SCHOOL OF PUBLIC HEALTH
COLLEGE OF HEALTH SCIENCES
UNIVERSITY OF GHANA

CERVICAL CANCER KNOWLEDGE AND SCREENING AMONG WOMEN
IN ASHIEDU KETEKE SUB METRO IN ACCRA.

BY

JOANA OFORI-ATTAH
(10269451)

"THIS DISSERTATION IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF THE MASTER OF PUBLIC HEALTH DEGREE."

JULY, 2015
DECLARATION

I declare that this research work is my own work with the exception of references made to other authors which have been duly acknowledged.

_____________________                                                  _______________________
Joan Ofori-Attah             Date
(Student)

________________________                                              ______________________
Professor R.M. Adanu          Date
(Supervisor)
DEDICATION

This work is dedicated to the Almighty God the maker of all things and through whom this work has become possible.

To my lovely husband “Mr. Samuel Odei” who was the brain behind the persuance of this course, and my children “ Kwabena, Kwaku, Papa and Jojo” who made lot of sacrifices to make this piece possible.
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<td>ACI</td>
<td>American Cancer Institute</td>
</tr>
<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
</tr>
<tr>
<td>AOR</td>
<td>Adjusted Odds Ratio</td>
</tr>
<tr>
<td>CI</td>
<td>Confidence interval</td>
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<tr>
<td>COR</td>
<td>Crude Odds Ratio</td>
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<tr>
<td>DHS</td>
<td>Demographic and Health Survey</td>
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<td>EA</td>
<td>Enumeration Area</td>
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<td>GHS</td>
<td>Ghana Health Service</td>
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<td>GMHS</td>
<td>Ghana Maternal Health Survey</td>
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<td>GSS</td>
<td>Ghana Health Service</td>
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<td>HIV</td>
<td>Human Immune Deficiency Virus</td>
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<td>HPV</td>
<td>Human Papiloma Virus</td>
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<td>MDGs</td>
<td>Millennium Development Goals</td>
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<td>MOH</td>
<td>Ministry of Health</td>
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<tr>
<td>OR</td>
<td>Odds Ratio</td>
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<tr>
<td>PAPs</td>
<td>Pap Smear Test</td>
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<tr>
<td>WHO</td>
<td>World Health Organization</td>
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<td>UKCS</td>
<td>United Kingdom Cancer Syndrome</td>
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<td>UN</td>
<td>United Nations</td>
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<tr>
<td>SES</td>
<td>Socio economic Status</td>
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<tr>
<td>STI</td>
<td>Sexually Transmitted Infections</td>
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<tr>
<td>SPSS</td>
<td>Statistical package for social sciences</td>
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DEFINITION OF TERMS

Knowledge: this is where a woman knows the causes of cervical cancer, the symptoms, the effects, the screening centers and the process involved.

Awareness: this refers to whether a woman has heard about the disease before.

Beliefs: for the purpose of this study, beliefs are defined as the misconceptions women hold about the disease.

Cancer screening: the processes a woman goes through to determine her cancer status.
ABSTRACT

Introduction

In Ghana, cervical cancer is the leading cause of cancer deaths among women, and the mortality and incidence rate is among the highest in the world. Currently, little is known about the Ghanaian woman’s knowledge and beliefs about cervical cancer and cervical cancer screening, yet this information is essential to the success of cervical cancer prevention. The study sought to examine the variables that influence the decision of women to undertake cervical cancer screening.

Methods

A cross sectional study using quantitative methods was used to elicit information among sexually active women aged 18 years and above from May to June 2015. The study used random sampling to recruit 417 women and interviewed them using a structured questionnaire. Descriptive statistics were used to summarize continuous variables such as age and presented as means, standard deviations while categorical variables were summarized into frequencies and proportions. To assess the knowledge on cervical cancer, 26 responses were analyzed and a correct score was given one score and a wrong answer score 0. A five point likert scale was used to classify the knowledge. Data were analyzed using STATA version 13.

Results

A total of 417 women aged 18 years and above were studied. The mean age was 30 years (± 10.8). The prevalence of cervical cancer screening was 4.8% (20 out of 417). Misconceptions that cervical cancer could only affect older women and women with children was a determinant of whether a woman will screen for cervical cancer or not.
Conclusion

Cervical cancer screening is low among reproductive aged women in the Ashiedu-Keteke sub Metropolis. A concerted effort from all stakeholders including religious, opinion leaders, health authorities the government as well as community members is necessary to scaling up cervical cancer screening.
CHAPTER ONE

INTRODUCTION

1.1 Background

Cervical cancer has become the most common cause of cancer deaths among women across the world and has become a burden to many women. The rate of incidence is a source of concern to many developing and least developed countries, although the burden of cervical cancer is quite low in developed countries than developing countries (Ntekim, 2012). This is possible because in the developed countries, screening facilities are widely available and so many women are able to screen for the possibility of cancer and also have regular checkups; as such there is a wide variance between the mortality rates measured in the developed and developing nations. Cervical cancer accounts for approximately 4.3 million deaths worldwide, with the mortality rates of the least developed countries and developed countries being 10-35 per 100,000 and 2-4 deaths per 100,000 respectively (Anorlu, 2008; Arbyn et al., 2010). In sub-Saharan Africa, mortality rates ranges from 30-40 per 100,000 women meaning that Africa contributes a significant proportion of global cervical deaths (Imam et al., 2008; Louie, De Sanjose, & Mayaud, 2009).

In Ghana, cervical cancer is the most common cause of cancer related deaths among women and it is often screened in some major teaching and regional hospitals in Ghana as well as some private health institutions. A study found the Human Papilloma Virus (HPV) prevalence rate among a sample of women attending a gynecology outpatient clinic in Accra to be 10.7% (Edwin, 2010). Cervical cancer is associated with Human Papilloma Virus (HPV) infection, which can be acquired through sexual intercourse marking it out as a sexually transmitted infection (STI) (Bekkers, Meijer, Massuger, Snijders, & Melchers, 2006). It has been demonstrated
that certain life styles tend to increase a woman’s risk of contracting cervical cancer. For instance, it is indicated that cancer of the cervix is associated with early age at first intercourse, having multiple male sexual partners, having male sexual partners who have had multiple partners, early age at first birth, multi-parity, smoking, long term use of oral contraceptive pills and immuno-supressed state (Anorlu, 2006). In spite of the necessity for screening in being able to make an early diagnosis and commence treatment if needed, patronage of screening service remains low (WHO/ICO, 2007). Part of the problem lies in the fact that, cervical cancer prevention is not commonly promoted in Ghana (Blumenthal et al., 2007)

Cancer of the cervix is a preventable disease and a key component of this prevention is early detection through screening services. It is therefore imperative that all women at risk of contracting cervical cancer go for screening, to ensure early detection in other to reduce the rate of mortality. This is a huge task for many countries in sub-Saharan Africa, considering the fact that majority of Africa’s population reside in rural areas and many of these rural areas often lack basic health amenities. In cities within sub-Saharan Africa where some health institutions provide cervical cancer screening services for women, patronage of screening service can be said to be low compared to developed countries. For instance, the declining numbers of women engaged in screening for cervical cancer as evidenced by the Ghana Health Service Report (2011) is a clear manifestation of the low patronage. Several variables could account for the low patronage (Ghana Health Service (GHS), 2011). With literature indicating a positive relationship between education level of a woman and the decision to engage in screening for cervical cancer, it is highly possible that there are other socio-demographic variables that can influence the decision of a woman to undergo cervical cancer screening. This study seeks to examine the variables that
influence the decision of women to engage in cervical cancer screening in Ashiedu-Keteke sub metro in the Greater Accra region of Ghana. It seeks to find out the level of knowledge among women concerning cervical cancer as well as the misconceptions women in Ashiedu-Keteke have about cervical cancer.

1.2 Statement of the Problem

Cancer is the cause of about 51 million deaths yearly, out of which cervical cancer accounts for about 8.5%, most of which occurs in the developing countries. Also, out of half a million cases of cervical cancer reported in the world every day, majority occurs in developing countries (Anorlu, 2006). Cervical cancer is the leading cause of years of life lost in women in south central Asia Latin America and sub-Saharan African resulting in a greater reduction in a woman’s life expectancy even when compared with AIDS, TB, or maternal conditions (Yang, Bray, Parkin, Sellors, & Zhang, 2004). In Nigeria, the national incidence of cervical cancer was reported to be 250 per 100,000 population (Adewole, Edozien, Babarinsa, & Akang, 1996). Oguntayo, Zayyan, Kolawole, Adewuyi, Ismail and Koledade (2011) further reported that cervical cancer was the leading cause of gynecological cancers in Northern Nigeria, accounting for 65.7% of all gynecological cancers (Oguntayo et al., 2011).

In Ghana, cervical cancer is the leading cause of cancer death among women and the mortality and incidence rate is among the highest in the world (Wealth Health Organization, 2007). Even though there is no cervical cancer registry in Ghana, records of the incidence rate are kept. The International Agency for Research on Cancer has (Williams & Amoateng, 2012) estimated that in 2008, 3,038 Ghanaian women developed cervical cancer and more than 2,006 Ghanaian woman died.
because of cervical cancer. It is the commonest gynecological malignancies seen at the National referral hospital, Korle-Bu Teaching hospital, as it makes up 64% of gynaecological malignancies seen at the hospital (Nkyekyer, 2000). It is also indicated that the incidence and mortality rates due to cervical cancer have been rapidly increasing in the developing world, in contrast to the decrease observed in developed countries (Murthy, Li, Azzam, Narasimhadevara, & Yezzo, 2010).

Furthermore, a study of the knowledge, attitudes and practices of female health workers on cervical cancer screening conducted in Sokoto, a state in northern Nigeria, revealed that even though respondents had the knowledge and were aware of the screening procedures, they did not patronize screening services for the reason that they were not at risk of the disease (Oche, Kaoje, Gana, & Ango, 2013).

Similarly, another study on men in Kumasi, Ghana revealed some beliefs, taboos and attitude men have towards their wives seeking screening for cervical cancer. It was revealed that many of the married men who were interviewed indicated that they will not allow their wives to be screened by a male doctor as is a taboo for another man to see a woman’s nakedness when the woman is not his wife, and also many of the respondents believed that too much sex causes cervical cancer (Williams & Amoateng, 2012). There has been a lot of public education in Ghana on cervical cancer among medical students who are regularly taught about the lethal nature of cervical cancer but studies have indicated very low rates of patronage of cervical cancer screening services and the importance of cervical cancer screening (Adanu, 2002; Chen et al., 2005).

This has shown that the knowledge, awareness and misconceptions held by women may prevent women from patronizing cervical cancer screening services. Many
studies have been conducted on cervical cancer knowledge among women in communities with low socio-economic status or least developed communities as well as the awareness level of such women. Currently, little is known about the Ghanaian woman’s knowledge and beliefs about cervical cancer and cervical cancer screening, yet this information is essential to the success of cervical cancer prevention (Abotchie & Shokar, 2009). This research seeks to fill the knowledge gap by assessing the level of awareness and knowledge of cervical cancer among women and its influence on cervical screening.

1.3 Conceptual Framework

A conceptual flow diagram (Figure 1.1) has been designed to put the study into perspective. The variables in the diagram have been classified into dependent and independent variables so as to facilitate the ease of measurement of the variables.

Figure 1.1: Conceptual flow diagram
The Figure 1.1 above shows the flow of the variables that affect the decision of women to engage in cervical cancer screening. From the diagram, the screening status of a woman is the main dependent variable. The screening status alludes to whether a woman has been screened or not; as such it essentially depends on the decision to screen. The decision to screen for cervical cancer is influenced by a number of variables including the availability of resources such as money and time, beliefs on cervical cancer, awareness of the screening services, the level of knowledge on cervical cancer (causes, symptoms and effects) as well as the socio-demographics such as income, age and level of education. Also, the process of undergoing the screening has some key intervening variables. These are perceptions of the screening process and awareness of the screening centers and process. This is because, a woman may not engage in the screening process if she has some negative perceptions towards the screening process. On the other hand, a woman may not patronize screening services if she has no knowledge of the screening centers. The conceptual flow diagram is appropriate for the study as it clearly shows the relationships between the variables under study and also incorporates all the key variables required for the study.

1.4 Justification of the study

Cervical cancer has become a major health concern for women all over the world. It has implications on government budgets on health, family welfare and some other members of the extended family. This study is required as it will provide further literature in addition to the numerous studies that have been conducted on cervical cancer in Ghana. It will also serve as the basis for further research on how to improve on patronage of cervical cancer screening services in Ghana and Africa. In spite of the
statistics indicating a serious concern, cervical cancer prevention is not commonly promoted in Ghana (Blumenthal et al., 2007).

It is necessary to find out the level of knowledge among women in Ashiedu-Keteke sub-Metro in Accra and how it influences their decision to engage in cervical cancer screening. This will inform policy formulation and practice among educationists and health practitioners in ways on how to reduce the incidence of cervical cancer among women in Ghana as well as improve the knowledge.

1.5 Research Questions
To what extent does the knowledge, beliefs and awareness of cervical cancer affect the decision of women to undergo cervical cancer screening?

1. Does knowledge and awareness influence the decision of women to engage in cervical cancer screening?

2. How do beliefs and misconceptions of women affect their decision to engage in cervical cancer screening

1.6 Objectives
1.6.1 General Objective
To determine the effect of knowledge and awareness of cervical cancer on cervical cancer screening among women in Ashiedu keteka sub metro.
1.6.2 Specific Objectives

1. To determine the relationship between socio-demographics and cervical cancer screening

2 To determine women’s knowledge and awareness on cervical cancer screening.

3. To determine women’s beliefs about cervical cancer on cervical cancer screening
CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

The chapter is made up of the review of relevant literature to the study. It covers literature on knowledge of women on cervical cancer and cervical cancer screening, beliefs and perceptions of women on cervical cancer screening as well as the influence of culture on cervical cancer awareness and screening. For the purpose of clarity, the literature is arranged in headings. The literature however covers the objectives of the study. Search engines such as Google scholar, HINARI, Web of Science, African Journal Online and some books were used in the review. Key phrases such as cervical cancer, cancer knowledge, socio-demographic factors, awareness of cervical cancer, beliefs and misconceptions about cancer screening, incidence and prevalence of cervical cancer, were used in the search engine. The literature was reviewed in accordance with the conceptual framework and stated research questions of the study.

2.2 Understanding cervical cancer

2.2.1 Cervical cancer description and etiology

Cancer of the cervix is a malignant disease of the cervix in women which often occurs in the 5th or 6th decade of life at about the age of 54, but it has a pre-malignant stage in younger women under the age of 40 years (Owoeye & Ibrahim, 2013). It is named after the part of the body where it actually starts from. Cervical cancer, like other cancers, is a disease that occurs when the cells in the body grow out of control (metastasize), and it specifically arises from a ring of mucosa in the cervix called the cervical transformation zone commonly due to persistent Human Papilloma Virus
(HPV) infections of women in their first decade of sexual activity (most frequently, HPV types 16 and 18 found associated with the premalignant and malignant stages of cervical cancer) (World Health Organization WHO, 2013). The causal association between HPV infections and cervical cancer is extensively confirmed in literature, such that any other risk factor for cervical cancer has been asserted as being mediated by an initial infection with HPV (Bosch, Lorincz, Muñoz, Meijer, & Shah, 2002).

2.2.2 Cervical cancer prevalence and incidence

Cervical cancer is the second most common cancer in women worldwide, the most common among women in sub-Saharan Africa and the most prominent of all cancers in sub-Saharan Africa, with 530,000 cases of cervical cancer and 275,000 deaths from the disease in 2008 globally (Arbyn et al., 2011; Schiffman, Castle, Jeronimo, Rodriguez, & Wacholder, 2007). 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).

It is a concern for both developed and developing countries but developing countries have higher incidence of the disease (Arbyn et al., 2011). 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 nations.
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.

It has been indicated that an estimated 12,340 cases of invasive cervical cancer were expected to be diagnosed in 2013 while 4,030 deaths were expected in the United States of America (Viswanathan, Bhosale, Shah, & Vikram, 2013). In the United Kingdom (UK), it was found that it is the 12th most common cancer among women age variations among victims. For instance between 2009-2011, 78% of all cervical cancer women were between the ages of 25-64 years while 11% was among women between the ages of 75 years and above (Cancer Research UK, 2013). In the United States of America (USA), study shows that cervical cancer cases have declined nearly 50% over the past decades (Siegel, Naishadham, & Jemal, 2013). It implies that there have been considerable efforts made in reducing the prevalence rate. The picture of incidence in the African context is different from that of Europe. A study revealed that the highest incidence of cervical cancer are in sub-Saharan Africa, as well as South-Central Asia and South America, hence the incidence of cervical cancer is more prevalent among least developed countries and developing countries than developed countries. It is shown that out of 80% new cases and deaths due to cervical cancer every day, sub-Saharan Africa bear the largest, with incidence often ranging between 30-40 per 100,000 women (Anorlu, 2008; Kahesa et al., 2008). It is further made known that in areas such as Ibadan city in Nigeria, it is the second most common cancer among women after cancer of the breast, while about 60-75% of women who developed cervical cancer live in rural areas (Nketim, 2012). The literature does provide some reasons for the regional disparities in the incidence of cervical cancer. This is largely due to the fact that in developing and least developed regions, there is a gaping inadequacy of screening centers compared to the developed
regions, ensuring that there is a failure to detect precancerous and early stage cervical cancer (Jemal et al., 2011). Also, Nketim (2012) has demonstrated that there is a correlation between sex and the occurrence of cervical cancer especially in situations where women have multiple sex partners.

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). Furthermore, in Ghana, screening for cervical cancer using visual inspection after Acetic Acid Application (VIA) is usually conducted among women between the ages of 25 to 45 years while Papinocolou (Pap) smear is done for women 21 years and above at the Ridge hospital in Accra (Ghana Heath Service Report (GHS), 2011). Where results from VIA is not convincing, the pap smear test is conducted. This provides an opportunity for verification and validity of test results. It is also shown that several other women stand the risk of contracting cervical cancer depending on the kind of lifestyles they adopt (Nketim, 2012).

2.2.3 Cervical cancer risk factors

Since the investigation of the epidemiology of cervical cancer intensively began in the 1960s, different risk factors have been identified as inimical to the prevention of
cervical cancer (Reynolds & Tansey, 2009). Also, a study by Melbye and Sprgel (1991) found strong association between anal cancer and cervical cancer suggesting that these cancers share common risk factors (Melbye & Sprgel, 1991). The most important risk factors are discussed below:

- **Early sexual initiation**: Studies have found strong association between a woman/girl being initiated too early to sexual intercourse before her maturation (Castellsagué, 2008; Castellsagué et al., 2006; Munoz, Castellsagué, de González, & Gissmann, 2006). A study of eight developing countries (across Africa and Latin America) comparing the age at first sexual intercourse (AFSI) among women found that relative to women with AFSI greater than or equal to 21 years, the odds ratio (OR) of cervical cancer was 1.80 among women with AFSI 17–20 years and 2.31 for women with AFSI of less than or equal to 16 years (Louie, de Sanjose, et al., 2009).

- **Early Pregnancy**: The earlier cited study of women in developing countries found that cervical cancer risk was 2.4-fold higher among those who reported age at first pregnancy of less than or equal to 16 years compared with those with age at first pregnancy of greater than or equal to 21 years (Louie, de Sanjose, et al., 2009).

- **High sexual activity**: A woman having high number of sexual partners throughout her life, and sexual contacts with high risk individuals (in men, frequent contact with women that practice prostitution and in women, frequent contacts with men with multiple sexual partners) puts one at risk of cervical cancer. HPV transmission takes place, mainly, by sexual contact and the organs most susceptible to infection with potential of starting a neoplastic transformation are the cervix (transformation zone) and the pectineal line of
the anal canal. HPV DNA can be detected in the cervix, vagina, and vulva in the woman, the glands, prepuce and skin of the penis and scrotum in the man, and in the anal canal and perennial area in women and men (Castellsagué et al., 2006).

At the ages of greatest sexual activity, the prevalence of subclinical HPV infections (presence of viral DNA with normal morphology or minimal changes) can be up to 40% in the female population, with an annual infection rate of 10–15%. In the age groups beyond 30 years, the prevalence decreases to 5–10% (Castellsagué, 2008).

- **Smoking**: The association between cigarette smoking and cervical cancer has been found to be causal as a chemical carcinogen contained in tobacco smoke is responsible for a substantial proportion of the incidence of cervical cancer (Kjellberg et al., 2000; Winkelstein Jr, 1990). Passive smoking was also found to be a risk factor for cervical cancer after prolonged exposure to it (Slattery, Robison, Schuman, & Al, 1989).

Other risk factors in literature include diet, history of venereal disease, oral contraceptive use (Chichareon et al., 1998; Kjellberg et al., 2000). It is therefore imperative that more steps are taken to disseminate information concerning the kind of lifestyles that put women at risk of contracting cervical cancer.

### 2.3 Awareness of cervical cancer

Awareness creation is synonymous to education; it can be formal and informal. However, effectiveness of creating awareness is dependent on several factors. These include the media for creating the awareness, the target group, the content of the
messages, the language of the message and who is actually creating the awareness. The active role of each agent is required for reducing the menace of cervical cancer. A study indicated that nurses have an important role to play when it comes to cervical cancer education and prevention (Ertem, 2009). This emphasizes the relevance of awareness as an important variable in the management of cervical cancer. Nurses or medical staff have an integral role because they are privy to information in the medical world and are used to the technical aspect of medicine, hence they should be in control to re-educate women on such issues in a comprehensive manner and in a language understood by women. A critical question worth noting concerns the adequacy of the knowledge possessed by nurses to deliver information to women. It is indicated in a study that, even though nurses knew about all risk factors and symptoms of cervical cancer, they were not aware that Pap smear test should be done 3 years after onset of sexual life and if the repeated tests were normal, it could be done every 2–3 years (Ertem, 2009). This proves that information on cervical cancer among nurses who play a key role in the awareness process is not adequate. In this regard, the fight against the disease would be an exercise in futility if those in charge of the process are not fully equipped with what they need to know.

Another key component of the awareness is the avenues through which women get to know about cervical cancer. Several studies have been conducted on cervical cancer but not much has been done on the knowledge of cervical cancer among women in least developed areas. For instance it is opined that Turkish Ministry of Health encourages people to keep away from cancer risk factors such as smoking and bleaching and perform screening activities but there is no regular and systematic cancer prevention programme (Ertem, 2009). It is further indicated that diseases such as malaria, tuberculosis, HIV/AIDS, and most recently breast cancer receive the
majority of health promotion resources (Mayhew & Adjei, 2004). In a study by Williams and Amoateng (2012), majority of women said they have never heard the word cervical cancer before and the reasons cited indicated that there was inadequate knowledge of the disease in Ghana. Similar findings exist in a study conducted among women in Onitsha Nigeria indicating that 35.6% of respondents screened were aware of the cervical cancer test and this was considered to be low awareness in comparison to the population of women in Onitsha (Nwankwo, Aniebue, Aguwa, Anarado, & Agunwah, 2011). Also in Ghana, not much has been seen on public screening programmes on cervical cancer, even with regards to community health education in the rural areas. It therefore stands to reason that many women may only get the information or become aware when they go to the hospital to seek for medical care anytime they have uncomfortable symptoms such as bleedings especially abnormal bleeding, bleeding between periods, during intercourse and leg pain and pelvic pain.

One cannot ignore the role of culture as there have been cultural transformations. This is because even though the study concentrates on the influence of knowledge of cervical cancer on cervical cancer screening, the culture of an individual can influence the decision to screen even if the person has substantial knowledge. The ongoing transformation of culture due to the importation of western life styles and education can influence the role played by awareness creation with regards to cervical cancer. It is indicated that the current prevalence of adult cigarette smoking is low in Africa (Shafey, Eriksen, Ross, & Mackay, 2009), but there is a probability that the prevalence will increase due to increased disposable income and adoption of Western lifestyles controlled by images such as movies that show smoking as a stylish activity (Glynn, Seffrin, Brawley, Grey, & Ross, 2010). The transformation of culture could limit the effectiveness of awareness creation in a bid to manage cervical cancer. Per
the culture of many Ghanaians and Africans especially where they provide self-medication and only visit health care institutions when symptoms persist, it implies that many women would only visit health care institution when the condition is symptomatic. When screening of cervical cancer is done earlier, it helps in early treatment and prevents cervical cancer related deaths. This will help to reduce the cervical cancer mortality rates and help alleviate the financial burden of the disease, since it will cost more to treat when reported at a late stage than at an early stage. With the notion that cervical cancer can be treated when detected at an early age, it is important for public education to be made concerning the disease and its symptoms to enable women report earlier when the symptoms begin to manifest. For the mediums of knowledge provision, it is found out that in Nigeria the mass media, print media and internet are the major source of information for staff, students and the general public (Owoeye and Ibrahim, 2013). This shows the influence of technology in terms of awareness creation and formal and informal education. This might not fit for a variety of settings with regards to the fact that many of Africa’s population is rural based and may not have internet and access to mass media. However, the springing up of community radio stations which transmit messages in local dialect could serve a great tool for the purpose of awareness creation.

2.4 Knowledge of cervical cancer

Knowledge is a powerful tool for development. It can also be obtained from formal and informal methods of education. Knowledge on cervical cancer could include one knowing the causes, testing centers, testing process and symptoms. Since the study concerns the knowledge of cervical cancer among women and its influence on cervical cancer screening, it will be suitable as part of the study to find out the sources
and medium of the knowledge. The analogy is that if one has information on the above stated variables, the likelihood of the person reporting symptoms and availing herself to a testing process is high. Ofori, Ebu, John and Siakwa (2014) found out that knowledge of cervical cancer screening may not translate into utilization of screening services in the sense that participants were found to have adequate knowledge of cervical cancer but had poor attitude towards screening (Ofori, Ebu, John, & Siakwa, 2014). In this regard, it could be due to certain beliefs and perceptions towards the screening or perhaps people may not have the resources or cannot afford the cost of screening. It remains a challenge in ensuring that women across the life span are equipped with the requisite knowledge concerning risk factors and what to do when symptom begin to occur.

Some relationship has been shown between the levels of a woman’s knowledge and the probability of the woman to engage in cervical cancer screening. Adanu, Seffah, Seffah, Darko Hill and Anarfi (2010) shared the view that a woman is more likely to have a Pap smear if she has had some formal education and is of high socioeconomic status (Adanu et al., 2010). This points much the affordability of the screening aside the level of knowledge possessed by a woman. Also it is indicated that there is no national cervical cancer screening programme hence women who go through screening do so via opportunistic screening where they are detected through general gynecological consultations (Adanu et al., 2010). In order for the effective management of increasing cervical cancer cases, there is the need for promotion of issues of cervical cancer at the national, community and the district level.
2.5 Cervical cancer screening in Ghana

The availability of technical knowledge and screening services does not guarantee an automatic acceptance by women to the screening process even though it is indicated that the introduction of national cervical cancer screening in the United Kingdom led to a significant decrease in the incidence of cervical cancer (Owoeye and Ibrahim, 2013). In the developed world cervical cancer screening has a 63% coverage, whereas in the developing world it is on average 19% with a range from 1% in Bangladesh to 73% in Brazil (Gakidou, Nordhagen, & Obermeyer, 2008).

In Ghana, there is no national cervical cancer screening programme, despite the development of plans for the scale-up of a national VIA-based screening programme, and also a confirmation of the safety and social acceptability of VIA (Quentin et al., 2011). As such, it is not surprising that as at 2012, only 2.7% of Ghanaian women had been screened for cervical cancer at least once (Williams & Amoateng, 2012). Coverage of pap smear among women ages 18-69 was found to be slightly higher at about 9%, a figure deplorable as compared to Congo, another sub-Saharan African nation, with 57.6% coverage (Akinyemiju, 2012). This means that most screening efforts are led by personal initiatives or are opportunistic, as doctors request Pap smears or VIA for patients who are seen in clinics for either general medical examinations or for consultations unrelated to cervical cancer.

Improving these coverage demands that traditional approaches to screening must be revamped, with a study of cervical cancer screening in five developing countries including Ghana suggesting that the most cost-effective way to improve screening coverage is to ensure that women are screened once in their lifetime, at the age of 35 years, with a one-visit or two-visit screening strategy involving visual inspection of the cervix with acetic acid or DNA testing for human papilloma virus (HPV) in
cervical cell samples. This is said to be able to reduce the lifetime risk of cancer by about 25 to 36 percent, and cost less than $500 per year of life saved (Goldie et al., 2005). Another study cited the optimal a group for screening women to be 30-39, with two screenings at ages 35 and 40 being able to reduce lifetime cancer risk by as much as 65% if done by VIA and 76% if done by HPV DNA testing (Sherris et al., 2009). Furthermore, a study conducted in Rwanda stated that Cytology via Papinocolou (Pap) smear is not generally a suitable method of screening in low-resource regions such as Ghana due to its complex process and cost (Mukakalisa, Bindler, Allen, & Dotson, 2014).

However, several other variables ought to be considered in improving cervical cancer screening coverage in Ghana. These factors include women being aware of such screening services, the cost of such service, the personal lifestyle of the women as well as the beliefs and practices women are accustomed to. Owoeye and Ibrahim (2013) further provided that some of the reasons for non-participation included administrative failures, inconvenient clinic times, unavailability of a female screener, lack of awareness of the test’s indications and benefits, considering one-self not to be at risk of developing cervical cancer and fear of embarrassment, pain, or the detection of cancer. It is indicated that cervical cancer screening is relatively inexpensive and there is worldwide agreement that screening programmes for cervical cancer are a necessity (Ngoma, 2014). In Ghana, VIA screening has been marked to cost between 7.30 to 21.86 GHS, with number of women screened per provider and treated per facility per year determining cost (UK Department for International Development [DFID], 2010). This still does not guarantee general affordability and accessibility. In terms of accessibility one must look at the location of services, in other words the distance between service users and service centers. The socio-economic nature of
many women considering the gender positions of women in Africa and for that matter Ghana, many women may not be able to economically provide for screening.

The inaccessibility by distance has a high probability of producing non participation. Nigeria is a clear example. It was found out that Nigeria has not produce a great deal of success in implementing effective cervical cancer screening programme. In Nigeria, screening for cervical cancer is an opportunistic procedure and it is dependent on the woman’s initiative or the kind of health institution the woman regularly visits (Ngoma, 2006). This could also further depend on the relationship between the woman and the health care provider. This is in the sense that a cordial relationship between a woman and her health care provider would mean that the woman will take in advice and the opportunity for regular checkups when called upon. This requires a further study to determine the influence of relationship between a woman and her health care provider and its ability to influence a woman’s decision to screen for cervical cancer. In the case of the Nigerian situation, services are only available in teaching hospitals and are not adequately utilized (Ngoma, 2006). Ngoma (2006) cited reasons such as poverty, ignorance and system failure. This usually leads to nonuse of screening facilities and in some cases lack of follow-up of abnormal results.

The types of test available as well as the knowledge of women concerning the test provide women with choice to engage in screening or not to. Adanu, Seffah, Seffah, Darko Hill and Anarfi (2010) further found a relationship between women’s knowledge gained from school on cervical cancer, socio-economic status and cervical cancer screening such that a woman is more likely to have a Pap smear if she has had some formal education and is of high socioeconomic status (Adanu et al., 2010). A woman’s knowledge of the nature, type and cost of the screening for cervical cancer
can influence a woman’s decision to engage in cervical cancer screening. It is shown that cervical cancer screening in many hospitals in Accra, especially the Ridge hospital in Accra is done by Papanicola (Pap) smear and visual inspection of the cervix with acetic acid (VIA) (Sanghvi et al., 2008). In Nigeria, PAP is the most popular screening test but with some medical staff and students wrongly misconceiving that blood test is used for cervical cancer screening (Owoeye and Ibrahim, 2013). A point worth noting is that, even though awareness and knowledge of cervical cancer was high among staff and students in general, their patronage of screening is low. For instance, Owoeye and Ibrahim (2013) concluded in their study in the Niger Delta University that practice of cervical cancer screening was low in both staff and students. There is therefore the need for further study to find out why staff and students with knowledge of cervical cancer have low patronage of the screening.

2.6 Beliefs on cervical cancer
It is often difficult to imprison someone’s power of imagination. This implies that changing people’s beliefs and perceptions could take a long period of time as it will require gradual transformations using education. This even brings a daunting task especially when it is engulfed in the person’s culture. A number of beliefs have been found to influence women’s decision to engage in cervical cancer screening. It is indicated that fear of cancer, fatalistic views about cancer, linguistic barriers, and culturally based embarrassment are some of the beliefs and misconceptions that often prevents women from seeking screening service (McMullin, Alba, Chavez, & Hubbell, 2005). In a study by Williams and Amoateng (2012), it was found among married men that they would not be comfortable knowing that their wife was having a
cervical cancer screening performed by a male doctor. This boils down to the traditions and customs where men would own exclusive rights of their women hence would not want any other male to see the nakedness of their wife. Even though education is gradually transforming this kind of perception through cultural transformation as a result of western culture, these practices are still deeply rooted in the rural areas. In a study, it was found out that the most common belief among the participants was that cervical cancer was caused by too much sex (Williams and Amoateng, 2012). Williams and Amoateng (2012) maintained that although multiple sexual partners is a risk factor for developing cervical cancer due to the increased risk of contracting HPV, the respondents had the perception that physical damage to sex organs due to frequent sex was the risk associated with cervical cancer. This finding does not put limit to number of ties one can have sexual intercourse hence much education is needed on sex to enable people engage in healthy sexual practices.

2.7 Determinants and barriers of cervical cancer knowledge and screening

Increasing cervical cancer knowledge and screening is dependent on a number of factors. These factors range from individual to health-service factors. Many times these determinants can constitute barriers to individuals adopting preventive behaviors. To understand better what these determinants are, they are discussed below.

Socio-demographic characteristics are important determinants of knowing about cervical cancer and screening for it. Two studies in India found that younger women (30-39 years, optimally below 35 years) were more likely to be screened than older women (Aswathy, Quereshi, Kurian, & Leelamoni, 2012; Nene et al., 2007). This was corroborated by a study in California, US where being older (odds ratio [OR] = 6.48,
95% confidence interval [CI] = 3.89 - 10.79) was associated with the likelihood of not having been screened for cervical cancer (Leyden et al., 2005). Also, younger age and knowledge were found to be associated in a study assessing the prediction of cervical screening attendance rate by Chinese women’s knowledge about cervical cancer and cervical screening (Leung & Leung, 2010). Two studies in Latin America among women aged 15 and above found that those who knew about cervical cancer were on average younger than those who did not (Hanisch et al., 2008; Soneji & Fukui, 2013). A study in Ethiopia found higher knowledge of cervical screening among those aged below 34 years; the study also found little increased likelihood of married people having knowledge of cervical screening than single people do (Getahun, Mazengia, Abuhay, & Birhanu, 2013). A study in Nigeria found that age and marital status had an effect on knowledge and screening for cervical cancer, as the screening and knowledge was higher among those younger than 39 and married (Ayinde, Ogunbode, & Adebayo, 2006). Gan and Dahlui in a study in Malaysia among rural women found that being married with children was a predictor of knowledge and uptake of screening services (Gan & Dahlui, 2013). Parity also predicts screening status as a study in Tanzania shows that women who had 0–2 children were more prone to accept screening in comparison with women who had five or more children (Kahesa et al., 2012). A study in India among female university students also alluded to family size as a determinant of knowledge of cervical cancer and screening, as smaller family sizes meant increased knowledge (Saha, Chaudhury, Bhowmik, & Chatterjee, 2010).

Education is one of the factors most frequently associated with knowledge of cervical cancer and screening for it (Denny, Quinn, & Sankaranarayanan, 2006; Nwankwo et al., 2011). Lower educational status has not only been found as strongly associated with low knowledge and screening status, it can also serve as a barrier to getting
screened in the future (Claeys et al., 2002). A study in India found that screened women were younger, better educated and had ever used contraception (Nene et al., 2007).

Socio-economic factors also play significant roles in screening and knowledge, as many women associated high expense with screening for cervical cancer, and as such wealthier women would both know and screen for cervical cancer than otherwise similar women (Soneji & Fukui, 2013). Living in a poor area is said to be associated with lower knowledge of cervical cancer, and consequently the likelihood of women being screened (Vanslyke et al., 2008). In addition, a study by Mupepi et al. (2011) posited that women who were financially independent were 6.61% more likely to access cervical screening compared with those who were dependent on their husbands (Mupepi, Sampselle, & Johnson, 2011).

Health utilization factors are important determinants in knowledge and screening for cervical cancer, as those who visit the doctor more often or recently were more likely to know about cervical cancer and screen for it. Also, using public hospitals more frequently has been found to be associated with low levels of knowledge and screening, just as having health insurance increases the likelihood of knowing and screening for cervical cancer. A study in Tanzania found that the distance to the facility which provides cervical cancer screening is also associated with screening status (Lyimo & Beran, 2012).

Other individual factors that determines screening are conscious negligence in which women simply decide not to be screened as they do not find it important or think themselves at risk of it, fear of the screening including fear of a positive diagnosis and
fear that the screening is painful are cited reasons for not getting a screening among those with knowledge of it (Abotchie & Shokar, 2009; Udigwe, 2007).

In using an inter-sectionalist approach, Williams-Brennan identified structural (cultural and societal values, ethnicity and socioeconomic position), cross-cutting (social cohesion) and intermediary factors (geographic location, psychosocial factors, health system nature and health seeking behavior) as influencing the screening status of women in developing countries (Williams-Brennan, Gastaldo, Cole, & Paszat, 2012).

Socio cultural barriers and determinants are also evidently powerful in a woman’s health status. Cultural gender norms means that in religiously and culturally conservative societies, women would prefer being attended to by female doctors (Al Sairafi & Mohamed, 2009; Williams & Amoateng, 2012). The support of partners was also cited as a key factor in screening for cervical cancer, as those who had no support from their partner were less likely to screen (Gan & Dahlui, 2013; Scarinci et al., 2010). Finally, religion is a determinant of screening, as many religious women are less likely to screen, although variations exists among religions (Freeman & Chu, 2005; Mather, McCaffery, & Juraskova, 2012; Todorova, Baban, Alexandrova-Karamanova, & Bradley, 2009).

2.8 Gaps in the literature

There is vast literature on cervical cancer as many studies have been conducted surrounding cervical cancer. It is realized that even though literature abounds, the literature concentrated much on staff and students. Many of the studies conducted on awareness and knowledge of cervical cancer were concentrated on staff, students and
nurses; as such most of the findings did show that there is considerable awareness level of cervical cancer. This is obvious as staff and students may possess high level of education and so could easily read and understand knowledge. Several studies is needed across women and in the general population to ascertain the level of awareness and beliefs held by women in general. Also, even though staff and student often have high level of awareness, results showed that they had low patronage of screening, and the literature did not provide reasons why there was low patronage of screening by people who have high level of awareness and knowledge. Finally, there is no much literature on the beliefs held on cervical cancer. The beliefs were most often concentrated on sex and issues of fear and stigmatization. It could have extended into religious and traditional beliefs that have often prevented women from seeking reproductive health services with regards to cervical cancer. The literature also did not explicitly provide the cost of undergoing cervical cancer screening.
CHAPTER THREE

METHODOLOGY

3.1 Introduction

This section presents the various techniques and tools that was used to collect data, from the participants. It also describes the type of study, study location, variables that were measured, sampling plan and analytical tools that were used to analyze the data. Furthermore it presents the ethical considerations and issues of the study.

3.2 Study Design

A cross-sectional study using quantitative methods was conducted among sexually active women aged 18 years and above from May to June 2015.

Since the research-work intends to study a large population size and also gain some empirical perspective to a social problem, the study found the quantitative research method a suitable option.

3.3 Study Area

The Ashiedu Keteke sub metro is the study area. It is the smallest and yet the most populated sub metro in the Accra Metropolis. It is the center of economic activities in Accra and the center of the Accra metropolitan area. It shares boundary with Obetsebi Lamptey circle, the graphic road and Kinbu Traffic Light in the north, Korle- Lagoon and Mortuary road in west, Barnes Road to Kwame Nkrumah Mausoleum in the east and by the Gulf of Guinea in the South (Ghana Case Study, 2000). It has an estimated population of 129,566 people, however the population of women between the ages of 15-
49 years is 51,829 (Population and Housing Census, 2010). The climate is often warm with two main rain patterns. The indigenous people are mainly fisherman, fishmongers and it is as a result of the fact that they are closer to the sea, but quiet a sizeable number of the people are traders and public servants and others as hawkers and Kayayeis.

Most of the people are semi literates, school drop outs and illiterates (Ghana Living Standards Survey, 2005). The people though aware of health problems and issues affecting their welfare have other values and beliefs and these affect their behaviour. There are a lot of drinking bars and sports. Alcoholism is a problem. There are few health institutions such as the James Town polyclinic and so on. This area was selected due to its population density as well as the low education level among the people and also it is an area with some level of poverty and sexually active population.

3.4 Variables

3.4.1 Dependent Variable

Cervical cancer screening

3.4.2 Independent Variables

1. Socio demographic characteristics: age, marital status, level of income, educational level.

2. Level of knowledge: causes, signs and symptoms.

3. Awareness of screening

4. Beliefs and cervical and cervical cancer screening
5. Perception about screening

6. Awareness of screening centers

3.5 Study Population

Best and Khan (1993) defined a population as a group of individuals that have one or more characteristics in common that are of interest to the researcher. Cardwell (1999) also indicated that the population is a group of people who are the focus of a research study and to which the results would apply.

The study population comprised of women living within the Ashiedu- Keteke sub- Metro who are above 18 years of age and are sexually active.

3.5.1 Inclusion Criteria

Before sampling, women who were 18 years and above, mentally sound, had lived in the area for more than a year and have consented to participate.

3.5.2 Exclusion Criteria

Women who had visited or lived less than a year in the area, and women who were not mentally sound were excluded from the study.
3.6 Sampling

3.6.1 Sample size Calculation and Selection procedure

The sample size for the study depended on the population, the confidence interval, the confidence level and the expected frequency and applied the Cochran sample size formula. The formula was stated as follows;

\[ n_0 = \frac{Z^2pq}{e^2} \]

Where \(Z\) = z score corresponding to a 95% confidence interval (1.96) \(P\)=prevalence of good knowledge of cervical cancer (39% based on Adanu, 2012) \(q\)= 1-\(p\) and \(e\)=sampling error (±5%) this will lead to sample size of 366 respondents.

\[ N_0 = 1.96^2 [0.39 (1-0.39)] \]
\[ 0.05^2 \]
\[ n_0 = 366 \]

Due to the probability of questionnaire loss, 15% of the sample size was added back to the sample to give a final sample size of 421. The calculation is as follows

\[ N_0 = 15 \times 366 + 366 \]
\[ 100 \]
\[ = 421 \]
3.6.2 Sampling Procedure /Methods

The Ashiedu-Keteke Sub-metro consists of three Enumeration Area (EA) bases – Agbogloshie, James Town and Ussher Town with numbered houses in each enumeration area. Two of the EA bases, James Town and Ussher Town were randomly picked with a ballot done by the principal investigator. Each of the two bases consists of 8 and 16 Enumeration Areas (EAs) respectively making up 24 enumeration areas. The existing housing list with GPS co-ordinates for the EA bases was used. All the houses in the EAs were included in the sampling and from each EA, 18 households were randomly sampled using a sample randomizer software. In each household a woman aged 18 and above who met the inclusion criteria was selected from each household to be interviewed. In any household without an eligible woman, the next household was sampled as replacement, and an eligible woman was picked. Research assistants visited the homes of the selected households each morning from the hours of 6:00am to 10:00am in order to meet eligible women before they leave for work. From each randomly selected household, all household members were listed before eligible participants were randomly selected and interviewed following signing of a consent form. Each participant was made comfortable by sitting during interviews. To ensure confidentiality, interviews were conducted away from other household members.

3.7 Data Collection Techniques/Methods & Tools

The instruments for the data collection were in the form of interviewer administered questionnaires. The questionnaires were based on the objectives of the study; hence they were designed into themes according to the objectives. Open-ended and closed ended
questions were included. With the open-ended questions, trained research assistants quoted the exact response for the respondents. The questionnaires covered the demographic background of respondents, knowledge of cervical cancer, awareness of cervical cancer and beliefs on cervical cancer and cervical cancer screening.

3.8 Quality Control
For the purposes of the validity and reliability of data collection, the research assistants were taught to translate questions directly into local dialect to ensure respondents provide accurate responses to questions. Research assistants were also trained on ethically conducting interviews and in data collection. During the training the research assistants were also introduced to the rational of the study, the selection of eligible participant for the study. Techniques for introducing themselves and establishing rapport to get good response from participants was explained to the full understanding of each research assistant. Care was taken when entering data into the computer software through the double entry of data after which the raw data was cleaned. A backup of data was made.

3.9 Statistical Analysis
Data collected from the field was handled with care. Quantitative data obtained was checked for errors and inconsistencies. The data was then coded and entered into Microsoft excel version 2013 and exported to STATA for cleaning and data analysis. The entered data was cleaned to ensure safety. Coding, which involved assigning numbers to labels with regards to the variables under study was done while cleaning up to ensure that
no response was entered wrongly on the computer was also done. Descriptive and Inferential statistics was used to determine the influences of knowledge and awareness of cervical cancer on cervical cancer screening.

Descriptive statistics were used to summarize continuous variables such as age, and presented as means, standard deviations. Categorical data were summarize into frequencies and proportions.

To assess the knowledge of the respondents on Cervical Cancer, 26 responses were analyzed and a correct response was given one score. The highest possible score therefore was 26 and 0 being the lowest. A respondent who had no correct score out of these 26 was considered to have no knowledge. A score of 1 to 7 was considered as low knowledge, 8-14 as poor knowledge, 15-21 as good knowledge and above 21 was categorized as excellent knowledge.

### 3.10 Ethical Considerations

Ethical clearance for the study was obtained from Ghana Health Service Ethical Review Committee for approval before commencement of the study. Permission was obtained from the Accra Metropolitan Assembly and chiefs of communities that were involved in the study.

The participants gave their consent before they were recruited into the research. No participant was forced or coerced to take part in the study. They were made to know that participation is voluntary and that there will be no penalty for refusing to participate.
The study was conducted in a manner that ensured privacy. All those who gave their consent were assured of anonymity. Data was reported in a manner that ensured confidentiality of information that was collected from the participants. No name was written on the questionnaire in an order that ensures that the privacy of participants were respected.

Although participants were not compensated or paid for participating in the research, their inputs have been recognized and appreciated. Apart from the inconvenience of the time to complete the study questionnaire, there will be no other risk(s) associated with study.

The questionnaires were coded and kept under lock and key in a cupboard, and the key was kept by the principal investigator. Data collected was coded and entered within 24 hours of collection, and was saved under a password known to only the principal investigator. The soft copy of data was stored on a CD-ROM and external hard drive as well. The data collected will be kept by the principal investigator for 3-4 years to allow for publication of research, after which questionnaires will be destroyed.

Apart from its academic and public health importance, there are no other personal interests in the study. Participants were interviewed in their homes at a time convenient to them. Participants were told they had the right to answer or ignore sensitive questions. Sensitive questions were however asked in a way that minimized such discomfort as research assistants were properly trained on that. Questions asked were not harmful but could cause some discomfort. Participants were told they have the right to answer or ignore such sensitive questions.
3.11 Pre-testing

The questions were pretested in a community at Chorkor that was not selected for the study. Chorkor was chosen for the study because the people within that community share the same socio-demographic characteristics as the people of the Ashiedu-Keteke Metropolis.
CHAPTER FOUR

RESULTS

4.1 Introduction

This chapter presents the results obtained from the study. A total of 417 reproductive women aged 18 years and above were interviewed using a structured questionnaire. The chapter is organized into four sub sections. These are organized under ‘background characteristics, the relationships between socio demo graphic characteristics and cervical cancer screening, the relationship between knowledge and awareness of cervical cancer screening, and beliefs about cervical cancer screening among women in Ashiedu-keteke

4.2 Socio-demographic characteristics of participants

Table 1 shows the demographic characteristics of the study participants. Majority 177(42.5) of respondents were between the ages of 20-29 while the least 48(11.5%) were less than 20 years. Single women formed the majority 215(51.6%) while women who were divorced formed the least 15 (3.6%). A higher proportion 275(66.0%) of women had primary education with the least 6(1.4%) represented with tertiary education .Regarding the income level of women, women who earned above GHS600.00, formed the majority  275(61.7%) while the least 72(17.1 ) were income earners who earned between GHS210-600.00.
Table 4.1: Demographic Characteristic of Women in Asheidu-Keteke Sub Metro June 2015

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age category</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;20</td>
<td>48</td>
<td>11.5</td>
</tr>
<tr>
<td>20-29</td>
<td>177</td>
<td>42.5</td>
</tr>
<tr>
<td>30-39</td>
<td>106</td>
<td>25.5</td>
</tr>
<tr>
<td>40-49</td>
<td>85</td>
<td>20.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>416</td>
<td>100</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
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<td></td>
</tr>
<tr>
<td>Married</td>
<td>116</td>
<td>27.8</td>
</tr>
<tr>
<td>Single</td>
<td>215</td>
<td>51.6</td>
</tr>
<tr>
<td>Divorced</td>
<td>15</td>
<td>3.6</td>
</tr>
<tr>
<td>Other</td>
<td>71</td>
<td>17.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>417</td>
<td>100</td>
</tr>
<tr>
<td><strong>Level of Education</strong></td>
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<td></td>
</tr>
<tr>
<td>No formal Education</td>
<td>66</td>
<td>15.8</td>
</tr>
<tr>
<td>Primary</td>
<td>275</td>
<td>66.0</td>
</tr>
<tr>
<td>SHS</td>
<td>70</td>
<td>16.8</td>
</tr>
<tr>
<td>Tertiary</td>
<td>6</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>417</td>
<td>100</td>
</tr>
<tr>
<td><strong>Religion</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christianity</td>
<td>361</td>
<td>86.8</td>
</tr>
<tr>
<td>Muslim</td>
<td>38</td>
<td>9.1</td>
</tr>
<tr>
<td>Traditional/ others</td>
<td>17</td>
<td>4.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>416</td>
<td>100</td>
</tr>
<tr>
<td><strong>Employment Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self employed</td>
<td>175</td>
<td>42.3</td>
</tr>
<tr>
<td>Government worker</td>
<td>18</td>
<td>4.4</td>
</tr>
<tr>
<td>Private sector</td>
<td>78</td>
<td>18.8</td>
</tr>
<tr>
<td>Unemployed</td>
<td>143</td>
<td>34.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>414</td>
<td>100</td>
</tr>
<tr>
<td><strong>Income Categories</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below GH₵ 210</td>
<td>88</td>
<td>21.1%</td>
</tr>
<tr>
<td>GH₵ 210 – 600</td>
<td>73</td>
<td>17.5%</td>
</tr>
<tr>
<td>Above GH₵ 600</td>
<td>256</td>
<td>61.4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>417</td>
<td>100.0</td>
</tr>
</tbody>
</table>

4.2.1 Sex-Related Background

From Table 4.2, 83% of the respondents affirmed that they currently have sex partners with a whopping 95% attesting that they have ever indulged in sexual intercourse before. Again most of the respondents had sexual intercourse before age eighteen (57%) and only
6% have been involved with only one sex partner. These figures clearly show that, a bulk or majority of the respondents are at the risk of cervical cancer infection.

<table>
<thead>
<tr>
<th>Table 4.2</th>
<th>Sexual Background Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
</tr>
<tr>
<td>Have Partner</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>348</td>
</tr>
<tr>
<td>No</td>
<td>71</td>
</tr>
<tr>
<td>Ever Had Sexual Intercourse</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>397</td>
</tr>
<tr>
<td>No</td>
<td>22</td>
</tr>
<tr>
<td>Age of Sexual Initiation</td>
<td></td>
</tr>
<tr>
<td>Less than 12</td>
<td>22</td>
</tr>
<tr>
<td>12 - 17</td>
<td>207</td>
</tr>
<tr>
<td>18 - 23</td>
<td>164</td>
</tr>
<tr>
<td>Above 24</td>
<td>6</td>
</tr>
<tr>
<td>Number of Sexual Partners</td>
<td></td>
</tr>
<tr>
<td>One</td>
<td>23</td>
</tr>
<tr>
<td>2 - 3</td>
<td>115</td>
</tr>
<tr>
<td>More than 3</td>
<td>250</td>
</tr>
</tbody>
</table>

4.3 Knowledge and Awareness about Cervical cancer screening

The mean score for level of knowledge was 6.81 ± 2.62. Most (67.6%) of the respondents had low knowledge about cervical cancer with 3 women who had no knowledge. About a
third (30.2%) of the women had poor knowledge and 2 had an excellent knowledge of cervical cancer.

Only 21.1% are aware of a disease called cervical cancer. Of those who are aware of the existence of cervical cancer, majority (60.5%) quoted the modern media as their source of awareness. The low awareness level could possibly suggest the reason for the abnormally low knowledge and high misconception on cervical cancer.

Table 4.3: Knowledge And Awareness Of Cervical Cancer Among Respondents

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge score</td>
<td></td>
</tr>
<tr>
<td>No knowledge</td>
<td>3 (0.7)</td>
</tr>
<tr>
<td>Low knowledge</td>
<td>281 (67.6)</td>
</tr>
<tr>
<td>Poor knowledge</td>
<td>126 (30.2)</td>
</tr>
<tr>
<td>Good knowledge</td>
<td>4 (1)</td>
</tr>
<tr>
<td>Excellent knowledge</td>
<td>2 (0.5)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>417 (100)</strong></td>
</tr>
<tr>
<td>Awareness</td>
<td></td>
</tr>
<tr>
<td>Heard of cervical cancer</td>
<td>88 (21.1)</td>
</tr>
<tr>
<td>Never heard of cervical cancer</td>
<td>329 (78.9)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>417</strong></td>
</tr>
<tr>
<td>Source of Awareness</td>
<td></td>
</tr>
<tr>
<td>Media</td>
<td>252 (60.5)</td>
</tr>
<tr>
<td>Nurse/Doctor</td>
<td>68 (16.3)</td>
</tr>
<tr>
<td>Community Health Worker</td>
<td>3.4 (8.1)</td>
</tr>
<tr>
<td>Religious Bodies</td>
<td>63 (15.1)</td>
</tr>
</tbody>
</table>

4.4 Beliefs of participants on cervical cancer and screening

A tenth of women were aware of Pap smear as the method used to test for cervical cancer. Most (93.7) were aware that they could get treatment when diagnosed and 91.5% thought they could die when diagnosed positive. A quarter of the women were well aware
that cervical cancer is caused by a virus. One-fifth of the women also have never heard of cervical cancer.

Figure 4.1: Relationship between knowledge and sexual related factors among participants.

Level of knowledge was compared with sexual related factors. Poor knowledge was highest among all sexual related variables studied with about one-third of women have good knowledge across all the variables. There was no association having a partner, ever
had sex, age at first sexual intercourse, number of sexual partners and the level of knowledge of the women.

4.5 Factors Associated With Cervical Cancer Screening

The study further investigates relationship between level of awareness and knowledge, demographic factors and sex related factors.

4.5.1 Factors Associated With Cervical Cancer Screening And Socio Demographics

Table 2 describes the relationship between socio demographic characteristics and cervical cancer screening among women in Ashieu- Keteke in June 2015. The study revealed 4.8% prevalence of cervical cancer screening among women in Ashiedu- Keteke Demographic variables were compared with status of screening to look for relationships. There was no association between the demographic factors and screening status. However proportions of women not screened were higher for all categories. Almost all the background characteristics recorded more that 90% for women not screened relative to women who were screened.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Cervical cancer screening</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ever screened</td>
<td>Never screened</td>
</tr>
<tr>
<td>Age (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;20</td>
<td>0 (0)</td>
<td>48 (100)</td>
</tr>
<tr>
<td>20-29</td>
<td>10 (5.7)</td>
<td>167 (94.4)</td>
</tr>
<tr>
<td>20-39</td>
<td>7 (6.6)</td>
<td>99 (93.4)</td>
</tr>
<tr>
<td>40-49</td>
<td>3 (3.5)</td>
<td>82 (98.5)</td>
</tr>
<tr>
<td>Totals</td>
<td>20</td>
<td>396</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>5 (4.3)</td>
<td>111 (95.7)</td>
</tr>
<tr>
<td>Single</td>
<td>12 (5.6)</td>
<td>203 (94.4)</td>
</tr>
<tr>
<td>Divorced</td>
<td>0 (0)</td>
<td>15 (100)</td>
</tr>
<tr>
<td>Other</td>
<td>3 (4.2)</td>
<td>68 (95.8)</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>397</td>
</tr>
<tr>
<td>Level of Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No formal Education</td>
<td>4 (6.1)</td>
<td>62 (93.9)</td>
</tr>
<tr>
<td>Primary</td>
<td>14 (5.1)</td>
<td>261 (94.9)</td>
</tr>
<tr>
<td>SHS</td>
<td>1 (1.4)</td>
<td>69 (98.6)</td>
</tr>
<tr>
<td>Tertiary</td>
<td>1 (16.7)</td>
<td>5 (83.3)</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>397</td>
</tr>
<tr>
<td>Religion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christianity</td>
<td>20 (5.5)</td>
<td>341 (94.5)</td>
</tr>
<tr>
<td>Muslim</td>
<td>0 (0.0)</td>
<td>38 (100)</td>
</tr>
<tr>
<td>Traditional/ others</td>
<td>0 (0.0)</td>
<td>17 (100.0)</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>396</td>
</tr>
<tr>
<td>Employment Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self employed</td>
<td>7 (4.0)</td>
<td>168 (96.0)</td>
</tr>
<tr>
<td>Government worker</td>
<td>3 (16.7)</td>
<td>15 (83.3)</td>
</tr>
<tr>
<td>Private sector</td>
<td>4 (5.1)</td>
<td>74 (94.9)</td>
</tr>
<tr>
<td>Unemployed</td>
<td>5 (3.5)</td>
<td>138 (96.5)</td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
<td>395</td>
</tr>
<tr>
<td>Income categories (cedis)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below 210</td>
<td>3 (3.4)</td>
<td>85 (96.6)</td>
</tr>
<tr>
<td>210-600</td>
<td>4 (5.5)</td>
<td>69 (94.5)</td>
</tr>
<tr>
<td>Above 600</td>
<td>13 (5.1)</td>
<td>243 (94.9)</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>397</td>
</tr>
</tbody>
</table>

+ fisher's exact p-value
4.5.2 Relationship between knowledge score, awareness and cervical cancer screening among respondents

Generally, the number of women screened was low. When this was compared with the level of awareness and knowledge, it was realized that a higher number of respondents (13) with low knowledge were found to have screened for cervical cancer as compared to those who have good knowledge. None of the women with good knowledge of cervical cancer had ever screened. There was a significant statistical evidence that an association exist between level of knowledge of women and screening for cervical cancer (fisher’s exact p=0.028).

Table: effect of knowledge and awareness of cervical cancer on cervical cancer screening

<table>
<thead>
<tr>
<th>Variable</th>
<th>Screened</th>
<th>Not screened</th>
<th>Chi-square value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level of knowledge</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No knowledge</td>
<td>2</td>
<td>1</td>
<td>25.60</td>
<td>0.028**</td>
</tr>
<tr>
<td>Low knowledge</td>
<td>13</td>
<td>268</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor knowledge</td>
<td>5</td>
<td>121</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good knowledge</td>
<td>0</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excellent knowledge</td>
<td>0</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>396</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Awareness of cervical cancer</td>
<td></td>
<td></td>
<td>1.50</td>
<td>0.243</td>
</tr>
<tr>
<td>Ever heard of cervical cancer</td>
<td>6</td>
<td>78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never heard of cervical cancer</td>
<td>13</td>
<td>313</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
<td>391</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* significant at p<0.05  + fisher’s exact p-value

44
4.5.3 Factors Associated With Beliefs, Misconceptions And Cervical Cancer Screen

Table 3 shows the beliefs of Ashiedu-Keteke women on cervical cancer and screening. Most of the respondents 10 (4.3%) who had no idea that HPV is the main cause of cervical cancer were more likely to screen for cervical cancer than those who believed it was caused by a virus 3 (3.3%) This was also insignificant with p = 0.153. Surprisingly majority of the respondents 297 (97.7%) who disagree that cervical cancer affects only women will go for screening compared to those who agree 13 (100% ) that cervical cancer affects only women. This was statistically significant with p value of 0.044. It was also found out that majority of the respondents 286 (97.9%) who disagree that cancer does not affect young women were more likely to go for screening than respondents 4 (15.4%) who agree. This was also significant (p=0.001).
Table 4.3: Relationship between belief and cervical cancer screening among women in Ashiedu-keteke June 2015

<table>
<thead>
<tr>
<th>Variable</th>
<th>Ever screened</th>
<th>Never screened</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cause of HPV</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spiritual</td>
<td>0(0.0)</td>
<td>39(100.0)</td>
<td>0.153</td>
</tr>
<tr>
<td>Virus</td>
<td>3(3.3)</td>
<td>89(96.7)</td>
<td></td>
</tr>
<tr>
<td>STI</td>
<td>4(10)</td>
<td>36(90)</td>
<td></td>
</tr>
<tr>
<td>No idea</td>
<td>10(4.3)</td>
<td>225(95.7)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>389</td>
<td></td>
</tr>
<tr>
<td><strong>Cervical cancer has no cure</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agree</td>
<td>2(2.2)</td>
<td>89(97.8)</td>
<td>0.601</td>
</tr>
<tr>
<td>Disagree</td>
<td>11(4.6)</td>
<td>227(95.4)</td>
<td></td>
</tr>
<tr>
<td>No idea</td>
<td>3(4.0)</td>
<td>389(95.4)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>389</td>
<td></td>
</tr>
<tr>
<td><strong>Cervical cancer affects only women</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agree</td>
<td>0(0.0)</td>
<td>13(100)</td>
<td>0.044*</td>
</tr>
<tr>
<td>Disagree</td>
<td>8(2.6)</td>
<td>297(97.38)</td>
<td></td>
</tr>
<tr>
<td>No idea</td>
<td>7(8.14)</td>
<td>79(91.86)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>389</td>
<td></td>
</tr>
<tr>
<td><strong>Cervical cancer do not affect young women</strong></td>
<td></td>
<td></td>
<td>0.001*</td>
</tr>
<tr>
<td>Agree</td>
<td>4(15.4)</td>
<td>22(84.6)</td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td>6(2.1)</td>
<td>286(97.9)</td>
<td></td>
</tr>
<tr>
<td>No idea</td>
<td>5(5.8)</td>
<td>81(94.2)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>389</td>
<td></td>
</tr>
</tbody>
</table>

* significant at p<0.05
CHAPTER FIVE

DISCUSSION

This section discusses the main findings of the study conducted in relation to: cervical cancer knowledge and screening among women in Ashiedu-Keteke sub metro in the greater Accra region of Ghana. It compares the findings from this study to what other studies or researchers have found and the possible reasons for the differences in findings.

The study found cervical cancer screening among women of the reproductive age to be extremely low (4.8%) in the sub metropolis. This could because Ghana currently does not have a national cervical cancer screening programme thus women who were willing to have a Pap smear test would not know where to go and have the test

Though this is very low but it is not surprising considering the fact that chunk of the respondents had only basic education as their highest form of education. Coincidentally, education was not a significant factor that affected the knowledge. Respondents seemed to relatively know less about the causes and signs of symptoms of cervical cancer. This is very worrying as this implies that early detection and prevention is very likely to elude them.

The knowledge level was so low to the extent that it cut across all subgroups of possible factors that could be related. Demographic factors such as Age, Education Level (as already mentioned), Employment and Income Level were all not significantly related to Knowledge level. The same can be said for sex related factors like the number of sex partners and the age of sex initiation. This shows that other underlying factors could probably be affecting the knowledge level.
The knowledge level especially on the causes, signs and symptoms are very low at Ashiedu-Keteke area as shown by the respondents,

Contrary to a study by Adanu et al.,(2010) the knowledge level was much higher (39%) than what was found in this study. This is because whilst this study considered one district in the metropolis the other was done in the whole Accra metropolis thus is likely to give a better picture in the level of knowledge amongst the people. Even though Ashiedu-Keteke is situated in the capital city, the study found that majority of the residence had lower educational level (primary) and so the lower prevalence could be as results of the higher illiteracy rate in the Metropolis. This was consistent with what Adanu et al., (2010) found in their study, in Accra Metropolis. Having formal education was directly related to cervical cancer screening uptake and women with primary education were more likely to go for screening most. Generally knowledge level was low in this study. Out of a total of 417 respondent 281(67.6%) scored, low knowledge while only 126 (30.2%) women had poor knowledge on cervical cancer with only 3(0.7%) women having gone for cancer screening. This was similar to a study done by (Assoumou et al., 2015) Gabon where women generally demonstrated a poor level of knowledge on cervical cancer knowledge and screening.

Although the highest proportion of the respondents who have screened for cervical cancer are those with primary education, education level showed no significant relationship with the screening status as opposed to the findings in the studies Adanu et al.(2010 and Ngoma (2006) but in accordance with findings in Owoeye and Ibrahim (2013). Again, though respondent in the higher income belt were those with higher proportion of screened respondents yet income on a whole was not significantly associated with the
screening status. This study showed negligible evidence that poverty is a factor that is associated with CC screening as suggested by the studies Adanu et al.(2010) and Ngoma (2006).

Higher proportion of screened respondents were however, not married, self employed and between the ages "30 – 39 years”. But none of the demographic factors were significantly associated with cervical cancer screening in this study.

Employment status was also not significantly associated with CC awareness. More of the self employed women are aware of cervical cancer than the rest of the other employment status. Marital and Income status were however not associated with the cervical cancer awareness. The results in this study also shows that rich will find information more accessible.

In addition, cervical cancer awareness was not associated with sex related factors like, number of sex partners and the age of sex initiation,. However, most of the respondents were those who do not have sex partners currently and those who have been indulged with more than one sex partner.

To cap it, the study further did not find any significant association between CC awareness and screening. This concords the findings by Owoeye and Ibrahim (2013)

Therefore the study finds that, cervical cancer awareness affects the (which is obvious) educational level of women in a way that affects the tendency to be aware of cervical cancer.
Regarding beliefs on cervical cancer, 286 (97.9) believed cervical cancer do not affects young women this was significant with p-value. 0.001. This was not surprising as respondents within that community had poor knowledge on cancer screening.

Levels of knowledge of cervical cancer screening was very low. More people with higher income were screened and the number of people screened increased significantly with level of knowledge on cervical cancer. There was a significant association between level of knowledge and screening for cervical cancer.

There has been low coverage of women having ever screened for cervical cancer. A study in Elmina (Ebu, Mupepi, Siakwa, & Sampselle, 2015) to assess the knowledge, barriers and practice towards cervical cancer screening recorded only 3 (0.8%) women were ever screened which is consistent with what was observed in his study 20 (4.8%). In Southern Ghana women reported unavailability of testing site and proximity to testing site as some of the major barriers limiting access to screening. Socio economic status of women also influenced their ability to go for cervical cancer screening or not (Ebu et al., 2015). In this study, the higher the women earned, the higher the proportion that was screened. Reports by Ebu et al. (2015) asserted that, the cost of Pap smear is a financial barrier to its access and that the cost will prevent the average Ghanaian woman from undergoing the test.

There is low levels of knowledge on cervical cancer among women in developing countries (Amarin, Badria, & Obeidat, 2008). This study recorded a mean score of 6.8 on knowledge of women on cervical cancer similar to (Rosser, Njoroge, & Huchko, 2015) a study in rural Kenya. There was an association between level of knowledge and screening
for cervical cancer and similar results were reported in India that cited lack of knowledge as important in the uptake of cervical cancer screening (Aswathy, Quereshi, Kurian, & Leelamoni, 2012). When there is low level of knowledge, women are not empowered to make healthy choices the easier one. Knowledge of women on cervical cancer is therefore important in increasing access to Pap smear test. There is not enough health education on the risk factors, causes and symptoms of cervical cancer. The low level of knowledge could be due to lack of educational interventions. Lack of information is cited in Agurto et al. (2005) as a main factor in limiting access to cervical cancer screening interventions.

Some women had some beliefs and misconceptions that cervical cancer could affect only older women and women with children. This was significant with p-value of 0.044 and 0.001 respectively. Ebu et al. (2015) also identified negative misconceptions that made women feel that they were less at risk of developing cervical cancer therefore did not see it necessary to go for screening. This might have accounted for a low coverage in testing since a bigger population of Ghanaian women are young.

Some women had some beliefs and misconceptions that cervical cancer could affect only older women and women with children. This was significant with p-value of 0.044 and 0.001 respectively. Ebu et al. (2015) also identified negative misconceptions that made women feel that they were less at risk of developing cervical cancer therefore did not see it necessary to go for screening. This might have accounted for a low coverage in testing since a bigger population of Ghanaian women are young. Misconceptions affect the success of programs. Cervical cancer screening coverage might be low due to the misconceptions people have about the disease and screening. In addressing these myths
and misconceptions, William et al. (2014) suggested that cervical cancer interventions aimed at bridging educational gaps and addressing misconceptions and myths should be culturally suitable to meet the demands to Ghanaians.

In this study, low level of knowledge was a significant determinant of accepting to a pap smear test with very few women ever heard of cervical cancer. In addition, the level of knowledge of women on the causes, signs and symptoms, treatment and prevention of cervical cancer was very low.

A significant relationship was found between socio-demographic characteristics and the level of knowledge and awareness of cervical cancer and cancer screening. This was also in consistent with a study in conducted among Gabonese women where the study found a significant relationship between socio-demographic characteristics on the level of knowledge about cervical cancer and cancer screening.

Though the age group in the study was not statistically significant related to cervical cancer screening, (p=0.029) woman between the age 30-39 years tend to patronize more cervical cancer screening than the rest though this phenomenon could be due to the fact that most of these women might have had a formal education and would have been gainfully employed and therefore have the financial muscle to finance cervical cancer screening. This is consistent with a study conducted by (Ekechi et al., 2014). which reveals that women within aged 18-78 years tend to have higher educational qualification and therefore will be able to bear the cost of screening.
5.1 Limitation To The Study

Since the study was dealing with a sensitive topic, the research anticipated non response to some embarrassing questions. To address it, research assistants were trained to establish a good rapport for participants to feel comfortable to answer such questions.
CHAPTER SIX

CONCLUSION AND RECOMMENDATION

6.1 Conclusion

The study found cervical cancer screening among women of the reproductive age to be extremely low (4.8%) in the Asedu- Keteke Sub metropolis. Women socio demographic factors did not affect whether they will be infected or not. Misconceptions that cervical cancer could only affect older women and women with children was a determinant of whether a women will screen for cervical cancer or not.

The study thus concludes that;

Risk factors such as high number of sex partners is prevalent amongst the women in the Ashiedu- Keteke area and as such most of them are at risk of cervical cancer.

The knowledge level of women in Ashiedu- Keteke on Cervical is severely poor and the factors that is accounting for this is farfetched. Further investigation is needed to explain why the knowledge is very low amongst the women. The knowledge is especially poor concerning the causes and sign and symptoms of the disease.

The proportion of women who have undergone cervical cancer screening is very low and like other studies the underlying factors are not specifically known. Women's knowledge and awareness has no bearing whatsoever on the screening of cervical cancer. However higher education seems to boost the tendency for screening.

Awareness of cervical cancer is very low and mostly created through the mass media. The awareness of cervical cancer effectively influences women knowledge on cervical
but has no bearing on whether women go for screening or not. Also women with higher level of education seem more aware of cervical cancer

6.2 Recommendations

Based on the findings, the following recommendations are being made:

Stakeholders of health namely; Ghana Health Service and Ministry of Health should incorporate education on cervical cancer in hospitals calendars and schedules to aid regular education on cervical cancer for women especially in deprived areas like Ashiedu Keteke. The education should basically be concentrated on the signs and symptoms of cervical cancer. This would help in early detection and subsequently treatment. The mass media are also advised to continually give education on it.

Stakeholders should seek sponsorship to bring screening of cervical cancer to doorsteps of women to better the number screened women in the country and if possible incorporate the cost in the National Health Insurance Scheme.

Further studies should be conducted across the country to find out exactly the causes of low patronage as far as cervical cancer screening is concerned.
REFERENCES


population-based survey in Rivas, Nicaragua. *Tropical Medicine & International Health, 7*(11), 935–941. doi:10.1046/j.1365-3156.2002.00953.x


APPENDICES

APPENDIX A

INFORMED CONSENT

Project Title: Cervical Cancer Knowledge and Screening among Women In Ashiedu Ketek Sub Metro In Accra.

Principal Investigator: Joan Ofori-Attah,

Contact of Principal Investigator: 0508033145; jofattah@gmail.com

Institution of Affiliation:Department of Population, Family and Reproductive Health, School of Public Health, College of Health Sciences, University of Ghana, Legon.

General Information about the research

This research is a study on knowledge and screening for cervical cancer among women. It is being conducted in Ashiedu Ketek Sub-metro of Accra among women aged 18 years and above. The purpose of the study is to determine the effect of knowledge and awareness of cervical cancer on cervical cancer screening among the study population. I hope that the information obtained from this study will help us design evidence-based strategies in the prevention and control of cervical cancer. 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 10-20 minutes to complete the questionnaire.
Possible Risks and Discomfort

The risks involved in taking part in this study are minimal. These include the inconvenience that the interview will cause you, and the time you will spend answering the questions. Some of the questions may seem personal and sensitive. You can however choose not to answer any question that you do not feel comfortable answering.

Possible Benefits

There are no direct benefits to you for your participation in the study, and there will be no compensation given to you for participating in this study. However, 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.

Voluntary Participation & Right to Leave the Research

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 refuse to answer any question asked, if you are uncomfortable doing so. 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. 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 and nobody will be able to trace your answers back to you.
Dissemination of Results

The 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.

Contact for Further Clarification

If you would like to find out more about the study, you may contact the Principal Investigator, Joan Ofori-Attah on phone number 0508033145

For additional information, you may contact Prof Richard K. Adanu, the supervisor of this study on phone number.

If you have any questions as to your rights as a participant or need any further information, you can contact the GHS Ethical Review Committee administrator, Hannah Frimpong on 0243235225 or 0507041223.

Participant Agreement

The above document describing the benefits, risks and procedures for the research titled “Cervical cancer knowledge and screening among women in Ashiedu-Keteke Sub-metro in Accra” 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 or thumbprint of participant
If volunteers cannot read the form themselves, a witness must sign here

I was present while the benefits, risks and procedures were read to the volunteer. All questions were answered and the volunteer has agreed to take part in the research.

___________________________
___________________________

Date       Signature of witness

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research has been explained to the above individual.

___________________________
___________________________

Date       Signature of person who obtained consent
Dear Respondents,

My name is Joan Ofori-Attah, a master’s student from the School of Public, University of Ghana. I am conducting a research project on Cervical Cancer Knowledge and Screening among Women In Ashiedu Ketek Sub Metro in Accra, as part of the fulfillment for the award of a Master of Public health degree. The purpose of this study is to determine the knowledge and awareness of cervical cancer on cervical cancer screening. It is in this respect that I solicit your cooperation to complete the questionnaire. This is purely an academic work and the information provided will be treated with utmost confidentiality. No part of the information will be disclosed without prior consent from you.

Respondent No:……………..
SECTION A DEMOGRAPHIC INFORMATION

1. Age

2. Marital Status
   (i) Married [   ]   (ii) Single [   ]   (iii) Divorced [   ]   (iv) Others
   (Specify)…………….

3. Level of Educational
   (i) No formal Education [   ]   (ii) Basic Education (iii) SHS [   ]   (iv) Tertiary [   ]

4. Religious Affiliation
   (i) Christianity [   ]   (ii) Muslim [   ]   (iii) Traditionalist [   ]   (iv) Others…………….

5. Employment Status
   (i) Self-Employed (ii) Government worker (iii) Private-sector Employed (iv) Unemployed

6. Do you have a partner?
   (i) Yes [   ]   (ii) No [   ]

7. Have you ever had sexual intercourse?
   (i) Yes [   ]   (ii) No [   ]

8. Age at which you had your first sexual intercourse
   (i) <12 [   ]   (ii) 12-17 [   ]   (iii) 18-23 [   ]   (iv) > 24 [   ]

9. Number of sexual partners in life.
   (i) None (ii) 1-2 [   ]   (iii) > 3 [   ]
10. What is your level of income per month?

__________________________________

SECTION B: KNOWLEDGE ABOUT CERVICAL CANCER

11. Have you ever heard about cervical cancer?
   (i) Yes [ ] (ii) No [ ]

12. If yes, where did you hear it?
   (i) Media [ ] (ii) Nurse/Doctor [ ] (iii) Community health worker [ ] (iv) Hospital
   (iv) From friends [ ] (v) Family members [ ] (vi) others (specify)………………

13. Cervical cancer is cancer of the
   (i) Cervix [ ] (ii) Abdomen [ ] (iii) Bladder [ ] (iv) Uterus [ ]

14. Who does cervical cancer affect?
   (i) Men [ ] (ii) Women [ ] (iii) Both [ ] (iv) No idea [ ]

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

16. 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)________________________

17. Which organism causes the infection?
   (i) Virus [ ] (ii) Bacteria [ ] (iii) Parasite [ ] (iv) Others (specify)………………
18. Can cervical cancer be treated?
   (i) Yes [ ] (ii) No [ ]

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

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

SECTION C: KNOWLEDGE ON CAUSES, SIGNS AND SYMPTOMS, TREATMENT AND PREVENTION OF CERVICAL CANCER

21. What are the presenting symptoms of cervical cancer? (multiple responses accepted)
   (i) Abnormal menstrual bleeding [ ] (ii) bleeding between menstrual period [ ]
   (i) Itching of the vagina [ ] (iv) vaginal discharge [ ] (v) foul vaginal discharge [ ]
   (v) No Idea [ ]

22. Human Papillomavirus (HPV) is the main cause of cervical cancer
   (i) Agree [ ] (ii) Disagree [ ] (iii) No Idea [ ]

23. HPV is sexually transmitted
   (i) Agree [ ] (ii) Disagree [ ] (iii) No Idea [ ]

24. The number of births can cause cervical cancer
   (i) Agree [ ] (ii) Disagree

25. The cause of HPV infection can be
26. Treatment for cervical cancer is available in the hospital
   (i) Agree [ ] (ii) Disagree [ ] (iii) No Idea [ ]

27. Can cervical cancer has no cure
   (i) Agree [ ] (ii) Disagree [ ] (iii) No Idea [ ]

28. Using condom during sex can reduce risks of cervical cancer
   (i) Agree [ ] (ii) Disagree [ ] (iii) No Idea [ ]

29. Regular screening can reduce risks of cervical cancer
   (i) Agree [ ] (ii) Disagree [ ] (iii) No Idea [ ]

30. What is the recommended frequency for screening for cervical cancer
   ____________________________________________________________________________

31. Going for the HPV vaccine can prevent cervical cancer
   (i) Agree [ ] (ii) Disagree [ ] (iii) No Idea [ ]

SECTION D: HEALTH BELIEF MODEL VARIABLES

32. Cervical cancer affects only women with children
   (i) Agree [ ] (ii) Disagree [ ] (iii) No Idea [ ]

33. Cervical cancer do not affect young women
   (i) Agree [ ] (ii) Disagree [ ] (iii) No Idea [ ]

34. my partner will agree for me to for screening
   Agree or Disagree

35. I am at risk of cervical cancer
   (i) Agree [ ] (ii) Disagree [ ] (iii) No Idea [ ]
   (ii)
SECTION E: SCREENING STATUS

36. Have you ever screened for cervical cancer

(i) Yes [ ] (ii) No [ ]

37. If yes, how many times

____________________________________

38. When was the last time you went for the screening

(i) >3 years (ii) 3-5 years (iii) <5 years

39. If No to question 35, why have you not done the screening

(i) Don’t know about screening (ii) Cost (iii) distance to screening centre (iv) attitude of health workers (iv) spousal/partner opposition to being screened (v) Cultural/religious reasons (vi) Other (Specify)

____________________________________

40. Will you voluntarily go for cervical cancer screening

(i) Yes [ ] (ii) No [ ]