ENSIGN COLLEGE OF PUBLIC HEALTH, KPONG, EASTERN REGION.

CERVICAL CANCER KNOWLEDGE AND SCREENING BEHAVIORS AMONGST FEMALE HEALTH PROFESSIONALS IN SOME SELECTED HEALTH FACILITIES IN THE LA NKWANTANANG MADINA MUNICIPALITY IN THE GREATER ACCRA REGION OF GHANA.

BY; REJOICE ZIWU

THIS THESIS IS SUBMITTED TO THE DEPARTMENT OF COMMUNITY HEALTH IN THE FACULTY OF PUBLIC HEALTH IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE

MASTER OF PUBLIC HEALTH

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DECLARATION AND CERTIFICATION

I hereby certify that except for reference to other people's work, which I have duly cited, this Project submitted to the Department of Community Health, Ensign College of Public Health, Kpong is the result of my own investigation, and has not been presented for any other degree elsewhere.

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(Ag. Head of Academic Programme) Signature Date

DEDICATION

I dedicate this thesis to the Almighty God who has been merciful to me and has been the source of strength and wisdom to me in completing this research work. Also to my grandparents, Mr. Emmanuel K. Ziwu and Mrs. Victoria W. Ziwu, God reward you abundantly.

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DEFINITION OF TERMS

Knowledge: This is where a female health professional knows the causes of cervical cancer, the signs & symptoms, the effects, the screening methods, centres and the process involved.

Source: this refers to where a female health worker heard about or derived information about cervical cancer.

Cervical Cancer Screening: the processes a woman goes through to determine her cervical cancer status.

Colposcopy-A health care provider uses a tool with a light and magnifying glass to look closely at the cervix for cells that are not normal. If there are abnormal cells, the health care provider will probably suggest a biopsy.

Biopsy-A health care provider takes a small piece of tissue from the cervix. The tissue is sent to a lab for study.

LIST OF ACRONYMS AND THEIR MEANING

AIDS	Acquired Immune Deficiency Syndrome
CIN	Cervical Intraepithelial Neoplasia
DNA	Deoxyribonucleic Acid
GHS	Ghana Health Service
HIV	Human Immunodeficiency Virus
HPV	Human Papilloma Virus
MOH	Ministry of Health
SDGs	Sustainable Development Goals
STATA	Statistics and Data
STIs	Sexually Transmitted Infections
VIA	Visual Inspections with Acetic Acid

WHO	World Health Organization
WIFA	Women In Fertile Age group

ABSTRACT

Within the first quarter of 2017, a study was conducted to assess cervical cancer knowledge and screening behaviors amongst female health professionals in some selected health facilities in the La Nkwantanang Madina municipality in the Greater Accra region of Ghana, through a cross-sectional study design which had both a quantitative and qualitative study components.

It revealed that 35% of the female health professionals agreed that starting sexual intercourse at a tender age increases a woman's likelihood of contracting cervical cancer. 87.57% of the respondents have never attended any seminar or training workshop on screening and treatment of cervical cancer and 37% of the respondents' source of information on cervical cancer is training school. Approximately, 87% of female health professionals who enrolled in the study know the availability of the Pap smear screening. 52% of the respondents are of the opinion that Human Papilloma Virus vaccination is not gaining popularity in Ghana. Majority (83.53%) of the respondents have never screened for cervical cancer whiles 16% have of which 41% last time of screening is 3 to 4 years. According to some key persons, female health staff do not go for screening because of the fear of the unknown or positive result even though some health facilities have mechanism in place in relation to staff welfare regarding cervical cancer whiles other health facilities do not have.

Female health staff should be updated on the knowledge and practice in relation to cervical cancer and also go for regular Pap smear at least once every 3 years. Municipal and facility heads should organize training workshops, seminars, and annual compulsory medical screening in relation to cervical cancer for all staff which should be a pre

requisite for their promotion.

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CHAPTER ONE

1.0 INTRODUCTION

Developing countries over the years have been trying to combat the increasing incidence and mortalities due to cervical cancer. Various interventions such as screening programmes by some developing countries have been put in place to reduce its incidence. Key players such as health workers need to have adequate knowledge of the disease and how to prevent it so that, they been the role models in terms of health related issues, can guide the public in taking up the right initiatives.

1.1 BACKGROUND INFORMATION

Cervical cancer is a major public health problem through-out the world, and despite important declines in incidence and mortality observed in developed countries in the last 20 years, those indicators remain almost unchanged in developing countries" by (JNCIM 1996).

Cancer is a disease of the cells in the body. There are many different types of cell in the body, and many different types of cancer which arise from different types of cell. What all types of cancer have in common is that the cancer cells are abnormal and multiply out of control. Some cancers are more serious than others, some are more easily treated than others particularly if diagnosed at an early stage. Sometimes a cell becomes abnormal. This occurs because one (or more) gene in the cell becomes damaged or altered.

The abnormal cell may then divide into two, then four, then eight, and so on. Lots of abnormal cells may then develop from the original abnormal cell. These cells do not know when to stop multiplying. A group of abnormal cells may then form. If this group of cells gets bigger, it becomes a large clump of abnormal cells called a tumor (Kenny 2014). In other words, it is the out of control cell growth. Cancers are named for the part of the body where they start. This is according to National Cancer Institute (NCI), U. S.

The types that affect the female reproductive system are cancer of the vulva, vagina, ovary, uterus and cervix. Of these, the most common is the cervical cancer. The cervix is the lower narrow end of the uterus (the organ where a fetus grow) and it leads from the uterus to the vagina (birth canal). When cancer starts on the cervix, it is caled cervical cancer. Cells do not suddenly change into cancer. Pre-cancer cells are cells that are not normal. They are not cancer but can turn into cancer if not treated.

Cervical cancer is caused by Human Papillomavirus. (HPV) is a virus that is spread during sexual contact. This means that one contract the viral infection when sexual contact is unprotected. Most adults have HPV infections at some time during their lives. Usually the infection clears up on its own. There are more than 100 different types of HPV, and only a few cause cancer. A person who has a type of HPV that causes cancer and is not treated for many years could get cancer. A vaccine (shot) is available to prevent HPV infection. There are many types of the Human Papilloma Virus. Not all types of HPV cause cervical cancer. Some of them cause genital warts, but other types may not cause any symptoms. The main types of cervical cancer are squamous cell

carcinoma and adenocarcinoma. Squamous cell carcinoma begins in the thin, flat cells that line the cervix. Adenocarcinoma begins in cervical cells that make mucus and other fluids. Long-lasting infections with certain types of human papillomavirus (HPV) cause almost all cases of cervical cancer (NCI).

According to American Cancer Society (ACS 2016), abnormal cervical cell changes rarely cause symptoms. But you may have symptoms if those cell changes grow into cervical cancer. Symptoms of cervical cancer may include; (1) Abnormal bleeding from the vagina, such as bleeding between menstrual periods, after sex, heavy bleeding or after menopause. (2) pain in the lower abdomen or pelvis. (3) pain during sex. (4) any abnormal vaginal discharge. (Bleeding after douching or performing pelvic examination (ACS 2016).

According to the National Cancer Institute (U S), two tests are often done to check for cervical cancer or precancer. (1) Pap test-during a pelvic exam; the doctor or nurse takes a few cells from the cervix for testing. (2) HPV test; a blood test that checks for HPV infection..The HPV test can help tell if an abnormal Pap test could be due to HPV infection. A woman should get her first Pap test at age 21. After the first test, she should have a Pap test every 1 to 3 years. Women who are 30 or older sometimes have an HPV test done along with the Pap test.

When a Pap or HPV test is not normal, it usually does not mean the woman has cancer. The tests might not be normal because of: Infection. A precancer. A lab error in looking at the cells from the Pap test. It is important to find and treat precancers. Treatment can

stop precancer from becoming cancer. Infection can be treated with medication. The health care provider may suggest having the test again or getting other tests. Other tests can include: Colposcopy and Biopsy (NCI).

Cervical cancer can often be successfully treated and very curable when it is detected or found at a very early stage.

"Several factors contribute to high burden of disease and advanced stage at presentation including poor knowledge about the disease, In most of the developing countries, the mass screening program for early detection of cervical cancer is practically nonexistent. Methods of prevention, early detection and treatment are well established that include vaccination against HPV as primary prevention. Pap test for early identification and treatment of precancerous/cancerous lesion of uterine cervix as secondary prevention. Early identification and treatment of precancerous/cancerous lesion of uterine cervix lead to better prognosis and survival. In spite of all these, cervical cancer burden is high in low-income countries as the health infrastructure is limited. At the same time it is essential that our health care professionals are aware of these advances and especially of those interventions which can be utilized in low-resource settings" (Swapnajaswanth et al 2014).

About 80% of those detected at the early stage are cured with suitable treatments. In developing countries, cervical cancers are often diagnosed at very late stages due to the poor or even lack of good screening and treatment methods as opposed to the developed countries that have continuously been able to detect and treat early stages of cervical

cancer mostly in the precancerous stages (ACCP, 2004).

"But in the United States and other countries where cervical cancer screening is routine, this cancer is not so common" (Wiredu et al 2006).

"It is common among women in the reproductive age of 15 to 49 years. In Ghana, cervical cancer is the leading cause of death in gynecological cancers. Every year, 3,038 new cases are recorded and out of this, over 2000 women die from the disease" (WHO, 2012).

The aim of this study is to assess the knowledge of cervical cancer and it's screening behaviors among female health professionals in some health institutions of the La-Nkwantanang Madina Municipal of the Greater-Accra Region of Ghana.

1.2 STATEMENT OF THE PROBLEM

Worldwide, cervical cancer is the most common gaenacological cancer and the second most common cancer among women, after breast cancer (McCarey 2011).

Even though the world is improving in terms of disease prevention of some public health diseases, there is indication that cervical cancer is predominantly a problem of low resource setting countries and many efforts are being made to curb this situation.

Cervical cancer is the leading cause of cancer death among women in Ghana, West Africa (Wiredu, et al 2006), (WHO 2007). About 2,006 women in Ghana die annually

from cervical cancer out of 3,038 who are diagnosed (WHO, 2010). It is the leading cause of death in gynecological cancers in Ghana.

The cervical cancer incidence and mortality rates in Ghana are among the highest in the world (Lingwood, et al 2008). 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 2010). Cervical cancer is highly preventable with the use cervical cancer screening tools (Murthy, et al 2010), (Luciani, et al 2009). When cervical cancer is found in early stages, it can be easily treated; however treating cervical cancer in the advanced stage is very challenging. (Patra 2010). 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 (WHO 2010).

Moreover, there are only few screening centers in the country. About 90% of cervical cancer cases cannot be treated in most of the country's health facilities because it gets to the advanced stage before most women suffering from the disease report which makes the situation very disturbing When it gets to the advanced stage the disease is beyond surgery and the only treatment is mostly chemo radiation (chemotherapy and radiotherapy) In Ghana now there are only three health institutions where one can receive treatment, Korle Bu Teaching Hospital in Accra, Komfo Anokye Teaching Hospital in

Kumasi and the Sweden Medical Center in East Legon which cost about six thousand dollars and how many women in Ghana can afford that much. Women with high level of education and income are more likely to receive all two (2) forms of screening on cervical cancer than those with lower level (Wilcox and Mosher, 1993).

Recently Bathor Catholic Hospital in the Volta Region of Ghana has embarked on various health promotion activities including screening programs for the health staff and community members in the fight against cervical cancer.

"Despite these staggering statistics, cervical cancer prevention is not commonly promoted in Ghana. Diseases such as malaria, tuberculosis, HIV/AIDS, and most recently breast cancer receive the majority of health promotion resources" (Affriye 2004). The Pap test and visual inspection with acetic acid (VIA) are the cervical cancer screening tools that are available in few public and private health institutions in Ghana. Some public hospitals in the country offer cervical cancer screening at the reproductive. In the past, non-governmental organizations have conducted organized cervical cancer screening events in rural areas.

Additionally, the bivalent HPV vaccine has been licensed for use in Ghana and HPV DNA testing is available in a 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).

Lack of knowledge about cervical cancer in the population and among healthcare workers is a prime barrier for access to cervical cancer prevention (Tebeu et al 2008) (Agurto et al 2004) (Tebeu et al 2009) as cited in McCarey 2011.

However, since Ghana is equally trying to prevent cervical cancer among its population, lack of knowledge about cervical cancer among Ghanaians may also be a barrier to cervical cancer screening. It is however, unclear whether health professionals in the La-Nkwantanag Madina Municipal have some level of knowledge about cervical cancer and it's screening, since they are the frontline workers in educating the general public.

1.3 RELEVANCE OF THE STUDY

Worldwide three quarters of cervical cancer cases occur in developing countries where programmes for screening and treatment are seriously deficient. Cervical cancer is the commonest cancer among sub-Saharan African women. It affects the younger age group as a result of early sexual activity, several sexual partners and history of sexually transmitted infections mainly linked with human papilloma virus (HPV).

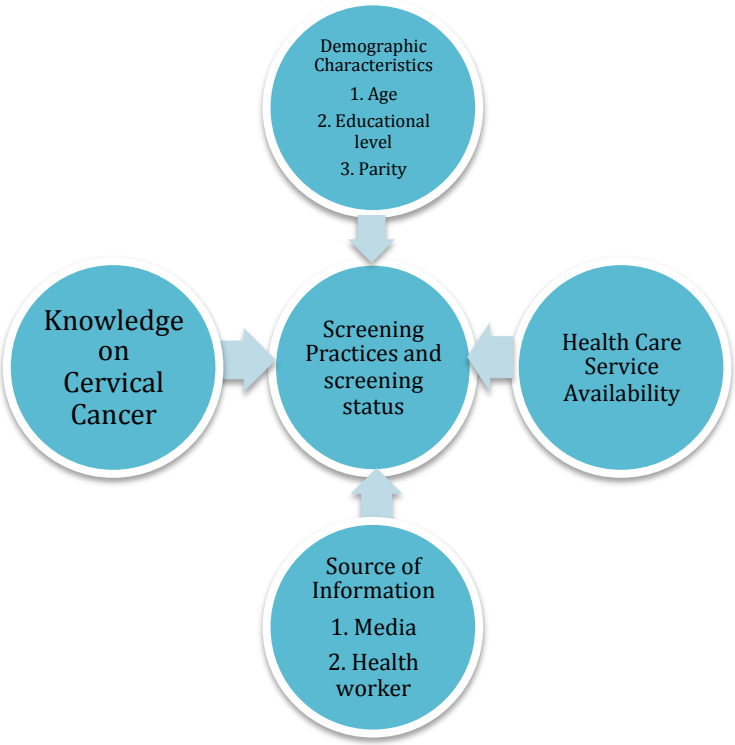
One way to prevent cervical cancer is through screening and early treatment programmes. Early detection and management of precancerous lesions require political and technical input. Challenges faced by countries are: lack of awareness and level of knowledge of people about cervical cancer, absence of policy framework, inadequate infrastructures, insufficient of data and evidence.

Also, health education on cervical cancer, its screening activities and prevention is not commonly promoted in Ghana as compared to diseases such as malaria, tuberculosis, HIV/AIDS, and most recently breast cancer.

Results of this study is to help inform female health professionals on the need to have adequate knowledge about cervical cancer and its practices, and also inform policy makers, stakeholders and other developmental organizations on the need to make informed policies, plans and strategies to curb the current situations in order to reduce incidence and mortalities due to cervical cancer. Again, with regards to achieving the sustainable development goal "3" which is "ensure well-being of all", hence improvement in maternal health as well as serve as a scientific research study upon which other or future investigations can be carried out.

1.4 CONCEPTUAL FRAMEWORK

The conceptual framework has been designed to put the study into perspective. The variables in the diagram have been categorized into response (dependent) and explanatory (independent) variables to help easy carry out the study and have a clear focus on the analysis of the variables under study.



Author's Construction

1.5 RESEARCH QUESTIONS

1. What are the basic knowledge female health professionals have about cervical cancer?

2. What are their sources of information on cervical cancer?

3. How do female health professionals in the La Nkwantanang Madina municipality assess health care services on cervical cancer?

4. What are the screening behaviors taken by the female health professionals in the La Nkwantanang Madina Municipality?

RESEARCH QUESTIONS FOR QUALITATIVE COMPONENT

5. What are the views of key informants of the selected health facilities about knowledge on cervical cancer and the screening behaviors of their female health staff?

6. What are the health care mechanisms or plans made by health facilities towards the health needs of female health professionals?

1.6 MAIN OBJECTIVE

To assess the knowledge level of cervical cancer and its screening behaviors amongst female health professionals in some selected health facilities in the La-Nkwantanang Madina Municipality.

1.7 SPECIFIC OBJECTIVES

1. To assess the basic knowledge level of female health professionals in La Nkwantanang Madina Municipality on cervical cancer

2. To identify the sources of information of female health professionals in the La Nkwantanag Madina Municipality on cervical cancer.

3. To assess how female health professionals in the La Nkwantanag Madina Municipality access health care services on cervical cancer.

4. To identify screening behaviors taken by female health professionals in the La Nkwantanag Madina Municipality in combating cervical cancer.

OBJECTIVES FOR QUALITATIVE COMPONENT

5. To assess views of key informants of the selected health facilities about knowledge on cervical cancer and it's screening behaviors of their female health staff.

6. To identify health care mechanisms or plans made by health facilities towards the health needs of female health professionals.

1.8 PROFILE OF STUDY AREA

The La Nkwantanang-Madina Municipality is located in the Greater Accra Region. It is one of the 16 Metropolitan, Municipal and District Assemblies in the region and was created in 2012 as part of the newly created Assemblies It was carved out of the Ga East Municipality. The La Nkwantanang -Madina Municipality is located at the northern part of the Greater Accra Region. It covers a total land surface area of 70.887 square kilometers under longitude -0.166 and the latitude of 5.683.

It is bordered on the West by the Ga East Municipal, on the East by the Adentan Municipal, the South by Accra Metropolitan Area and the North by the Akwapim South District. La Nkwantanang Madina Municipality is generally urban (84percent).

The total population of the municipality in 2010 was 111,926, comprising 48.5% males and 51.5% females. The district has a sex ratio of 94.1. The population of the

Municipality is youthful (38.7%) depicting a broad base population pyramid which tapers off with a small number of elderly persons (5.0%) (2010 Population Census).

The Total Fertility Rate for the municipality is 2.5. The General Fertility Rate is 71.7 Births per 1000 women aged 15-49 years which is the second highest for the region.

With regards to religion, 79.2% are Christians with different denominations, 17.5% are Muslims whiles less than 1% are traditionalist.

Languages spoken within the municipality includes Ga, which is the dominant one, then Akan, Ewe, Hausa, Dagare, Fante and many others.(2010 Population Census).
They celebrate the 'Homowo' festival which means 'hooting at hunger', from the month of July to August of every year since it is a Ga land.

This municipality is made up of various communities such as Madina Estate, Social welfare, Aviation, Ritz, Firestone, Madina Zongo, Madina New Road, Pantang, Oyarifa, Ghana Flag, Ayimensah Otinibi and others.

The main occupation of most of the employed population in the Municipality is service and sales (whole sale and retail trading) work (35.5%). There are more males (12.9%) in professional occupation than females (8.2%). The private sector (both formal and informal) was the main employer in the Municipality Among the economically not active

population, majority are persons in full time education (56.7%). The age group 25-29 years had the highest number of employed population (20.1%) in the Municipality.

Agricultural activity was not common in the Municipality due to its urban characteristics. However, households who were engaged in agriculture were mainly into crop farming, livestock rearing, fish farming and tree planting. Households who were into crop farming were found in urban localities.

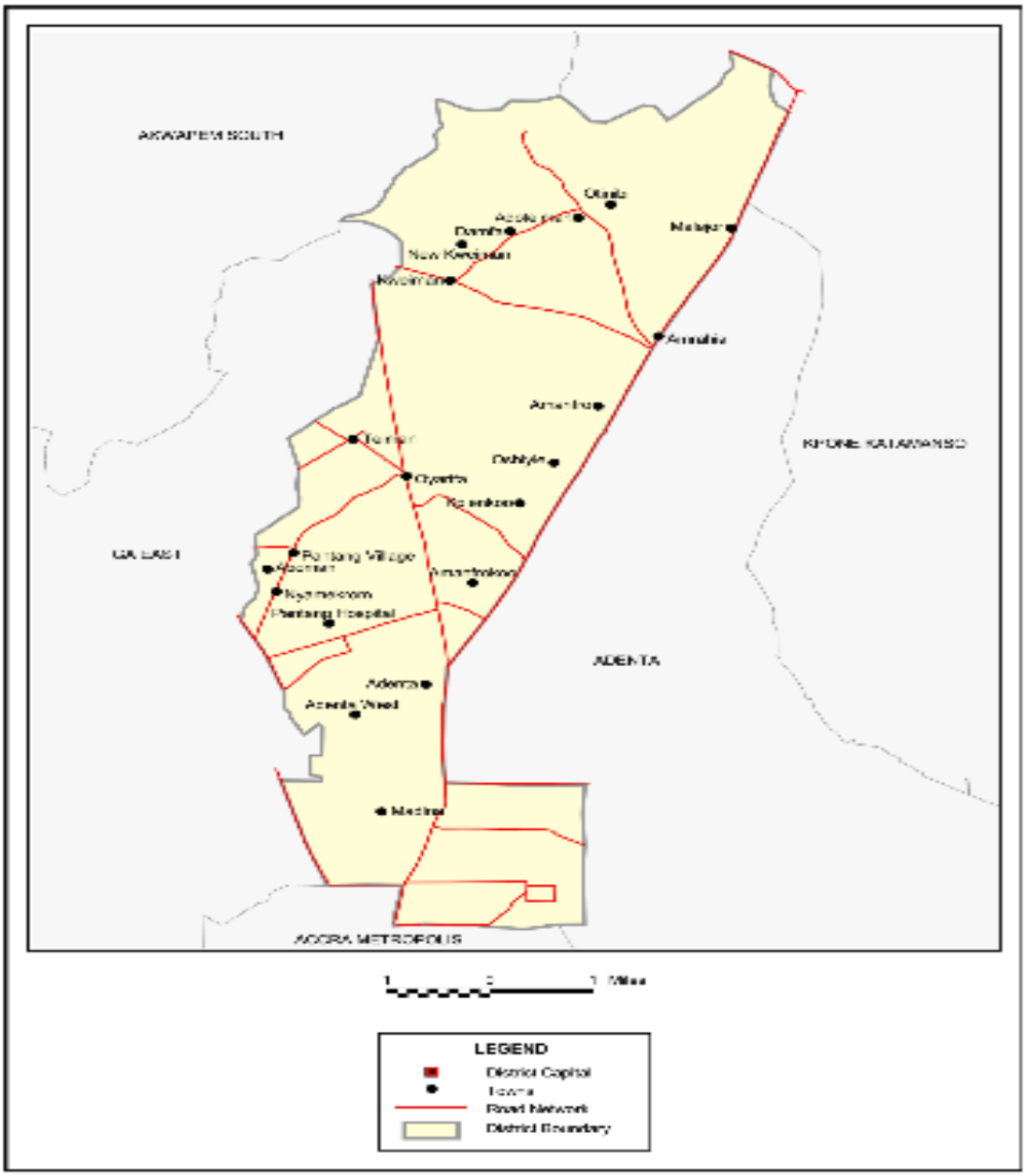
Due to the numerous and various economical activities going on within the municipality, there is existence of various economical institutions such as Agricultural Development Bank, Ghana Commercial Bank, National Investment Bank, Access Bank and many others.

The municipality has various educational institutions such as preschools (public and private), primary schools (public and private), secondary schools (public and private, vocational schoo (public) and a teacher training college (public).

Primary (Chps Zones, a Health Centre, Maternity Homes and Clinics) and secondary (Polyclinics and a CHAG Hospital) health institutions can be found within the municipality. The municipality also has private clinics but does not have a municipal hospital

Map 1.1

MAP OF LA - NKWANTANANG MUNICIPAL



Source: Ghana Statistical Service, GIS

1.9 SCOPE OF THE STUDY

The study took place in one (La-Nkwantanang Madina Municipality) out of the sixteen district/municipal/metropolitan assemblies within the Greater Region of Ghana. It was conducted in two of the three main sub-municipals within the La-Nkwantanag Madina Municipality. The three main sub-municipals include; Pantang, Danfa which are rural urban communities and Madina; urbanized community with a lot of commercial activities. The Madina sub-municipal has three sub-districts, which are Tatanaa, Nkwantanag and social welfare. The two sub-municipals used for the study were Danfa and Madina and they have various health facilities under them. Some of which are Danfa Health Centre, Madina Polyclinic, Pentecost Hospital and others. This brought about the diversity of study participants from rural urban and urbanized communities, hence result generalization was achieved. This study setting also offered the dynamics needed for this study.

1.10 ORGANIZATION OF REPORT

Page i to xi have indications of the tittle page, declaration, dedication, acknowledgement, definition of terms, abbreviations/acronyms with their respective meanings, an abstract of the study, table of contents, list of tables, list of figures and list of appendices. The entire research report is in six chapters.

Chapter one (1) introduces the research study. It also includes the background information of the research work, problem statement, relevance of the study, a conceptual framework of the study, the research questions, main and specific objectives of the study,

a brief profile of the study area, scope of the study and a brief narrative of the organization of the report.

Chapter two (2) looks at the reviewed of relevant available literature related to the research topic in accordance with the objectives of the study. It explores literatures from knowledge about the disease (cervical cancer), sources of information, screening practices, global and local disease burden (thus pertaining to Ghana). For the purpose of clarity, the literature has been arranged in sub-headings.

Chapter three (3) focuses on the research design and methods used to carry out the study. It also gives a description about the data collection technique and tools, study population, study variables, sampling techniques, pre-testing, data handing and analysis, ethical considerations, limitations and assumptions.

Chapter four (4) gives a description of the study findings based on the key study variables.

Chapter five (5) discusses results with the research questions, objectives, key variables and relevant literature while citing appropriate references.

Chapter six (6) which is the final chapter provides conclusions where key findings are summarized with figures, and recommendations are made regarding the key findings to stakeholders and interest parties.

CHAPTER TWO

2.0 LITERATURE REVIEW

Introduction

This chapter covers the reviewed of relevant and available literature to the study. It explores literature from knowledge about the disease (cervical cancer), the sources of information about cervical cancer, screening practices and the global and local disease burden of cervical cancer in Ghana. For the purpose of clarity, the literature is arranged in sub-headings.

Knowledge on cervical cancer

In a cross sectional study by Swapnajaswanth et al (2014) elicited information on the knowledge, attitude and practice regarding Pap test screening and vaccination for carcinoma cervix and also assessed barriers to acceptance of the Pap test among female doctors and nurses in a tertiary care hospital in Bangalore, India, It was found that higher proportion of doctors, 78.9% had very good knowledge as compared to only 13.3% of the nurses, about risk factors for cancer cervix and Pap test (p=0.001). As many as 89.6% of the study subjects had favorable attitude towards Pap test and vaccination, but 73.6% of the study subjects never had a Pap test and the most common reason for not practicing was absence of disease symptoms (31%). In spite of good knowledge and attitudes towards cervical cancer and the fact that Pap test is good, practice remained low among the female health care professionals and it was recommended that female health care practitioners need to be sensitized first to undergoing cervical cancer screening because

of their essential roles in the implementation of future screening programs and in their educative role with their clients and patients.

"A cross-sectional study with the aim of assessing the awareness of cervical cancer and its prevention amongst female health professionals in the Winneba Municipality revealed that the awareness of cervical cancer among the female health professionals was generally high (99%), with their predominant source of information being school (37%) followed by the internet (22%). Knowledge about the signs and symptoms of the disease were insufficient as about half of the respondents did not know whether persistent lower back pain, bleeding from vagina, persistent pelvic pain and unexplained weight loss were signs and symptoms of the disease or not. Also, knowledge about the risk factors was inadequate as some of the respondents were not sure whether smoking any form of cigarettes (65%), infection with Chlamydia (51%), having a sexual partner who is not circumcised (29%), having many children (65%) and not going for pap smear (50%) increased one's risk of developing cervical cancer or not. It concluded that inadequate knowledge about cervical cancer amongst female health professionals in the Winneba Municipality and recommended that Interventions by stakeholders especially the Winneba Municipal Health Directorate should be geared towards addressing the inadequacy of cervical cancer knowledge amongst its health providers by organizing training programmes to address the setback"(Kloku 2014).

A study by Ebu et al (2014) among sexually active females, age 10 to 74 years in Ghana, assessed the level of knowledge, Pap smear screening practices and its barriers towards

cervical cancer among women in Elmina. It revealed that 68.4% had never heard about cervical cancer, 93.6% had no knowledge on the risk factors, nine (2.3%) reported multiple sexual partners and being sexually active as risk factors, and 92% did not know about the prevention and treatment of cervical cancer. Majority (97.7%) had never heard of the Pap smear test. Only 0.8% (3) women out of 392 had had a Pap smear test and their reasons for seeking a Pap smear test were as a result of fear of cervical cancer, referral, and radio campaigns. It was however recommended that community leaders, women, and politicians need to agree on a policy that will facilitate cervical screening; Pap smears should be accorded priority like other Maternal and Child Health Programs.

A study conducted by APJCP in 2009 showed that most nurses knew about the Pap smear test as a cervical cancer screening method. The demographic characteristics of nurses and knowledge on risk factors of cervical cancer, as well as awareness of symptoms and attitudes in terms of screening programmers such as Pap smear, were assessed in a cross-sectional survey of nurses working in public Health Cabins and Family Health Centers in the rural area of Izmir, located in the western region of Turkey. Of the nurses who participated in the research, 69.1% (67) said that they had talked about cancer and cancer prevention with their families or friends; 60.8% (59) believed that their occupation was important for cancer prevention; 11.3% of the nurses had a history of cancer in their families; and 63.9% (62) thought that their knowledge about cervical cancer was adequate" (APJCP 2009).

It was revealed that there was no significant differences between knowledge, attitudes, risk factors and symptoms of cervical cancer and screening methods regarding age, marital status, years of experience ($p > 0.05$), even though a statistically significant relationship was drawn between having under gone a Pap test and a history of cancer in one's family ($p < 0.05$) " (APJCP 2009).

Results from a cross-sectional study of female graduates attending NGOP in Bhutan revealed that the mean knowledge score to be 3.571 (SD1.75, Range 0–8). About 6% of the respondents reported undergoing Pap test at least once and 94% reported as never done Pap test. The most commonly cited reasons for not doing Pap test included "never thought I needed one" (57%), "embarrassment of being examined by male health professional" and "fear of finding out cancer". Also, the average age of the participants was 23.43 ± SD 2.73. About 92% of the respondents were aged 25 years or less and 7.9% of the respondents were aged 26 or more. The study revealed low cervical cancer knowledge and poor screening behavior among the graduates. This showed that there was a significant association between increasing age, the married, knowledge score and females recommended for screening by health professionals, with the uptake of Pap smear testing as the screening method. The study was however conducted using self-administered anonymous questionnaire to elicit information on demographic characteristics, knowledge, screening behaviors and determinants of cervical cancer (Dhendup and. Tshering 2014).

A qualitative study by Isa Modibbo et al (2016) explored the barriers to cervical cancer screening, focusing on religious and cultural factors, in order to inform group-specific interventions that may improve uptake of cervical cancer screening programmes. This study conducted through a focus group discussion in two hospitals, one in the South West and the other in the North Central region of Nigeria was among 27 Christian and 22 Muslim women over the age of 18, with no diagnosis of cancer. Results showed that "most participants in the focus group discussions had heard about cervical cancer except Muslim women in the South Western region who had never heard about cervical cancer. Participants believed that wizardry, multiple sexual partners and inserting herbs into the vagina cause cervical cancer. Only one participant knew about the human papillomavirus. Among the Christian women, the majority of respondents had heard about cervical cancer screening and believed that it could be used to prevent cervical cancer. Participants mentioned religious and cultural obligations of modesty, gender of healthcare providers, fear of disclosure of results, fear of nosocomial infections, lack of awareness, discrimination at hospitals, and need for spousal approval as barriers to uptake of screening. These barriers varied by religion across the geographical regions and that there is the need to take into consideration the varying cultural and religious beliefs in order to design and implement effective cervical cancer screening intervention programmes" (Isa Modibbo et al 2016)

Another cross sectional study on Knowledge and Screening for Cervical Cancer among 83 sampled Women in Mangalore City elicited their level of knowledge about cervical cancer, its screening, role of doctors, source of information, and reasons for not

undergoing screening using a semi structured questionnaire. It revealed that majority of the women have poor knowledge about cervical cancer (81.9%) and it's screening (85.5%). Only 6 out of 83 women had undergone screening. Though women had come into contact with doctors earlier, they were neither educated about cervical cancer nor were they told about the screening. Whatever little knowledge the women had was obtained from mass media. It was recommended that mass media be used to educate the women and also there is a need to conduct community based study to know the practices of doctors and assess if they are educating and offering suggestions for screening (Kumar and Tanya 2014).

A study by Gebreegziabber et al 2016, assessed the magnitude and factors affecting the practices of cervical cancer screening among female nurses in Mekelle Town, Tigray, Northern Ethiopia 2014 using a cross-sectional study design. The study showed that "screening practice among nurses was 10.7%, within the past five years of the survey. Attitude and work place of the respondents were significantly associated with a history of cervical cancer screening practices with an adjusted odds ratio (AOR) of 3.023, 95% CI (1.134–8.059), and 3.424, 95% CI (1.080–10.853), respectively. This hereby indicated that cervical cancer screening practice is very low among nurses and health professionals and that negative attitude and workplace were identified to be the factors that determine their decision for cervical cancer screening (Gebreegziabber et al 2016).

Results of a previous study indicated that awareness of cervical cancer screening and uptake was low amongst its respondents even though majority of the respondents had risk

factors for cervical cancer. The study which aimed at assessing the risk factors for cervical cancer, the knowledge and level of utilization of cervical cancer screening among female staff and female undergraduates of Niger Delta University, showed that 50.6% of the respondents were aware of cervical cancer screening, 12.1% of the respondents have had at least one pap test in the past, their reasons for uptake of screening were; (1) when it is free or subsidized (27.3%), (2) as part of a general screening program (27.3%), (3) Doctor's request (18.2%) and (4) self-conviction (18.2%) (Isa et al 2013). "41.4% of the respondents, considered themselves healthy and did not see any reason to subject themselves to any form of screening. The reasons for uptake and non-uptake of screening were statistically significant between the students and staff ($x^2 = 18.175$, $p = 0.001$; $x^2 = 11.31$, $p = 0.046$). The mean age for the initiation of penetrative sex among the respondents was 15.4 ± 2.7, 71.1% had more than one sexual partner and 51.0% had been treated for sexually transmitted infections in the past" (Isa et al 2013).

A descriptive cross sectional study on Knowledge of cervical cancer and screening practices of nurses at a regional hospital in Tanzania showed that "less than half of the nurses had adequate knowledge regarding cervical cancer. There was a significant association between knowledge levels of causes of cervical cancer and transmission of HPV and age. Knowledge was more adequate among the young nurses ($p = 0.027$) and knowledge differed significantly between cadres. Registered nurses had more adequate knowledge than enrolled nurses ($p = 0.006$). The majority did not know screening intervals and a few were aware of HPV vaccine. Most nurses (84.6%) had never had a

Pap smear examination. results reflect a need for continuing medical education, creation of cervical cancer prevention policies and strategies at all levels of the health sector" (Urasa and Darj 2011).

According to a descriptive cross-sectional study by Mutyaba et al 2006 which was to describe knowledge on cervical cancer, attitudes and practices towards cervical cancer screening among the medical workers of Mulago hospital in Uganda, the response rate was 92%. Of these, 93% considered cancer of the cervix a public health problem and knowledge about Pap smear was 83% among respondents. Less than 40% knew risk factors for cervical cancer, eligibility for and screening interval. Of the female respondents, 65% didn't feel susceptible to cervical cancer and 81% had never been screened. Of the male respondents, only 26% had partners who had ever been screened. Even though medical students in the third and final clerkships are expected to learn the techniques of screening, only 14% of the final year medical students felt skilled enough to use a vaginal speculum and 87% had never performed a pap smear.it was concluded that knowledge of the gravity of cervical cancer and prevention by screening using a Pap smear, attitudes and practices towards screening were negative. The medical workers who should be responsible for opportunistic screening of women they care for are not keen on getting screened themselves. There is need to explain/understand the cause of these attitudes and practices and identify possible interventions to change them. Medical students leave medical school without adequate skills to be able to effectively screen women for cervical cancer wherever they go to practice. Medical students and nurses

training curricula needs review to incorporate practical skills on cervical cancer screening (Mutyaba et al 2006).

In a study by Perry 2001 on how the uptake of cervical cytology screening be improved? It was indicated that there is a great need for modification and improvement of present screening programmes if all women who are at risk from cervical cancer are to be encouraged to attend for screening. And also attitude of smear screening providers was very crucial in gaining women's confidence since an unpleasant experience might deter a patient or client from revisiting. Other barriers included administrative errors and lack of knowledge.it therefor recommended that the mass advertising and health promotion campaigns were ideal strategies to be applied to increase cervical screening uptakes.

Upon observation that cervical cancer screening progragramme had little attendance in Estonia, a cross sectional population based study was conducted to outline awareness of cervical cancer risk factors, reasons why women do not want to participate in cervical screening programme to make the programme better. The respondent rate was 36%. Main reasons for non-participation in the national screening programme were a recent visit to a gynaecologist (42.3%), fear to give a Pap-smear (14.3%), long appointment queues (12.9%) and unsuitable reception hours (11.8%). Fear to give a Pap-smear was higher among women aged 30 and 35 than 50 and 55 (RR 1.46; 95% CI: 0.82-2.59) and women with one or no deliveries (RR 1.56, 95% CI: 0.94-2.58). In general, awareness of cervical cancer risk factors is poor and it does not depend on socio-demographic factors. Awareness of screening was higher among Estonians than Russians (RR 1.64, 95% CI: 1.46-1.86). Most women prefer to receive information about screening from personally

mailed invitation letters (74.8%). It was concluded that women need more information about cervical cancer risk factors and the screening programme. They prefer personally addressed information sharing. Minority groups should be addressed in their own language" (Kivistik et al 2011)

"With respect to indicators of sexual habits, the association with age at first sexual intercourse and number of sexual partners was found as expected, but risk trends did not reach statistical significance. Only 10% of Cervical Cancer cases and 5% of control women reported 3 lifetime sexual partners or more. A stronger association emerged, however, between Cervical Cancer risk and indicators of the sexual behavior of a woman's husband, including polygamy, which was much rare. IUD was inversely associated with Cervical Cancer risk and the reasons for this are unclear, especially since among control women, those who reported IUD use actually showed, if anything, a higher prevalence of HPV infection than nonusers. The number of full-term pregnancies was not significantly associated with Cervical Cancer risk in the analysis adjusted for age and residence only, but a direct association emerged in the multivariable model. In fact, the number of sexual partners and husband's extramarital sexual relationships were negative confounders of the relationship between multiparity and Cervical Cancer risk. In the analyses restricted to HPV-positive Cervical Cancer cases and HPV-positive control women, the main risk factors that were found among all study women were confirmed. As expected, a woman's number of sexual partners and husband's extramarital sexual relationships were directly associated with HPV infection among control women" (Hammouda et al 2004).

A cross sectional study conducted in Diyala, Iraq among women with a mean age of (27.29±9.63) years was to evaluate knowledge and awareness about cervical cancer and HPV. “Results of the study showed that participants demonstrated poor levels of knowledge about HPV and cervical cancer, 106(53.54%) of them had heard about HPV, while, only 73(36.87%), 60(30.30%) knew that the cervical cancer and genital warts are caused by HPV. This study showed that the participants had very limited knowledge about pap smear, only 57(28.79%) knew that pap smear is the test to detect abnormal cervical cells, the results show highest level of knowledge and awareness about HPV, cervical cancer was among health care workers group, participants who live in urban and married with statistically significant difference ($P<0.05$), ($P<0.01$). Conclusion: This study highlighted the need for educational programs regarding HPV infection and it's complications such as cervical cancer and concluded that there is inadequate level of knowledge and awareness about cervical cancer, HVP, genital warts as well as transmission of infection and Pap smear test among study groups especially the university students” by (Hwaid 2013).

Awodele et al investigated the knowledge, attitude and practice of 200 nurses in Lagos University Teaching Hospital towards cervical cancer screening as they are important health personnel that are supposed to educate women on the need for cervical cancer screening through a descriptive cross-sectional survey and results showed that 99% of the respondents were aware of cervical cancer and that 92% of the respondents were also

aware that the causative organism, human papillomavirus was responsible for cervical cancer.

"Tobacco smoking, high parity, long-term hormonal contraceptive use, co-infection with Chlamydia trachomatis, herpes simplex virus type 2, HIV, immunosuppression, certain dietary deficiencies, and genetic and immunological host factors are contributing factors to cervical cancers", by Muñoz et al.2006 cited by Awodele et al 2011.

Lack of knowledge about cervical cancer in the population and among healthcare workers is a prime barrier for access to cervical cancer prevention (Tebeu et al 2008), Agurto et al, 2004 and Tebeu et al 2009 as cited by McCarey 2011).

Sources of information

A study by Urasa and Darj 2011, resulted that nurses upon being asked about their source of cervical cancer information, it was revealed that nursing school (53.3%) was the most common source of cervical cancer information, then media (47.4%), Colleagues (18.2%) and self-study (18.2%) were sources of information of the respondents. Only 2.9% and 8% had attended seminars and continuing medical education sessions on cervical cancer. (Urasa and Darj 2011).

"Whatever little knowledge the women had was obtained from mass media" (Kumar and Tanya 2014).

A study by Awodele et al 2011, which investigated the knowledge, attitude and practice of 200 nurses in Lagos University Teaching Hospital towards cervical cancer screening showed that the major sources of information for the nurses (respondents) were through electronic media (43.9%) and health professionals (37.4%).

A previous cross-sectional descriptive study examined the perception of Papanicolau smear, document its utilization and assess its sources of information among 210 sexually active female nurses of different departments in a tertiary health institution (a teaching hospital) in Southwest Nigeria with a semi-structured open and close-ended questionnaire.

It resulted that, among the respondents (mean age 39.4 years), majority (96.2%) were Christians, 61.0% were sexually active within the previous 6 months and 83.3% were parous. Formal lectures and trainings were the most common (73.8%) sources of information on cervical cancer. Multiple sexual partner and early sexual activity were correctly identified by 87.3% and 77.6% respectively as risks for developing cervical cancer. While respondents demonstrated adequate knowledge both for risk factors (75.2%) and symptoms (88.6%) of cervical cancer, this knowledge was not associated with age, marital status or years of working experience. Based on the results, that since most female nurses are among health workers who provide health education for

secondary school students and women in rural communities, awareness on perception of cervical cancer being high among female nurses is of significant importance. It was recommended that female nurses should be trained not only in leading community awareness of cancer of the cervix but also in the use of the internet to broaden their knowledge and aptitude of the disease (Biobaku et al, Part 1)

"In Biobaku et al (Part 1), responses to the source of information on cervical cancer among the female nurses. Majority of the respondents (73.8%; 71.4%) detailed formal lectures during training and seminars respectively. Other sources of information on cervical cancer were work exposure (70.0%), reading medical books (69.0%) media (55.7%) and the internet (48.1%).

Screening

"However a study by Ertem 2009 has reported that a lower proportion (53.6%) of the nurses had not undergone Pap test. The reasons for not undergoing Pap test were virginity (67.3%), forgetting (21.2%) and feeling embarrassed (11.5%)".

"Also, another study by Tran et al revealed that 98% of health care practitioners were aware of Cancer cervix and Pap test and only 13% of them had ever had a Pap test (Tran, 2011)"

In a study by Awodele et al 2011, "the respondents were quiet aware of Pap smear (91%) as one of the screening techniques of cervical cancer and had good attitudes (89%)

towards Pap smear, but most of them had never done it before. The study further revealed that majority of the respondents did not know colposcopy as one of the screening techniques for cervical cancer. Finally, it has been made known from this study that nurses have good knowledge of cervical cancer but have limited understanding of the types of cervical cancer screening techniques and poor disposition towards undergoing cervical cancer screening. It may thus be recommended that institutions should periodically organise seminars and training for health personnel especially the nurses which form a group of professionals that should give health education to women about cervical cancer. This training may be done as part of the orientation programme to newly employed staff" (Awodele et al 2011).

"Countries that have organized screening programs have substantially reduced cervical cancer incidence and mortality. Screening programs have the potential to be effective because cervical cancer is easily accessible to biopsy, there is a long latent period easily recognizable before development of cancer and there is an effective treatment in precursor disease" (McCarey 2011).

Disease Burden

Cervical cancer is the second most commonest occurring cancer among women in sub-Saharan Africa, accounting for an estimated 20-25% of all new cancers among women. The World Health Organization (WHO) estimates the annual age-standardized cervical cancer incidence rate in Ghana as 29.3/100,000, which is four times the US rate, while

the mortality rate is 23.8/100,000, or ten times the US rate. Some studies have reported that among gynecological cancers diagnosed at a large hospital in Ghana, cervical cancer accounts for about 60% of cases, while 70% of these cases are diagnosed at an advanced stage.

But cervical cancer need not kill or affect so many women. We know that persistent infection with some specific strains (so called high risk strains) of the Human Papilloma Virus (HPV), a sexually transmitted infection, is the cause of virtually all cases of cervical cancer. Cervical cancer is one of the very few cancers caused by an infection and this peculiarity serves as a good first point in our fight against the disease.

Also, a study estimated that 70,722 new cases of invasive cervical cancer (ICC) occur annually in sub-Saharan Africa and it is responsible for one-quarter of all female cancers (Louie, De Sanjose, et al., 2009).It manifests over many years, even decades, in a minority of women with pre-cancer, with a peak or plateau in risk at about 35–55 years of age of symptomatic presentation (Schiffman et al., 2007).

The disease manifests over many years, even decades, in a minority of women with pre-cancer, with a peak or plateau in risk at about 35–55 years of age of symptomatic presentation (Schiffman et al., 2007).

A comparative analysis conducted by Jemal et al. (2011) showed that the age-specific rate of cervical cancer incidence per 100,000 people in developing nations (17.8) was

about twice that of developed nations (9.0), and the mortality rate (9.8) was thrice that of developed regions (3.2) (Jemal et al., 2011). They went on to state that more than 85% of cervical cancer cases and deaths occur in developing countries.

In Ghana, cervical cancer is the leading cause of cancer related death among women and the mortality rates are among the highest in the world (Murthy et al., 2010). This has shown an inverse relationship between the incidence rate in developed countries and that of Ghana, such that while the incidence rate in the developed countries is declining gradually, that of Ghana is increasing. It is predicted that by year 2025, 5,000 new cases of cervical cancer and 3,361 cervical cancer deaths will occur annually in Ghana (World Health Organization, 2006). In year 2011, it is indicated that women were screened for cervical cancer using Papinocolou smear (PAP) and results revealed that, out of 1116 women screened 11(1%) were cervical cancer cases (Ghana Health Service (GHS), 2011).

Cervical cancer is the commonest gynaecological malignancy seen at the Korle Bu teaching hospital, being reported to make up 64% of gynaecological malignancies seen at the hospital. Cervical cancer is however known to be a preventable disease. Cervical cancer is strongly associated with Human Papilloma Virus (HPV) infection, which can be acquired through sexual intercourse

This implies that prevention of cervical cancer can be achieved through the same measures recommended for prevention of HIV and sexually transmitted infections (STIs)

and also through cervical cancer screening. Abstinence from sexual intercourse, having only one sexual partner and consistent correct condom use are the methods recommended to prevent STIs. Cervical cancer screening in many hospitals in Accra is done by Papanicolau (Pap) smear and visual inspection of the cervix with acetic acid (VIA). Cervical cancer screening procedures are able to detect pre-malignant lesions of the cervix, which can be treated and so prevent progress to cervical cancer. Premalignant cervical lesions are generally asymptomatic, hence the need for cervical cancer screening programmes that target healthy women (Adanu et al, 2010)

Ghana has a population of 8.57 millions women ages 15 years and older who are at risk of developing cervical cancer. Crude incidence rates of HPV-related to cervical cancer is 24.3. With regards to the burden of cervical cancer, annual number of new cases/deaths is 3052 (Incidence), 1556 (Mortality), Crude rate is 24.3 (Incidence), 12.4 (mortality). The age-standardized rate is 35.4 incidence and mortality is 18.9 whereas Cumulative risk 0-74 years (%) is 3.8 incidence and 2.1 mortality. In ranking of cervical cancer (all years or ages) incidence is 1st as well as mortality whiles in ranking of cervical cancer (15-44 years), the incidence is also 1st but mortality is 2nd (ICO Information Centre on HPV and Cancer; Fact sheet 2016).

However, improvement in screening services will not by itself be sufficient to result in increased screening uptake, unless we understand and address the multifaceted health beliefs that are likely to influence women's willingness to schedule and obtain screening. While a study conducted in 2003 found that education was significantly associated with

screening among a large sample of women in Accra, little is known about Ghanaian women's knowledge and beliefs about cervical cancer and screening. The purpose of this study is to describe the level of knowledge and cervical cancer screening behaviors among a sample of female health professionals in some selected health facilities within the La-Nkwantanang Municipal, Accra Ghana.

CHAPTER THREE

3.0 METHODOLOGY

Introduction

This chapter focuses on the research design and methods used to carry out the study. It also gives a description about the data collection technique and tools, study population, study variables, sampling techniques, pre-testing, data handing and analysis, ethical considerations, limitations and assumptions.

3.1 Research Method and Design

A cross sectional study design and an in-depth interview was employed for this research study. This study elicited information on level of knowledge, sources of information, health care services and screening practices among female health professionals in some selected health facilities such as Pentecost hospital, Madina polyclinic-Kekele, Madina polyclinic–Rawlings Circle and Danfa health centre on cervical cancer from the sampled respondents with diverse characteristics, through the use of a 37 items questionnaires. The quantitative nature of the questionnaires helped in both descriptive and analytical statistics of the information gathered which are in the forms of frequencies, percentages.

3.2 Data Collection Technique and Tool

A quantitative and qualitative data collection technique was used in collecting the data. Quantitative Method; A structured questionnaire was adopted and modified through literature reviews (Ofori-Attah 2015), (Kloku 2014), (Kumar and Tanya 2014), (Urasa and Darj 2011) and expert discussions. This tool was in 5 sections, thus A, B, C, D, and E which elicited information on respondent's demographic characteristics, level of

knowledge on cervical cancer, their screening behaviors and practices. It also had both closed and open-ended questions in defined sections.

Qualitative Method; An depth Interview guide was developed in accordance with the main objectives to interview key persons such as nursing heads of each selected health facility. The interview guide had explorative questions which elicited information on the level of knowledge, screening behaviors of female health staff as well as the help plans of health facility managements towards the welfare of their staff in relation to cervical cancer. The interviews lasted for about 7 to 20 minutes and were recorded on an audio recorder.

3.3 Study Population

The population for the study consisted of female health professionals or workers who were working in the various health facilities such as Danfa Health Centre (52), Madina Polyclinic-Rawlings Circle (66), Madina Polyclinic-Kekele (104) and Pentecost Hospital (98) within the La Nkwantanag Madina municipality for at least one (1) year. The total population of female health professionals for the study was 320. The population of the female health professionals were similar in characteristics such as age, educational level, socio-economic status, professional levels, religious affiliation and others.

Also, key persons such as the nursing heads of the various health facilities within the La Nkwantanang Madina Municipality were used, one from each facility.

3.4 Study Variables

QUANTITATIVE

Dependent Variable;

Screening practices; Tests or examinations done to detect or know one's status on cervical cancer.

Independent Variable;

Level of knowledge; Amount of information on cervical cancer.

Source of information; where information on cervical cancer was derived from.

Health Care Services; Available health care services on cervical cancer.

QUALITATIVE

CODE	MEANING
K1	The key informant for Madina Polyclinic Kekele
P2	The key informant for Pentecost Hospital
D3	The key informant for Danfa Health Centre

Author's Construct

3.5 Sampling

To ensure high external validity of the research findings, it was ensured that respondents selected had the characteristics found in the general population. In other words, steps were taken to ensure respondents had diverse characteristics in terms of age, educational level, socio-economic status, professional levels, and religious affiliation in reflection of what pertains in the general population. Due to this, results of the study can be generalized beyond the scope of this research.

Sampling Technique

In selecting the health facilities and study participants for this study, a multistage sampling method was employed.

- Purposive sampling was used since the sub municipals under the municipality are only three and as such two of them had the similar characteristics which could be represented by one of them. One (Danfa sub municipal, thus Danfa Health Centre 31 (16%)) out of the two sub municipals (rural urban communities; Pantang and Danfa sub municipalities) was selected by balloting with "YES" and "NO" inscription, where "YES" meant "included in the study" and "NO" meant "excluded from the study". Then it was added to the urbanized sub municipal; Madina sub municipal (Pentecost Hospital 59 (31%), Madina Polyclinic-Kekele 63 (32%) and Madina Polyclinic-Rawlings Circle 40 (21%)).
- Probability proportion to size was used for the selection at the facility and department level. Based on variations in health facility infrastructure,

respondents were enrolled as were available in each facility following the eligibility criteria for the study. This technique allowed participants of desired characteristics to be obtained. This technique was employed for the study because of the researcher's interest to obtain female health professionals with varied characteristics. It enable the researcher to ensure that female health professionals with different age, religious affiliation, professional level, educational level and others, were fairly treated in the study.

For the Qualitative Approach; Purposive sampling was employed. The nursing heads of each facility was interviewed using an in-depth interview guide. They were purposively selected based on their experience and also had some vital information that helped enrich the study. This was done to lay more emphasis and clarity on the findings gathered from each facility level during the study.

Sample Size Calculation

The sample size was calculated by bearing in mind the following;

- The margin of error to be 5%
- The confidence level of 95%
- The prevalence of 50%
- The population 320 (Permanent
- With a non-respondent effect of 10%

The calculated sample size using the Raosoft sample size calculator is 193.

NAME OF HEALTH FACILITY	TOTAL POPULATION (FEMALE HEALTH PROFESSIONALS)	NUMBER SAMPLED AND PERCENTAGE (%) (FEMALE HEALTH PROFESSIONALS)
PENTECOST HOSPITAL	98	59 (31%)
MADINA POLYCLINIC - KEKELE	104	63 (32%)
MADINA POLYCLINIC – RAWLINGS CIRCLE	66	40 (21%)
DANFA HEALTH CENTRE	52	31 (16%)
TOTAL	320	193 (100%

Author's Construct

For the Interview

In total, three key persons were interviewed instead of four. This was due to the fact that the fourth key person was not available for the interview and all appointments made with her failed.

Inclusion Criteria

Female health professionals who were;

18 to 60 years

Permanent staff working for at least one year

Had professional certificate as the least educational level

Exclusion Criteria

Student workers

Orderlies and Casual workers

3.6 Pre-Testing

The study was pretested with a sample size of 10 female health professionals within the Ga East district, which can be found in the Greater Accra Region of Ghana. The population had the same demographic and socioeconomic characteristics and similarities as compared to the selected study population. Pre-testing revealed the weakness of the data collection tool (the questionnaire) of which corrections were made to address the weaknesses observed (modified).

3.7 Data Handing

The data extracted from the questionnaire was entered into Epi Info software programme. And checked for completeness, all corrections and cleaning made. These checks were done and back-up copy saved on an external hard disc for safe -keeping.

Qualitative; the interviews with the stakeholders were recorded on an audio recorder and then transcribed.

3.8 Data Analysis

The questionnaires were coded before analysis. Descriptive analysis was employed to determine the level of knowledge about cervical cancer among the respondents.

Graphical presentation such as tables, graphs and charts are presented in the results chapter to illustrate the findings. STATA version 14 for Windows (STATA Corp., College Station, Texas, United States) was used to analyze the data.

Qualitative; statements of each interviewee was coded. The statements of each interviewee was read. Themes were developed from each statement, compared and analyzed.

3.9 Ethical Consideration

A research proposal was sent to the Ethics Review Board of Ensign College of Public Health, then permission sought from the school; thus an introductory letter from the Community Health Department of Ensign College of Public Health was given to me and thereafter delivered to the Municipal Director of La-Nkwantanang Madina; Miss Prinscilla Siaw and then she gave me introductory letters to the heads of the four health facilities. (Pentecost Hospital, Madina Polyclinic-Kekele, Madina Polyclinic-Rawlings Circle and Danfa Health Centre) where data was collected.

The consent of participants was acknowledged before the study was commenced. Also, consent of the interview participants were sought under no pressure and inducement of any kind to encourage individuals to participate in the study. Participants‟ freedom to partake or withdraw from the study at any time, was respected (voluntary participation).

Furthermore, confidentiality and anonymity of respondents was guaranteed.

3.10 Limitation / Challenges

Some participants refuse because of work or being on duty and so will give the questionnaires out and come for it later.

3.11 Assumptions

1. That the municipal health directorate will cooperate in conducting the research within the municipality.

2. That the heads and management of the various health facilities will cooperate in conducting the study among the female health professionals.

3. There will be full participation of the consented respondents

4. That the respondents will answer all questions on the questionnaire.

5. That there will be a 100% respondent rate.

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CHAPTER FOUR

4.0 RESULTS

Introduction

Results of the research study are found in this chapter and are based on the research study objective. Findings are presented in tables, charts and graphs, which elicits the results in quantitative analysis. This chapter elicits the results on the knowledge of cervical cancer, sources of information, assessing cervical cancer health care service access, screening practices and the determinants of cervical screening among female health professionals in Pentecost hospital, Madina Polyclinic Kekele, Madina Polyclinic Rawlings Circle and Danfa health Centre.

Response Rate

Out of the 193 female health professionals sampled for the study, 171 responded to the study, which was 89% respondent rate. At the time of data collection. Some staff had gone on leave, transfer, workshop training and others.

Socio-demographic Characteristics

Name of Variable	Categories.	Frequency (N)	Percentage (%).
GENDER	Female	171	100
AGE GROUP (In years).	15-19	1	0.6
	20-25	44	26.35
	26-30	47	28.14
	31-35	38	22.75
	36-40	19	11.38
	40 & Above	18	10.78
	Total	167	100
ETHNICITY	Ga	24	14.12
	Akan	47	27.65
	Ewe	39	22.94
	Fante	14	8.24
	Dagare	16	9.41
	Nzema	9	5.29
	Others	21	12.35
	Total	170	100
MARITAL STATUS	Single	60	36.36
	Married	90	54.55
	Separated	3	1.82
	Divorced	1	0.61
	Widowed	8	4.85
	Co-habiting	3	1.82
	Total	165	100
RELIGION	Christian	145	85.29
	Muslim	21	12.35
	Traditionalist	2	1.18
	No Religion	2	1.18

Source; field survey data 2017

Name of Variable	Categories.	Frequency (N	Percentage (%).
EDUCATIONAL LEVEL	Certificate	51	30.36
	Diploma	34	20.24
	Advance Diploma	27	16.04
	Degree	34	20.24
	Above 1st Degree	22	13.10
	Total	168	100
OCCUPATION	Nurse	120	71,43
	Doctor	1	0.60
	Physician Assistant	14	8.33
	Pharmacist	6	3.57
	Laboratory Tech.	16	9.52
	Dispensary Tech.	3	1.79
	X ray Tech.	2	1.19
	Others	6	3.57
	Total	168	100
WORK DEPARTMENT	OPD	42	25.00
	Maternity	32	19.05
	RCH	35	20.83
	Ward	2	1.19
	Theatre	4	2.38
	Others	53	31.55
	Total	168	100
) Have you, or any member of your family or friends ever been diagnosed with Cervical Cancer?	Yes	14	8.75
	No	146	91.25
	Total	160	100

Source; field survey data 2017

Table 4.1; Socio-demographic characteristics.

Table 4.1 shows the demographic characteristic of the female health professionals used in the study. Majority of the respondents (28%) were within the age group of 26 -30 years. Christians made up 85% of the respondents whiles Muslims were 12% and 1.8% had no religion.

However, the dominant ethnic group was Akan (27%), followed by Ewe (22%).

Over half (54%) of them were married. Approximately, 30% of the female health professionals surveyed had Certificate in nursing and they were the highest respondents.

Majority of the respondents recruited in this study were nurses (71%).

8.75% of the respondents have a family member or friend diagnosed of cervical cancer.

KNOWLEDGE ON CERVICAL CANCER

Table 4.2; Basic Knowledge About Cervical Cancer

As part of the assessment of the level of knowledge level of the study respondents, they were asked to give their opinion about some warning signs associated with cervical cancer by ticking “Yes”, “No” or “Don’t know”.

12. The following may or may not be warning signs for cervical cancer. We are interested in your opinion:			
Signs or "non-signs"	**Yes (%)**	**No (%)**	**Don't know (%)**
Do you think abnormal vaginal bleeding between periods could be a sign of cervical cancer?	**109(64.50)**	**42(24.85)**	**18(10.65)**
Do you think persistent lower back pain could be a sign of Cervical cancer?	**75(44.91)**	**60(35.93)**	**32(19.16)**
Do you think a persistent unpleasant vaginal discharge could be a sign of cervical cancer?	**94(56.29)**	**44(26.35)**	**29(17.37)**
Do you think discomfort or pain during sex could be a sign of cervical cancer?	**84(50.60)**	**38(22.89)**	**44(26.51)**
Do you think menstrual periods that are heavier or longer than usual could be a sign of cervical cancer?	**71(42.01)**	**68(40.24)**	**30(17.75)**
Do you think persistent diarrhea could be a sign of cervical cancer?	**14(8.43)**	**130(78.31)**	**22(13.25)**
Do you think vaginal bleeding after the menopause could be a sign of cervical cancer?	**83(49.70)**	**43(25.75)**	**41(24.55)**
Do you think persistent pelvic pain could be a sign of cervical cancer?	**97(58.08)**	**35(20.96)**	**35(20.96)**
Do you think vaginal bleeding during or after sex could be a sign of cervical cancer?	**91(54.17)**	**38(22.62)**	**39(23.21)**
Do you think blood in the stool or urine could be a sign of cervical cancer?	**15(8.92)**	**115(68.45)**	**38(22.62)**
Do you think unexplained weight loss could be a sign of cervical cancer?	**52(31.90)**	**74(45.40)**	**37(22.70)**

Source; field survey data 2017

Table 4.2 has the percentage distribution of the responses of the study participant

Majority of the respondents identified vaginal bleeding between periods (109, 64.5%), persistent unpleasant vaginal discharge (94, 56%), discomfort or pain during sex (84, 51%), vaginal bleeding after menopause (83, 49.7%) and vaginal bleeding during/after sex (91, 54.1%) as possible warning signs and symptoms of cervical cancer.

Also, majority of the respondents agreed that persistent lower back pain (75, 44.9%), persistent pelvic pain (97, 58%) were equally part of the signs and symptoms of cervical cancer.

On the other hand, 45.4% of the respondents said unexplained weight loss is not a sign or symptoms of cervical cancer.

Nevertheless, most of them correctly identified persistent diarrhea (130, 78.3%) and blood in stool or urine (115, 68.4%) not to be signs and symptoms of cervical cancer.

Table 4.3; Knowledge on age at risk

Respondents were ask “In your opinion, which age range of women is most likely to develop cervical cancer in Ghana”?

Women Age Range	Frequency	Percentage
10 to 19	8	4.71
20 to 29	29	17.06
30 to 49	64	37.65
50 to 69	47	27.65
70 and above	16	9.41
Unrelated to age	6	3.53

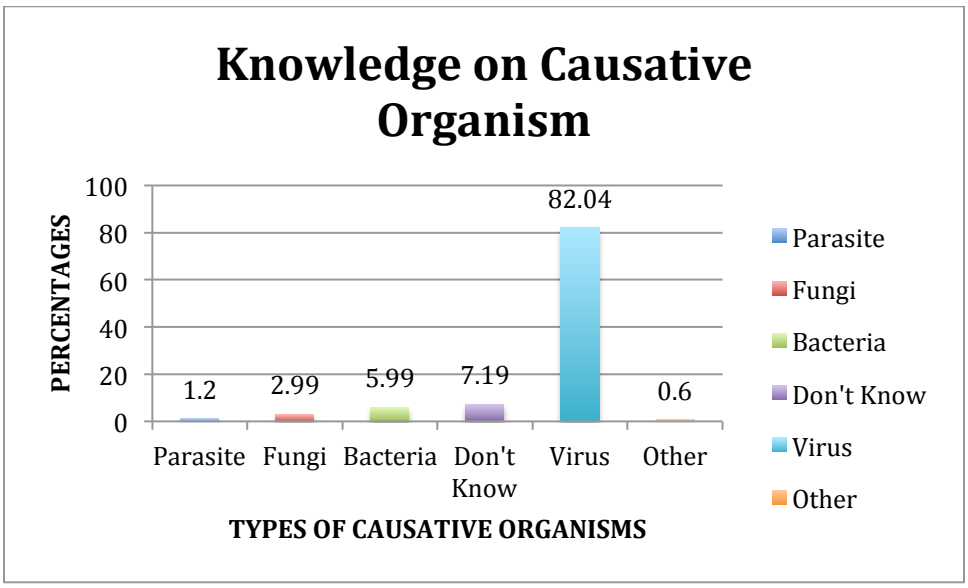
Source; field survey data 2017

Table 4.3; shows that majority (64, 37.65%) of the respondents identify women age range from 30 49 years, (47, 27.65%) identify women age range from 50 to 69 years and (29, 17.06%) identify women age range from 20 to 29 years are most likely to develop cervical cancer. (6, 3.53%) are of the opinion that developing cervical cancer is unrelated to age.

Figure 4.1; Knowledge on the causative organism of cervical cancer.

Even though some of the female health professionals did not know (12, 7.19%) the causative organism of cervical cancer, majority knew it as a virus (137, 82.04%) and others knew it as bacteria (10, 5.99%), fungi (5, 2.99%) and as parasite (2, 5.99%).

(Includes multiple responses).



Source; field survey data 2017

Figure 4.1

Table 4.4; HPV as a cause of cervical cancer.

	Frequency	Percentages (%)
YES	124	75.15
NO	7	4.24
DON'T KNOW	34	20.61

Source; field survey data 2017

Majority (75%) of the study respondents agreed that HPV causes cervical cancer whiles only (4%) a few of them do not agree. 20.6% Respondents do not know that HPV causes cervical cancer.

Table 4.5 Knowledge About The Risk Of Developing Cervical Cancer (Likert Scale)

Table 4.5; The table shows the percentage distribution of the female health professional's chances of developing cervical cancer. The psychometric response scale (Likert scale) was primarily used in this questionnaire to obtain respondents preference or agreement with the set of statements.

23. The following may or may not increase a woman's chance of developing cervical Cancer. How much do you agree that each of these can increase a woman's chance of developing cervical cancer?	Strongly disagree (%)	Disagree (%)	Not sure (%)	Agree (%)	Strongly agree (%)
Infection with HPV (human papilloma virus)	4(2.4)	6(3.59)	36(21.56)	67(40.12)	54(32.34)
Smoking any form of cigarettes.	18(10.98)	33(20.12)	49(29.88)	39(23.78)	25(15.24)
Having a weakened immune system (e.g. because of HIV/AIDS, immunosuppressant drugs or having a transplant)	16(9.52)	31(18.45)	48(28.57)	51(30.36)	22(13.10)
Long term use of the contraceptive pill	16(9.64)	57(34.34)	57(34.34)	33(19.88)	3(1.81)
Infection with Chlamydia (a sexually transmitted infection)	14(8.48)	38(23.03)	36(21.82)	44(26.67)	33(20.0)
Having a sexual partner who is not circumcise	28(16.77)	34(20.36)	45(26.95)	42(25.15)	18(10.78)
Starting sexual intercourse at a tender age (before age 17)	10(5.95)	28(16.67)	31(18.45)	59(35.12)	40(23.81)
Having many sexual partners.	6(3.59)	15(8.98)	25(14.97)	74(44.31)	47(28.14)
Having many children	19(11.31)	53(31.55)	65(38.69)	30(17.86)	1(0.60)
Having a sexual partner with many previous partners	7(4.27)	17(10.37)	38(23.17)	59(35.98)	43(26.22)
Not going for regular smear (Pap)	4(2.4)	18(10.78)	35(20.96)	75(44.91)	35(20.96)

Source; field survey data 2017

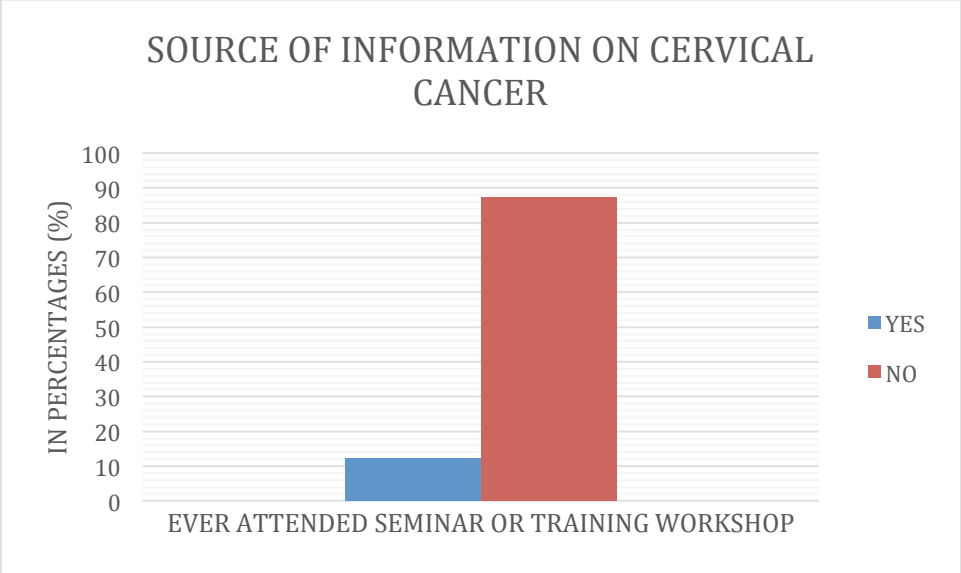
As seen in the table above, majority of the respondents agree that infection with HPV (40%), having a weakened immune system (30%), infection with chlamydia (27%), starting sexual intercourse at a tender age (35%), having many sexual partners (44%), having a partner with many previous partners (36%) and not going for regular pap smear screening (45%) increases a woman's chance of developing cervical cancer.

More so, majority of the respondents were not sure that, smoking any form of cigarette (30%), long term use of contraceptive pill (34), having a sexual partner who is not circumcised (27%), and having many children (39%) increases a woman's chance of developing cervical cancer.

In contrast, 34% of the respondents disagree that, long term use of contraceptive pill can increase a woman's chance of developing cervical cancer.

SOURCES OF INFORMATION ON CERVICAL CANCER

Figure 4.2; Ever attended seminar or training on cervical cancer screening?

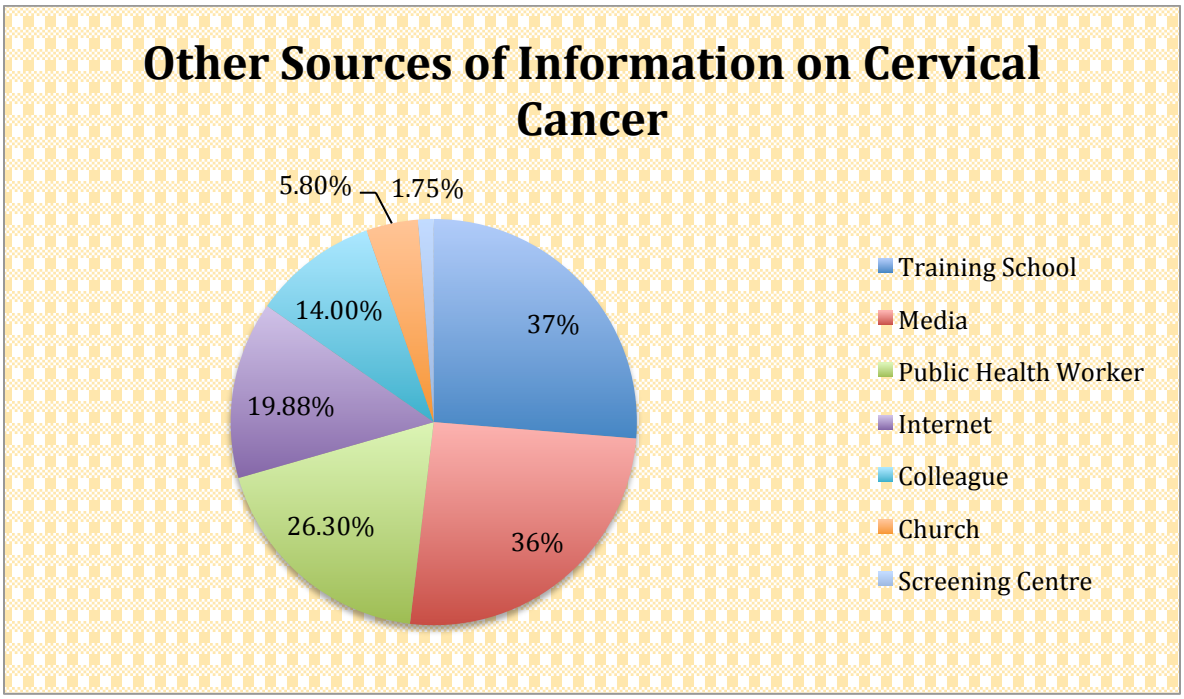


Source; field survey data 2017

Majority (148, 87.57%) of the female health professionals said they have never attended any seminar or training workshop on screening and treatment of cervical cancer.

Also, a few (21, 12.43%) have ever attended a seminar or training on screening and treatment of cervical cancer.

Figure 4.3; Other sources of information



Source; field survey data 2017

Majority (37%) of the respondents' source of information on cervical cancer is training school, followed by media (36%), the public health provider (26.3%). Also, internet (19.88%), colleagues (14.0%), church (5.8%) and screening centre (1.75).

These include multiple responses.

HEALTH CARE SERVICES ON CERVICAL CANCER

Table 4.6 Pap smear screening

Pap smear screening?	**Frequency**	**Percentages (%)**
YES	143	87.20
NO	21	12.80

Source; field survey data 2017

Approximately, 87 % of female health professionals who enrolled in the study knows the availability of the pap smear screening and 12.8% do not know of it.

Table 4.7 Availability of Cervical cancer screening program

Availability of screening programs	**Frequency**	**Percentage (%)**
YES	39	25.49
NO	114	74.51

Source; field survey data 2017

It is clear in the table above that screening program is known to 114 respondents which 74.51% as been available.

Table 4.8 Popularity of HPV Vaccination against Cervical Cancer

Vaccination Popularity	**Frequency**	**Percentage (%)**
YES	78	47.85
NO	85	52.15

Source; field survey data 2017

Table 4.9 shows that 52% of the respondents believe that HPV vaccination not gaining popularity and 47.85 approximately 48% are of the opinion that vaccination is gaining

Table 4.9 SCREENING PRACTICES

Ever Screened for Cervical Cancer?

Ever screened for cervical cancer	**Frequency**	**Percentage (%)**
YES	28	16.47
NO	142	83.53

Source; field survey data 2017

Majority (142, 83.53) of the respondents have never screened for cervical cancer

Table 4.10 Last Time of going for screening (In Years).

Last time of screening	Frequency	Percentages
< 1 year	2	11.76
1 to 2 years	5	29.41
2 to 3 years	2	11.76
3 to 4 years	7	41.18
5 years and above	1	5.88

Source; field survey data 201

Majority (7, 41%) of the respondents' last time of screening is 3 to 4 years

FINDINGS ON INTERVIEWS

Views of key informants about knowledge on cervical cancer and it's screening behaviors of their female health staff.

K1

"Women in WIFA age group should go for screening because it is for their own or our own benefit. For screening, staff complain that the money is too much and I tell them it is for 50 cedis and we spend more than 50 cedis on items. Some staff do not go for screening for fear of the unknown".

P2

"As health professionals, there is a saying that you are better off if you don't know. And since we have much knowledge as far as health is concern. There are some people who wants to know what is worrying them and there are others who do not want to know. Its kind of two sides"

.

D3

"I particular have never heard of any circular telling facilities asking female staff for cervical cancer screening. Apart from me hearing it on radio or reading my newspaper, I have not heard of cervical cancer being talked about. Cervical cancer has been something hidden among us. We hardly talk about it or discuss it, or even where to go for screening. It has been something we have not added to our day to day activities. I have never heard that Ghana Health Services has a policy on cervical cancer for staff. During my public school years I heard much about it and also went for the screening. Some

health professionals do not like to go for the screening because of fear of getting a positive result and some also think that they do not have the disease"

Health care mechanisms or plans made by health facilities towards the health needs of female health professionals.

K1

"I don't know about this place but I would have to ask, am new and have spent less than six weeks. But from my former place of work, the facility organizes medical screening for all staff yearly. This includes; typhoid, breast cancer and others, but it does not include cervical cancer screening. We go for clinic pathological meetings and we discuss communicable and non-communicable diseases".

P2

"We organize annual medical screening for all staff were they are screen. Majority attends. When a staff have been diagnosed of cervical cancer which none has occurred ever since I came here or any other condition, the hospital has laid down structures be it financially, psychologically, give every support that the person will need. We do pap smear here".

D3

"Since I came here in 2014, I have not heard of any staff been diagnosed of cervical cancer or any other cancer or disease and been assisted by the facility. Apart from

cancer issue when you are sick even here, without health insurance, you foot your own bills. If the facility should pay for 20 people, the facility will break down. So there is no policy that when you are a staff and sick you should be treated freely. You use your health insurance.

CHAPTER FIVE

5.0 DISCUSSION

Introduction

This chapter discusses key findings with relevant literature while citing appropriate references. It elicits the level of knowledge and screening practices among female health professionals in some selected health facilities within the La Nkwantanag Madina Municipality in the Greater Accra Region.

KNOWLEDGE ON CERVICAL CANCER

"Cervical cancer is common among women in the reproductive age of 15 to 49 years. In Ghana, cervical cancer is the leading cause of death in gynecological cancers. Every year, 3,038 new cases are recorded and out of this, over 2000 women die from the disease" (WHO, 2012).

Lack of knowledge about cervical cancer in the population and among healthcare workers is a prime barrier for access to cervical cancer prevention (Tebeu et al 2008) (Agurto et al 2004) (Tebeu et al 2009) as cited in McCarey 2011.

If the health professionals who the public sees as highly inclined on issues concerning health do not have adequate knowledge and understanding about cervical cancer, then what of the larger population.

This study revealed that majority of the respondents identified vaginal bleeding between periods (109, 64.5%), persistent unpleasant vaginal discharge (94, 56%), discomfort or pain during sex (84, 51%), vaginal bleeding after menopause (83, 49.7%) and vaginal

bleeding during/after sex (91, 54.1%) as possible warning signs and symptoms of cervical cancer. Also, majority of the respondents agreed that persistent lower back pain (75, 44.9%), persistent pelvic pain (97, 58%) were equally part of the signs and symptoms of cervical cancer. Majority knew that the causative organism for cervical cancer is a virus (137, 82.04%) and (75%) of the study respondents agreed that HPV causes cervical cancer. These results are a little more than what was found in a study by Kloku 2014. Whiles in Ebu et al 2011 had lower results.

However, more than half of the female health professionals identified the common signs and symptoms of cervical cancer, causative organism, and HPV causing cervical cancer.

Risk factors for cervical cancer include early onset of sexual activity, multiple sexual partners, infection with HPV, poor hygiene, family history of the disease, smoking, high parity, low socioeconomic status, old age, and prolonged use of oral contraceptives .(Goldsmith et al., 2007; Castellsague et al., 2002;Anttila et al., 2001), as cited by Kloku 2014.

Using the Likert scale, which has statements that measure the level or strength of an agreement. Respondents give or tick varying statement in relation to the questions.

In this study, majority of the respondents agree that infection with HPV (40%), having a weakened immune system (30%), infection with chlamydia (27%), starting sexual intercourse at a tender age (35%), having many sexual partners (44%), having a partner with many previous partners (36%) and not going for regular pap smear screening (45%) increases a woman's chance of developing cervical cancer.

More so, majority of the respondents were not sure that, smoking any form of cigarette (30%), long term use of contraceptive pill (34), having a sexual partner who is not circumcised (27%), and having many children (39%) increases a woman's chance of developing cervical cancer.

In contrast, 34% of the respondents disagree that, long term use of contraceptive pill can increase a woman's chance of developing cervical cancer. This shows that female health professionals have some knowledge on factors that increases a woman's chance of developing cervical cancer.

SOURCES OF INFORMATION

According to the findings of this study, Majority (37%) of the respondents' source of information on cervical cancer is training school, followed by media (36%), the public health provider (26.3%). Also, internet (19.88%), colleagues (14.0%), church (5.8%) and Screening Centre (1.75). (it includes multiple answers).

Also, a few (21, 12.43%) have ever attended a seminar or training on screening and treatment of cervical cancer. Female health professionals had their information on cervical cancer from school, mass media, public health provider and the using of internet primarily. Other studies (Awodele et al 2011) (Kumar and Tanya 2014) and have shown similar results on the sources of information regarding cervical cancer

HEALTH CARE SERVICES ON CERVICAL CANCER

A study conducted by APJCP in 2009 showed that most nurses knew about the Pap smear test as a cervical cancer screening method“.

Approximately, 87 % of female health professionals who enrolled in this study knows the availability of the Pap smear screening and 12.8% do not know of it. This is an indication that Pap smear screening is known by female health professionals.

SCREENING PRACTICES

A previous study by Ebu et al 2014 made it clear that participants had no knowledge of cervical cancer nor the Pap smear test even though they had high risk of the disease

According to a previous study done by Urasa and Darj 2011, most nurses (84.6%) had never had a Pap smear examination.

Results from this study also reveals that Majority (142, 83.53) of the respondents have never screened for cervical cancer. In conclusion, female health professionals have some knowledge about Pap smear screening as a preventive measure for cervical cancer but they do not go for screening. Of those who go for screening, the time is between 3 to 4 years.

INTERVIEW

Views of key informants about knowledge on cervical cancer and it's screening behaviors of their female health staff.

It will be very disturbing and a big embarrassment when a health worker or professional is diagnosed of a preventable and curable disease such as cervical cancer at stage three or even four, where little can be done to help that person at that time. If the health worker or staff had gone for regular screening or Pap smear, the situation would have been different.

According to the three key informants (K1, P2 and D3) of the selected health facilities under study, they all mentioned that some female health staff do not go for screening because of the fear of the unknown or positive result, some just doesn't want to and lastly cost which is in contrast of the reasons stated in a study by Ertem 2009.

Health care mechanisms or plans made by health facilities towards the health needs of female health professionals.

The "P2" facility organizes periodic medical screening, provides financial assistance to the needy and counselling support. The key informant for "K1" said she is unaware of any mechanism since she is new. The key informant for "D3" said there is no mechanism in place regarding staff welfare.

CHAPTER SIX

6.0 CONCLUSION AND RECOMMENDATIONS.

This chapter summarizes and highlights the key issues within the study that needs urgent attention and also outlines certain facts and suggestions to the various stakeholders who are concern and involve in the prevention of cervical cancer, as well as the health of health care professionals.

CONCLUSION

8.75% of the respondents have a family member or friend diagnosed of cervical cancer.

Two thirds (75%) of the respondents knew that infection with HPV causes cervical cancer

87.57% of the female health professionals have never attended any seminar or training workshop on screening and treatment of cervical cancer and 25% of the respondents' source of information on cervical cancer is training school.

Approximately, 87 % of female health professionals who enrolled in the study knows the availability of the Pap smear screening. More than half (52%) of the respondents believe that HPV vaccination is not gaining popularity in Ghana.

Majority (83.53 %) of the respondents have never screened for cervical cancer whiles 16 % have, of which 41% last time of screening is 3 to 4 years.

Some female health staff do not go for screening because of the fear of the unknown or positive result even though some facilities have mechanism in place whiles others do not have.

In actual facts, female health professionals have proven that they have some awareness and level of knowledge on cervical cancer and screening but they are not able to patronize the screening services which rather endangers their lives, since majority of the health staff are in the youthful population and their services are needed at all times in all aspects.

RECOMMENDATIONS

Based on the key findings of the study, certain measures, activities and support are needed to curb and reduce what is rendering the progress of the welfare and wellbeing of health staff and or improve upon good and effective practices to promote health.

Each and everyone have a role to play in reducing the incidence and mortalities associated with cervical cancer.

STAFF

Every female health staff needs to rise and think about their clients and patients by first being healthy, before being able to render their effective services to their clients and patients. Regular Pap smear should be done by every female staff at least once every 3 years or as directed by your screening provider. There is a saying that “charity begins at

home". Staff should start inculcating regular Pap smear into their sexually active female children who are above 21years and also send the young or adolescent female or girl child for HPV vaccination. Staff should have a habit of updating their knowledge at every opportunistic or given time on health issues.

HEALTH FACILITY HEADS

Facility can set done policies that will help by making annual compulsory medical screening for all staff which should be a pre requisite for promotion of staff.

MUNICIPAL HEALTH DIRECTORATE

The municipal health directorate should organize training workshops for all staff within the municipality on cervical cancer and screening. They should also sensitize them on the screening to allay fears. Also, programs on cervical cancer within the entire municipality to both the general public and the staff should be organized through radio and television broadcast, health education in schools, churches, durbars, and other gatherings. Again, posters and flyers should be distributed to the public.

MINISTRY OF HEALTH AND GHANA HEALTH SERVICE

Develop policies on cervical cancer for all health staff. Liaise with other non-governmental organizations and solicit for funds and logistics for cervical cancer awareness campaign programs. Making a screening a pre requisite for entering into the health training institutions and compulsory for staff's promotion. There should be a sector in charge for solely activities on cervical cancer in each health institutional

departments and to make all health facilities organize quarterly programs on awareness and sensitization of cervical cancer and free screening for the general public. The National Health Insurance Scheme should include screening and treatment of all cases related to cervical cancer. Make vaccination a routine national immunization for all adolescent girls. Have more researches done on cervical cancer in the country to help know how to develop strategies and policies for cervical cancer. Subsidize fee for screening and vaccination fee for all adolescents and women. Train more screening service providers and create cervical cancer registry in all regions in the country.

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APPENDICES

APPENDIX A

INFORMED CONSENT

Project Title: Cervical Cancer Knowledge and Screening behaviors among female health professionals in the La-Nkwantanang Municipality of the Greater Accra Region. Principal Investigator: Rejoice Ziwu, Contact of Principal Investigator:; 0242052215, Email; rziwu@yahoo.com.
Name of Institution; Ensign College Of Public Health

General Information About The Research

This research is a study on knowledge and screening behaviors of cervical cancer among female health professionals. It is being conducted in some health institutions within the municipality The purpose of the study is to determine the level of knowledge and screening behaviors among the study population. I am inviting you to participate in the study to assess your knowledge and screening practices on cervical cancer. You were randomly selected to participate in the study, and if you agree to participate in this study, it may take between 10-15 minutes to complete the questionnaire.

The inconvenience that the interview will cause you, the time you will spend answering the questions and some of the questions may seem personal and sensitive, the information will be accessible only to me and would not be shared with anyone; it will be used only for the purposes of this study, your name will not be mentioned in the study of which nobody will be able to trace your answers back to you.

Even though there are no direct benefit, the information that will be obtained from this study will help in addressing issues relating to cervical cancer, and how to improve its prevention and control measures and design evidence-based strategies. Your participation in the study is entirely voluntary. If you agree to participate in the study, it may take 10-15 minutes to complete this questionnaire. You can also withdraw your consent to participate in the study. If you decide not to participate in the study, there will be no penalty, loss of benefits or negative consequences whatsoever. Anonymity and Confidentiality Any and all information you share in completing this questionnaire will be treated confidentially and no personal identifying information concerning you will be presented. Results of the study will be made available to the general public through seminars, presentations at conferences, general awareness programmes in collaboration with the Media, government agencies and academic/research institutions in print, electronic and audio forms. If you would like to find out more about the study or have any questions please contact the Principal Investigator, Participant Agreement.

The above document describing the benefits, risks and procedures for the research titled "Cervical cancer knowledge and screening behaviors among female health professionals in the La- Nkwantanang municipality" has been read and explained to me. I have been given an opportunity to have any questions about the research answered to my satisfaction. I voluntarily agree to participate in the study.

……. ……..
Date of Consent **Signature of participant**

APPENDIX B

QUESTIONNAIRE

ENSIGN COLLEGE OF PUBLIC HEALTH, KPONG, EASTERN REGION OF GHANA (MASTER OF PUBLIC HEALTH)

The researcher is an mph student of ENSIGN COLLEGE OF PUBLIC HEALTH conducting a research on Cervical Cancer Knowledge and screening behaviors. The questionnaire is designed to seek your candid views about the topic.

The researcher will be grateful if you could devote some of your quality time to study and answer this questionnaire. **All answers will be treated as confidential** and will be used for statistical analysis, research and academic purposes only.

CERVICAL CANCER KNOWLEDGE AND SCREENING BEHAVIORS AMONG FEMALE HEALTH PROFESSIONALS IN THE LA – NKWANTANANG MADINA MUNICIPALITY.

Researcher: Rejoice M. Y. Ziwu Tel: 0203664035 Email; rziwu@yahoo.com

Date of interview: _____

Questionnaire Number: _____

Location / Facility Name; _____

Interviewer: _____

SECTION A

DEMOGRAPHIC CHARACTERISTICS

1. Age ; ……..

   5-19 [ ] 20-25 [ ] 26-30 [ ] 31-35 [ ]
   36-40 [ ] 41 and above [ ]

2. Gender. Male [ ] Female [ ]

3. Which ethnic group do you belong to?

   Ga[ ] Akan [ ] Ewe [ ] Fante [ ] Dagare[ ]
   Nzema [ ] Others, please specify ……..

4. Which Religion do you belong to?

   Christian [ ] Muslim [ ] Traditionalist [ ]
   No religion [ ] Others, please specify .....

5. What is the highest level of education qualification you have obtained?

   Certificate [ ] Diploma [ ] Advanced diploma [ ]
   Degree [ ] Above 1st Degree [ ]

6.Occupation

   Nurse [ ] Doctor [ ] Physician Assistant[ ] Pharmacist [ ]
   Laboratory technician [ ] Dispensary technician [ ]
   X- ray technician[ ] Others, please specify .....

7. Which department are you currently working?

OPD[ ] Maternity[ ] RCH[ ] Ward Type[ ]
Theatre[ ] Others, please specify; …….

8. Marital status
(a)Single [ ] (b) Married [ ] (c) Separated [ ](d) Divorced [ ]
(e) Widowed [ ] (f) Cohabitating[ ]

9. What was your age at first sexual intercourse? …….

10. How many biological children do you have? ……

SECTION B
KNOWLEDGE ON CERVICAL CANCER

11. a) Have you, or any member of your family or friends ever been diagnosed with Cervical Cancer? Yes [ ] No [ ]

b) If Yes, tick (You can tick as many as that applies)
Myself [ ] Partner [ ] My Family member [ ]
Partner family member [ ] Friend[ ]Other, please specify ……

12. The following may or may not be warning signs for cervical cancer. We are interested in your opinion:			
Signs or "non-signs"	Yes	No	Don't know
Do you think abnormal vaginal bleeding between periods could be a sign of cervical cancer?			
Do you think persistent lower back pain could be a sign of Cervical cancer?			
Do you think a persistent unpleasant vaginal discharge could be a sign of cervical cancer?			
Do you think discomfort or pain during sex could be a sign of cervical cancer?			
Do you think menstrual periods that are heavier or longer than usual could be a sign of cervical cancer?			
Do you think persistent diarrhea could be a sign of cervical cancer?			
Do you think vaginal bleeding after the menopause could be a sign of cervical cancer? Do you think persistent pelvic pain could be a sign of cervical cancer?			
Do you think vaginal bleeding during or after sex could be a sign of cervical cancer?			

Do you think blood in the stool or urine could be a sign of cervical cancer?			
Do you think unexplained weight loss could be a sign of cervical cancer?			

13. If you had a symptom that you thought might be a sign of cervical cancer how soon would you contact your doctor to make an appointment with the doctor to discuss it?
Within a week [ ] Within a month [ ] Within a few months [ ]
Within a few years [ ]

14. How confident are you to notice a cervical cancer patient?
(a) Not all confident [ ] (b) Not very confident[] (c) Fairly confident [ ]
(d) Very confident

15. In your opinion, which age range of women is most likely to develop cervical cancer in Ghana?
(a) A woman aged 10 to 19 years[ ] (b) A woman aged 20 to 29 years [ ] (c) A woman aged 30 to 49 years[ ] (d) A woman aged 50 to 69 years [ ](e) A woman aged 70 or over[ ] (e) Cervical cancer is unrelated to age [ ]

16. What is the causative organism for cervical cancer? (a) Bacteria (b) Virus
(c) Parasite (d) fungi (e) Don't Know (f) Other, specify ……

17. Cervical Cancer is the commonest amongst gynecological cancer in Ghana (i) Agree [ ] (ii) Disagree [ ] (iii) Don't know [ ]

18. What are the causes of cervical cancer? (multiple answer acceptable) (i)Genetics [ ]
(ii) Infection [ ] (iii) Environment [ ] (iv) No idea [ ] (v)Too much sex [ ]
(vi) Other (specify)_____

19. Do you know that the HPV is the cause of Cervical Cancer?
Yes [ ] No [ ] Don"t Know [ ]

20. Can cervical cancer be treated? (i) Yes [ ] (ii) No [ ]

21. Do you think cervical cancer can kill? (i) Yes [ ] (ii) No [ ]

22. How can cervical cancer be diagnosed? (i) Blood test [ ] (ii) Pap smear (test) [ ] (iii) X-ray of the abdomen [ ]

23. The following may or may not increase a woman's chance of developing cervical Cancer. How much do you agree that each of these can increase a woman's chance of developing cervical cancer?	Strongly disagree	Disagree	Not sure	Agree	Strongly agree

Infection with HPV (human papilloma virus)					
Smoking any form of cigarettes.					
Having a weakened immune system (e.g. because of HIV/AIDS, immunosuppressant drugs or having a transplant)					
Long term use of the contraceptive pill					
Infection with Chlamydia (a sexually transmitted infection)					
Having a sexual partner who is not circumcise					
Starting sexual intercourse at a tender age (before age 17)					
Having many sexual partners.					
Having many children					
Having a sexual partner with many previous partners					
Not going for regular smear (Pap)					

SECTION C
SOURCES OF INFORMATION ON CERVICAL CANCER

24a. Have you ever attended any seminar or training workshop on screening and treatment of cervical cancer? Yes[ ] No[ ]

24b. If yes, when and where? .....

25a. Have you ever heard about cervical cancer? Yes [ ] No [ ]

25b. Where did you have your information on the cervical cancer from? Tick (√)
School [ ] Church [ ] Public Health Worker [ ]
Maternity Clinic [ ] Screening Centers[ ] Colleague [ ]
Mass Media [ ] I Internet [ ]

26. If you have any health problem concerning cervical cancer, which specific health institution would you visit for treatment.....

27a. Do you think our health institutions are doing well in creating awareness of cervical cancer? Yes[ ] No[ ]

27b. If no, what do you think should be done to create awareness of the disease? .....
.....
.....

SECTION D

HEALTH SERVICES FOR CERVICAL CANCER

28. Are you aware of Pap smear? Yes[ ] No[ ]

29a. Do you think health institutions in Ghana have available cervical cancer services? Yes[ ] No[ ]

29b. If no, what do you think is the cause of non availability of these services? .....
.....

30. What do you think contributes to the development of cervical cancer? .....
.....
.....

31a. As far as you are aware, is there a cervical cancer screening programme? Yes No

31b. If yes, at what age should women first screen for cervical cancer in Ghana? ……..

32a. Do our health institutions have vaccination to protect women against cervical cancer? Yes [ ] No[ ]

32b. If yes, at what minimum age range is it offered? ……

33a. Do you think cervical cancer vaccination is gaining popularity among women in Ghana as it should? Yes [ ] No [ ]

33b. If answer to 33 is 'Yes', what do you think is the reason for that? Rank the following in order of 1 to 3 with 1 being the most probable reason and 3 being the least probable reason.

(a). Inexpensive nature of the vaccine. ……
(b). Proximity to Screening Centers. ……
(c). More Awareness is being created. .....

33c. If answer to 33 is 'No', what do you think is the reason for that? Rank the following in order of 1 to 3 with 1 being the most probable reason and 3 being the least probable reason.

(a). High cost of the vaccine. ……
(b). Lack of Screening centres in the country. ……....

(c). Lack of awareness creation on cervical cancer. ……

34a. Have you employed any measure personally to prevent cervical cancer? Yes No

34b. If yes, what is the measure? …….

35. What recommendation would you give to ensure the prevention of cervical cancer in Ghana?

.....
.....
.....
.....

SECTION E

SCREENING PRACTICES AND BEHAVIORS

36a. Have you ever screened for cervical cancer (i) Yes [ ] (ii) No [ ]

36b. If yes, when was the last time? Less than 1 year [ ] between 1 to 2 years [ ] between 2 to 3 years [ ] between 3 to 4 years [ ] ≥ 5 years [ ]

36c. If yes, how many times? ……times.

36d. if yes, which did you go for? Pap Smear{ } VIA { } Other, please specify ……..

36e, if no, why have you not done the screening?

(i) Don't know about screening
(ii) Cost of screening is expensive.
(iii) Distance to screening centre
(iv) Attitude of screening service providers
(v) Spousal/partner opposition to being screened
(vi) Cultural/religious reasons
(vii) Screening procedure is Painful
(viii) Screening procedure is unfriendly or embarrassing
(ix) Other (Specify) _____

37. Will you voluntarily go for cervical cancer screening (i)Yes [ ](ii) No [ ]

37b. If no, why? ……
……

37c. If yes, why? ……
……

Thank you very much for responding to the questionnaire

APPENDIX C
INTERVIEW GUIDE
ENSIGN COLLEGE OF PUBLIC HEALTH, KPONG, EASTERN REGION OF GHANA (MASTER OF PUBLIC HEALTH)

CERVICAL CANCER KNOWLEDGE AND SCREENING BEHAVIORS AMONG FEMALE HEALTH PROFESSIONALS IN THE LA – NKWANTANANG MADINA MUNICIPALITY.

Researcher: Rejoice M. Y. Ziwu Tel: 0242052215 Email; rziwu@yahoo.com

Date of interview: _____

Location / Facility Name; _____

Interviewer: _____

IN-DEPTH INTERVIEW GUIDE

1. Please give a brief description about yourself as well as your roles and responsibilities within this health facility.

2. Please, from your point of view, describe cervical cancer knowledge and screening behaviors among female health staff.

3. Please what are some of the policies the facility has on cervical cancer screening for staff.
   (b). As part of the managements plans, what helps are available for staff that have been diagnosed of cervical cancer, and / or other malignant diseases or gaenacological cancers?

4. Please madam, what special programs do your facility have in place pertaining to cervical cancer within the municipality for the female health staff and or the community members?

5. Please, what is the way forward and recommendations to help in the fight against cervical cancer?
   (b). Any advice to the youth and women out there?

6. Please, have you heard of any myth surrounding cervical cancer?