

Knowledge of Cervical Cancer among Female Students of Salaga Senior High School

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ABSTRACT

Cervical cancer is one of the World's deadliest but most easily preventable forms of cancer in women. It is responsible for more than 270000 deaths annually. The effects of cervical cancer on developing nations is quite devastating not excluding Ghana where according to the Ghana Health Service, cervical cancer is responsible for over 2000 deaths annually. There has been a relatively low level of awareness on cervical cancer among females in Sub-Saharan Africa contributing to the excessively high prevalence of the disease. The main objective of this study was to assess the level of awareness of cervical cancer among female high school students, the case of Salaga Senior High School. A descriptive cross-sectional study design was employed where 271 senior high school girls participated in the study.

The key findings showed that more than half of the respondents (53.9%) have ever heard about cervical cancer. Majority of the respondents could not correctly identify the risk factors for cervical cancer. As much as 70.8% of the respondents did not know any symptom for cervical cancer and almost half of the respondents are not aware of screening and early diagnostic methods for cervical cancer with only 3.7% of the respondents receiving vaccination against the Human Papilloma Virus (HPV). Though more than half of the respondents have ever heard about cervical cancer, their knowledge of the risk factors, symptoms, HPV and screening methods is low.

Efforts should be made to enhance and facilitate more effective health promotion campaigns and exercise on cervical cancer, sex education and health promotion be implemented in the early school years thereby targeting young girls and effective organisation of HPV vaccination campaigns to help protect young girls against the Human Papilloma virus.

Keywords: Cervical Cancer, Awareness, Senior High School, Females, Students

INTRODUCTION

Cervical cancer is one of the world's deadliest but most easily preventable forms of cancer for women, responsible for more than 270000 deaths annually (WHO 2014).

Cervical cancer is the most common gynecological cancer in women (Williams, 2012). It ranks second among all malignancies for women³ (Patra, 2010). Over the years, the prevalence of cervical cancer has reduced in the developed countries. This has been mainly attributed to effective cervical cancer awareness programs and the strategic implementation of highly efficacious screening methods, eventually leading to early detection of premalignant lesions and thus providing ample opportunities to effect an adequate cure.

This is hardly the case in developing countries where the incidence of the disease is still high. Cervical cancer is responsible for more than 270000 deaths annually, 85% of which occur in developing countries¹ (WHO 2014). Sub-Sahara Africa is the region with the highest incidence of cervical cancer in the world comprising 20-25% of all cancers among women in Sub-Saharan Africa, about double that of women worldwide (Abotchie and Shokar, 2009). Cervical cancer is malignancy of the female cervix. Human Papilloma virus (HPV) is central to the development of cervical cancer^{5, 6} (Lingwood, 2008; Sherris, 2000).

This virus is sexually transmitted. Other risk factors for the disease include early onset of sexual activity/ less than 16 years, multiple

sexual partners, a high risk sexual partner, previous sexually transmitted infections, immunosuppression, cigarette smoking and multiparity.

Cervical cancer is considered preventable because it has a long preinvasive phase. The mainstay of prevention is primary prevention which includes vaccination and lifestyle modification (Murthy et al. 2010; Jackett and Hartman. 2010; Luciani et al. 2009). Secondary prevention entails the application of various screening tools including the Papanicolaou Smear Test (PAP Smear) in order to detect the condition at the precancerous stage and effect an adequate cure.

According to the 2014 Africa Cervical Cancer Multi Indicator Incidences and Mortality Scorecard of the Africa Coalition on Maternal, Newborn and Child Health, out of a total of 53 countries, Ghana ranked 18 and 25 in incidence and mortality of cervical cancer respectively. Lack of awareness among women about the disease and screening programs are some of the reasons for such a high incidence¹¹ (Sherris and Herdman 2000).

One of the main avenues to curb this dire situation is through primary prevention which entails creating comprehensive awareness of this disease in the female population. Once they are enlightened about cervical cancer, they become empowered to take the necessary steps needed to protect themselves from cervical cancer. Recently, some efforts have been made to make the public more aware about cervical cancer in Ghana. More work needs to be done though, since the incidence remains high, over 2000 deaths annually in Ghana¹² (GHS, 2013).

Key to addressing the problem of cervical cancer will involve creating the much needed awareness of the condition among young girls and women. As to whether young girls in Ghana have sound knowledge on the topic of cervical cancer remains elusive, especially in Northern Ghana, and in the Salaga District where no work has been done to assess the level of cervical cancer awareness. This study is therefore to assess the level of awareness of cervical cancer among female senior high school students in Salaga with specific emphasis on risk factors, screening for cervical cancer and the Human Papilloma Virus (HPV).

METHODOLOGY

The study was conducted in the Salaga Senior High School located in the Salaga District. The study is a descriptive cross-sectional study. It

was carried out from January to April, 2016 in the Salaga Senior High school. The study population consisted of female students of the Salaga Senior High School with a total population of 646. The minimal sample size of female students required for the study was determined using Yamane's formula.

$$n = \frac{N}{1 + Ne^2}$$

$$n = \frac{646}{1 + 646 \times 0.05^2}$$

$$n = 247.04$$

Where n is the sample size, N is the population size and e is the level of precision. A 95% confidence level and a 5% precision level were used. With a total female student population at 646. Substituting these values into the formula yields a minimum sample size of 247. This number was increased to 271 to allow for a non-response rate of 24%.

Non probability convenient sampling was the sampling method employed in this study. During the period of data collection, female students in classes that were not engaged in any academic activity were used for the study. Student participation was entirely voluntary.

A questionnaire designed and used for this study consisted of 2 parts with 13 questions. The first part consisted of questions pertaining to the background and personal information of the participants. The second part contains questions about awareness and knowledge of cervical cancer including risk factors, symptoms and screening. With the aid of research assistants, instructions on how to fill the questionnaire were explained to the participants and afterwards the questionnaires were administered to the participants in a duration of 15 to 20 minutes. As participants/respondents filled the questionnaires, research assistants were present and available to aid in clarification of any misunderstandings or concerns that might have arisen among participants. Data collected was stored and analyzed using a standard computer software (International Business Machines Statistical Package for the Social Sciences [IBM SPSS] Statistics, version 23).

RESULTS

Socio Demographic Characteristics of Respondents

The minimum age of respondents was 13 years and a maximum of 21 years. The mean age of the respondents was 17.3 ± 1.3 (mean \pm SD). The study results showed that majority of the respondents forming 55.7% were within the age group of 17-18 years whilst 1.1% were over 20

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years. The results further showed that 27.7% of the respondents were within 15-16 years. The proportion of respondents within 19-20 years was 14% as shown in the table below.

Table1. Socio Demographic Characteristics of Respondents

Variable	Frequency (n= 271)	Percentage
Age group		
13-14	2	0.7
15-16	75	27.7
17-18	151	55.7
19-20	40	14.8
21-22	3	1.1
Religion		
Islam	176	64.9
Christianity	95	35.1
Ethnicity		
Gonja	113	41.7
Dagomba	37	13.7
Komkomba	52	19.2
Mamprusi	7	2.6
Akan	2	0.7
Frafra	5	1.8
Others	55	20.3
Form		
Form one	181	66.8
Form two	89	32.8
Form three	1	0.4

Knowledge and Awareness of Cervical Cancer

The results showed that majority of the respondents, representing 53.9% have ever heard of cervical cancer whilst 46.1% have never heard about the disease. The main source of information on cervical cancer was from the

television with 31% of respondents receiving information on cervical cancer through television, 18.8% heard about the condition in school, whilst 17.7% heard information on cervical cancer from radio stations as shown in table below.

Table2. Knowledge and Awareness of Cervical Cancer

Variable	Frequency (n=100)	Percentage
Ever heard of Cervical cancer		
Yes	146	53.9
No	125	46.1
Total	271	100.0
Source of information		
TV	84	31.0
Radio	48	17.7
Books	37	13.7
Lecture	8	3.0
School	51	18.8
Other sources	8	3.0
Total	236	87.2

Knowledge of Risk Factors of Cervical Cancer

The results showed that 44.6% reported that having multiple sexual partners is a predisposing factor to contracting cervical cancer. Only 2.2%

said that having many children constituted a risk factor for developing cervical cancer. However, 62% of the students said that having many children is not a risk factor of developing cervical cancer.

Table3. Knowledge of risk factors cervical cancer

Variable	Frequency (n=100)	Percentage
Having multiple sexual partners		
Yes	39	14.4
No	121	44.6
Don't know	111	41.0

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Total	271	100.0
Having many children		
Yes	6	2.2
No	168	62.0
Don't know	97	35.8
Total	271	100.0
Having a sexual partner with many previous sexual partners		
Yes	38	14.0
No	134	49.4
Don't know	99	36.6
Having an uncircumcised partner		
Yes	18	6.6
No	144	53.1
Don't know	109	40.2
Smoking cigarettes		
Yes	52	19.2
No	133	49.1
Don't know	86	31.7
Having HIV/AIDS		
Yes	26	9.6
No	149	55.0
Don't know	96	35.4
Having STDs		
Yes	36	13.3
No	136	50.2
Don't know	99	36.5
Being transfused with infected blood		
Yes	47	17.3
No	116	42.8
Don't know	108	39.9

Knowledge of the Symptoms of Cervical Cancer

An assessment of the knowledge of the symptoms of cervical cancer showed that only 14% of the respondents said that vaginal discharge is one of the symptoms of cervical cancer whilst 86% said that vaginal discharge is not a symptom of cervical cancer. The study further established that 7% of the respondents reported that intermenstrual bleeding is a symptom of cervical cancer whilst 93% reported that intermenstrual bleeding is not a symptom of cervical cancer. The results further show that on 5.2% said that postmenopausal bleeding is a symptom of cervical cancer whilst 94.8% reported that postmenopausal bleeding is not a

symptom of cervical cancer.

About 6% of the respondents said that women with cervical cancer may have lower back pains whilst 93.7% said that women with cervical cancer may not develop lower back pain. It was also found that 9.2% of the respondents reported that women with cervical cancer may have bleeding after sexual intercourse whilst 90.8% reported that bleeding after sexual intercourse is not a symptom of cervical cancer. The results show that majority of the respondents representing 70.8% had no knowledge of any of the symptoms of cervical cancer. Table 4 below shows the knowledge of respondents on the symptoms of cervical cancer.

Table 4.4: Knowledge of symptoms of cervical cancer

Variable	Frequency (n=100)	Percentage
Vaginal discharge		
Yes	38	14.0
No	233	86.0
Intermenstrual bleeding		
Yes	19	7.0
No	252	93.0
Postmenopausal bleeding		
Yes	14	5.2
No	257	94.8
Lower Back pain		
Yes	17	6.3

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No	254	93.7
Bleeding after sexual intercourse		
Yes	25	9.2
No	246	90.8
Don't know any symptom		
Yes	192	70.8
No	79	29.2

Knowledge of Human Papilloma Virus

The study assessed the knowledge of respondents on the human papilloma virus. The results show that an overwhelming majority of the respondents who represented 88.9% said that

they have never heard about the virus. Only 11.1% said that they have ever heard about the virus. Figure 4.1 below shows the knowledge of human papilloma virus among respondents.

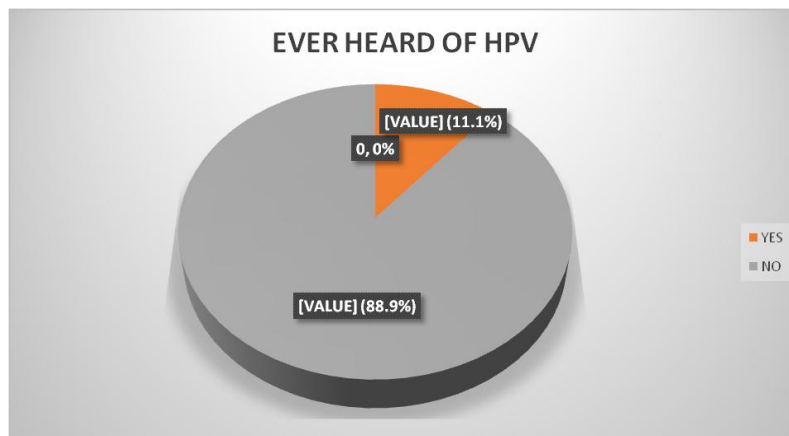


Figure4.1. Ever heard of human papiloma virus

Awareness of Screening Methods for Cervical Cancer

The study assessed the awareness of screening methods for cervical cancer among the respondents. The results show that 42.8% of the respondents were aware that early diagnosis can help treat cervical cancer. However, 13.7% said that there are no methods of screening and diagnosis of cervical cancer. About 43% reported that they are not aware of any method of screening and diagnosis of cervical cancer.

Only 15.1% of the respondents knew of Pap smear as screening method of cervical cancer whilst 84.9% of the respondents said that they were not aware of pap smear as a screening method. The results again showed that 22.1% of the respondents knew VIA as a screening method of cervical cancer whilst 73.9% were not aware of VIA as a screening method for cervical cancer. Table 4.5 below shows respondents' awareness of screening methods of cervical cancer.

Table4.5. Awareness of cervical cancer screening methods

Method of Screening	Frequency	Percentage
Awareness of early diagnosis methods		
Yes	116	42.8
No	37	13.7
Don't know	118	43.5
Pap Smear		
Yes	41	15.1
No	230	84.9
VIA		
Yes	60	22.1
No	211	73.9

Vaccination against Cervical Cancer

An assessment of vaccination against cervical cancer showed that only 3.7% of the respondents have been vaccinated against

cervical cancer whilst 96.3% have not been vaccinated against cervical cancer. Figure 4.2 below shows the vaccination of respondents against cervical cancer.

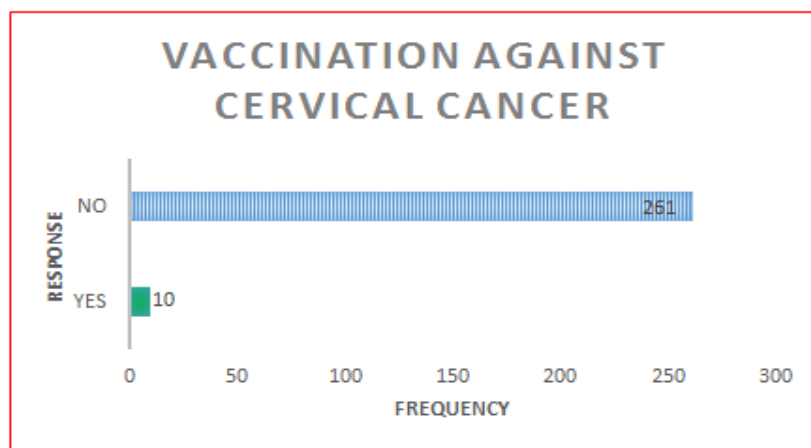


Figure4.2. Vaccination against cervical cancer

DISCUSSION

Socio Demographic Characteristics of Respondents

The mean age of respondents was 17 years. Such a finding is consistent/corresponds to the trends commonly observed in Ghana where senior high school education typically begins at age 15 (Form one) and ends at age 18 (Form three) with the average age between 16 and 17 years. Most of the students were Gonjas, a finding which is expected since the study was conducted in the Salaga Senior High School located in the East Gonja District where the dominant ethnic group is the Gonjas. Being located in the Northern part of Ghana, it is not surprising that more than half of the respondents are Muslims since the main religion in Northern Ghana is Islam. Form one students comprised a little over half the total sample size for the study with most of the remainder consisting of Form 2 students. This is because, during the period when the study was carried out, most of the Form three students were undertaking their Mock examinations in preparation for the WASSCE and so were unavailable for participation.

Awareness of Cervical Cancer

Out of the 271 senior high school girls involved in the study, 146 out of the total making up 53.9% have ever heard of cervical cancer. Considering that this comprises more than half of the sample size, such a finding can be deemed quite impressive, especially comparing this to other studies reported by Nancy et al., 2014; and Ajayi et al., 1998, in which majority of their respondents had never heard of cervical cancer. However, these findings are similar to what was obtained in other studies.

Perhaps, the high proportion of students who have ever heard of cervical cancer could be due

to increased health promotion campaigns via the media. Such an inference can be made considering the fact that, out of the available avenues by which respondents could have gained access to information with regards to cervical cancer, majority had come to hear about cervical cancer through the television. The second leading source of information was through school with the radio coming third very closely. Such findings serve as an indication as to how powerful the media and our educational facilities can be in the advancement of awareness on cervical cancer as emphasized in a similar study conducted in Ghana among college students⁴ (Abotchie and Shokar, 2009).

Knowledge about the Risk Factors of Cervical Cancer

Though a significant proportion of the participants indicated that they have ever heard of cervical cancer, not many of them actually know much about the risk factors for the disease. Aside from 14.4% of them identifying having multiple sexual partners as a risk factor, most of them had difficulty identifying the other risk factors. Only a meagre 2.2% could correctly attribute having many children as a risk factor. Also, only 6.6% could correctly identify that having an uncircumcised sexual partner could predispose someone to cervical cancer and only 19% said that smoking cigarettes constituted a risk factor for cervical cancer. As many as 111 students comprising 41% did not know that having many sexual partners is a major risk factor for the disease and a substantial 121(44.6%) said that it was not a risk factor at all. Overall, it can be said that though a significant number of students have heard about cervical cancer, their knowledge on the risk factors for the condition is very low. This finding is consistent with other studies^{16, 15}.

¹⁷(Ajayi et al., 1998; Anorlu et al., 2010) but contrasts with that of Rudolph's (2011).

Such low levels of knowledge on the risk factors for cervical cancer could be linked to a lack of more comprehensive packages fitted into various health promotion campaigns being carried out across the nation and educational curricula implemented in our educational institutions. Lapses like these lead to young girls having very low awareness level on cervical cancer.

Knowledge of the Symptoms of Cervical Cancer

Again, majority of the participants in the study know very little about the symptoms of cervical cancer. Only 14%, 7% and 5.2% could correctly identify vaginal discharge, intermenstrual bleeding and postmenopausal bleeding respectively as symptoms of the disease. As many as 192 (70.8%) did not know any symptom for the disease at all. Such a finding is very alarming. This is because inability of one to identify symptoms of a particular disease makes that individual more prone to delaying in seeking appropriate medical help which is a major reason why women in such settings usually present late to medical facilities for assistance by which time the prognosis for the condition would have worsened.

Knowledge of Human Papilloma Virus

Majority of the respondents (88.9%) have never heard about HPV, the major predisposing factor to developing cervical cancer. Not knowing about this virus and the fact that it is transmitted via sexual intercourse places these girls at a significant disadvantage with regards to how vulnerable they are and how easily they can protect themselves from developing the disease. These findings are quite similar to other studies (Jin-Kyoung et al., 2010; Anthony, 2002).

Awareness of Cervical Cancer Screening Methods

Almost half of the respondents (42.8%) were aware of cervical screening methods for early diagnosis while quite a large proportion of them (43.5%) were not aware of any cervical screening methods. Such findings could be due to the inadequate numbers of screening facilities available in communities for clients to patronize. Also, a lack of health promotion and proper health education on the existence of such screening facilities and the proper avenues to acquire such services might have contributed to such results (Mutuyaba et al., 2007). This

contrasts sharply with studies by Klokou (2014) in Winneba where majority of the respondents were very much aware of the screening methods for cervical cancer. However, such high levels of awareness could have been as a result of the fact that the study was conducted among health professionals and not senior high school students.

Vaccination against Cervical Cancer

Only 3.7% of the respondents have been vaccinated against cervical cancer via the HPV vaccine. Despite East Gonja having been part of the Government's pilot project on introducing the HPV vaccine as part of the EPI in 2013. Such results could be as a result of an ineffective pilot project and vaccination scheme, probably due to a very low coverage, poor health promotion or education. It is also possible that at the time the vaccination exercise was carried out, most of the respondents were not residing within the designated locations where the vaccination exercise was carried out, and no further exercise was carried out after the one time implementation.

CONCLUSION AND RECOMMENDATIONS

More than half of the students have heard of cervical cancer but their knowledge base on the condition is quite low. Majority of the students cannot correctly identify the risk factors for cervical cancer. As much as 70.8% of the students do not know any symptom of cervical cancer, a very appalling finding. Overall, though more than half of the respondents have ever heard of cervical cancer, their knowledge on the risk factors, symptoms, HPV, screening methods and HPV vaccine is low with only 3.7% of the respondents having been vaccinated via the HPV vaccine.

Therefore, more effective health promotion campaigns and exercises on cervical cancer is required in the early school years so as to target girls when they are very young, a period when implementation of such activities could have a very positive and profound effect on their health in later years. Finally, effective organization of HPV vaccination and making it routine by adding it to the nation's EPI could help make more young girls get vaccinated and increase awareness of the condition of cervical cancer. Such vaccination schemes would also provide a platform to further educate the public and especially young girls on the risk factors, symptoms and other relevant issues pertaining to cervical cancer.

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Ethical Approval

Ethical approval for the study was obtained from the Ethical Review Board of the School of Medicine and Health Sciences, University for Development Studies, Ghana.

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