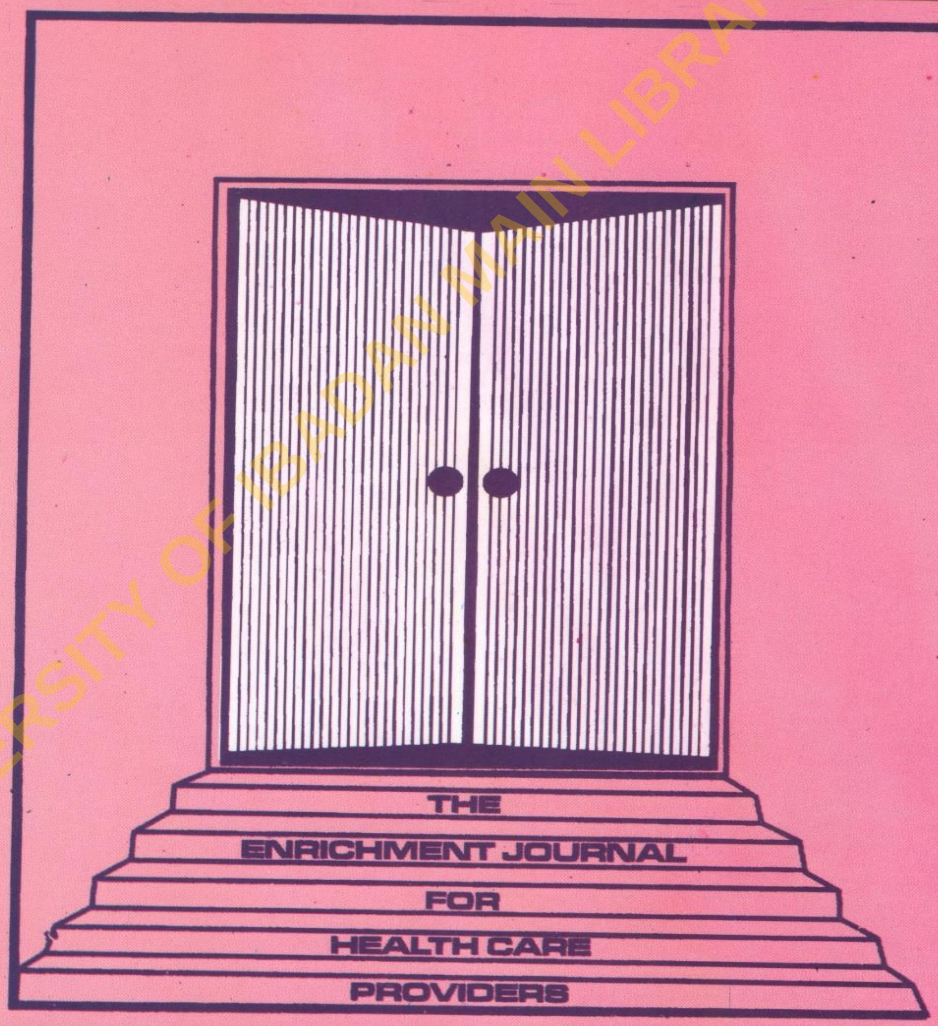
African Journal of Nursing and Health Issues



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Knowledge of risk factors and Predisposition to cervical cancer among female undergraduates' in Oyo state tertiary Institutions

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Abstract

Background: Cervical cancer is one of the conditions that lead to mortality among females. Major risk factors are early sexual debut and multiple sexual partners.
Objective: This study investigated the knowledge of risk factors and predisposition to cervical cancer among female undergraduates' in University of Ibadan and the Polytechnic, Ibadan, Nigeria.
Methods: This descriptive survey was carried out among 346 female students selected using a multi-stage and stratified random sampling technique. Data were collected using a structured questionnaire. Data were analysed using Statistical Package for the social sciences and were presented as frequencies and percentages.
Results: Findings revealed that the mean age of respondents was 18.7±7.3 years, 32.7% had ever had sexual intercourse, mainly between ages 17 and 21 years. Majority, 60.4% had high level of knowledge and their perception was good. Participants believed that multiple sex partners predisposes an individual to the risk of cervical cancer but many did not understand the implications of early exposure to sexual intercourse. Only, 2.3% of the respondents had been screened for cervical cancer.
Conclusion: Efforts should be made to enhance awareness of risk factors and provide accessible screening services.

Key Words: Cervical cancer screening, knowledge, predisposition, risk factors, sexual behaviour

Introduction

Cervical cancer is a silent killer that has been termed the third most common cancer worldwide and primarily caused by infection with the Human Papilloma Virus. Nigeria has a population of 40.43 million women aged 15 years and older who are at risk of developing cervical cancer which ranks as the second most frequent cancer among the women and the second most frequent cancer among women between 15 and 44 years of age[1]. About 23.7% of women in the general population are estimated to harbour cervical HPV infection at a given time[1].

Risk factors include among others, early exposure to sexual intercourse, multiple sexual partners, contraceptive use, smoking, alcohol, multiple pregnancy and dietary implications[2]. Furthermore, Fouseco-Moutinho[3] stated that 21% of smoking females were more likely to die of cervical cancer compared to their non-smoking counterparts. He explained that smoking is a major cofactor on cervical HPV driving carcinogenesis and recommended that active interventions be put in place to curb smoking habits.

No less than 100,000 cases of cancer can be prevented in Nigeria every year if

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adequate and effective screening tools are available and accessible in the country[4]. Once a woman is affected, it can take between 5 and 30 years for the virus to develop into full cancer, but since it has no early symptoms the woman may not be aware of the changes[5]. Without access to viable programmes, women from poor communities globally, generally seek care only when they develop symptoms and the cancer is advanced and difficult to treat[6]. Despite this, it has been documented that awareness of cervical cancer is very low and screening services are poorly utilized[7, 8]. Studies conducted across Nigeria revealed that Knowledge about cervical cancer[9] and Pap smear tests was very poor[10].

Prevention of cervical cancer by educating young adults about implication of risk promoting life styles and screening by Pap smear or acetic acid test should be encouraged[11]. Nurses and other health care workers should therefore educate their clients about cervical cancer, risk factors and sexual behaviour, personal and environmental factors[12]. The nurse is also an advocate of its prevention as this is more preferable than cure options, hence emphasis be on the importance of early screening. This study evaluated female undergraduates' knowledge of risk factors of cervical cancer, their predisposition to the disease.

Methods

Using a descriptive research design, this study was conducted among female undergraduates in two selected tertiary institutions in Ibadan, the University of Ibadan and the Polytechnic, Ibadan. Using the formula involved in calculating sample size for a population more than 10,000, Chochran[13], sample size $n= Z^2pq/e^2$, calculated at a confidence level of 95%[13].

n_0 = Sample size; N = minimum sample size; Z = constant 1.96 (Z^2 is the abscissa of the normal curve); e = Desired level of Precision; P = Prevalence of 50% would be used; Q = 1-P; Z= 1.96 Q = 0.5 where P = 0.5 and 1-P =0.5

$$n_0 = \frac{(1.96)^2(0.5)(.5)}{(0.05)^2} = 385$$

However, because the total female students population is less than 10,000. The formula below was then used to calculate the actual sample size used for the study.

$$n = \frac{n_0}{1+ (n_0-1)/N}$$

$$\frac{385}{1+ (385-1)/3546 = 347}$$

To cater for 10% attrition which is 35, sample size increased to 382

A four staged sampling technique and stratified probability method was utilized in the study.

Stage 1: The two major institutions the University of Ibadan and The Polytechnic Ibadan were purposively selected.

Stage 2: Involved all the Female Halls within the University of Ibadan and the Polytechnic, Ibadan. One female hall was selected out of the two halls in the Polytechnic while two halls were chosen out of the three halls in the University of Ibadan. The halls were picked using balloting method.

Stage 3: Selection of blocks was also done through balloting. Two blocks were selected from each hall.

Stage 4: Selection of elements of the study: 103 students were selected from the poly technique and 282 students were from the University of Ibadan.

Ethical approval was obtained from University of Ibadan/University College Hospital, Ibadan institutional review board before commencement of the study and informed consent was obtained from respondents.

Three hundred and eighty five (385) questionnaires were administered to students in the University of Ibadan and Polytechnic, Ibadan in their rooms. Respondents were given information about the study, the nature of data collection with use of questionnaire and informed consent was obtained. They were assured of confidentiality and anonymity. Client's right to participate or refusal to participate was equally respected.

The data was collected and processed using the Statistical Package for Social

Sciences (SSPS). Descriptive statistics of frequency distribution tables, pie charts and bar charts were used to describe the data. Associations were tested with the use of chi-square test for categorical variables and Pearson's product moment correlation coefficient was used to measure relationships.

Results

Out of the 385 questionnaires administered, 351 questionnaires were retrieved while 346 were valid for analysis, thus giving 90.6% response rate. The participants were from the Polytechnic, Ibadan and University of Ibadan.

The mean age ±SD of participants was 18.7±7.3 years, with most (43.1%) in the 16-20years age group. A higher percentage was of the Yoruba ethnic speaking undergraduates (73.4%) and mainly Christians (78.3%). Table 1 shows details of other socio demographic variables.

Table 1: Socio-demographic variables of respondents

Variables	Responses	Frequency (n=346)	Percentage (%)
Age	16 – 20	148	43.1
	21 -25	132	38
	26 -30	22	6.5
	31 – 35	2	0.6
	Others	43	12.5
	Mean Age	18.7± years	
Religion	Christianity	271	78.3
	Islam	69	19.9
	Traditionalist	2	0.6
	Eckankar	3	0.9
	Others	1	0.3
Father's Occupation	Civil Servant	164	47.4
	Doctor	18	5.2
	Unemployed	17	4.9
	Trader	49	14.2
	Others	98	28.3
Mother's Occupation	Civil Servant	132	38.2
	Doctor	7	2.0
	Unemployed	17	4.9
	Trader	137	39.6
	Others	53	15.3

Awareness about cervical cancer

Figure 1 shows that most 276 (79.8%) had heard about cervical cancer, and for many (32.4%) the source of Information is the television as shown on Figure 2. Also, most 126 (36.4%) out of the respondents were aware that cervical cancer is the second most common cancer among women with 42.8% responding that young adults were the most affected. Majority, 56.1% acknowledged that screening can be carried out in hospitals while 113(36.7%) suggested other places such as religious institutions as possible places for screening.

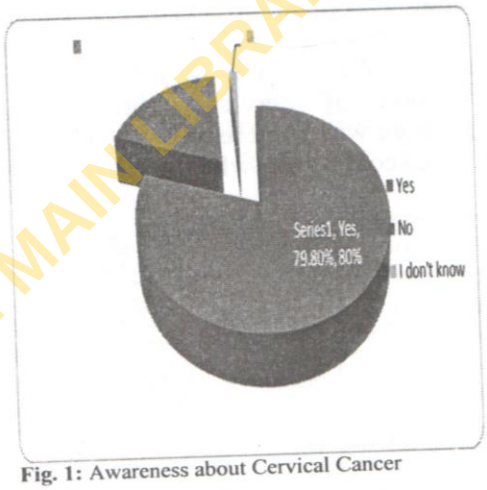

Fig. 1: Awareness about Cervical Cancer

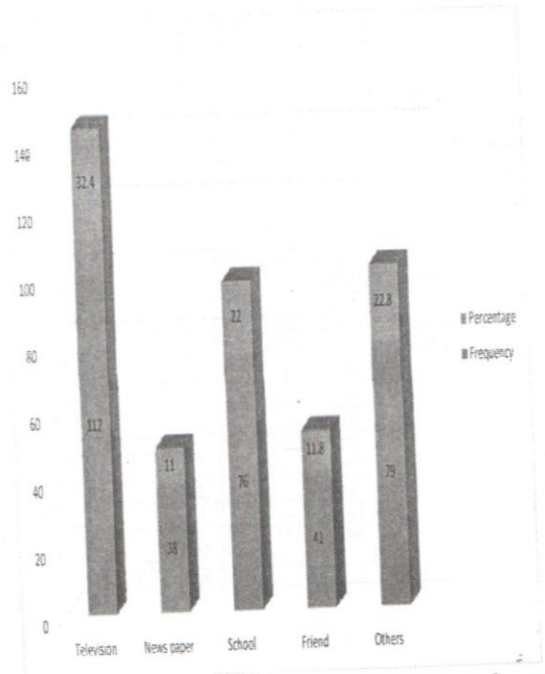

Fig. 2: Respondents' most common sources of information on cervical cancer

Knowledge of Cervical cancer screening

Over half (59.8%) of the respondents correctly selected Human Papilloma virus as the common cause of cervical cancer. Table 2 further elucidates on the knowledge of cervical cancer, 53.8% identified that having multiple sex partners can predispose to cervical cancer, 50% of the respondents affirmed that abnormal vaginal discharge and vaginal bleeding at odd times were possible symptoms of cervical cancer. Also, 65.3% selected screening through pap smear test as early detection measure for prevention of cervical cancer. Their knowledge was good as 60.4% had up to the average score on knowledge.

Table 2: Knowledge of cervical cancer

Variables	Responses	Frequency N = 346	Per-centage
What Predisposes a woman to HPV	Many sexual Partners	186	53.8
	Transfusion (Blood)	32	9.2
	Malaria	13	3.8
	Pap Smear	33	9.5
	Others	82	23.7
Dilatation and Curettage can lead to Cervical Cancer	Yes	207	59.8
	No	58	16.8
	I don't know	81	23.4
Abnormal Vaginal Discharge is a symptom of cervical cancer	Yes	172	49.7
	No	26	7.5
	I don't know	148	42.8
Vaginal Bleeding at odd times is a symptom of cervical cancer	Yes	189	54.6
	No	24	6.9
	I don't know	133	38.5
Lack of appetite is a symptom of cervical cancer	Yes	102	29.5
	No	28	8.1
	I don't know	216	62.4
Blurry Vision is a symptom of cervical cancer	Yes	61	17.6
	No	45	13.0
	I don't know	240	69.4
How can cervical cancer be detected early	Use of Drugs	14	4.0
	Cervical Screening	226	65.3
	Religion	8	2.3
	Cervical Exam	43	12.4
Knowledge Category	High	209	60.4
	Low	137	39.6
	Mean	6.81±3.21	
	Range	Minimum: 0 to Maximum: 13	

Perception of Cervical Cancer

Table 3 shows that many (45.1%) of the respondents believe that cultural factors can predispose a woman to cervical cancer, only 9.8% of the respondents considered that experimenting with sex at a young age can predispose to cervical cancer. Also 32.9% were not sure that receiving to HPV vaccine will prevent cervical cancer.

Table 3: Respondents' Perception of Cervical Cancer

Perceptions	Yes		No		Not sure	
	Freq	%	Freq	%	Freq	%
Having more than one sexual partner should prevent cervical cancer	41	11.9	228	65.9	77	22.3
HPV Vaccination will reduce cervical cancer	198	57.2	34	9.8	114	32.9
Spir*itual Influences can lead to Cervical Cancer	57	16.5	176	50.9	113	32.7
Cultural Factors can predispose a woman to it	156	45.1	68	19.6	122	35.3
Experimenting with sex at a young age contributes to cervical cancer	34	9.8	217	62.7	95	27.5
Cervical cancer is found more in younger women	146	42.2	66	19.1	134	38.8
Multiple Pregnancy is reduces cervical cancer	33	9.3	175	50.6	131	40.2
Eating fruits and vegetables may lead to Cervical Cancer	39	11.2	228	63	89	25.7

Participants' Sexual behaviour/ predisposition to cervical cancer

Two hundred and thirty three (67.3%) participants never had sex, while 12 (3.5%) had their sexual debut between 12-16 years, 59 (17.1%) had their first sexual experience between 17-21 years with 12.2 had their first experience between 22 and 26 years. Fifty four (15%) had 2-5 multiple sexual partners. Table 4 shows details of other sexual behaviour.

Table 4: Respondents' Sexual Behaviours

Sexual Behaviour	Frequency (N=346)	Percent
Ever had sexual intercourse		
Yes	113	32.7
No	233	67.3
Age at first sexual intercourse		
12- 16	12	3.5
17-21	59	17.1
22-26	42	12.2
No of Sexual Partners		
None	232	67.1
1	51	14.7
2 and above	58	16.8
Ever Had sexually transmitted infections		
Yes	8	2.3
No	295	85.3
Don't know	47	13.6
Ever used Contraceptives		
Yes	39	11.3
No	260	75.1
Don't Know	47	13.6
Ever had Pap Smear		
Yes	8	2.3
No	295	85.6
Don't know	41	11.8

Willingness to be screened for cervical cancer

Most 214(62%) of the respondents were willing to screened for cervical cancer, 68(20%) were not sure while 64(18%) were not willing to be screened for cervical cancer as seen in Figure 3.

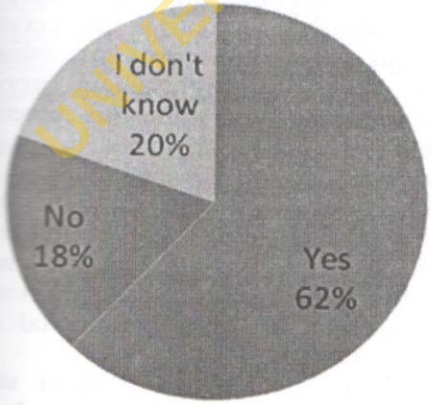

Fig. 3: Willing to utilize cervical cancer screening.

Discussion

This study was conducted among undergraduate students in the polytechnic and University. The modal age group in this study is 18-23 years, this is consistent with age structure in similar studies among undergraduates students [9, 10]. They were mainly Yoruba speaking and Christians (78.3%) which is typical of south western Nigeria where Yoruba tribe and Christianity are dominant tribe and religion[14].

Knowledge about Cervical Cancer

The respondents had moderate knowledge of cervical cancer and majority were aware that human Papilloma virus is a major predisposing factors. A similar study on knowledge, attitude and practice of screening for cervical cancer among female students of a tertiary institution in South Eastern Nigeria revealed they had good knowledge of cervical cancer but majority did not know about pap smear and none had gone for cervical cancer screening[10]. This present study however reported higher knowledge level of respondents over some previous similar studies conducted across the country which revealed that knowledge about cervical cancer was very poor[7, 9, 15].

Most of the respondents were not sure about the stages or symptoms that are prevalent in Cervical Cancer. This shows that there were still gaps in their knowledge. A study on Knowledge, attitude and practice of cervical cancer screening among women attending gynaecology clinics in a Nnamdi Azikiwe Teaching Hospital, Nnewi in south-eastern Nigeria by Mbamara, Ikpeze, Okonkwo, Onyiaorah and Ukah[16] reported that "Twenty-five (12.6%) of the women were aware of the cervical cancer screening test but none was aware of the introduction of vaccination against the human papillomavirus. A study that evaluated Saudi young females' knowledge of cervical and breast cancer showed that 58% had unsatisfactory knowledge of cervical cancer, only a few knew about HPV vaccination[17]

Perception of Cervical Cancer

Many (62.7%) of the respondents did not understand that experimenting with sex at early age was also an important risk factor of cervical cancer but many knew that having more than one sexual partner will predispose them to cervical cancer. Women in a study Wong and Kwamoto[18] corroborates the fact that having multiple sexual partners contributing to cervical cancer. The respondents in this study were cognizant of the importance of HPV vaccination in the prevention of cervical cancer as 57.2% of the respondents believed that vaccination was helpful in preventing cervical cancer. According to Joseph and Clark[19], although 75% of Haitians and 63% of African Americans intended to vaccinate their daughters, only 47% of African-American and 31% of Haitian daughters were vaccinated. Most African Americans felt that vaccination fell within the parental role, whereas many Haitians felt uncomfortable vaccinating against sexually transmitted infections because they felt children should not be having sex[19].

Cates and Brewer[20] reported that more white respondents had heard of HPV than had black respondents and whites had higher HPV knowledge. Study by Makwe, Anorlu and Odeyemi[21] on Human Papilloma virus (HPV) infection and vaccines: knowledge, attitude and perception among female students at the University of Lagos showed that only few of the students were aware of HPV infection and HPV vaccines. Also, College Women's HPV Vaccine decision by Hopfer and Clippard[22] showed that the participants did not oppose vaccination generally but denied being at risk for HPV, and therefore denied the need for the HPV vaccine.

Predisposition to cervical cancer

The study revealed that, most of the respondents had never had sexual intercourse, were not on contraceptive pills and had never had any sexually transmitted infection. This was contrary to the findings among the students in a University in Japan as 116 (47%) had had a sex experience[23]. Among the respondents in the present study, the greater percentage of the respondents had their first sex experience at 18years as for the number of sex partners, most of the students who reported having had sex had one or two partners. Study carried out by Ojong and Oluwatosin[24] which revealed that women in their study reported that they had their first sexual debut as early as 11-14 years and up to 71% of the women had multiple sex partners. Similarly, in a study[25] among South African women over a third of their participants had multiple sexual partners. Cervical cancer incidence is low in Saudi Arabian women, suggesting low prevalence to HPV infection due to environmental, cultural and genetic differences[26].

Few of the respondents (2.3%) had ever been screened for cervical cancer and cited barriers such as fear, time, and lack of knowledge about cervical cancer. Another study conducted among female students in University of Sydney[27] highlighted poor awareness of screening guidelines, poor levels of consistent condom use (50%) amongst those sexually active, and low uptake of screening amongst those eligible to be screened. This is not surprising because even among childbearing women uptake of screening has remained low[28].

Implications for Nursing

The study has been able to take a closer look at young adult's perception of cervical cancer. It has shown a dire need to reawaken the public especially youths about cervical cancer and its risk factors and this therefore would help to reduce its prevalence.

Since majority of the respondents are willing to receive HPV vaccine advocacy is very important in order to ensure it is accessible at affordable cost. There is a need to advocate for intersectorial collaboration as well as intervention of governmental and non-governmental bodies.

Finally, since parents are major stake holders in the life of youths, nurses should ensure parents receive information on HPV vaccine. Also when the young adult comes to the clinic every opportunity and avenue

should be seized to educate them about Cervical Cancer thereby curbing this menace.

Recommendations

- Cervical cancer should enjoy better publicity using media and other sources of information.
- During medical screening of students at the sickbay or school clinic, Health Education and screening for Cervical Cancer should be included.
- More Cervical screening and vaccinations centres should be available in order to enhance enable the students obtain the services at the appropriate time since they are willing.

Conclusion

Cervical cancer is one of the conditions that lead to mortality among females. Sexually active females are at risk of cervical cancer but many are not aware of this fact. Preventive measures like vaccination and cervical cancer screening have remained underutilized. This study investigated the knowledge of risk factors of cervical cancer and predisposition among female undergraduates' in selected tertiary institutions in Oyo state.

The respondents were knowledgeable about cervical cancer. There is still need for targeted educational intervention as there are gaps in their knowledge and perception. It is important that every effort should be made to reduce cervical cancer through evidenced based research and interventions.

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