

ENSIGN GLOBAL COLLEGE
KPONG, EASTERN REGION, GHANA

KNOWLEDGE AND UPTAKE OF CERVICAL CANCER VACCINE AMONG
COMMUNITY HEALTH NURSES IN TAKORADI,
IN THE WESTERN REGION OF GHANA

BY

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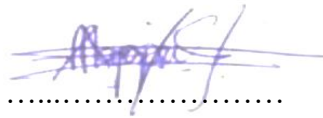
A THESIS SUBMITTED TO THE DEPARTMENT OF COMMUNITY HEALTH, FACULTY
OF PUBLIC HEALTH, ENSIGN COLLEGE OF PUBLIC HEALTH IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE
MASTER OF PUBLIC HEALTH DEGREE

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DECLARATION

I hereby declare that the thesis titled submitted in partial fulfillment of the requirement for the degree of Masters in Public Health on knowledge and uptake of cervical cancer vaccine among Community Health Nurses in Takoradi, in the Western Region of Ghana at Ensign College is entirely my original work, except where otherwise acknowledged and appropriately referenced.

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DEDICATION

To my family, whose unwavering love, boundless support, and encouragement have been my guiding light throughout this journey. Your belief in me has fueled my determination to reach new heights and overcome every challenge. This achievement would not have been possible without your sacrifices and understanding.

To my friends, for the laughter, understanding, and camaraderie that have provided moments of respite and joy during the demanding phases of this endeavor.

To my family and lovely mum Mrs. Martha Appiah Kusi of blessed memory this is for you.

To the Almighty God for the strength, guidance, protection, unbundled love, and good health, I dedicated this to you.

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As I reach this significant milestone in my academic journey, I find myself reflecting not only on the achievement itself but also on the incredible support and love that have sustained me throughout. Amid this accomplishment, I want to take a moment to express my deepest appreciation for you, my rock and my unwavering source of strength.

I am profoundly grateful for the divine presence for providing me strength, wisdom, and guidance throughout this journey of completing this thesis.

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DEFINITIONS OF TERMS

Term	Definition
Cervical Cancer	A type of cancer originates in the cervix, the lower part of the uterus connecting to the vagina.
Human Papillomavirus (HPV)	A group of viruses that can lead to cervical cell changes and increase the risk of cervical cancer.
Pap Smear (Pap Test)	A screening test involves collecting and examining cervical cells to detect abnormal changes.
Cervical Dysplasia	Abnormal cell changes in the cervix, often detected through Pap smears, ranging from mild to severe.
Cervical Intraepithelial Neoplasia (CIN)	Abnormal cell growth is categorized as CIN1 (mild), CIN2 (moderate), or CIN3 (severe), a precancerous condition.
Biopsy	A tissue sample is removed for microscopic examination to diagnose or confirm cancer.
Colposcopy	A procedure using a colposcope to closely examine the cervix, vagina, and vulva for abnormalities.
Cervical Cone Biopsy (Conization)	A diagnostic or treatment procedure involving the removal of a cone-shaped tissue section from the cervix.
Cervical Cancer Staging	A system to determine the extent of cancer based on factors like size, invasion, lymph nodes, and metastasis.
Radical Hysterectomy	Surgery to remove the uterus, cervix, and surrounding tissues for treating localized cervical cancer.

ABBREVIATIONS/ACRONYMS

ASIR- Age-Standardized Incidence Rates

CC-Cervical cancer

CDC- Centers for Disease Control and Prevention

CIN -Cervical intraepithelial neoplasia

GHS- Ghana Health Service

HBM- Health belief model

HIV- Human Immunodeficiency Virus

HPV- Human papillomavirus

ICC- Invasive Cervical Carcinoma

IRB- Institutional Review Board

LARC- Locally advanced rectal cancer

NARM-National association of registered midwives

NHIS-National Health Insurance Scheme

STD -Sexually transmitted disease

STI –Sexually transmitted infection

VIA - Visual Inspection with Acetic acid

WHO- World Health Organization

ABSTRACT

Background: Cervical cancer is an important reproductive health problem for women in developing countries where it constitutes 13% of all female malignancies. It is the second most common cancer in women worldwide and 83 percent of the world's 500,000 new cases and 85 percent of the 288,000 cervical cancer deaths occur in developing countries. Community health workers play an important role in educating the public on cervical cancer prevention strategies. The primary objective of the study is to assess the knowledge and barriers to the uptake of cervical cancer vaccination among Community Health Workers in Takoradi in the Western Region of Ghana. **Methodology:** A descriptive study design was adopted for the research work. The target population of this study was Community Health Workers within Takoradi. A semi-structured self-administered questionnaire was administered to eligible participants. The questionnaire was adopted from earlier research work with slight modifications, thereby ensuring its validity and reliability. The questionnaire had forty questions in four sections aimed at determining the knowledge, barriers and background factors associated with cervical cancer vaccination among community health workers in Takoradi. The study used systematic sampling to obtain data for the study. **Result:** Respondents who had had information on vaccination had it from different sources, with more than half (53.1%) reporting they got the information from the hospitals. The study showed that about 31.5% of the respondents were motivated to vaccinate because maintaining good health was important to them. **Conclusions:** Most of the respondents were aware of the deadly disease, however none of them reported having been vaccinated against it. **Keywords:** Cervical cancer, Human Papillomavirus, Community Health Nurses, Takoradi.

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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the study

Women's health continues to be severely affected by cervical cancer, especially in the world's poorest countries (Hbbema et al., 2012). In 2009, parts of Asia, sub-Saharan Africa (SSA), the Caribbean, and Latin America were the regions most affected by the disease, with more than 40 cases per 100,000 women; The number of cases per 100,000 people was less than 10. There are 100,000 women in North America and Europe (WHO, 2013).

Cervical cancer has the highest cancer mortality rate in women (35 per 100,000 women) and is the most common cancer among women in East Africa (44 per 100,000 women). It has been reported that (WHO, 2013). The uncontrolled development of cells in the cervix (the entrance to the uterus) is called cervical cancer (WHO, 2013). After a precancerous lesion is discovered, cells in the cervix slowly begin to grow abnormally over several years, and it usually takes 10 to 20 years for invasive cancer to develop (Blake et al., 2015). Human papillomavirus causes the sexually transmitted disease cervical cancer (HPV). Therefore, there is a significant association between cervical cancer and sexually transmitted infections (STDs/STIs).

In Ghana, 50.5% of cases of cervical cancer are caused by the human papillomavirus (HPV) strains 16 and 18. This represents sixteen percent of all deaths from cancer. According to World Health Organization (WHO, 2013), Ghana will see at least 3,300 annual fatalities and more than 5,000 new cases of cervical cancer by 2025 (GHS, 2013). Unchecked cell growth in cervical cancer leads to tumor formation that can invade surrounding tissues, even rupture and travel to other areas of the body. Metastasis is the term for this (Garvit, 2012). However, HPV vaccine and its timely administration play an important role in controlling the development of cervical

cancer (Petry, 2014). According to the Human Papillomavirus (HPV) Center (2019), 119,284 women in Africa who are 15 years of age or older were diagnosed with CC, and each year 81,687 fatalities were reported. On the other hand, sickness, illness, and mortality rates are seven to ten times lower in developed continents like Australia and North America (Bray et al., 2018).

If we restrict our analysis to Ghana, the issue is as evident as the data for poor nations would imply. According to reports, about 8 million Ghanaian women who are 15 years of age or older could get CC. 2,119 Ghanaian women lose their lives to CC per year, out of 3,151 diagnosed cases. This makes CC the second most common cancer among Ghanaian women aged 15 to 44 years (ICO/IARC Information Center on HPV and Cancer, 2019).

1.2 Problem statement

Cervical cancer screening services are rare and limited in Ghana. This test is only performed in a small number of public health facilities in the country and is only used by referrals and a small number of people who are knowledgeable about Pap smears. Early screening and vaccination are considered effective ways to reduce the incidence of cervical cancer (William et al., 2013; Wright et al., 2018). Pap smear and visual inspection with acetic acid (VIA) are the most commonly used and accepted methods in Ghana (Blumenthal et al., 2007). Although opportunistic screening is available and useful, anecdotal evidence from Ghanaian Gynecological Health Centers suggests that the majority of CC patients are diagnosed at an advanced stage of the disease (Calys- Tagoe et al., 2020). Low uptake of CC screening among the population and nursing staff has been noted in several African countries, including Ghana (Serrano et al., 2012, Koç et al 2015, Rahman et al, 2015, Shah et al., 2012). - Tagoe et al., 2020,

Ziba et al., 2015, Adanu et al., 2010). To understand the low acceptance of CC screening, it is useful to apply the Health Belief Model (HBM). HBM is based on two foundations.

The desire to stay healthy or, in the event of illness, to receive treatment. (Del Toro, 2022). Community nurses have a special opportunity to help prevent cervical cancer by interacting with young girls and women on a regular basis. They act as mentors, educators, health advocates, and role models. Thus, for campaigns against CC, their attitude, knowledge, and comprehension of CC are essential (Rahman et al., 2015, Shah et al., 2012). In light of the current research findings, no studies that have been published in Ghana have made an effort to characterize the attitudes, knowledge, and obstacles that Ghanaian female nurses and midwives have when it comes to CC screening. Ampofo et al., 2020, Binka et al., 2019, Ebu et al., 2015) and other research that focused on awareness, knowledge, and barriers to CC were carried out among the general public, students, and HIV-positive women in southern Ghana. With the exception of the research done in northern Ghana by Ziba et al. (2015). Therefore, researchers considered it necessary to investigate community nurses' knowledge, attitudes, and acceptance of cervical cancer vaccination. This may indirectly impact patient understanding and practice regarding cervical cancer screening.

1.3 Rationale for the study

If the population is not educated about the benefits of cervical cancer screening and preventive actions, the risk of the disease in the community is likely to rise. As a result, nurses' knowledge and uptake towards routine cervical cancer vaccination, as well as health education on preventative measures, are crucial in the prevention or at least decrease of cervical cancer incidence rates in the community. This study will thus significantly contribute to the body of scientific knowledge in health education and practices at Takoradi and in Ghana as a whole and

can be used by Ghanaian policymakers to design guidelines and programs to improve health education and cervical cancer screening practices as well as vaccination.

1.4 Conceptual framework

The Health Belief Model (HBM) offers a framework for conducting studies on health-related behaviors. Using preset metrics—reported severity, perceived benefits, perceived hurdles, perceived vulnerability, and self-efficacy—it forecasts changes in health-related behavior. In order to understand why people do not respond to and participate in disease prevention initiatives, a group of social psychologists in the United States of America (USA) created HBM in the 1950s (Glanz & Donald 2010). The model was updated by Rosenstock and Becker in the 1970s, and its applications and structure are still being improved upon today (Glanz & Donald 2010). In research, HBM is used to forecast people's preventive health behaviors, identify variables that support and impact people's intentions to practice preventive health, and forecast compliance with advised health-protective behaviors (Glanz et al., 2008). This model states that the following variables influence a person's intention to engage in a suggested health behavior:

A person's perception of their vulnerability to illness is measured by perceived susceptibility. A person is more likely to follow advised health habits if they believe they have a higher chance of developing a specific ailment (Glanz et al., 2008). Perceived susceptibility was characterized in this study as awareness of the risk factors for cervical cancer, age groups that are susceptible, the impact of HPV, the belief that one is at risk, and the prevalence of the disease.

Perceived benefit indicates that a person's intention to follow a recommended behavior depends on the extent to which the person believes that the behavior will help reduce the risk of a particular disease (Glanz et al. 2008). In this study, perceived benefits were defined as the benefits of cervical cancer screening test knowledge and early detection of the disease.

The deficiencies of advised health habits are addressed by perceived impediments. Human behavior theory (HBM) states that people subjectively judge an action's likelihood of success based on its perceived cost, difficulty, difficulty level, and time commitment (Glanz et al., 2008). Perceived hurdles in this study include cost, time, risk, accessibility, fear, and other attitudes in addition to screening difficulty. The results of this assessment will influence caregivers' willingness to undergo screening. Newer HBM formulations include components such as behavioral cues, which refer to variables that trigger and cause behavior, such as physical changes or environmental cues such as media (Glanz et al., 2008). According to HBM, other variables (modifiers) that influence health behaviors include a variety of demographic, psychosocial, and cultural factors.

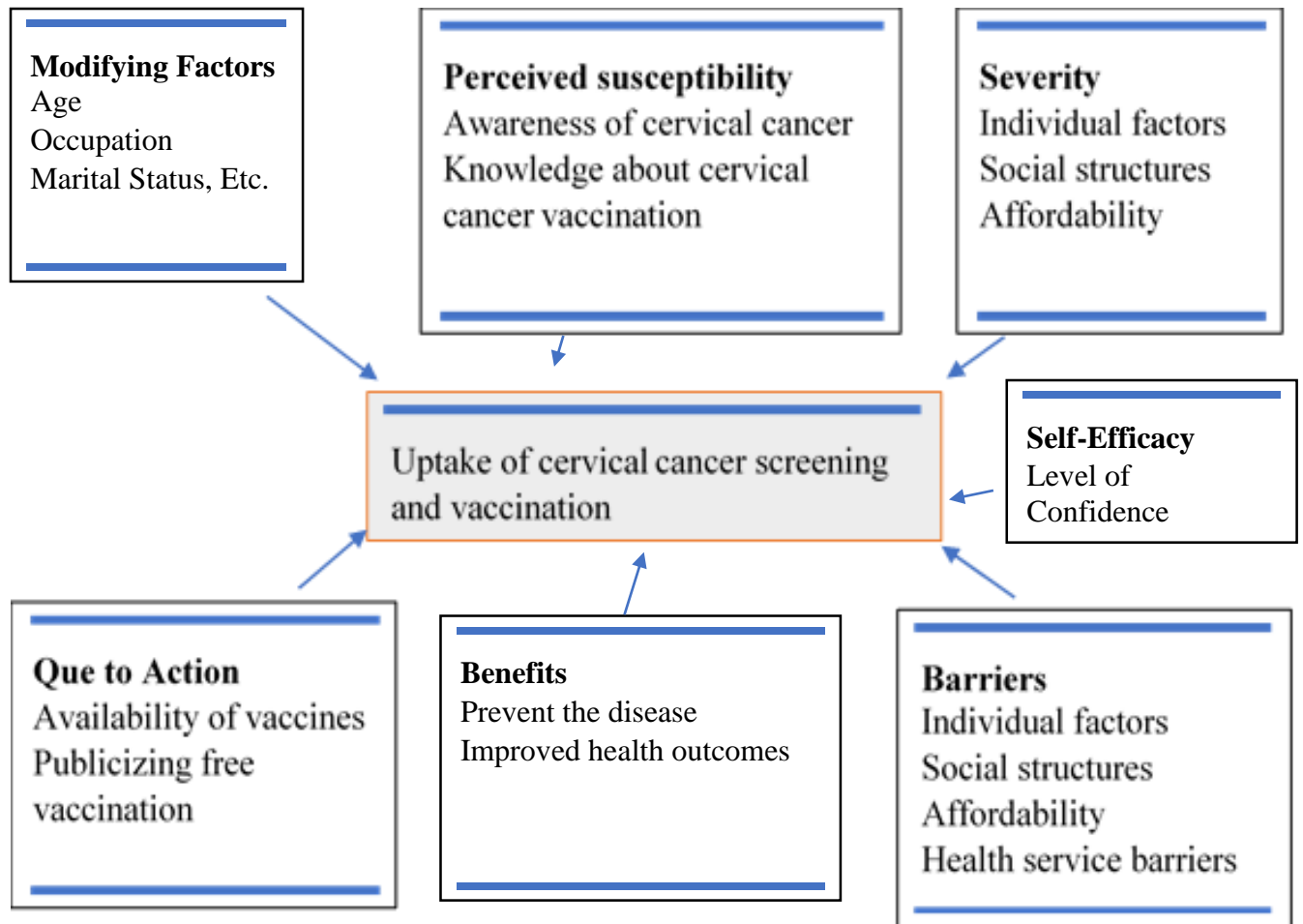


Figure 1: Conceptual framework

Source: Aldohaian *et al* 2019

1.5 Research questions

1. Are Community Health Nurses aware of cervical cancer Vaccination?
2. What is the uptake of HPV vaccination among Community Health Nurses?
3. What are the barriers to the uptake of HPV vaccines amongst Community Health Nurses?

1.6 General objective

To assess the knowledge and uptake of cervical cancer vaccination among Community Health nurses in Takoradi in the Western Region of Ghana.

1.7 Specific objectives

1. To assess the knowledge of cervical cancer Vaccination among Community Health Nurses.
2. To assess the uptake of HPV vaccination among Community Health Nurses.
3. To determine the barriers to the uptake of HPV vaccines amongst Community Health Nurses.

1.8 Profile of the Study Area

559,548 people live in Sekondi-Takoradi Metropolis, which makes up 23.5% of the region's total population, according to the 2010 Population and Housing Census. Men comprise 48.9 percent of the population, while women 51.1 percent. 96% of the population lives in urban areas. The Metropolis's female-to-male sex ratio is 95.6, meaning that there are roughly 96 males for every 100 females. With a broad base population pyramid that tapers down to a very modest share of elderly persons (6.1%), the population of the city is largely young (32.6%). The age dependence rate for the Metropolis as a whole is 58.2, however, it is greater for men (58.6) than it is for women (57.9). 89.5 percent of people aged 11 and over are literate, compared to 10.5 percent who are illiterate. Male literacy rates are higher (94.0%) than female literacy rates (85.1%). Five Out of 10 individuals, 58.2% claimed to be able to read and write in both Ghanaian and English languages. 9.5% of people in the Metropolis who are older than three years old have never attended school; of those, 40.1% are doing so right now, and 50.3% have done so in the past. About 39% of the population aged 12 years and older are married. By age 25-29 years, 47.6 percent of females are married compared to 23.0 percent of males. Among those 65 and older, bereaved men make up only 13.6% of the population; widowed women make up as much as 57.9%. 13.4% of married people do not have any formal education, compared to 3.6 percent of

single people. Among those who are married, a little over three-quarters (76.9%) work, 4.8% are unemployed, and 18.3% are not involved in the economy. According to the GHS (2020), a higher percentage of people who have never married (62.9%) are not employed, and 7.6% are not engaged in the workforce.

1.9 Scope of the study

The paper talks about immunization requirements and cervical cancer. It also covers the respondents' knowledge of cervical cancer. The study also covers the several obstacles to cervical cancer awareness. The study also covers nurses' roles and expertise in preventing cervical cancer.

1.10 Organization of the Study

The study is divided into six (6) chapters. Chapter One gives a general introduction to cervical cancer and the need for vaccination. Chapter Two is the literature review. This section reviews papers by various authors on the issue of cervical cancer and vaccination. Chapter Three discusses the methodology and how to obtain data for the study. Chapter Four talks about the results of the results from the study. Chapter Five discusses the results and Chapter Six gives a conclusion and provides recommendations for the study.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Cervical cancer

Roughly 12.0% of all malignant tumors in women globally are cervical cancers (Daley et al., 2013). Although it is more common in developing nations, it is the second most common cancer in women worldwide. More than a million women are thought to be impacted. In the world, millions of people are impacted by cervical cancer. A large number of these women remain untreated and without access to medications that could save or extend their lives. WHO (2018) reports that in 2012, there were 528,000 new cases of cervical cancer identified, and 266,000 women lost their lives to the disease, with low- to middle-income countries accounting for 90% of these deaths. Cervical cancer deaths are predicted to increase by roughly 25% over the next ten years if prompt action is not taken (WHO 2014).

At least 85.0% of cervical cancer-related deaths occur in developing countries; these deaths primarily occur in the poorest regions, which include sections of Latin America, South Asia, and Sub-Saharan Africa (SSA) (WHO 2014). The most prevalent cancer in Sub-Saharan Africa (SSA), cervical cancer accounted for 75,141 new cases in 2008, or 14% of all cancer cases worldwide. Tanzania, Kenya, and Zimbabwe have the highest rates. This disparity is caused by ineffective screening programs in developing nations where cervical cancer is common (Mutyaba, et al 2006).

Consequently, cervical cancer has a major effect on women's health worldwide, particularly in underdeveloped nations. Invasive cervical cancer is the most prevalent kind of the disease (ICC). With 75,141 new cases and 50,233 fatalities recorded annually, it is the most frequent cancer among women in SSA and the primary cause of cancer-related mortality. The incidence of cervical cancer varies greatly per subregion. According to Ferlay et al. (2008), some of the

nations with the highest ICC incidence rates worldwide are Guinea, Zambia, Tanzania, Malawi, and Mozambique.

In the United States (USA), the incidence of cervical cancer was 40/100,000 for white women and 73/100,000 for black women between 1947 and 1949, prior to the 1960s pap smear introduction. It was a human. These proportions have dramatically dropped. Estimated age-standardized incidence rates (ASIRs) within the SSA region are highest in East and West Africa (34.5 and 33.7 per 100,000 women, respectively), and lowest in East Africa (25.3 and 24.0 per 100,000 women, respectively) (Deanna et al, 2012). Not unexpectedly, ICC is the primary cause of cancer-related deaths among females in East, West, and Central Africa, and ranks second in southern Africa only to breast cancer (Dorrell et al., 2012).

The countries with the largest ICC burdens include Kenya, where women have an ASIR of more than 25 out of 100,000, and Guinea, Zambia, Tanzania, Malawi, and Mozambique, where women have an ASIR of more than 50 out of 100,000. (Vuyst and colleagues, 2013).. It is not the case that cervical cancer only strikes the elderly. Women in their prime years for biological and economic productivity make up the majority of casualties. This implies that a woman's life is not abruptly snatched away from her when she passes away from cervical cancer. Rather, spouses lose their spouses, kids lose their moms, and families experience social, economic, and psychological instability. The nation, which pays a sizable amount of the expense of treating cervical cancer patients, will also suffer an economic loss of valuable human resources at the same time.

8,982 instances were reported in Kenya between 2004 and 2008, according to Korir et al. (2015). Of those, 3,889 men had an ASIR of 161 per 100,000, while 5,093 women had an ASIR of 231 per 100,000. I brought it up. Prostate cancer risk was higher in men (ASIR 40.6 per 100,000

men), but breast cancer risk was higher in women (ASIR 51.7 per 100,000 men). According to D'Orazio et al. (2014), cervical cancer was the second most frequent malignancy among women in Nairobi, with an ASIR of 46.1 per 100,000.

Over the past 30 years, cervical cancer incidence and mortality have decreased, particularly in developed nations. This is because numerous attempts have been made to screen women for cervical abnormalities and HPV.

Furthermore, progress has been achieved in the management of early-stage cervical cancer and carcinoma in situ. Cervical cancer burdens Kenya's public health resources significantly, despite the fact that it is avoidable with early detection and treatment of precancerous lesions (Sudenga et al. 2013). Cervical cancer early identification and treatment encounter comparable obstacles to other health initiatives.

These include conflicting health needs, a lack of political will, restricted access to care, inadequate health care systems, ignorance about screening and treatment, insufficient funding, resources (human and financial), high expenses, lengthy wait times, and This covers follow-ups, missing referrals, and waiting periods. Ignorance of follow-up appointments, screening, and therapy.

2.2 Aetiology of cervical cancer

The condition known as cervical cancer develops where the cervix and uterus meet. The biggest risk factor for the emergence of invasive or preinvasive cervical cancer is a sexually transmitted HPV infection (Kimani et al., 2012). HPV is exceedingly frequent and is present in 99.7% of cervical cancers. More than half of women who were sexually active had the virus by the time they were 50 years old (Leslea et al., 2013). Cervical cancer has been linked to a number of HPV types as predisposing factors (Bain, Burton & Mcgavigan 2011). HPV 16 and 18, the two most

prevalent strains, are present in almost 70% of cases of cervical cancer. According to Leslea et al. (2013), squamous epithelial cells at the cervix-uterus junction may divide quickly and migrate abnormally, eventually becoming dysplastic cells, as a result of exposure to carcinogens like HPV 16 and 18. Over time, the changes in the cervical region get worse until they become cancerous. According to Denny (2010), this indicates that over 90.0% of cervical abnormalities can be identified and treated at an early stage, preventing the development of cancer.

Most HPV infections are temporary in nature. Only 31% of women with untreated HPV infection become persistent HPV carriers, increasing their risk of developing cervical cancer. According to Collymore (2008), a woman can become infected with HPV at a young age, but she does not develop cervical cancer until she is over 35 years old. Cervical dysplasia is usually asymptomatic in its premalignant state, highlighting the importance of screening for early detection. Her 4,444 HPV risk factors include smoking, having more sexual partners, having early sex, having immunosuppression from the HIV virus, having high parity, and having a low socioeconomic status. Given that HIV and HPV are both sexually transmitted infections and that HIV-positive women are more likely to experience chronic HPV infection, CIN is frequent in HIV-positive women (Mutya et al., 2006). Collymore (2008) states that screening women for anomalies in cervical tissue, treating them before the disease worsens, and providing adequate follow-up treatment are the main goals of global efforts to detect cervical cancer. It's all about doing.

Over the past 50 years, cervical cancer has reduced in industrialized countries by 75.0% in terms of both morbidity and death. However, in poor countries, cervical cancer continues to be the primary cause of cancer-related morbidity and mortality. It ranks as the second most typical reason. The extensive adoption of cervical cancer prevention and early detection programs in

wealthy nations is mostly to blame for this inequality. Nevertheless, these institutions are almost nonexistent in the majority of developing nations. Lack of screening was identified as a major contributing factor in a recent meta-analysis on the process of medical failure in the prevention of cervical cancer in less developed nations. Leslea et al. (2013) found that of her patients with invasive cervical cancer, 42.0% had never had a screening test performed and 54.0% had an unsatisfactory screening history.

2.3 Available screening tests

Cervicography, pap smears, visual inspection with acetic acid (VIA), and HPV/DNA are among the screening tests for cervical cancer that are accessible globally (Leelin et al., 2007). The earliest cervical screening technique was developed in the 1930s and involved visually checking the cervix without dilatation while using Lugol's iodine. Cervical cytology swiftly replaced VIA due to its low 79.0% sensitivity and 85.0% specificity. Consequently, Papanicolaou (Pap) smears—which identify aberrant cellular alterations in the cervical junction—have been the main focus of screening initiatives (Denny et al., 2010). Pap smears have been the gold standard for early cervical cancer lesion identification since the 1950s (Sudenga et al., 2013).

For CIN23, the corresponding values are 70%-80% and 95%. In poor nations, the extensive use of Pap smears presents a number of issues. Due to these challenges, his VIA—which employs the human eye as a screening method in environments with limited resources—was reintroduced. It is affordable, needs little equipment, and yields results quickly despite its limited reach (Denny et al., 2010). According to Gichanggi et al. (2003), CIN grade 23, which is regarded as a true precancerous lesion, can be found using both pap smears and his VIA screening. In places with

limited resources, HPV testing alone or in conjunction with VIA may enhance cervical cancer screening.

Regretfully, it is costly, necessitates processing equipment, and results are delayed. Its specificity (84.2% vs. 94.5%) is lower and its sensitivity (90.2% vs. 41.4%) is higher than his VIA. (2009, Sankaranarayanan).

But because HPV testing finds more high-risk HPV subtypes, it is better than VIA or cervical cytology. Contrarily, cervical cytology testing is a highly effective preinvasive cancer screening method. This implies that in environments with limited resources, quick HPV test findings could be helpful for screening and treatment.

Biopsy and pathology reports are commonly used in the Western world to confirm the diagnosis of cervical cancer (Denny et al., 2010). Women who have symptoms but no visible lesions or just abnormal cervical cytology undergo colposcopy and guided biopsy. If necessary, a diagnostic conization is performed. Screening and subsequent treatment of women with positive results at the same visit reduces the difficulties of communicating results and noncompliance during follow-up clinic visits. In developing countries, cryotherapy is the most cost-effective and preferred treatment for those with a positive VIA test.

2.4 Screening and utilization of screening services

Every one to three years, women in developed countries are routinely checked for cervical cancer. But most developing countries cannot afford this level of screening frequency. Under such conditions, the age range that will yield the most reduction in the incidence and death of cervical cancer will dictate the frequency of screening (Denny et al., 2010). Screening women between the ages of 30 and 35 seems to have the biggest impact in reducing the incidence of cervical cancer, according to Denny et al. (2010). Subgroup analysis of the Indian randomized

trial supports this. Between the ages of 30 and 59, almost 80,000 women were assigned to receive health education about cervical cancer or VIA screening. After seven years, the age-standardized cervical cancer rate was 25.0% lower in women who had received screening (Sankaranarayanan et al., 2007). The optimal age and frequency of screening have also been determined by recent studies. Using clinical data from South Africa, India, Thailand, and Peru, one such study assessed cervical cancer screening in women 35 years of age and above. According to Denny et al. (2010), screening with VIA or HPV within these criteria decreased the lifetime risk of cervical cancer by 25.06.0%.

Unfortunately, due to a lack of financial and human resources, strategies utilized in wealthy nations have not been adopted in developing nations. After seven years, the age-standardized incidence of cervical cancer was 25.0% lower in women who had received screening (Sankaranarayanan, 2007). The optimal screening age and frequency have also been determined by recent study. Using clinical data from South Africa, India, Thailand, and Peru, one such study assessed cervical cancer screening in women 35 years of age and above. According to Denny et al. (2010), screening with VIA or HPV within these criteria was found to reduce the lifetime risk of cervical cancer by 25.06.0%.

Unfortunately, due to a lack of personnel and financial resources, the strategy used in wealthy countries has not been replicated in developing nations. In developed countries, cervical cancer screening is received by 63.0% of women, with the highest rates ranging from 80.0% to 90.0%, according to a recent study. According to Denny et al. (2010), screening rates range from 1.0% in Bangladesh, Ethiopia, and Myanmar to 73.0% in Brazil, with an estimated 19.0% of impoverished nations having screening rates. Many Kenyan women still lack access to cervical cancer screening programs and are unaware of the existence of the disease (Sudenga et al.,

2013). Cervical cancer is still the second greatest cause of morbidity and death in underdeveloped countries, despite a 75.0% decline in incidence and mortality rates in wealthy nations (WHO 2013).

2.5 The Impact of Screening

The World Health Organization highlights that the successful early identification of cervical cancer depends on screening uptake. In high-income nations, the incidence and death of cervical cancer have declined, partly as a result of improved screening programs (Gakidou et al., 2008). Compared to impoverished countries where the ASIR ranges from 25 to 55 per 100,000, cervical cancer is an extremely rare disease in these countries, with an ASIR of less than 10/100,000. (Denny et al., 2010). The majority of middle-income nations, including China and Brazil, offer screening, however it might only be offered at obstetric and child health facilities (WHO, 2002).

A danger in which the likelihood of illness is reduced. Despite considerable efforts over the past 30 years to establish cytological screening, several pilot studies conducted in India revealed that 99.0% of respondents had never been checked. WHO, 2002. With 52,000 new cases annually, Latin American countries continue to have the greatest incidence of cervical cancer. According to data, the prevalence of cervical cancer is rising in several SSA regions where cytology screening programs are being tested.

In 1992, there were 4,467 new cases recorded, bringing the total number of documented cases to 25,143 (Denny et al., 2010). The issue is caused by both the failing health system and the long-standing policy of concentrating preventative efforts on opportunistic screening of younger women who visit clinics for treatment related to pregnancy. Lower cervical cancer incidence and death are associated with good adherence to routine screening, evaluation of abnormal

Papanicolaou smears, and treatment of precursor lesions. According to Finer and Philbin (2013), cervical cancer mortality declined by 75.0% in affluent nations but did not decrease in developing nations. Inadequate screening is a significant contributing cause to high mortality rates of cervical cancer, according to a scenario analysis study conducted in poor nations. According to Sawadogo et al. (2014), 42.0% of patients with invasive cervical cancer never had screening tests performed, while 50% of patients had inadequate screening tests.

This finding implies that high rates of cervical cancer screening efficacy are attained in developed nations. Throughout all target countries, the population-weighted average raw coverage and effective screening coverage were, respectively, 68.0% and 40.0%. These rates were much lower, at 45.0% and 19.0%, respectively, in the 30 impoverished countries studied. Additionally, research revealed that whilst only 1.0% of women in Ethiopia and Bangladesh received effective testing, nearly 80.0% of Australian women did (Gravitt, 2011). Cervical cancer screening was not included, despite the fact that most women in a number of middle-income nations, such as China, Brazil, and former communist states, have had gynecological exams at some point in their lives. This indicates that a sizable fraction of women in these nations had interacted with obstetric or gynecological healthcare providers, and that a sizable part of these women may have benefited from effective screening that health systems chose not to give. It implies that. Making use of the current healthcare systems in these well-known nations may lead to lost chances and access to unsuitable testing (Gakidou et al., 2008).

50 to 60 million (94.0%) cervical cancer smears are thought to be conducted annually in the majority of affluent nations, including the United States. The population-weighted averages of approximate effective coverage for cancer screening were 40.0% and 68.0%, respectively. In Kenya, Ethiopia, and Bangladesh, a greater percentage of women reported never having been

tested; over 90% of them. Because early diagnosis rates of cervical cancer are so high in these countries, the disease is quite uncommon. An ASIR of less than 10/100,000 for rare diseases, as opposed to 25–55/100,000 in underdeveloped nations (WHO 2015).

2.6 Knowledge and Utilization Health Screening Services

Rositch, Gatuguta, and Choi (2012) define health literacy as the capacity to comprehend and respond to health information, including prescription orders and appointment forms, as well as read and interpret medical terminology. It also includes completing paperwork associated with one's health. Its capacity. The authors claim that health literacy and higher education are related. Knowledge thus has a direct relationship with health literacy. A person is more likely to have access to a socially privileged position and to have the knowledge and power to influence his or her own ideas, plans, and behaviors if they have greater education and knowledge. Low health literacy is linked to ignorance of cervical cancer screening, claim Rosic et al. (2012). Lack of knowledge about cervical cancer is one of the barriers to early identification, according to Sudenga et al. (2013).

2.7 Sociocultural Factors and Cervical Cancer

Women's risk and experience with cancer are influenced by a variety of sociocultural factors, including class, gender, ethnicity/race, and views toward sexuality. One such element is cervical cancer.

2.7.1 Race and Ethnicity

When people are categorized into groups according to physical traits, ethnicity, or genetic elements like skin color, this is referred to as race (Templeton, 2013). Although the incidence of cervical cancer is higher in white women, black women in Alabama die from the disease at a

lower rate than white women, according to a review of trends in incidence over a 35-year period. In CCO (2012). According to Garcia-Palacio et al. (2012), Hispanic women's susceptibility to cervical cancer appears to be more influenced by their knowledge of HPV/STI exposure in the past or present as well as whether or not they have a family member who has the disease.

Racial and cultural differences have been found in HPV knowledge and comprehension (Blake et al., 2015). Cervical cancer death rates were greater in rural areas with lower socioeconomic level among women than in metropolitan areas. Furthermore, compared to non-Hispanic white women, black and Hispanic women have greater fatality rates from cervical cancer. According to Jacqueline et al. (2015), there were gaps in the understanding and awareness of HPV, obesity rates, and cancer screening.

In comparison to black women and other white women with lower household incomes, white women with higher household incomes reported having a Pap test with a 95% confidence interval, according to an analysis of Pap tests performed on 4,992 women. [Jacqueline and others, 2015]. According to research, insurance coverage is crucial for Black and White women's cancer screening (Madadi et al., 2014). Studies reveal that fewer than 64.1% of low-income women—especially those who identify as African American and Hispanic—get screening for cervical cancer (Hirth et al., 2015).

These groups have a greater HPV prevalence as a result. Cervical cancer was detected in 11.5 percent of African American women and 14.2 percent of Hispanic women, according to the study. Compared to the 8.8 percent number for the entire population, this value is noticeably higher (Hirth et al., 2015). According to Ackerson et al. (2007), some theoretical explanations for this statistics include socioeconomic factors, inconsistent healthcare, a lack of insurance

coverage, attitudes regarding cervical cancer, and disparities in the incidence and treatment of cancer.

2.7.2 Socioeconomic status

Socioeconomic status refers to a person's or a group's social standing or class (Lai et al., 2013). It is frequently determined by combining factors like occupation, wealth, and education. An individual's income and education level impact how much knowledge they have regarding the HPV vaccine and how it is administered (Ramirez et al., 2013). Because certain ethnic groups may not have sufficient vaccine coverage, socioeconomic status may be a barrier to the prevention of cervical cancer. According to D'Orazio et al. (2014), education is the most significant element influencing people's knowledge and comprehension of vaccinations. Cervical cancer death rates were greater in rural areas with lower socioeconomic position among women than in urban areas (Kontos et al., 2012). Furthermore, compared to non-Hispanic white women, African American and Hispanic women had greater cervical cancer death rates (Kontos et al., 2012).

Socioeconomic status affects both education level and ability to obtain insurance. Women of low socio-economic status have lower levels of education and insurance coverage, making them less likely to receive cancer screening and vaccinations (Kontos et al., 2012). The U.S. Census Bureau reports that poverty among African Americans and Hispanics has increased by 25%. This is significantly higher than the 8.6 percent poverty rate for non-Hispanic whites. 41% of this population is uninsured and may not have access to cervical cancer screening (Semega et al., 2017). In addition to the financial burden, many women in this community have misconceptions about what a cervical cancer diagnosis means for them (Ramirez et al., 2013).

When asked what they thought about cancer, Hispanic and African American women said, "Removing the cancer can spread it," "Cancer treatment is worse than the disease," and "There is almost no treatment for this." Others said they did not need to be tested unless they engaged in "high-risk sexual activity" (Ramirez et al., 2013). According to research, the primary reason these women chose not to get tested was because their physicians had not advised them to (Ackerson et al 2007). This emphasizes how crucial it is for doctors to engage with these communities and give their patients support and knowledge.

2.7.3 Location of residence

Based on perception, geography influences the incidence of cervical cancer and vaccine availability in a region. Women in rural areas are known to have higher mortality rates from cervical cancer than women in urban areas. Women living in the city. This is also due to the fact that rural women have limited access to information and education about her HPV vaccination and related cervical cancer (Anhang et al., 2011).

2.7.4 Sexual lifestyle

The term "sexual lifestyle" describes how many partners one has, when they start having sex, and how they utilize contraception. Each of these elements affects the frequency of female cervical cancer. Young children who engage in sexual activity have a higher chance of contracting HPV. Her chance of contracting HPV is further increased by unprotected intercourse with numerous partners (Finer & Philbin, 2013). A woman's chance of contracting HPV infection rises with prolonged use of contraceptive pills (Ramirez et al., 2013).

2.8 Attitude towards vaccination

The medical community acknowledges vaccination as a means of preventing illness and advancing public health. But other people choose not to get vaccinated because they start to doubt the advantages and necessity of vaccination. This vaccination reluctance, which precedes vaccine refusal, is sometimes referred to as vaccine refusal (Arbyn et al., 2015). Hesitancy is not the same as outright rejection; rather, it is a reluctance to get vaccinated that, when paired with ignorance of the advantages of vaccination, results in the decision not to get vaccinated.

Public attitudes toward vaccination are strongly influenced by knowledge about the benefits of vaccines. Appropriate communication between eligible individuals and vaccination providers can transform an attitude of “hesitancy” into a willingness to vaccinate. The experiences of relatives and relatives also influence attitudes towards vaccination (Arbyn et al., 2015). This means that "hesitancy" turns into refusal if vaccination is ineffective for a family member or friend.

A teenage woman's acceptance of her HPV vaccination is also influenced by her parents' cancer beliefs and health information beliefs. It was discovered that parents who believed they had a high chance of acquiring cancer and who trusted medical authorities with their health information were more likely to consent to vaccinations. Acceptance of vaccines was not correlated with assessments of the severity of cancer or fatalistic views on cancer prevention (Nan et al., 2014). To guarantee that their daughters obtain the most benefit and efficiency of vaccination against deadly cervical cancer, parents should be aware of the advantages of HPV vaccine and accept immunization early. Nonetheless, studies reveal that a large number of women skip routine cervical cancer exams out of ignorance or fear of the negative outcomes. For the latter reason, up to 38% of women decline cervical cancer screening (Petry, 2014). Given the strong positive correlation between survival and detection time, this is a serious concern for many doctors.

By offering each patient the support and care they require, nurses play a critical role in reducing fear and anxiety (Nan et al., 2014). Apart from providing women with information and relaxation, it is imperative that men and women receive education regarding sexual health, namely regarding the use of condoms during sexual activity, cervical cancer, and HPV vaccination (Blake et al., 2015). One of the main risk factors for acquiring cancer is thought to be HPV infection. Young women can gain immunity and lower their HPV infection rate by using condoms (Blake et al., 2015).

2.9 Cervical Cancer Screening and Treatment

Cervical cancer is caused by HPV, a prevalent sexually transmitted infection that also raises mortality and morbidity rates. Cervical high-grade and low-grade lesions are primarily caused by HPV. About 70% of cervical cancer cases are caused by HPV 16 and 18, the most prevalent HPV strains (Petry, 2014). However, low-risk HPV strains, such as the most prevalent HPV 6 and 11, are linked to cervical cancer and other HPV infections in addition to causing genital warts, low-grade cervix lesions, and recurrent respiratory papillomatosis. linked tumors, hence it won't be the cause of this (Guglielmo et al., 2014).

A Pap smear administered by a gynecologist or other medical expert is the most common method of detecting cervical cancer (Ashok et al., 2012). Pap smears, however, have the potential to yield false-positive and false-negative results. Although she is not, a false-positive test result suggests that she has a high-risk form of HPV. According to the Mayo Clinic (2018), a false negative test result indicates that you have HPV infection even when the test indicates that you are not. Reboji et al. (2013) suggest that minimizing the issue of false-positive and false-negative findings can be achieved by refraining from sexual activity, douching, or the use of vaginal medicines or spermicidal foams, creams, and jellies two days before to the test.

The American Cancer Society (2012) states that a woman should begin screening for cervical cancer three years after starting to have sexual relations or when she turns 21 years old, whichever comes first. This is to identify any alterations that take place in the initial phases of the illness. A woman can begin having a pap smear every three years at the age of thirty, and beyond the age of seventy-nine, if her tests have been normal for the previous ten years, she can cease having the tests. It seems that most people do not adhere to these rules. A CDC research found that 60% of women with cancer had either never had a Pap smear performed or had not had one in the previous five years (Arbyn et al., 2015). In the event that the Pap smear reveals abnormal cells, a colposcopy test is conducted. To provide a clear view of the cervix during a colposcopy procedure, a colposcope—a magnifying lens device—is inserted outside the cervix (Ashok et al., 2012). After confirming the colposcopy, it may be necessary to perform a biopsy to further investigate abnormal cells in the cervix.

During a biopsy, a small sample of cervix tissue is taken out for additional examination. To verify that a seemingly aberrant illness is, in fact, cancer, a biopsy is performed. To inspect further parts of the system and identify the locations where the cancer has progressed, other procedures that may be used include cystoscopy, proctoscopy, and testing while under anesthesia by inserting a lighted tube. (Ashok and others, 2012). Testing people suspected of having cervical cancer can be done in a variety of methods. Together, patients and physicians create a plan of action to combat cancer, which ultimately determines available treatment options. Cryosurgery or laser surgery may be the preferred course of treatment when it comes to precancerous or aggressive malignancy. In order to freeze aberrant cells, a metal probe cooled with liquid nitrogen is inserted into the cervix and vagina during cryosurgery (Miller, 2016).

In addition, precancerous lesions are burned away during laser surgery, and tiny tissue fragments are extracted for biopsy (Ramirez et al., 2013). Conization is a procedure used to identify or treat cervical cancer that has progressed to Stage I. Using a surgical or laser knife, a cone-shaped portion of tissue is removed from the cervix during a conization. If a woman want to have children in the future, she should get this operation. According to D'Orazio et al. (2014), a hysterectomy may be necessary for stage I or stage II cervical cancer. Depending on the particular type of cancer the patient has, a hysterectomy may be a major or minor procedure. A radical hysterectomy eliminates more tissue than a basic hysterectomy, which just involves the removal of the uterus and cervix. Additionally removed are the tissues next to the uterus and the upper portion of the vagina adjacent to the cervix. Removal of the fallopian tubes, lymph nodes, and ovaries is another possible side effect of a radical hysterectomy.

Early stage II cancer is more frequently treated with a radical hysterectomy. In addition to being a surgical procedure used to cure cervical cancer, a trachectomy also enables young women to become pregnant. The uterus is left intact after this procedure, which removes the cervix and upper portion of the vagina (D'Orazio et al., 2014). With this operation, the chance of cancer recurrence is minimal, but the probability of miscarriage is greater than in women in good health (Hawkins et al., 2010). For more advanced cases of cervical cancer, chemotherapy or radiation therapy are further therapeutic options. According to Ramirez et al. (2013), radiation therapy is utilized to eradicate cancer cells 30 and reduce tumor size.

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recurrence is minimal, but the probability of miscarriage is greater than in women in good health (Hawkins et al., 2010). For more advanced cases of cervical cancer, chemotherapy or radiation therapy are further therapeutic options. According to Ramirez et al. (2013), radiation therapy is utilized to eradicate cancer cells and reduce tumor size. Nurses should constantly educate patients about cervical cancer, particularly by urging young women to get vaccinated against HPV and supporting cervical cancer screening (Petry, 2014).

2.10 HPV Vaccination

According to estimates, three-quarters of adults will contract HPV at some point in their lives. Sexually active youth are the most common age group for HPV infection (Guglielmo et al., 2014). Improving understanding and awareness of HPV and the HPV vaccine is essential for reducing the morbidity and mortality rate from cervical cancer. A greater willingness to get vaccinated should follow from improved awareness of the advantages of HPV vaccination. Concern should be expressed over the HPV vaccination's subpar uptake (Deanna et al., 2012). There are currently no efficacious vaccinations available to lower the risk of HPV infection. There are now two kinds of HPV vaccines that can guard against high- and low-risk HPV infections: quadrivalent and bivalent (Guglielmo et al., 2014).

HPV vaccination shows promise and can lower morbidity and death associated with HPV if administered appropriately. Determining the precise moment at which young women should receive the HPV vaccine and researching the diagnosis of cervical cancer are crucial steps in maximizing the efficacy of the vaccine. For women between the ages of 13 and 60, HPV vaccination is advised due to the necessity of preventive measures (Blake et al., 2015). The acceptance of HPV vaccination is impacted by multiple variables. The study by Lai et al. (2013) indicated that although US women were more knowledgeable of HPV, this did not correlate with

their desire to vaccinate their daughters against the virus. Furthermore, compared to black women, white women were shown to be more inclined to get the HPV vaccination. Lower prevalence of HPV infection and cervical cancer may result from higher HPV vaccination rates (Jacqueline et al., 2015). Gardasil and Cervarix are the two HPV vaccinations (Ortiz et al., 2012). Gardasil, which was approved in 2006, protects against HPV types 6, 11, 16, and 18. Cervarix, which was approved in 2009, protects against HPV types 16 and 18. Please note that for the vaccine to be effective, you must finish your HPV vaccination and take all three doses on time. These vaccines tend to prevent infection with high-risk HPV types that cause most cervical cancers.

2.10.1 Timing of Vaccination, Adolescence vs Post Adolescence

It is crucial to time the HPV vaccination in order to avoid cervical cancer. The HPV vaccine should ideally be given prior to engaging in any sexual activity (Deanna et al., 2012). A systematic review and meta-analysis evaluating the safety and effectiveness of HPV vaccinations in preventing cervical cancer, adenocarcinoma in situ (CIN2+), and grade 2 and 3 intraepithelial neoplasia (CIN2 and CIN3). This implies that the vaccines that are currently on the market work well. According to Rey-Ares et al. (2012), it can prevent CIN2+ lesions and is safe. Numerous studies have demonstrated the advantages of vaccinations for public health and their cost-effectiveness (White, 2014). According to Holman et al. (2014), cervical cancer screening programs that solely use Papanicolaou smears are inferior to cervical cancer prevention with vaccine for female patients. According to the CDC's recommended schedule (Markowitz et al., 2014), women should get their first HPV vaccination at ages 11 and 12, then another shot every 26 years.

Age-appropriate women who have already been exposed to HPV are advised to keep being vaccinated, according to guidelines. It is unclear how primary care physicians (PCPs) base their recommendations for HPV vaccinations on sexual history, Pap tests, and HPV (Deanna et al., 2012). The best known predictor of starting and finishing a three-dose HPV vaccination series is a referral from a healthcare provider (Dorrell et al., 2012, Kessels et al., 2012).

2.10.2 Availability and Accessibility to Vaccination

According to Holman et al. (2014), cervical cancer screening programs that solely use Papanicolaou smears are inferior to cervical cancer prevention with vaccine for female patients. According to the CDC's recommended schedule (Markowitz et al., 2014), women should get their first HPV vaccination at ages 11 and 12, then another shot every 26 years.

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Variations in HPV-related mortality and morbidity are also caused by this awareness gap. Cervical cancer death rates are greater in rural areas and among women with lower socioeconomic level than in urban areas. Furthermore, compared to non-Hispanic white women, African American and Hispanic women have greater mortality rates from cervical cancer (Ramirez et al., 2013).

CHAPTER THREE

3.0 METHODOLOGY

3.1 Research Method and Design

Data were collected using a quantitative manner in a descriptive cross-sectional study design. This involved recording data that was appropriate for characterizing the phenomenon based on data collected at a certain point in time. This approach is less time-consuming, relatively inexpensive, and allows for the analysis of a large number of results to generate new ideas. In the research, the quantitative technique is trustworthy and objective.

3.2 Data Collection and Tools

Participants who met the eligibility requirements were given a semi-structured questionnaire by the researcher. With a few minor adjustments, the questionnaire was modified from earlier research in the field. The purpose of the 41-item questionnaire, which was divided into five sections, was to find out how many community health nurses had received the HPV vaccine and were screening for cervical cancer.

3.3 Study Population

The Takoradi Community Health Nurses were the study's target population. The goal of the research, consent procedures, and confidentiality were explained to the participants.

3.4 Study variables

The study variables include cervical cancer knowledge and awareness among community health nurses. It included knowledge and uptake of HPV vaccination among community health nurses and the barriers to the uptake of HPV vaccines amongst community health nurses

3.5 Sample size estimation and sampling

The sample size was from Yamane's Formula (Yamane's 1967) which is;

$$n = \frac{N}{1 + N(e)^2}$$

Where

n is the sample size,

e is the allowable error, which is 0.05 for this study and

N is the total population of Community Health Nurses in the Takoradi Municipality [Municipal Health Directorate].

Therefore,

$$= \frac{388}{1 + (338 \times 0.05^2)} = 184$$

A 10% non-response rate on the estimated sample was calculated (19 respondents) and added to the minimum sample size ((184 + 19 = 203), thereby bringing the working sample for the study to about 203.

The study adopted a random sampling, using the list of community health nurses obtained from the municipal health directorate as the sampling frame; to choose the study participants.

After review and approval by the Institutional Review Board for Ethical Research (IRB), the Principal Investigator (PI) sought permission from the Municipal Health Directorate to conduct the data collection. by handing over the self-administered semi-structured questionnaire to the selected participant to fill it. Participants had time to finish answering the questionnaires.

3.6 Pre-testing

The questionnaire was pretested among community health students present at the Kwesimintsim Government Hospital at the time of the pretest. It was edited to suit the study parameters.

3.7 Data handling

After being completed, the questionnaire was obtained from the chosen research subjects to ensure it was accurate. Each and every survey was anonymous. After filled out, the questions are secured with a lock to protect respondent privacy and prevent data loss.

3.8 Data Analysis

Prior to analysis, the data was coded, cleaned, and organized into relevant units before being entered into the SPSS program. The continuous variables' mean, median, frequency tables, and standard deviations were determined at the univariate level of analysis. The factors that were plausible and found to be statistically significant at bivariate analysis with a p-value of less than or equal to 0.05 were then subjected to logistic regression for additional analysis, which identified the factors that encourage and hinder cervical cancer screening. Tables and a pie chart were used to display these data.

3.9 Ethical Consideration

The Ensign Global College Ethical Review Board received the research proposal and granted ethical approval. After providing all the information on the study to the participants, informed consent was requested and acquired. The consent papers were signed before to completing the surveys. To maintain confidentiality, the identities of the study participants were not recorded. The participants were not penalized if they left the study at any point.

3.10 Exclusion criteria

The participant who was not allowed to participate in this research include:

1. Community health nurses who have been diagnosed with cervical cancer already or are on treatment for it.
2. Individual who has not consented to participate in the study.

3.11 Inclusion criteria

To be eligible for this study, participants need to meet the following requirements:

1. Must be a community health nurse.
2. Community health nurse present at the time of the study.
3. Individuals who have consented to participate in the study

CHAPTER FOUR

4.0 RESULTS

4.1 Introduction

This section presents the results of the data for the study on the knowledge and uptake of Community Health Nurses on cervical cancer and its vaccination. A total of 233 questionnaires were administered to all individuals who met the set inclusion criteria for the study. Out of this number 203 have responded which generated the cleaned data for the analysis, thereby resulting in an 87.12% study response rate.

4.2 Demographic characteristics

The demographic characteristics of the study are presented in Table 1. Results from the survey show that most Community Health Nurses were between the ages of 21 to 30years. This was represented by 71.9% of the total population. This was followed by those in the age bracket of 31 – 40, representing 23.6% of the study population. Only 4.4% of the population were aged 41 years and above.

The marital status of the respondents also showed that almost 69.5% of the respondents were single. About 27.5% of them were however married. The study results again showed that 3.0% were cohabiting. The religious background of the respondents showed that almost all were Christians. This was represented by 98.5% of the respondents. Only 1.5% of the population were Muslims.

The study also explored the number of years a respondent has worked as a Community Health Nurse. Results from the study showed that the majority of the community health nurses had been working for between 2 and 5 years. They made up about 64.2% of the total population. This was

followed by those who had worked for less than a year (15.4%). About 10% of the respondents had worked for between 6 to 10 years. The study also showed that 10.4% had been working for more than 11 years.

Table 1: Demographic characteristics

Variables	Categories	Frequency (n)	Percentage (%)
Age/years	21 – 30	146	71.9
	31 – 40	48	23.6
	41 and above	9	4.4
Marital Status	Single	141	69.5
	Married	56	27.5
	Cohabiting	6	3.0
Religion	Christian	200	98.5
	Muslim	3	1.5
Number of years working	Less than 1 year	31	15.4
	2 – 5 years	129	64.2
	6 – 10 years	20	10.0
	11 years and above	21	10.4
Income level/ month (GHc)	1000	39	19.4
	1001 – 5000	160	79.6
	Above 5000	2	1

Source: *Field Survey, 2023*

Results from Table 1 further showed that the majority of the Community Health Nurses receive between 1,001 and 5000 Ghana cedis. This was represented by 79.6% of the respondents. About 19.4% of the respondents also received 1000 Ghana cedis as their salary. Only 1% of the community health nurses received above 5,000 Ghana cedis.

4.2 Sex and family planning

The sexual and family planning activities of the study population were also studied. The results are presented in Table 2. Results from the study show that the majority (97.0%) of all respondents acknowledged they had ever had sexual intercourse. The majority of those who reported ever having sex did so when had had sex were sixteen (16) years and above. They represented about 95.1% of the population. Only 4.9% of the respondents had sex at an age below 16 years.

Table 2: Sexual and Family Planning Activities

	Response	Frequency(n)	Percentage (%)
Have you ever had sex?	Yes	197	97.0
	No	6	3.0
At what age did you have sex?	Below 16	10	4.9
	16 and above	193	95.1
Number of sexual partners?	One	164	80.8
	Two and more	39	19.2
Do you use family planning?	Yes	97	47.8
	No	106	52.2
Asked among those who use Family Planning			
What family planning methods do you use?	Contraceptive pill	37	30.1
	Condom	69	56.1
	IUD	5	4.0
	Injection	12	9.8

Source: *Field Survey, 2023*

The majority of the study population represented by 80.8% had only one sexual partner. However, about 19.2% of the respondents had multiple sexual partners. The study however showed that 47.8% of the respondents use family planning. Another 52.2% of the Community Health Nurses did not use any form of family planning. On the type of family planning used, the majority of the respondents used condoms (56.1%). About 30.1% used contraceptive pills while 9.8% of the respondent's used injection. Only 4.0% used the intrauterine device. Respondents in this instance were asked to choose more than one family planning method used.

4.3 Cervical Cancer Awareness

The results showed that all contacted respondents (100%) in the study were knew of cervical cancer. However, 72.4% of the respondents were aware of vaccination for cervical cancer and the need to get inoculated for deadly diseases like cervical cancer. The results also showed that 27.6% were not aware of vaccination for cervical cancer. This is presented in Table 3.

Table 3: Cervical Cancer Awareness

	Response	Frequency(n)	Percentage (%)
Are you aware of cervical cancer?	Yes	203	100
	No		
Are you aware of vaccination for cervical cancer?	Yes	147	72.4
	No	56	27.6
Asked among those reporting only awareness (n=147)			
Where did you get the information from?	Health practitioner	78	53.1
	Media	24	16.3
	Lecturer	27	18.4
	Friend	13	8.8
	Family	5	3.4

Source: *Field Survey, 2023*

Respondents who had had information on vaccination had it from different sources. More than half of the Community Health Nurses got the information from their health practitioners. This was presented by 53.1% of the study population. About 18.4% of the Community Health Nurses got to know about vaccination from their lecturers. The study also showed that 16.3% of the respondents had their information on vaccination from the media. The study revealed that 8.8% and 3.4% of the information for vaccination were from friends and family respectively.

4.4 Vaccination against cervical cancer

The respondents' uptake of cervical cancer vaccination was also determined and results are presented in Table 4.

The study showed that all respondents had not been vaccinated against cervical cancer. About 88.2% of the respondents were willing to be vaccinated against cervical cancer. Only 3.0% of the respondents were not ready to receive vaccination for cervical cancer. About 8.8% of the respondents also confirmed that they may receive vaccination for cervical cancer in the future.

Table 4: Cervical cancer awareness

Response		Frequency (n)	Percentage (%)
Have you been vaccinated against cervical cancer	Yes	0	0
	No	203	100
Are you willing to vaccinate for cervical cancer	Yes	179	88.2
	No	6	3.0
	Maybe	18	8.8

cervical cancer	1. Maintaining good health is important to me	63	31.5
	2. I got advice from my family, friend, or physician	5	2.5
	3. I need to discover my health problems		
	4. Having regular cervical screening tests will help find changes to the cervix before they turn into a cancer	12	6.0
		33	16.5
	5. I have adequate knowledge of cervical cancer		
	6. Having vaccination will decrease the chances of dying of cervical cancer	18	9.0
	7. I can afford the cervical cancer vaccination		17.0
	8. I have access to free vaccination screening services	34	
	9. I feel that the available cervical cancer screening services are gender sensitive	10	5.0
	15	7.5	
	10	5.0	
What will motivate you to vaccinate for			

Source: *Field Survey,2023*

Several reasons were given by the Community Health Nurses on what motivates them to receive a vaccine against cervical cancer. The study showed that about 31.5% of the respondents were motivated to vaccinate because maintaining good health was important to them. The study also showed about 16.5% of the respondents stated that having regular cervical screening tests will help find changes to the cervix before they turn into cancer. Another 17.0% claimed they were motivated because having vaccination will decrease the chances of dying of cervical cancer. Another 9.0% of the respondents were motivated to receive the vaccine because of their knowledge of cervical cancer vaccination.

The study also showed that 7.5% of the Community Health Nurses were motivated because they had access to free vaccination screening services. Some of the respondents were also motivated to receive the vaccine because they were in a position to afford the cost of the vaccination. This was represented by 5.0% of the population. Discovering health problems was also what motivated other respondents to vaccinate against cervical cancer. They were made up of 6.0% of the respondents. The study also revealed that 5.0% of the respondents were motivated as a result of the gender-sensitive nature of the screening services. Only 2.5% of the respondents got advice from their friends, family, and physicians and were thus motivated to receive the vaccine.

4.5 Individual factors that will not make one receive cervical cancer vaccine

The personal factors that de-motivate respondents to receive a vaccine were also studied. The results are presented in Table 5 below.

Table 5: Personal or individual factors to make one receive the vaccine

	Response	Frequency(n)	Percentage (%)
Factors that will make one receive the vaccine	1. I don't have the money to test	6	3.2
	2. I don't know where to go for the screening	36	19.0
	3. It's for a married couple		
	4. I think it will be painful		3.7
	5. I don't have the money for the test and vaccine	7	10.1
	6. I am at low risk of getting cervical cancer	19	34.4
	7. I use condoms so I think am protected	65	9.0
	8. If there is cancer vaccination will not stop it	17	
	9. I hate vaccination		8.5
		16	10.1
		19	2.0
		4	

Source: *Field Survey,2023*

Results from the study showed that the majority of the Community Health Nurses did not go for vaccination because they did not have money for the vaccination. This was indicated by 34.4% of the respondents. Another 19.0% of the respondents did not know where to go for the screening and vaccine. Some respondents were of the view that the screening would be painful. Others thought they were at low risk of getting cervical cancer. This was represented by 9.0% of the respondents respectively. Another 8.5% of the respondents were of the view that they used condoms and thus did not need to be vaccinated. About 10.1% of the respondents were of the view that if they had cervical cancer, vaccination was not going to stop it. Another section of the respondents thought screening for cervical cancer was for married couples. This was confirmed by about 3.7% of the population. The results from Table 5 also show that about 3.2% of the respondents do not screen for cervical cancer because they do not have the money to pay for screening.

4.6 Health facility factors that prevent screening

The health facility factors that prevent respondents from going for cervical cancer screening are presented in Table 6.

Table 6: Perception of Health facility factors that prevent screening

	Response	Frequency (n)	Percentage (%)
Health facility factors	1. Health professionals who do the cervical cancer vaccination test are very rude to women	12	7.8
	2. There are long waiting hours at the cervical cancer centers	34	22.1
	3. Sometimes the vaccines are out of stock so the health workers give me another date which is not in line with my schedule	51	33.1
	4. I fear that I may get a hospital-acquired infection during cervical cancer vaccination,		
	5. It is difficult to get an appointment for cervical cancer vaccination at the hospital	19	12.3
	6. Sometimes the health professionals who offer the services are busy with other activities	27	17.5
		11	7.1

Source: *Field Survey, 2023*

About 33.1% of the respondents were of the view that sometimes the vaccines are out of stock so the health workers give another date which is not in line with my schedule. This prevented them from going for screening. In another instance, 22.1% of the respondents confirmed that there were long waiting queues at the cervical cancer centers. This prevented them from going for screening.

Getting an appointment was difficult for some respondents. Thus about 17.5% of the respondents were not motivated to go for screening. The study also revealed that 12.3% of the respondents were scared of getting hospital-acquired infections from the screening centers. About 7.8% of the respondents said Sometimes the health professionals who offer the services are busy with other activities. This prevented them from going for screening. The rude nature of some of the health professionals also prevented respondents from going for screening. Some respondents (7.8%) were of the view that Health professionals who do the cervical cancer vaccination test are very rude to women.

The confidence of receiving the cervical cancer vaccine was also studied and results were summarized in Table 7. Results of the study showed that the majority (75.9%) of the respondents were very sure of receiving the vaccine in future. Only 7.9% were not confident enough to receive the vaccine. However, 16.2% were slightly sure of receiving the vaccine. Concerning the cost of the vaccine, about 92.5% of the respondents were ready to receive the vaccine if it was offered for free. Only 7.5% were of the view that maybe they will receive the vaccine.

Table 7: Confidence in receiving vaccine

	Response	Frequency (n)	Percentage (%)
How confident are you to receive the vaccine	Very sure	154	75.9
	Slightly sure	33	16.2
	Not sure	16	7.9
If the cervical vaccine was free, will you receive it	Yes	190	92.5
	Maybe	13	7.5

Source: *Field Survey, 2023*

4.7 Bivariate analysis of vaccine acceptance for Cervical Cancer on other correlates

A Pearson's Chi-Square test was conducted for the respondent's willingness to accept the vaccine for cervical cancer. Results from Table 9 show that the age of the respondents had no ($p > 0.05$) significant relationship with their willingness to accept the vaccine. The marital status of the respondents however had a statistical ($p < 0.05$) on the willingness of the respondents to accept the cervical cancer vaccine. The years of working as a community health worker also had a significant ($p < 0.05$) relationship with the willingness of the nurses to accept the vaccine.

The income of the respondents however had no statistical relationship ($p > 0.05$) with the willingness to accept a vaccine. Results from this study show that irrespective of the salary level, most Community Health Nurses will only accept the vaccine if it were offered for free. The number of sexual partners also had no statistical relationship ($p > 0.05$) with the respondent's willingness to accept a vaccine. Most of the respondents in this study had only one sexual partner.

The awareness of a vaccine however had a significant relationship ($p < 0.05$) with their willingness to accept a vaccine. Once a nurse is aware of a vaccine, they are encouraged to

receive the vaccine. This explains why they had a statistical relationship with the awareness and the willingness to receive a vaccine. Offering a vaccine for free also had a significant relationship ($p < 0.05$) with the willingness to accept the vaccine. This is valid in that one of the reasons why respondents were not going to receive a vaccine had to do with the cost of the vaccine. This confirms the work in this study on the negative reasons why a community health nurse will not receive a vaccine.

Table 8: Bivariate analysis of selected indicators on the willingness of the respondents to accept vaccination for Cervical Cancer

Variable	Are you willing to Vaccinate for cervical cancer?			P-value
	Maybe	No	Yes	
Age				
21 – 30	12	3	16	0.068
31 – 40	9	3	42	
41 and above	0	0	9	
Marital Status				
Cohabiting	0	0	6	<0.001*
Married	9	6	45	
Single	12	0	162	
Years of Working				
≤ 1	9	0	30	<0.001*
2-5	6	3	147	

6-10	3	3	15	
≥ 11	3	0	18	
Income Level				
≤ 1,000	3	0	45	0.617.
1,001-5,000	18	6	162	
≥ 5,001	0	0	3	
Sex Partner				
One	21	6	168	0.082
More Than One	0	0	33	
Awareness of Vaccine				
No	12	3	66	0.035*
Yes	9	3	147	
Offered Free vaccine				
Maybe	6	0	12	0.001*
Yes	9	6	177	
No	15	6	189	

Source: *Field Survey,2023*

CHAPTER 5

5.0 DISCUSSION

5.1 Knowledge of cervical cancer

The age group of 21–30 years old comprised the bulk of participants (71.9%). More over half of Ghanaian women are under the age of thirty, according to the findings of her 2008 Ghana Demographic and Health Survey (Acheampong, 2010). 200 persons, or 98.5 percent, identified as Christians, and 3 (1.5 percent) as Muslims. This backs with the assertion made by Adamu (2002) that 17.6% of Ghanaians are Muslims and 71.2% of people are Christians.

The data' age distribution suggests that the sample is made up of a young population with a potentially high fertility rate. Strategies for preventing cervical cancer greatly benefit from knowledge about the disease and pap screenings in women. According to the study's findings, every person surveyed (100%) was aware of cervical cancer. This result runs counter to other research (Duda et al., 2005) that found women to be ignorant about cervical cancer.

Although most respondents were knowledgeable about cervical cancer, all respondents said they had "never" been tested for cervical cancer. These results suggest that respondents may encounter barriers to cervical cancer screening. In this current study, respondents reported never having undergone a cervical cancer test. Therefore, this is lower than the hospitalization rate determined by researchers in Tanzania. Eze et al. (2012), only 14.3% of respondents said they had ever been tested for cervical cancer.

This discrepancy is caused by inadequate access to healthcare, which results in fewer reported diagnoses, inadequate screening for early diagnosis and treatment, and subpar cancer registries in impacted nations. This could be brought on by inadequate data, which results in inaccurate data (Mabelele et al., 2018).

Furthermore, the current study's findings cannot be compared to those of a study that evaluated healthcare professionals' screening procedures for cervical cancer in Elmina, Ghana. Merely 795 (29.34%) and 225 (8.3%) out of the 2,711 women polled had ever undergone a Pap smear and gynecological exam. (2018) Maabelele et al. According to data, very few African women were screened for cervical cancer (Nwabichie et al., 2018).

Health workers in developing nations, particularly in Ghana, report low screening adoption despite the fact that screening is known to lower the incidence and mortality of this common disease that affects women. (Tagoe and Calys, 2020). However, African women frequently have low support for cervical cancer screening because of things like their marital status, level of happiness with their healthcare, and level of participation in their healthcare (Calys-Tagoe et al. al., 2020). Many women think that screening is not required if there are no symptoms or signs of cervical cancer, and they do not because they are unaware of the significance of screening in the early diagnosis and treatment of the illness. is an additional factor contributing to the low cervical cancer screening uptake (Black et al., 2019).

5.2 Sex and family planning

It was indicated by nine (2.3%) of the participants that having several sexual partners or having intercourse may raise one's risk of developing cervical cancer. This result aligns with a number of earlier research investigations that found a link between HPV and sexual activity and cervical cancer. There is a strong correlation between the impression of cervical cancer risk and having several sexual partners. WHO (2014) states that HPV is the primary cause of cervical cancer, an STD that mostly affects men and women who are sexually active. Nonetheless, only 23 participants (5.9%) in the current study were aware that sexual transmission could result in cervical cancer. This implies that a higher percentage of sexually active women may contract

HPV through intercourse without being aware of the infection's source. Every respondent engaged in sexual activity, and 18.8% of participants said that having several sexual partners could increase their risk of developing cervical cancer. This result aligns with a number of earlier research investigations that found a link between HPV and sexual activity and cervical cancer. There is a strong correlation between the impression of cervical cancer risk and having several sexual partners. The World Health Organization states that HPV, a sexually transmitted infection that mostly affects women who are sexually active, is the cause of cervical cancer (Getahun et al., 2013).

The results of this study are consistent with those of White et al. (2017), who contended that greater usage of family planning and cervical cancer services was the outcome of their integration of services. For instance, in Uganda, the uptake of implants and intrauterine devices (IUDs) among clients attending static clinics increased threefold after cervical cancer screening and preventive treatment were included in a program with a variety of contraceptive method options. This suggests that providing multiple services can have a synergistic effect (White et al., 2017).

Additionally, according to Donnelly et al. (2013), 77% of clients who took part in exit interviews stated that they had received additional services during their visit for a cervical cancer screening; the most often mentioned services were family planning counseling (CCS & PT) or long-acting reversible contraception (LARC).

More than 94,000 family planning services (IUDs, tubal ligations, and short-acting techniques) were provided in Uganda in 2015 by social franchising clinics. Of these individuals, the majority (54%) who were given any kind of contraception also had their cervical cancer checked. The majority of women who choose an IUD and who underwent screening for cervical cancer (73%),

used dual therapy (CCS and PT). According to White et al. (2017), these results demonstrate the advantages of integrated 36 her SRH service provision, which guarantees women have access to services that address all of their unique requirements. Craze et al. (2003) found that although the provision of cervical cancer screening in family planning clinics is beneficial to clients, family planning services are only available to a small number of women who are most at risk; argue that it is unlikely to affect the epidemiology of cervical cancer incidence. However, Claeys et al. (2003) suggested that measures to reach more older women could have a greater impact. The above results are consistent with the concession theory of Hweng et al. (2010) state that family planning laws are not safe for women and their implementation has led to many of the illnesses and diseases that women suffer from today. They say the reaction that hormones undergo is the catalyst for the recent rise in cervical, breast, and brain cancers.

5.3 Awareness of cervical cancer

The frequency of cervical cancer screening is in line with research by Abukadeer et al. (2015), which discovered that the majority of Xinjiang Uyghur Autonomous Region's childbearing women knew very little or nothing about the risk factors for cervical cancer. Of the women, only 900 (18.0%) were aware of any one risk factor for cervical cancer.

This current finding is corroborated by another investigation. Obol et al. (2021) state that women, regardless of their background, cannot affect behavioral changes in others until they obtain the necessary training to enhance their acceptance, comprehension, and functional knowledge of routine cervical cancer screening. I discovered that I may not be able to give. This was confirmed by a study by Abamecha et al. Further support. (2019) found that intention to undergo cervical cancer screening was strongly and positively associated with knowledge about cervical cancer. Although knowledge is insufficient, it is important and essential for making

logical decisions, especially regarding health-related behaviors. Therefore, additional educational programs about cervical cancer should be provided to women in general to increase the uptake of preventive testing.

5.4 Facilitators and health-seeking behavior towards cervical cancer screening

Some of the respondents in this research have never had a cervical cancer screening, which suggests that they had a bad opinion of the procedure. These findings demonstrate that even non-screeners comprehend the value of screening, and if other non-screeners understood the significance of cervical cancer screening as well, they would be more likely to This implies that females might start having medical exams. Your attitude about it will be positive. According to the majority of study participants, cervical cancer screening is vital, and early detection and diagnosis can consequently result in positive outcomes. This study supports the need of cervical cancer screening. This aligns with certain research findings that indicate favorable perspectives toward (Mukama et al., 2017).

The scientists also discovered that participants with greater levels of education were more likely to be excited and have good thoughts about cervical cancer screening in a study including 1,137 women between the ages of 30 and 49. In 2019 (Heena et al.)). This study's findings run counter to Heena et al.'s (2019) investigation, which indicated that the majority of participants had unfavorable opinions on cervical cancer screening. Tilahun et al. (2019) discovered that just 44.1% of research participants had a positive impression about cervical cancer screening, which is in contrast to the findings of the most recent study. According to Ghosh et al. (2021), older women are 11.7 times more likely than younger women to have a positive attitude about cervical cancer screening, with 286 respondents (46.7%) favoring the procedure compared to 326

(53.3%). Additionally, it was discovered that over 90% of the women who took part in the study had a favorable attitude toward cervical cancer screening as a preventive measure.

According to the survey's results, 30.4% of the women said that getting vaccinated was something they did "to maintain health." As a result, it is anticipated that the city's cervical cancer screening rate would rise. In spite of this, the Takoradi metropolitan region has a poor cervical cancer screening prevalence. This finding aligns with a different study conducted by Ghosh et al. (2021), which found that healthcare professionals' knowledge and information from their practice have a significant impact on the frequency of service consumption.

In contrast, 89.6% of nurses and midwives in a research by Swapnajaswanth et al. (2014) stated that they did not engage in their CCS but that they had positive sentiments toward the screening process. Numerous studies found that participants' opinions concerning CCS were positive since they understood the seriousness of the condition and the potential benefits of early identification and treatment. In 2017—Mukama et al. According to Natterbo (2018), women have a duty to educate themselves about their CC and that most men are unaware that they may be carriers of the HPV virus. declared. A Korean qualitative study examining men's understanding of CC found that the men in the study were given incorrect information when the topic of intercourse came up and were indifferent to their wives' health (Black et al., 2019). This proves that men place less importance on the reproductive health of their spouses and other female colleagues.

5.5 Barriers to Cervical Cancer Screening

Several factors can prevent women from taking appropriate health-seeking actions. The majority of respondents, 348 (89.4%), reported that their last vaginal exam was uncomfortable. Factors that inhibited participation included a painful screening experience and embarrassment during genital examination. In a previous study, Waller et al. (2009) found that barriers to cervical

cancer screening include fear of pain, embarrassment, not knowing the results of the screening, difficulty in making an appointment, and lack of sexual activity, and screening. Insufficient self-assurance, etc. Women's pap smear screening behavior was impacted by limited access to health care, which included extended travel times and a lack of screening facilities.

According to Sudenga et al. (2013), one major barrier preventing women from participating in cervical cancer screening is a lack of awareness. Similar findings have been observed in earlier research. Additionally, because Pap smear tests are not covered by the National Health Insurance System (NHIS), 2.7% of respondents to the research said they could not afford the cost of the test. According to this study, the most obstacles to getting a pap smear test in Elmina were institutional and individual issues. At the communal level, these obstacles may have an impact on women's health-seeking behaviors. There is proof that a major obstacle in low- and middle-income sub-Saharan African nations may be a lack of community-level knowledge on cervical cancer screening. Women might not know where to find assistance for testing.

Respondents' ignorance of screening locations and the significance of Pap testing was one of the personal barriers found. Numerous research have shown that poor nations have inadequate awareness of cervical cancer screening.

CHAPTER SIX

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

The study concludes that the majority of the respondents were sexually active. Most of them had sex when they were 16 years and above. The majority of the respondents have a single sexual partner. More than half of the respondents use family planning and the major family planning used is the condom.

All respondents were aware of cervical cancer but only 64% were aware of the availability of a vaccine. The majority of the nurses had information from their health practitioners and lecturers. None of the respondents, however, had been vaccinated against cervical cancer. The study concludes that the majority of the respondents were ready to vaccinate against cervical cancer. The majority of the respondents were motivated to undergo screening and vaccination because it helped maintain good health was important to them. There was an observed strong statistical association between the work duration and willingness to accept the vaccine for the disease among the respondents.

A major factor that prevented the women from receiving the vaccine was the cost involved. Another group of respondents believed that undergoing screening when one has cancer won't help. A major health facility problem had to do with the vaccines being out of stock so the health workers gave me another date which is not in line with my schedule.

The study concludes that the majority of the respondents were confident of receiving the vaccine if it was given free of charge.

6.2 Recommendations

As a result of the research conducted on the knowledge and uptake of cervical cancer vaccines among Community Health Nurses in Takoradi, several important findings have been highlighted. Based on these findings, the under-listed recommendations are proposed to effect policy change.

1. Regular, full training and education for Community Health Nurses on cervical cancer risk factors as well as the importance of vaccination against HPV should be developed and implemented by Ghana Health Services. The most recent guidance on screening, prevention strategies, and the administration of vaccines should also be covered by these programs. It will make community health nurses more capable of providing their community with accurate and reliable information through the empowerment of health nurses who are up to date.
2. The Ministry of Health should input cervical screening into family planning services for free or at a very reduced cost and make it a policy under the National Health Insurance scheme.
3. To increase the uptake of cervical cancer vaccines among Community Health Nurses, Ghana Health Services should ensure that vaccination services are easily accessible and available at healthcare facilities across the country. Furthermore, consideration should be given to providing free or subsidized HPV vaccination for community health nurses to remove financial barriers and incentivize uptake.
4. The National Community Health Nurses' Association should facilitate the dissemination of information, and training programs, enhancing the impact of vaccination campaigns,

and also cutting off costs on both screening and vaccination for their members just as the National Midwives' Association (NAM) did for their members.

5. Future researchers should adopt a qualitative study design to help gain in-depth knowledge of the behavioral practices of the respondents that mitigate good uptake of the vaccine.

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APPENDIX I

**ENSIGN GLOBAL
COLLEGE**

OUR REF: ENSIGN/IRB/EL/SN-236
YOUR REF:

May 19, 2023.

INSTITUTIONAL REVIEW BOARD SECRETARIAT

Mavis Twumwaa Appiah
Ensign Global College
Kpong



Dear Mavis,

ETHICAL CLEARANCE TO UNDERTAKE POSTGRADUATE RESEARCH

At the General Research Proposals Review Meeting of the *INSTITUTIONAL REVIEW BOARD (IRB)* of Ensign Global College held on Friday, May 5, 2023, your research proposal entitled **"Knowledge and Uptake of Cervical Cancer Vaccine Among Community Health Workers in Takoradi, in the Western Region of Ghana"** was considered.

You have been granted Ethical Clearance to collect data for the said research under academic supervision within the IRB's specified frameworks and guidelines.

We wish you all the best.

Sincerely

Dr. (Mrs.) Rebecca Acquah-Arhin
IRB Chairperson

Allen Appiah

HR - Kinch put a lots of info direction on this to our faculty

APPENDIX II

In case of any reply the number
And date of this letter should be
quoted

OUR CORE VALUES

- Teamwork
- Professionalism
- Innovation
- Integrity
- Client centeredness
- Discipline



METRO HEALTH DIRECTORATE
SEKONDI-TAKORADI METROPOLIS
POST OFFICE BOX 187
SEKONDI

TEL NO: 0557241630

22nd May, 2023

Our Ref: **GHS/WR/MHD/GEN/43/05/23**

Your Ref:

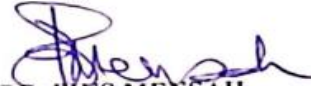
TO ALL FACILITY IN-CHARGES

LETTER OF INTRODUCTION

The bearer of this letter, Miss MAVIS TWUMWAA APPIAH is a student of **ENSIGN GLOBAL COLLEGE**. She is conducting research with the title "Knowledge and uptake of Cervical Cancer Vaccine Among Community Health Workers in Takoradi, Western Region". Kindly offer her the necessary assistance to enable her collect data in your facility.

Kindly find attached the ethical clearance for the study

Thank you.


DR. PIUS MENSAH
METRO DIR. OF HEALTH SERVICE

CONSENT FORM

KNOWLEDGE AND UPTAKE ON CERVICAL CANCER VACCINES AMONG COMMUNITY HEALTH WORKERS IN TAKORADI.

INTRODUCTION AND INFORMED CONSENT FORM TO PARTICIPANTS

Hello Madam,

I am a student at Ensign Global College, Kpong. I am researching the knowledge and uptake of cervical cancer vaccines among community health workers in Takoradi, in the Western Region.

This is academic work that could be used to formulate a policy. I would very much appreciate it if you could spare some time to answer this questionnaire.

Confidentiality

This information you're about to share will not be disclosed to anyone outside this research team.

Your name will not be written, but a number will be assigned to your questionnaire. All information from this research will be kept private and under lock and key.

Risks

This survey might require you to give very personal details about your sexual experiences or practices. You might feel a bit awkward about some of the questions I'll ask but bear in mind you.

don't have to answer any question if you don't want to. You should also bear in mind you don't have to explain if you refuse to partake in this survey and you don't have to explain why you don't want to answer any questions, you're uncomfortable with.

Benefits

You will not be given anything to motivate you to partake in this survey. However, your

participation might assist us in finding out more about the facilitators and barriers to the uptake of cervical cancer and to find ways and means to educate people to make informed decisions and reduce mortalities of cervical cancer.

Duration

Due to the detailed nature of the questions I'm about to ask you, this interview might take 15 to 25 minutes to complete. It will involve some questions about your knowledge and the uptake of cervical cancer as well as HPV vaccines. It is not compulsory to partake in this survey and you're not obliged to answer any or all the questions.

Do you have any questions to ask about the interview? YES _____ NO _____

Do you want to take part in it? YES _____ NO _____

ANSWER ANY QUESTIONS AND ADDRESS THE RESPONDENT'S CONCERNS.

RESPONDENT AGREES TO BE INTERVIEWED

----- BEGIN

RESPONDENT DOES NOT AGREE TO BE INTERVIEWED

----- END

Name of Interviewer _____

Date: _____

RESPONDENT'S SIGNATURE: _____

QUESTIONNAIRE

A: Demographic characteristics (please tick)

1. Age: Below 18-20() 21 – 30 () 31 – 40() Above 41 ()
2. Marital status: Single () Married () Cohabiting ()
Separated/Widowed/Divorced ()
3. Religion: Christian () Moslem () Others ()
4. Highest Level of Education: Certificate [] Diploma [] 1st Degree [] 2nd Degree []
5. Year of work: Less than 1yr () 2-5yrs () 6-10yrs () >10yrs ()
6. Income: Less than 1000gh () 1000 - 500 gh () Above 5000 gh ()

B: Reproductive health characteristics

7. Have you ever had sexual intercourse?
Yes () No ()
8. At what age did you have your first sexual intercourse?
Below 16 ()
16 and above ()
9. Your current number of sexual partners
One () Multiple ()
10. Do you use family planning?
Yes () No ()
11. If YES to number 10, what family planning methods do you use?
Condom ()
Contraceptive pill ()
Intrauterine device ()

Injection ()

12. Are you aware of cervical cancer?

Yes () No ()

13. What are the modes of transmission?

- a) Skin-to-skin
- b) Coughing and sneezing
- c) Sexual contact
- d) Mosquito bites
- e) Don't know

14. Are you aware of vaccination for cervical cancer?

Yes () No ()

15. Where did you get the information from?

Health practitioner ()

Media ()

Friend ()

Family ()

Lecturer ()

16. Have you been vaccinated against Cervical cancer?

Yes () No ()

17. Do you ever fear getting the virus?

Yes () No ()

18. Are you willing to Vaccinate for cervical cancer?

Yes () No ()

C: Facilitators of cervical cancer vaccination

What motivated you to vaccinate for cervical cancer?

		Please tick
19.	I need to discover my health problems early	
20.	Maintaining good health is important to me	
21.	Having regular cervical cancer screening test will help find changes to the cervix before they turn into a cancer	
22.	Having vaccination will decrease the chances of dying of cervical cancer	
23.	I have access to free vaccination screening services	
24.	I can afford the cervical cancer vaccination	
25.	I got advise from my friend, family, or physician	
26.	I have adequate knowledge about cervical cancer	
27.	I feel that the available cervical cancer screening services are gender sensitive	

D: Barriers to cervical cancer vaccination among the participants

	Individual factors	Please tick
28.	I hate vaccination	
29.	I don't know where to go for screening	
30.	I don't have the money to test	
31.	I am at a low risk of getting cervical cancer	
32.	I think it will be painful	
33.	It's for married couple	
34.	If there is cancer, vaccination will not stop it	
35.	I use condoms so I think am protected	
36.	My sexual partner doesn't want me to be vaccinated for cervical cancer	
	Health facility-related factors	Please tick
37.	Health professionals who do the cervical cancer vaccination test are very rude to women	
38.	There are long waiting hours at cervical cancer centers	
39.	I fear that I may get hospital-acquired infection during cervical cancer vaccination	
40.	It is difficult to get an appointment for cervical cancer vaccination at the hospital	
41.	Sometimes the health professionals who offer the services are busy with other activities	
42.	Sometimes the vaccines are out of stock so the health workers give me another date which is not in line with my schedule	

43. How confident are you that you will go for the vaccine if it is available?

- a) Will not
 - b) Slightly sure
 - c) Not sure
 - d) Very sure
-