

**ADOLESCENT GIRLS' KNOWLEDGE AND SOURCES OF INFORMATION ON  
CERVICAL CANCER: A COMPARATIVE STUDY OF ACCRA HIGH SCHOOL AND  
ATIAVI SENIOR HIGH TECHNICAL SCHOOL STUDENTS**



**THIS DISSERTATION IS SUBMITTED TO THE UNIVERSITY OF GHANA IN  
PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF M.A.  
COMMUNICATION STUDIES DEGREE.**

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**DECLARATION**

I hereby declare that this dissertation is the result of my own research conducted under the supervision of Dr. Gilbert Tietaah at the Department of Communication Studies, School of Information and Communication Studies, at the University of Ghana. All references to other people's works have been duly acknowledged.

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### **DEDICATION**

This work is dedicated to my mother, the late Peace Afi Afatsawu, whose selfless love, prayers and support have brought me this far. Thank you Danye.



## ACKNOWLEDGEMENT

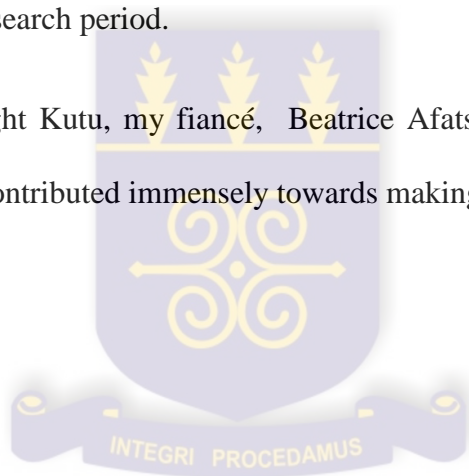
It is my wish to acknowledge the efforts of all who in diverse ways helped me in the completion of this study. My first acknowledgement goes to the Almighty God for His direction and help throughout my life.

My next acknowledgement goes to Dr. Gilbert Tietaah, my supervisor, for his immeasurable inputs to this work. God bless you, Dr. Tietaah.

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May God richly bless you all.



## ABSTRACT

This comparative study assessed the knowledge of adolescent girls on cervical cancer and its prevention in Ghana using a senior high school in an urban area (Accra High School) and a senior high school in a rural area (Atiavi Senior High Technical School). The choice of the two schools was motivated by the expectation that students in these schools will differ significantly in terms of their socioeconomic backgrounds which was duly confirmed.

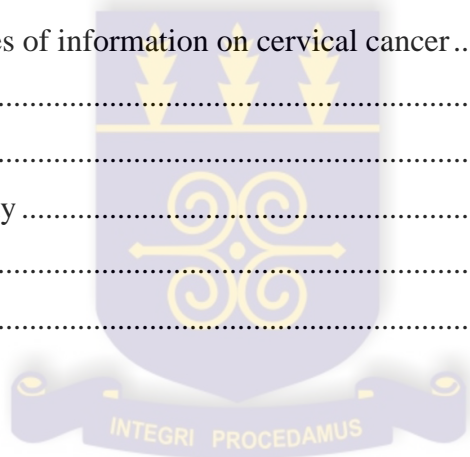
The study determined whether socioeconomic variables affected the knowledge and preference for sources of information on the disease among the adolescent girls. It also sought to find out if adolescent girls who perceived that they were at risk of getting cervical cancer sought information on it and its prevention. The study was undertaken within the framework of the knowledge gap hypothesis and the health belief model. A survey was conducted to collect data from adolescent girls from the two schools.

The study found that adolescent girls from Accra High School, who were from relatively higher socioeconomic backgrounds, had a higher level of knowledge of cervical cancer than respondents from Atiavi Senior High Technical School, who were from lower socioeconomic backgrounds. However, their preferred sources of information were not influenced by their socioeconomic background since they all preferred medical personnel. The most common source from which the respondents got information on cervical cancer was television (19.2%). In addition, the study found that adolescent girls who perceived that they were at risk of getting cervical cancer are not likely to seek information on the disease and its prevention.

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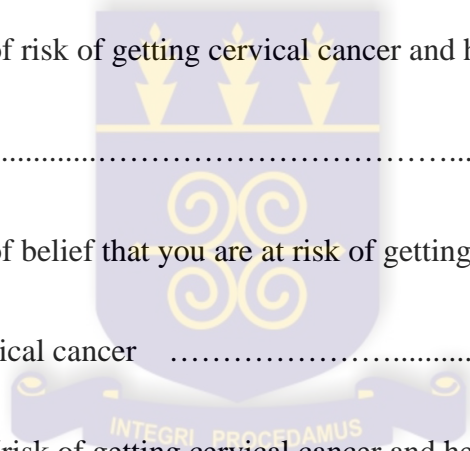
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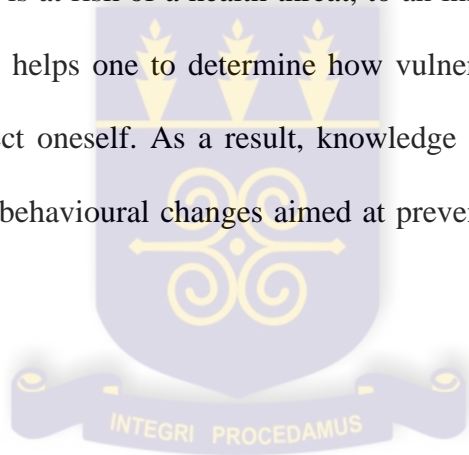


## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background to the Study

Knowledge about health-related issues is a necessary requirement for operationalizing the World Health Organization (WHO, 2001:1) definition of health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." Information and knowledge enable people to understand what causes diseases and determine whether or not they are at risk of getting an illness. In other words, knowledge about one's health moves one from a state of ignorance, where one is at risk of a health threat, to an informed state where one knows about that health threat. This helps one to determine how vulnerable one is to that threat and therefore takes steps to protect oneself. As a result, knowledge and information about health-related issues enable various behavioural changes aimed at preventing disease in populations at risk.



Promoting knowledge among adolescents and young people on health issues is an effective tool in achieving several national targets for improving health (Iverson & Kolbe, 1983). This role acquires particular prominence in the light of the central role given to gender and maternal health within targets under the Millennium Development Goals 3 (promote gender equality and empower women) and 5 (improve maternal health), respectively. And ironically also, in the light of concerns about the rising incidence of cervical cancer among women especially in developing countries like Ghana. Ghana, with the assistance of GAVI Alliance (Global Alliance for Vaccines and Immunization), introduced a pilot project in 2013 to vaccinate adolescent girls in

primaries 4 and 5 in both public and private schools against cervical cancer in 17 districts in the Greater Accra, Central and Northern regions (Osei, 2013). The World Health Organization (WHO) and other important institutions state that a successful comprehensive strategy to preventing cervical cancer should include educating women and communities about the causes and prevention of cervical cancer (Cervical Cancer Action, 2012; WHO, 2013). This is because public education plays a major role in raising awareness of public health issues and putting the power into the hands of communities to make informed decisions.

This therefore means that public education through important information sources such as mass media and interpersonal contacts should accompany many national and international efforts, such as the vaccination programme, in preventing and reducing the incidence of cervical cancer in order to be effective. There have been several initiatives by organizations such as Al-Hayaat Life Foundation<sup>1</sup> and the cervical cancer unit of the Ridge Hospital in Accra to educate the public in awareness creation programmes on cervical cancer to fight the disease. There has also been some public education through the mass media about cervical cancer in Ghana.

## **1.2 Cervical Cancer Prevalence**

Cervical cancer is a disease that forms in the tissues of the cervix, the organ that links the uterus and the vagina (American Cancer Society, 2013). These tissues become abnormal, grow uncontrollably and form tumours.

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<sup>1</sup> Al-Hayaat Life Foundation is a non-governmental organization in Ghana that has its core mandate to educate women, mostly in second cycle and tertiary institutions, on cervical cancer.

Cervical cancer is mainly caused by the human papillomavirus (HPV) (Jastreboff & Cymet, 2002). Genital HPVs, which are sexually transmitted, account for most cervical cancer cases globally. HPV types 16 and 18 are responsible for seven out of 10 cervical cancer cases worldwide (Bruni et al., 2014). The main risk factors of cervical cancer are increased number of sexual partners or sexual intercourse with a man who has multiple sexual partners, increased regularity of having sexual intercourse and early age of first sexual intercourse. The other risk factors of cervical cancer are tobacco smoking, use of oral contraceptives, infection with other sexually transmitted diseases and lack of Vitamin C or Beta-carotene) (Jastreboff & Cymet, 2002).

According to the Institut Català d'oncologia (ICO) Information Center on HPV and Cancer, cervical cancer is the third most common cancer among women globally with an estimated 530,232 new cases and 275,008 deaths in 2008. Current estimates of the disease show that 527,624 women are diagnosed with cervical cancer and 265,653 die from the disease every year (Bruni et al., 2014). Women aged 15 and above are at risk of developing cervical cancer. Less developed regions like Ghana record high incidence of cervical cancer than more developed countries (Bruni et al., 2014). In Ghana, cervical cancer is the first cause of cancer among women and the most common cancer among women aged 15 to 44 years (Bruni et al., 2014). According to the ICO Information Center on HPV and Cancer on Ghana, the country records 3,052 new cases and 1,552 deaths of cervical cancer annually. This is among the highest in Western Africa which records 27,326 new cases and 16,546 deaths annually out of the global number of 527,624 new cases and 265,653 deaths (Bruni et al., 2014).

### **1.3 Prevention and Treatment of Cervical Cancer**

The peak period for HPV infection is shortly after one has become sexually active (WHO, 2013). Cervical cancer can be mainly prevented through vaccination against the human papillomavirus using HPV vaccines. According to the United Nations Population Fund (UNFPA), if girls and women are vaccinated before they commence sexual activities, this can offer an excellent prospect in reducing cervical cancer incidence over time (UNFPA, 2011). Newly developed HPV vaccines are able to prevent infection with HPV types 16 and 18 which are the two most common types that cause cancer. The vaccines are targeted at girls 9-13 years of age since it is generally believed that at that age they might not have begun engaging in sexual activities (WHO, 2013).

Another way of preventing cervical cancer is by screening the cervix to detect the presence of the disease in a woman's body and treat pre-cancer after infection has already taken place and persisted (Cervical Cancer Action, 2012). The screening can be done through cervical cytology (Pap tests), visual inspection of the cervix using acetic acid (VIA) or testing for HPV DNA (UNFPA 2011). Other ways of preventing the disease include counseling women to reduce the number of their sexual partners and also consider using barrier contraceptives instead of oral contraceptives to prevent pregnancy (Jastreboff & Cymet, 2002).

In addition, the World Health Organization stresses the need for carefully designed messages to educate communities, parents, teachers and adolescents about cervical cancer and its prevention

(WHO, 2013). This therefore requires the important use of communication through a wide variety of sources such as mass media and interpersonal contacts to inform and educate.

#### **1.4 Statement of the Problem**

According to the National Research Council and Institute of Medicine, in 2005, data from developing countries showed that majority of males and females reported having begun sexual activity between the ages of 15 and 20 (Lloyd, 2005). In Western and Central Africa, 21.4%, 59.3% and 76% of females reported having had sexual intercourse by the ages of 15, 18 and 20 respectively. Among males, 11%, 40.3% and 60.6% had reported having had sexual intercourse by the ages of 15, 18 and 20 respectively. This clearly indicates that a significantly larger number of females begin sexual activity earlier than their male counterparts and are therefore at a greater risk of contracting the human papillomavirus. The development, physiological and behavioural changes that accompany put young females at high risk for infection from sexually transmitted diseases (STDs), such as the human papillomavirus which causes cervical cancer (Dixon-Mueller, 2008).

The occurrence of the human papillomavirus infection is extremely high among young sexually active adult women (Burak & Meyer, 1998). Cronje (2005) states that usually, women get infected with HPV in their teen ages and twenties. However since many of the HPV infections do not show any symptoms, most adolescent girls do not realize that they are infected until they become pre-cancerous (Moscicki, 2005). With such statistics, the need for adolescents girls to receive information on cervical cancer and its prevention in order to protect themselves becomes

significant in light of the stress the World Health Organization puts on designing messages to educate adolescents on the disease. In order to ensure this, it becomes imperative that data from adolescent girls be collected to reflect what they know and their source of information on the disease.

Several studies have shown that adolescent girls and women in general lack knowledge on cervical cancer and human papillomavirus (Dugandžija et al., (2012); Ghotbi & Anai, (2012); Hoque (2010); Kimberling et al., (2011); Makwe, Anorlu & Odeyemi, (2012); Rashwan, Ishak and Sawalludin, (2013). A prior study has also been conducted also to describe the knowledge and beliefs of cervical cancer and cervical cancer screening among women in a college in Ghana (Abotchie & Shokar, 2009). However there is no known empirical study in Ghana to assess the role that socioeconomic variables play in determining the level of knowledge on the disease and its prevention. Therefore, this study is aimed at assessing the knowledge of adolescent girls on cervical cancer and its prevention in Ghana using a senior high school in an urban area (Accra High School) and a senior high school in a rural area (Atiavi Senior High Technical School). The problem the study sought to investigate, therefore, was whether factors affecting gaps in knowledge among adolescents would reflect in their varying levels of awareness about cervical cancer and its prevention.

### **1.5 Objectives of the Study**

The objectives of the study are to assess the knowledge of adolescent girls in Ghana on cervical cancer and its prevention and the relationship between adolescent girls' knowledge on cervical cancer and their socioeconomic background. It was to determine whether adolescent girls who

are sexually active perceive getting cervical cancer a threat, as well as find out the main and preferred sources of information for adolescent girls on cervical cancer.

## 1.6 Research Hypotheses

**Hypothesis 1:** Adolescent girls in the urban school are likely to be more knowledgeable about cervical cancer and its prevention than adolescent girls in the rural school.

**Rationale:** According to the knowledge gap theory, difference in socioeconomic status corresponds to differences in knowledge among members of a population therefore, it is expected that respondents in Accra will generally know more about cervical cancer than those who live in Atiavi due to their place of usual residence. This is because it is anticipated that the place of usual residence and the socioeconomic status of adolescent girls in Accra High School should give them access to more information which is likely to influence their level of knowledge on cervical cancer and its prevention than girls in Atiavi Senior High Technical School.

**Hypothesis 2:** Adolescent girls who perceive contracting HPV to be a threat are likely to seek information on cervical cancer and its prevention.

**Rationale:** Adolescent girls who are sexually active will believe that they are at risk of getting infected with HPV since it is sexually transmitted and will therefore seek information on cervical cancer and its prevention in order to protect themselves against the disease as well as other sexually transmitted diseases.

**Hypothesis 3:** Adolescent girls' preferences for sources of information on cervical cancer and its prevention are likely to be influenced by their socioeconomic status.

**Rationale:** Adolescent girls with higher socioeconomic status will have all the different media available to them and will therefore have a greater number of information sources. Adolescent girls with lower socioeconomic status, on the other hand, will have limited media options available to them and will therefore be limited in their choice of sources of information.

### **1.7 Significance of the Study**

It is hoped that this study would help provide empirical evidence regarding adolescent girls' knowledge and sources of information on cervical cancer and its prevention in Ghana. This is because there is no known empirical data on adolescent girls' knowledge of cervical cancer in the country. The findings, which will reflect the level of knowledge about the disease across populations with different socioeconomic status, will also allow policy makers to develop appropriate educational and awareness programmes on cervical cancer and its prevention targeting young Ghanaian girls.

### **1.8 Operationalization of Concepts**

- **Adolescent girls:** WHO defines adolescence as the period that occurs after childhood and before adulthood, from the ages 10 to 19 years. In this study, an adolescent girl will be from the ages of 14 to 19.

- **Sources of information:** Places or persons from whom and where information is obtained on cervical cancer and its prevention. In this study, there are sources of information such as parents or guardians, teachers, radio, television, internet and print media and peers.
- **Socioeconomic status:** The social standing of the adolescent girls measured by their places of usual residence, highest level of education and the occupations of their parents and guardians.

In this study, students were asked to indicate the highest level of education and the exact work their parents do. Based on their responses, the researcher grouped them into professional/managerial, skilled blue-collar, and semi-skilled and unskilled workers.

- **Professional/Managerial workers:** Parents with university and professional or polytechnic education and had professions as administrators, chief executive officers, bank managers, lawyers, head teachers, accountants, etc.
- **Skilled blue-collar workers:** Parents with professional or polytechnic education and had professions as police officers, teachers, health workers, printers, secretaries, receptionists, caterers, etc.
- **Semi-skilled and unskilled workers:** Parents with primary, secondary or no education and had professions as carpenters, mechanics, farmers, traders, fisher folk, etc.

## **1.9 Organization of the Study**

The study is organized into five chapters. Following this introductory chapter, the theoretical framework and relevant literature are presented in Chapter two. Chapter three covers the methodology used in the study. Chapter four presents the findings from the study including the test of hypotheses, which is followed by a discussion, summary and recommendations of the study in Chapter five.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.0 Introduction

This chapter discusses the theoretical perspectives used to inform this study. They are the Knowledge Gap Hypothesis and the Health Belief Model. It also presents the empirical findings of related studies in the field of health communication generally, and as they address the subject of information on cervical cancer and its prevention in particular. The review provides insight into what other studies have explored, how they were undertaken, the findings and any gaps and contentions the review exposed.

#### 2.1 Theoretical Framework

The theoretical framework of this study spans the relevant propositions and concepts developed in the context of the Knowledge Gap Hypothesis postulated by Tichenor, Donohue, and Olien (Severin & Tankard, 2001), as well as the Health Belief Model posited by social psychologists Hochbaum, Rosentock and Kegel (Glanz, Rimer, & Lewis, 2002).

##### 2.1.0 The Knowledge Gap Hypothesis

The Knowledge Gap Hypothesis states that:

as the infusion of mass media information into a social system increases, segments of the population with higher socioeconomic status tend to acquire this information at a faster rate than the lower-status segments, so that the gap in knowledge between these segments tends to increase rather than decrease ( Tichenor, Donohue & Olien 1970: 159-160).

The hypothesis means that increase in information in the public domain is not acquired equally by every member of the society which results in a gap in knowledge (Severin & Tankard, 2001). This is because individuals with high socioeconomic status, who are information-rich, tend to have a better ability to acquire information than people with low socioeconomic status, who are “information-poor”. As Severin and Tankard explained, “people who are struggling with financial poverty are also information-poor. There are haves and have-nots with regard to information just as there are haves and have-nots with regard to material wealth” (Severin & Tankard, 2001: 245). Based on this statement, it can be said that there is a relationship between income, which is determined by an individual’s socioeconomic status, and his or her level of knowledge on an issue. This, in this study, means that adolescent girls with higher socioeconomic backgrounds are more likely to be information-rich in knowledge about cervical cancer while adolescent girls with lower socioeconomic backgrounds are more likely to be information-poor in knowledge about cervical cancer.

Tichenor, Donohue and Olien (1970) also used education to indicate socioeconomic status, stating that there is a significant correlation between knowledge and education. In other words, one’s educational level determines one’s level of knowledge about an issue. The knowledge gap will probably occur in areas of general public interest such as science news. This is worrying considering that an informed public is the solution for many existing problems in the society (Severin & Tankard, 2001), including health. As Finnegan and Viswanath (2002) admit, inequalities in gaining knowledge among adolescents will pose a serious challenge for adolescent health.

Tichenor, Donohue and Olien (1970) gave five reasons for a knowledge gap. First, there is a difference between the communication skills of people with high socioeconomic status and people with low socioeconomic status. These communication skills, such as reading, understanding and recollecting, are acquired through education. Second, individuals with high socioeconomic status have a lot of stored information on issues due to education or prior exposure to media content. Thus, they are able to have previous knowledge and understanding of an issue when it appears in the mass media than individuals with lower socioeconomic status. Third, individuals with high socioeconomic status may have important social contact, individuals who are equally exposed to issues of public affairs and science news, with whom they relate and might discuss such topics. This might result in an increase in knowledge of such issues. Fourth, selective exposure, acceptance and retention may be in force. Individuals of lower socioeconomic status may find information on public affairs and science news incompatible with their values or attitudes and will therefore have no interest in it. The fifth reason is based on the assumption that the nature of the mass media favours individuals with higher socioeconomic status. Tichenor, Donohue and Olien state that this is due to the fact that the print media, which is geared to meet the needs, interests and tastes of those with higher socioeconomic status, carries much of the news of public affairs and science.

In this study, the socioeconomic status of the respondents was determined by the residential location, educational level, and occupation of their parents or guardians. Gaziano (1997) affirms this in stating that the socioeconomic status of parents has basically determined their children's educational achievements and that the quality of education is likely to be superior in higher socioeconomic communities than in lower socioeconomic communities. This also implies that

the area in which adolescent girls reside is likely to influence their quality of education and hence in this study, their level of knowledge about cervical cancer.

This study sought to find out if, given the above mentioned reasons for a knowledge gap, there is likely to be a gap in knowledge about cervical cancer and its prevention between respondents in Accra High School (urban) and those in Atiavi Senior High Technical School (rural). It was expected that adolescent girls in the urban area would be more information-rich and hence, would have more knowledge about cervical cancer than adolescent girls in the rural area. This is due to the fact that they should have more access to the wide range of sources of information on cervical cancer. Their parents, guardians and community members generally will also serve as their relevant social contact.

### **2.1.2 The Health Belief Model (HBM)**

The Health Belief Model (HBM) developed by Hochbaum, Rosentock and Kegel states that health behaviour is formed based on expected benefits and barriers, ability to act against perceived risks and severity of health threat (Glanz, Rimer & Lewis, 2002). The HBM is based on six key constructs: perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action and self efficacy. Perceived susceptibility refers to an individual's beliefs about his or her chances of getting a disease. Perceived severity is an individual's feelings about the seriousness of getting a disease or of leaving it untreated. Perceived benefits states that an individual is likely to change his or her behaviour based on the perceived benefits that accompany efforts in reducing the disease threat even if he or she perceives he or she is

susceptible to getting the disease. Perceived barriers, refers to the likely negative aspects that accompany particular health behaviour. These can act as obstacles to the adoption of the health action. Cues to action are the strategies an individual adopts in order to take a health action which shows his or her readiness to taking that particular action. Self efficacy is the individual's conviction that he or she can successfully carry out the desired health behaviour in order to produce certain outcomes. Thus an individual is likely to adopt a health behaviour based on his or her beliefs regarding the chance of getting that condition, how serious that condition and its implications are, the benefits and barriers associated with that health behaviour and his or her ability to take action to carry out the desired health behaviour.

The implications of the Health Belief Model on this study are that depending on an adolescent girl's belief of how serious cervical cancer is and her likelihood of getting it, is likely to believe that she can protect herself against the disease. Also depending on her locus of control, that is, her belief that she controls major events in her life, she would be inclined to take steps in protecting herself by seeking information on the disease.

The Health Belief Models therefore implies that an adolescent girl's perceived risk of getting cervical cancer based on her perceived susceptibility, self-efficacy and locus of control are major factors in determining if she will seek information on the disease. Consequently, it has an implicit link to the knowledge gap hypothesis since socioeconomic background leads to more information and greater self-efficacy and locus of control. On the other hand, the factors of perceived susceptibility and severity mean that it is possible that an adolescent girl from a lower

socioeconomic background will have more information on cervical cancer if she perceives that she is at risk of getting the disease than an adolescent girl from a higher socioeconomic background who believes that she is not at risk of getting the disease. In this sense, the Health Belief Model contradicts the knowledge gap hypothesis. The study sought to find out how these inherent relationships and potential contradictions would reflect in the responses of the two sets of adolescents to the incidence of cervical cancer.

## **2.2 RELATED STUDIES**

This section presents findings of related studies conducted in the field of health communication with particular emphasis on the subject of knowledge and sources of information on cervical cancer and its prevention among adolescent girls and young women.

Available studies have shown that adolescent girls and women in general mostly lack knowledge on cervical cancer, its causes and prevention (Kemberling et al. 2011; Rashwan, Ishak and Sawalludin, 2013; Kamzol et al. 2012; Dugandžija et al. 2012; Hoglund et al. 2008; Ghotbi & Anai, 2012; Guiseppe et al. 2008; Hoque 2010; Makwe, Anorlu & Odeyemi 2012).

Most studies sought to determine the sexual activities of respondents and what they knew about the link between their sexual activities and their risk of getting cervical cancer. Kemberling et al. (2011) sought to determine the knowledge levels, attitudes and perceptions of Alaska native adolescent girls about cervical cancer, HPV, genital warts and the HPV vaccine. Likewise, in Kuala Lumpur, Malaysia, Rashwan, Ishak and Sawalludin (2013) assessed the knowledge and

views of secondary school students from three different races, Chinese, Malay and Indian, on cervical cancer and its prevention.

Similarly, Hoglund, Tydén, Hannerfors and Larsson (2008) investigated knowledge and attitudes to sexually transmitted infection (STI) with particular focus on human papillomavirus and the HPV vaccine, among high school students in Sweden. Ghotbi and Anai (2012) also sought to examine the knowledge of college students in Japan regarding prevention of cervical cancer through safer sex, periodic screening and HPV vaccination. Furthermore, Guiseppe et al. (2008) assessed knowledge, attitudes and behavioural intention towards human papillomavirus infection and vaccination among adolescents and young women in Italy. However, Kamzol et al. (2012) and Dugandžija et al. (2012) focused on assessing knowledge about cervical cancer and its prevention as well as establishing the sources of information cervical cancer and its risk factors in Krakow, Poland and Serbia respectively.

In similar studies conducted in Africa, Hoque (2010) assessed the awareness about cervical cancer and preventive behaviour of female first year students in a university in South Africa. Makwe, Anorlu and Odeyemi (2012) in addition, determined the knowledge and attitude of female undergraduate students at the University of Lagos, Nigeria towards human papillomavirus infections, HPV related diseases and HPV vaccines. Likewise, Abotchie and Shokar (2009) sought to describe the knowledge and belief of female university students in Ghana on cervical cancer and cervical cancer screening.

Most of these studies used the survey method in gathering data in order to enable generalizations and also describe quantitatively, the knowledge of respondents on cervical cancer as well as draw comparisons. Teenagers and young adults from the ages of 14 to 29 were sampled. The sample size ranged from 550 to 1,348 respondents (Rashwan, Ishak and Sawalludin, 2013; Kamzol et al. 2012; Dugandžija et al. 2012; Høglund et al. 2008; Ghotbi & Anai, 2012; Guiseppe et al. 2008 ; Hoque 2010; Makwe, Anorlu & Odeyemi 2012 ; Abotchie & Shokar, 2009).

However Kemberling et al. (2011) used the qualitative research method. They conducted 79 in-depth interviews with adolescent girls aged 11 to 18 in four communities in Alaska. Sixty-five percent, 25% and 10% of the participants were from hub communities, a village and an urban area, respectively. The respondents were made to answer knowledge questions concerning cervical cancer, HPV and genital warts after which they were given a short educational session on each topic and asked further questions.

### **2.2.1 Findings Made**

#### ***Onset of sexual activity and sexual activities of adolescent girls***

Sexual activity is a main factor in HPV infection which accounts for most cervical cases. It is therefore necessary to draw the link between respondents' knowledge of cervical cancer and their sexual activities.

Giuseppe et al. (2008), in their study in Italy, found that the average age at which most of the respondents (45.4%) reported current or previous sexual activity was 17 years. Of the

respondents who were sexually experienced, 21.1% stated that they have consistently used condom during sexual intercourse in the last year.

In the study conducted in Japan, Ghotbi and Anai (2012) revealed that the earliest age at which two of the respondents started engaging in sexual intercourse was 13 years while most of the respondents had their first sexual intercourse at the age of 18 years. Fifty-nine percent of sexually active students had one or two sex partners. Other sexually active students, 22% and 14%, stated that they had three and four or five sexual partners respectively while 14% had more than five partners. Out of these students, 42% used condoms consistently while 56% represented those who did not use condoms consistently.

Makwe, Anorlu and Odeyemi (2012) discovered in the study in Nigeria, that almost half (56 %) of the respondents were not sexually active. However, those who were sexually active had commenced having sexual intercourse as early as eight years. Hoque (2010) in the study in South Africa did not determine the age of first sexual intercourse among the respondents but discovered that 40% of them were sexually active. Out of this number, 28 % said that they had two or more sex partners.

### ***Knowledge of Cervical cancer and its risk factors***

The findings of the studies revealed that knowledge of cervical cancer was generally low among the respondents in most of the studies. Kemberling et al. (2011) found that respondents were

equally divided between either stating that they did not know about cancer or giving medically accurate answers. Many of the respondents gave more accurate answers related to lung cancer, which showed that they had heard more about lung cancer than cervical cancer. While some of the respondents did not know about the causes of cancer, others cited drugs, alcohol, and tobacco. Some common responses for the causes of cervical cancer were sexual intercourse, STDs, HPV, environmental conditions such as the use of pesticides and radiation as well as poor health in general. Younger teens were less likely to mention the causes of cancer as sexual activity, STDs and HPV than were older teens. In addition, younger teens had heard of HPV as much as older teens. This suggests that age plays an important role in determining an adolescent girl's knowledge on cervical cancer. Older teens are therefore more likely to be more exposed and interested in information on cervical cancer than younger teens.

The Rashwan, Ishak and Sawalludin (2013) study discovered that majority of the respondents (80.4 %) had heard about cervical cancer. This, however, had a strong significant relationship with form and race. In terms of race, more Malay students (86.9%) had heard about cervical cancer, followed by Indian (80.6%) and Chinese students (69.9%). Although most of the respondents had heard of cervical cancer, 74.4% of them had low level of knowledge on the causes and prevention of cervical cancer. Respondents from the science classes had a significantly higher knowledge of cervical cancer and its prevention than respondents from the art classes because the former had previous knowledge about the disease because of their science background than the latter that had little science background. Also more respondents in lower Form 6 (92.8%) had heard about cervical cancer than form 4 students (76.2%).

Similarly, Hoglund et al. (2008) established in the study in Sweden that the respondents lacked knowledge about the HPV and its relationship with cervical cancer. In addition, Guisepe et al. (2008) discovered in the study in Italy that only half of the respondents said that they had heard of cervical cancer before. In general, only 23.3% of the respondents had heard about cervical cancer and that HPV is one of the most widespread infections of the genital mucosa. Of the respondents, only 29.8 % stated that HPV is one of the most common infections of the genital mucosa while three-quarters of them knew that the infection is primarily transmitted through sexual intercourse.

In contrast, Kamzol et al. (2012) discovered in the study in Poland that almost all the respondents (98.5%) had heard about cervical cancer. Eighty-four percent knew that cervical cancer leads to death while 44.8% believed that they could develop cervical cancer in future. The respondents believed that the most important risk factors associated with cervical cancer are genetics and family history. They also mentioned infection with HPV and having multiple sexual partners as other causes of cervical cancer. This revealed that the respondents in this study had higher knowledge levels on cervical cancer.

The level of knowledge on cervical cancer among adolescent girls in Africa was significantly lower than in most Western countries. The Hoque (2010) study in South Africa discovered that of all the respondents, only 33 % had heard about cervical cancer. Of this number, 32 % knew about HPV as the cause of cervical cancer while 26 % cited having multiple sexual partners as the cause. It was also discovered that the respondents were twice more like likely to use condoms

if they had heard about cervical cancer. This indicates that sexually active respondents who had heard of cervical cancer and believed that they were at risk of getting the disease took steps in protecting themselves by using condoms. This affirms the implications of the health belief model that an individual is likely to take steps in protecting him or herself against contracting a disease if he or she perceives that he or she is susceptible to getting the disease. In Nigeria, the Makwe, Anorlu and Odeyemi (2012) study found that 56.4%, 17.7% and 14.4% of the respondents were aware of cervical cancer, HPV infection and HPV vaccine respectively. While in Ghana the Abotchie and Shokar (2009) study revealed only 7.9% of the respondents were able to associate cervical cancer with HPV.

### ***Knowledge of cervical cancer prevention***

Respondents' knowledge of cervical cancer prevention was also low in most of the studies. The Kemberling et al. (2011) study discovered that some of the respondents did not believe that cancer was preventable but others suggested vaccine, medicine, a healthy lifestyle, safer sex practices and abstinence from sex, drugs, alcohol and tobacco as preventive means to cancer. More respondents knew that cancer was curable than others who either did not know or did not think that it was curable.

About half of the respondents answered questions on the purpose of a vaccine correctly. Adolescents aged 15 to 18 years however showed a more precise understanding of the purpose of a vaccine which indicates that older teens know more about such things than younger teens. Some of the respondents gave reasons for accepting to take vaccines as not to fall sick, to get

better, to be healthy or because someone had recommended it. Others said that they would not take the vaccines for reasons that they were afraid of the vaccine shots, the shots would hurt, the vaccine might not work, neither they nor their sex partners would get an STD and that the vaccine might have adverse side effects.

However, Rashwan, Ishak and Sawalludin, (2013) found that 70.4 % had low knowledge about the cervical cancer prevention. Most of the respondents (68.9 %) expressed interest in finding out more information about cervical cancer vaccines if they existed. More respondents in lower form 6 (77.5 %) agreed to be take the vaccine than respondents in form 4 (66.5 %). The main reason for agreeing to take the vaccine was because some respondents (51.1 %) were aware of the risk associated with developing cancer. Respondents who refused to take the vaccine (12.4 %) stated that they did not believe that they were prone to developing cervical cancer. Others (11.1 %) were afraid of adverse effects of taking the vaccine while some (8.7 %) did not know of the importance of vaccination.

Likewise, the Kamzol et al. (2012) study discovered that 30.1 % of the respondents did not know that vaccination is a way of preventing cervical cancer. Similarly, the Hoglund et al. (2008) study found that the respondents' knowledge on the vaccine was inadequate. The respondents stated that they used condom when having sexual intercourse with new partners however this reduced if they used oral contraceptives and had been vaccinated against an STI.

The Guiseppe et al. (2010) study discovered that 60.2 % of the respondents knew that many cervical cancer incidences and deaths can be prevented by means of a pap test to detect precancerous changes in the cervix while 34.8 % knew that the risk of HPV and cervical cancer can be reduced through condom use. Less than 42.2 % of the respondents knew that the HPV vaccine is used to prevent cervical cancer while only 15.3 % knew of the vaccine's availability in Italy. Majority of the respondents (81.7 %) had the desire of getting HPV vaccine in future. Their reasons were that taking the vaccine reduces one's risk of getting infected with HPV (73.8%), developing cervical cancer (59.7%) and because they were feeling at risk of getting the disease (10%). The respondents who did not express the desire of getting the HPV vaccine said that they believed the vaccine was dangerous (59.6%) and that they do not feel at risk of getting the disease.

In contrast, the Hoque (2010) study in South Africa revealed that 31 % of the respondents had heard about the pap smear test out of which 33% were aware that the test is used to either detect or prevent cervical cancer. This finding was higher compared to the study by Makwe, Anorlu & Odeyemi, (2012) in Nigeria where it was discovered that only 12.7 % of the respondents knew that pap smear could be used to prevent cervical cancer. However less than 50% of the respondents who knew about the HPV vaccine knew that it was for preventing cervical cancer.

Likewise in Ghana, Abotchie and Shokar (2009) discovered that most respondents were not aware of any local cervical cancer screening programme. The prior pap screening rate among the respondents was 12.0%. Sixty-eight percent of the respondents identified that young women

were prone to getting cervical cancer while 52.5% believed they were at risk of developing cervical cancer. The barriers to the respondents going for screening were lack of awareness of the importance of the pap screening in diagnosing cancer, fear of what people might think and lack of information about how to get screening services. Others also did not have the belief that cervical cancer screening diagnoses cancer while others believed that the pap smear test was painful and others also believed that the test could take away their virginity. In addition, some of the respondents (23.4%) were concerned about issues with cost; others (24.3%) did not know where to go to get screening while others stated that if they went for the screening, everyone would think that they are sexually active.

### ***Sources of information on cervical cancer and its prevention***

The media served as major sources of information on cervical cancer and its prevention among most of respondents in the studies reviewed. Most of them preferred the media to other sources, although some also preferred getting information from medical personnel.

Kemberling et al. (2011) found that most of the respondents commonly mentioned school, medical staff, family, television, and internet as their sources of health information. Sources that were less common among them were peers, posters and brochures. Younger teens generally mentioned their school and teachers as their main sources of information. However older teens got their information from family. Magazines were a common source of information while newspapers and radio were less chosen as sources. Older teens mostly chose medical staff, television and the internet as sources of health information than did younger teens. Respondents'

preferred type of media was television, the internet, brochures and posters respectively because of the relative privacy and ease accompanied with seeking information from such sources. The respondents also said that they would rather approach medical personnel than teachers with questions about cervical cancer and HPV although they commonly cited teachers as a source of information. Their belief was that medical personnel work in the health sector therefore they are the best source from which information on cervical cancer should be sought.

Similarly, the Rashwan, Ishak and Sawalludin, (2013) study found that the preferred source of information on cervical cancer to the respondents was the internet (64.4%). This was followed by books and magazines (54.0%) and health care professionals (52.9%). Also, Kamzol et al. (2012) stated that the respondents cited the internet, television and newspaper as the main sources of information about cervical cancer.

The media was also cited by respondents (38.5 %) in the study by Dugandžija et al. (2012) as the most important source of information on cervical cancer to the patients at the Oncology Institute of Vojvodina (the IOV). The female students often cited the media as their main source of information (44%) as well as 47.5% of the group of women coming for systematic examination to the IOV. Doctors were considered the second most important source of information on cervical cancer to 37.5 % of the respondents.

The media also served as an important source of information on cervical cancer prevention in the Guiseppe et al. (2008) study in which 62.7% of the respondents who knew of the vaccine's availability in Italy got the information on television or mass media. Some respondents (17.4%) also mentioned health professionals as their source of information on the vaccine's availability in Italy.

In contrast, the Høglund et al. (2008) study discovered that the main source of information on cervical cancer for the respondents was the school which was followed by youth clinics and the media. In addition, Hoque (2010) revealed that almost half of whom (42%) had heard of cervical cancer from medical or community health workers. Nineteen percent had heard it from the media. Only 31% of the respondents had heard of the pap smear test, about half (46%) of whom had heard it from health workers. The respondents' sources of information on cervical cancer, HPV infection and vaccine were television (21%), print media (12.7%), health campaigns (12.2%), family and friends (9.9%), and health care providers (9.4%).

One major gap discovered in the studies reviewed is that they failed to draw a link between respondents' knowledge on cervical cancer and their socioeconomic backgrounds. Also, they failed to establish the links between respondents' need for information to protect themselves from the disease, to their susceptibility to getting cervical cancer, self-efficacy and locus of control. In addition, they fell short in determining if respondents' preferences for particular sources of information had a bearing on their socioeconomic statuses.

## **Summary**

This chapter discussed the main theoretical perspectives used for the study. They are the knowledge gap hypothesis and the health belief model. The knowledge gap hypothesis states that as more mass media information is infused into a social system, people with higher socioeconomic status tend to get this information more rapidly than people with lower socioeconomic status therefore resulting in an increase of the knowledge gap between the two groups. Based on this theory, this study sought to determine if there is likely to be a gap in knowledge about cervical cancer and its prevention between respondents in Accra High School in an urban area and Atiavi Senior High Technical School in a rural area.

The Health belief model states that an individual is likely to adopt a health behaviour based on his or her beliefs regarding the chance of getting that condition, how serious that condition and its implications are, the benefits and barriers associated with that health behaviour and his or her ability to take action to carry out the desired health behaviour. The implications of the health belief model on this study is that an adolescent girl's perceived risk of getting cervical cancer based on her perceived susceptibility, self-efficacy and locus of control are major factors in determining if she will seek information on the disease.

This chapter also reviewed related studies on the subject of information on cervical cancer and its prevention. The empirical findings of the studies reviewed showed that there was relatively low levels of knowledge on cervical cancer and its prevention among young women. The mass media also tended to be the main source of information on cervical cancer and its prevention among the respondents in the related studies.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.0 Introduction**

This chapter covers the procedures used to collect data for addressing the research problem and the hypotheses posed in Chapter 1. The study was to assess the knowledge levels of adolescent girls on cervical cancer and its prevention as well as determine their sources of information about the disease. It also sought to establish whether the socioeconomic background of adolescent girls affected their knowledge and sources of information on cervical cancer and its prevention.

#### **3.1 Target Group**

Considering that it was a comparative study, two schools were selected for the study. They were Accra High School in the Greater Accra Region and Atiavi Senior High Technical School in the Volta Region. The rationale for this selection is to cover an urban area (Accra) and a rural area (Atiavi). The Ghana Statistical Service classification of areas into urban and rural is based on the size of the population. Areas with a population size of 5,000 or more individuals are considered urban while areas with a population size of less than 5,000 individuals are classified as rural. According to the 2010 Population and Housing Census of Ghana, Accra had a population of 4,010,054 people which makes it an urban area. Atiavi, on the other hand, had a population of 3,450 people which makes it a rural area.

The female students of Accra High School in the Greater Accra Region and Atiavi Senior High Technical School in the Volta Region formed the target of the study. The two schools are public co-educational and admit both male and female students. In addition, both of them are day

schools which mean that students live in the areas in which the schools are sited. Accra High School is located in Accra (an urban area) while Atiavi Senior High Technical School is located in Atiavi (a rural area). It is likely, therefore, that their knowledge and sources of information on cervical cancer will differ because of their different locations.

### **3.2 Sampling Process**

The sample was made up of female students from both Accra High School and the Atiavi Senior High Technical School. A total size of 180 respondents was drawn which was made up of 90 students from each school. Both schools have three forms; forms one, two and three. As at the time of data collection, form one students had not yet reported to school for the commencement of the academic year so the sample was restricted to students in forms two and three. The attendance rosters of the classes were used to select the participants for the study. Numbers were written against the names of all the female students from each form and the odd numbers were selected. In the situation where a student was absent, refused to take part in the study, or could not take part in the study because she did not fall within the age bracket, a student with an even number was randomly chosen to replace her. In addition, the questionnaire had a screener question about their ages to ensure that only respondents within the 14-19 years age bracket were included in the survey.

The questionnaire administration process was negotiated with the heads of the school to ensure that the study did not disrupt the normal daily routine of the school especially during lesson hours. The data collection process took place in the second week after the schools had reopened

for the commencement of the first term therefore, lessons had not begun in earnest for the process to disrupt the lesson hours. The data collection process took two days in each school.

### **3.3 Research Design**

The method employed is the survey. The survey method allows data collection to be done within a relatively short period of time. It also enables large amounts of data to be collected with relative ease from large variety of people (Babbie, 2010). The questionnaires were self-administered because at the senior high school level, it was believed that all the respondents were literate and could therefore read and understand the questions as well as follow instructions. It was also to encourage respondents to answer questions with a degree of fidelity that the anonymity of self administration could permit, considering the ‘private’ nature of some of the questions. The questionnaire was also carefully worded to make it understandable to the respondents. In addition, the initial questionnaire was pre-tested by adolescent girls within the same age bracket to ensure that the questions were comprehensible to them.

The questions sought to determine the knowledge of the adolescent girls on cervical cancer and its prevention, their socioeconomic background as well as demographic characteristics such as their age, the educational level and occupation of their parents or guardians, and where they live. The respondents were also asked about their sources of information on cervical cancer and its preventions, which sources they preferred and why. The questions also sought to elicit information from the respondents about their sexual activities.

The questionnaires constituted mostly of close-ended questions and some open-ended items. The close-ended questions were used because it allows for easy analysis since the responses are limited and straight to the point. It is therefore best suited for the survey method of data gathering which involves large number of respondents. The close-ended questions gave the respondents the opportunity to choose an answer from a list of possible responses that were provided. The open-ended questions made it possible to collect in-depth responses from the perspective of the respondents themselves on their feelings and the reasons for their choices. The combination of the close-ended and open-ended questions ensured that one supplemented the other and made possible the collection of both qualitative and quantitative data which provided in-depth information.

### **3.4 Data Analysis**

After the questionnaires were collected, the written and ticked responses were coded into numerical data and analyzed with the Statistical Package for the Social Sciences (SPSS) software program. Since the open-ended questions demanded written responses, they were all categorized under several themes and coded into numerical data to allow easy analysis with SPSS. Statistical tools such as cross-tabulations, chi-square, and weighted means were used to make the analysis clear and easy to understand. A confidence level of 95% was used for the entire hypothesis tested.

## CHAPTER FOUR

### FINDINGS OF THE STUDY

#### 4.0 Introduction

This chapter presents the results and discussions of the research. The findings and analysis are based specifically on the research objectives and the research hypotheses. The objectives of the study were to assess the knowledge of adolescent girls in Ghana on cervical cancer and its prevention, the relationship between adolescent girls' knowledge on cervical cancer and their socioeconomic background, determine whether adolescent girls who perceived that they were at risk of getting cervical cancer sought information on it, as well as determine the main sources of information for adolescent girls on cervical cancer. These objectives were based on the following research hypotheses:

***Hypothesis 1:*** Adolescent girls in the urban school are likely to be more knowledgeable about cervical cancer and its prevention than adolescent girls in the rural school.

***Hypothesis 2:*** Adolescent girls who perceive contracting HPV to be a threat are more likely to seek information on cervical cancer and its prevention.

***Hypothesis 3:*** Adolescent girls' preferences for sources of information on cervical cancer and its prevention are likely to be influenced by their socioeconomic status.

#### 4.1 Demographic Profile of the Respondents

The total number of respondents studied was 180 which comprised 90 female students each from Accra High School and Atiavi Senior High Technical School. As presented in Table 4.1, out of the 180 students targeted, 164 students were reached, giving a response rate of 91.11%. Eighty-

nine respondents representing 98.89 % were reached at Accra High School and 75 respondents representing 83.33% were reached at Atiavi Senior High Technical School. In Accra High School, majority (50.6%) of the respondents studied were in Form three. Similarly, majority (54.7%) of the respondents in Atiavi Senior High Technical School were in Form three. Table 4.2 presents the ages of the respondents in Accra High School and Atiavi Senior High Technical School. The average age of all the students was 16.5. The ages of the respondents in both schools differed significantly.

It is realized from the table that the respondents in Atiavi Senior High School were relatively younger than respondents in Accra Senior High School. Many students in Atiavi Senior High Technical School were older than 19 years. Given that the study sought to target adolescents within the ages of 14 to 19 years, they could not be used for the study hence resulting in a lower response rate in the school.

**Table 4.1: Year of study of the respondents**

SCHOOL	FORM	Frequency	Percent (%)
ACCRA HIGH SCHOOL	FORM 2	44	<b>49.4</b>
	FORM 3	45	<b>50.6</b>
	<b>Total</b>	<b>89</b>	<b>100.0</b>
ATIIVI SENIOR HIGH TECHNICAL SCHOOL	FORM 2	34	<b>45.3</b>
	FORM 3	41	<b>54.7</b>
	<b>Total</b>	<b>75</b>	<b>100.0</b>

SOURCE: Field study 2014

**Table 4.2: Age of Respondents**

Age (years)	Accra High School	Atiavi Senior High School	Total	
	Frequency	Frequency	Frequency	Percentage (%)
14	2	0	<b>2</b>	<b>1.2</b>
15	11	5	<b>16</b>	<b>9.8</b>
16	26	10	<b>36</b>	<b>22.0</b>
17	26	7	<b>32</b>	<b>20.1</b>
18	18	14	<b>32</b>	<b>19.5</b>
19	6	39	<b>45</b>	<b>27.4</b>
Total	89	75	<b>164</b>	<b>100</b>

SOURCE: Field Study 2014

The respondents were asked to state their place of usual residence, the highest level of education and occupation of their parents or guardians. The socioeconomic status of the respondents was determined by their place of usual residence, the highest level of education and occupation of their parents or guardians. Table 4.3 shows that 12.9% and 14.7% of respondents in Accra High School had parents with professional or skilled blue collar jobs respectively. However, no respondent in Atiavi Senior High Technical School had a parent with a managerial job while 6% had parents with skilled blue collar jobs, which is significantly lower than the finding in Accra.

**Table 4.3: Crosstabulation of place of usual residence and occupation of parent**

Occupation of parent	Place of usual residence				Total Frequency	Percentage
	Accra		Atiavi			
	Frequency	Percentage (%)	Frequency	Percentage (%)		
Professional/Managerial	21	12.9	0	0	21	12.9
Skilled Blue Collar	24	14.7	11	6.7	35	21.5
Semi-skilled and unskilled blue collar	44	27	58	35.6	102	62.6
Don't Know	0	0	5	3.1	5	3.1
<b>Total</b>	<b>89</b>				<b>164</b>	

SOURCE: Field study 2014

Also, Table 4.4 demonstrates that 10.5% and 11.1% of respondents in Accra had parents with university and professional training or polytechnic education respectively. On the other hand, 6.8% of respondents in Atiavi had parents with professional training or polytechnic education however no respondent had a parent with university education. The findings in Table 4.3 and Table 4.4 showed that most of the respondents in Accra had parents with professional or managerial and skilled blue collar jobs as well as higher educational backgrounds than respondents in Atiavi. It can therefore be concluded that respondents in Accra High School were from a relatively higher socioeconomic backgrounds than respondents in Atiavi Senior High Technical School.

**Table 4.4: Crosstabulation of place of usual residence and highest level of education of parent**

Highest level of education of parent	Place of Usual Residence				Total	
	Accra		Atiavi		Frequency	Percentage (%)
	Frequency	Percentage (%)	Frequency	Percentage (%)		
None	5	3.1	8	4.9	<b>13</b>	<b>8.0</b>
Primary	12	7.4	37	22.8	<b>49</b>	<b>30.1</b>
Secondary	37	22.8	17	10.5	<b>54</b>	<b>33.1</b>
Professional training/Polytechnic	18	11.1	11	6.8	<b>29</b>	<b>17.8</b>
University	18	10.5	0	0	<b>18</b>	<b>10.4</b>
Don't know	0	0	1	.6	<b>1</b>	<b>.6</b>
<b>Total</b>	<b>90</b>	<b>54.6</b>	<b>74</b>	45.4	<b>164</b>	<b>100</b>

SOURCE: Field study 2014

This affirms Gaziano's (1997) argument that the socioeconomic status of parents has basically determined their children's educational achievements and that the quality of education is likely to be superior in higher socioeconomic communities than in lower socioeconomic communities.

#### **4.2 Respondents' Knowledge and Sources of information on Cervical Cancer and its prevention**

It was revealed from the study that, the majority of the respondents, 75, representing 84.5%, from Accra High School were aware of cervical cancer compared to 50.7% (38) of the respondents in Atiavi Senior High Technical School who were aware of the disease as shown in Table 4.5.

**Table 4.5: Heard of cervical cancer**

SCHOOL	Response	Frequency	Percent (%)
	YES	75	84.3
ACCRA HIGH SCHOOL	NO	14	15.7
	<b>Total</b>	<b>89</b>	<b>100.0</b>
ATIAMI SENIOR HIGH	YES	38	50.7
TECHNICAL SCHOOL	NO	37	49.3
	<b>Total</b>	<b>75</b>	<b>100.0</b>

SOURCE: Field study 2014

This indicates that, adolescent girls in the urban school seemed to be more aware of cervical cancer and its prevention than adolescent girls in the rural school. This result is supported by the chi-square analysis in Table 4.6 since its P-value was less than 0.05 (the significance level).

**Table 4.6: Chi-Square Tests (knowledge on cervical cancer and school)**

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	21.449 <sup>a</sup>	1	.000
Continuity Correction <sup>b</sup>	19.909	1	.000
Likelihood Ratio	21.901	1	.000
Fisher's Exact Test			
Linear-by-Linear Association	21.318	1	.000
N of Valid Cases	164		

SOURCE: Field study 2014

The correlation coefficient in Table 4.7 also indicates that there is a significant association or relationship between place of study or stay and knowledge on cervical cancer. In other words, there is a positive relationship between urbanization and knowledge on cervical cancer. It can therefore be concluded that socioeconomic status of the adolescent girls in Accra High School gave them access to more information, which influenced their level of knowledge on cervical cancer and its prevention than girls in Atiavi Senior High Technical School.

**Table 4.7: Symmetric Measures (knowledge on cervical cancer and school)**

Statistics	Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig.
Pearson's R	.362	.072	4.937	.000 <sup>c</sup>
Spearman Correlation	.362	.072	4.937	.000 <sup>c</sup>
N of Valid Cases	164			

SOURCE: Field study 2014

The respondents were asked to state whether or not they were sexually active. Out of the 164 respondents, 43, representing 26.2% of the respondents were sexually active. Out of this number, 36 respondents reported having one sexual partner while four of them had two sexual partners. In addition, two of the sexually active respondents stated that they had three sexual partners while one had four sexual partners. The youngest age at which one respondent reported having started having sex was nine years as shown in Table 4.7. Furthermore, majority of the sexually active respondents (16) stated that they used condoms sometimes while 11 of them said that they used it

always. However, 14 of these sexually active respondents reported having never used it while two gave no response.

**Table 4.8: Age of first sexual intercourse**

Age	Frequency	Percent
9	1	2.3
13	1	2.3
14	1	2.3
15	6	14.0
16	7	16.3
17	9	21.0
18	8	18.6
19	10	23.2
<b>Total</b>	<b>43</b>	<b>100</b>

SOURCE: Field Study 2014

#### **4.2.1 Respondents' knowledge of the causes of cervical cancer and its prevention**

The findings reveal that although most of the respondents had heard of cervical cancer, many of them did not know the causes of the disease. The respondents were asked, in a multiple response option, to mention the causes of cervical cancer. Of all the respondents who had heard of cervical cancer, only 44.5% knew the causes of the disease. Some of them mentioned more than one cause of cervical cancer. The causes of cervical cancer listed by the respondents were early age of commencement of sexual intercourse, having unprotected sex, and having multiple sexual

partners; inserting harmful substances such as vaginal wash and soap into the vagina; bad sanitary practices such as wearing dirty panties and not bathing regularly; bad eating habits such as eating a lot of sweets; abortion; smoking; as well as drinking alcohol.

**Table 4.9: Causes of Cervical Cancer**

Causes	Frequency	Percent (%)	Rank
Early age of sexual intercourse, unprotected sex and having multiple sexual partners	49	<b>67.1</b>	1
Inserting harmful substances into the vagina	30	<b>41.1</b>	2
Bad sanitary practices	20	<b>27.4</b>	3
Bad eating habits	7	<b>9.6</b>	4
Abortion and tattoos	6	<b>8.2</b>	5
Smoking	2	<b>2.7</b>	6
Drinking alcohol	1	<b>1.4</b>	7

SOURCE: Field study 2014

The commonly mentioned causes of cervical cancer, as indicated in Table 4.9, were early age of commencement of sexual intercourse, unprotected sex and having multiple sexual partners (67.1%); insertion of harmful substances into the vagina (41.1%); and bad sanitary practices (27.4%). The other causes: poor eating habits (9.6%), abortion (8.2%), smoking (2.7%) and drinking alcohol (1.4%) were least mentioned by the respondents.

Furthermore, the findings revealed that majority (87.6%) of the respondents who had heard of cervical cancer knew that the disease affected only women and a similarly high proportion (87.5%) knew that cervical cancer caused death.

The results of the study showed that majority (70.8%) of the respondents knew that cervical cancer could be prevented, but fewer (40.9%) knew how it could be prevented. Respondents who knew how to prevent cervical cancer stated that it could be done by adopting good hygienic practices (17.7%); avoiding sex completely or avoiding sexual contact with an infected person (7.3%), education or awareness creation on cervical cancer (6.1%), cervical cancer screening (5.5%); condom use when having sex (1.2%) and taking prescribed drugs (1.8%) as shown in Table 4.10.

**Table 4.10: Cervical Cancer prevention**

Measures	Frequency	Percent (%)
Avoid sex completely or sexual contact with an infected person	12	<b>7.3</b>
Cervical cancer screening and vaccination	9	<b>5.5</b>
Condom use when having sex	2	<b>1.2</b>
Education on cervical cancer	10	<b>6.1</b>
Good sanitary practices	29	<b>17.7</b>
Taking prescribed drugs	3	<b>1.8</b>
<b>Total</b>	<b>65</b>	<b>39.6</b>

SOURCE: Field study 2014

Although most of the respondents knew that cervical cancer could be prevented, only 27.9% of them knew that cervical cancer screening was available in Ghana. Also, only 9.8% of the respondents knew HPV vaccines in Ghana.

When the respondents were asked to indicate if they believed that they were at risk of getting cervical cancer, only 15% of them believed that they were at risk of getting the disease while majority (46.8%) did not believe that they were at risk. Thirty-seven percent were not sure if they were at risk of getting cervical cancer or not. The respondents who said they were at risk of getting the disease gave the reason that they were sexually active, had been inserting unprescribed drugs into and washing the vagina with soap, and also because every woman is at risk of getting the disease.

#### **4.2.2 Respondents Sources of Information on Cervical Cancer and its prevention**

Respondents who were aware of cervical cancer and its prevention were asked in a multiple response question to indicate their sources of information on cervical cancer. Table 4.10 shows that the most important sources of information on cervical cancer and its prevention among the respondents was television (19.2%). Other commonly mentioned sources of information for the respondents on cervical cancer were health workers (15.9%), teachers (14.6%), and radio (13.6%). The least commonly mentioned sources of information were friends (8.6%), newspapers or magazines (7.6%), internet (7.1%), parents (5.3%), siblings (4.8%), and religious leaders (3.3%).

**Table 4.11 Respondents sources of information on cervical cancer**

Source of information	Frequency	Percentage (%)
Parent	21	<b>5.3</b>
Teachers	58	<b>14.6</b>
Health Workers	63	<b>15.9</b>
Siblings	19	<b>4.8</b>
Friends	34	<b>8.6</b>
Religious Leaders	13	<b>3.3</b>
Radio	54	<b>13.6</b>
Television	76	<b>19.2</b>
Internet	28	<b>7.1</b>
Newspapers or Magazines	30	<b>7.6</b>
<b>Total</b>	<b>396</b>	<b>100</b>

SOURCE: Field Study 2014

The respondents were also asked to state their preferred source of information on cervical cancer and its prevention. It was expected that although respondents had initially acquired the information on the disease from certain sources they would prefer to approach other sources for more information on the disease. As shown in Table 4.11, although majority of respondents who had heard of cervical cancer obtained the information from television (19.2%), as indicated in Table 4.9, 61.7% of them stated that they would prefer health workers as their source for additional information on the disease.

**Table 4.12 Respondents' preferred source of information on cervical cancer**

Preferred Source of Information	Frequency	Percentage (%)
Parents	10	9.3
Teachers	18	16.8
Health Workers	66	61.7
Friends	2	1.9
Religious Leaders	1	.9
Radio	2	1.9
Television	8	7.5
<b>Total</b>	<b>107</b>	<b>100</b>

SOURCE: Field Study 2014

The study sought to find out whether the preferred source of information on cervical cancer is related or associated to the socioeconomic status of the respondent, the results of which are presented in Tables 4.13, 4.14, 4.15 and 4.16.

**Table 4.13: Crosstabulation of preferred source of information on cervical cancer and place of residence**

		Place Of Usual Residence		<b>Total</b>
		(Accra)	(Atiavi)	
Preferred Source Of Information	Parents	7	3	<b>10</b>
	Teachers	11	7	<b>18</b>
	Health Workers	43	23	<b>66</b>
	Friends	1	1	<b>2</b>
	Religious Leaders	0	1	<b>1</b>
	Radio	1	1	<b>2</b>
	Television	6	2	<b>8</b>
	<b>Total</b>	<b>69</b>	<b>38</b>	<b>107</b>

SOURCE: Field study 2014

There were indications from Table 4.13 to Table 4.14 that the preferred source of information on cervical cancer was not related or associated to the socioeconomic status of the adolescent students. This is because, no matter how rich or poor the home of the student was, most of them preferred getting information on cervical cancer from health workers as shown in Tables 4.13, 4.14 and 4.14.

**Table 4.14: Crosstabulation of preferred source of information and highest level of education of parent/guardian**

Preferred source of information	Highest Level Of Education Of Parent / Guardian					<b>Total</b>
	None	Primary	Secondary	Professional Training / Polytechnic	University	
PARENTS	1	0	6	2	1	<b>10</b>
TEACHERS	2	1	8	3	4	<b>18</b>
HEALTH WORKERS	5	21	23	12	5	<b>66</b>
FRIENDS	1	0	0	0	1	<b>2</b>
RELIGIOUS LEADERS	0	0	1	0	0	<b>1</b>
RADIO	0	0	0	0	1	<b>1</b>
TELEVISION	0	3	1	2	2	<b>8</b>
<b>Total</b>	<b>9</b>	<b>25</b>	<b>39</b>	<b>19</b>	<b>14</b>	<b>106</b>

SOURCE: Field study 2014

**Table 4.15: Crosstabulation of preferred source of information and occupation of parent/guardian**

Preferred Source Of Information	Occupation Of Parent / Guardian			Total
	Professional / Managerial	Skilled Blue-Collar	Semi-Skilled And Unskilled Blue Collar	
PARENTS	3	0	7	<b>10</b>
TEACHERS	4	3	11	<b>18</b>
HEALTH WORKERS	8	19	38	<b>65</b>
FRIENDS	0	1	1	<b>2</b>
RELIGIOUS LEADERS	0	0	1	<b>1</b>
RADIO	1	0	0	<b>1</b>
TELEVISION	2	2	4	<b>8</b>
<b>Total</b>	<b>18</b>	<b>27</b>	<b>62</b>	<b>105</b>

SOURCE: Field study 2014

The chi-square analysis in Table 4.16 also supports this argument that the preferred source of information on cervical cancer is not related to the socioeconomic status of an individual since the P-values were greater than 0.05.

**Table 4.16: Chi-Square Tests (Source of information and socioeconomic status)**

Statistics	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.486 <sup>a</sup>	12	.407
Likelihood Ratio	14.173	12	.290
Linear-by-Linear Association	.395	1	.530
N of Valid Cases	105		

SOURCE: Field study 2014

Therefore, the third hypothesis is not confirmed since the significance value was higher than 0.05. Hence, it can be concluded that, adolescent girls' preferences for sources of information on cervical cancer and its prevention were not influenced by their socioeconomic status. Therefore, the rationale that adolescent girls with higher socioeconomic status will have all the different media available to them and will therefore have a lot to choose from to get information is not valid. Similarly, the rationale that adolescent girls with lower socioeconomic status will not have all the different media available to them and will therefore be limited in their choice of sources of information is also not supported.

Table 4.17 represents whether a person's anticipation of getting cervical cancer may prompt her to seek information on it. It appears from the study that, a respondent may seek information on cervical cancer not because of her expectation of getting the disease. This is because, those who believed that they were not at risk of getting a cervical cancer formed the majority (that is 75.36% of 69 students who were sure of their answer) who were aware of cervical cancer.

**Table 4.17: Crosstabulation of belief that you are at risk of getting cervical cancer and Heard of cervical cancer**

		Heard Of Cervical Cancer		Total	Percentage
Belief That You Are At Risk Of Getting Cervical Cancer	Yes	17		<b>17</b>	15.3
	No	52		<b>52</b>	46.8
	Not Sure	42		<b>42</b>	37.8
<b>Total</b>		<b>111</b>		<b>111</b>	<b>100</b>

SOURCE: Field study 2014

**Table 4.18: Crosstabulation of Risk of getting cervical cancer and Heard of cervical cancer**

		Heard Of Cervical Cancer		Total
		Yes	No	
Risk Of Getting Cervical Cancer	Strongly Agree	3	3	<b>6</b>
	Agree	4	5	<b>9</b>
	Uncertain	7	3	<b>10</b>
	Disagree	8	6	<b>14</b>
	Strongly Disagree	3	1	<b>4</b>
<b>Total</b>		<b>25</b>	<b>18</b>	<b>43</b>

SOURCE: Field study 2014

This result is also supported by the findings in Tables 4.17 and 4.18. The cross-tabulation in Table 4.18 indicates that, there was no association between risk of getting cervical cancer and knowledge of cervical cancer. The chi-square analysis in Table 4.19 also supports the argument that a person's knowledge on cervical cancer has nothing to do with her anticipation of getting cervical cancer since the P-values were greater than 0.05.

**Table 4.19: Chi-Square Tests**

Statistics	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.908 <sup>a</sup>	4	.753
Likelihood Ratio	1.946	4	.746
Linear-by-Linear Association	.745	1	.388
N of Valid Cases	43		

SOURCE: Field study 2014

This, therefore, does not confirm the second hypothesis. It can therefore be concluded that, adolescent girls who perceive contracting HPV a threat are not likely to seek information on cervical cancer and its prevention. For this reason, the rationale that adolescent girls who are sexually active will believe that they are at risk of getting infected with HPV since it is sexually transmitted and will therefore seek information on cervical cancer and its prevention in order to protect them against the disease is not supported since there not enough evidence to prove it.

## CHAPTER FIVE

### DISCUSSION AND CONCLUSION

#### 5.1 Introduction

In this chapter, the findings of the previous chapter are discussed and analyzed in line with existing theory and the objectives of the study. This enables valid conclusions to be made about questions that were raised to guide the study.

#### 5.1 Knowledge and sources of information on cervical cancer

This study hypothesized that respondents in Accra High School would be of higher socioeconomic statuses than respondents in Atiavi Senior High Technical School and would therefore have more knowledge on cervical cancer and its prevention. This assumption was based on the belief that the socioeconomic status of the adolescent girls in Accra High School gave them access to more information which influenced their level of knowledge on cervical cancer and its prevention than girls in Atiavi Senior High Technical School. This supposition was based on the Knowledge Gap Hypothesis which posits that individuals with high socioeconomic status tend to be more knowledgeable on issues of health than individuals with lower socioeconomic status.

According to findings in Table 4.3 and Table 4.4 respondents in Accra High School were of relatively higher socioeconomic statuses than respondents in Atiavi Senior High Technical School. It was also discovered from the study that, 75 representing 84.5% of the female students from Accra High School were aware of cervical cancer as compared to 50.7% (38) of the female

students in Atiavi Senior High Technical School. This confirmed that, adolescent girls in urban schools are likely to be more knowledgeable about cervical cancer and its prevention than adolescent girls in rural schools. There was therefore a positive relationship between socioeconomic status and knowledge on cervical cancer. This finding consequently agrees with the Knowledge Gap Hypothesis and therefore contributes to it. The results of the chi-square analysis in Table 4.6 and Table 4.7 showed a significance level of 0.05 which indicated that there was a strong relationship between socioeconomic status and level of knowledge on cervical cancer. Therefore, the hypothesis was confirmed.

Television (19.2%) and radio (13.6) were the commonly mentioned source of information for the respondents who had heard of cervical cancer. This is similar to Hoque (2010) study in South Africa which indicated that television (20%) was the main source of information on cervical cancer and its prevention. Most studies have also shown that the media is an important source of information on cervical cancer for adolescent girls shown in the fact that it was mostly mentioned (Kemberling et al. 2011; Rashwan, Ishak and Sawalludin, 2013; Kamzol et al. 2012; Dugandžija et al. 2012; Høglund et al. 2008). Other commonly mentioned sources of information were health workers and teachers. The least mentioned sources of information were friends or peers, newspapers or magazines, internet, parents, siblings, and religious leaders.

The most preferred source for additional information on cervical cancer among the respondents was health workers. The reason given for this preference was that health workers had more knowledge on cervical cancer and its prevention and also provided reliable information. According to the study by Kemberling et al. (2011) respondents preferred medical personnel to

teachers (which they mostly mentioned) for more knowledge on cervical cancer. In contrast, the Rashwan, Ishak and Sawalludin, (2013) study found that the preferred source of information on cervical cancer to the respondents was the internet (64.4 %) because of its ease of access and the relative anonymity in seeking information. The study hypothesized that adolescent girls' preferred sources of information on cervical cancer and its prevention are likely to be influenced by their socioeconomic status. The chi-square tests in Table 4.16 showed a significance level greater than 0.05 indicating that the preferred source of information on cervical cancer is not related to the socioeconomic status of the respondents. Therefore the third hypothesis is not confirmed. The results of the study indicated that the preferred source of information on cervical cancer is not related or associated to the socioeconomic status of the respondents. This is because most of them preferred getting information on cervical cancer, not from the media, but from health workers notwithstanding their socioeconomic status. Therefore, adolescent girls' preferences for sources of information on cervical cancer and its prevention are not influenced by their socioeconomic status.

The study sought to determine if respondents were sexually active and determine also, if they believed they were susceptible to cervical cancer as a result of their sexual activities. Findings show that 43, representing 26.2% of the respondents were sexually active. Out of this number, 36 respondents reported having one sexual partner while four of them had two sexual partners. In addition, two of the sexually active respondents stated that they had three sexual partners while one had four sexual partners. The youngest age at which one respondent reported having started having sex was nine years as shown in Table 4.7. Furthermore, majority of the sexually active respondents (16) stated that they used condoms sometimes while 11 of them said that they used it

always. However, 14 of these sexually active respondents reported having never used it while two gave no response. The youngest age at which one respondent reported having started having sex was nine years. This is similar to the Makwe, Anorlu and Odeyemi (2012) in Nigeria where the youngest age at which a respondent reported having commenced having sexual intercourse was 8 years and majority of the respondents had not engaged in sexual intercourse but. Most of the other respondents (10), however, reported having started at the age of 19 years.

According to the health belief model, as implied in this study, an adolescent girl is likely to, depending on her belief of how serious cervical cancer is and her likelihood of getting it, seek information on the disease. The chi-square tests in Table 4.19 showed a significance level greater than 0.05 indicating that there was no relation between a respondent's perceived susceptibility to getting cervical cancer and her likelihood of seeking information on the disease. Therefore the second hypothesis which stated that adolescent girls who perceive contracting HPV a threat are more likely to seek information on cervical cancer and its prevention is not confirmed. This is because the study showed that a respondent may seek information on cervical cancer not necessarily because of her expectation of getting a cervical cancer. This is due to the fact that those who believed that they were not at risk of getting a cervical cancer formed the majority of those who were aware of cervical cancer. It was concluded that adolescent girls who perceived contracting HPV as a threat were not likely to seek information on cervical cancer and its prevention. Therefore, the rationale that adolescent girls who are sexually active will believe that they are at risk of getting infected with HPV since it is sexually transmitted and will therefore seek information on cervical cancer and its prevention in order to protect them against the disease is not supported since there is not enough evidence to confirm it. The findings of the

study therefore contradict the argument the Health Belief Model posits that an individual is likely to adopt a health behaviour based on his or her beliefs regarding the chance of getting that condition, how serious that condition and its implications are, the benefits and barriers associated with that health behaviour and his or her ability to take action to carry out the desired health behaviour (Glanz, Rimer & Lewis, 2002).

## **5.2 Conclusion**

This comparative study sought to find out adolescent girls' knowledge on cervical cancer and its prevention and also determine if their socioeconomic status had an influence on their level of knowledge and source of information on the disease. It also sought to determine if sexually active adolescent girls considered themselves at risk of getting the disease and saw that as enough motivation to seek information on the disease in order to protect themselves. It was a comparative study between two senior high schools, Accra High School and Atiavi Senior High Technical School in an urban and rural area respectively. The rationale for selecting the two schools was to establish a difference in the socioeconomic status of the respondents.

In total, 164 respondents, 89 and 75 from Accra High School and Atiavi Senior High Technical School respectively, took part in the study giving a response rate of 91.1%.

From the study, it was found that adolescent girls in the urban schools are likely to be more knowledgeable about cervical cancer and its prevention than adolescent girls in the rural schools. Again, the socioeconomic status of the adolescent girls in Accra High School gave them access to more information which influenced their level of knowledge on cervical cancer and its

prevention than girls in Atiavi Senior High Technical School. Besides, a person may seek information on cervical cancer not necessary because of her expectation of getting a cervical cancer. Moreover, preferred source of information on cervical cancer is not related or associated with the socioeconomic status of the adolescent students. In addition, a person's knowledge on cervical cancer is associated with her age.

### **5.3 Recommendations**

Based on the findings of the research, these recommendations are hereby suggested. There should be more awareness creation on cervical cancer among adolescent girls in Ghana with particular emphasis on their different socioeconomic backgrounds. Considering that many of the respondents in Atiavi had not heard of cervical cancer before, efforts should be stepped up in educating rural communities about the disease to ensure that there is equal distribution of knowledge among urban and rural communities. In addition, in view of the fact that many of the respondents lacked enough information on cervical cancer risk factors, there should be more accurate education on the disease. This would help adolescent girls become 'information-rich' on cervical cancer and in this way protect themselves against the disease.

### **5.6 Limitations of the study**

This study was not without limitations. First of all, there was an unequal distribution of the sample from the schools that took part in the study. An equal number of respondents were expected from each school to ensure fair representation. However, 89 and 75 students from Accra High School and Atiavi Senior High Technical School, respectively, participated in the

research. As a result, the findings of the study were a little skewed in favour of Accra High School.

Secondly, the schools and the sample selected were not big enough to allow for more concrete and credible generalizations. This was a result of time and financial constraints.

Thirdly, the truthfulness with which the respondents answered some of the questions was considered a limitation. The questionnaire had questions that sought to elicit information from the respondents about their sexual activities which are regarded as taboos among unmarried youth in many African societies. Though the respondents were assured of the confidentiality of the responses, it should be borne in mind that some still refused to give responses to issues which they considered personal.

These limitations notwithstanding, it is expected that the results of this study are truly representative of the knowledge of adolescent girls in Ghana on cervical cancer and contribute to existing literature on the subject matter.

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**APPENDIX**  
**QUESTIONNAIRE**

Dear respondent,

My name is Margaret Torkornu, a student of the University of Ghana, undertaking research work for the award of the Master of Arts (MA) in communication studies.

I am interested in finding out what adolescent girls like you know about cervical cancer. The information you provide in this questionnaire is strictly confidential. The final report aggregates all answers and cannot therefore be attributed to you individually or by name. You are further assured that no personal harm or disadvantage will apply to you as a result of your participation in this study. Moreover, you can choose not to continue with, or answer any particular question if you feel strongly about it. Do I have your consent to administer the questionnaire to you now?

**INSTRUCTION: PLEASE TICK A BOX LIKE THIS • TO SELECT AN ANSWER THAT BEST APPLIES TO YOU OR BY WRITING YOUR ANSWER IN THE SPACE PROVIDED WHERE APPLICABLE.**

Name of School: (PROVIDED IN PRINT)

Form: a. Two [ ]      b. Three [ ]

**Are you below 13 years or above 19 years? [If yes, Terminate]. [If No, Continue]**

**Section A: (Knowledge and Source of information on Cervical Cancer and its prevention)**

1. Have you ever heard of cervical cancer?

Yes [ ]                      b. No [ ]

2. What do you think are the causes of cervical cancer?

a. ....

b. ....

c. ....

- d. ....
- e. ....
- f. ....
- g. ....

- 3. Cervical cancer affects only women.  
a. True [ ]                      b. False [ ]                      c. Not sure [ ]
- 4. Cervical cancer can lead to death.  
a. True [ ]      b. False [ ]                      c. Not sure [ ]
- 5. Cervical Cancer can be prevented.  
a. True [ ]                      b. False [ ]                      c. Not sure [ ]

**If you answered True, answer Question 6. Otherwise, skip to Question 7.**

- 6. How can cervical cancer be prevented?  
.....  
.....

- 7. Do you know of cervical cancer screening in Ghana?  
a. Yes [ ]                      b. No [ ]
- 8. Do you know of the availability of cervical cancer vaccines in Ghana?  
a. Yes [ ]                      b. No [ ]

- 9. Where did you learn about cervical cancer and its prevention? **[PLEASE TICK AS MANY AS APPLY]**
  - a. Parents [ ]
  - b. Teachers [ ]
  - c. Health Workers [ ]
  - d. Siblings (brothers and sisters) [ ]
  - e. Friends(peers) [ ]
  - f. Religious Leaders [ ]

- g. Radio [ ]
- h. Television [ ]
- i. Newspapers/ Magazines [ ]
- j. Others (PLEASE SPECIFY).....

10. What is your preferred source of information on cervical cancer and its prevention?

**[PLEASE CHOOSE ONE]**

- a. Parents [ ]
- b. Teachers [ ]
- c. Health Workers [ ]
- d. Siblings (brothers and sisters) [ ]
- e. Friends (peers) [ ]
- f. Religious Leaders [ ]
- g. Radio [ ]
- h. Television [ ]
- i. Newspapers/ Magazines [ ]
- j. Others (PLEASE SPECIFY).....

11. Why do you prefer this source above all the others?

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

12. Have you looked for information on cervical cancer on your own?

- a. Yes [ ]                      b. No [ ]

13. Why?

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

**Section B: (Sexual Behaviour)**

14. Do you believe that you are at risk of getting cervical cancer?

- a. Yes [ ]                      b. No [ ]                      c. Not sure [ ]

15. Why?

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

16. Has information on cervical cancer and its prevention affected your sexual behaviour in any way?

- a. Yes [ ]                      b. No [ ]                      c. Don't Know [ ]

17. If yes, how has it affected you?

.....  
.....

18. If no, why has it not affected you?

.....  
.....

19. Have you had sex before?

- a. Yes [ ]                      b. No [ ]

**If No, skip to Question 24.**

20. At what age did you have your first sex experience?

.....

21. How many sexual partners have you had since you started having sex?

- a. One [ ]  
b. Two [ ]  
c. Three [ ]

- d. Four [ ]
- e. Other (SPECIFY) .....

22. How often do you use condoms when having sexual intercourse?

- a. Always
- b. Sometimes
- c. Never

**Section C: Background Information**

23. How old are you?

.....

24. What is your place of usual residence (The area you usually live)? Please state exact location.

.....

25. What is the highest level of education of your parent or guardian?

- a. None [ ]
- b. Primary [ ]
- c. Secondary [ ]
- d. Professional Training/Polytechnic [ ]
- e. University [ ]
- f. Don't Know [ ]

26. What is the occupation of your parent/guardian?

.....

**Thank you very much.**