issa, T., Babi, A., Azizan, A., Alibekova, R., Khan, S. A., Issanov, A., Chan, C. K., & Aimagambetova, G. (2021). Factors associated with cervical cancer screening behaviour of women attending gynaecological clinics in Kazakhstan: A cross-sectional study. *Women's Health*, 17, 174550652110041. 10.1177/17455065211004135 - DOI - PMC - PubMed

Jansen, E. E. L., Zielonke, N., Gini, A., Anttila, A., Segnan, N., Vokó, Z., Ivanuš, U., McKee, M., Koning de, H. J., de Kok, I. M. C. M., Veerus, P., Anttila, A., Heinävaara, S., Sarkeala, T., Csanádi, M., Pitter, J., Széles, G., Vokó, Z., Minozzi, S., ... Priaulx, J. (2020). Effect of organised cervical cancer screening on cervical cancer mortality in Europe: A systematic review. *European Journal of Cancer*, 127, 207–223. 10.1016/j.ejca.2019.12.013 - DOI - PubMed

Kanyina, E. W., Kamau, L., & Muturi, M. (2017). Cervical precancerous changes and selected cervical microbial infections, Kiambu County, Kenya, 2014: A cross sectional study. *BMC Infectious Diseases*, 17(1), 647. 10.1186/s12879-017-2747-4 - DOI - PMC - PubMed

Kenya Bureau of Statistics. DHS Program . (2015). Kenya demographic and health survey 2014. The Bureau. <https://dhsprogram.com/pubs/pdf/fr308/fr308.pdf>

Landy, R., Pesola, F., Castañón, A., & Sasieni, P. (2016). Impact of cervical screening on cervical cancer mortality: Estimation using stage-specific results from a nested case–control study. *British Journal of Cancer*, 115(9), 1140–1146. 10.1038/bjc.2016.290 - DOI - PMC - PubMed

Lemp JM, De Neve JW, Bussmann H, Chen S, Manne-Goehler J, Theilmann M, Marcus ME, Ebert C, Probst C, Tsabedze-Sibanyoni L, Sturua L, Kibachio JM, Moghaddam SS, Martins JS, Houinato D, Houehanou C, Gurung MS, Gathecha G, Farzadfar F, Dryden-Peterson S, Davies JI, Atun R, Vollmer S, Bärnighausen T, Geldsetzer P. (2020). Lifetime prevalence of cervical cancer screening in 55 low- and middle-income countries. *JAMA*. 324(15):1532-1542. 10.1001/jama.2020.16244 - DOI - PMC - PubMed

Liu, F. W., Vwalika, B., Hacker, M. R., Allen, S., & Awtrey, C. S. (2012). Cervical cancer and HPV vaccination: Knowledge and attitudes of adult women in Lusaka, Zambia. *Journal of Vaccines & Vaccination*, 3(138), 1–4. 10.4172/2157-7560.1000138 - DOI - PMC - PubMed

Makau-Barasa, L. K., Greene, S., Othieno-Abinya, N. A., Wheeler, S. B., Skinner, A., & Bennett, A. V. (2020). A review of Kenya’s cancer policies to improve access to cancer testing and treatment in the country. *Health Research Policy and Systems*, 18(1), 2. 10.1186/s12961-019-0506-2 - DOI - PMC - PubMed

Mengesha, A., Messele, A., & Beletew, B. (2020). Knowledge and attitude towards cervical cancer among reproductive age group women in Gondar town, North West Ethiopia. *BMC Public Health*, 20(1), 209. 10.1186/s12889-020-8229-4 - DOI - PMC - PubMed

Ministry of Health, Kenya (2017). National cancer control strategy 2017–2022. <https://repository.kippra.or.ke/handle/123456789/2802>

Ministry of Health, Kenya (2018). Kenya national cancer screening guidelines. <https://www.ncikenya.or.ke/policies.php>

Ministry of Health, Kenya (2019). Government to roll out HPV vaccine to prevent cervical cancer next month. <http://www.health.go.ke/government-to-roll-out-hpv-vaccine-to-prevent-ce...>

Ministry of Health, Kenya: Division of Community Health Services. (2020). Kenya community health strategy 2020-2025. <https://repository.kippra.or.ke/handle/123456789/3076>

Ministry of Public Health and Sanitation, Ministry of Medical Services. (2012). National guidelines for prevention and management of cervical, breast and prostate cancers. Kenyan Ministry of Public Health and Sanitation. http://guidelines.health.go.ke:8000/media/National_Guidelines_for_Preven...

Mugai, F., Karonjo, J., Mutua, F. M., Kamau, P., & Kausya, J. (2020). Knowledge and health system factors influencing utilization of cervical screening services among sex workers in Kiambu County Hotspots, Kenya. *PAMJ – One Health*, 2, 2. 10.11604/pamj-oh.2020.2.2.21200. – DOI

Mukama, T., Ndejjo, R., Musabyimana, A., Halage, A. A., & Musoke, D. (2017). Women's knowledge and attitudes towards cervical cancer prevention: A cross sectional study in Eastern Uganda. *BMC Women's Health*, 17(1), 9. 10.1186/s12905-017-0365-3 - DOI - PMC - PubMed

Ng'ang'a, A., Nyangasi, M., Nkonge, N. G., Gathitu, E., Kibachio, J., Gichangi, P., Wamai, R. G., & Kyobutungi, C. (2018). Predictors of cervical cancer screening among Kenyan women: Results of a nested case-control study in a nationally representative survey. *BMC Public Health*, 18(Suppl 3), 1221. 10.1186/s12889-018-6054-9 - DOI - PMC - PubMed

Ngune, I., Kalembo, F., Loessl, B., & Kivuti-Bitok, L. W. (2020). Biopsychosocial risk factors and knowledge of cervical cancer among young women: A case study from Kenya to inform HPV prevention in Sub-Saharan Africa. *PLoS One*, 15(8), e0237745. 10.1371/journal.pone.0237745 - DOI - PMC - PubMed

Nyambe, A., Kampen, J. K., Baboo, S. K., & Van Hal, G. (2019). Knowledge, attitudes and practices of cervical cancer prevention among Zambian women and men. *BMC Public Health*, 19(1), 508. 10.1186/s12889-019-6874-2 - DOI - PMC - PubMed

Pengpid, S., & Peltzer, K. (2014). Attitudes and practice of cervical cancer screening among female university students from 25 low, middle income and emerging economy countries. *Asian Pacific Journal of Cancer Prevention*, 15(17), 7235–7239. 10.7314/APJCP.2014.15.17.7235 - DOI – PubMed

Phaiphichit, J., Paboriboune, P., Kunnavong, S., & Chanthavilay, P. (2022). Factors associated with cervical cancer screening among women aged 25–60 years in Lao People’s Democratic Republic. *PLoS One*, 17(4), e0266592. 10.1371/journal.pone.0266592 - DOI - PMC - PubMed

Rabil, M. J., Tunc, S., Bish, D. R., & Bish, E. K. (2022). Benefits of integrated screening and vaccination for infection control. *PLoS One*, 17(4), e0267388. 10.1371/journal.pone.0267388 - DOI - PMC - PubMed

Sakwa, G., Bukhala, P., Kipmerewo, M., & Kwena, Z. (2021). Knowledge, attitude and practices in cervical cancer screening in Kakamega County, Kenya. *Journal of Health, Medicine and Nursing*, 7(3), 51–66. 10.47604/jhmn.1427 - DOI

StataCorp . (2013). *Stata statistical software: Release 13*. StataCorp LP. <https://www.stata.com/>

Sung, H., Ferlay, J., Siegel, R. L., Laversanne, M., Soerjomataram, I., Jemal, A., & Bray, F. (2021). Global cancer statistics 2020: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA: A Cancer Journal for Clinicians*, 71(3), 209–249. 10.3322/caac.21660 - DOI - PubMed

Tekle, T., Wolka, E., Nega, B., Kumma, W. P., & Koyira, M. M. (2020). Knowledge, attitude and practice towards cervical cancer screening among women and associated factors in hospitals of Wolaita Zone, Southern Ethiopia. - DOI - PMC - PubMed

Vermandere, H., van Stam, M.-A., Naanyu, V., Michielsen, K., Degomme, O., & Oort, F. (2016). Uptake of the human papillomavirus vaccine in Kenya: Testing the health belief model through pathway modeling on cohort data. *Globalization and Health*, 12(1), 72. 10.1186/s12992-016-0211-7 - DOI - PMC – PubMed

Waitara, J. K., Kerich, G., Kihoro, J., & Korir, A. (2021). Poisson-gamma and spatial-temporal models: With application to cervical cancer in Kenya's counties. *American Journal of Theoretical and Applied Statistics*, 10(3), 158–166. 10.11648/j.ajtas.20211003.14 - DOI

Wanyoro, A. K., & Kabiru, E. W. (2017). Use of mobile phone short text message service to enhance cervical cancer screening at Thika Level 5 Hospital, Kiambu County, Kenya: A randomised controlled trial. *Research in Obstetrics and Gynecology*, 5(1), 10–20. <http://article.sapub.org/10.5923.j.rog.20170501.03.html>

Warui, L. W., Suleman, M. A., Makokha, F. W., & Kamita, M. (2021). Trend in cancer cases diagnosed at Kiambu and Gatundu Level 5 Hospitals, Kiambu County Kenya between 2013 and 2017. *International Research Journal of Oncology*, 4(1), 36–48. <https://journalirjo.com/index.php/IRJO/article/view/30148>

M. Stead, PESCE European Research Team, Angus K, Holme I, et al. . Factors influencing european GPs' engagement in smoking cessation: a multi-country literature review. *Br J Gen Pract*. 2009;59(566):682–690. – PMC – PubMed

N.H Chavannes, Meijer E, Wind LA, et al. . Herziene richtlijn 'behandeling van tabaksverslaving en stoppen met roken ondersteuning. *Ned Tijdschr Geneesk*. 2017;161:D1394. – PubMed

R. Borland, Li L, Driezen P, et al. . Cessation assistance reported by smokers in 15 countries participating in the international tobacco control (ITC) policy evaluation surveys. *Addiction*. 2012;107(1):197–205. – PMC – PubMed

K. Pirie, Million Women Study Collaborators, Peto R, Reeves GK, et al. . The 21st century hazards of smoking and benefits of stopping: a prospective study of one million women in the UK. *Lancet*. 2013;381(9861):133–141. – PMC – PubMed

C. Senore, L. Giordano, Bellisario C, et al. . Population based cancer screening programmes as a teachable moment for primary prevention interventions. A review of the literature. *Front Oncol*. 2012;2:45. – PMC – PubMed

S. Hall, Reid E, Ukoumunne OC, et al. . Brief smoking cessation advice from practice nurses during routine cervical smear tests appointments: a cluster randomised controlled trial assessing feasibility, acceptability and potential effectiveness. *Br J Cancer*. 2007;96(7):1057–1061. – PMC – PubMed

Brown KF, Rungay H, Dunlop C, et al. . The fraction of cancer attributable to modifiable risk factors in England, Wales, Scotland, Northern Ireland, and the United Kingdom in 2015. *Br J Cancer*. 2018;118(8):1130–1141. – PMC – PubMed

Roura E, Castellsague X, Pawlita M, et al. . Smoking as a major risk factor for cervical cancer and pre-cancer: results from the EPIC cohort. *Int J Cancer*. 2014;135(2):453–466. – PubMed

Holschneider CH, Baldwin RL, Tumber K, et al. . The fragile histidine triad gene: a molecular link between cigarette smoking and cervical cancer. *Clin Cancer Res*. 2005;11(16):5756–5763. – PubMed

Gezondheidsenquête/Leefstijlmonitor 2019. [cited 2022 March 9].
<https://www.rivm.nl/leefstijlmonitor/roken-onder-volwassenen>

Hiscock R, Murray S, Brose LS, et al. . Behavioural therapy for smoking cessation: the effectiveness of different intervention types for disadvantaged and affluent smokers. *Addict Behav.* 2013;38(11):2787–2796. – PMC – PubMed

Faulkner K, Sutton S, Jamison J, et al. . Are nurses and auxiliary healthcare workers equally effective in delivering smoking cessation support in primary care? *NICTOB.* 2016;18(5):1054–1060. – PMC – PubMed

Katz DA, AHRQ Smoking Cessation Guideline Study Group, Brown RB, Muehlenbruch DR, et al. . Implementing guidelines for smoking cessation: comparing the efforts of nurses and medical assistants. *Am J Prev Med.* 2004;27(5):411–416. – PubMed

Campbell NC, Murray E, Darbyshire J, et al. . Designing and evaluating complex interventions to improve health care. *BMJ.* 2007;334(7591):455–459. – PMC – PubMed

Mansour MB, Crone MR, van Weert HC, et al. . Smoking cessation advice after cervical screening: a qualitative interview study of acceptability in dutch primary care. *Br J Gen Pract.* 2019;69(678):e15–e23. – PMC – PubMed

Vidrine JI, Shete S, Cao Y, et al. . Ask-Advise-Connect: a new approach to smoking treatment delivery in health care settings. *JAMA Intern Med.* 2013;173(6):458–464. – PMC – PubMed

Braun V, Clarke V.. Using thematic analysis in psychology. *Qualitative Res Psychol.* 2006;(3(2)):77–101.

McLeroy KR, Bibeau D, Steckler A, et al. . An ecological perspective on health promotion programs. *Health Educ Q.* 1988;15(4):351–377. – PubMed

Tong A, Sainsbury P, Craig J.. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care.* 2007;19(6):349–357. – PubMed

Petrova M, Vail L, Bosley S, et al. . Benefits and challenges of employing health care assistants in general practice: a qualitative study of GPs' and practice nurses' perspectives. *Fam Pract.* 2010;27(3):303–311. – PubMed

Bosley S, Dale J.. Healthcare assistants in general practice: practical and conceptual issues of skill-mix change. *Br J Gen Pract.* 2008;58(547):118–124. – PMC – PubMed

Ferrer RL, Mody-Bailey P, Jaen CR, et al. . A medical assistant-based program to promote healthy behaviors in primary care. *Ann Fam Med.* 2009;7(6):504–512. – PMC – PubMed

Wandell PE, de Waard AM, Holzmann MJ, et al. . Barriers and facilitators among health professionals in primary care to prevention of cardiometabolic diseases: a systematic review. *Fam Pract.* 2018;35(4):383–398. – PubMed

Rubio-Valera M, Pons-Vigues M, Martinez-Andres M, et al. . Barriers and facilitators for the implementation of primary prevention and health promotion activities in primary care: a synthesis through Meta-ethnography. *PLoS One.* 2014;9(2):e89554. – PMC – PubMed

Stevens C, Vrinten C, Smith SG, et al. . Acceptability of receiving lifestyle advice at cervical, breast and bowel cancer screening. *Prev Med.* 2019;120:19–25. – PMC – PubMed

Hall S, Marteau TM.. Practice nurses' self-reported opportunistic smoking cessation advice in three contexts. *Nicotine Tob Res.* 2007;9(9):941–945. – PubMed

Vogt F, Hall S, Marteau TM.. General practitioners' and family physicians' negative beliefs and attitudes towards discussing smoking cessation with patients: a systematic review. *Addiction.* 2005;100(10):1423–1431. – PubMed

LHV, NHG, VPH, InEen . http://toekomsthuisartsenzorg.nl/wp-content/uploads/2020/10/Final_Toekom... 2020. Available from: <https://toekomsthuisartsenzorg.nl/kerntaken-in-de-praktijk/>.

Damschroder LJ, Aron DC, Keith RE, et al. . Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. *Implement Sci.* 2009;4:50. – PMC – PubMed

Wild, C. P., Weiderpass, E., & Stewart, B. W. (2020). World cancer report: Cancer research for cancer prevention. International Agency for Research on Cancer. <http://publications.iarc.fr/586>

Global strategy towards eliminating cervical cancer as a public health problem. Geneva: World Health Organization; 2020 (<https://www.who.int/initiatives/cervical-cancer/strategy>).

National Cancer Control Plan 2018 – 2022. Abuja: Nigeria Federal Ministry of Health; 2018 (https://www.iccp-portal.org/system/files/plans/NCCP_Final%20%5B1%5D.pdf, accessed 22 October 2020).

Jannamike L. World Cancer Day: Minister urges Nigerians to engage in physical exercises [World cancer Day Speech 2018]. Vanguard Media Limited (Nigeria). 4 February 2018 (<https://www.vanguardngr.com/2018/02/world-cancer-day-minister-urges-nigerians-engage-physical-exercises/>, accessed 22 October 2020).

Cancer Today: data visualization tools for exploring the global cancer burden in 2018 [website]. Lyon: Cancer Today – IARC; 2018 (<https://gco.iarc.fr/today/home>, accessed 22 October 2020).

Nigerian Fact Sheet 2018 [website]. Geneva: UNAIDS; 2020 (<https://www.unaids.org/en/region-scountries/countries/Nigeria>, accessed 22 October 2020]

Bruni L Albero G Serrano B Mean M G Mez D, Mu oz J et al. ico/arc information centre on hpv and cancer [hpv information centre]. Human papillomavirus and related diseases nigeria .summary report 17 june 2019 [http; [//www.hpvcentre.net/statistics/report/nga.pdf](http://www.hpvcentre.net/statistics/report/nga.pdf), accessed 22 October 2020]

WHO cervical cancer prevention and control costing [c4p] tool. In; WHO/immunization, vaccines and biological/vaccines and diseases [websites].Geneva; world health organisation 2020 [http://www.who.int/immunization/diseases/hpv/cervical_cancer_costing_tool/, accessed 22 October 2020]

Immunization coverage; WHO /unicef estimates of natural immunization coverage in; who /immunization, vaccines and biological /monitoring systems [websites].Geneva; world health organization; 2019 [http://www.who.int/immunization/monitoring_surveillances/routines_coverage/en/index4.html, accessed 22 October 2020]

World Health Organization. (2020). Global strategy to accelerate the elimination of cervical cancer as a public health problem. <https://www.who.int/publications/i/item/9789240014107>

World Health Organization. (2022). cervical cancer: Fact sheet. <https://www.who.int/news-room/fact-sheets/detail/cervical-cancer>

Zimmerman, B. J. (2000). Self-efficacy: An essential motive to learn. *Contemporary Educational Psychology*, 25(1), 82–91. 10.1006/ceps.1999.1016 - DOI – PubMed

<https://www.cancer.gov/types/cervical/treatment>

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Chapter Three

Methodology

3.1 Research Design

A cross-sectional research design was use for this study

3.2 Population of the Study

The study was conducted in Yagba West LGA of Kogi State, Nigeria. Its headquarters is in Odo - Ere town. It has an area of 1,272 km² and a population of almost 200,000. Nineteen towns and villages are in it. Most of the people are farmers and traders. The target population are women between the ages of 15 and 49 years who are sexually active or has been exposed to sexual intercourse at a time living in any of the town or village of Yagba west Kogi state. There are two General hospitals in Yagba West LGA, one in Egbe and another in Odo –Ere. None of the general hospital has facility for cervical cancer screening. There is a faith based hospital in Egbe which has facility for Cervical cancer screening but people do not assess the screening.

Figure1



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Kogi State Context

Kogi is a state in the North-Central zone of Nigeria. It is popularly called the ‘confluence state’ because the confluence of Rivers Niger and Benue occur there. The State was created on the 27th August 1991 from the Eastern part of Kwara state and the Western part of Benue State. Its capital is Lokoja. There are three major ethnic groups in Kogi, viz: Igala, Ebira, and Okun with other minorities like Bassa, Nge, Bassa Komo, Nupe, Gbagi, Kakanda, Oworo, Ogori and Eggan.

Kogi State is the most centrally located of all the states of the federation. It shares common boundaries with 10 states namely Niger, Kwara, Nassarawa, and the Federal Capital Territory (to the north); Benue, Enugu and Anambra (to the east); and Ondo, Ekiti and Edo (to the west).

The state is made up of 21 Local Government Areas (LGAs) as shown in Figure 2 and 239 wards with a population figure of 3,314,043 from the 2006 population census. There are 50.5% male and 49.5% female (Figures 3 and 4). As at 2007, it has a GDP per capita of \$1,386 (C-GIDD) and is located on the West Africa Time (WAT) time zone, which is equivalent to Coordinated Universal Time (UTC) plus 1 hour.

Figure 2: Map of Kogi State showing the 21 LGAs



Fig 3: Kogi State population by gender (Census 2006)

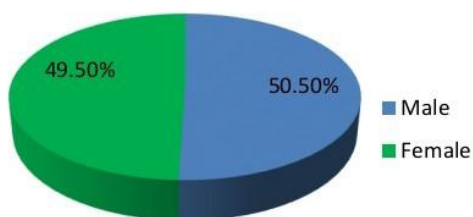
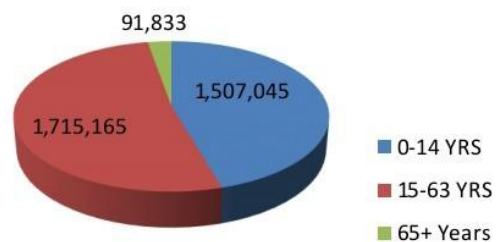


Fig 4: Kogi State population by age groups (Census 2006)



Yagba West is a **Local Government Area** in **Kogi State, Nigeria**, in the west of the state adjoining **Kwara State**. Its headquarters is in the town of **Odo Ere**.

Yagba West	
LGA	
	
Location in Nigeria Coordinates: 8°15'N 5°33'E	
Country	 Nigeria
State	Kogi State
Area	
• Total	1,276 km ² (493 sq mi)
Population (2006 census)	
• Total	149,023
Time zone	UTC+1 (WAT)
3-digit postal code prefix	262
ISO 3166 code	NG.KO.YW

WIA

Source: National Population Commission

3.3 Sample and Sampling Technique

A two stage cluster sampling was used for this study.

Stage 1- Out of the 19 communities in Yagba West LGA, 10 communities were selected by simple random and visited. They are; Egbe, Oke -Ere, Odo -Ere, Igbaruku, Iyamerin, Odo -Eri, Ejiba, Omi, Ogbe, Okunran.

Number of respondents recruited in each community; Egbe..... 60, Oke -Ere30, Odo -Ere.....50, Igbaruku.....30, Iyamerin.....25, Odo -Eri.....30, Ejiba.....35, Omi.....25, Ogbe.....30, Okunran.....40

Stage 2..... A cluster sampling was used to select the respondent for the study

The sample size will be determined by the Yamane's formula where a 95% confidence level is assumed.

$$n = \frac{N}{1+N(e)^2} \quad (\text{Yamane, 1967})$$

n = desired sample size

N is Population.

The level of precision is 0.05).

100900 is a number

N is a number

The number is 398.4206.

The number is 398.

For the purpose of this research, 10% of the sample size was added since the minimum sample size is 398. The number of questionnaires will be rounded up to 417.

3.4 Description of the Research Instrument

This study used a structured questionnaire as the data collection tool. Section A: Contained a question that elicited information on socio-demographic variables of the respondents such as age, religion, marital status and educational level. Questions on knowledge of cervical cancer, screening and prevention were included in

Section B: It comprises of questions about attitudes and barriers to cervical cancer screening.

3.5 Validity of the Research Instrument

The questionnaires were corrected by the supervisor to ensure its validity.

3.6 Reliability of the Research Instrument

The test-retest method was used to check the consistency of the data tool.

3.7 Data Collection

Data on demographic characteristics was gathered using a structured questionnaire that has undergone validation. Before beginning, each participant was given a verbal explanation of the study's objectives and given the opportunity to provide their informed permission. Additionally, the process for gathering data from the participants was described.

The researcher recruits two research assistants to help with data collection. The purpose of the study was explained to the respondents. Their consents were obtained before the survey was administered.

3.8 Data Analysis

Using the statistical program for social sciences (SPSS) version 20, Socio-demographic data were presented as descriptive statistics of percentages and frequencies. The link between good knowledge and other independent variable was determined by a multi-variable study. To assess the prevalence of knowledge, descriptive statistics (frequency, mean, and standard deviation) were utilized.

3.9 Ethical Considerations

The data collection process had to adhere to traditional ethical research standards.

Prospective respondents were informed about the study's purpose. The Kogi State Ministry of Health clearance was obtained; the Lead City university ethical research committee also gave a research clearance. Before the study questionnaires were administered, consent was sought from all the respondents. No one was forced to take part in the study. They were assured of confidentiality of all information provided and they were told that they were free to opt out of the study whenever they wanted.

CHAPTER FOUR

Results and Discussion of Findings

4.0 Introduction

The result of this study was presented in different parts. The first part involves the description of the study participant according to their background characteristics. The knowledge of women in Yagba was assessed in the second part, while the practice of cervical screening and factors influencing good knowledge to cervical screening was assessed in the third part.

4.1 Demographic Data Analysis

The result from table 4.1 shows that out of four hundred and seventeen (417) respondent 44(10.6%) are between the age of 18 – 20 years, 100(24%) are between the age of 21 -26 years, 232(55.6%) are between the age of 27 – 35 years, while 41(9.6%) are between the age of 36 - 55 years. The study shows that 118(28.3%) are single, 248 (59.5%) are married, while 51(12.2%) were previously married. The result shows that 42(10.1%) has no formal education, 87(20.9%) has primary education, 74(17.7%) has secondary education, while 214(51.3%) has tertiary education. The result shows that 42(10.1%) are schooling, 84(20.1%) are farmers, 82(19.7%) are traders, while 209(50.1%) are civil servants. The result also shows that 277(66.4%) are practicing Christianity, 83(19.9%) are practicing Islam, 57(13.6%) are traditionalist.

Table 4.1: Percentage Distribution of Background Characteristics

Variables	Frequency	Percent
Age		
18-20 years	44	10.6
21-26 years	100	24.0
27-35 years	232	55.6
36-55 years	41	9.8
Marital status		
Single	118	28.3
Married	248	59.5
Previously married	51	12.2
Educational status		
No formal education	42	10.1
Primary	87	20.9
Secondary	74	17.7
Tertiary	214	51.3
Occupation		
Schooling	42	10.1
Farming	84	20.1
Trading	82	19.7
Civil servant	209	50.1
Religion		
Christianity	277	66.4
Islamic	83	19.9
Traditional	57	13.6

4.2 Presentation of Data

4.2.1 Knowledge of Women on Cervical Cancer

According to table 4.2, result shows that 40% of the respondents answered correctly that all women are at risk of cervical cancer while 60% answered the same question incorrectly. The study shows that 71% answered correctly that medical treatment of cervical cancer will be better than traditional or spiritual ways while 29% answered the same question incorrectly. The result also shows that 80.1% of the respondent answered correctly that women that smoke, having sexual intercourse with many men contacting STIs likely to have cancer while 19.9%

answered the same question incorrectly. It is shown from the result that 79.1% of the respondent answered correctly that if cervical cancer is detected; it should be treated as early as possible while 20.9% answered the same question incorrectly. The finding shows that 80.8% of the respondent answered correctly that every woman who is sexually active should have cervical screening done every 6 months while 19.2% answered the same question incorrectly. It is revealed from the result that 80.3% of the respondent answered correctly that proper information and education of reproductive age women could reduce the rate of cervical cancer while 19.7% answered the same question incorrectly. The result shows that 39.6% of the respondent answered correctly that a woman can die of cervical cancer while 59.4% answered the same question incorrectly. Furthermore the result shows that 49.2% answered correctly what preventive measure is to be carried out while 50.8% answered the same question incorrectly.

If cervical cancer is detected, it should be treated as early as possible	87(20.9%)	330(79.1%)
Every women who is sexually active should have cervical screening done every 6 months	80(19.2%)	337(80.8%)
Proper information and education of reproductive age women could reduce the rate of cervical cancer	82(19.7%)	335(80.3%)
Can a woman die of cervical cancer?	252(60.4%)	165(39.6%)
What preventive measure is to be carried out?	212(50.8%)	205(49.2%)

Figure 4.1 show that only 33.20% of the respondent has good knowledge of cervical cancer while 66.80% have poor knowledge.

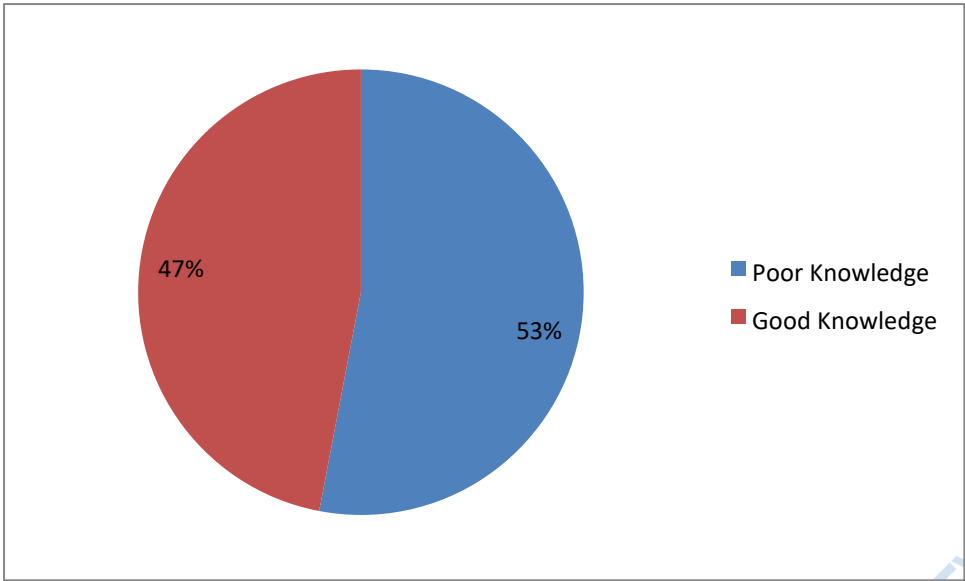


Figure 4.1: Percentage Distribution of Knowledge of women on Cervical Cancer

4.2.2 Practice of Cervical Cancer in Yagba Local Government

Figure 4.2 shows that only 58.8% of the respondents are practicing cervical cancer screening while 41.2% are not practicing.

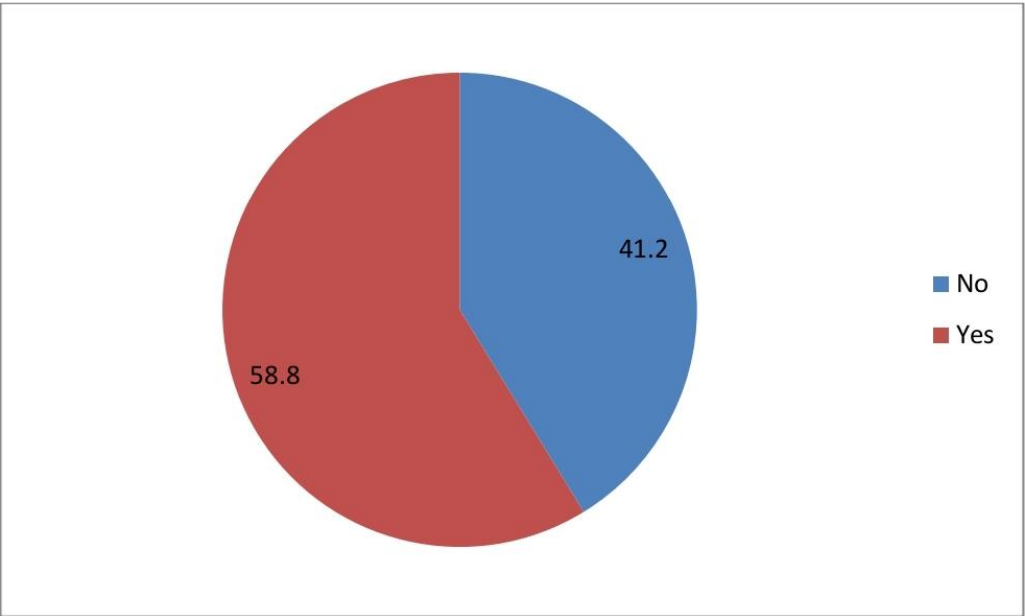


Figure 4.2: Percentage Distribution of Practice of Cervical Cancer Screening

Table 4.2: Percentage Distribution of Knowledge of Women on Cervical**Cancer**

Variables	Incorrect	Correct
All women are at risk of cervical cancer	250(60%)	167(40%)
Women that smoke, having sexual intercourse with many men contacting STIs likely to have cancer	83(19.9%)	334(80.1%)
Medical treatment of cervical cancer will be better than traditional or spiritual ways?	121(29%)	296(71%)
If cervical cancer is detected, it should be treated as early as possible	87(20.9%)	330(79.1%)
Every women who is sexually active should have cervical screening done every 6 months	80(19.2%)	337(80.8%)
Proper information and education of reproductive age women could reduce the rate of cervical cancer	82(19.7%)	335(80.3%)
Can a woman die of cervical cancer?	252(60.4%)	165(39.6%)
What preventive measure is to be carried out?	212(50.8%)	205(49.2%)

Figure 4.3 shows that 66.9% of the respondents said the reasons that prevent them from being screened is that they do not want anyone to know that they have cancer, if the result is positive while 33.1% said they do not have money for screening.

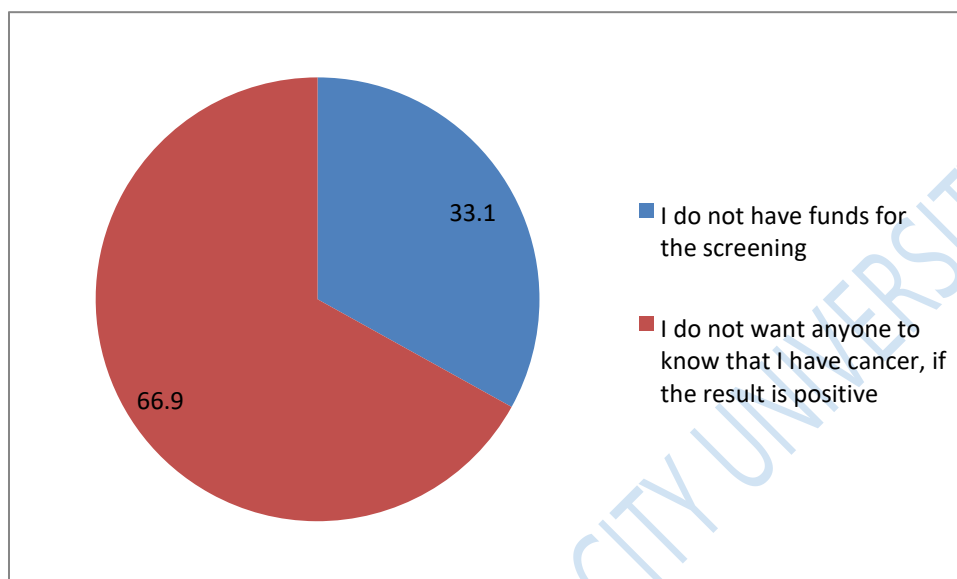


Figure 4.3: Percentage Distribution of the Reasons that prevent women from being screened of cervical cancer

4.3.3 Factors influencing Good Knowledge of Cervical Cancer Screening

Table 4.4 shows the factors influencing good knowledge on cervical cancer. From the result, respondent between 18 – 20 years are 80 times more likely to have poor knowledge of cervical screening compared to their counterpart who are between the age of 36 -55 years at (3.187, 2025.872 CI). The result shows that respondents between the age of 21 -26 years are 2.2 more likely to have poor knowledge of cervical cancer compared to their counterpart who are between the age of 36 -55 years at (0.000, 44143.3 CI), the respondent between the age of 27 –

35years are 27.4 times more likely to have poor knowledge of cervical cancer screening compared to their counterpart who are between the age of 36 -55 years.

It is shown from the result that respondents who are single are 1.66 times less likely to have poor knowledge of cervical cancer compared to their counterpart who are previously married at (0.000, 11345.3 CI). It also shows that respondent who are married are 43.4 less likely to have poor knowledge of cervical cancer compared to their counterpart who were previously married at (0.001, 0.697 CI).

The result shows that respondent who have no formal education are 4.3 times more likely to have poor knowledge of cervical cancer compared to their counterpart who have tertiary education at (0.298, 62.515 CI). Respondent who have primary education are 11.4 times less likely to have poor knowledge of cervical cancer compared to their counterpart who had tertiary education at (0.017, 0.457 CI). It is also revealed from the result that respondent who had secondary education are 7.0 times more likely to have poor knowledge of cervical cancer compared to their counterpart who had tertiary education at (0.211, 234.65 CI).

The result shows that respondent who are still schooling are 2.7 times less likely to have poor knowledge of cervical cancer compared to their counterpart who are civil servant at (0.006, 21.076 CI). It is also shown from the result that respondent who are farmers are 4.90 less likely not to have poor knowledge of cervical cancer compared to their counterpart who are civil servant at (0.030, 1.84 CI). Respondent who are traders are 19.2 less likely not to have poor knowledge of cervical cancer compared to their counterpart who are civil servant at (0.005, 0.537 CI).

Furthermore, the results show that respondent who doesn't submit their selves to medical examination are more likely to have poor knowledge of cervical cancer compared to their counterpart who submit their selves for medical examination at (0.000, 0.005 CI).

Table 4.3: Factors influencing Good Knowledge of Cervical Cancer

Variables	UOR	95% CI	P-value	AOR	95% CI	P-value
Age						
18-20 years	45.500	12.758, 162.267	0.000	80.352	3.187, 2025.872	0.008
21-26 years	52.500	17.743, 155.342	0.000	2.205	0.000, 44143.3	0.876
27-35 years	2.081	0.344, 5.190	0.116	27.468	0.877, 860.2	0.059
36-55 years	1					
Marital status						
Single	32.008	12.798, 80.050	0.000	0.600	0.000, 11345.3	0.919
Married	1.102	0.563, 2.161	0.776	0.023	0.001, 0.697	0.030
Previously married	1					
Educational status						
No formal education	1.075	0.539, 2.141	0.838	4.317	0.298, 62.515	0.283
Primary	0.156	0.087, 0.280	0.000	0.087	0.017, 0.457	0.004
Secondary	0.178	0.097, 0.327	0.000	7.033	0.211, 234.65	0.276
Tertiary	1					
Occupation						
Schooling	0.257	0.127, 0.519	0.000	0.360	0.006, 21.076	0.623
Farming	0.150	0.084, 0.270	0.000	0.204	0.030, 1.84	0.104
Trading	0.228	0.130, 0.391	0.000	0.052	0.005, 0.537	0.013
Civil servant	1					
Submission for medical examination						
No	0.001	0.000, 0.011	0.000	0.000	0.000, 0.005	0.000
Yes	1					

4.3 Discussion of Findings

4.3.1 Background characteristics of the respondent

More than half of the respondent were in the age group of 27 -35 years, the majority of the participants are Christian this is consistent with the study carried out in Kwazulu-natal South Africa.

4.3.2 Knowledge of Cervical Cancer Screening

The study revealed that only 47% have good knowledge about regarding cervical cancer and its prevention this reflects even majority of those who had heard about cervical cancer didn't have sufficient knowledge regarding the disease. This is consistent with a study conducted on sexual health status and cervical cancer prevention among 250 Thai couples in which majority, (65.6%) having a low level of knowledge about cervical cancer and its prevention¹. This consistency might emerge from a lack of information about it. This might be also due to the lack of awareness creation programs regarding cervical cancer. Because chronic diseases like cancer are neglected and the major focus of government in most developing countries including Ethiopia is on infectious disease prevention. It is also consistent with other studies across literatures in low and middle-income countries².

4.3.3 Practice of Cervical Cancer Screening

Most of the participants practice cervical cancer screening (Pap smear test) (58.8%). This finding is in line with the results of studies conducted in Malaysia, Qatar and SA, where 80.5%, 76% and 60% of participants had heard of a Pap smear test. The study findings further revealed a fairly good (66.8%) uptake of a

Pap smear. Some of the study participants have had a Pap smear done more than once (50.8%). In studies conducted in Johannesburg and Limpopo in SA, 80% and 96.8%, respectively, had never had a Pap smear. The uptake of Pap smear in this study is fairly good compared to some studies conducted in SA. Increased uptake among these participants could be attributed to the burden of HIV among women in this area. A yearly test is routinely done and emphasized for HIV-infected women according to South African guidelines

4.3.4 Barriers to cervical cancer screening

Most of the respondents have misconceptions about cervical cancer screening. The findings from the study shows that 66.9% of the respondents said the reasons that prevent them from being screened is that they do not want anyone to know that they have cancer, if the result is positive while 33.1% said they do not have money for screening. Some of the participants are afraid of the instrument which prevent them from getting screened for cervical cancer.

4.3.5 Factors influencing Good Knowledge of Cervical Cancer

Results on the influence of demographic characteristics on knowledge of cervical cancer screening showed strong influence of age and level of education on information about cervical cancer screening such that 26–30 years age brackets were more familiar with the screening than other age brackets. The level of knowledge on cervical cancer screening increased with

increasing level of education such that higher proportion of respondents who heard of the screening were post-secondary school certificate holders with a significant association. In one study, the participants level of education did not significantly influenced the uptake of cervical cancer screening, while it significantly predicted uptake of cervical cancer screening in another study. Therefore, though education is a vital tool in health promotion, it may not be the sole determinant of health practices of individuals which are usually multi-factorial in nature

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Chapter Five

Conclusion

This chapter presents the summary, conclusion, recommendation, as well as suggestions for further studies. The chapter was discussed using the following outline:

5.1 Summary of Findings

The research study looked at women's knowledge, practice and barriers towards cancer screening and prevention. The study was done in Yagba West L.G.A. It was Kogi State. The results of the analysis show that more women are knowledgeable about the disease and use it more often, but some are negligent about the preventive measures. A lot of bad motives about their health, health workers attitude, financial handicaps, and low self- esteem were presented during the general reviews.

The researcher created a good communication in a simple language that the respondents could understand and positive response was put into practice. The study examined the Knowledge, Practice and Barriers to Cervical Cancer Screening, Prevention and Treatment among women of reproductive age in Yagba West Local Government Area, Kogi State. The targeted population for the study was 417 women who are sexually active or exposed. A sample size of 417 respondents was drawn with the use of two stage cluster sampling, where the first phase engaged simple random sampling in selecting 10 communities out of 19 communities in Yagba Local Government using the Leslie fisher's formula for sample size determination.

The result from this study shows that 44(10.6%) of the respondent are between the ages of 18 – 20 years, 100(24%) are between the age of 21 -26 years, 232(55.6%) are between the age of 27 – 35 years, while 41(9.6%) are between the age of 36 - 55 years. The study shows that 118(28.3%) are single, 248 (59.5%) are married, while 51(12.2%) were previously married.

The result shows that 42(10.1%) has no formal education, 87(20.9%) has primary education, 74(17.7%) has secondary education, while 214(51.3%) has tertiary education. The result shows that

42(10.1%) are schooling, 84(20.1%) are farmers, 82(19.7%) are traders, while 209(50.1%) are civil servants. The result also shows that 277(66.4%) are practicing Christianity, 83(19.9%) are practicing Islam, 57(13.6%) are traditionalist.

Findings from this study show that 40% of the respondents answered correctly that all women are at risk of cervical cancer while 60% answered the same question incorrectly. The study shows that 71% answered correctly that medical treatment of cervical cancer will be better than traditional or spiritual ways while 29% answered the same question incorrectly. The result also shows that 80.1% of the respondent answered correctly that women that smoke, having sexual intercourse with many men contacting STIs likely to have cancer while 19.9% answered the same question incorrectly. It is shown from the result that 79.1% of the respondent answered correctly that if cervical cancer is detected; it should be treated as early as possible while 20.9% answered the same question incorrectly.

The finding shows that 80.8% of the respondent answered correctly that every woman who is sexually active should have cervical screening done every 6 months while 19.2% answered the same question incorrectly. It is revealed from the result that 80.3% of the respondent answered correctly that proper information and education of reproductive age women could reduce the rate of cervical cancer while 19.7% answered the same question incorrectly.

The result shows that only 33.20% of the respondent has good knowledge of cervical cancer while 66.80% have poor knowledge.

The current study shows that only 58.8% of the respondents are practicing cervical cancer screening while 41.2% are not practicing.

Furthermore, the finding from this study shows the factors influencing good knowledge on cervical cancer. From the result, respondent between 18 – 20 years are 80 times more likely to have poor knowledge of cervical screening compared to their counterpart who are between the age of 36 -55 years at (3.187, 2025.872 CI). The result shows that respondents between the age of 21 -26 years are 2.2 more likely to have poor knowledge of cervical cancer compared to their counterpart who are between the age of 36 -55 years at (0.000, 44143.3 CI), the respondent between the age of 27 – 35years are 27.4 times more likely to have poor knowledge of cervical cancer screening compared to their counterpart who are between the age of 36 -55 years.

It is shown from the result that respondents who are single are 1.66 times less likely to have poor knowledge of cervical cancer compared to their counterpart who are previously married at (0.000, 11345.3 CI). It also shows that respondent who are married are 43.4 less likely to have poor knowledge of cervical cancer compared to their counterpart who were previously married at (0.001, 0.697 CI).

The result shows that respondent who have no formal education are 4.3 times more likely to have poor knowledge of cervical cancer compared to their counterpart who have tertiary education at (0.298, 62.515 CI). Respondent who have primary education are 11.4 times less likely to have poor knowledge of cervical cancer compared to their counterpart who had tertiary education at (0.017, 0.457 CI). It is also revealed from the result that respondent who had secondary education are 7.0 times more likely to have poor knowledge of cervical cancer compared to their counterpart who had tertiary education at (0.211, 234.65 CI).

5.2 Conclusion

The overall outcome indicated that the respondent have little knowledge of cervical cancer screening and also above half of the respondent practice cervical cancer screening. The research shows that most of the respondents don't know anything about the prevention or treatment of the disease. The respondents have a lot of misconception about access to health care facility for screening. Mass media, seminars, lectures and health education are some of the ways in which awareness can be created.

5.3 Recommendation

1. The health workers need to create a friendly environment where women will be free from fear of being tested for cancer.
2. The existence of the vaccine should be reported to the appropriate authority by the nurses and the midwives.
3. For women in the community, seminars teaching, health education and advocating method should be put in place.
4. The government should teach their health workers how to prevent cancer.
5. Government should sponsor a similar research and it should be carried out on a larger scale on the effects and vaccination that can serve as a proper preventative measure.
6. The federal government and the federal ministry of health should work together to reduce the cost of screening and treatment for those living in the development.
7. The female gender should be involved in the community.

8. A healthy life style can be achieved by women in the community.
9. The community leaders, market women, and all individuals in the community should be involved in achieving full cooperation of the women in their knowledge of the disease.
10. The negative attitudes towards the prevention and treatment are abolished.
11. They should create a friendly environment where women will be free from fear of being screened for cancer.
12. The existence of the vaccine should be reported to the appropriate authority by the nurses.
13. Seminars teaching, health education and advocating method should be put in place, organized for women in the community for more clarifications about the deadly diseases called cervical cancer
14. A similar research should be carried out in the same area after some time to check if the findings and situations have changed as a result of the research.
15. This work should be done in other local government areas to find out what to get there.

5.4 Suggested Areas for Further Research

1. Knowledge, attitudes, and perceptions about cervical cancer, and the uptake of cervical cancer screening

Bibliography

Books

Diedrich A. Lonkey J.T, Guidor N.M .O. Textbook of human Obstetrics is and Gynecology. 2nd edition England 2014

Adegoke, Olusola, Shalini Kulasingam, & Beth Virnig. “*Cervical Cancer Trends in the United States: A 35-Year Population-Based Analysis.*” **Journal of Women's Health** 21, no. 10, 2012: 1031–1037.

Adegoke, Olusola, Shalini Kulasingam, & Beth Virnig. “*Cervical Cancer Trends in the United States: A 35-Year Population-Based Analysis.*” **Journal of Women's Health** 21, no. 10, 2022: 1031–1037.

Adesokan F.O Reproductive Health for All Ages third Edition, Akure, Bosoms. Nigeria 2017

Arif, Moh Erfan, Rila Anggraeni, & Nadiyah Hirfiyana Rosita. “*Analysis of Behavioral Intentions of Health Protocol Discipline during the COVID-19 Pandemic Using Theory of Planned Behavior (TPB) and Health Belief Model HBM.*” **Asia Pacific Management and Business Application** 010, no. 03 2022: 261–274.

“Awareness and Utilization of Cervical Cancer and Pap Smear Services among Market Women in North-Central Nigeria”

Blumenthal, Paul D., Lynne Gaffikin, Sylvia Deganus, Robbyn Lewis, Mark Emerson, & Sydney Adadevoh. “*Cervical Cancer Prevention: Safety, Acceptability, and Feasibility of a Single-Visit Approach in Accra, Ghana.*” **American Journal of Obstetrics and Gynecology** 196, no. 4, 2017.

Bray, Freddie, Anja H. Loos, Peter McCarron, Elizabete Weiderpass, Mark Arbyn, Henrik Møller, Matti Hakama, & D. Max Parkin. "Trends in Cervical Squamous Cell Carcinoma Incidence in 13 European Countries: Changing Risk and the Effects of Screening." **Cancer Epidemiology, Biomarkers & Prevention** 14, no. 3, 2015: 677–686.

Bray, Freddie, Jacques Ferlay, Isabelle Soerjomataram, Rebecca L. Siegel, Lindsey A. Torre, & Ahmedin Jemal. "Global Cancer Statistics 2018: Globocan Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries." **CA: A Cancer Journal for Clinicians** 68, no. 6, 2018: 394–424.

Bray, Freddie, Jacques Ferlay, Isabelle Soerjomataram, Rebecca L. Siegel, Lindsey A. Torre, & Ahmedin Jemal. "Global Cancer Statistics 2018: Globocan Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries." **CA: A Cancer Journal for Clinicians** 68, no. 6, 2018: 394–424.

Brunner M. & Shulders .O. Textbook of Medical Surgical Nursing 13th Edition, Philadelphia. . 2018

Bay. O Nursing Fundamental Caring and Clinical Decision Making. Second Edition. Philadelphia 2014

British Medical Association Illustrated Medical Dictionary. Second Edition, London 2015

Chirenje, J.R, & Chanamed .J. Textbook of Preventive and Society Medicine. 2nd edition India 2019

Cox, Richard J. "The Web of Records: Blogs and the Records Professions." **Records & Information Management Report** 23, no. 10, 2017: 01–11.

F.Bray,A.H.Loos,P.McCarronet al.,“Trendsincervicalsquamouscellcarcinomaincid
encein13Europeancountries:changingriskandtheeffectsofscreening,”
CancerEpidemiologyBiomarkers&Prevention,vol.14,no.3,pp.677–
686,2005.Viewat: [PublisherSite](#) | [GoogleScholar](#)

Fraser D.M (2015), Textbook of Human Development on Cervical Cancer, 2nd edition,

Getachew Mullu, Rahel Nega. “Nurses’ Attitude, Practice and Barriers toward Cancer Pain Management, Addis Ababa, Ethiopia.” **Journal of Cancer Science & Therapy** 6, no. 12, 2022.

Gichangi, P., B. Estambale, J. Bwayo, K. Rogo, S. Ojwang, A. Opiyo, and M. Temmerman. “Knowledge and Practice about Cervical Cancer and Pap Smear Testing among Patients at Kenyatta National Hospital, Nairobi, Kenya.” **International Journal of Gynecological Cancer** 13, no. 6 2022: 827–833.

Hay, Jennifer L., Tamara R. Buckley, & Jamie S. Ostroff. “The Role of Cancer Worry in Cancer Screening: A Theoretical and Empirical Review of the Literature.” **Psycho-Oncology** 14, no. 7, 2015: 517–534.

He, Yulong, Iiro Rajantie, Katri Pajusola, Michael Jeltsch, Tanja Holopainen, Seppo Yla-Herttuala, Thomas Harding, Karin Jooss, Takashi Takahashi, & Kari Alitalo. “Vascular Endothelial Cell Growth Factor Receptor 3– Mediated Activation of Lymphatic Endothelium Is Crucial for Tumor Cell Entry and Spread via Lymphatic Vessels.” **Cancer Research** 65, no. 11 2015: 4739–4746.

WHO U, PATH. Cryosurgical equipment for the treatment of precancerous cervical lesions and prevention of cervical cancer. 2012.

WHO/NMH/NMA. UN Joint Global Programme on Cervical Cancer Prevention and Control. The United Nations Global Cervical Cancer Programme 2016.

Bruni L, Albero G, Serrano B, Mena M, Gómez D, Muñoz J, et al.. Human Papillomavirus and Related Diseases in Ethiopia. 2017.

Fitzmaurice C, Dicker D, Pain A, Hamavid H, Moradi-Lakeh M, MacIntyre MF, et al.. The Global Burden of Cancer 2013. *JAMA oncology*. 2015;1(4):505–27. Epub 2015/07/17. Doi: 10.1001/jamaoncol.2015.0735 ; PubMed Central PMCID: PMC4500822. – DOI – PMC – PubMed

Hendry M, Lewis R, Clements A, Damery S, Clare W. “HPV? Never heard of it!”: A systematic review of girls’ and parents’ information needs, views and preferences about human papillomavirus vaccination 2013. Doi: 10.1016/j.vaccine.2013.08.091 – DOI – PubMed

Health WHOR, Diseases WHOC, Promotion H. Comprehensive cervical cancer control: a guide to essential practice: World Health Organization; 2006.

Denny L, Quinn M, Sankaranarayanan R. Screening for cervical cancer in developing countries. *Vaccine*. 2006;24:S71–S7. Doi: 10.1016/j.vaccine.2006.05.121 – DOI – PubMed

Sankaranarayanan R et al.. HPV screening for cervical cancer in rural India. *N Engl J Med*. 2009;360:1385–1394. Doi: 10.1056/NEJMoa0808516 – DOI – PubMed

Moyer VA. Screening for cervical cancer: US Preventive Services Task Force recommendation statement. *Annals of internal medicine*. 2012;156(12):880–91. Doi: 10.7326/0003-4819-156-12-201206190-00424 – DOI – PubMed

FMOH. National cancer control plan of Ethiopia. 2015.

Campos NG, Castle PE, Wright TC Jr, Kim JJ. Cervical cancer screening in low-resource settings: A cost-effectiveness framework for valuing tradeoffs between test performance and program coverage. *International journal of cancer*. 2015;137(9):2208–19. Doi: 10.1002/ijc.29594 – DOI – PMC – PubMed

Pimple S, Mishra G, Shastri S. Global strategies for cervical cancer prevention. *Current Opinion in Obstetrics and Gynecology*. 2016;28(1):4–10. Doi: 10.1097/GCO.0000000000000241 – DOI –

PubMed (OECD. StatExtracts; 2013. [http://stats.oecd.org/Index.aspx? Dataset Code=HEALTH_PROC](http://stats.oecd.org/Index.aspx?DatasetCode=HEALTH_PROC). Cited May 6 2020.).

Sudenga SL, Rositch AF, Otieno WA, Smith JS. Knowledge, attitudes, practices, and perceived risk of cervical cancer among Kenyan women: brief report. *International Journal of Gynecologic Cancer*. 2013;23(5):895–9. – PMC – PubMed

Idowu A, Olowookere SA, Fagbemi AT, Ogunlaja OA. Determinants of cervical cancer screening uptake among women in Ilorin, North Central Nigeria: a community-based study. *Journal of cancer epidemiology*. 2016;2016. Doi: 10.1155/2016/6469240 – DOI – PMC – PubMed

Ngugi CW BH, Muigai AW, Wanzala P, Mbithi JN. Factors affecting uptake of cervical cancer early detection measures among women in Thika, Kenya. *Health Care Women Int*. 2012;33(595–613 doi: 10.1080/07399332.2011.646367]. – DOI – PubMed

De Sanjosé S, Serrano B, Castellsagué X, Brotons M, Muñoz J, Bruni L, et al.. Human papillomavirus (HPV) and related cancers in the Global Alliance for Vaccines and Immunization (GAVI) countries. A WHO/ICO HPV Information Centre Report. *Vaccine*. 2012;30(Suppl 4):D1–83. – PubMed

Chidyaonga-Maseko F, Chirwa ML, Muula AS. Underutilization of cervical cancer prevention services in low and middle income countries: a review of contributing factors. *Pan African medical journal*. 2015;21(1). Doi: 10.11604/pamj.2015.21.231.6350 – DOI – PMC – PubMed

Moher D et al.. Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. *Systematic reviews*. 2015;4(1). Doi: 10.1186/2046-4053-4-1 – DOI – PMC – PubMed

Singer M, Deutschman CS, Seymour CW, Shankar-Hari M, Annane D, Bauer M, et al.. The third international consensus definitions for sepsis and septic shock (Sepsis-3). *Jama*. 2016;315(8):801–10. Doi: 10.1001/jama.2016.0287 – DOI – PMC – PubMed

Egger M SG, Schneider M, Minder C. Bias in meta-analysis detected by a simple, graphical test. *BMJ*. 1997;315(7109):629–34. Doi: 10.1136/bmj.315.7109.629 – DOI – PMC – PubMed

Begg CB MM. Operating characteristics of a rank correlation test for publication bias. *Biometrics*. 1994;50(4):1088–101. – PubMed

Higgins JP TS, Deeks JJ, Altman DG. Measuring inconsistency in meta-analyses. *BMJ*. 2003;327(7414):557. Doi: 10.1136/bmj.327.7414.557 – DOI – PMC – PubMed

Deeks JJ, Higgins JP, Altman DG. Analysing data and undertaking meta-analyses. *Cochrane handbook for systematic reviews of interventions*. 2008:241–84.

Teame H, Gebremariam L, Kahsay T, Berhe K, Gebreheat G. Factors affecting utilization of cervical cancer screening services among women attending public hospitals in Tigray region, Ethiopia, 2018; Case control study. 2019;14(3):e0213546. Doi: 10.1371/journal.pone.0213546 . – DOI – PMC – PubMed

Geremew AB, Gelagay AA, Azale T. Comprehensive knowledge on cervical cancer, attitude towards its screening and associated factors among women aged 30–49 years in Finote Selam town, northwest Ethiopia. *Reproductive health*. 2018;15(1):29. Epub 2018/02/16. Doi: 10.1186/s12978-018-0471-1 ; PubMed Central PMCID: PMC5813403. – DOI – PMC – PubMed

Petros H, Ayele AA. Cervical Cancer Screening and Treatment Services in South West Shoa Zone of Oromia Region. *Ethiopian Journal of Reproductive Health*. 2018;10(1):7–.

Gebrie MH, Belete MA, Lemlem SB, Woreta HK. Knowledge, preventive practice and associated factors of female nurses' towards cervical cancer in the selected government hospitals in Addis Ababa, Ethiopia. *J Diabetes Metab*. 2015;6(7):569.

Tarekegn AA, Mengistu MY, Mirach TH. Health professionals' willingness to pay and associated factors for cervical cancer screening program at College of Medicine and Health Sciences, University of Gondar, Northwest Ethiopia. *PloS one*. 2019;14(4). Doi: 10.1371/journal.pone.0215904 – DOI – PMC – PubMed

Bejiga B. Acceptability of cervical cancer screening using See and Treat (SAT) approach and determinant factors among women of reproductive age in health centers in Addis Ababa, Ethiopia 2017.

Boka A, Nigatu D. Cervical cancer screening and associated factors among women attending gynecology out-patient department and maternal and child health at mettu karlreferral hospital, South West, Ethiopia, 2019. *International Journal of Current Research in Life Sciences*. 8(01):2934–44.

Deribe L. cervical cancer screening service utilization and associated factors among HIV positive and women with unknown hiv status in alamata generalized hospital, Tigray, Ethiopia 2018: comparative cross sectional study: Addis Ababa University; 2018.

Gebre Z, Gerbaba M, Dirar A. Utilization of Cervical Carcinoma Screening Service and Associated Factors among Currently Married Women in Arba Minch Town, Southern Ethiopia *Journal of Womens Health Care*. 2016;5(1).

Tilahun T, Tulu T, Dechasa W. Knowledge, attitude and practice of cervical cancer screening and associated factors amongst female students at Wollega University, western Ethiopia. BMC research notes. 2019;12(1):518. Doi: 10.1186/s13104-019-4564-x – DOI – PMC – PubMed

Mulatu K, Motma A, Seid M, Tadesse M. Assessment of knowledge, attitude and practice on cervical cancer screening among female students of Mizan Tepi University, Ethiopia, 2016. Cancer Biol Ther Oncol. 2017;1(1):1–5.

Mekuria R. cervical cancer screening behavior and associated factors among women attending gynecology out-patient department and maternal and child health Addis Ababa university referral hospital, Ethiopia, 2018: Addis Ababa University; 2018.

Tsegaye S. Knowledge, Attitude, Practice of Cervical Cancer Screening and Its Associated Factors Among Female Students in Hawassa University college of Medicine and Health Science Hawassa: Addis Ababa University; 2015.

Abdulkadir IR. Level of knowledge toward human papillomavirus/cervical cancer & practice of Papanicolaou test screening among female Addis Ababa university students in Ethiopia: California State University, Northridge; 2013.

Gebregziabher D, Berhanie E, Birhanu T, Tesfamariam K. Correlates of cervical cancer screening uptake among female under graduate students of Aksum University, College of Health Sciences, Tigray, Ethiopia. BMC research notes. 2019;12(1):520. Epub 2019/08/21. Doi: 10.1186/s13104-019-4570-z ; PubMed Central PMCID: PMC6701026. – DOI – PMC – PubMed

Mersha A. Comprehensive knowledge and uptake of cervical cancer screening is low among women living with HIV/AIDS in Northwest Ethiopia. *Value in Health*. 2017;20(9):A493. Doi: 10.1186/s40661-017-0057-6 – DOI – PMC – PubMed

Gelibo T, Roets L, Getachew T, Bekele A. Coverage and factors associated with cervical Cancer screening: results from a population-based WHO steps Study in Ethiopia. *Adv Oncol Res Treat*. 2017;1(115):2.

Michael E. Cervical cancer screening utilization and its associated factors among women aged 30 years and above in Woliso town, South West Showa Zone, Oromia region, Ethiopia: Addis Ababa University; 2018.

Shiferaw S, Addissie A. Knowledge about cervical cancer and barriers toward cervical cancer screening among HIV-positive women attending public health centers in Addis Ababa city, Ethiopia. 2018;7(3):903–12. Doi: 10.1002/cam4.1334 . – DOI – PMC – PubMed

Getachew S, Getachew E. Cervical cancer screening knowledge and barriers among women in Addis Ababa, Ethiopia. 2019;14(5):e0216522. Doi: 10.1371/journal.pone.0216522 . – DOI – PMC – PubMed

Woldetsadik AB, Amhare AF, Bitew ST, Pei L, Lei J, Han J. Socio-demographic characteristics and associated factors influencing cervical cancer screening among women attending in St. Paul's Teaching and Referral Hospital, Ethiopia. *BMC women's health*. 2020;20(1):70. Epub 2020/04/08. Doi: 10.1186/s12905-020-00927-5 ; PubMed Central PMCID: PMC7137499. – DOI – PMC – PubMed

Birhanu Z, Abdissa A, Belachew T, Deribew A, Segni H, Tsu V, et al.. Health seeking behavior for cervical cancer in Ethiopia: a qualitative study. *International journal for equity in health*. 2012;11:83. Epub 2013/01/01. Doi: 10.1186/1475-9276-11-83 ; PubMed Central PMCID: PMC3544623. – DOI – PMC – PubMed

Bante SA, Getie SA, Getu AA, Mulatu K, Fenta SL. Uptake of pre-cervical cancer screening and associated factors among reproductive age women in Debre Markos town, Northwest Ethiopia, 2017. *BMC public health*. 2019;19(1):1102. Epub 2019/08/16. Doi: 10.1186/s12889-019-7398-5 ; PubMed Central PMCID: PMC6692942. – DOI – PMC – PubMed

Nega AD, Woldetsadik MA, Gelagay AA. Low uptake of cervical cancer screening among HIV positive women in Gondar University referral hospital, Northwest Ethiopia: cross-sectional study design. 2018;18(1):87. Epub 2018/07/10. Doi: 10.1186/s12905-018-0579-z . – DOI – PMC – PubMed

Nigussie T, Admassu B, Nigussie A. Cervical cancer screening service utilization and associated factors among age-eligible women in Jimma town using health belief model, South West Ethiopia. *BMC women's health*. 2019;19(1):127. Epub 2019/10/30. Doi: 10.1186/s12905-019-0826-y ; PubMed Central PMCID: PMC6819648. – DOI – PMC – PubMed

Tefera F, Mitiku I. Uptake of Cervical Cancer Screening and Associated Factors Among 15-49-Year-Old Women in Dessie Town, Northeast Ethiopia. *Journal of cancer education: the official journal of the American Association for Cancer Education*. 2017;32(4):901–7. Epub 2016/04/15. Doi: 10.1007/s13187-016-1021-6 . – DOI – PubMed

Muluneh BA, Atnafu DD, Wassie B. Predictors of cervical cancer screening service utilization among commercial sex workers in Northwest Ethiopia: a case-control study. *BMC women's health*. 2019;19(1):162. Doi: 10.1186/s12905-019-0862-7 – DOI – PMC – PubMed

Kasa AS, Tesfaye TD, Temesgen WA. Knowledge, attitude and practice towards cervical cancer among women in Finote Selam city administration, West Gojjam Zone, Amhara Region, North West Ethiopia, 2017. *African health sciences*. 2018;18(3):623–36. Doi: 10.4314/ahs.v18i3.20 – DOI – PMC – PubMed

Erku DA, Netere AK, Mersha AG, Abebe SA, Mekuria AB, Belachew SA. Comprehensive knowledge and uptake of cervical cancer screening is low among women living with HIV/AIDS in Northwest Ethiopia. *Gynecologic oncology research and practice*. 2017;4(1):20. Doi: 10.1186/s40661-017-0057-6 – DOI – PMC – PubMed

Aynalem BY, Anteneh KT, Enyew MM. Utilization of cervical cancer screening and associated factors among women in Debremarkos town, Amhara region, Northwest Ethiopia: Community based cross-sectional study. *PloS one*. 2020;15(4):e0231307. Epub 2020/04/08. Doi: 10.1371/journal.pone.0231307 ; PubMed Central PMCID: PMC7138328. – DOI – PMC – PubMed

ASERES T. KNOWLEDGE, PRACTICE AND ASSOCIATED FACTORS OF CERVICAL CANCER SCREENING AMONG WOMEN HEALTH WORKERS IN GONDAR UNIVERSITY TEACHING AND REFERRAL HOSPITAL, GONDAR, ETHIOPIA, 2016 2017.

Aweke YH, Ayanto SY, Ersado TL. Knowledge, attitude and practice for cervical cancer prevention and control among women of childbearing age in Hossana Town, Hadiya zone, Southern Ethiopia: Community-based cross-sectional study. *PloS one*. 2017;12(7):e0181415. Epub 2017/07/26. Doi: 10.1371/journal.pone.0181415 ; PubMed Central PMCID: PMC5526548. – DOI – PMC – PubMed

Assefa AA, Astawesegn FH, Eshetu B. Cervical cancer screening service utilization and associated factors among HIV positive women attending adult ART clinic in public health facilities, Hawassa town, Ethiopia: a cross-sectional study. *BMC health services research*. 2019;19(1):847. Epub 2019/11/21. Doi: 10.1186/s12913-019-4718-5 . – DOI – PMC – PubMed

Seyoum T, Yesuf A, Kejela G, Gebremeskel F. Utilization of cervical cancer screening and associated factors among female health Workers in Governmental Health Institution of Arba Minch town and Zuria District, Gamo Gofa zone, Arba Minch, Ethiopia, 2016. *Arch Cancer Res*. 2017;5(4):165.

Dulla D, Daka D, Wakgari N. Knowledge about cervical cancer screening and its practice among female health care workers in southern Ethiopia: a cross-sectional study. *International journal of women's health*. 2017;9:365. Doi: 10.2147/IJWH.S132202 – DOI – PMC – PubMed

Tekle T, Wolka E, Nega B, Kumma WP, Koyira MM. Knowledge, Attitude and Practice Towards Cervical Cancer Screening Among Women and Associated Factors in Hospitals of Wolaita Zone, Southern Ethiopia. *Cancer management and research*. 2020;12:993. Doi: 10.2147/CMAR.S240364 – DOI – PMC – PubMed

Solomon K, Tamire M, Kaba M. Predictors of cervical cancer screening practice among HIV positive women attending adult anti-retroviral treatment clinics in Bishoftu town, Ethiopia: the application of a health belief model. *BMC cancer*. 2019;19(1):989. Epub 2019/10/28. Doi: 10.1186/s12885-019-6171-6 ; PubMed Central PMCID: PMC6813043. – DOI – PMC – PubMed

Heyi WD, Bekabil TT, Ebo GG. KNOWLEDGE, ATTITUDE AND PRACTICE OF CERVICAL CANCER SCREENING AMONG WOMEN AGED 15–49 YEARS IN BISHOFTU TOWN, EAST

SHEWA ZONE, OROMIA REGION, ETHIOPIA, 2016. Ethiopian Journal of Reproductive Health. 2018;10(2):10–.

Ashagrie A. Knowledge and screening practice on cervical cancer and associated factors among HIV positive women in Adama, Ethiopia: Addis Ababa Universty; 2017. Doi: 10.1186/s13104-017-2887-z – DOI

Bayu H, Berhe Y, Mulat A, Alemu A. Cervical Cancer Screening Service Uptake and Associated Factors among Age Eligible Women in Mekelle Zone, Northern Ethiopia, 2015: A Community Based Study Using Health Belief Model. PloS one. 2016;11(3):e0149908. Epub 2016/03/11. Doi: 10.1371/journal.pone.0149908 ; PubMed Central PMCID: PMC4786115. – DOI – PMC – PubMed

Gebreegiabher M, Asefa NG, Berhe S. Factors Affecting the Practices of Cervical Cancer Screening among Female Nurses at Public Health Institutions in Mekelle Town, Northern Ethiopia, 2014: A Cross-Sectional Study. Journal of Cancer Research. 2016;2016.

Berhanu T, Mamo E, Tewolde T, Beshir M. Knowledge of Cervical Cancer and Its Screening Practice among Health Extension Workers in Addis Ababa, Ethiopia. Primary Health Care: Open Access. 2019;9(1):1–5.

Bao H, Zhang L, Wang L, Zhang M, Zhao Z, Fang L, et al.. Significant variations in the cervical cancer screening rate in China by individual-level and geographical measures of socioeconomic status: a multilevel model analysis of a nationally representative survey dataset. Cancer medicine. 2018;7(5):2089–100. Doi: 10.1002/cam4.1321 – DOI – PMC – PubMed

Tiruneh FN, Chuang K-Y, Ntenda PAM, Chuang Y-C. Individual-level and community-level determinants of cervical cancer screening among Kenyan women: a multilevel analysis of a

Nationwide survey. *BMC women's health*. 2017;17(1):109. Doi: 10.1186/s12905-017-0469-9 – DOI – PMC – PubMed

Gakidou E, Nordhagen S, Obermeyer Z. Coverage of cervical cancer screening in 57 countries: low average levels and large inequalities. *PLoS medicine*. 2008;5(6). Doi: 10.1371/journal.pmed.0050132 – DOI – PMC – PubMed

Gan DEH, Dahlui M. Cervical screening uptake and its predictors among rural women in Malaysia. *Singapore medical journal*. 2013;54(3):163–8. Doi: 10.11622/smedj.2013047 – DOI – PubMed

Ho V, Yamal JM, Atkinson EN, Basen-Engquist K, Tortolero-Luna G, Follen M. Predictors of Breast and Cervical Screening in Vietnamese Women in Harris County, Houston, Texas. *Cancer Nursing*. 2005;28(2):119–29. 00002820-200503000-00005. Doi: 10.1097/00002820-200503000-00005 – DOI – PubMed

M. Stead, PESCE European Research Team, Angus K, Holme I, et al. . Factors influencing european GPs' engagement in smoking cessation: a multi-country literature review. *Br J Gen Pract*. 2009;59(566):682–690. – PMC – PubMed

N.H Chavannes, Meijer E, Wind LA, et al. . Herziene richtlijn 'behandeling van tabaksverslaving en stoppen met roken ondersteuning. *Ned Tijdschr Geneesk*. 2017;161:D1394. – PubMed

R. Borland, Li L, Driezen P, et al. . Cessation assistance reported by smokers in 15 countries participating in the international tobacco control (ITC) policy evaluation surveys. *Addiction*. 2012;107(1):197–205. – PMC – PubMed

K. Pirie, Million Women Study Collaborators, Peto R, Reeves GK, et al. . The 21st century hazards of smoking and benefits of stopping: a prospective study of one million women in the UK. *Lancet*. 2013;381(9861):133–141. – PMC – PubMed

- C. Senore, L. Giordano, Bellisario C, et al. . Population based cancer screening programmes as a teachable moment for primary prevention interventions. A review of the literature. *Front Oncol.* 2012;2:45. – PMC – PubMed
- S. Hall, Reid E, Ukoumunne OC, et al. . Brief smoking cessation advice from practice nurses during routine cervical smear tests appointments: a cluster randomised controlled trial assessing feasibility, acceptability and potential effectiveness. *Br J Cancer.* 2007;96(7):1057–1061. – PMC – PubMed
- Brown KF, Rungay H, Dunlop C, et al. . The fraction of cancer attributable to modifiable risk factors in England, Wales, Scotland, Northern Ireland, and the United Kingdom in 2015. *Br J Cancer.* 2018;118(8):1130–1141. – PMC – PubMed
- Roura E, Castellsague X, Pawlita M, et al. . Smoking as a major risk factor for cervical cancer and pre-cancer: results from the EPIC cohort. *Int J Cancer.* 2014;135(2):453–466. – PubMed
- Holschneider CH, Baldwin RL, Tumber K, et al. . The fragile histidine triad gene: a molecular link between cigarette smoking and cervical cancer. *Clin Cancer Res.* 2005;11(16):5756–5763. – PubMed
- Gezondheidsenquête/Leefstijlmonitor 2019. [cited 2022 March 9].
<https://www.rivm.nl/leefstijlmonitor/roken-onder-volwassenen>
- Hiscock R, Murray S, Brose LS, et al. . Behavioural therapy for smoking cessation: the effectiveness of different intervention types for disadvantaged and affluent smokers. *Addict Behav.* 2013;38(11):2787–2796. – PMC – PubMed
- Faulkner K, Sutton S, Jamison J, et al. . Are nurses and auxiliary healthcare workers equally effective in delivering smoking cessation support in primary care? *NICTOB.* 2016;18(5):1054–1060. – PMC – PubMed
- Katz DA, AHRQ Smoking Cessation Guideline Study Group, Brown RB, Muehlenbruch DR, et al. . Implementing guidelines for smoking cessation: comparing the efforts of nurses and medical assistants. *Am J Prev Med.* 2004;27(5):411–416. – PubMed
- Campbell NC, Murray E, Darbyshire J, et al. . Designing and evaluating complex interventions to improve health care. *BMJ.* 2007;334(7591):455–459. – PMC – PubMed
- Mansour MB, Crone MR, van Weert HC, et al. . Smoking cessation advice after cervical screening: a qualitative interview study of acceptability in dutch primary care. *Br J Gen Pract.* 2019;69(678):e15–e23. – PMC – PubMed

Vidrine JI, Shete S, Cao Y, et al. . Ask-Advise-Connect: a new approach to smoking treatment delivery in health care settings. *JAMA Intern Med.* 2013;173(6):458–464. – PMC – PubMed

Braun V, Clarke V.. Using thematic analysis in psychology. *Qualitative Res Psychol.* 2006;(3(2):77–101.

McLeroy KR, Bibeau D, Steckler A, et al. . An ecological perspective on health promotion programs. *Health Educ Q.* 1988;15(4):351–377. – PubMed

Tong A, Sainsbury P, Craig J.. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care.* 2007;19(6):349–357. – PubMed

Petrova M, Vail L, Bosley S, et al. . Benefits and challenges of employing health care assistants in general practice: a qualitative study of GPs' and practice nurses' perspectives. *Fam Pract.* 2010;27(3):303–311. – PubMed

Bosley S, Dale J.. Healthcare assistants in general practice: practical and conceptual issues of skill-mix change. *Br J Gen Pract.* 2008;58(547):118–124. – PMC – PubMed

Ferrer RL, Mody-Bailey P, Jaen CR, et al. . A medical assistant-based program to promote healthy behaviors in primary care. *Ann Fam Med.* 2009;7(6):504–512. – PMC – PubMed

Wandell PE, de Waard AM, Holzmann MJ, et al. . Barriers and facilitators among health professionals in primary care to prevention of cardiometabolic diseases: a systematic review. *Fam Pract.* 2018;35(4):383–398. – PubMed

Rubio-Valera M, Pons-Vigues M, Martinez-Andres M, et al. . Barriers and facilitators for the implementation of primary prevention and health promotion activities in primary care: a synthesis through Meta-ethnography. *PLoS One.* 2014;9(2):e89554. – PMC – PubMed

Stevens C, Vrinten C, Smith SG, et al. . Acceptability of receiving lifestyle advice at cervical, breast and bowel cancer screening. *Prev Med.* 2019;120:19–25. – PMC – PubMed

Hall S, Marteau TM.. Practice nurses' self-reported opportunistic smoking cessation advice in three contexts. *Nicotine Tob Res.* 2007;9(9):941–945. – PubMed

Vogt F, Hall S, Marteau TM.. General practitioners' and family physicians' negative beliefs and attitudes towards discussing smoking cessation with patients: a systematic review. *Addiction*. 2005;100(10):1423–1431. – PubMed

LHV, NHG, VPH, InEen . http://toekomsthuisartsenzorg.nl/wp-content/uploads/2020/10/Final_Toekom... 2020. Available from: <https://toekomsthuisartsenzorg.nl/kerntaken-in-de-praktijk/>.

Damschroder LJ, Aron DC, Keith RE, et al. . Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. *Implement Sci*. 2009;4:50. – PMC – PubMed

Damiani G, Basso D, Acampora A, Bianchi CB, Silvestrini G, Frisicale EM, et al.. The impact of level of education on adherence to breast and cervical cancer screening: evidence from a systematic review and meta-analysis. *Preventive medicine*. 2015;81:281–9. Doi: 10.1016/j.ypmed.2015.09.011 – DOI – PubMed

Musa J, Achenbach CJ, O'Dwyer LC, Evans CT, McHugh M, Hou L, et al.. Effect of cervical cancer education and provider recommendation for screening on screening rates: A systematic review and meta-analysis. *PloS one*. 2017;12(9). Doi: 10.1371/journal.pone.0183924 – DOI – PMC – PubMed

Wanyenze RK, Bwanika JB, Beyeza-Kashesya J, Mugerwa S, Arinaitwe J, Matovu JK, et al.. Uptake and correlates of cervical cancer screening among HIV-infected women attending HIV care in Uganda. *Global health action*. 2017;10(1):1380361. Doi: 10.1080/16549716.2017.1380361 – DOI – PMC – PubMed

Devarapalli P, Labani S, Nagarjuna N, Panchal P, Asthana S. Barriers affecting uptake of cervical cancer screening in low and middle income countries: A systematic review. *Indian journal of cancer*. 2018;55(4):318. Doi: 10.4103/ijc.IJC_253_18 – DOI – PubMed

Abboud S, De Penning E, Brawner BM, Menon U, Glanz K, Sommers MS, editors. Cervical cancer screening among Arab women in the United States: an integrative review. *Oncology nursing forum*; 2017: NIH Public Access. – PMC – PubMed

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

Arlinghaus, K. R., & Johnston, C. A. (2017). Advocating for behavior change with education. *American Journal of Lifestyle Medicine*, 12(2), 113–116. 10.1177/1559827617745479 - [DOI](#) - [PMC](#) - [PubMed](#)

Awich, L. (2019). Cancer prevalence rate per county. *The Star*. <https://www.the-star.co.ke/news/2019-07-30-cancer-prevalence-rate-per-co...>

Bray, F., Ferlay, J., Soerjomataram, I., Siegel, R. L., Torre, L. A., & Jemal, A. (2018). Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA: A Cancer Journal for Clinicians*, 68(6), 394–424. 10.3322/caac.21492 - [DOI](#) - [PubMed](#)

Bruni, L., Albero, G., Serrano, B., Mena, M., Collado, J. J., Gómez, D., Muñoz, J., Bosch, F. X., & de Sanjosé, S., & ICO/IARC Information Centre on HPV and Cancer (HPV Information Centre) . (2021). Human papillomavirus and related diseases in Kenya. Summary report. <https://hpvcentre.net/statistics/reports/KEN.pdf>

Chan, C. K., Aimagambetova, G., Ukybassova, T., Kongrtay, K., & Azizan, A. (2019). Human papillomavirus infection and cervical cancer: Epidemiology, screening, and vaccination—Review of current perspectives. *Journal of Oncology*, 10, 3257939. 10.1155/2019/3257939 - [DOI](#) - [PMC](#) - [PubMed](#)

Chang, H. K., Myong, J.-P., Byun, S. W., Lee, S.-J., Lee, Y. S., Lee, H.-N., Lee, K. H., Park, D. C., Kim, C. J., Hur, S. Y., Park, J. S., & Park, T. C. (2017). Factors associated with participation in cervical cancer screening among young Koreans: A nationwide cross-sectional study. *BMJ Open*, 7(4), e013868. 10.1136/bmjopen-2016-013868 - [DOI](#) - [PMC](#) - [PubMed](#)

Donkor, A., Lathlean, J., Wiafe, S., Vanderpuye, V., Fenlon, D., Yarney, J., Opoku, S. Y., Antwi, W., & Kyei, K. A. (2015). Factors contributing to late presentation of breast cancer in Africa: A systematic literature review. *Archives of Medicine*, 8(2.2), 1–10. <https://www.archivesofmedicine.com/medicine/factors-contributing-to-late...>

Dozie, U. W., Elebari, B. L., Nwaokoro, C. J., Iwuoha, G. N., Emerole, C. O., Akawi, A. J., Chukwuocha, U. M., & Dozie, I. N. S. (2021). Knowledge, attitude and perception on cervical cancer screening among women attending ante-natal clinic in Owerri west L.G.A, South-Eastern Nigeria: A cross-sectional study. *Cancer Treatment and Research Communications*, 28, 100392. 10.1016/j.ctarc.2021.100392 - [DOI](#) - [PubMed](#)

Gatumo, M., Gacheri, S., Sayed, A. R., & Scheibe, A. (2018). Women’s knowledge and attitudes related to cervical cancer and cervical cancer screening in Isiolo and Tharaka Nithi counties, Kenya: A cross-sectional study. *BMC Cancer*, 18(1), 745. 10.1186/s12885-018-4642-9 - [DOI](#) - [PMC](#) - [PubMed](#)

George, J. (2021). Factors influencing utilization of cervical cancer screening services among women – A cross sectional survey. *Clinical Epidemiology and Global Health* 11(1), 100752. <https://www.sciencedirect.com/science/article/pii/S2213398421000567> - [PMC](#) - [PubMed](#)

Ghosh, S., Mallya, S. D., Shetty, R. S., Pattanshetty, S. M., Pandey, D., Kabekkodu, S. P., Satyamoorthy, K., & Kamath, V. G. (2021). Knowledge, attitude and practices towards cervical cancer and its screening among women from tribal population: A community-based study from southern India. *Journal of Racial and Ethnic Health Disparities*, 8(1), 88–93. 10.1007/s40615-020-00760-4 - [DOI](#) - [PMC](#) - [PubMed](#)

Huchko, M. J., Ibrahim, S., Blat, C., Cohen, C. R., Smith, J. S., Hiatt, R. A., & Bukusi, E. (2018). Cervical cancer screening through human papillomavirus testing in community health campaigns versus health facilities in rural western Kenya. *International Journal of Gynecology & Obstetrics*, 141(1), 63–69. 10.1002/ijgo.12415 - [DOI](#) - [PMC](#) - [PubMed](#)

Huchko, M. J., Olwanda, E., Choi, Y., & Kahn, J. G. (2020). HPV-based cervical cancer screening in low-resource settings: Maximizing the efficiency of community-based strategies in rural Kenya. *International Journal of Gynecology & Obstetrics*, 148(3), 386–391. 10.1002/ijgo.13090 - [DOI](#) - [PMC](#) - [PubMed](#)

ICO/IARC Information Centre on HPV and Cancer . (2021). Kenya, human papillomavirus and related cancers, fact sheet 2021. HPV Information Centre. <https://hpvcentre.net/>

Issa, T., Babi, A., Azizan, A., Alibekova, R., Khan, S. A., Issanov, A., Chan, C. K., & Aimagambetova, G. (2021). Factors associated with cervical cancer screening behaviour of women

attending gynaecological clinics in Kazakhstan: A cross-sectional study. *Women's Health*, 17, 174550652110041. 10.1177/17455065211004135 - DOI - PMC - PubMed

Jansen, E. E. L., Zielonke, N., Gini, A., Anttila, A., Segnan, N., Vokó, Z., Ivanuš, U., McKee, M., Koning de, H. J., de Kok, I. M. C. M., Veerus, P., Anttila, A., Heinävaara, S., Sarkeala, T., Csanádi, M., Pitter, J., Széles, G., Vokó, Z., Minozzi, S., ... Priaulx, J. (2020). Effect of organised cervical cancer screening on cervical cancer mortality in Europe: A systematic review. *European Journal of Cancer*, 127, 207–223. 10.1016/j.ejca.2019.12.013 - DOI - PubMed

Kanyina, E. W., Kamau, L., & Muturi, M. (2017). Cervical precancerous changes and selected cervical microbial infections, Kiambu County, Kenya, 2014: A cross sectional study. *BMC Infectious Diseases*, 17(1), 647. 10.1186/s12879-017-2747-4 - DOI - PMC - PubMed

Kenya Bureau of Statistics. DHS Program . (2015). Kenya demographic and health survey 2014. The Bureau. <https://dhsprogram.com/pubs/pdf/fr308/fr308.pdf>

Landy, R., Pesola, F., Castañón, A., & Sasieni, P. (2016). Impact of cervical screening on cervical cancer mortality: Estimation using stage-specific results from a nested case–control study. *British Journal of Cancer*, 115(9), 1140–1146. 10.1038/bjc.2016.290 - DOI - PMC - PubMed

Lemp JM, De Neve JW, Bussmann H, Chen S, Manne-Goehler J, Theilmann M, Marcus ME, Ebert C, Probst C, Tsabedze-Sibanyoni L, Sturua L, Kibachio JM, Moghaddam SS, Martins JS, Houinato D, Houehanou C, Gurung MS, Gathecha G, Farzadfar F, Dryden-Peterson S, Davies JI, Atun R, Vollmer S, Bärnighausen T, Geldsetzer P. (2020). Lifetime prevalence of cervical cancer screening in 55 low- and middle-income countries. *JAMA*. 324(15):1532-1542. 10.1001/jama.2020.16244 - DOI - PMC - PubMed

Liu, F. W., Vwalika, B., Hacker, M. R., Allen, S., & Awtrey, C. S. (2012). Cervical cancer and HPV vaccination: Knowledge and attitudes of adult women in Lusaka, Zambia. *Journal of Vaccines & Vaccination*, 3(138), 1–4. 10.4172/2157-7560.1000138 - DOI - PMC - PubMed

Makau-Barasa, L. K., Greene, S., Othieno-Abinya, N. A., Wheeler, S. B., Skinner, A., & Bennett, A. V. (2020). A review of Kenya's cancer policies to improve access to cancer testing and treatment in the country. *Health Research Policy and Systems*, 18(1), 2. 10.1186/s12961-019-0506-2 - DOI - PMC - PubMed

Mengesha, A., Messele, A., & Beletew, B. (2020). Knowledge and attitude towards cervical cancer among reproductive age group women in Gondar town, North West Ethiopia. *BMC Public Health*, 20(1), 209. 10.1186/s12889-020-8229-4 - DOI - PMC - PubMed

Ministry of Health, Kenya . (2017). National cancer control strategy 2017–2022. <https://repository.kippra.or.ke/handle/123456789/2802>

Ministry of Health, Kenya . (2018). Kenya national cancer screening guidelines. <https://www.ncikenya.or.ke/policies.php>

Ministry of Health, Kenya . (2019). Government to roll out HPV vaccine to prevent cervical cancer next month. <http://www.health.go.ke/government-to-roll-out-hpv-vaccine-to-prevent-ce...>

Ministry of Health, Kenya: Division of Community Health Services. (2020). Kenya community health strategy 2020-2025. <https://repository.kippra.or.ke/handle/123456789/3076>

Ministry of Public Health and Sanitation, Ministry of Medical Services. (2012). National guidelines for prevention and management of cervical, breast and prostate cancers. Kenyan Ministry of Public Health and Sanitation. http://guidelines.health.go.ke:8000/media/National_Guidelines_for_Preven...

Mugai, F., Karonjo, J., Mutua, F. M., Kamau, P., & Kausya, J. (2020). Knowledge and health system factors influencing utilization of cervical screening services among sex workers in Kiambu County Hotspots, Kenya. *PAMJ – One Health*, 2, 2. 10.11604/pamj-oh.2020.2.2.21200. - [DOI](#)

Mukama, T., Ndejjo, R., Musabyimana, A., Halage, A. A., & Musoke, D. (2017). Women’s knowledge and attitudes towards cervical cancer prevention: A cross sectional study in Eastern Uganda. *BMC Women’s Health*, 17(1), 9. 10.1186/s12905-017-0365-3 - [DOI](#) - [PMC](#) - [PubMed](#)

Ng’ang’a, A., Nyangasi, M., Nkonge, N. G., Gathitu, E., Kibachio, J., Gichangi, P., Wamai, R. G., & Kyobutungi, C. (2018). Predictors of cervical cancer screening among Kenyan women: Results of a nested case-control study in a nationally representative survey. *BMC Public Health*, 18(Suppl 3), 1221. 10.1186/s12889-018-6054-9 - [DOI](#) - [PMC](#) - [PubMed](#)

Ngune, I., Kalembo, F., Loessl, B., & Kivuti-Bitok, L. W. (2020). Biopsychosocial risk factors and knowledge of cervical cancer among young women: A case study from Kenya to inform HPV prevention in Sub-Saharan Africa. *PLoS One*, 15(8), e0237745. 10.1371/journal.pone.0237745 - [DOI](#) - [PMC](#) - [PubMed](#)

Nyambe, A., Kampen, J. K., Baboo, S. K., & Van Hal, G. (2019). Knowledge, attitudes and practices of cervical cancer prevention among Zambian women and men. *BMC Public Health*, 19(1), 508. 10.1186/s12889-019-6874-2 - [DOI](#) - [PMC](#) - [PubMed](#)

Pengpid, S., & Peltzer, K. (2014). Attitudes and practice of cervical cancer screening among female university students from 25 low, middle income and emerging economy countries. *Asian Pacific Journal of Cancer Prevention*, 15(17), 7235–7239. 10.7314/APJCP.2014.15.17.7235 - [DOI](#) - [PubMed](#)

Phaipichit, J., Paboriboune, P., Kunnavong, S., & Chanthavilay, P. (2022). Factors associated with cervical cancer screening among women aged 25–60 years in Lao People’s Democratic Republic. *PLoS One*, 17(4), e0266592. 10.1371/journal.pone.0266592 - [DOI](#) - [PMC](#) - [PubMed](#)

Rabil, M. J., Tunc, S., Bish, D. R., & Bish, E. K. (2022). Benefits of integrated screening and vaccination for infection control. *PLoS One*, 17(4), e0267388. 10.1371/journal.pone.0267388 - [DOI](#) - [PMC](#) - [PubMed](#)

Sakwa, G., Bukhala, P., Kipmerewo, M., & Kwena, Z. (2021). Knowledge, attitude and practices in cervical cancer screening in Kakamega County, Kenya. *Journal of Health, Medicine and Nursing*, 7(3), 51–66. 10.47604/jhmn.1427 - [DOI](#)

StataCorp . (2013). Stata statistical software: Release 13. StataCorp LP. <https://www.stata.com/>

Sung, H., Ferlay, J., Siegel, R. L., Laversanne, M., Soerjomataram, I., Jemal, A., & Bray, F. (2021). Global cancer statistics 2020: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA: A Cancer Journal for Clinicians*, 71(3), 209–249. 10.3322/caac.21660 - [DOI](#) - [PubMed](#)

Tekle, T., Wolka, E., Nega, B., Kumma, W. P., & Koyira, M. M. (2020). Knowledge, attitude and practice towards cervical cancer screening among women and associated factors in hospitals of Wolaita Zone, Southern Ethiopia. *Cancer Management and Research*, 12, 993–1005. 10.2147/CMAR.S240364 - [DOI](#) - [PMC](#) - [PubMed](#)

Vermandere, H., van Stam, M.-A., Naanyu, V., Michielsen, K., Degomme, O., & Oort, F. (2016). Uptake of the human papillomavirus vaccine in Kenya: Testing the health belief model through pathway modeling on cohort data. *Globalization and Health*, 12(1), 72. 10.1186/s12992-016-0211-7 - [DOI](#) - [PMC](#) - [PubMed](#)

Waitara, J. K., Kerich, G., Kihoro, J., & Korir, A. (2021). Poisson-gamma and spatial-temporal models: With application to cervical cancer in Kenya's counties. *American Journal of Theoretical and Applied Statistics*, 10(3), 158–166. 10.11648/j.ajtas.20211003.14 - [DOI](#)

Wanyoro, A. K., & Kabiru, E. W. (2017). Use of mobile phone short text message service to enhance cervical cancer screening at Thika Level 5 Hospital, Kiambu County, Kenya: A randomised controlled trial. *Research in Obstetrics and Gynecology*, 5(1), 10–20. <http://article.sapub.org/10.5923.j.rog.20170501.03.html>

Warui, L. W., Suleman, M. A., Makokha, F. W., & Kamita, M. (2021). Trend in cancer cases diagnosed at Kiambu and Gatundu Level 5 Hospitals, Kiambu County Kenya between 2013 and 2017. *International Research Journal of Oncology*, 4(1), 36–48. <https://journalirjo.com/index.php/IRJO/article/view/30148>

Wild, C. P., Weiderpass, E., & Stewart, B. W. (2020). World cancer report: Cancer research for cancer prevention. International Agency for Research on Cancer. <http://publications.iarc.fr/586>

World Health Organization . (2020). Global strategy to accelerate the elimination of cervical cancer as a public health problem. <https://www.who.int/publications/i/item/9789240014107>

World Health Organization . (2022). Cervical cancer: Fact sheet. <https://www.who.int/news-room/fact-sheets/detail/cervical-cancer>

Zimmerman, B. J. (2000). Self-efficacy: An essential motive to learn. *Contemporary Educational Psychology*, 25(1), 82–91. 10.1006/ceps.1999.1016 - [DOI](#) - [PubMed](#)

Chosamata MS, Hong SA, Tiraphat S. Determinants of cervical cancer screening utilization among women aged 30–45 years in Blantyre district, Malawi. 2015.

Visanuyothin S, Chompikul J, Mongkolchati A. Determinants of cervical cancer screening adherence in urban areas of Nakhon Ratchasima Province, Thailand. *Journal of infection and public health*. 2015;8(6):543–52. Doi: 10.1016/j.jiph.2015.04.018 . – DOI – PubMed

Teame H, Addissie A, Ayele W, Hirpa S, Gebremariam A, Gebreheat G, et al.. Factors associated with cervical precancerous lesions among women screened for cervical cancer in Addis Ababa,

Ethiopia: A case control study. PLOS ONE. 2018;13(1):e0191506. Doi: 10.1371/journal.pone.0191506 – DOI – PMC – PubMed

Ross CE, Wu C-l. The links between education and health. American sociological review. 1995:719–45.

Ebu NI, Ogah JK. Predictors of cervical cancer screening intention of HIV-positive women in the central region of Ghana. BMC women's health. 2018;18(1):43. Doi: 10.1186/s12905-018-0534-z – DOI – PMC – PubMed

KAMBAGA EM. Determinants of provider-initiated HIV testing and counselling uptake in Jaramogi Oginga Odinga teaching and referral hospital, Kisumu, Kenya: Maseno University; 2017.

Hoque, M, E Hoque, & SB Kader. “Risk Factors for Anaemia in Pregnancy in Rural KwaZulu-Natal, South Africa: Implication for Health Education and Health Promotion.” **South African Family Practice** 51, no. 1, 2019: 68–72.

ICO/IARC Information Centre on HPV and Cancer, “Saudi Arabia human papillomavirus and related cancers, fact sheet 2017,” 2017, http://www.hpvcentre.net/statistics/reports/SAU_FS.pdf. View at: Google Scholar

Moodley, M., J. Moodley, & I. Kleinschmidt. “Invasive Cervical Cancer and Human Immunodeficiency Virus (HIV) Infection: A South African Perspective.” **International Journal of Gynecological Cancer** 11, no. 3 2021: 194–197.

Mutyaba, Twaha, Francis A Mmiro, and Elisabete Weiderpass. “Knowledge, Attitudes and Practices on Cervical Cancer Screening among the Medical Workers of Mulago Hospital, Uganda.” **BMC Medical Education** 6, no. 1 2016.

Muñoz, Nubia, Silvia Franceschi, Cristina Bosetti, Victor Moreno, Rolando Herrero, Jennifer S Smith, Keerti V Shah, Chris JLM Meijer, and F Xavier Bosch. “Role of Parity and Human Papillomavirus in Cervical Cancer: The IARC Multicentric Case-Control Study.” **The Lancet** 359, no. 9312, 2022: 1093–1101.

Kingdom of Saudi Arabia Saudi Health Council Saudi Cancer Registry, "Cancer incidence report Saudi Arabia 2014," 2014, <https://nhic.gov.sa/eServices/Documents/2014.pdf>. View at: Google Scholar

Kingdom of Saudi Arabia Saudi Health Council Saudi Cancer Registry, "Cancer incidence report Saudi Arabia 2014," 2014, <https://nhic.gov.sa/eServices/Documents/2014.pdf>. View at: Google Scholar "Knowledge, Attitude, and Practice towards Cervical Cancer Screening among HIV Positive Women in Addis Ababa, Ethiopia." **Journal of Gynecology & Reproductive Medicine** 6, no. 2, 2022.

K.P. Braaten & M.R. Laufer, "Human papillomavirus (HPV), HPV related disease, and the HPV vaccine," **Reviews in Obstetrics & Gynecology**, vol. 1, no. 1, pp. 2–10, 2008. View at: Google Scholar

La Ruche, Guy, Bruno You, Isabelle Mensah-Ado, Christine Bergeron, Crépin Montcho, Rosa Ramon, Karidiata Touré-Coulibaly, Christiane Wellfens-Ekra, François Dabis, & Gérard Orth. "Human Papillomavirus and Human Immunodeficiency Virus Infections: Relation with Cervical Dysplasia Neoplasia in African Women." **International Journal of Cancer** 76, no. 4 2018: 480–486.

Meissner, Helen I., Arnold L. Potosky, and Rena Convisser. "How Sources of Health Information Relate to Knowledge and Use of Cancer Screening Exams." *Journal of Community Health* 17, no. 3 (1992): 153–165.

Momenimovahed, Zohre, and Hamid Salehiniya. "Incidence, Mortality and Risk Factors of Cervical Cancer in the World." **Biomedical Research and Therapy** 4, no. 12, 2017: 1795.

Okuofua F. Human Papilloma Virus vaccine of cervical cancer in African retrieved
from <http://www.njeponliil.com> on March, 2014.

Povey, Rachel, Mark Conner, Paul Sparks, Rhiannon James, and Richard Shepherd. "Application of the Theory of Planned Behaviour to Two Dietary Behaviours: Roles of Perceived Control and Self-Efficacy." **British Journal of Health Psychology** 5, no. 2, 2020: 121–139.

Pyatt, Robert, Robert B. Chadwick, Cheryl K. Johnson, Clement Adebamowo,

Albert de la Chapelle, & Thomas W. Prior. "Polymorphic Variation at the Bat-25 and Bat-26 Loci in Individuals of African Origin." **The American Journal of Pathology** 155, no. 2 2019: 349–353.

Roberts, AA, OO Ayankogbe, TF Osisanya, AO Bamgbala, AT Ajekigbe, BS Olatunji, & VA Inem. "Knowledge of Cervical Cancer Risk Factors among Refugee Women in Oru Camp." **Nigerian Medical Practitioner** 46, no. 4 2015.

Rogo, K.O., J. Omany, J.N. Onyango, S.B. Ojwang, & U. Stendahl. "Carcinoma of the Cervix in the African Setting." **International Journal of Gynecology & Obstetrics** 33, no. 3, 2019: 249–255.

Roland, Katherine B., Vicki B. Benard, Mona Saraiya, Nikki A. Hawkins, Heather Brandt, & Allison L. Friedman. "Assessing Cervical Cancer Screening Guidelines in Patient Education Materials." **Journal of Women's Health** 18, no. 1, 2019: 5–12.

Rowlands, P.K., & A. de Barros Lopes. "Invasive Carcinoma of the Cervix." **Current Obstetrics & Gynaecology** 11, no. 3, 2021: 172–177.

Sahasrabuddhe, V V, M H Mwanahamuntu, S H Vermund, W K Huh, M D Lyon, J S Stringer, & G P Parham. "Prevalence and Distribution of HPV Genotypes among HIV-Infected Women in Zambia." **British Journal of Cancer** 96, no. 9, 2017: 1480–1483.

Samoff, Erika, Emilia H. Koumans, Lauri E. Markowitz, Maya Sternberg, Mary K. Sawyer, David Swan, John R. Papp, Carolyn M. Black, & Elizabeth R. Unger. "Association of Chlamydia Trachomatis with Persistence of HighRisk Types of Human Papillomavirus in a Cohort of Female Adolescents." **American Journal of Epidemiology** 162, no. 7, 2015: 668–675.

Sankaranarayanan, Rengaswamy, Pulikkottil Okkuru Esmey, Rajamanickam Rajkumar, Richard Muwonge, Rajaraman Swaminathan, Sivanandam Shanthakumari, Jean-Marie Fayette, & Jacob Cherian. "Effect of Visual Screening on Cervical Cancer Incidence and Mortality in Tamil Nadu, India: A Cluster-Randomised Trial." **The Lancet** 370, no. 9585, 2017: 398–406.

Schiffman, M. H., H. M. Bauer, R. N. Hoover, A. G. Glass, D. M. Cadell, B. B. Rush, D. R. Scott, "Epidemiologic Evidence Showing That Human Papillomavirus Infection Causes Most

Cervical Intraepithelial Neoplasia.” **JNCI Journal of the National Cancer Institute** 85, no. 12, 2017: 958–964.

Segnan, N. “*Cervical Cancer Screening. Human Benefits and Human Costs in the Evaluation of Screening Programmes.*” **European Journal of Cancer** 30, no. 6, 2019: 873–875.

Shulman, L.P. “*Prophylactic Efficacy of a Quadrivalent Human Papillomavirus (HPV) Vaccine in Women with Virological Evidence of HPV Infection.*” **Yearbook of Obstetrics, Gynecology and Women's Health** 2018: 183– 184.

Singh, Jasvinder A., Daniel E. Furst, Aseem Bharat, Jeffrey R. Curtis, Arthur F. Kavanaugh, Joel M. Kremer, Larry W. Moreland,. “*2012 Update of the 2008 American College of Rheumatology Recommendations for the Use of Disease-Modifying Antirheumatic Drugs and Biologic Agents in the Treatment of Rheumatoid Arthritis.*” **Arthritis Care & Research** 64, no. 5 2022: 625–639.

Suarez, Lucina, Rich Ann Roche, Donna Nichols, & Diane M. Simpson. “*Knowledge, Behavior, and Fears Concerning Breast and Cervical Cancer among Older Low-Income Mexican-American Women.*” **American Journal of Preventive Medicine** 13, no. 2 2017: 137–142.

Suba, Eric J., Sean K. Murphy, Amber D. Donnelly, Lisa M. Furia, My Linh Huynh, & Stephen S. Raab. “*Systems Analysis of Real-World Obstacles to Successful Cervical Cancer Prevention in Developing Countries.*” **American Journal of Public Health** 96, no. 3, 2016: 480–487.

Waller, Jo, Marta Bartoszek, Laura Marlow, & Jane Wardle. “*Barriers to Cervical Cancer Screening Attendance in England: A Population-Based Survey.*” **Journal of Medical Screening** 16, no. 4 2019: 199–204.

Waller .O , *Textbook on Human Development on Cervical Cancer*, 2nd edition, United Kingdom 2019

World Health Organization. World Health Organization, n.d. Accessed November 9, 2022.

Z.MomenimovahedandH.Salehiniya,“*Incidence,mortalityandriskfactorsofcervicalcancerintheworld,*” **BiomedicalResearchandTherapy**,vol.4,no.12,pp.1795–1811,2017.Viewat: PublisherSite | GoogleScholar

Internet sources

ICO/IARC Information Centre on HPV and Cancer, “*Saudi Arabia human papillomavirus and related cancers, fact sheet 2017,*” 2017,
http://www.hpvcentre.net/statistics/reports/SAU_FS.pdf.View at: Google Scholar

Global strategy towards eliminating cervical cancer as a public health problem. Geneva: World Health Organization; 2020 (<https://www.who.int/initiatives/cervical-cancer/strategy>).

National Cancer Control Plan 2018 – 2022. Abuja: Nigeria Federal Ministry of Health; 2018 (https://www.iccp-portal.org/system/files/plans/NCCP_Final%20%5B1%5D.pdf, accessed 22 October 2020).

Jannamike L. World Cancer Day: Minister urges Nigerians to engage in physical exercises [World cancer Day Speech 2018]. Vanguard Media Limited (Nigeria). 4 February 2018 (<https://www.vanguardngr.com/2018/02/world-cancer-day-minister-urges-nigerians-engage-physical-exercises/>, accessed 22 October 2020).

Cancer Today: data visualization tools for exploring the global cancer burden in 2018 [website]. Lyon: Cancer Today – IARC; 2018 (<https://gco.iarc.fr/today/home>, accessed 22 October 2020).

ICO/IARC Information Centre on HPV and Cancer, “*Saudi Arabia human papillomavirus and related cancers, fact sheet 2017,*” 2017,
http://www.hpvcentre.net/statistics/reports/SAU_FS.pdf.View at: Google Scholar

Global strategy towards eliminating cervical cancer as a public health problem. Geneva: World Health Organization; 2020 (<https://www.who.int/initiatives/cervical-cancer/strategy>).

National Cancer Control Plan 2018 – 2022. Abuja: Nigeria Federal Ministry of Health; 2018 (https://www.iccp-portal.org/system/files/plans/NCCP_Final%20%5B1%5D.pdf, accessed 22 October 2020).

Jannamike L. World Cancer Day: Minister urges Nigerians to engage in physical exercises [World cancer Day Speech 2018]. Vanguard Media Limited (Nigeria). 4 February 2018 (<https://www.vanguardngr.com/2018/02/world-cancer-day-minister-urges-nigerians-engage-physical-exercises/>, accessed 22 October 2020).

Cancer Today: data visualization tools for exploring the global cancer burden in 2018 [website]. Lyon: Cancer Today – IARC; 2018 (<https://gco.iarc.fr/today/home>, accessed 22 October 2020).

<http://wwncb/minhgov/July,2012>

Wikipedia (a) mobile desktop last edition on June 2016

<https://en.m.wikipedia.org>

<https://www.mebi.n/mnihgov/pmcarticle/pme/1>

<https://wwbiomedcentral.com/47> – [2458/7/34/prepub](https://www.biomedcentral.com/2458/7/34/prepub)

<https://www.southerncross.cons> <https://www.goggle.com.ng>

www.foundationforwoman'scancer.org

www.cancergov.org www.omnicsonline.org

www.journals.plos.org

www.bmcpublichealth.biomedcentre.com

www.emerald.com www.sciencedirect.com

<https://www.iarc.who.int/>

www.bccancer.bc.ca

World Health Organization (WHO) comprehensive cervical cancer control. A guide to essential practice. Geneva 2006 en.wikipedia.com ncbi.nlm.nih.gov/pmc/article
lichealth.biomedcentral.com

www.alamy.com

www.cytecarehospital

<https://www.cancer.gov/types/cervical/treatment>

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QUESTIONNAIRE

I am a Post graduate student of Leadcity University Ibadan, conducting a research on the knowledge, attitude and practice of cervical cancer screening, prevention and treatment amongst women of child bearing age in Yagba West LGA. The information collected is purely for academic purposes and generate data that will be used for informed intervention by the appropriate authority.

Your information will be kept with utmost confidentiality.

Thanks for your understanding and co- operation

Esther OlanikeAjiboye *Esther*

Consent form

Please affix your signature to affirm that you agree to fill this questionnaire.

.....

SECTION A (DEMOGRAPHIC DATA)

Instruction – please tick () or fill in the gaps as appropriate

1. Age: (a) 18 – 20years () (b) 21 – 26years () (c) 27 – 35years () (d) 36 – 55years ()
2. Marital Status: (a) Single () (b) Married () (c) divorce () (d) widow ()
3. Education status: (a) No formal education () (b) Primary Education () (c) Secondary education () (d) Tertiary education ()

4. Occupation (a) Schooling () (b) Farming () (c) Trading () (d) Civil servant

5. Religion (a) Christianity () (b) Islamic () (c) Traditional ()

SECTION B

6. What do you know about cancer?

a) I do not know anything about cervical cancer ().

b) It is a disease in a woman's private part ().

7. Can cervical cancer be caused by sexual intercourse?

a) I do not know ()

b) Sexual intercourse cannot cause cervical cancer but the virus that causes disease is a sexually transmitted diseases ()

c) Yes it is possible ()

8. Can a woman die of cervical cancer?

a) I do not know ()

b) Yes, cervical cancer can kill a woman ()

c) It cannot kill a woman ()

9. What preventive measure is to be carried out?

a) Abstinence from sexual intercourse ()

b) Washing vagina regularly with soap and water ()

c) Drinking locally made concoction ()

d) Submitting self for occasional medical examination ()

e) I do not carry any preventive measures ()

10. How often do you submit yourself for medical examination of your private life?

a) I have never ()

b) It is only during my deliveries of babies ()

c) I do not see any need for that ()

11. What is the possible reason that prevents you from being screened of cervical cancer?

a) I was not aware of the screening ()

- b) I do not have funds or money for the screening ()
- c) I do not want anyone to know that I have cancer. If result is positive ()
- d) I am afraid of the instrument ()

SECTION C

Please tick (✓) the appropriate option to depict your degree of the following statement based on the following state

Key: Strongly Agree _____ S.A

Agree _____ A

Disagree _____ D.A

Strongly Disagree _____ SD

S/N	OPINIONS	S.A	A	D	S.D
12	All women are at risk of cervical cancer.				
13	Women that smoke, having sexual intercourse with many men, contacting sexually transmitted diseases without adequate treatment are more likely to have cervical cancer.				
14	Medical treatment of cervical cancer will be better than traditional or spiritual ways?				
15	If cervical cancer is detected, it should be treated as early as possible.				
16	Every woman who is sexually active should have cervical screening done every 6months.				
17	Women should have trust in medical personnel to keep their secret confidentially.				
18	Proper information and education of reproductive age women could reduce the rate of cervical cancer in our society?				

Lead City University Ibadan, Oyo State

Student Bio-data

Name: Ajiboye Esther Olanike
Address: Kogi State Ministry of health Lokoja
Tel: 07039011779, 08055516079
Email: talk2nikeajiboye@gmail.com

Career Objectives;

To possess first rate research, reporting, communicative and managerial skills within the Nursing/midwifery and public health sector, to be an agent of change complimented by outstanding interpersonal and organisational abilities'

Personal Data

Surname: Ajiboye
Esther Olanike
Other names:
Gender: Female
Date of Birth: 24/03/1975
Place of Birth: Egbe, Kogi state
Local Government Area: Yagba West
State of Origin: Kogi
Religion: Christianity
Nationality: Nigerian
Marital Status: Married
Postal Address: Kogi state ministry of health beside NTA Lokoja.
PMB 1068, Lokoja, Kogi State

Peace Ayokanmi Ajiboye

Next of kin:

Permanent Home Address: 18, Titcombe college area along Oke -Ere road,
Egbe, Kogi State

Academic Qualification

Educational Institutions Attended with Dates

2007 – 2013	Bachelor of Science in Nursing	National Open University of Nigeria
2005 – 2007	Advanced Diploma in Nursing Education	Kaduna Polytechnic, Kaduna
1996 – 1997	Diploma in Midwifery	School of Midwifery, Egbe, Kogi State
1992 – 1995	Diploma in Nursing	School of Nursing, Egbe, Kogi State

Professional Qualifications

Registered Nurse, Registered Midwife, Registered Midwife educator

Personal Profiles

Work Experience

January 2022 -till date. - Program coordinator (Child health) Kogi state ministry of health

Feb. 2019 -Dec.2021. HOD. Midwifery/Head of Exams (School of Midwifery
Egbe, Kogi State)

Outline

Duties include: Working as a member of the Management team, responsible for the day-to-day delivery and smooth running of all academic programmes in the entire School. Training of trainers and preceptors on client's care.

Mentoring students and tutors on good customer service

Direct patient care

Key Responsibilities

Approving all decisions relating to academic matters and reporting to the head of school.

Planning, updating and executing academic programmes and curricula

Acting as Secretary on many influential committees including the Examination committee, curriculum development committee, research and training, disciplinary committee, security and surveillance committee

Compiling report and action plan for the Management Team

Successfully completing all reports and analyses to stringent deadlines and prioritising workloads

Constantly reviewing our training to ensure it meets best practices

Analysing, evaluating and interpreting data for effective decision making

Supervising nurses and midwives in research and in the care of patients

2007 – 2014 School of Midwifery, Egbe, Kogi State Midwife Educator

Outline

Developing, monitoring and teaching on various subjects including management, nursing and midwifery practices, research and practical approach to midwifery practices

Key Responsibilities

Programme Co-ordinator for training Life Saving skills , Manual Vacuum Aspiration , Visual inspection of the cervix with Acetic acid and lugol's iodine to detect precancerous lesion, post abortive care and CPR within the School.

Teaching of Principles of Management in Nursing and Midwifery practice Teaching reproductive health including life saving skills, safe motherhood,

post abortion care, visual inspection of the cervix with acetic acid and lugol's iodine which is used to detect precancerous lesions in low resource areas like Nigeria and treatment with cryotherapy, use of anti shock garment, treatment of obstetric emergencies, Family planning services, HIV/AIDS and care of People Living With HIV/AIDS and People Affected By AIDS among others.

Teaching fundamentals of midwifery practice, which include basic principles of midwifery, theories and models of nursing & midwifery, the nursing process etc.

Supervising students in the clinical areas to ensure that there is correlation between what is taught and practice.

Participated in GAVI-HSS training on integration of management of childhood illnesses and reduction of maternal and infant mortality for Nurses and CHEWs working in the local government setting; focus on Mopa-Amuro Local Government of Kogi State.

2003 – 2005 School of Nursing , Egbe, Kogi State; Clinical Instructor

Outline

Clinical instructor, supervising and teaching students about nursing procedures.

Key Responsibilities

Teaching nursing procedures and skills to students

Serving as a liaison officer between the students, clinical area and the school

Reporting to the Principal and Director of Nursing Services.

1997 – 2003 Omolola Hospital, Ilorin, Kwara State Nursing Officer

Outline

Worked as a first-point of call Nursing Officer in a very busy Hospital environment

Key Responsibilities

Developed core nursing competences and carried out care on medical, surgical, accident and emergencies

Performed prenatal, intranatal and postnatal childcare

Community Development- Public health outreach/ health education n preventable diseases and living healthy

Responsibilities - Coordination, Health Promotion.

Paper Presentation/Publication -Nil

Conference and Workshops Attended

March 2021....MCPDP Volume iv Maternal and child health

July 2019... Examiners Workshop on promoting excellent nursing care. UCH Ibadan

April 2019..... Basic Life Support/ AED training.

2015 July - Training on application of NIC and NOC in quality patient care

2014 April; USAID fhi360 training on Social and Behavioral change communication

2014 July Examiners Workshop, Ibadan

2014 Committee of all Head of Nursing Institutions Conference, Lokoja

2013 Committee of all Head of Nursing Institutions Conference, Bayelsa

2013 MCPDP Volume 2

2012 MCPDP Volume 1

2011 Cervical Cancer Prevention through Screening with VIA and treatment with cryotherapy

2010 Action Step-down Training for Educators on care of PLWHIV/PABA

2009 N&MCN examination workshop

2008 Women- centered post abortion care and manual vacuum aspiration

2006. LSS training (Bauchi)

2004 - Family planning service provider training programme

1993 - Cardio- pulmonary resuscitation course

Self-Practical Project

Importance of sex education among JSS 2 – SS3 students in selected secondary schools at Egbe, Kogi State

Paper/Project Work Supervised

Knowledge, practice and barriers to cervical cancer screening, prevention and treatment among women in Yagba West LGA, Kogi state

Assessment of awareness rate of women in Yagba West about cervical cancer 2013

Factors responsible for failure among students at school of nursing and midwifery, Egbe Kogi state. 2007

Appraisal of male attitude towards accepting male sterilization as a method of family planning in Egbe, Kogi state 1997

The effect of Corpulmonale on health of men and women between ages 40 – 80 years. A case study of ECWA hospital Egbe, Kogi state 1995

Hobbies

Reading, singing, learning new things

Language Spoken/Knowledge

English, Yoruba

Community Service

Health educating women and men on safe birth practices at Egbe community

Health outreach at suburb communities e.g. Omi, Ogbe, igbaruku, Odo –Ara, Oke_Ere in creating awareness on dangers associated with unscrupulous intake of monosodium glutamate (maggi)

Referees

Rev. E.Y Babalola

Former Director of Nursing Services Kogi State

College of Nursing Egbe

08038518503

Mrs C.O Sunday

Co-ordinator/Administrator

HELP Africa

Egbe, Kogi State

08066816623

Rev. Ademola Banjoko
Foursquare gospel church itire Lagos

08023074566

ETHICAL CLEARANCE CERTIFICATE

This is to Certify that the Methodology Adopted by

AJIBOYE ESTHER OLANIKE

For the Study of

*“Women’s knowledge, Practice and Barriers to Cervical
Cancer Screening, Prevention and Treatment; A cross-
Sectional study of yagba West Local Government Area, Kogi
State”*

Will not in any way impinge on the Ethical Standard of Medical Practice in Kogi
State, Nigeria.

DR. AKE STEPHEN OLUWAROTIMI

Chairman, Health Research Ethics Committee.



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Title	WOMENS' KNOWLEDGE, PRACTICE AND BARRIERS TO CERVICAL CANCER SCREENING, PREVENTION AND TREATMENT; A CROSS SECTIONAL STUDY OF YAGBA WEST LGA KOGI STATE

Congratulations! The review process for the **International Journal of Applied Sciences: Current and Future Research Trends (IJASCFRT)** has been completed. The journal during its journey which started in 2019 received submissions from 55 different countries and regions, which were reviewed by international experts.

Based on the recommendations of the reviewers and Based on the editorial board decision, we are pleased to inform you that your paper identified above has been accepted for publication in **peer reviewed and indexed** [Ulrich, Google Scholar, Ulrich's Periodicals Directory, Microsoft academic research, University of Texas (USA), Stanford University (USA), State University Libraries of Florida (included in 11 universities libraries in Florida)(USA), University of Cambridge (United Kingdom), Simon Fraser University (Canada), University of South Australia (Australia), OAlster database, PubZone (ACM SIGMOD), Research gate, OCLC World Cat, IE Library (Spain), Elektronische Zeitschriftenbibliothek (Ezb germany), Simpson University (USA), Columbia University (USA), NEOS library consortium (Canada), University of Melbourne (Australia), Technische Universität Darmstadt (Germany), University of Gronigen (The Netherlands), University of Liverpool (UK), Universität Würzburg (Germany), Academic research (ourGlocal), Issuu, Researchbib, Journal seek, docstoc, ProLearnAcademy, ectel07, University of Canterbury (New Zealand), University of Hong Kong, Queen's University (Canada), Universität Mainz (Germany), University of Saskatchewan (Canada), The Hong Kong University of Science & Technology, University of Manitoba (Canada), Auckland University of Technology (New Zealand), scribd, prorch, slideshare, mendeley, academia, Genamics JournalSeek, Internet archive, Ebookbrowse, CiteSeer, Physikalisch Technische Bundesanstalt (Germany), University of Twente (The Netherlands), Universität Osnabrück (Germany), Universität Marburg (Germany) , University of IOWA (USA), etc] **International Journal of Applied Sciences: Current and Future Research Trends (IJASCFRT)**. The acceptance decision was based on the internal and external reviewers' evaluation after internal and external double blind peer review and chief editor's approval.

Finally, we would like to further extend our congratulations to you.

Yours sincerely,

IJASCFRT Editorial Board

University Compliance Certification

This is to certify that this thesis by Esther Olanike Ajiboye with Matric No. LCU/PG/001187 in the Department of Public Health, Faculty of Basic Medical and Applied Sciences, Lead City University, Ibadan is in full compliance with the approved university format.

Signature

Date

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