



# KNOWLEDGE, RISK FACTORS AND PREVENTIVE STRATEGIES OF CERVICAL CANCER AMONG TERTIARY STUDENTS IN TARABA STATE, NIGERIA

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## ABSTRACT

Taraba State is one of the states with high incidence rate of cancer in Nigeria especially cervical cancer which leads to increased cervical cancer which leads to increase in cancer incidence and prevalence. As results of these incidences this paper assessed the knowledge, risk factors and preventive strategies of cervical cancer among female tertiary students in Taraba State. A structured questionnaire was used to collect data on 250 randomly sampled students. Data collected were analyzed using descriptive statistics with the aid of statistical package for social sciences (SPSS Version, 23). The results showed that female students in tertiary institution have good knowledge of cervical cancer. In addition, infection with the human papilloma virus (HPV), multiple sexual partners, early age sexual intercourse and early age at first full-term pregnancy as well as family history were the identified as the major risk factors of cervical cancer. Thus, avoidance of multiple sex partners, avoidance of early age sexual intercourse, avoidance of early age pregnancy and vaccination of human papilloma virus are the major strategies to prevent been contacted with cervical cancer among women. The paper therefore recommends among others that: more efforts should be gear towards creating awareness to the youths especially female via enlightenment programmes, workshops and seminar by health professionals on the causes, signs and symptoms as well as the effects of contacting cervical cancer in order to curtail the incidence of cervical cancer to its barest minimal. Young female students in the tertiary institutions are encouraged to avoid early sexual intercourse or even abstain from premarital sex in order not to be contacted with cervical cancer. Again, students should as a matter of fact visit any nearby screening center to know their status for early detection and possible treatment if detected as accepted by the majority of the respondents that cervical cancer is curable when detected at its early stage.

## KEYWORDS

Cervical cancer, Pap Smear, Human Papilloma Virus, Risk Factors, Preventive Strategies



## INTRODUCTION

Cervical cancer is a malignant neoplasm of the cervical area of the uterus caused by the Human Papilloma Virus (HPV) as the virus DNA is found in 99.7% of all cervical cancers (Lewis, 2014). Cervical cancer is preventable and, in most cases, curable, if identified in its early stages mostly through screening programmes which have been instituted in some countries (Gebreegziabher, Asefa, & Berhe, 2016). Global Cancer (GLOBOCAN) report puts cervical cancer in both incidence and mortality, as the fourth most prevalent cancer among women with an estimated 570,000 of new cases diagnosed worldwide in 2018 which represents 6.6% of all female cancers (Bray et al., 2018). According to the World Health Organization (WHO), approximately 90% of deaths from cervical cancer occur in developing countries of the world (WHO, 2018).

Cervical cancer is one of the leading causes of death among female students in tertiary institutions in Taraba State due to the high rate of ignorance, absence of national screening programme and low income or not financially sound in terms of affordability to the screening. Even though the prevalence of cervical cancer is high in Taraba State, there exists to be no accurate data to capture the incidence of the disease. The idea to collect, store and analyze data on people living with cervical cancer is to provide accurate, complete and timely report for interventional programmes. Such information would serve as a guide to monitor patient care, assist in the efficient and effective allocation of scarce health resources, and act as a driving force for policy development which is needed for a comprehensive cancer control in Taraba State.

The reasons for the high prevalence and death from cervical cancer in Taraba State include lack of awareness of cervical cancer among the population, health-care providers and policymakers; limited access to high-quality health-care services and cervical cancer screening programmes; and lack of functional referral systems. All these lead to advanced stage at diagnoses (WHO, 2016). In developed countries, occurrence and transience from cervical cancer have been reduced through measures which include cytological screening and prompt treatment of early detected cervical cancer (Sankaranarayanan, Budukh & Rajkumar, 2011).

Introducing population-based cervical cancer screening programme and increasing its uptake among higher institutions students is an important goal in reducing cervical cancer prevalence and mortality in tertiary institutions in Taraba State. Uptake of screening programmes may be assisted by raising awareness about cervical cancer risk factors and preventive measures including young age at first sexual intercourse, multiple male sexual partners, high parity, infections with the human papillomavirus, young age at first full-term pregnancy, prolonged use of oral contraceptives and HIV infections (Sankaranarayanan et al, 2011).

Similarly, early help-seeking may be promoted if female students in the tertiary institutions become more aware of the symptoms of cervical cancer including inter-menstrual vaginal bleeding, post-menopausal vaginal bleeding, post-coital vaginal bleeding, offensive vaginal discharge and lower abdominal pain (Sankaranarayanan et al, 2011). It was in line with this background this paper assessed the knowledge, risk factors and preventive strategies of cervical cancer among female students of tertiary institutions in Taraba State.

## MATERIALS AND METHODS

The design for this paper was a cross-sectional survey comprising 250 female students of tertiary institution of Taraba State. They were sampled randomly using a purposive sampling technique. A structured questionnaire was used for the study to capture information on demographics of respondents as well as their knowledge and awareness and the challenges they are facing about cervical cancer screening. Five variables: age of respondents, marital status, educational level, religion and ethnicity were considered for socio-demographic characteristics. Regarding knowledge and awareness, five (5) questions were set which sought for the opinions of the respondents regarding their level of knowledge and awareness of cervical cancer. On the risk factors, eight (8) questions were set to determine the commonness risk factors found among the sampled respondents. To proffer solutions to the problems of curbing the prevalence of cervical cancer, six (6) questions were set to identify the workable preventive strategies towards cervical cancer. The question statements to which respondents responded were yes or no questions. The data obtained was entered and analysed using descriptive statistics including frequency distribution tables, graphs and simple percentage with the aid of the Statistical Package for Social Science (SPSS v.23).

## RESULTS

**Table 1:** Socio-Demographic characteristics of the Respondents

S/N	Description of item	Frequency	Percentage (%)
1	<b>Age</b>		
	<18	17	6.8
	18 – 25	170	68.3
	26 – 35	40	16.0
	36& above	23	8.9
	Total	250	100
2	<b>Marital Status</b>		
	Single	162	64.8
	Married	73	29.2
	Divorced/Widow	15	6.00
	Total	250	100
3	<b>Educational level</b>		
	Year one	36	14.5
	Year two	82	32.7
	Year three	132	52.8
	Total	250	100
4	<b>Ethnicity</b>		
	Mumuye	25	10
	Fulani/Hausa	45	18
	Jukun/Kuteb	55	22
	Nyandang/Kunini	17	7
	Wurkm/Karinjo	15	6
	Kaka/Mambila	27	11
	Jenjo/Bandawa	13	5
	Igbo/ Tangale	30	12
	Margi/Michika	15	6
	Tiv/Idoma	8	3

	Total	250	100
5	<b>Religion</b>		
	Christianity	180	72.3
	Islam	56	22.2
	Others	14	5.5
	Total	250	100

**Table 2:** Level of knowledge of cervical cancer among female students of tertiary institutions in Taraba State

S/N	Description of item	Yes (%)	No (%)	Total (%)
1	Have you heard of cervical cancer before?	197(78.6%)	53(21.40%)	250(100%)
2	Irregular menstrual bleeding is a symptom of cervical cancer	186(74.2%)	64(25.80%)	250(100%)
3	Bleeding after sexual intercourse is a symptom of cervical cancer	116(46.3%)	134(53.70%)	250(100%)
4	Weight loss is a symptom of cervical cancer	131(52.4%)	119(47.60%)	250(100%)
5	Difficulty in passing urine is a symptom of cervical cancer	162(64.8%)	88(35.20%)	250(100%)
6	Blood-stained vaginal discharge is a symptom of cervical cancer	211(84.2%)	39(15.80%)	250(100%)
7	A woman can have cervical cancer without manifesting symptoms	227(91%)	23(9.00%)	250(100%)
8	Cervical cancer is a killer if not detected early	219(87.6%)	31(12.40%)	250(100%)
9	Offensive vaginal discharge and lower abdominal pain is a symptom of cervical cancer	190(75.8%)	60(24.20%)	250(100%)
10	Where is the source of your information about cervical cancer?			
A	Health Professionals	69(34.8%)	0(0.00%)	69(34.8%)
B	Friends/Relatives	6(2.80%)	0(0.00%)	6(2.80%)
C	Social Media	44(22.5%)	0(0.00%)	44(22.5%)
D	School	64(32.7%)	0(0.00%)	64(32.7%)
E	Mass Media	14(7.20%)	0(0.00%)	14(7.20%)

**Table 3:** Level of knowledge of the risk factors of cervical cancer among female students of tertiary institutions in Taraba State

S/N	Description of item	Yes (%)	No (%)	Total (%)
1	Having multiple sexual partners is a risk for cervical cancer	239(95.4%)	11(4.60%)	250(100%)
2	Sexually transmitted infection is a risk for cervical cancer	231(92.3%)	19(7.70%)	250(100%)
3	Early age sexual intercourse can be a risk factor for cervical cancer	216(86.2%)	34(13.8%)	250(100%)
4	Family history of abnormal cervical lesion is a risk factor for cervical cancer	204(81.4%)	46(18.6%)	250(100%)
5	Smoking is a risk factor of cervical cancer	181(72.5%)	69(27.5%)	250(100%)
6	Infections with the human papilloma virus is a risk for cervical cancer	245(98.0%)	5(2.000%)	250(100%)
7	Early age at first full-term pregnancy is a risk for cervical cancer	212(84.6%)	38(15.4%)	250(100%)
8	Prolonged use of oral contraceptives is a risk for cervical cancer	172(68.9%)	78(31.1%)	250(100%)

**Table 4:** Level of knowledge of preventive strategies of cervical cancer among female students of tertiary institutions in Taraba State

S/N	Description of item	Yes (%)	No (%)	Total (%)
1	Delay in sexual debut	189(75.5%)	61(24.5%)	250(100%)
2	Consistent use of contraceptives (condoms) during sexual intercourse	155(62.0%)	95(38.0%)	250(100%)
3	Vaccination of human papilloma virus (HPV)	223(89.0%)	27(11.0%)	250(100%)
4	Regular medical checkup/screening	210(84.0%)	40(16.0%)	250(100%)
5	Avoid early age pregnancy	226(90.2%)	24(9.8%)	250(100%)
6	Avoid early age sexual intercourse	231(92.3%)	19(7.7%)	250(100%)
7	Avoid smoking	147(58.6%)	103(41.4%)	250(100%)
8	Avoid multiple sex partners	240(96.0%)	10(4.0%)	250(100%)

## DISCUSSION

Table 1 presented the demographic characteristics of the respondents. The sample comprised of only women since the study purposefully enrolled female students. Regarding the age distribution, majority 68.3% is between the ages of 18 – 25 years. On the marital status of respondents, it was established that, majority (64.8%) of respondents are single. For the respondent's highest level of education, majority 52.8% were year three students, 32.7% year two students and 14.5% were year one students respectively. Regarding the ethnicity, 22% were Jukun/Kuteb followed by 18% Fulani/Hausa; 12% Igbo/ Tangale; 11% Kaka/Mambila as well as Mumuye with 10%. Others include: Nyandang/Kunini 7%; Wurkm/Karinjo and Margi/Michika 6%; Jenjo/Bandawa 5% and Tiv/Idoma 3% respectively. Majority (72.3%) of the respondents were Christians followed by Muslims who constituted 22.2% of the total sample for the study.

Table 2 shows results of level of knowledge on the causes, diagnosis, prevention and treatment of cervical cancer. Majority (78.6%) of the respondents have heard about cervical cancer with 21.40% indicated to have got the information. Irregular menstrual bleeding is accepted by majority 74.2% of the respondents to be a symptom of cervical cancer. About 53.70% of the respondents rejected that bleeding after sexual intercourse is a symptom of cervical cancer it may be caused by other factors other than cervical cancer. Weight loss is accepted by 52.4% of the respondents as a symptom of cervical cancer. About 64.8% of the respondents accepted that difficulty in passing urine signifies presence of cervical cancer. Majority of the respondents about 84.2% blood-stained vaginal discharges is a sign that the victim has cervical cancer. About 91% of the respondents agreed that a woman can have cervical cancer without manifesting symptoms on her body. About 87.6% accepted that cervical cancer kills if not detected early; 75.8% of the respondents accepted that offensive vaginal discharge and lower abdominal pain is a symptom of cervical cancer. About 34.8% indicated that their source of information about cervical cancer was through health professionals followed by School 32.7% and social media 22.5%. By implication, female students in the study area have good knowledge of cervical cancer. Similarly, studies in Ghana also reported that majority of the participants indicated that they had never heard of cervical cancer (Abotchie&Shokar, 2010; Makwe et al., 2012). Also in a related study that examined the knowledge and beliefs on cervical cancer and practices on cervical cancer screening among women aged 20 to 50 years in Ouagadougou revealed that, while 64.2% of participants have heard about cervical cancer, only 8.5% have heard about Human Papilloma virus and this confirms the uneven and inadequate information women have about cervical cancer (Sawadogo et al., 2014). It was encouraging to learn that a greater proportion (41.4%) of the respondents received cervical cancer information from health workers.

Table 3 presented the level of knowledge of the risk factors of cervical cancer. Majority 95.4% accepted that having multiple sexual partners is a risk for cervical cancer; about 92.3% of the respondents agreed that sexually transmitted infection is a risk for cervical cancer. Again, 86.2% of the entire respondents accepted that early age sexual intercourse can be a risk factor for cervical cancer.

In addition, 81.4% accepted that family history of abnormal cervical lesion is another risk factor of cervical cancer. About 72.5% accepted smoking as another risk factor of cervical cancer; surprisingly, almost all the respondents about 98.0% accepted that infection with the human papilloma virus is a major risk of cervical cancer. In addition, 84.6% and 68.9% accepted that early age at first full-term pregnancy and prolonged use of oral contraceptives are risk factors of cervical cancer. By implication, infection with the human papilloma virus (HPV), multiple sexual partners, early age sexual intercourse and early age at first full-term pregnancy as well as family history were the identified major risk factors of cervical cancer. The study is consistent with the study conducted by Abudukadeer et al(2015). The results suggest that the respondents in study were aware of some risk factors but also misidentified some factors as risk factors which require serious targeted health education. The danger of not knowing the risk factors is that chances of prevention in terms of behavioral risk factors are almost non-existent. This then results in a higher number of women being at risk of cervical cancer. In addition, it was also observed that, most of the respondents thought having multiple sexual partners could put an individual at risk of developing cervical cancer. The respondents also thought that having unprotected sex and early sex could predispose women to developing cervical cancer. These results were similar to studies which revealed that although lower number of the respondents recognized risk factors of cervical cancer and risk

perception was low, the most commonly identified risk factors were having sex at an early age, many different sexual partners and sexually transmitted infections.

Table 4 depicted the level of knowledge of preventive strategies of cervical cancer. About 75.5% accepted that delay in sexual act helps in preventing cervical cancer among women; 62.0% also affirmed that consistent use of contraceptives (condoms) during sexual intercourse is another preventive measure to contacting cervical cancer. Table 4 further showed that about 89.0% accepted that vaccination of human papilloma virus (HPV) is another strategy for preventing cervical cancer.

In addition, about 84.0% accepted that regular medical checkup/screening makes cervical cancer easily preventable when it is detected early. Majority 90.2% of the respondents accepted that avoidance of early age pregnancy helps in preventing cancer among women. Again, about 92.3% accepted that avoidance of early age sexual intercourse; and 58.6% of respondent accepted avoidance of smoking. Finally, almost all the respondents about 96.0% accepted that avoidance of multiple sex partners serves as the best measure of preventing cervical cancer among women. It therefore signified that, avoidance of multiple sex partners, avoidance of early age sexual intercourse, avoidance of early age pregnancy and vaccination of human papilloma virus are the major strategies to preventing being contacted with cervical cancer among women.

### **CONCLUSION/RECOMMENDATIONS**

This paper assessed the knowledge, risk factors and preventive strategies of cervical cancer among female tertiary students in Taraba State. The results showed that female students in tertiary institution have good knowledge of cervical cancer. In addition, infection with the human papilloma virus (HPV), multiple sexual partners, early age sexual intercourse and early age at first full-term pregnancy as well as family history were the identified major risk factors of cervical cancer. The study finally, found that avoidance of multiple sex partners, avoidance of early age sexual intercourse, avoidance of early age pregnancy and vaccination of human papilloma virus are the major strategies to preventing being contacted with cervical cancer among women. The paper therefore recommends among others that: more efforts should be gear towards creating awareness to the youths especially female via enlightenment programmes, workshops and seminar by health professionals on the causes, signs and symptoms as well as the effects of contacting cervical cancer in order to curtail the incidence of cervical cancer to its barest minimal. Young female students in the tertiary institutions are encouraged to avoid early sexual intercourse or even abstain from premarital sex in order not to be contacted with cervical cancer. Again, students should as a matter of fact visit any nearby screening center to know their status for early detection and possible treatment if detected as accepted by the majority of the respondents that cervical cancer is curable when detected at its early stage.

## REFERENCES

- Abotchie, Y. A., & Shokar, O.K. (2010). Knowledge and attitude towards cervical cancer screening among female students and staff in a tertiary institution in the Niger Delta. *International Journal of Medicine and Biomedical Research*, 2(1), 48-56.
- Abudukadeer, H., Ezechi, OC., Gab-Okafor, CV., Ostergren, PO., & Pettersson, KO. (2015). Willingness and acceptability of cervical cancer screening among HIV positive Nigerian women. *BMC Public Health*. 2015;13(1):46.
- Bray, F., Parkin, DM. & Paola, P. (2018). Global cancer statistics, 2018. *CA: A Cancer Journal for Clinicians*, 2018; 55: 74–108.
- Ferlay J, Shin HR, Bray F, Forman D, Mathers C, Parkin DM. GLOBOCAN (2018). Cancer Incidence and Mortality Worldwide. Lyon: International Agency for Research on Cancer, 2018.
- Gebreegziabher, J., Asefa, AD., & Berhe, M. (2016). Awareness of cervical cancer risk factors and symptoms: cross-sectional community survey in post-conflict northern Uganda. *Health Expect*. 2016;19(4):854–867.
- Lewis, F. (2014). Knowledge about cervical cancer and associated factors among 15-49 year old women in Dessie Town, Northeast Ethiopia. *PLoS One*. 2016;11(9).
- Makwe, C. C., Anorlu, R. I., & Odeyemi, K. A. (2012). Human papillomavirus (HPV) infection and vaccines: Knowledge, attitude and perception among female students at the University of Lagos, Lagos, Nigeria. *Journal of Epidemiology and Global Health*, 2(4), 199-206.
- Sankaranarayanan, R., Budukh, AM. & Rajkumar, R. (2011). Effective screening programmes for cervical cancer in low- and middle-income developing countries. *Bulletin of the World Health Organization*, 2011; 79: 954–962.
- Sawadogo, K.L., Hakama, M., Chamberlain, J., Day, NE., Miller, AB. & Prorok, PC. (2014). Evaluation of screening programmes for gynaecological cancer. *British journal of cancer*, 2014; 52: 669–673.
- World Health Organisation. (2018). Human papillomavirus and cervical cancer summary report of Ghana Vaccine (Vol. 25): World Health Organisation: Latest global cancer data. *International Agency for Research on Cancer*, September, 2018, 13-15.
- World Health Organization (2016). *Comprehensive Cervical Cancer Control; A Guide to Essential Practice*. Geneva, Switzerland: WHO Press, World Health Organization, 2016.