

Knowledge of Cervical Cancer and Attitude Toward Cervical Cancer Screening Among the First-Year School of Midwifery Students in FMC Nguru, North-Eastern Nigeria

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Abstract

Cervical cancer occurs due to infection by high-risk human papillomavirus (HPV) and subsequent integration of the HPV genome into the host chromosome of cervical epithelial cells. The viral proto-oncogenes, mainly E6 and E7, are responsible for the initial changes in the epithelial cells of the transformation zone of the cervix. The viral proteins inactivate two main tumor suppressor proteins, p53, and retinoblastoma (pRb). Inactivation of these host proteins disrupts both the DNA repair mechanisms and apoptosis, leading to rapid cell proliferation. Cervical cancer is the 4th most common cancer among women worldwide, it ranked 14th among all cancers worldwide. There are 500,000 new cases of cancer of the cervix annually, and about 250,000 mortalities all over the world from cervical cancer. About 80% of all these cases occur in low-income countries. In Nigeria, there are 12,075 new cases of cervical cancer and 7,968 deaths due to cervical cancer per year. The study was a cross-sectional type aimed at exploring the knowledge of the participants on cancer of the cervix and their attitude toward cervical cancer screening using a semi-structured questionnaire in FMC Nguru. Results: The total number of participants was 29(n=29). The mean age of the respondents was 20.9 +/-2. 8SD. Concerning the knowledge of cervical cancer among the participants, 27(93.1%) heard of cervical cancer. Most of the respondents do not know the cause of cervical cancer, as only 10(34.5%) know that cervical cancer is associated with HPV. The risk factors for cervical cancer are not known by most of the respondents as 14(48.3%) agreed that having a relative who had the disease is a risk factor, while only 10(34.5%) agreed that HPV is a cause of the pathology. There was poor knowledge regarding the presentation of cancer of the cervix, abnormal vaginal bleeding is the most popular way of presentation known by 13(44.8%) of the respondents while only 8(27.6%) know that cervical cancer can present with bleeding after sexual intercourse, five of the respondents (17.2%) showed smelling vaginal discharge as the mode of presentation, dysuria by only 2(6.9%). A good number of the participants know about cervical screening 26(89.7%). Twenty-eight respondents (96.6%) are willing to go and have themselves screened for cervical cancer if they are asked to do so, and 27(93.1%) will advise some other people to go for the screening. A good number of the respondents, 27(93.1%) are aware that cancer of the cervix can be prevented. **Conclusion:** The students had a good awareness of cervical cancer and cancer of the cervix screening and had a positive attitude toward having themselves screened whenever the chance was available, and also had a positive attitude toward being willing to convince other people to go for the screening, but demonstrated less knowledge on cervical cancer causes, risk factors and mode of presentation. Hence there is a window of opportunity to deliver more health education to the students and by extension to the larger population.

Keywords: Cervical cancer, cervical cancer screening, FMC Nguru.

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INTRODUCTION

Cervical cancer is the 4th highest cancer of women worldwide, it ranked 14th among all cancers worldwide. There are 500,000 new cases of cancer of the cervix annually, and about 250,000 mortalities all over the world from cervical cancer. About 80% of all these cases occur in low-income countries [1]. In Nigeria, there are 12,075 new cases of cancer of the cervix and about 7,968 deaths due to cervical cancer per year. In third-world countries, cervical cancer remains the second highest women's cancer [2]. The incidence and death from cervical cancer are highlighted, and great disparities exist between developed and low-income countries. Developed countries have a low incidence of cervical cancer due existence and practice of standard screening strategies [3]. According to the Global Strategy for Cancer of the Cervix Elimination adopted in 2020 by the World Health Assembly, every country should meet the 90-70-90 targets by 2030 i.e. "90% of girls fully vaccinated with the HPV vaccine by the age of 15, 70% of women screened using a high-performance test by the age of 35, and again by the age of 45, 90% of women with pre-cancer treated and 90% of women with invasive cancer managed". All countries must reach and maintain an incidence rate of below 4 per 100,000 women to eliminate cervical cancer [4]. In Nigeria, age-standardized rates for cancer of the cervix are much higher, at 36.0 per 100,000 [5], and many cases of cervical cancer have a late presentation. There are 12,075 new cases of cervical cancer, and 7,968 deaths occur annually [6]. By the year 2025, deaths due to this cancer in Nigeria may increase by 63% for women less than or equal to 65 years, and 50% for women greater than 65 years [7]. Predisposing factors for cervical cancer may include; HPV infection, which is the most important risk factor for cervical cancer. There are many strains of HPV, but HPV16 and HPV18 are more important concerning cervical cancer, others are early age of sexual intercourse and having multiple sexual partners. Patients with immunodeficiency conditions, for example, HIV infection, prolonged steroid use, and those on cytotoxic are also at risk. Genital herpes infection, advanced maternal age, low socioeconomic condition, prolonged use of OCPs, DES-exposed babies, tobacco use, and multiple pregnancies are other risk factors [8]. After knowing the risk factors, it's important to understand the screening modalities, these include the Papanicolaou cervical smear test. Papanicolaou's landmark publication in collaboration with H. F. Traut "Diagnosis of Uterine Cancer by the vaginal smear" in 1943 paved the way to diagnose uterine cervical lesions with the help of a simple and effective method [9]. In 1951, Ayres first described and illustrated squamous epithelial cells with a perinuclear "halo" in smears of the uterine cervix [10]. Another screening modality is liquid base cytology (LBC), this is superior to the original PAP smear because it has low cellular debris, no overlapping of cells, and shorter interpretation time with the low tendency of

having unsatisfactory smears when compared to the original PAP smear [11].

Human papillomavirus DNA testing is another modality, it is used in detecting HPV viruses. HPV viruses are associated with about 99.7% risk of cervical carcinoma [12] It is the most important test for patients at an age greater than 30 years. Those with positive results can have VIA (as explained below) or colposcopy when available. Cervical inspection after the application of acetic acid can also be implemented in detecting premalignant cervical lesions, three to five percent of dilute acetic acid is used on the cervix and examined with the naked eye after 1 minute. The presence of a dense aceto white area within the transformation zone is termed positive and colposcopy for biopsy is advised [13]. Another screening technique is a naked-eye inspection of the cervix after applying Lugol's iodine. The test is based on the identification of areas that are not stained with Lugol's iodine, iodine negative areas may suggest CIN, but this test has a high false positive rate [14].

Clinically, the patient may be asymptomatic or may present with symptoms of abnormal vaginal bleeding, usually postcoital. Vaginal discomfort, malodorous discharge, and dysuria are not uncommon.

Cervical cancer can grow exophytically (outward) or endophytically (inward), and can spread to lymphatics, the bladder, rectum, kidneys lungs, and even to the brain [15].

On examination, initially, patients may appear normal, but as the disease progresses, patients may appear cachexic and anemic, and ulcers or nodular friable masses which easily bleed on contact may be observed on the cervix. These abnormalities can extend to the vagina or rectum. Other symptoms exist depending on the area of metastasis [16]. The treatment of cancer of the cervix involves multidiscipline specialties, ranging from gynecological oncologists, radiation oncologists, medical oncologists, and even psychotherapists. For early disease, TAH, and BSO may suffice but in some cases, a more advanced surgery may be needed. In more advanced cases, Radical hysterectomy, and radiation combined with chemotherapy can be done. In more disseminated cases, palliation is the treatment modality [17].

MATERIALS AND METHODS

The study was a cross-sectional type, conducted at FMC Nguru, Yobe State, North Eastern Nigeria. The health facility is a tertiary health center that covers the state and also receives referrals from neighboring Jigawa State and even Niger Republic. The hospital renders preventive, promotive, and rehabilitation services. It is also running a school of nursing and midwifery program, from where the study population was obtained, they were first-year midwifery students who came into the gynae ward for their routine posting and consented to fill out

the questionnaire. A designed proforma was used to obtain this information, covering their biodata, their basic knowledge of cervical cancer, cervical cancer screening, and their attitude toward cervical cancer screening.

Data cleaning was done and was then analyzed using the SPSS version 21 statistical software package. The socio-demographic data was presented with descriptive statistics. Association between variables was

done using Fisher’s exact test. All levels of statistical significance were set at $P < 0.05$.

RESULTS

The age range of the participants where 17-28, with the mean age being 20.9+/- 2.8 years. twenty-four of participants where Muslims, 82.8%, whereas 5(17.2%) where Christians.

Table 1: Sociodemographic characteristic

Variable	Frequency	Percentage	Mean/SD	P value
Age				
17- 18	5	17.24	20.52 ± 2.1 SD	<0.05
19 – 20	10	34.48		
21 – 22	9	31.04		
23 -24	5	17.24		
Religion				
Islam	24	82.80		
Christianity	5	17.20		
Tribe				
Kanuri	11	37.90		
Hausa	7	24.10		
Fulani	6	20.70		
Bade	3	10.30		
Others	2	6.90		
Marital Status				
Married	5	17.2		
Single	24	82.8		

Table 1 As can be seen above, participants are mainly young ladies and those within 20 years had the highest frequency.

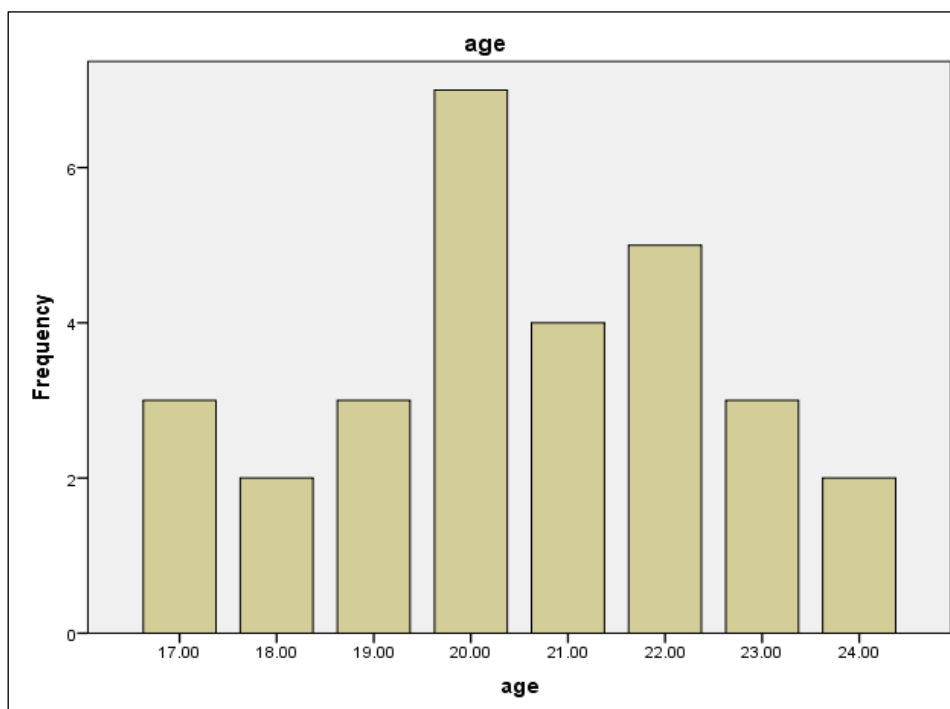


Figure 1

Fig 1 Above showed a bar chart showing the distribution of the participants by age, those between the ages of 20 and 22 had the highest number.

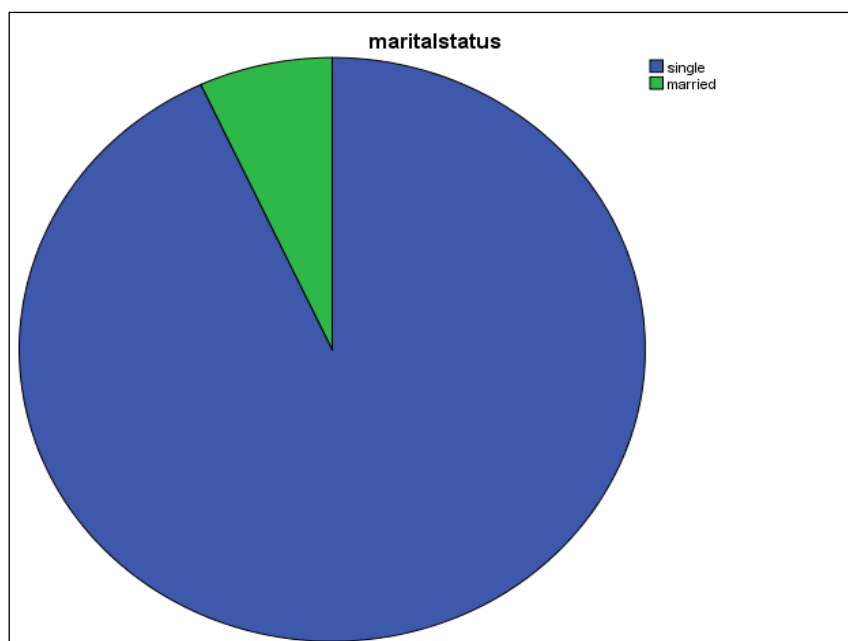


Figure 2

Fig 2 Above shows a pie chart depicting the marital status of the women, more than 82.8% of the women were unmarried, probably waiting to finish their educational pursuit

The majority of the respondents 27(93.1%) have heard about cervical cancer and 58.6% know that cancer of the cervix is common. The majority of the respondents 72.4% have their source of information on cervical cancer from fellow health workers. Respondents demonstrated a poor understanding of the risk factors of cancer of the cervix, in that, the majority do not know that HIV/AIDS, early marriage, or having multiple sexual partners are associated with cervical cancer and 48.3% thought that cancer of the cervix can be transmitted from one person to another. Only 10(34.5%) know that cancer of the cervix is caused by human papillomavirus. Respondents also demonstrated poor knowledge regarding the presentation of cancer of the cervix, abnormal vaginal bleeding is the most popular way of presentation known by 13(44.8%) of the respondents while only 8(27.6%) know that cervical cancer can present with bleeding after sexual intercourse, five of the respondents (17.2%) showed smelling vaginal discharge as the mode of presentation, dysuria by only 2(6.9%). Twenty-two of the respondents showed that cervical cancer is curable and 21(72.4%) showed that the place where a cure can be obtained is in the hospital. Cancer of the cervix can be prevented, this is a response from 27(93.1%) of the respondents, but only 5(17.2%) believed that cervical cancer can be prevented using vaccination. Concerning cervical cancer screening a good number of the respondents 26(89.7%) have heard about it, and 19(65.5%) had their source of information

from health centers or doctors, also same number of the respondents 19(65.5%) know that cervical cancer screening can be done after taking a sample from the cervix. A good number of the respondents 15(51.7%) know that women are eligible for their first cervical cancer screening after their first sexual activity, and the screening frequency is once a year 10(34.5%) of the participants. The attitude of the respondents toward cancer of the cervix screening is encouraging, as 26(89.7%) are aware that every woman needs to go for cervical cancer screening, and almost all the respondents 28(96.9%) are willing to go for cervical cancer screening if they get the opportunity, and 26(89.7%) think that cervical cancer screening is of benefit. A large number of the respondents 27(93.1%) will encourage their relatives and friends to go for cancer of the cervix screening and 24(82.8%) had the opinion that health education on cancer of the cervix screening can improve the utilization of screening services. Among the respondents, only 2(6.9%) had ever been screened for cervical cancer and this was recommended by doctors in government-owned health facilities, the screening was done only once since last year for the two respondents each. Fifteen (51.7%) of the respondents are willing to have frequent cancer of the cervix screenings. A greater number of the participants 15(51.7%) have not ever advised anyone to go and have screening for cancer of the cervix. There was no significant association between marital status and knowing whether cancer of the cervix is curable or not (Fisher's exact test, 1.000, P value, 0.653) There was also no significant association between religion and knowledge of cervical cancer, (Fisher's exact test, 1.000, P value, 0.739TT).

DISCUSSION

The essence of the study was to explore the awareness level of the respondents on cervical cancer and their attitude toward cancer of the cervix screening. A good number of the respondents, 27(93.1%) heard of cervical cancer cervix, this is similar to the finding by Maree JE. Malawi (93.4%) [18] but much higher than the findings by Olubodun T. in Lagos Nigeria, (12.8%) [19], this is so probably because the respondents in this study were women who reside in an urban slump and might not be clinically exposed as the respondents in this study. The risk factors for cervical Cancer are not known by most of the respondents as 14(48.3%) agreed that having a relative who had the disease is a risk factor, while only 10(34.5%) agreed that HPV is a cause of the pathology, this is much lower than the findings by Ifemelumma CC *et al.*, Abakaliki Nigeria, 86.2% [20] and only 8(27.6%) are aware that post-coital bleeding is the most frequent symptom of cancer of the cervix, the findings by Ifemelumma CC. revealed 57.7% [20]. This shows that the respondents need more health education on cervical cancer despite having good knowledge of its existence. Concerning the cure of cervical cancer, 22(75.9%) believed that it can be cured, this is not the same as the findings by Mengesha A. in Ethiopia, 42.7% [21]. The difference may be because our study population may have a little better knowledge than the Mengasha study population which are just women within the reproductive age group. A good number of the respondents know that cancer of the cervix can be prevented, 27(93.1%), but only 5(17.2%) are aware that the prevention strategy is via the HPV vaccine, hence this showed that there is a need for more health education even among the health students. A good number of the participants heard about cancer of the cervix screening, 26(89.7%) and 19(65.5%) had their source of information from the health center or doctors. This is similar to the findings by Tekle T., in Ethiopia 60.5% [22]. Similarly, most of the participants are aware that cancer of the cervix screening is achieved via taking samples from the cervix, 21(72.4%), this is not surprising probably because of their virtue as midwifery students, they might have acquired the knowledge during their clinical postings in the hospital. A good number of the respondents, 15(51.7%), are aware that the first cancer of the cervix screening is done when the woman becomes sexually active, however, the frequency is annually by 10(34.5%). The attitude of the respondents on cancer of the cervix screening is positive in that 28(96.6%) of the respondents are willing to go for cervical cancer screening, and 27(93.1%) are willing to encourage their friends and relatives to have cancer of the cervix screening, but only 5(17.2%) had cancer of the cervix screening, and these are the ones that are married. This is the same as the findings by Kumar S., in India, 100%, but lower than the finding by Nakamanya SK., in Kampala 38.5% [24], this may be because of the difference in the demography of the respondents, the Kamapala study was on health workers in community drug outlets they may have less health knowledge when compared to the midwifery students in our study.

CONCLUSION

It can be observed from the study that most of the respondents are aware of cancer of the cervix, and most have an encouraging attitude on cancer of the cervix screening, however, their level of knowledge on cancer of the cervix risk factors and presentations is shallow, hence they need more health education to increase their knowledge, which they may extend to the larger society.

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