

## Short Research Article

### CERVICAL CANCER KNOWLEDGE AND SCREENING AMONG SCHOOLING AND UNEDUCATED FEMALES WITHIN TAMALE-GHANA

#### ABSTRACT

**Background:** Cervical cancer, one of the gynecological cancers, is a serious health concern in Ghana. To improve the chances of survival and treatment outcomes for this condition, early screening and detection is the best remedy. Comprehensive knowledge and positive attitude highly influence acceptability and uptake of screening methods.

**Objective:** To assess the knowledge about cervical cancer and screening practice among females in secondary and tertiary institutions and uneducated females in Tamale-Ghana.

**Methods:** Females (n = 300) between the ages of 15 and 49 years, comprising 100 participants in three categories (senior high school, tertiary institution and the non-educated) were recruited into the study. Data was gathered through a semi-structured questionnaire, and analyzed by descriptive statistical methods.

**Results:** Approximately 61.3% of the participants have heard about cervical cancer, 33.1% and 29.9% of who got the information from school and the media respectively. Of those who have heard about cervical cancer, only 19.3% had considerable general knowledge about the condition. A significant association ( $p = 0.02$ ) was observed between educational level and knowledge about cervical cancer. Meanwhile, only 5.3% of the 300 participants were previously screened for cervical cancer. Lack of information about cervical cancer was the most reported reason (46.6%) for not attending cervical cancer screening.

**Conclusion:** Proactive intervention is required in the study area towards preventing new diagnosis through mass education, establishment of cervical cancer control programs, as well as screening and treatment centers.

**Keywords:** *Cervical cancer, knowledge, perception, practice, screening, education, Tamale.*

27 **INTRODUCTION**

28 Cervical cancer is a malignant lesion that affects the cervix. Cancer of the cervix uteri is a  
29 frequent cancer affecting women, and is a leading cause of mortality worldwide [1].

30 Gynecological cancers continue to be a public health challenge worldwide. The Union for  
31 International Cancer Control estimates that globally, 7.6 million lives are lost annually to cancer,  
32 more than HIV/AIDS, tuberculosis, and malaria combined [1]. A new report [2] by the World  
33 Health Organization's International Agency for Cancer Research (IARC) suggests that the  
34 incidence of cancer worldwide will grow by 75% by the year 2030, nearly doubling in some  
35 developing countries. Those increases will put a more burden on the poorly developed healthcare  
36 systems in such countries because cancer care is much more expensive than care for infectious  
37 diseases [3].

38 Almost all cervical cancers are caused by human papillomavirus (HPV), a common virus that can  
39 be passed from one person to another during sex. There are many types of HPV. Some HPV  
40 types can cause changes on a woman's cervix that can lead to cervical cancer over time, while  
41 other types can cause genital or skin warts. HPV is so common that most people get it at some  
42 time in their lives. HPV usually causes no symptoms so you can't tell that you have it. For most  
43 women, HPV will go away on its own; however, if it does not, there is a chance that over time it  
44 may cause cervical cancer. Other things can increase your risk of cervical cancer; Smoking.,  
45 having HIV (the virus that causes AIDS) or another condition that makes it hard for your body to  
46 fight off health problems, using birth control pills for a long time (five or more years), having given  
47 birth to three or more children and having several sexual partners.[3].

48 A study conducted in Germany 2005, indicated that sexually active adolescents might be at  
49 particularly high risk of developing cervical dysplasia because of earlier initiation of sexual  
50 intercourse. Having multiple sexual partners and smoking, increases vulnerability to STIS and  
51 carcinogenesis [4]. Certain strains (HPV16 andHPV18) of HPV are central to the etiology of  
52 cervical cancer. The study concluded that the risk factors for cervical cancer include multiple  
53 sexual partners, multi-parity, sexual activity at an early age, smoking, use of birth control pills and  
54 family history of the disease [4]. However, A study by [5] among women of reproductive age in

55 the Bolgatanga Municipality revealed knowledge on cervical cancer risk factors to include early  
56 initiation of sex (32%), multiple birth (10%), multiple sexual partners (34%), vaginal douching  
57 (9.3%), cigarette smoking (14.7%), recurrent STD's (36.7%) with 26% of the respondents  
58 reported had no idea of any of the risk factors. This may be attributed to; limited awareness on  
59 cervical cancer, cultural believes associated with seeking orthodox treatment and lack of proper  
60 decentralization of health facilities and workers in the Northern regions.

61 Cancer of the cervix is one of the most common cancers among females, accounting for 12% of  
62 all cancers in women and is ranked second among cancers in women globally [2]. It is estimated  
63 that 528,000 new cases were reported globally in 2012, with the largest burden occurring in less  
64 industrialized countries – around 85% of the global prevalence [6]. The main challenge in less  
65 developed countries is the absence of accurate population and health statistics [3]. This makes it  
66 difficult to reliably estimate with accuracy the actual burden of cervical cancer. In Sub-Saharan  
67 Africa, approximately 35 new cases of cervical cancer are diagnosed per 100,000 women  
68 annually, and about 23 per 100,000 women die from the disease [3].

69 In Ghana, cervical cancer is the leading cause of cancer deaths among women, and 8.57 million  
70 women who are currently above 15 years of age are at risk of developing cervical cancer. While  
71 approximately 3,000 women are diagnosed annually with cervical cancer, at least 2,000 of them  
72 die from the disease [6]. According to a report by the World Health Organization [1] cited in [7], by  
73 2025, there will be over 5,000 new cases of cervical cancer annually in Ghana with at least 3,361  
74 of the victims dying.

75 Cancer of the cervix is preventable if discovered at a very early stage by screening tools [2]. The  
76 World Health Survey has indicated very low uptake of cervical cancer screening in rural and  
77 urban areas with respective rates estimated at 2.2% and 3.2% [8]. There is also an observed  
78 widening inequality in cancer survival rates globally between the rich and the least deprived  
79 groups for 19 out of 33 cancer types [9]. Although the Human Papilloma Virus (HPV) vaccine has  
80 been licensed for use in Ghana, it is limited to only a few health facilities in the country. This  
81 response to the prevention of cervical pre-cancer has many challenges with its implementation

82 [10]. **Creating awareness of cervical cancer among young** adolescents and adult women is  
83 therefore a key preventive and management measure. However, how well women know about  
84 cervical cancer and the rate of screening for the condition in the Tamale metropolis **to the best of**  
85 **our knowledge** had not been previously assessed. Furthermore, it has not been established  
86 whether young adolescents in school may be more informed about the condition and/or practice  
87 screening for it compared to women who have no formal education. The purpose of this study  
88 was therefore to assess and compare cervical cancer knowledge and screening rates between  
89 these two female groups.

90

## 91 **METHODS**

### 92 **Study Location and Setting**

93 The study was conducted in the Tamale metropolis which is one of the 26 districts in the Northern  
94 region of Ghana. The metropolis has a total estimated land size of 646.90 km<sup>2</sup> [11], comprising  
95 115 communities. The population of the metropolis is estimated at 233,252 (males/females =  
96 49.7%/50.3%), representing 9.4% of the population of the Northern region (Population and  
97 Housing Census, 2010). The proportion of the population living in urban localities (80.8%) is  
98 higher than that living in rural localities (19.1%) of the metropolis. The population of the  
99 metropolis is youthful, with almost 36.4% of the population reportedly below 15 years [11].

100 Participants were drawn from one randomly selected senior high school (Ghana Senior High  
101 School), one randomly selected tertiary education institution (Tamale College of Education), and  
102 one randomly selected community (Dungu community) within the Tamale metropolis.

103

### 104 **Study Design**

105 The study was a cross-sectional survey that recruited two categories of females: those in school  
106 (at senior high and tertiary levels) and those who have had no formal education.

107

## 108 **Target population and Sample size**

109 The study targeted only females within the age range of 15-49 years, who were in senior high and  
110 tertiary schools, and those who did not have formal education. The required sample size was  
111 determined using the formula for sample size in sampling for proportions [12] with the following  
112 assumptions: 95% confidence level, 5% margin of error, 26.5% cervical cancer prevalence rate in  
113 Ghana [13], and a corresponding undiagnosed rate of 73.5%. Thus, an estimated 300  
114 participants were recruited into the study.

## 115 **Inclusion/Exclusion criteria**

116 Only women aged between 15 and 49 years who were either resident in the Dungu community or  
117 were schooling at either the Ghana Secondary School or Tamale College of Education were  
118 recruited. Furthermore, only those who consented and were willing to participate in the study  
119 were included. Any other person who did not satisfy any of these criteria was excluded from the  
120 study.

## 121 **Sampling procedure**

122 By the simple random sampling method, 300 participants were selected from the Tamale  
123 metropolis. The total sample size was stratified into three sub-groups of 100 participants **each:**  
124 girls in a senior high school, young adult women in a tertiary education institution, and  
125 uneducated women in a community

## 126 **Data collection technique**

127 Guided interviews were conducted by using a semi-structured questionnaire that contained both  
128 closed and open-ended questions. The questionnaire was initially pre-tested and refined to  
129 enhance accuracy and completeness of data collected. All questions contained in the

130 questionnaire have been presented in various Tables, under the respective results subsections,  
131 with the frequency of responses to each question.

132 The questionnaire was used to gather information in three thematic areas: knowledge about  
133 cervical cancer, perception about cervical cancer and screening, and practice of cervical cancer  
134 screening. Knowledge about cervical cancer was assessed based on respondents' general  
135 awareness about the condition (6 questions), its risk factors (7 questions) and screening practices  
136 (5 questions). Therefore, an 18-item question list was used to assess participants' level of  
137 knowledge about cervical cancer. Participants who correctly answered 15-18 questions were  
138 regarded as having "adequate" knowledge about cervical cancer; those who scored less than 15  
139 were considered to have "limited/poor" knowledge about cervical cancer.

#### 140 **Data analysis and presentation**

141 Data analysis was conducted using the Statistical Package for the Social Sciences, SPSS  
142 software (version 20, IBM Corp., USA). Data were analysed by descriptive statistical methods,  
143 and presented in frequency/percentage distribution Tables and charts. Associations were  
144 explored using Chi-squared cross-tabulation. Significance level was set at  $p < 0.05$ .

#### 145 **Ethical considerations**

146 An Introductory Letter was obtained from the Head of the Department of Nursing which was  
147 submitted to the Heads of the two selected educational institutions, for permission to be granted  
148 to engage their students in the study. The assembly member for the Dungu community was also  
149 contacted for permission to conduct the study in the community. Each participant gave informed  
150 verbal or written consent, as appropriate, and had the choice to opt out of the study if they wanted  
151 to do so at any time during the study. Participants were assured of confidentiality and anonymity  
152 throughout the study.

153

154

## 155 RESULTS

### 156 Socio-demographic characteristics of respondents

157 A total of 200 female students and 100 non - educated females were included in the study with  
158 response rate of 96.8%. Among the total participants (300), 184(61.3%) were between 15-24  
159 years followed by 69(23.0%) between 25 – 34 years. More than half of the respondents were  
160 single 189(63.0%) in terms of marital status and 183(61.0%) were Dagombas in ethnicity.  
161 Regarding religion, two-thirds of the respondents 202(67.3%) were Muslims followed by  
162 Christians 84(28.0%).

163 Table 1 shows the frequency distributions of the study participants by various socio-demographic  
164 characteristics.

165 **Table 1: Socio-demographic characteristics of the study participants**

Variable	Categories	Frequency	Percentage
Age ( <i>in years</i> )	15-24	184	61.3
	25-34	69	23.0
	35-44	24	8.0
	45-49	23	7.7
Marital status	Married	91	30.3
	Not married	189	63.0
	Divorced	9	3.0
	Separated	11	3.7
Occupation*	Student	200	66.7
	Unemployed	11	3.7
	Trading	46	15.3
	Farming	17	5.7
	Hairdressing	20	6.6
	Dressmaking	6	2.0
Religion	Islam	202	67.3
	Christianity	84	28.0
	African Traditional	13	4.3

166 *\*The "Student" category comprised of those in senior secondary and tertiary schools; all other*  
167 *employment categories did not have formal education*

### 168 Knowledge about cervical cancer

169 Background knowledge of the respondents about cervical cancer was assessed; the frequency of  
170 their responses is shown in Table 2.

171 **Table 2: Assessment of the knowledge of respondents about cervical cancer**

<b>Question item</b>	<b>Answer category</b>	<b>Frequency</b>	<b>Percentage</b>
Have you ever heard about cervical cancer?	Yes	184	61.3
	No	118	38.7
Source of information about cervical cancer	School	61	33.1
	Mass media	55	29.9
	Hospital	38	20.6
	Relative/Friends	15	8.2
	Social media	15	8.2
Main cause of cervical cancer	Human immunodeficiency virus	37	12.3
	Hepatitis B virus	25	8.3
	Human papilloma virus	114	38.0
	I don't know	123	41.0
Cervical cancer is sexually transmitted	Yes	118	39.3
	No	72	24.0
	I don't know	110	36.7
Body part affected by cervical cancer	Cervix	114	38.0
	Vagina	93	31.0
	Breast	30	10.0
	Neck	3	1.0
	I don't know	60	20.0
Is cervical cancer curable?	Yes	153	51.0
	No	38	12.7
	I don't know	109	36.3

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#### 174 **Knowledge about the risk factors of cervical cancer**

175 Following the general knowledge assessment about cervical cancer, specific questions about its  
 176 risk factors were asked. The frequency distributions of the responses to the respective questions  
 177 are indicated in Table 3.

178 **Table 3: Assessment of respondents' knowledge about cervical cancer risk factors**

<b>Question item</b>	<b>Answer category</b>	<b>Frequency</b>	<b>Percentage</b>
Sexually transmitted infection (HPV)	True	134	44.7
	False	26	8.7
	I don't know	140	46.7
Early onset of sexual intercourse	True	119	39.7
	False	42	14.0
	I don't know	139	46.3
Smoking	True	79	26.3
	False	66	22.0
	I don't know	155	51.7
A weak immune system	True	89	29.7



	False	61	20.3
	I don't know	150	50.0
Multiple sexual partners	True	152	50.7
	False	31	10.3
	I don't know	117	39.0
Poor diet (low fruits/vegetables)	True	48	16.0
	False	87	29.0
	I don't know	165	55.0
Wearing nylon panties	True	83	27.7
	False	62	20.7
	I don't know	154	51.3

179

180 **Knowledge about cervical cancer screening.**

181 In assessing participants' knowledge about cervical cancer screening, they were presented with  
182 five questions that required answers in various categories (Table 4).

183 **Table 4: Respondents' knowledge about cervical cancer screening**

<i>Question item</i>	<i>Answer category</i>	<i>Frequency</i>	<i>Percentage</i>
Have you heard about cervical cancer screening?	Yes	111	37.0
	No	189	63.0
Are there any cervical cancer screening programmes in Ghana?	Yes	78	26.0
	No	62	20.7
	I don't know	160	53.3
At what age should women be first screened for cervical cancer?	Adolescent (12-19 years)	50	64.0
	Young women (20-50 years)	25	32.0
	Old women (60 years and over)	3	6.3

184 Based on frequencies of responses gathered from the participants about their levels of  
185 knowledge about cervical cancer (Tables 2-4), 184 (61.3%) of them had 'adequate' and 116  
186 (38.7%) of them had 'limited' knowledge about cervical cancer.

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190 **Association between education and knowledge about cervical cancer**

191 Associations were explored by Chi-squared cross-tabulation to find out whether the level of  
 192 respondents' education had a link with their knowledge about cervical cancer. Table 5 shows the  
 193 proportions of respondents in the respective categories of level of education and their knowledge  
 194 about cervical cancer.

195 **Table 5: Proportion of respondents who are knowledgeable about cervical cancer**  
 196 **according to their levels of education.**

Level of education	Adequate	Limited	Total
No education	36	64	100
Senior high school	67	33	100
Tertiary education	81	19	100
<b>Total count (%)</b>	<b>184 (61.3)</b>	<b>116 (38.7)</b>	<b>300 (100.0)</b>

198

199 Knowledge about cervical cancer was associated with a respondent being a student ( $p < 0.01$ )  
 200 and with their level of education ( $p = 0.02$ ), if they were schooling. The results thus indicate that  
 201 education could be a necessary factor in the knowledge about cervical cancer.

202 **Perception about cervical cancer and its screening**

203 Respondents answered a 10-item question list regarding their perceptions about cervical cancer  
 204 and its screening. They indicated their levels of agreement with statements that focused on  
 205 perceptions about cervical cancer. Table 6 shows the frequencies of the responses indicating the  
 206 various levels of agreements with each of the ten statements in the questionnaire.

207 **Table 6: Respondents' perceptions about cervical cancer**

<i>Question item</i>	<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>
Early detection is good for favorable treatment outcomes	123	94	65	18
Cervical cancer can lead to death	78	54	82	86

Cervical cancer is a serious health condition	123	112	46	19
Cervical cancer is one of the common cancers in women	120	79	82	9
Cervical cancer is a burden on society	189	87	19	5
I prefer a woman to conduct my screening test	190	78	9	23
I feel shy going for cervical cancer screening	117	88	72	23
Cervical cancer screening should be part of the routine medical examination for women	126	114	55	5
I will feel secured after cervical cancer screening	142	97	46	15
Unmarried women who go for cervical cancer screening may be considered promiscuous	117	89	30	64

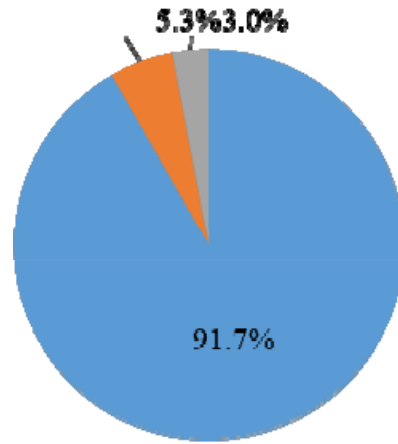
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209 **Practice of cervical cancer screening and barriers to screening**

210 When asked about whether respondents have been screened for cervical cancer before, majority  
 211 of them (91.7%) indicated that they have never been screened before while only 5.3% of them  
 212 have been screened before (Figure 1).

213 Among the barriers that did not allow most of the respondents to screen for cervical cancer,  
 214 inadequate or lack of information about cervical cancer was the most common barrier (Figure 2).  
 215 Only a few of the respondents did not screen due to the unpleasant nature of the test.

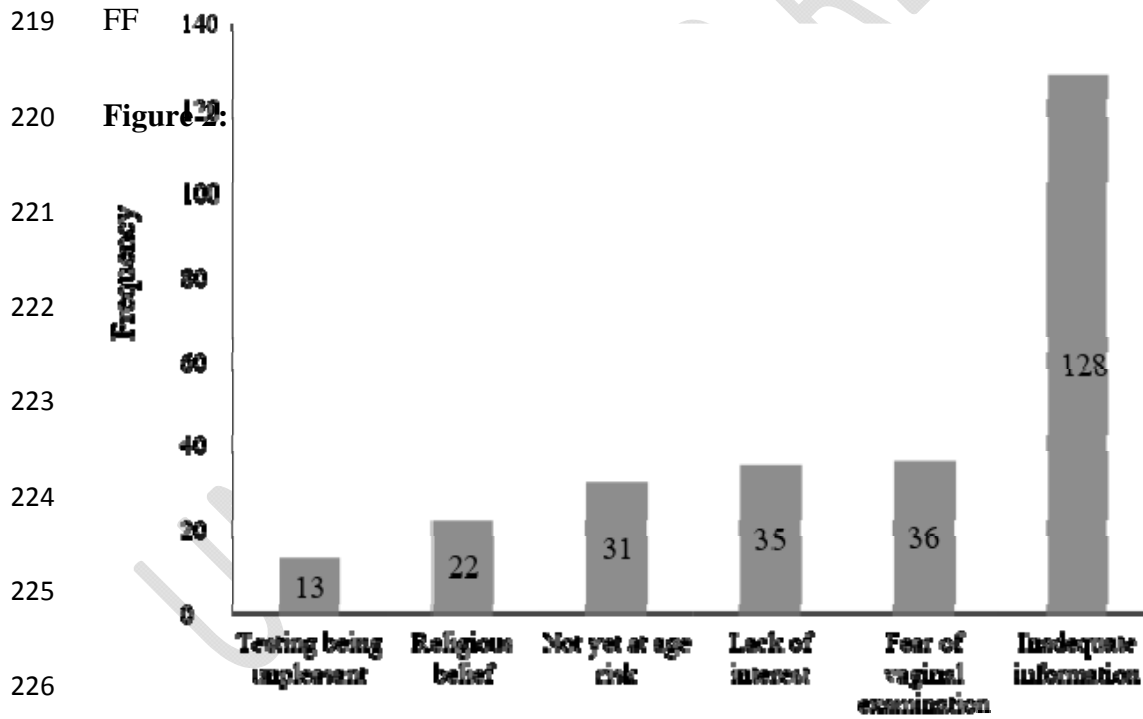
216 **Figure 1: Proportion of respondents who have been screened for cervical cancer**



■ Never been screened ■ Have been screened ■ Not sure

217

218 **Figure 2: Barriers to the practice of cervical cancer screening**



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220 **Figure 2:**

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## 228 DISCUSSION

229 The average annual incidence of cervical carcinoma from an institution-based study conducted at  
230 the Korle-Bu Teaching Hospital in Accra-Ghana is reported to range between 70.0% and 75.0%  
231 [6]. This is high and may be attributed to the low level of awareness of the disease among  
232 Ghanaian women prior to the study by [6]. There is however an indication that current  
233 sensitization programmes are yielding results; this might have accounted for the considerable  
234 number of women (61.3%) in this study being **adequately aware** about cervical cancer. This  
235 compares with an average awareness rate reported by [5] in Bolgatanga-Ghana.

236 This study observed a significant association between being a student ( $p < 0.01$ ) at a particular  
237 level ( $p = 0.02$ ) and knowledge about cervical cancer. The study involved 200 students, and so  
238 the proportion of those among the students who had adequate knowledge about cervical cancer  
239 (most likely from school (33.1%)) could have also resulted in the high awareness rate observed in  
240 this study. In another study conducted in Elmina-Ghana [14], very few sexually active women  
241 were reported to have been aware about cervical cancer. Indeed, even though most women in  
242 this study indicated awareness about cervical cancer, only 19.3% of them could correctly answer  
243 up to half of the questions about background knowledge about cervical cancer in Table 2. The  
244 indication of school (33.1%) and mass media (29.9%) as the major sources of information about  
245 cervical cancer shows that strategies to disseminate educational information about cervical  
246 cancer should be directed at these avenues.

247 It has been reported [15] that 70% of all cases of cervical cancer are linked to the human  
248 papilloma virus (HPV). However, about 41.0% of the participants in this study had no idea about  
249 the cause of cervical cancer (Table 2), even though most (73.3%) of them knew that it was a  
250 preventable disease (Table 4). Efforts at awareness creation about the disease should therefore  
251 include information about the main cause(s) of cervical cancer.

252 The risk factors of cervical cancer according to [16] include HPV infections, smoking,  
253 **immunosuppressant**, diet low in fruits and vegetables, being overweight, long-term use of oral  
254 contraceptives, intrauterine device use, having multiple full term pregnancies, younger than 17

255 years at first full term pregnancy, and having a family history of cervical cancer. In this study, the  
256 respondents were assessed on their awareness about the risk factors for cervical cancer (Table  
257 3). Having multiple sexual partners was the major risk factor reported for cervical cancer by  
258 50.7% of the respondents in this study, followed by HPV infection (44.7%), and the least identified  
259 risk factor was diet poor in fruits and vegetables (16.0%). Indeed, HPV infection, multiple sexual  
260 partners, early sexual initiation, and smoking have been cited elsewhere [17] as major risk factors  
261 for cervical cancer. Among health workers in Winneba-Ghana, it was found that this group of  
262 women had adequate knowledge about the risk factors of cervical cancer [7], and it was therefore  
263 not surprising that the participants in that study did well on this same question than those in the  
264 current study. However, the findings of this study regarding the question about risk factors were  
265 similar to those among women of reproductive age in Bolga-Ghana [5] and sexually active  
266 women in Elmina-Ghana [13] who were not health workers in both studies and therefore could not  
267 have been adequately informed about cervical cancer.

268 Cervical cancer is readily preventable when effective programs are implemented to detect and  
269 treat its precursor lesions [18]. However, cervical cancer prevention appears not to be commonly  
270 promoted in Ghana. In assessing the knowledge of respondents (Table 4) on awareness of  
271 cervical cancer screening and availability of screening programmes in Ghana most of them have  
272 not heard about cervical cancer screening (63.0%), and about the availability of screening  
273 programmes in Ghana, most of them (53.3%) did not know whether there is screening  
274 programme or not. Most of them (64.0%) however believed that females aged 12 – 19 years thus  
275 the adolescents should be first screened for cervical cancer. These findings about cervical cancer  
276 screening among the respondents of this study are in consistent with those reported by [19]  
277 among sexually active women in India. In contrast to our finding, [20] reported a generally high  
278 awareness rate (88.4%) about cervical cancer screening among nursing staff in a tertiary health  
279 institution in India. Clearly, the respondents in the study by [20] were more exposed to information  
280 about cervical cancer than our respondents and those of [19].

281 A very well informed individual about cervical cancer is more likely to hold an informed perception  
282 about it, including accepting screening. It was therefore not surprising that our study found a

283 significant association between education and knowledge about cervical cancer, adding to a  
284 61.3% cervical cancer knowledge rate among the respondents in this study. This could have  
285 contributed to most of the respondents (123, 41.0%) agreeing strongly that early detection could  
286 be beneficial and (190, 63.3%) of them agreeing strongly that colleague women are the preferred  
287 choice for screening them, (Table 6).

288 Generally, their perceptions about cervical cancer were indicative of the need to widen the scope  
289 of sensitization programmes in the study area beyond schools, since the results show that  
290 educational programmes about cervical cancer in schools are already yielding positive results.

291 Cervical cancer screening is an effective method for reducing the incidence and mortality of  
292 cervical cancer. In this study, a significantly high number (91.7%) of the women indicated that  
293 they had never undergone cervical cancer screening (Figure 1), citing lack of adequate  
294 information (46.6%) as the reason for their inability to get to know about cervical cancer and the  
295 need to screen for it (Figure 2). Previous studies have indicated that the main barriers to  
296 participation in cervical cancer screening include a lack of knowledge and awareness of cervical  
297 cancer screening, its benefits, shortage of staff, equipment and supplies, the fear of pain and  
298 being diagnosed with cervical cancer, embarrassment, the lack of husband's support for  
299 screening and cultural [21],[22].Our finding is in agreement with this assertion.

300

## 301 **CONCLUSION AND RECOMMENDATION.**

302 This study observed a trend towards increasing levels of knowledge about cervical cancer among  
303 sexually active women, particularly among those in school. Despite their high knowledge about  
304 cervical cancer and acceptance that screening is necessary, only 1 in 20 women in this study  
305 have been screened before. Therefore, current sensitization programmes should go beyond  
306 providing only information and focus on screening on planned schedules and venues within the  
307 Tamale metropolis.

308 We also recommend a well-structured screening programme that should have components of  
309 education, screening, management and treatment of cervical cancer in various communities,  
310 health facilities, and schools in order to allow for all categories of women to access such services.

### 311 **LIMITATION OF THE STUDY**

312 It is important to state that this study had a few limitations, which we wish to acknowledge. The  
313 questionnaire used for data collection was not a standardized tool to assess knowledge about  
314 cervical cancer. In addition to this, some of the questions were rather detailed for a respondent of  
315 no clinical background to answer, even though public sensitization programmes about cervical  
316 cancer could provide information on some of them. Finally, there is no established cervical cancer  
317 prevalence rate for the Tamale metropolis currently. We therefore used a reported range for the  
318 whole country, assuming an average appropriate for a regional-based rate in order to estimate  
319 the sample size for the study.

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383 **UNIVERSITY FOR DEVELOPMENT STUDIES**  
384 **SCHOOL OF ALLIED HEALTH SCIENCES**  
385 **DEPARTMENT OF NURSING**

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387

**QUESTIONNAIRE**

388 **INTRODUCTION**

389 We are BSc. Nursing students from the school of Allied Health Sciences, University for  
390 Development Studies. We are conducting a study on **knowledge about cervical cancer and**  
391 **screening practices among women in the Tamale Metropolis of Northern Ghana: A**

392 **comparative study between female students and women without formal education,** in  
393 partial fulfillment of the award of the BSc Nursing degree. We would like to seek your views on  
394 the above topic through this questionnaire. We would therefore be glad if you could complete the  
395 questionnaire for us.

396 We assure you of confidentiality and that the information you may provide would be used only for  
397 academic purposes, and would not be made available to any third party. To ensure absolute  
398 anonymity, please do not indicate your name on any part of the questionnaire.

399 Thank you.

#### 400 GENERAL INSTRUCTION ON COMPLETING THIS QUESTIONNAIRE

401 Please where appropriate, tick your choice of answer from the options given, and write in the  
402 spaces provided if your answer is not stated in the given options.

#### 403 SECTION A: SOCIO- DEMOGRAPHIC DATA

404 1. Age (years)

405 A). 15-24 [ ] B). 25 -34[ ] C). 35-44[ ] D). 45 – 49 [ ]

406

407 2. Marital status

408 A. Married [ ] B. Single [ ] C. Divorced [ ] D. Married but separated [ ]

409

410 3. Religion

411 A. Islam [ ] B. Christianity [ ] C. Traditional [ ] D. Other (specify).....

412 4. Educational level

413 A. Tertiary [ ] B. Secondary [ ] C. No Formal Education [ ]

414 5. What is your employment status?

415 A. Farmer [ ] B. Trader [ ] C. Salary worker [ ] D. Student [ ]

416 E. Unemployed [ ] F. Other (Specify) .....

417 6. How many children do you have?

418 A. 0 [ ] B. 1 [ ] C. 2 [ ] D. 3 [ ] E. 4 [ ] F. Other (Specify) .....

419

#### 420 SECTION B: KNOWLEDGE ABOUT CERVICAL CANCER.

421 7. Have you ever heard of cervical Cancer? YES [ ] NO [ ]

422 8. If yes, Where? a) Mass media [ ] b). School [ ] c). Hospital [ ]

423 d. relatives and friends [ ] e). Other (Specify) .....

424 9. What is the causative organism of cervical cancer?

425 A. Human immunodeficiency virus (HIV)

426 B. Hepatitis B virus (HBV)

427 **C. Human papilloma Virus (HPV)**

428 D. Other (Specify) .....

429 10. Cervical cancer is a sexually transmitted infection. **YES** [ ] **NO** [ ] **DON'T KNOW** [ ]

430 11. Is it possible to cure Cervical cancer? **YES** [ ] **NO** [ ] **DON'T KNOW** [ ]

431 12. Cervical cancer affect the .....of a woman.

432 **a) cervix** b). neck c). breast d). vagina

433 13. Before today, have you ever heard of the Human Papilloma Virus (HPV)?

434 **YES** [ ] **NO** [ ] **DON'T KNOW** [ ]

435 14. If you answered YES to question 13, we would now like to ask what you know about the HPV.

436 Please read each of the following statements about HPV and indicate whether they are **TRUE** or

437 **FALSE** by ticking the appropriate box. If you do not know the answer, please tick "**DON'T**

438 **KNOW**".

STATEMENT ABOUT THE HPV	TRUE	FALSE	DON'T KNOW
HPV can cause cervical cancer	<b>True</b>		
A person could have HPV for many years without knowing	<b>True</b>		
Having many sexual partners increases the risk of getting HPV	<b>True</b>		
HPV can be passed on during sexual intercourse	<b>True</b>		
HPV always has visible signs or symptoms		<b>False</b>	
Using condoms reduces the risk of getting HPV	<b>True</b>		
HPV can cause HIV/AIDS		<b>False</b>	
Having sex at an early age increases the risk of getting HPV	<b>True</b>		
H PV can be cured with antibiotics		<b>False</b>	
If a woman tests positive for HPV, she will definitely get cervical cancer		<b>False</b>	

439

440 15. What is/ are the signs and symptoms of cervical cancer? You can select more than one.

441 **A. persistent vaginal discharge with unpleasant smell** [  ]

442 **B. persistent pelvic pain.** [  ]

443 **C. vaginal bleeding during or after sexual intercourse.** [  ]

444 **D. abnormal menstrual cycle.** [  ]

445 E. blood in urine. [  ]

446 F. persistent diarrhea [  ]

447 G. other (specify) .....

448

449 **SECTION C: RISK FACTORS OF CERVICAL CANCER.**

450 16. What are the risk factors of cervical cancer? Please read each of the following statements

451 about risk factors of cervical cancer and indicate whether they are **TRUE** or **FALSE** by ticking the

452 appropriate box. If you do not know the answer, please tick "**DON'T KNOW**".

RISK FACTORS OF CERVICAL CANCER	TRUE	FALSE	DON'T KNOW
Infection with sexually transmitted virus, eg. HPV	True		
Early onset of sexual intercourse	True		
Smoking of cigarette/tobacco	True		
Having a weakened immune system (HIV)	True		
Having many sexual partners	True		
Diet		False	
Wearing of nylon panties		False	

453

454 **SECTION D: CERVICAL CANCER SCREENING AND BARRIERS.**

455 **17.** Have you ever heard of Cervical Cancer screening? YES [  ] NO [  ] DON'T KNOW [  ]

456 **18.** Are there any cervical cancer screening programmes?

457 YES [  ] NO [  ] DON'T KNOW [  ]

458 **19.** If you answered YES to question 18, at what age should women be first screened for cervical  
459 cancer in Ghana?

460 **A.** Adolescent (12 – 19 years) [  ]

- 461 B. Young women (20 – 50 years) [ ]
- 462 C. Old women (60 years and above) [ ]
- 463 20. Who should get tested for cervical cancer?
- 464 A. Married woman [ ] B. Unmarried woman [ ] C. Any female [ ]
- 465 21. Have you ever been screened of Cervical Cancer? YES [ ] NO [ ] DON'T KNOW [ ]
- 466 22. If you answered **YES** to question 21 how often do you go for screening?
- 467 A. every month B. every year C. every three years D. other (specify).....
- 468 23. If you answered **NO** to question 21, what is/ are reason(s) for not going for screening?
- 469 A. religious belief. [ ]
- 470 B. fear of vaginal examination [ ]
- 471 C. lack of interest [ ]
- 472 D. test being unpleasant [ ]
- 473 E. not yet been of age at risk [ ]
- 474 F. other (specify) .....
- 475
- 476 24. Is there anything you can think of that might put you off going to the doctor if you had a
- 477 symptom you thought might be a sign of cervical cancer? If **YES**, please state what these are.
- 478 .....
- 479 25. How much do you agree or disagree that early detection of cervical cancer is good for
- 480 treatment outcome?
- 481 A. Strongly agree B. Agree C. Neither agree nor disagree D. Disagree E. Strongly disagree
- 482 26. Is cervical screening important? YES [ ] NO [ ] DON'T KNOW [ ]
- 483 27. Why is cervical cancer screening important? You can select more than one.
- 484 A. It helps you to know whether you are infected or not [ ]
- 485 B. To help in early detection and treatment [ ]
- 486 C. To protect women from the danger of the disease [ ]
- 487 D. To avoid Sexually Transmitted Diseases [ ]
- 488 E. To prevent the disease from spreading. [ ]
- 489 F. Other (specify) .....
- 490

- 491 28. Are you aware of any vaccine for cervical cancer? YES [ ] NO [ ] DON'T KNOW [ ]
- 492 29. If **YES**, at what minimum age range is it given? A. 9 – 13yrs B. 20 – 29 yrs C. Don't know.
- 493 30. What is the duration of the vaccination?
- 494 A. 3 shots over 6 months B. 5 shots in a month C. Take the shot at once
- 495 31. Are you vaccinated against cervical cancer? YES [ ] NO [ ]
- 496 32. Someone who has been vaccinated cannot develop cervical cancer.
- 497 YES [ ] NO [ ] DON'T KNOW [ ]
- 498 33. The HPV vaccines offer protection against all sexually transmitted infections.
- 499 YES [ ] NO [ ] DON'T KNOW [ ].
- 500 34. Is Cervical cancer preventable? YES [ ] NO [ ] DON'T KNOW [ ]
- 501 35. If **YES** what are some of the practices that prevent cervical cancer? Select more than one, if
- 502 applicable.
- 503 A. Abstinence. [ ]
- 504 B. Condom use. [ ]
- 505 C. Single sexual partner. [ ]
- 506 D. Having regular Pap smear / screening. [ ]
- 507 E. Having HPV vaccine. [ ]
- 508 F. Other (specify) .....
- 509