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Perception and Practice of Cervical Cancer Screening among Female Professionals Attending Gynaecology Clinic at A University Teaching Hospital

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ABSTRACT

Background: By using the right screening tools and preventative measures, cervical cancer can be avoided. However, the underuse of preventative measures is caused by a lack of information and awareness. Professional women with sufficient knowledge can have a significant positive impact on the attitudes and behaviours of the broader public. So, we evaluated how professional women perceived and used cervical cancer screening.

Objectives: To evaluate how female professionals who visit gynaecology clinics view and approach cervical cancer screening.

Methods: A cohort of 160 consenting female professionals working at the Nnamdi Azikiwe University Teaching Hospital (NAUTH), Nnewi, Nigeria, were used in this facility-based, single-center, descriptive, cross-sectional study. Participants filled up questionnaires about their knowledge assessment, screening for cervical cancer, and personal characteristics that influence them. Simple percentages, charts, and IBM SPSS Statistics 26 for Windows, version 26.0 (IBM Corp., Armonk, NY, USA) were used to portray and analyse the data.

Results: The analysis employed a total of 160 questionnaires completed by research participants. All of the selected female professionals knew about cervical cancer screening, with nurses (49.3%) making up the majority. However, just 29.6% of them were aware that cervical cancer is connected to sexually transmitted diseases, and 33.2% were unaware that it is connected to age at first sexual activity. Only 93.2% of respondents had heard of Pap smears, despite the fact that every respondent had heard and read about cervical cancer and its screening. Despite the knowledge, only 44 (27.5%) had performed Pap tests and only 76(47.5%) had ever recommended cervical cancer screening to people. Of the women surveyed, 148 (92.5%) said they would be willing to have a cervical cancer screening, while 18 (11.25%) said they would decline.

Conclusion: Despite more knowledge and awareness, the rate of cervical cancer screening among female professionals in Nnewi is still below average and insufficient. Cervical cancer can be avoided. Eliminating the morbidity and mortality frequently linked with cervical cancer would need deliberate efforts to increase screening methods' uptake and utilisation.

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Introduction

Achieving sustainable development goals and decreasing global health inequities have both been seriously threatened by cervical cancer. Over 80% of all new occurrences of cervical cancer occur in low and middle-income nations, indicating an uneven distribution of the diseases burden worldwide [1]. In low and middle-income nations like Nigeria, cervical cancer is the most prevalent gynaecological malignancy affecting women [2,3]. It is regrettable to note that, despite being avoidable, insufficient cervical cancer screening and treatment are to blame for over 85% of cervical cancer incidence and mortality in these LMICs [2]. In high income countries, where cervical cancer incidence has decreased thanks to organised screening, the trend is different.

Because cervical cancer has a long pre-invasive stage and is thus susceptible to screening and therapy, it is regarded as a disease that can be prevented [4]. The majority of Nigerian women, including professionals, are not checked for early diagnosis, therefore they typically appear with severe clinical stages of disease, which makes them less likely to survive for a long time [4]. The most successful method for screening for cervical cancer is still the Papanicolaou (Pap) smear, which was developed by George Nicholas Papanicolaou (1883-1962) in 1941. Cervicography, speculoscopy, polar probe, aided and unaided ocular inspection, human papilloma virus DNA testing, and other methods of screening for cervical cancer are available [5-7].

A woman's lifetime risk of dying from cervical cancer is demonstrably decreased by roughly 60% with only one smear, with the risk decreasing proportionally with each consecutive test [4]. These cervical cancer screening techniques are accessible in Nigeria, and pathologists perform them in the majority of tertiary hospitals, including the study location. In order to ensure early detection and treatment, it is therefore anticipated that women will take advantage of the opportunity by participating in the screening [8-12].

The use of cytology screening alone every three years, high-risk human papilloma virus (HPV) screening alone every five years, or co-testing with both cytology and HPV screening every five years are all supported by evidence-based recommendations for cervical cancer screening. In locations where cytology-based screening is not practical, the use of the see and treat strategy, which includes visual examination with acetic acid (VIA) or HPV testing, if available, followed by cryotherapy or loop electrosurgical excision treatment, is encouraged [8].

This study was designed to determine the level of knowledge and use of cervical cancer screening by these female experts since health workers and professionals are regarded by their patients and the general public as the reliable source of accurate health information. The results of this study might then be used to inform the creation of programmes that address any deficiencies and encourage this group of women to lead the way in cervical cancer screening. Their encouragement of other women to get screened for cervical cancer would not only enhance the health of women in our society but also assist reduce the morbidity and mortality that are frequently linked to the disease. The purpose of this study is to evaluate how female professionals who visit gynaecology clinics view cervical cancer and its screening.

Materials and Methods

Study Design and Setting

A descriptive cross-sectional study of female professionals working at the Nnamdi Azikiwe University Teaching Hospital, Nnewi, was conducted. A tertiary/referral hospital operated by the federal government, Nnamdi Azikiwe University Teaching Hospital (NAUTH) Nnewi serves Anambra State and neighbouring states Enugu, Imo, Delta, Ebonyi, and Abia. Female doctors, nurses, other healthcare professionals, and administrative employees are all employed by it. The hospital operates a gyne-oncology unit that includes one of its activities the screening for genital tract cancer.

Study Population

Female professionals who presented themselves immediately to the gynaecology clinic with reference letters from nearby hospitals or from any other departments or clinics in NAUTH comprised the study population. These professionals included doctors, nurses, allied health personnel, and administrative staff in addition to other female professionals. The study's target audience consisted of professionals with advanced degrees in their fields who gave informed permission. Participants who were critically ill or who did not provide informed permission were not allowed to participate in the study.

Study Duration

The study spanned from September 1, 2017 to August 31, 2022.

Sample Size Determination

The determination of the sample size required for the study was calculated using the Cochran formula, taking our prevalence to be 11.8% as given by Murray et al [13].

$$\mathbf{n}=\frac{Z^2pq}{d^2}$$

Where n = minimum sample size
Z = standard normal varied, put as a constant 1.96
p = Prevalence
q =1-p
d = Degree of absolute precision usually set as 0.05 ie5%
p = 0.118
q = 1-p
q = 0.882
d = 0.05
$n = (1.96)^2 \times 0.118 \times 0.882/0.05^2$
n = 159.93=160
Anticipating a non-response rate of 10% we calculate attrition with nf/(1-f)
Where f = attrition rate = 10% = 0.1
160/0.9 = 177.78. Upgraded to 178.

Study Data Collection and Analysis

The study employed a well-structured, closed-ended self-administered questionnaire. Sections A and B of this questionnaire were separated. The respondent biodata were contained in Section A. A component of component B was devoted to evaluating respondents' attitudes concerning cervical cancer and its screening as well as their knowledge of these topics. The professionals who showed up for consultation at the gynaecology clinic filled out the questionnaires.

Outcome Measures

Perception and uptake of cervical cancer screening.

Statistical Analysis

Statistical analysis done using demographic characteristics, knowledge, attitude, and practice of cervical cancer screening were represented using descriptive statistics including percentages, frequencies, mean, and median. Data were analysed using the IBM SPSS Statistics 26 for Windows, version 26.0 (IBM Corp., Armonk, NY, USA).

Results

One hundred and sixty female participants of various career categories were sequentially recruited for the study. Through the screening questionnaire, all participants were checked for their knowledge of cervical cancer screening, their use of it, and the factors that influence them. Table 1 lists the study participants' demographics and baseline characteristics.

Table 1: Demographics and baseline characteristics of the study participants

Age(years)	Number	Percentage (%)
21-25	32	20
26-30	43	26.9
31-35	24	15.0
36-40	19	11.8
41-45	20	12.5
46-50	13	8.1
51-55	6	3.8
56-60	2	1.3
>60	1	0.6
Total	160	100

Marital status	Number	Percentage (%)
Married	98	61.2
Single	54	33.4
Divorced/Separated	3	1.9
Widow	5	3.1
Total	160	100

Profession	Number	Percentage (%)
Doctors	13	8.1
Nurses	79	49.3
Bankers	14	8.8
Teachers	43	26.9
Lawyers	11	6.9
Total	160	100

Parity	Number	Percentage (%)
Nulliparous	58	36.3
Primipara	31	19.3
Multipara	47	29.4
Grand multipara	24	15.0
Total	160	100

Religion	Number	Percentage (%)
Catholic	91	56.9
Protestant/Anglican	46	28.7
Pentecostal	23	14.4
Total	160	100

Ethnic group	Number	Percentage (%)
Igbo	149	93.1
Hausa	3	1.9
Yoruba	5	3.1
Efik	1	0.6
Non Nigerian	2	1.3
Total	160	100

Family Setting	Number	Percentage (%)
Monogamous	98	61.2
Polygamous	8	5.0
Unmarried	54	33.8
Total	160	100

Age, marital status, parity, career, religion, ethnic group, and family situation were taken into account when tabulating the data. The majority of responders (26.9%) fell between the 26–30 age range. Up to 60.3% to 36.4% of people were single, 1.9% were divorced or separated, and 3.1% were widowed. Nurses made up the bulk of responses (49.3%), followed by teachers (26.9%). The majority of responders (64.9%) were Roman Catholic Christians and nulliparous (36.3%). A total of 98 women (61.2%) who were married in a monogamous relationship made up the 93.1% of respondents who belonged to the Igbo tribe.

Table 2 displays the respondents' knowledge ratings. The responders generally had a high level of knowledge regarding cervical cancer and its screening. However, several areas of their understanding of these were lacking. For instance, 29.6% of them were aware that cervical cancer is connected to sexually transmitted diseases (STDs), whereas 33.2% were unaware that it is connected to age at first sexual activity. All respondents had heard of and read about cervical cancer, but only 93.2% had heard about Pap smears at the time this study was conducted, and 6.8% had not. Up to 12.4% of those polled were unaware that cervical cancer might be avoided. Up to 92.1% of respondents were aware that Pap tests are used to identify cervical cancer in its earliest stages.

Table 2: Assessment of knowledge of respondents

S/N	QUESTION	YES	NO	TOTAL
1.	Have you heard of cervical cancer	160 100	_____	160 100
2.	Do you think that cancer of the cervix is common	115	45	160
3.	Can cancer of the cervix kill	151	9	160
4.	Do you think that early stage of cervical cancer can be asymptomatic	139	21	160
5.	Is cancer of the cervix related to sexual habits	135	25	160
6.	Can early age of first sexual intercourse lead to cancer of the cervix	93	67	160
7.	Is cancer of the cervix related to sexual transmitted disease	120	40	160
8.	Are there screening tests for cancer of the cervix	148	12	160
9.	Is cancer of the cervix preventable	152	8	160
10.	Can one do PAP smear more than once	149	11	160

Table 3 shows the assessment of attitude of respondents to cervical cancer screening, while Table 4 shows the assessment of cervical cancer screening by respondents.

Table 3: Assessment of attitude of respondents to cervical cancer screening

S/N	QUESTION	YES	NO	TOTAL
1.	Have you ever done PAP smear before			
2.	If you have not done PAP smear before, why have you not done			
A.	It is not important	10	150	160
B.	I am not likely to have cancer of the cervix	24	136	160
C.	It is for older people	18	142	160
D.	No time	11	149	160
E.	Because of cost	4	156	160
F.	My husband will not like it	4	156	160
G.	I have no reason	94	66	160
H.	I don't know where I can do the test	8	152	160
3.	Will you do the PAP smear if opportunity is given	142	18	160

Table 4: Assessment of cervical cancer screening by respondents

S/N	QUESTION	YES	NO	TOTAL
1.	Have you ever done PAP smear before	116	116	160
2.	Have you ever recommended a PAP smear test for someone before now	76	84	160

The majority of respondents (72.5%) had no justification for not undergoing the PAP smear test, while 16% would refuse to undergo the test even if they were given the chance to do so, according to an assessment of the respondents' attitudes towards cervical cancer and its screening. 8.5% of respondents felt they couldn't acquire cervical cancer, while 7.7% thought it only affected the elderly. Seven percent of the respondents who might have liked to take the test but were unable to do so due to work obligations.

Only 9.4% of the respondents had a Pap smear performed, which was used to evaluate the actual practice of the test. Up to 90.6% had never performed a Pap test. Only 47.5% of the participants in this study had in fact passed along a Pap smear recommendation. Table 5 shows the assessment of need for more information on cervical cancer and screening.

Table 5: Assessment of need for more information on cervical cancer and screening

S/N	QUESTION	NO. OF RESPONDENTS	PERCENTAGE (%)
1.	The is the need for more information	154	96.25
2.	There is no need for more information	6	3.75
	Total	160	100

Discussion

In Nigeria and other Sub-Saharan African nations, cervical cancer is the most prevalent genital tract malignancy [9-11]. Despite being avoidable, human papilloma virus (HPV) nonetheless significantly contributes to the morbidity and mortality of many women who develop cancer, in part because screening for the condition has not been taken seriously. In order to determine whether these women, who are more privileged by virtue of their professional success, adopted this prevention method, this paper examined the level of awareness, perception, and practice of cervical cancer screening among women professionals. It is anticipated that the respondents' professional accomplishments will set them apart from the competition and, as a result, have a beneficial impact on other women with lower social status' acceptance and use of cervical cancer screening [2].

This study showed that female professionals had a high degree of knowledge of cervical cancer and Pap smear screening as a method of early detection. All the respondents were knowledgeable about Pap smears. This is comparable to a study conducted in Abuja in 2000 and 2011 by Mbamara et al [12,14]. which reveals a substantial connection between educational status and understanding of the cervical smear Pap test. Nevertheless, discrepancies occur between perception and real practice despite this understanding [15]. Given that the public looks on these experts for accurate information and education about this condition, these gaps should be treated seriously.

Again, public awareness and education campaigns are needed to emphasize the risk factors for developing cervical cancer, and these types of experts might be employed to spread the word. Additionally, it will be simple to train and keep these professionals so they can complete the task [15,16].

Concern should be expressed about the respondents' attitude towards Pap smears. This is due to the fact that some of them lack valid justifications for not doing or advising Pap smears to others. Others claimed that they would refuse to attend the screening even if given the chance. But according to the study by Eke et al., 84.9% of participants were aware of cervical cancer, and 71.5% were aware of the Pap smear screening test. Age and marital status were shown not to have any bearing on awareness of cervical cancer and Pap smear screening tests, however education level was found to have a substantial impact [17].

While the majority of the respondents will have a Pap smear when given the chance, 7.7% of them will refuse to do so even if they are. In a related study conducted in Zambia by Nyambe et al., 6.7% of the entire sample of women had also vaccinated their daughters in addition to attending screenings, but understanding of the causes and prevention was relatively limited [18]. In the Nyambe et al study, there was a significant correlation between knowledge of cervical cancer and screening and vaccination practices (odds ratio = 20.5, 95% confidence interval = [9.214, 45.516]; odds ratio = 5.1, [2.473, 10.423]); social interactions were also found to have a significant impact on screening and vaccination practices.

Olaniyan and colleagues discovered a worrying tendency in our respondents' fatalistic attitudes against using Pap smears, which has been linked to misinformation, dread of the disease, and the negative effects of cancer discovery. Whatever it is, it needs to be fixed in this group in order to inspire both members and others to update cervical screening. Furthermore, a prior study in Nnewi with individuals who had cervical cancer found a Pap smear screening rate of 0% [19]. In Ibadan, 92.2% of respondents to Ayinde and Omigbodun's study had never had a Pap smear performed [9]. This is an extremely risky trend that should not go on.

There are several clinical ramifications of our work. The percentage of women in the workforce who get screened for cervical cancer is still low. This has a wide-ranging impact. Women in the Kampong Speu area of Cambodia, for instance, had limited awareness of and rarely practiced cervical cancer screening, but were quite ready to have a Pap test and an HPV vaccination [20]. A parallel greater tendency for screening and immunisation should be expected.

Our research does have certain limitations, though. The results we discussed may be impacted by the use of a single centre and recollection bias. In fact, the cross-sectional study design makes note of this. Nevertheless, it is a problem in some research looking at the rate of cancer screening and is fundamental to the topic. The fact that this study updated the status of cervical cancer screening at the study centre is one of its key merits.

Conclusion

The rate of cervical cancer screening among female professionals in Nnewi is remains below average and insufficient despite increased knowledge and awareness. Cervical cancer is preventable. Despite the fact that the responders are aware of the gaps, they are now quite problematic. To ensure that women get Pap smears, this egregious gap between good knowledge/awareness and use of cervical screening needs to be closed. In order to fill in these knowledge gaps and encourage more females to use screening programmes, there is a need for purposeful and systematic training, retraining, and campaigns. A bigger and more thorough national cervical screening plan will gain popularity as a result.

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Author Contributions

All the authors were involved in the overall conceptual design and implementation of the project, and overall revision of the manuscript. CBO, OCO, CGO, JEO, JEJ, TNA, ODU, BCO, TBE, KCO and COE contributed to data collection, analysis, and manuscript writing. BUO, GUE, SON, EAE, CCO, CIO, IJO, MCE, JEM, UCC, CSA, OCE, ECE, KEE, AAO, SCE, NGU and NLO were involved in the writing of this manuscript and overall revision. The authors read, approved the final manuscript, and agreed to be accountable for all aspects of the work.

Disclosure Statement for Publication

All authors have made substantial contributions to conception and design of the study, or acquisition of data, or analysis and interpretation of data; drafting the article or revising it critically for important intellectual content; and final approval of the version submitted. This manuscript has not been submitted for publication in another journal.

Declaration of Conflicting Interests

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Ethical Approval and Consent to Participate

The study was approved by the Ethics Review Board of the hospital (Reference number: 0156/10/2022; date of approval: 26th October, 2022).

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