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AWARENESS OF CERVICAL CANCER SCREENING AMONG NURSES IN THE

KORLE BU TEACHING HOSPITAL

BY

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DECLARATION

I declare that with the exception of references cited to other people's work which have been duly acknowledged, this work is as a result of my own research. This has not been submitted neither in part nor whole anywhere else for any degree.

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DEDICATION

I dedicate this work to my Parents, Mr. Eleazer Kofi Annoh-Mensah and Miss Edna Akogoram and my siblings who have been my source of encouragement and support throughout this program.



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ABSTRACT

Introduction: Cancer has been described to be a disease in which cells in the body grow so much the body can no longer control them. Cervical cancer is a disease that affects the cervix in the female reproductive system. It has been said to be the second cause of female cancers worldwide. It accounts for over 275,000 female deaths and about 529,000 new diagnoses each year. There is a reduction in the occurrence of cervical cancer in developed countries because of constant screening but not in developing because screening is not done regularly. In order to reduce the rate at which cervical cancer occurs in women, there is the need to create awareness of cervical cancer screening among women. Some of the methods of screening is the Pap smear and the Visual inspection with acetic acid. The one commonly used in Ghana is the Pap smear. This study seeks to assess the awareness, knowledge and practices level of cervical cancer screening among nurses.

Methods: This was an exploratory qualitative study which employed in-depth interviews with nurses who have worked three to five years and above at the Korle Bu Teaching Hospital.

Results: Findings indicated that the awareness of cervical cancer screening was very high among female nurses at the Korle-Bu Teaching Hospital. Nurses are expected to be role models in all aspects of health service utilization. Findings showed that the extent of cervical cancer screening practice is very low among nurses even though the awareness was very high.

Conclusion: Even though health practitioners are expected to be role models in all aspects of health service utilization, the study showed that the magnitude of cervical cancer screening practice is very low among nurse health professionals.

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LIST OF ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
GHS	Ghana Health Service
HIV	Human Immunodeficiency Virus
HPV	Human Papilloma Virus
HPV- DNA	Human Papilloma Virus- Deoxyribonucleic Acid
IDI	In-Depth Interview
KBTH	Korle Bu Teaching Hospital
KNH	Kenyatta National Hospital
MTRH	Moi Teaching and Referral Hospital
PCR	Polymerase Chain Reaction
SSA	Sub Saharan Africa
VIA	Visual Inspection with Acetic Acid
WHO	World Health Organization



DEFINITION OF TERMS

Cervical Cancer Screening– The medical examination of women who do not present symptoms of cervical cancer, with the aim of detecting the disease at an early stage.

Uptake of Cervical Cancer – Opting to undergo cervical cancer screening.

Cervical Cancer- Cervical cancer is a disease that affects the cervix in the female reproductive system. The cervix is the lower part of the uterus that connects the vagina to the uterus.



CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Cancer is a disease in which cells in the body grow so much and the body can no longer control them (WHO, 2015). Cervical Cancer is the second most common cancer among females worldwide (Ferlay, Shin et al., 2008). It accounts for over 275,000 female deaths and about 529,000 new diagnoses each year (Jemal et al., 2011). Persistent infection with high risk of Human Papilloma Virus (HPV) causes about 99.7% of cervical cancer (WHO 2012). Cervical Cancer progresses slowly and hence considered as one of the most preventable cancers. There are effective treatments if detected early through screening (Balogun et al., 2012).

Cervical cancer screening is testing for the onset of cancer and cancer itself among women who have no symptoms and may feel perfectly healthy (WHO Fact Sheet, 2015). Screening helps in noticing the disease at an early stage so that the right intervention will be taken in to consideration at the appropriate time. Several screening methods have been used to fight the spread of HPV. Some of these methods are the Papanicolaou's Smear (Pap Smear), Visual Inspection with Acetic Acid (VIA) and HPV-DNA using Polymerase Chain Reactions (WHO, 2009). The PCR includes the use of HPV- DNA in the screening of HPV and cervical cancers, this method has good sensitivity (WHO, 2009). However the Pap smear method is the most commonly used in Ghana. (Adanu, 2002).

Over the last thirty years there has been a major reduction in cervical cancer rates in the developed world because of continuous screening programs, however, rates of the developing countries either remain unchanged or increased (Guner and Taskiran, 2007; Forouzanfar et al., 2011). Of all gynecological cancers, cervical cancers make up for about 57.8% in Ghana. Health workers play an important role in the education and delivery of

health services including cervical cancer screening (Akhigbe, et al., 2009). It is not surprising that one of the strongest motivations for women to have their screening comes from health workers (Obeidat, Amarin and Azaghah, 2011). There is therefore the need for nurses to be knowledgeable in cervical cancer screening and also have their screening done. Several studies (Nakalevu, 2009; Merchant, 2007) have been done on cervical cancer screening awareness among health workers but not too many works have been done on the uptake of screening among nurses. This study therefore seeks to assess the awareness of cervical cancer screening among female nurses at the Korle Bu Teaching Hospital to help in complementing knowledge, creating awareness and practice of cervical cancer screening among female nurses.

1.2 Problem Statement

Studies have shown that about 494,000 women develop cervical cancer worldwide and almost 49.5% (233,000) die from the disease with about 80% (376,000) in developing countries. In Taiwan it was shown that only 36% of 300 workers have ever had Pap Smear which is a form of cervical cancer screening (Thanappapasr, Chittitithaworn et al., 2010). In Western Africa, about 28,903 new cases of cervical cancer are recorded annually of which 26.4 per 100,000 population of women in the reproductive age (15 to 49years). Another Nigerian city showed only 3.1% of 162 female health workers had had a cervical cancer screening (Akhigbe et al., 2009)

In Ghana it is the second most common cancer among women aged 15 to 44 years. Every year 3,038 women are diagnosed with cervical cancer and 2,006 die from it in Ghana (Nkyekyer, 2000; WHO, 2010; Edwin, 2010; WHO 2012)

In the year 2013, the annual report from the Korle Bu Teaching hospital showed a total report of new cancer cases being 1,118 and out of the total cervical cancer showed up for 183 new cases which was 16.4% respectively.

The benefits of Pap smears availability and usage have been documented, resulting in lowering of mortality rates by up to 60 to 90% in some developed countries (Sankaranarayanan *et al.*, 2001; Wong *et al.*, 2009). There have been suggestions that unscreened women are at high risk of cervical cancer which has necessitated researchers to continue to investigate different reasons for non-screening among women (Ponten *et al.*, 1995; Oscarsson, 2008). Health care professionals are important predictors of the use of cervical cancer screening, and from various works done, it seems that even the health workers themselves in large numbers do not uptake the cervical cancer screening. Women with low levels of knowledge about cervical cancer and its prevention are unlikely to access screening services (Liao *et al.*, 2006; Abotchie and Shokar, 2009; Ertem, 2009; Hummeida *et al.*, 2009; Oche *et al.*, 2013; Dhodapkar *et al.*, 2014; Zahedi *et al.*, 2014). Hence this study seeks to find out why only a few percentage of nurses have their screening done when they are the ones supposed to encourage people to have theirs done. If it is a case of them not being aware and if so, as nurses what is the reason behind them not being aware of cervical cancer screening since they should in a way set themselves as an example for other females to follow. For example, only 18% of female health workers (who were aware of the Pap smear) had actually accessed it (Cyril *et al.*, 2009). This study will therefore investigate the current awareness of cervical cancer and cervical screening among female nurses at the Korle-Bu Teaching Hospital, Accra. It is hoped that data obtained from this study would form the basis for further interventions on cervical cancer prevention.

1.3 Objectives of the study

1.3.1 General objective

To investigate the awareness of cervical cancer screening among female nurses in Korle-Bu Teaching Hospital

1.3.2 Specific objectives

1. To explore the knowledge level of cervical cancer among female nurses in Korle-Bu Teaching Hospital
2. To identify the attitudes of nurses towards cervical cancer screening especially with the use of Pap smear
3. To examine barriers to cervical cancer screening uptake among female nurses in Korle-Bu Teaching Hospital

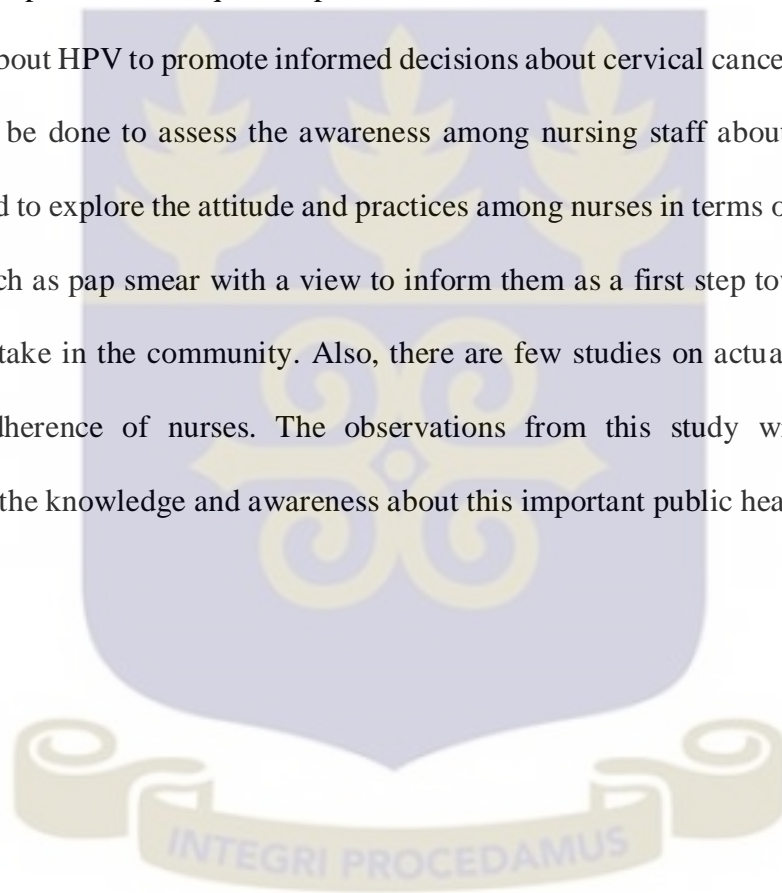
1.4 Research questions

1. What is the knowledge level of cervical cancer among female nurses at Korle-Bu Teaching Hospital?
2. Have nurses actually been screened for cervical cancer using the Pap smear?
3. What are the barriers to cervical cancer screening uptake among female nurses in Korle-Bu Teaching Hospital?

1.5 Justification of the Study

Nurses being an important link between the doctors and female patients in health facilities, it is important that they should be aware of the facts about cervical cancer and especially of screening techniques which can be utilized in low-resource settings. Also, some studies have

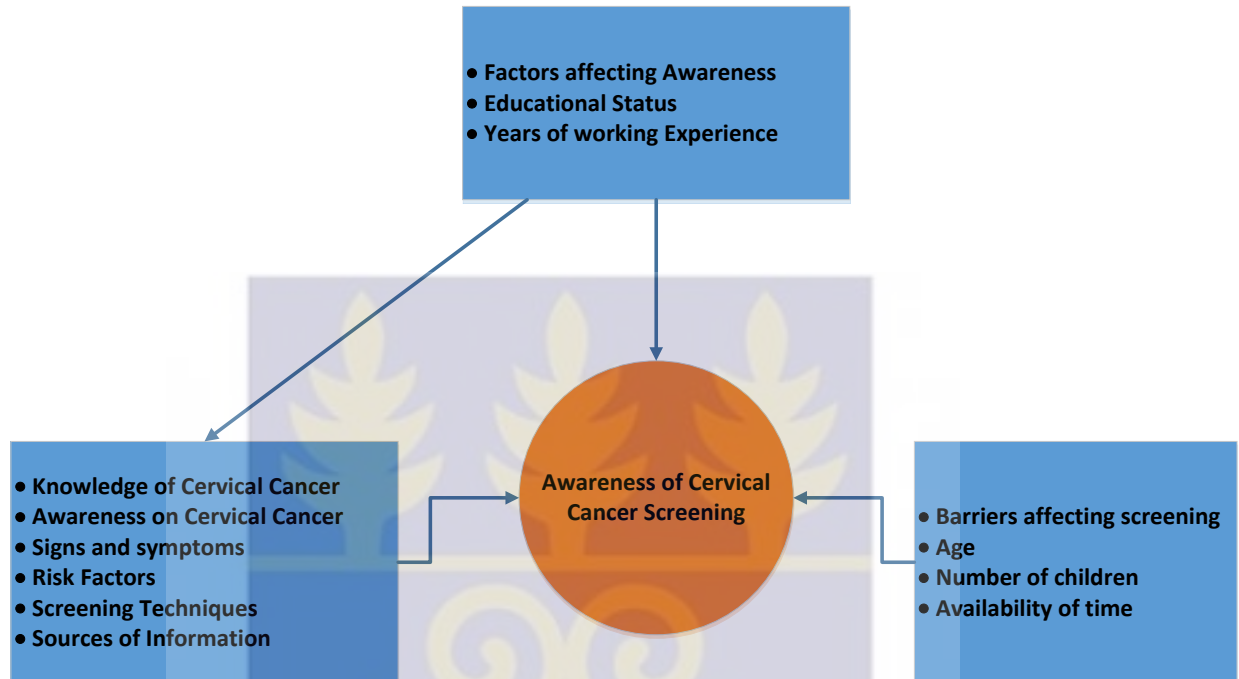
shown that recommendation of cervical cancer screening to females by medical professionals, including nurses, improves screening coverage among the general population (Leung *et al.*, 2010; Gu *et al.*, 2010; Ackerson *et al.*, 2010). Because nurses play an essential role in educating women in prevention of diseases and health promotion, they influence cervical cancer screening adherence and health activities among most women (Gu *et al.*, 2010; Turkistanli *et al.*, 2003). Therefore, knowledge among nurses, regarding cervical cancer and its prevention is quite important and nurses should have current and accurate knowledge about HPV to promote informed decisions about cervical cancer screening. This study would be done to assess the awareness among nursing staff about cervical cancer screening and to explore the attitude and practices among nurses in terms of cervical cancer screening such as pap smear with a view to inform them as a first step towards increasing screening uptake in the community. Also, there are few studies on actual cervical cancer screening adherence of nurses. The observations from this study will be useful to complement the knowledge and awareness about this important public health issue.



CONCEPTUAL FRAMEWORK

FACTORS AFFECTING AWARENESS OF CERVICAL CANCER SCREENING

Figure 1: Conceptual Framework



1.6 Conceptual Framework Narrative

Factors which could affect the awareness of cervical cancer screening are, knowledge on cervical cancer, signs and symptoms of cervical cancer, screening techniques, educational status, years of working experience, barriers such as age, number of children, availability of time, and number of children.

1.7 Knowledge on Cervical Cancer

To enhance the awareness of cervical cancer screening, nurses need to have, to some extent, some knowledge on cervical cancer and its methods of screening, they need to know the signs and symptoms which are associated with cervical cancer to make them informed and as to why it is important for them to have the cervical cancer screening done.

1.8 Factors Affecting Awareness

Nurses have different levels of qualification when it comes to the nursing profession. Some have a diplomat in nursing, others have first degree and also second degree and so it could be said that depending on the level of qualification of a nurse, she could either be aware of cervical cancer screening or not.

The number of years a nurse has worked expands the level of exposure the nurse would have. If a nurse has worked for more than five years, what she knows is likely to be a lot more than a person who has worked fewer years. Therefore, a nurse with much more experience might be more aware of cervical cancer screening than those who have not work for so long.

1.9 Barriers to Cervical Cancer Screening

Age. A nurse could be 50 years or more and might not think it important to have a cervical cancer screening done, hence would not engage herself in any education what so ever to make her aware of the cervical cancer screening and its method.

Number of Children. Increase in parity which is having five or more children could be a risk factor to cervical cancer. A nurse might think she has less than five children or maybe no child at all and so would not concern herself with the awareness of cervical cancer screening.

Availability of Time. Due to busy schedules that most nurses have at their work places, they practically have less or no time at all to do other things and so no time to want to know or be aware of the screening methods of cervical cancer.

CHAPTER TWO

LITERATURE REVIEW

2.1 General overview of cervical cancer

Cancer is a leading cause of death worldwide and accounted for 8.2 million deaths in 2012. More than half of all cancers (56.8%) and cancer deaths (64.9%) occurred in low and middle income countries. Projections based on the GLOBOCAN 2012 estimates predict a substantive increase to 19.3 million new cancer cases per year by 2025, due to growth and ageing of the global population (WHO 2013). More than 30% of cancer deaths can be prevented and with adequate investments in prevention control strategies, the morbidity and mortality rates attributable to cancers can be significantly reduced (WHO fact sheet, 2011). Cervical cancer is the second most common cancer among women worldwide and is the leading cause of cancer deaths in developing countries. In 2008, it was estimated that 529,409 new cases occurred globally, with 274,883 of the women (52%) dying. Of the total new cases each year, about 86% occur in developing countries, where unfortunately 80-90% of cervical cancer related deaths occur (GLOBOCAN 2008). With the peak age of cervical cancer being 35-45 years of age, it claims the lives of women in the prime of their life when they may be raising children, caring for the family, and contributing to the social and economic life of their community.

Cervical cancer is however easily detectable and curable in its early stages. Unfortunately, only 5% of women in developing countries undergo screening for cervical cancer compared to over 40% in developed countries, and 70% or higher in countries that have shown marked reduction in incidence and prevalence of cervical cancer. It is therefore not surprising that in Africa, where screening rates are very low the majority of women present at late stages with invasive and advanced disease. In sub-Saharan Africa (SSA) the magnitude of the problem has been under-recognized and under prioritized compared to competing health

priorities such as HIV& AIDS, tuberculosis and malaria. In sub-Saharan Africa, 34.8 new cases of cervical cancer are diagnosed per 100,000 women annually and 22.5% per 100,000 women die from the disease (WHO 2013). This is due to lack of epidemiological data and poor awareness, lack of human and financial resources, non-existent cancer service policies and lack of political will to address the complex problem (Denny *et al.* 2006; Parkin *et al.* 2008).

2.2 Epidemiology of Cervical Cancer

Cervical cancer is the second most common malignant neoplasm affecting women worldwide with about 86% in developing countries. Less than 50% of women affected by cervical cancer in developing countries survive longer than 5 years. In 2008, an estimated 529,409 new cases and 274,883 deaths from cervical cancer occurred globally. Cervical cancers account for 15% of female cancers in developing countries and about 3.6% in developed countries. Globally, the ratio of mortality to incidence is 55% with poor survival rate in developing countries and good survival rate in the developed countries (WHO, 2010). Cervical cancer is seen as an important cause of lost years because it affects young women. It is responsible for 2.7 million years of lost life worldwide (Parkin & Bray, 2006).

In Ghana, cervical cancer makes up about 57.8% of all gynecological cancers. It is the second most common cancer in women with an estimated incidence of 26.4 per 100,000. It is also the second most common cancer in women aged 15 to 44 years in Ghana. Every year, 3,038 women are diagnosed with cervical cancer and 2,006 die from it in Ghana (Edwin, 2010; Nkyekyer, 2000; WHO, 2010).

2.3 Burden of Cervical Cancer

Cervical cancer is a serious public health problem. Globally, every year around 500,000 women develop cervical cancer and almost 274,000 of them die from the disease (WHO, PATH, and the United Nations Population Fund, 2009). It is the second most common type of cancer in women worldwide and is responsible for deaths of most middle-aged women in developing countries. In India for instance, the incidence of cervical cancer per 100,000 Indian women of all ages varied between 30.0 and 44.9 (WHO, 2010). India bears about one fifth of the world's burden of cervical cancer (Shanta, 2003). More than 100,000 new cases are detected in India per year and the disease causes almost 20 percent of all female deaths in India (Shanta, 2003). About 75-80% of the cases are reported in advanced stage (India National Cancer Registry Programme, 2006). Cervical cancer is most common in women in under-developed and developing countries which bear more than 80% (WHO, 2010) of the global burden of the disease. This reflects the lack of effective control and detection measures in these countries. Cervical cancer is the most common female malignancy in sub-Saharan Africa. The incidence of cervical cancer in sub-Saharan Africa is among the highest worldwide, with the available age-standardized rates ranging from 19.9 per 100,000 in Ibadan, Nigeria, through 35.7 per 100,000 in Bamako, Mali, to 41.7 per 100,000 in Kyadondo, Uganda.

The prevalence of cervical Human Papilloma Virus (HPV) infection varies greatly worldwide. Population-based HPV prevalence surveys have shown a 13-fold variation in sexually-active women aged 15–65 years, ranging from 2.0% in Hanoi, North Vietnam, 3.0% in Barcelona, Spain, 14.8% in Bogota, Columbia, through 17.7% in Concordia, Argentina, to the highest of 26.3% in Ibadan, Nigeria.

In Ghana, West Africa Cervical cancer is the leading cause of cancer death among women (Wiredu et al, 2006). The cervical cancer incidence (3,038) and mortality rates (2,006) in Ghana are among the highest in the world (WHO/ICO, 2007). These rates have been rapidly increasing in contrast to the decreasing cervical cancer incidence and mortality rates in developed countries (Murthy et al, 2010).

The World Health Organization (WHO) predicts that by the year 2025, 5,000 new cases of cervical cancer and 3,361 cervical cancer deaths will occur annually in Ghana (WHO/ICO, 2007). However, cervical cancer is highly preventable with the use cervical cancer screening tools. When cervical cancer is found in early stages, it can easily be treated. Treating advanced cervical cancer is however very challenging. Although there is no formal cancer registry in Ghana, the International Agency for Research on Cancer has estimated that in 2008, 3,038 Ghanaian women developed cervical cancer and more than 2,006 Ghanaian woman died because of cervical cancer. Despite these staggering statistics, cervical cancer prevention is not rigorously promoted in Ghana. Diseases such as malaria, tuberculosis, HIV/AIDS, and most recently breast cancer receive the majority of health promotion resources. The Pap smear test and visual inspection of the cervix with acetic acid (VIA) are the cervical cancer screening tools that are available in public and private hospitals throughout the country. Some public hospitals offer free cervical cancer screenings. In the past, non-governmental organizations have conducted organized cervical cancer screening events in rural areas (Affriyie, 2004).

Additionally, cervarix and gardasil, HPV vaccine has been licensed for use in Ghana and HPV DNA testing is available in few large public hospitals. However, data from the World Health Survey indicate that cervical cancer screening rates in urban and rural areas in Ghana are extremely low (3.2% and 2.2% respectively). The results of previous studies indicate

that lack of knowledge about cervical cancer among Ghanaian women may be a barrier to cervical cancer screening (Blumenthal *et al.*, 2008).

2.4 Signs and symptoms of cervical cancer

In the early stages of cervical cancer, there are rarely any signs or symptoms but it can be diagnosed in this stage by routine screening. As cervical cancer progresses into more advanced stages, symptoms begin to appear. Some of the symptoms include: pelvic pain, pain during sexual intercourse, abnormal vaginal bleeding, and vaginal discharge. The fact that cervical cancer is asymptomatic in the early stages can partly explain why most patients have advanced disease at the time of diagnosis especially in countries where the screening services are rare. The other problem is that the symptoms of cervical cancer mimic infections like vaginitis and pelvic inflammatory disease. It is thus common to find a woman with cervical cancer receiving treatment for pelvic inflammatory disease in the hands of general practitioners. Some patients then buy over the counter medicines in an attempt to manage “menstrual problems”, without going for a proper check up (Gillet *et al.*, 2012). All these factors coupled with poverty, ignorance and lack of nearby services impact on cervical cancer prevention and management.

2.5 Risk Factors of cervical cancer

i. Human Papillomavirus: The most important risk factor for cervical cancer is infection by the human Papillomavirus (HPV). The sub types most frequently associated with cervical cancer are HPV 16 and 18. Human Papillomavirus is a sexually transmitted infection (WHO fact sheet no.380, 2013).

ii. Poverty: Women who are poor may not have access to medical services that detect and treat precancerous cervical conditions. When such women develop cervical cancer, the disease usually remains undiagnosed and untreated until it has spread to other parts of the body. Women who are poor are often undernourished, and poor nutrition is thought to increase cervical cancer risk (Abdulahi *et al.*, 2009).

iii. Tobacco use: Women who smoke are about twice as likely to develop cervical cancer as women who do not. The more a woman smokes - and the longer she has been smoking - the greater the risk (WHO fact sheet no.297, 2011)

iv. Number of sexual partners: The more the number of sexual partners the higher the risk of infection with HPV.

v. Family history of cervical cancer: Cervical cancer may run in some families. If a woman's mother or sister has or had cervical cancer, then one's chance of developing the disease is 2 to 3 times higher than if no one in the family had it.

vi. Eating habits: A diet that doesn't include ample amounts of fruits and vegetables can increase a woman's risk of developing cervical cancer.

vii. Weakened immune system: A woman whose immune system is weakened has a higher than average risk of developing cervical lesions that can become cancerous. This includes women who are HIV-positive. Human immunodeficiency virus (HIV), the virus that causes AIDS, damages the body's immune system and places women at higher risk for HPV infections. This may explain the increased risk of cervical cancer for women with AIDS. It also includes women who have received organ transplants and must take drugs to suppress the immune system so that the body will not reject the new organ (Grulich *et al.*, 2007).

viii. Hormonal medications: Some experts suggest that hormones in oral contraceptives (birth control pills) make women more susceptible to Human Papillomavirus (Moreno *et al*, 2002)

2.6 Common complications of cervical cancer

i. Infertility

Women who have advanced or invasive cervical cancer have a high risk of becoming infertile. Infertility is a cervical cancer complication characterized by the inability to become pregnant. One of the most common treatments for cervical cancer is hysterectomy-a surgical technique involving the removal of cervix and uterus thus these women are unable to bear children

ii. Treatment Side Effects

Cervical cancer treatments, such as chemotherapy, radiation and surgical procedures, can cause side effects in women. Chemotherapy and radiation can lead to adverse side effects that include skin irritation, vaginal dryness, nausea, vomiting, diarrhea, hair loss, recurrent infections or severe fatigue. Surgical or radiotherapy cancer treatment options can lead to complications involving bowel or bladder function. These cervical cancer complications of treatment can be uncomfortable and may have a significant impact on a woman's daily life and activities.

2.7 Methods of screening for cervical cancer

Cytology or Papinicolaou

Cytology or “Pap” smear is the most effective and common screening method. Cervical cytology consists of spreading and staining a smear of collected cervical cells and analyzing them under the microscope to detect lesions. The method enables professionals to accurately

detect and stage high grade lesions. This approach can contribute to early detection, thereby decreasing the incidence of advanced cervical cancer and associated mortality. However, PAP smears are challenging to perform in developing countries because the process requires trained personnel and certified laboratories that are often unavailable (Maine *et al.*, 2011).

Human Papilloma Virus - Deoxyribonucleic Acid (HPV- DNA) and care HPV

A common cause of cervical cancer is HPV. HPV- DNA approach is a newer option for cervical cancer screening. The HPV-DNA testing consists of screening for high-risk strains of HPV. In some studies, HPV testing has been shown to reduce mortality in high grade lesions in advanced invasive cervical cancer and even in women with human immunodeficiency (HIV) (Louie *et al.*, 2009). The HPV-DNA test has shown promising results with high sensitivity and specificity to detect high grade lesions, and therefore is used as a primary screening test in women aged 30 years or older. Samples can be either self-collected or provider collected. However, there are some limitations: the test is expensive, requires a laboratory, and the time needed to process the test is at least 7 hours. Although suitable for low resource settings, it requires a sophisticated laboratory to read the samples. Unfortunately, most developing countries do not have reliable laboratory facilities (Maine *et al.*, 2011).

In India, studies indicated that HPV testing reduced cervical cancer incidence and mortality rate up to 50%. The testing is done either with cervical or vaginal samples collected with a brush by a trained provider in the case of cervical screening or by the woman herself in the case of the vaginal sample. The sensitivity of HPV-DNA testing ranged from 66% to 95% for all women tested, but most studies indicated a sensitivity of 85% among women 30 years old or greater (Sherris *et al.*, 2009).

The alternative to HPV-DNA testing in low-resource setting countries is *care HPV*. This moderated HPV test was developed by Qiagen Gaithersburg Incorporated Laboratories in collaboration with the Bill and Melinda Gates Foundation and the Non-Government Organization PATH for those in developing countries. The test is simple and rapid; the results can be produced within 2 and half hours or less. A portable compact unit with a battery is operated by workers with minimal laboratory training. The test does not require a refrigerator, electricity, or running water. In the case of care HPV testing, HPV infection is detected with cervical or vaginal swabs and the woman can collect the sample herself. The method was tried in China for the first time and it showed reasonably promising results for the future (Louie *et al.*, 2009; Wright & Kuhn, 2011). The sensitivity of care HPV testing in China was 90% compared to Visual Inspection with Acetic Acid (VIA) and Pap smear at 41% and 85% respectively (Qiagen group, 2009). Unlike Care HPV, the HPV-DNA test is more costly, requires more technology and time to process. Costs of testing vary by country; for example, for HPV-DNA, the price ranges from \$ 26-29 per person in India to \$ 82 per person in South Africa (Goldie *et al.*, 2005).

Visual Inspection with Acetic Acid (VIA)

Visual Inspection with Acetic Acid screening is the simplest method of screening with the lowest cost and relative ease of use. The approach does not require high technology and has been demonstrated to reduce the deaths of women in developing countries (Wright & Kuhn, 2012). During VIA, 5% acetic acid or vinegar is applied to the cervical mucosa. Normal tissue is unaffected by vinegar wash, but abnormal cells including dysplastic and cancerous cells turn white. The screening method allows the practitioner to diagnose and treat abnormal cells almost immediately in a health center, typically using cryotherapy which is the application of liquid nitrogen or carbon nitrogen to the dysplastic area. The process is also inexpensive; in a Chinese study, the cost for VIA was estimated at \$2.64 per test (Shi

et al., 2012). According to a review of studies done in India comparing cytology, HPV, and VIA testing, VIA had the highest level of sensitivity ranging from 50%-96%. HPV-DNA was second with sensitivity of 61% - 90%, and cytology had a lower sensitivity of 31% - 78%. High sensitivity can result in false positives with subsequent unnecessary treatment. However, cryotherapy commonly used after VIA or VILI testing is a safe procedure with low incidence of tolerable side effects. However, cytology had the highest specificity at 91% -99%. The specificity for VIA and HPV- DNA testing were 44%-97% and 62%-94% respectively (Maine *et al.*, 2011).

Vaccination - Cervical Cancer Prevention Method

Studies indicate that preventive strategies to reduce cervical cancer incidence should focus on preventing risk factors. Another more recent preventive approach involves immunization. Women often become infected by HPV shortly after becoming sexually active. Eighty-seven percent of cases of cervical cancer are caused by 7 types of the 40 HPV genotypes that infect the vaginal tract. However, 2 types, HPV 16 and HPV 18, are responsible for 70 percent of all cases (Maine *et al.*, 2011). Human papillomavirus (HPV), the acquired causative agent of most cervical cancer, is preventable by prophylactic vaccines (Louie *et al.*, 2009). The HPV vaccine has been available since 2006 and can prevent 70% of HPV-caused cervical cancers if the 3 dose vaccine series is completed. The series begins with one injection and is followed by a second 2 months later and a third at the end of 6 months. The available vaccines are Quadrivalent Gardasil which prevents HPV 6, 11, 16, and 18; Bivalent Cervarix prevents only HPV 16 and 18. The prophylactic HPV vaccine offers a new promise for primary prevention of cervical cancer. However, the HPV vaccine does not replace cervical screening. Immunization can be ineffective due to missing follow-up doses and cost (Louie *et al.*, 2009). It is clear that education and resources are key components to all cervical cancer screening and prevention programs.

2.8 Knowledge and perceptions about cervical cancer and screening

Several qualitative studies have also revealed that, women's perceptions and limited knowledge about the importance of cervical screening influence uptake of cervical cancer screening (Fylan, 1998; Neilson, 1998; Nicky *et al.*, 2005; Merchant, 2007; Nakalevu, 2009). Many Women do not have a clear understanding of the interpretation of the screening outcome results. Many believe that an abnormal screening result means that a woman already has cancer, so they have fear and distress in case they screen and end up with an abnormal result. These studies also showed that, cultural norms of secrecy that bar women from discussing issues of reproductive health has made women not gain knowledge about the importance of cervical cancer screening. Other reasons cited for non- attendance include reluctance to go for a test in the absence of symptoms, uncertainty as to whether the screening is appropriate for certain age-groups (post-menopausal women and young girls up to age of 20 years) (Nakalevu, 2009).

However, the results of a qualitative study conducted in Ireland by Riain (2001), showed that 45% of high risk women actually had knowledge about the purpose of Pap smear screening but they were less likely to attend a cervical screening voluntarily because of socio-economic related problems like low income and lack of social support. Apart from lack of knowledge, Mutyaba (2007) asserts that cultural and economic issues dictate the reluctance among men to participate in women's reproductive health issues in Uganda yet they remain the sole providers of resources that enable women to access health care. Mutyaba's study methodology had wide representation that could produce more convincing results, because the participants were a mixture of men, women and health workers.

2.9 Practices and Behaviours about cervical cancer screening

Institutional factors have also been shown by different studies to be influencing uptake of cervical cancer screening. According to International Agency for Research on Cancer Organisation (2003), uptake of screening is increased when the governments ensure that there is an organized screening program in place. Hakama *et al.* (2008), Wabinga *et al.* (2000) and Mutyaba *et al.* (2007), showed that mortality due to cervical cancer reduced drastically in developed countries which had sustained organized screening program that were equipped with infrastructure, trained human resource, organized follow up and surveillance systems. A review of five qualitative studies that were conducted in Mexico, Peru and Ecuador showed that the main barriers to increasing uptake of cervical cancer included inaccessible and unavailability of high-quality health services, the lack of comfort and privacy in facilities, and unfriendly health workers (ACCP, 2004).

However, though various authors agree that a screening program is crucial in improving uptake, they strongly argue that other factors like knowledge, attitude of both women and health workers, socioeconomic, cultural beliefs and other supporting institutional factors like sufficient and trained staff supersedes just the availability of an organized screening program (PATH, 2000; Engender Health, 2002; Birmingham, 2003; Nakalevu, 2009). A study conducted in Netherlands showed that women's beliefs about cervical cancer screening and attendance are the best predictors of uptake of the service, even when organizational aspects are taken into account (Nastasi, cited in Nakalevu, 2009). In countries like Chile, Colombia, Costa Rica, Cuba and Mexico, which have organized screening programs in place, mortality due to cervical cancer has remained the same or even increased. The reasons for this were reported to be other underlying factors such as inadequate infrastructure, insufficient human resource and lack of education among the masses. These

countries have had to go back on the drawing board to address some of those challenges (Engender Health, 2002).

While the same factors have been considered in almost all of the cervical cancer screening uptake studies, findings have been contradictory in some cases. For example, ACCP (2004) and Bradly *et al.* (2004) found that socio economic factors were important variables that positively and negatively influence a woman's decision to participate in screening in India and South Africa. Mutyaba *et al.* (2006; 2007) on the other hand, found that a combination of economic and male partner influences, knowledge, cultural beliefs and health service factors interacted with presence of an organized screening program in influencing a woman's decision to participate in cervical cancer screening in Uganda. Nakalevu (2009) found that culture does not matter as long as women have knowledge about the importance of screening, fears and perceptions addressed then they are likely to participate in cervical cancer screening in Fiji. International Agency for Research on cancer Organisation (2003), found that uptake of screening is ensured when there is an organized screening program in place yet in other studies (Riain, 2001; Engender Health, 2002), cervical cancer screening, incidence and mortality due to cervical cancer did not necessarily improve because of the availability of organized cervical cancer screening programs.

2.10 Factors related to cervical cancer screening uptake

Several factors influencing cervical cancer screening have been reported. They include; lack of awareness, age and inadequate access to healthcare facility due to poor infrastructure, unawareness among the health care providers in rural areas regarding importance of early diagnosis and treatment (Singh and Badaya, 2012). Other factors include; existence of alternative medicine, deficient economic and moral support from husband and family and

an inappropriate demand for providing cervical cancer screening from the potential beneficiaries (Basu and Chowdhury, 2009).

2.10.1 Demographic characteristics

Demographic characteristics include education, age, and marital status. With regards to education level, several studies have found that women with high screening rates have a high level of education (Liao *et al.*, 2006; Fernández *et al.*, 2009). However, women with high education may not necessarily seek screening (Abotchie and Shokar, 2009); thus, additional factors must be considered. Regarding Age Specific rates of screening are substantially lower in younger women aged 20-29 years and elderly women aged 60 years and above (Liao *et al.*, 2006; Cyril *et al.*, 2009). A study done in Kenya on risks and barriers to cervical cancer screening among 219 women attending MNCH-FP clinic at the Moi teaching and referral hospital (MTRH) found that only 12.3% of the participants had ever been screened. In this study, women over 30 years were more likely to have screened for cervical cancer than younger women (Were *et al.*, 2012). With regards to marital status studies have found that unmarried and widowed women are less likely than married women or women living with a partner to obtain screening (Liao *et al.*, 2006). In addition, some studies have found that single women are more likely than married women to have pap screening (Cyril *et al.*, 2009; Singh *et al.*, 1998).

2.10.2 Level of knowledge

Women's knowledge on cervical cancer and its risk factors has been listed as a key factor in influencing uptake of screening. Women with low levels of knowledge about cervical cancer and its prevention are unlikely to access screening services. A study by Lyimo & Beran, 2012 done in Moshi Tanzania looking at the most important factors related to the uptake of

screening among 354 women aged between 18 and 69 revealed that, more than half (59.6%) of the participants had a low level of knowledge of cervical cancer and its prevention. In this study only 80 (22.3%) women reported having been screened. The study also showed that those with the highest level of knowledge about cervical cancer and its prevention were more likely to be screened than those with low or medium level of knowledge (Lyimo and Beran, 2012). In another study in Ghana by Abotchie and Shokar among college students on knowledge and health beliefs on cervical cancer there were gaps in knowledge about risk factors and screening intervals. Human papillomavirus is the most important risk factor for developing cervical cancer according to the American cancer society yet only 7.9% of the participants in this study knew about HPV (Abotchie and Shokar, 2009).

In Kuwait, a study whose objective was to assess the knowledge, attitude and practice regarding cervical cancer screening found out that of the 300 married randomly selected women, only 30.6% and 23.6% had adequate attitude and practice towards the test respectively (Mona and Farida, 2009). The Kuwait study also revealed that the main reason for not having a Pap test was because it had not been suggested by the doctor. This shows that women have limited knowledge on the importance of the screening test.

In Bangladesh, a qualitative study on community perceptions of cervical cancer and cervical cancer screening among 220 men, women and children found out that awareness of cervical cancer was widespread among the community but knowledge on its causes was inadequate (Ansink *et al.*, 2008). Another study involving 356 women from Mutoko and Shurugwi district in Zimbabwe, (Mungoma *et al.*, 2007), found that 95.8% of the women interviewed had never gone for screening and had little knowledge about the various aspects of cervical cancer causes, prevention and treatment. Sensitization of women about available services is therefore necessary in low resource settings.

In Uganda, a study on influences on uptake of reproductive health services in Nsagi community and their implications for cervical cancer screening found ignorance about cervical cancer risk factors as one of the major barriers to screening uptake (Mutuyaba *et al.*, 2007). A study among 310 medical workers on knowledge, attitudes and practices on cervical cancer screening in Mulago Hospital, Uganda found that less than 40% of the respondents had knowledge of the risk factors for cervical cancer. In this study 81% of the respondents had never been screened for cervical cancer (Mutuyaba *et al.*, 2006).

In Kenya, a study done at the Kenyatta National Hospital (KNH) found that about half (51%) of the participants were aware of cervical cancer and only 32% knew about Pap smear testing. There were no significant differences in knowledge between cervical cancer and non-cancer patients. In this study only 22% of all the participants had ever been screened (Gichangi *et al.*, 2003). Women who have some awareness of cervical cancer are more likely to have screened for cervical cancer. For instance in a cross-sectional study done in Kenya among 384 female primary school teachers on awareness of cervical cancer risk factors and practice of Pap smear testing, 87% of them were aware about cervical cancer and 75% knew about the Pap smear test. It is important to note that only about 39% knew that HPV infection was a risk factor for cervical cancer and only 41% had been screened before (Ombech *et al.*, 2012).

Another study done in Thika among 498 women on factors affecting uptake of cervical cancer, lack of awareness of cervical cancer and the benefits of early detection measures were reported as critical barriers to screening. In this study, about 17.3% of the women had ever gone for cervical cancer screening (Ngugi *et al.*, 2012).

2.10.3 Socio-cultural factors

Several socio-cultural factors are associated with low uptake of cervical cancer screening services. They include myths/perceptions surrounding the disease and test, women's lack of autonomy and ability to make decisions, lack of social support and traditions/customs that are still practiced in the communities. For instance, men are considered to be the leaders of the family and since the women lack autonomy in terms of decision making then perhaps negative attitudes among the male partners, who may serve as key decision-makers, prevent women from seeking screening services (Singh *et al.*, 1998). The role of men may thus, be important in determining women's access to screening for cervical cancer.

Regarding myths, a qualitative study in Bangladesh on community perceptions of cervical cancer and cervical cancer screening found out that most women and men would not be willing to accept the Pap smear unless it was done by a female healthcare provider in an environment with sufficient privacy (Ansink *et al.*, 2008). Also, in a study of Somali women in Camden London, women developed a negative outlook on screening due to embarrassment associated with female genital mutilation (Abdullahi *et al.*, 2009). Other cultural barriers may lead to negative opinions about screening including concern about exposure of private body parts (Hummeida *et al.*, 2009). The gender of the health worker who performs the Pap smear test, therefore, may be important as women may prefer one who is female (Bener *et al.*, 2001). A study carried out in Nigeria among 846 women in Owerri, South -Eastern Nigeria established that 52.8% of the women had heard about cervical cancer and only 7.1% had ever done a Pap smear. In this study, 11.6% of the respondents reported fear of positive results as a reason for not taking the Pap smear test (Ezem, 2007). A study in Uganda also found that cultural constructs and beliefs about cervical cancer was among the major barriers for screening (Mutuyaba *et al.*, 2007).

2.10.4 Socio-economic factors

Studies have found that the clash of economic activities with clinic appointment times can lead to low uptake of cervical cancer screening. Poverty is also one of the factors associated with low uptake since the cost of screening has been found to be high. For instance a study in Camden London among ethnic Somali women found that the clash of clinic appointment time with market days and child care needs were associated with low uptake of screening (Abdulahi *et al.*, 2009).

In Kenya a study done in Eldoret at the Moi teaching and referral hospital found that 11.4% of the participants lacked the finances to pay for the test and they identified this as the reason they do not go for screening. The study was conducted among 219 women attending the MNCH-FP clinic at the hospital (Were *et al.*, 2012). A study by Ansink *et al* in Bangladesh also reported the high costs of screening services as one of the most common barriers to screening (Ansink *et al.*, 2008). Cost has also been mentioned as a key determinant to accessing services in Uganda (Mutuyaba *et al.*, 2007).

2.10.5 Accessibility

Long distances to the cervical cancer screening services point reduce the likelihood of women accessing screening (Jo *et al.*, 2009). A cross-sectional, community-based survey revealed that poor transportation is an additional problem (Bener *et al.*, 2001). In Bangladesh, a study on community perceptions of cervical cancer found that low priority for seeking help for symptoms and limited availability of health services were among the most common barriers to screening (Ansink *et al.*, 2008).

CHAPTER THREE

METHODS

3.1 Introduction

This chapter explains the methods and procedures used in the study. It consists of the study area, study design, study population, data collection technique and tools, data processing and analysis and ethical consideration.

3.2 Study Design

The study adopted a cross-sectional exploratory design. This was a qualitative study that made use of nonprobability sampling techniques, such as purposive to collect data. Purposive Sampling, also known as subjective sampling, is a type of nonprobability sampling technique used in qualitative study where the units of the study are based on the judgement of the researcher. This sampling technique aided in investigating awareness of cervical cancer screening among nurses in KBTH.

3.3 Study Site

The study was undertaken at the Korle Bu Teaching Hospital. The hospital is located in Korle Bu which is in the Accra Metropolis, the main occupation of its residents is fishing. The Teaching Hospital was established on the 9th of October, 1923 as a general hospital to take care of the health needs of the people in the community and surrounding areas. Korle Bu Hospital became a Teaching Hospital in the year 1962 when the University of Ghana Medical School was established to train medical doctors.

The Teaching Hospital by the year 2013 had 2,000 beds, 21 clinical and diagnostic Departments. There are over 4,000 medical and paramedical staff, its average patient attendance is 1,500 and about 250 of these patients are admitted daily for further health care

administration. The Hospital is made up of Directorates namely; Medical Affairs, Nursing, Pharmacy, Finance, Engineering, Administration and Human Resource. The Clinical and Diagnostic Department are Medicine, Child Health, Obstetrics and Gynecology, Pathology, Laboratories, Radiology, Polyclinic, Surgical and Medical Emergency, Pharmacy among others. The Teaching Hospital has three Centres of Excellence which draws people from neighboring countries such as Togo, Burkina Faso, and Nigeria among others. These centres are the Plastic Surgery and Burns Centre, the National Cardiothoracic Centre and the National Centre for Radiotherapy and Nuclear Medicine.

The structure of the hospital is based on the declaration of the Act 525 of 1996, the Hospital has been given the powers to operate as a semi-autonomous organization. The Management board is responsible for giving policy for the hospital administration to embark upon. The daily administration of the hospital is the duty of the chief Executive, who is assisted by seven Directors; Medical Affairs, Nursing Services, Finance, Administration, Human Resource, Pharmacy and General Services.

3.4 Study Participants

The population of the study included nurses who have worked for three to five years and above in the Korle Bu teaching hospital (Wright & Kuhn, 2012). Generally, it is assumed that nurses who have worked for three to five years and above in a hospital would be exposed to most happenings in the hospital. Therefore, nurses within these range of years might be aware of cervical cancer screening.

3.5 Sampling

Nursing staff of the Korle Bu teaching hospital were selected for the study. With this, the researcher was able to sample those who have worked for three to five years and above for the study. The researcher purposively identified and interviewed willing nurses.

Data was collected using IDIs till information being shared becomes repetitive and contains no new ideas. This point of closure is called the saturation of data (Mason 2010).

3.6 Inclusion and Exclusion criteria

3.6.1 Inclusion criteria

Inclusion criteria for respondent of the IDIs were female nurses who have worked for three to five years or more in the Korle Bu Teaching Hospital.

3.6.2 Exclusion criteria

The exclusion criteria for the IDIs were male nurses and female nurses who have not worked for three to five years or more in the Korle Bu Teaching Hospital. This also excludes female nurses in the inclusion criteria who would not want to be part of the study.

3.7 Data Collection Techniques and tools

IDIs was used to gather information concerning the study from nurses in KBTH using the IDI guide to help ask questions which would explore the awareness of cervical cancer screening among nurses. Each interview session lasted between thirty (30) to fifty (50) minutes. In all, twenty five (25) IDIs were conducted.

3.8 Quality Control

Data for the study was collected by the researcher, assisted by two (2) research assistant who also recorded alongside to ensure consistency and accuracy. The necessary triangulation methods such as the use of voice recorder alongside hand-recording were employed to eliminate possible errors. Triangulation is an approach in research that combines more than one research strategy in a single investigation in order to assure completeness and to confirm findings.

A one-day training session was held with research assistants to equip them with the necessary knowledge and skills for the research.

3.9 Data Processing and Analysis

Data analysis was done manually. Data collected was transcribed and categorized using thematic analysis, concepts and themes were examined, and relationships between and among the themes defined. Direct quotes from respondent were used to support findings.

3.10 Pre-testing or Pilot study

Pre-testing was done at 37 Military Hospital which has similar characteristics as the Korle Bu Teaching Hospital. The purpose of the pretest was to find out the appropriateness of the questions, time needed to conduct IDIs, and to determine how valid and reliable the questions are. The outcome of this exercise aided in restricting the entire interview guide.

3.11 Data storage

Information gathered for this study have been treated as confidential and used only for the purpose of this research. Responses of respondent were not to be shared with other study respondents or members of the respondent's household. Finally, data collected and all

materials related to the study including audio- recording have been stored in locked cabinet by the Principal Investigator for a period of one year.

3.12 Ethical Consideration

Ethical clearance was sought from Ghana Health Service Ethics Review Committee before the study was carried out.

Respondents of this study included female nurses who have worked for three to five years or more in the Korle Bu Teaching Hospital

The setting of the interviews guaranteed the respondents' privacy and confidentiality. Respondents were interviewed in their conducive offices, in a quiet space away from other colleagues. Their opinions were valued and respected, therefore, they were not judged. They were allowed to freely express themselves and their own views, and permission was sought before audio recording the interview sessions which lasted between thirty (30) to fifty (50) minutes. Questions asked were relevant to the study and clear, and non-repetitive. These measures were to prevent negative feeling during participation. All these were done to ensure that respondents did not leave the interview sessions with negative feelings about participation. The investigator also avoided the use of respondents' real names and rather utilized pseudonyms.

Participation in the study therefore was purely voluntary. Respondents were given the opportunity to discontinue with the interview if they so desired. No participant was pressurized to answer questions against his/her will. At any point in the interview process respondents were free to stop answering questions if they so wish.

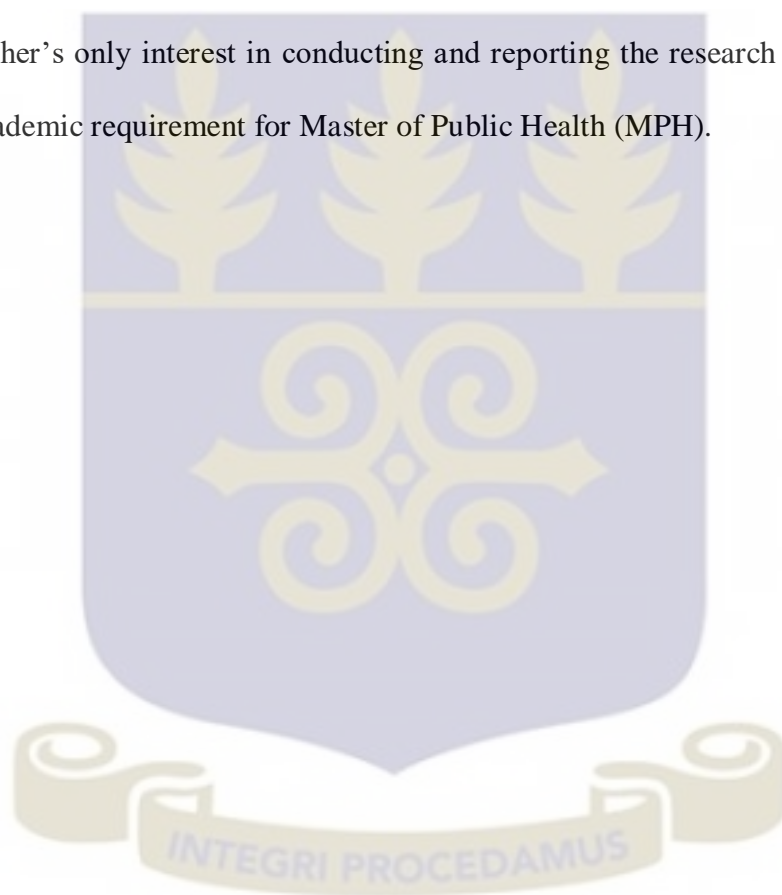
The research did not pose any risk to the respondents. The benefits of this study were: (1) to investigate the awareness of cervical cancer screening among female nurses (2) The

publication of research findings in academic journals for the benefit of a wider public health community.

The PI ensured that the consent form was read and explained to the respondents that they understood before they decided whether or not to sign.

Apart from snacks for respondents after interview sessions, there were no other forms of compensations.

The researcher's only interest in conducting and reporting the research findings was to fulfill her academic requirement for Master of Public Health (MPH).



CHAPTER FOUR

RESULTS

4.1 Introduction

The chapter features the results from the field data. It begins with the socio-demographic characteristics of the respondents and continues with findings on knowledge level of cervical cancer among female nurses in Korle-Bu teaching hospital, practices of nurses towards cervical cancer screening especially with the use of Pap smear and examine barriers to cervical cancer screening uptake among female nurses in Korle-Bu teaching hospital.

4.2 Socio-demographic information

A total of twenty-five (25) female nurses were interviewed. The ages of the respondents therefore ranged from twenty-seven (27) to fifty-three (53) years with average age of thirty-three (33) years. All respondent identified themselves as Christians (100%). With regards to their marital status, 56.0% were married and 44.0% single. The average years of practice is twelve (12) with a minimum of five (5) and a maximum of thirty-four (34). The rank categories of respondents consist of seven (7) Senior Staff Midwives, four (4) Senior Nursing Officers, five (5) Senior Staff Nurses, five (5) Staff Nurse, two (2) Principal Nursing Officer, one (1) Clinical Nurse and one (1) Matron.

Table 4. 1: Background Characteristics of Respondents

Characteristics	Value (%)
Age	
Average age	33 years
Minimum	27 years
Maximum	53 years
Standard Deviation	5.42
Religion	
Christian	25 (100)
Marital Status	
Single	11 (44.0)
Married	14 (56.0)
Years of Practice	
Average years	12 years
Minimum years	5 years
Maximum years	34 years
Standard Deviation	9.40
Rank	
Clinical Nurse	1 (4.0)
Matron	1 (4.0)
Principal Nursing Officer	2 (8.0)
Senior Nursing Officer	4 (16.0)
Senior Staff Midwife	7 (28.0)
Senior Staff Nurse	5 (12.0)
Staff Nurse	5 (20.0)

4.3 Awareness of cervical cancer screening among female nurses in Korle-bu Teaching Hospital

Teaching Hospital

The study findings indicate that all respondents have heard of cervical cancer (100%). Awareness of cervical cancer was high among the respondents. Cervical Cancer is a cancer of the cervix, mostly claimed by the participants. According to other respondents, Cervical Cancer is a cancer that affects women with multiple sex partners. A respondent defined it as old age disease and infection of the cervix.

Cancer that affects the cervix. "huh" I know its caused by the human papilloma virus which is mostly got from the men.

(IDI- 5 years of practicing nursing)

I know that it is cancer of the cervix; it is caused by the human papilloma virus

(IDI- 7 years of practicing nursing)

I have heard that you can get it if you are a woman and you change men regularly and also when you insert things in your vagina.

(IDI- 12 years of practicing nursing)

These days' women its prevalence and it's only the causes. Maybe we women we like inserting things.

(IDI- 25 years of practicing nursing)

4.4 Aware of cervical cancer screening

On Awareness of Cervical Cancer screening, majority of the respondents stated that they are aware about it, only one (1) out of the twenty five (25) admitted she is not aware of the screening.

When most of the respondents who said they have heard of about the cervical cancer screening were asked where they heard about it, majority mentioned that they heard it from the Family Planning Unit of Korle-Bu and other health institutions, while others noted it was from their colleagues at work. The following were given responses :

Family planning Unit here in Korle-bu

(IDI- 10 years of practicing nursing)

There has not been any formal spread of information to educate us as nurses about the cancer but currently a colleague nurse working at the reproductive health department told me about it.

(IDI- 12 years of practicing nursing)

I heard of it from my colleague nurse at the family planning unit

(IDI- 7 years of practicing nursing)

I heard it in church and I heard it here at work.

(IDI- 8 years of practicing nursing)

On the radio. Actually I wanted to do mine 2 years ago but I didn't

(IDI- 6 years of practicing nursing)

I heard on television and also I heard it from my colleagues at the family planning unit.

(IDI- 12 years of practicing nursing)

On what the respondent knew about cervical cancer screening, three out the twenty-five indicated they don't know how it's done, while the others gave responses like;

I know Pap smear is used for the screening

(IDI- 5 years of practicing nursing)

My colleague said you can walk in at any time to have your cervical cancer screening just as you can go for your breast screening. Now that there is a new center at the reproductive health that is what they basically do so you can walk in at any time. I know they would take a swap or something to check whether you have the cancer.

(IDI- 14 years of practicing nursing)

I know the screening is good it helps people know their status. Anyone at all can walk in to have their screening at the family planning unit.

(IDI- 7 years of practicing nursing)

I know they use Pap smear to check if you have the cancer or not.

(IDI- 8 years of practicing nursing)

I know if you do the screening it is good because you would know if you have the cancer or not.

(IDI- 6 years of practicing nursing)

I know you need to do it to find out whether you are at risk and also I know you have to pay.

(IDI- 6 years of practicing nursing)

4.5 Signs and symptoms of cervical cancer

Most of the respondent (88.0%) indicated that they know the signs and symptoms associated with cervical cancer.

Most of the respondents expressed high knowledge of the signs and symptoms of screening services. Below are some key statements made by respondents on the signs and symptoms of cervical cancer:

“hmmmm” severe lower abdominal pain, bleeding PV, bleeding after “erhm” sexual intercourse

(IDI- 5 years of practicing nursing)

Nipple of the breast becomes reddish normally resulting in operating on the breast.

(IDI- 34 years of practicing nursing)

You would bleed per vagina profusely as if you are menstruating, you have pains on having sex.

(IDI- 14 years of practicing nursing)

“erhmmm” what I know is that initially it is not diagnosed but as the condition advances you would see certain signs; Lower abdominal pains, you have foul discharging smells from the vagina

(IDI- 8 years of practicing nursing)

Sometimes they have bleeding per vagina, they have abdominal pains and cramps, fever and aches

(IDI- 5 years of practicing nursing)

4.6 Risk factors

As expected, awareness of cervical cancer among female nurses was very high, Respondents did know much about cervical screening and its associated risk factors. Their responses were centered on the fact that they were health practitioners. Common statements were:

Yes; if you have multiple sexual partners that’s all I can remember

(IDI- 14 years of practicing nursing)

Multiple sex partners, “erhmmmm” “I know those who also like inserting things into their vagina especially women who like this “erhmm”, some do like inserting these spices to make the place tight “yeah”.

(IDI- 7 years of practicing nursing)

Ok if the person becomes sexually active at an early age, if you have multiple sex partners and then if you have unprotected sex.

(IDI- 8 years of practicing nursing)

Like I said multiple sex partners, douching “Errmm errhh” abnormalities with pregnancies sometimes yes that’s all for now

(IDI- 5 years of practicing nursing)

Ageing, personal habits let’s say their sexual habits and this time we hear from research they say the food that we eat also.

(IDI- 6 years of practicing nursing)

That is what I said, inserting foreign materials into your vagina to make the place dry for men.

(IDI- 25 years of practicing nursing)

4.7 Practices of nurses towards cervical cancer screening especially with the use of pap smear

On what are the screening techniques for cervical cancer especially with the use of Pap smear, most of the respondents (80.0%) indicated they knew “Pap smear” while 20.0% indicated they knew nothing about the techniques.

4.8 Barriers to cervical cancer screening uptake among female nurses

More than half of the respondents (52.0%) have been for cervical cancer screening while 48.0% are yet to be screened.

The study further shows that half of the respondent with less than 10 years of practices have had their cervical cancer screening. For those with more 10 years of practice, 6 out of 11 have had their screening done.

Again, the study further explores the relationship between respondent and cervical cancer screening. Findings indicate that most of the respondent with age categories less than thirty years are yet to have their cervical cancer screened while 10 out 15 of the respondents with age categories more than thirty years have already had their own cervical cancer screening. This confirms that thought that cervical cancer is a disease of the aged woman.

Among those who have had their own cervical cancer screening, when asked when their last screening was done, these were their responses; “about 3 years ago and it was negative and I was trying to do it again recently”, “2 years ago”, “Just this year less than 3months ago” and lastly “8 years ago”.

Among those who are yet to screen for cervical cancer, below are reasons made by participants who are yet to have their own cervical cancer screening;

I went there they said I am not sexually active so they won't do it for me. I'm serious. They would counsel you then after the counselling, if you are eligible they would do it for you. If you're not they would tell you to go and come. They said I should go when I start having sex then I come back, so I would go there when I start having sex
(IDI- 5 years of practicing nursing)

I don't have time and I don't think I have the cancer.
(IDI- 34 years of practicing nursing)

No reason, I work in the hospital but no reason (after much probing) I haven't done it because it is too expensive and me being a nurse I think it should be reduced a little bit. Here in the hospital we even pay for workshops
(IDI- 7 years of practicing nursing)

...ok the time I wanted to do it I had other labs and things to take care of and the amount involved at that time I didn't have enough but I would still do it.
(IDI- 6 years of practicing nursing)



CHAPTER FIVE

DISCUSSION

The main objective of this study was to investigate the awareness of cervical cancer screening among female nurses in Korle-Bu teaching hospital. The study provides information about awareness, knowledge on cervical cancer, risk factors, practices and barriers on cervical cancer and its screening methods. The demographic characteristics of the respondents are shown in Table 4.1. Respondents were mostly married (56.0%) and aged between 27 and 53 years, mean =33, SD =5.42. All respondents were Christians (100.0%) and have worked between 3 and 34 years, mean=12years, SD=9.40. About the respondent nursing grades, the study findings indicate a varying range of grades from staff nurse to matron.

The study was summarized into the three objectives of the study.

5.1 Awareness and knowledge level of cervical cancer among female nurses in Korle-Bu Teaching Hospital

The study findings suggest that a high level of awareness of cervical cancer among female nurses in Korle-Bu Teaching Hospital. This is in contradiction to what findings reported by others (Fylan, 1998; Neilson, 1998; Nicky et al., 2005; Merchant, 2007; Nakalevu, 2009) that there exist limited knowledge of cervical cancer among women. The study findings are consistent with similar findings reported by Kabir et al., (2005); high level of knowledge of cervical cancer screening and positive attitude towards it among female health practitioners. The high level of awareness and knowledge is as a result of the high number of cases managed and recorded at the health facilities (Edwin, 2010; Nkyekyer, 2000; WHO, 2010).

Cervical Cancer was perceived to be disease among older women according to some of study respondents this was similar to the findings of Were et al., (2012) and Liao et al., (2006).

5.2 Practices of nurses towards cervical cancer screening especially with the use of pap smear

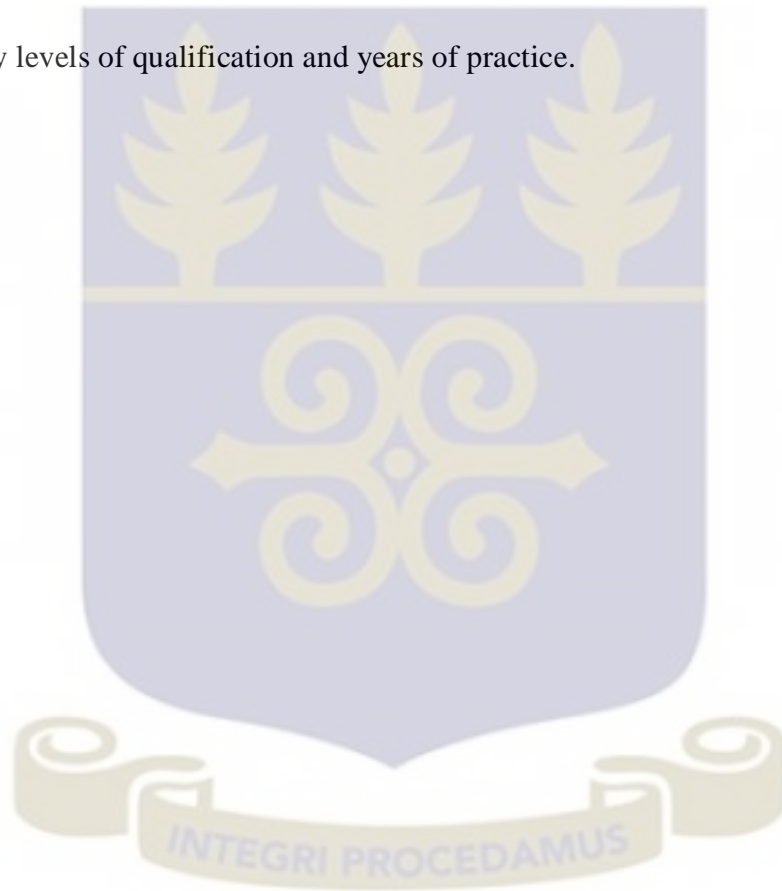
It has been shown that health practitioners' recommendations are strong predictors of cervical cancer screening for the general population according to Amarin et al., (2008). Most of the participants knew of the screening techniques especially with the use of the pop smear, this is because most of cervical cancer screening are suggested by health practitioners according to Mona and Farida (2009) findings.

5.3 Barriers to cervical cancer screening uptake among female nurses in Korle-Bu Teaching Hospital

The findings of the study suggested that less than half of the respondents have not tested for cervical cancer. As demonstrated by different literatures, including this study, high level of awareness and knowledge of cervical cancer demonstrated by respondents did not translate to proper utilization of the screening services Goyal et al, 2013. This study has demonstrated that older female nurses (age more than thirty years) often get tested than younger female nurses. Women negative attitudes could deter them from up taking cervical cancer screening Julinawati et al., (2013). The study further suggests that once females are not sexually active then they are less likely to suffer from cervical cancer.

5.4 Discussion in relation to conceptual framework

Findings suggested that knowledge on cervical cancer, signs and symptoms of cervical cancer, screening techniques, educational status, years of working experience, barriers such as age and occupation affects the level of awareness of cervical cancer screening. It was noted that knowledge enhance the awareness of cervical cancer screening, nurses need to have to some extent some knowledge on cervical cancer and its methods of screening. It was also demonstrated that the level of awareness of cervical cancer among nurses is much influenced by levels of qualification and years of practice.



CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1 Summary

This study looked at the awareness of knowledge of cervical cancer among female nurses who have worked 3-5 years or more in the Korle-Bu Teaching Hospital.

Findings showed that the awareness of knowledge on cervical cancer screening was very high among female nurses at the Korle-Bu Teaching Hospital but its practice among the nurses was very low. The high level of awareness is as a result of the high number of cases recorded at the Korle-Bu Teaching Hospital.

During the IDIs, it was realized that cervical cancer was perceived to be a disease among older women. Most of the nurses interviewed also knew the screening techniques used and identified it as the Pap Smear.

Age, women's negative attitude and availability of time was seen as barriers to cervical cancer screening uptake.

Health professionals are expected to be role models in all aspects of health service utilization, the study showed that the extent of cervical cancer screening practice is very low among nurses and for that matter health professionals cannot enhance the concept of public health. Most suggested that information on cervical cancer is being provided by health workers and health organizations.

6.2 Conclusion

Even though health practitioners are expected to be role models in all aspects of health service utilization, the study showed that the magnitude of cervical cancer screening practice is very low among nurse health professionals. Perception, age, qualification of nurses and years of practicing nursing in the public health institutions were found to be the predictors of cervical cancer test. The current screening program is not effective even in reaching female health professionals.

6.3 Recommendations

Incorporation of cervical cancer screening into routine reproductive health services should be considered. Efforts should be put in place to influence the attitude and perception of female nurses and women through public health education to encourage them take up the screening. There is a need for sensitization of nurses and other health professionals about cervical cancer and the importance of screening.

Nurses need to include cervical cancer as one of the topics to be discussed in the clinics as it is a very important reproductive health issue. It is also important to develop policy on cervical cancer screening as a nation. In addition, appropriate environment should be designed for cervical cancer testing.

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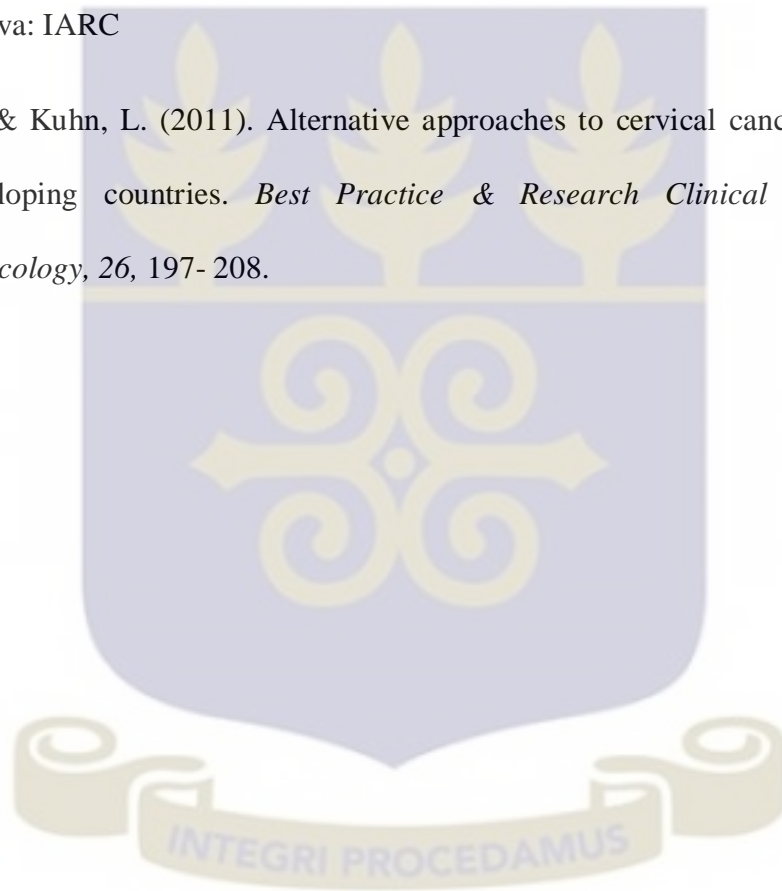
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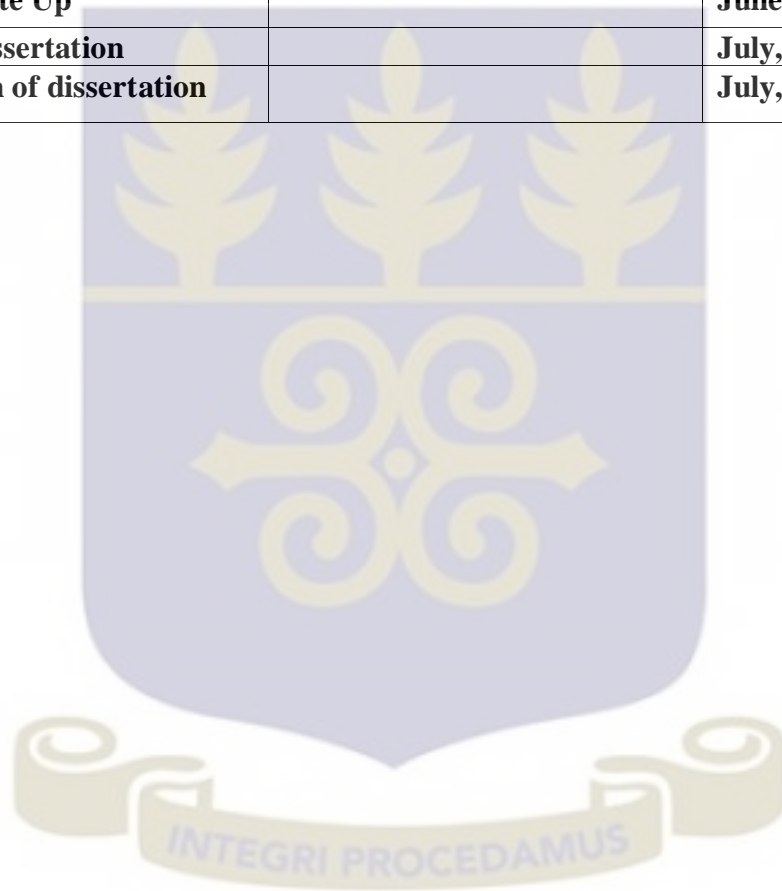
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APPENDICES.

Appendix A: Timeline.

Activity	Year 2015	Year 2016
Proposal Development	From September, 7 to November, 2	
Data Collection		May, 12 to June, 1
Data Entry		May, 20 to June, 5
Data Analysis		June, 8 to June, 16
Result Write Up		June, 8 to June, 22
Finalize dissertation		July, 2
Submission of dissertation		July, 5



Appendix B: Budget

ITEM	PURPOSE	UNIT COST (GHC)	TOTAL
STATIONARY	To take notes during interviews	200	200.00
ELECTRONIC RECORDER	To record interviews	300	300.00
TRAINING OF RESEARCH ASSISTANCE	To ensure research assistance understand objectives	200	200.00
ALLOWANCE FOR RESEARCH ASSISTANCE	To compensate research assistance for their time spent	600	600
TRANSPORTATION	To make movement to hospital easier	420	420.00
TOTAL		1,720	1,720.00

BUDGET JUSTIFICATION

The total estimated cost is GHC 1,720.00. The research would be self-financed. The tape recorder would be used during in-depth interviews. Stationaries like A4 sheet papers, pens among others would be bought to help write down information received. Two Research Assistants will help conduct the IDIs. They would help in note taking hence they need to be trained before the collection of data and compensated afterwards.

An amount of GHC420 has been budgeted for transportation.

Appendix C: In-Depth Interviews with Nurses

SCHOOL OF PUBLIC HEALTH
COLLEGE OF HEALTH SCIENCES
UNIVERSITY OF GHANA, LEGON

I am Daisy Annoh- Mensah, a Masters of Public Health student of the University of Ghana, School of Public Health. I am conducting a research on the topic **Awareness of Cervical Cancer Screening among Female Nurses in the Korle Bu Teaching Hospital.**

We are conducting in depth interview with nurses in the Korle Bu teaching hospital to find out their awareness, knowledge and practice level concerning cervical cancer screening.

You have been selected to be interviewed and we would be grateful on your opinion on the subject. There are no right or wrong answers. To help me remember all that you say, I would, with your permission, tape record the interview. You have the opportunity to ask questions about your rights with respect to the interview.

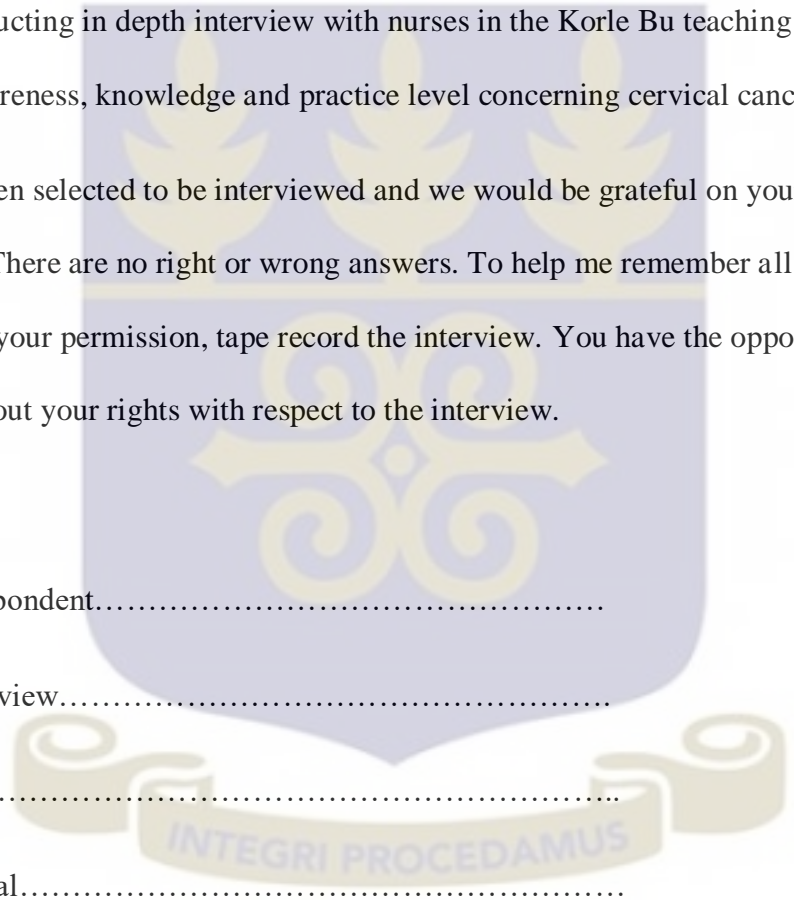
Code of Respondent.....

Date of Interview.....

Municipal.....

Sub municipal.....

Signature.....



How old are you?

What is your religion?

How long have u been practicing as a nurse?

What is your grade in the nursing profession?

Have you heard of cervical cancer?

What did you hear about it?

Do you know the signs and symptoms associated with cervical cancer?

What are they?

What are the risk factors associated with cervical cancer?

Are you aware of cervical cancer screening?

Where did you hear of cervical cancer screening?

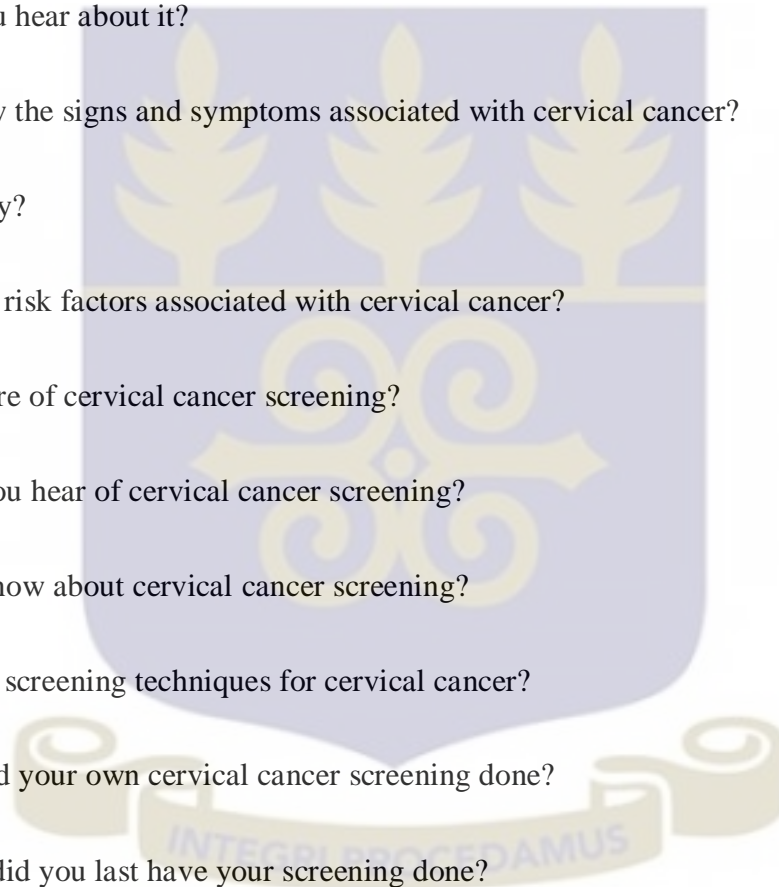
What do u know about cervical cancer screening?

What are the screening techniques for cervical cancer?

Have you had your own cervical cancer screening done?

If yes when did you last have your screening done?

If no why haven't you done it?



Appendix D: Informed Consent for Nurses at the Korle Bu Teaching Hospital

Project Title

Awareness of Cervical Cancer Screening Among Female Nurses in the Korle Bu Teaching Hospital.

Institutional Affiliation

Department of Social and Behavioral Science, School of Public Health, College of Health Sciences, University of Ghana, Legon

Background

I am Daisy Annoh- Mensah, a Masters of Public Health student of the University of Ghana, School of Public Health. I am conducting a research on the topic **Awareness of Cervical Cancer Screening Among Female Nurses in The Korle Bu Teaching Hospital** in an assessment to inform the awareness of cervical cancer screening.

Procedure

We will be conducting an in depth interview with nurses in the Korle Bu Teaching Hospital to find out their awareness, knowledge and practices concerning cervical cancer screening.

You have been selected to be interviewed and we would be grateful on your opinion on the subject. There are no right or wrong answers. Your assistance in providing responses to the questions will help us understand the awareness and knowledge level as well as the practices of cervical cancer screening among nurses in the Korle Bu teaching Hospital. To help me remember all that you say, I would, with your permission, tape record the interview. I also have an assistant with me to take notes as the discussions are going on. All that you say

would be kept confidential. The interview will last between 20 to 30 minutes. You are free to opt out at any stage of the discussion without any consequences to you.

Risks and Benefits

There would be no risk when you when you take part in this study. You will not benefit directly from this study, but the answers you provide will be used to inform policy for the improvement in awareness in cervical cancer screening among nurses.

Anonymity and Confidentiality

Whatever you say would be treated as strictly confidential and would be used only for the purpose of the research. Your name would not be used in any publication and no one would be able to trace back to you whatever you said. All information collected will be locked in cabinets and would be destroyed after 5 years.

Compensation

There would be no compensation for participation in the study. However their time spent would be very much appreciated.

Dissemination of Results

The final report of the study would be disseminated to the Korle Bu Teaching Hospital.

This research has been reviewed and approved by the Ghana Health Service Ethics Review Board (GHSERC). For further questions concerning this research you may contact Ms Hannah Frimpong, GHS ERC Administrator on +233 243 235221 or +233 057 041223 and Daisy Annoh Mensah, SPH, UG on +233 246637598.

Volunteer Agreement Form

I

declare that the purpose, procedures and the risks and benefits of the study have been explained to me in English and I clearly understand. I have had opportunity to ask questions and these have been explained to me. I freely consent to participate in the study.

Signature.....

Date.....

Interviewer's statement

I, the undersigned, have explained the consent form to the subject she has understood the purpose of the study, procedures and risks and benefits. The subject has freely agreed to participate in the study.

Signature of Researcher.....

Name of Researcher.....

Date.....

