

**Caring : Jurnal Keperawatan**

Vol. 10, No. 1, Maret 2020, pp.75 – 98

ISSN 2656-1557 (Online) 1978-5755 (Print)

DOI: 10.29238

Journal homepage: <http://e-journal.poltekkesjogja.ac.id/index.php/caring/>

**Knowledge of Cervical Cancer and Utilization of Screening Services among Female Nurses in Federal Medical Center Owerri, Imo State, Nigeria**

<sup>1</sup> Nwabueze A. E.1, <sup>2</sup>Ezeama M.C.

<sup>1</sup> Department of Nursing, Imo State University, Owerri, Imo State, Nigeria

<sup>a</sup>[austapet@gmail.com](mailto:austapet@gmail.com)

---

**HIGHLIGHTS**

-

---

**ARTICLE INFO**

**Article history**

Received date 29 June 2020

Revised date 20 July 2020

Accepted date 30 September 2020

**Keywords:**

*Cervical cancer,  
Nursing  
Knowledge  
Human papilloma virus*

**Kata Kunci:**

*Kanker serviks  
Keperawatan  
Pengetahuan  
Human papilloma virus*

**ABSTRACT /ABSTRAK (DALAM DUA BAHASA)**

*Cervical cancer is a scourge among women but female nurses are not paying attention to this menace. This study set out to determine the knowledge of cervical cancer and utilization of cervical cancer services among female nurses in Federal Medical Center Owerri, Imo state, Nigeria. Five objectives were set to guide the study. Descriptive survey design was adopted. Target population was the 820 female nurses working at the centre at the time of the study. Sample size of 326 was statistically determined using Taro Yamen formula. Sampling technique used was stratified and random sampling technique. Instrument of data collection was a pretested self-administered structured questionnaire. Data was analyzed using descriptive statistics of frequencies, percentages, bar and pie charts. Hypothesis was tested using inferential statistics of Pearson Chi-square and Statistical Package for Social Sciences (SPSS) 21.0 version at P-value of 0.005 level of significance ( $p < 0.05$ ). The result showed that awareness of screening services 315 (96.6%) and knowledge of cervical cancer 283(86.8%) are adequate but the utilization of screening services is very poor 94 (29%). There was statistical association between knowledge of cervical cancer, availability of screening services( $p < 0.05$ ) and utilization of cervical screening services but no significant statistical association with Age, Educational level and Religious affiliation( $p > 0.05$ ). Fear of result 90(38.8%) and lack of time 60(25.9%) ranked high among others in the factors militating against utilization of cervical cancer screening. Recommendations were made that hospital management and allied educators should organize and re-invigorate enlightenment programs to allay the fears of the nurses and step it down to colleges/schools of nursing in a bid to keep this preventable scourge in check among nurses which will dove-tail to the community.*

**Abstrak**

Kanker serviks adalah momok di kalangan wanita tetapi perawat wanita tidak memperhatikan ancaman ini. Penelitian ini bertujuan untuk mengetahui pengetahuan kanker serviks dan pemanfaatan layanan kanker serviks di antara perawat wanita di Federal Medical Center Owerri, negara bagian Imo, Nigeria. Lima tujuan ditetapkan untuk memandu penelitian. Desain survei deskriptif diadopsi. Populasi target adalah 820 perawat wanita yang bekerja di pusat pada saat penelitian. Ukuran sampel 326 ditentukan secara statistik menggunakan rumus Taro Yamen. Teknik pengambilan sampel yang digunakan adalah teknik stratified dan random sampling. Instrumen pengumpulan data berupa angket terstruktur yang telah diujicobakan sendiri. Data dianalisis menggunakan statistik deskriptif frekuensi, persentase, diagram batang dan diagram lingkaran. Pengujian hipotesis menggunakan statistik inferensial Pearson Chi-square dan Statistical Package for Social Sciences (SPSS) versi 21.0 pada P-value tingkat signifikansi 0,005 ( $p < 0,05$ ). Hasil penelitian menunjukkan bahwa

---

---

kesadaran akan layanan skrining 315 (96,6%) dan pengetahuan kanker serviks 283 (86,8%) sudah memadai tetapi pemanfaatan layanan skrining sangat buruk 94 (29%). Ada hubungan statistik antara pengetahuan kanker serviks, ketersediaan layanan skrining ( $p < 0,05$ ) dan pemanfaatan layanan skrining serviks tetapi tidak ada hubungan statistik yang signifikan dengan Usia, Tingkat Pendidikan dan Afiliasi Agama ( $p > 0,05$ ). Takut akan hasil 90 (38,8 %) dan kurangnya waktu 60 (25,9%) menduduki peringkat tinggi antara lain dalam faktor-faktor yang menghambat pemanfaatan skrining kanker serviks. Rekomendasi dibuat bahwa manajemen rumah sakit dan pendidik yang terkait harus mengatur dan menghidupkan kembali program pencerahan untuk menghilangkan ketakutan para perawat dan menurunkannya ke perguruan tinggi / sekolah keperawatan dalam upaya untuk menjaga momok yang dapat dicegah ini di antara perawat yang akan terjun. ekor ke masyarakat.

---

Copyright © 2020 Caring : Jurnal Keperawatan.  
All rights reserved

---

**\*Corresponding Author:**

Nwabueze A. E.

1Department of Nursing, Imo State University, Owerri, Imo State, Nigeria

Email: [austapet@gmail.com](mailto:austapet@gmail.com).

---

## 1. INTRODUCTION

Cervical Cancer is largely a preventable disease but still constitutes a major health burden among women. Cancer is a leading cause of death worldwide among women in both high-income countries (HICs) and middle-income countries. The increasing cancer burden is expected to be particularly pronounced in lower and middle income countries (LMICs), where the average life expectancy is increasing due to public health advances, such as the control of infectious diseases and reductions in maternal, infant, and childhood mortality. In addition to these increases due to population growth, the cancer burden is also growing among women in LMICs due to changes in the prevalence of cancer risk factors as countries experience economic transition. These risk factors include smoking, excess body weight, physical inactivity, and changes in reproductive patterns, such as a later age at first childbirth and less childbirth<sup>1</sup>.

Worldwide, cervical cancer is both the fourth-most common cause of cancer and deaths from cancer in women. In 2018, 570,000 cases of cervical cancer were estimated to have occurred, with over 300,000 deaths. It is the second-most common cause of female-specific cancer after breast cancer, accounting for around 8% of both total cancer cases and total cancer deaths in women. About 80% of cervical cancers occur in developing countries. It is the most frequently detected cancer during pregnancy, with an occurrence of 1.5 to 12 for every 100,000 pregnancies<sup>2,3</sup>.

Cervical cancer is a malignant growth on the cervix uteri. Nearly all cases of cervical cancers are associated with sexually transmitted Human Papilloma Virus (HPV) infection. More than 150 types (some sources indicate more than 200 subtypes) of HPV are acknowledged to exist. 15 of them are classified as high-risk types and 12 as low-risk. Types 16 and 18 are generally acknowledged to cause about 70% of cervical cancer cases. Together with type 31,

they are the prime risk factors for cervical cancer. Genital warts are caused by various strains of HPV which are usually not related to cervical cancer. Other risk factors include and multiple sex partners, early onset of sexual intercourse, early child bearing immune suppressant among others. Persistent HPV infection increases the risk for developing cervical carcinoma. Individuals who have an increased incidence of these types of infection are women with HIV/AIDS, who are at a 22-fold increased risk of cervical cancer<sup>4</sup>.

Most HPV infections of the cervix are cleared rapidly by the immune system and do not progress to cervical cancer. According to WHO (2019), the process of transforming normal cervical cells into cancerous ones is slow, cancer occurs in people having been infected with HPV for a long time, usually over a decade or more (10-15 years)<sup>2</sup>. Typically no symptoms are seen. Later symptoms may include abnormal vaginal bleeding, pelvic pain or pain during sexual intercourse. While bleeding after sex may not be serious, it may also indicate the presence of cervical cancer. Cervical cancer prevention options include primary prevention of HPV vaccination prior to infection before sexual life begins and secondary prevention of cervical cancer screening for women over 30<sup>5</sup>.

The HPV vaccines can prevent the most common types of infection. To be effective they must be used before an infection occurs and are therefore recommended between the ages of nine and thirteen. Cervical cancer screening, such as with the Papanicolaou test (pap) or looking at the cervix after using acetic acid, can detect early cancer or abnormal cells that may develop into cancer. This allows for early treatment which results in better outcomes. Screening has reduced both the number and deaths from cervical cancer in the developed world<sup>6</sup>. Chirenje (2014) opined that cervical cancer is a very unique disease in that the part of the body it strikes creates an environment where stigma and loneliness becomes a feature that we see<sup>7</sup>. Over 80% of cervical cancers in sub-Saharan Africa are detected in late stages, predominantly due to lack of information about the disease and lack of screening services. Consequently, women with cervical cancer in this region are not identified until they are at an advanced stage of disease which is associated with low survival rates. They often suffer from pain, particularly in our countries of low income, where morphine and palliative care are not regularly available. According to Mensah (2016), the magnitude of cervical cancer screening practice is very low among nurse health professionals in Ghana<sup>8</sup>. Seyoum, Yesuf, Kejela and Gebremeskel (2017) also reported low cervical cancer screening among health workers in Ethiopia<sup>9</sup>. A more recent study by Ifemelumma, Anikwe, Okorochukwu, Onu, Obuna, Ejikeme and Ezeonu (2019) at Federal Teaching Hospital Abakaliki Ebonyi State revealed 20.6% utilization rate which is far below 50%<sup>10</sup>.

Nurses are change agents and motivators in the health care system. By the nature of their training, they should be knowledgeable about cervical cancer and equally be role models in the promotion of uptake of utilization of screening services worldwide. Their attitude to such issues might positively or negatively influence the decision made by the community members. Based on the above stated facts, the researcher seeks to determine the knowledge of cervical cancer and

utilization of cervical cancer screening services among female Nurses in Federal Medical center Owerri, Imo state, Nigeria.

The burden of cervical cancer in Nigeria is huge. Nigeria has a population of over 50.33 million women aged 15 and above who are at risk of cervical cancer Current estimates indicates that every year 14,943 women are diagnosed with cervical cancer and 10,403 die from the disease. The high burden of cervical is probably due to a high prevalence of HPV infection and the lack of effective cervical cancer screening programs<sup>11</sup>.

Cervical cancer is the 12th-most common cancer in women in the United Kingdom, (3,100 women were diagnosed with the disease in 2011), and this accounts for 1% of cancer deaths. With a 42% reduction from 1988–1997, the National Health Service-implemented screening program has been highly successful, screening the highest-risk age group (25–49 years) every 3 years, and those ages 50–64 every 5 years. It was further stated that there are about 3,200 new cervical cancer cases in the UK every year, that is around nine every day (2014-2016) and incidence rates are projected to rise by 43% between 2014 and 2035, to 17 cases per 100,000 females by 2035<sup>12</sup>.

The American cancer society (2019) stated that an estimated 13,170 new cervical cancers and 4,250 cervical cancer deaths will occur in the United States in 2019<sup>13</sup>. The median age at diagnosis is 50. The rates of new cases in the United States was 7.3 per 100,000 women, based on rates from 2012-2016. Cervical cancer deaths decreased by approximately 74% in the last 50 years largely due to widespread Pap test screening. The annual direct medical cost of cervical cancer prevention and treatment prior to introduction of the HPV vaccine was estimated at \$6 billion.

In the majority of Sub-Saharan Africa, Ameber (2017) stated that in 40 out of 48 countries, cervical cancer is the number one cause of cancer-related deaths in women. In Malawi, 79.5 women out of 100,000 develop cervical cancer<sup>14</sup>. In Mozambique it is 65 and in Comoros, 61.3. This pattern continued with Zambia (58), Zimbabwe (56.4), Swaziland (53.1) Brundi (49.3) and other countries. According to Oluwole, Mohammed, Akinyinka and Salako (2017), the incidence rate of cervical cancer in Nigeria is 25/100,000 while the reported prevalence rates for Human Papilloma Virus (HPV) in the general population and HPV in women with cervical cancer are 26.3% and 24.8% respectively. A study in Maiduguri, Northern Nigeria aimed at ascertaining frequency patterns of female genital tract malignancies analyzed surgical biopsy materials retrospectively over a ten year –period, Cancer of the cervix was the most prevalent with a proportion of 70.5% compared to 16.3% for ovarian and 8.5% for uterine cancer. A rapid gradient rise was found for cases of cervical tumor in association with a decline in age at seven presentations for all the tumors. Also, a ten year study in Ilorin-Nigeria, reported that carcinoma of the cervix constituted 63.1% of histologically confirmed cases of gynecological cancers. Three out of eight cases were at an advanced stage<sup>15</sup>.

A similar review of histopathology reports on frequencies of malignant diseases of the female genital tract in Port-Harcourt also showed that cervical cancer accounts for 63.1% of

gynaecological cancers. Another study in Lagos, Nigeria reported that 71.8% of cervical cancer patients who reported at the clinic did so at an advanced stage of the disease. This was due to delay in referral by their health care providers and patients' delay in seeking health care<sup>15</sup>. Having lost many women to this scourge, it becomes necessary for women to utilize cancer screening services for early diagnosis and treatment. Previous studies done among female health workers especially nurses have shown acceptable knowledge of cervical cancer; however, cervical cancer screening service utilization rates are still far from satisfactory in most countries. Despite the fact that cervical cancer screening services are available in nearly all major health institutions in Nigeria, the decision that leads the nurses to use these services seems to occur within the context of the individual and personal conviction. Since no known study has been carried out in this center on this topic, the researcher set out to ascertain the knowledge of cervical cancer and utilization of screening services in order to impact positive screening uptake among female Nurses in Federal Medical center Owerri, Imo state, Nigeria.

The World health Organization (2018) projected that in 2025; there will be 22,914 new cervical cancer cases and 15,251 cervical cancer deaths in Nigeria<sup>16</sup>. This is an overt call for action to healthcare professionals especially nurses as cervical cancer like other cancers in developing countries, is most often diagnosed in the advanced stage with little or no hope for treatment and cure. In any community, trained nurses and midwives constitute a knowledgeable class with regards to medical information and intervention. They play a major role in promoting health care services and in enlightening the public. As role models and care givers, their attitude to health-related issues (such as cervical cancer screening) are crucial in gaining and promoting clients/patients' uptake of care as they come in contact daily with families and females of all ages. The female nurses are equally part of the population and should lead by example. There is therefore a great need for studies like this to answer questions on current cervical cancer knowledge and screening uptake among nurses and also find out why targets have not been reached.

This study is to ascertain the knowledge of cervical cancer and utilization of screening services among female Nurses in Federal Medical center Owerri, Imo state, Nigeria. (1) To ascertain the level of awareness of cancer screening services in the centre, (2) To assess the level of knowledge of cervical cancer among female nurses in Federal Medical center Owerri, Imo state, Nigeria (3) To ascertain the level of available cervical cancer screening services (4) To determine the rate of utilization of cervical screening services (5) To identify the factors militating against effective utilization of cancer screening services among female nurses in Federal Medical center Owerri, Imo state, Nigeria.

This study is important as it seeks to determine knowledge of cervical cancer and utilization of cervical cancer screening services and will be very beneficial to the society at large. It will help to determine the level of knowledge of cervical cancer and utilization of cervical cancer screening practices among nurses at Federal Medical center, Owerri, Imo state, Nigeria and will also complement efforts to prevent the disease. The study will also help in identifying factors that

constitutes barriers to the utilization of cervical cancer screening as delayed diagnoses results in more morbidity, reduced survival rate, and mortality while early diagnosis promotes early treatment and cure. Being role models, the study will help in further educating the nurses in the epic position of leadership by example which tends to influence the community positively. To the department of nursing, It will contribute to the body of knowledge to help lecturers to teach upcoming student nurses the importance of cancer screening services. The study will also help policy makers to plan and prioritize activities geared at reducing cervical cancer in Nigeria through vital recommendations which will enhance advocacy programs. Sensitive advocacy in this area is essential in order to help achieve the vision 2030 goal on elimination of preventable diseases in Nigeria. The research findings could also be used as a reference for other studies that could be conducted in the future.

This study is delimited to female Nurses working in Federal Medical center Owerri, Imo State, Nigeria from November- December 2020. It was delimited to knowledge of cervical cancer and utilization of cervical cancer screening services among female Nurses in Federal Medical center Owerri, Imo state, Nigeria.

## **2. MATERIAL AND METHODS**

### **2.1. Research Design**

The study adopted a cross-sectional descriptive survey design. Descriptive survey is a method of research which concerns itself with the present phenomenon in terms of conditions, practices and processes. Chinwuba, Iheanacho and Agbapuruonwu (2014) explained that descriptive research describes events as they are without any manipulation of what is being observed<sup>17</sup>. Its major concern is to observe and describe phenomena as they naturally occur as well as accurately document the observed phenomena. They further posited that descriptive study aim at showing the characteristics of the persons, situations or groups and number of times (frequency) of accuracy of a given phenomenon. They also stated that survey research involves the collection and analysis of responses of large number of people, the whole (population) or a fraction (sample) that represents the population designed to elicit their opinion, attitude and sometimes a specific topic.

### **2.2. Area of Study/Setting**

Federal Medical Center Owerri, Imo state Nigeria is a tertiary health institution located in Owerri Municipal Council, one of the 27 local government areas in Imo state. The Federal Medical Centre which is over hundred years was raised to its present status from a General Hospital in 1995. It comprises of clinical departments such as Obstetrics and Gynaecology, Orthopedics, General surgery, Ophthalmology, Ear Nose and Throat, Internal/Family medicine, Anaesthesiology, Dental and maxillofacial, Peadiatrics and Nursing services. Its non-clinical

departments include Pharmacy, Physiotherapy, Laboratory, Radiography and Ultrasonography, Health education, Social welfare and other support non clinical departments.

The clinical area has 24 wards, a Central Sterilization Supply Department, three theatres, General outpatient clinics with several specialty clinics.

### 2.3 Population of Study

Federal Medical Center Owerri, Imo State has a total of 840 nurses. The target population comprises of 820 female nurses of various cadres working at the center at the time of study.

### 2.4 Sampling and Sampling Techniques

Out of the target population of 820 female nurses, the researcher selected sample size using the Taro Yamane formula thus;

$$n = N/(1 + N(e)^2)$$

In order to maintain a 95% confidence level from respondents, not less than sample size of 269 will be used<sup>18</sup>. Finally 326 participants were used for the study which is allowed in research<sup>19</sup>.

### 2.5 Sampling Technique

Stratified sampling technique and simple random sampling was used in selecting 40% of the respondents by direct variation for equal representation. This is in line with Nwana who stated that when a population is a few hundred, 40% is adequate which brought the sample size to 326<sup>18</sup>. Those who picked yes was selected excluding those on leave, night duty and those who did not consent to participate in the study.

Sampling was done as follows:

Assistant Director of Nursing	29	12 was sampled
Chief Nursing officer	89	36 was sampled
Assistant chief nursing officer	69	28 was sampled
Principal Nursing Officer	169	68 was sampled
Senior Nursing Officer	138	55 was sampled
Nursing Officer 1	204	82 was sampled
Nursing Officer 11	122	45 was sampled

### 2.6. Instrument for Data Collection

The data for the study was collected by a self-administered structured questionnaires consisting of five sections.

**Section A;** consists of the demographics of the respondents,

**Section B;** focused on determining the awareness of cervical cancer screening services.

**Section C;** consists of questions focusing on the knowledge of cervical cancer.

**Section D;** focused on determining the availability of screening services

**Section E;** consists of assessment of utilization rate of cancer screening services

**Section F;** focused on questions to determine the factors militating against utilization of cervical cancer screening services among female nurses in Federal Medical Centre, Owerri, Imo State.

**2.7. Validation of the Instrument**

This is the ability the instrument to measure what it is supposed to measure. To ensure validity of the items on the instruments, the researcher after constructing the questionnaire, presented it to an expert in Gynaecology oncology who fished out mistakes. The questionnaires was then thoroughly corrected and submitted to the researcher’s supervisor for further review before administration. Their constructive contribution was used to modify final draft of the instrument.

**2.8. Reliability of the Instrument**

This refers to the level of consistency of the instrument in measurement. A pilot study was carried out using test retest method for the reliability of the instrument in which 10 copies was administered to female nurses in Imo state specialist hospital Owerri Imo state. The same but fresh copies were administered to the same group after two weeks. Results of the first and second tests were tallied and analyzed using Pearson product moment correlation coefficient (PPMCC). A correlation coefficient index of 0.86 which is highly reliable was obtained(Appendix III).

**2.9 Method of Data Collection**

Data was collected using a self-developed structured questionnaire. The researcher visited Federal Medical centre Owerri and explained the purpose of the study to the Heads of the units who gave permission for the study to be carried out in their wards and assisted in distributing the questionnaires to the respondents. Rapport was created with the respondents and the contents of the questionnaire were properly explained. The 326 questionnaires were shared to the respondents on various days and were promptly filled. The researcher collected back the questionnaires for analysis.

**2.10 Method of Data Analysis**

Data was collated, tallied and analyzed using the descriptive statistics of frequencies, percentages, Bar and Pie charts. Hypotheses was tested using Statistical Package for Social Sciences (SPSS) 21.0version at 0.05 level of significance (p=0.05).

**3. RESULT AND ANALYSIS**

**Results**

This chapter deals with the presentation and analysis of data collected from the respondents. Data was presented in tables and analyzed using descriptive statistics of frequencies, bar and pie charts. Test of association was done with SPSS 21.0 version.

**Table 1: Showing Age Participants (n = 326)**

Variable	Category	Frequency	Percentage
----------	----------	-----------	------------



Age Group (Years)	21– 30	29	(8.9%)
	31– 40	169	(51.8%)
	41– 50	78	(23.9%)
Total	>50	50	(15.4%)
		<b>326</b>	<b>100%</b>

From the table above, the age of participants ranges from 21 years and above with the age group 31-40 years 169(51.8%) having the highest percentage of distribution while the age group 21-30 years has the least frequency 29 (8.9%). 41-50years recorded 78(23.9%) while > 50years recorded 50((15.3%).

**Table 2: Showing Marital Status of respondent**

Variable	Category	Frequency	Percentage
Marital Status	Single	12	(3.7%)
	Married	314	(96.3%)
Total		<b>326</b>	<b>100%</b>

Majority of the nurses are married 314 (96.3%) while only 12(3.7%) are single (Table 2). Half of the participants were Catholics 164(50.3%) followed by Anglicans 83(25.5%). Pentecostals 55(16.9%), Religious affiliations like Jehovah witnesses, Adventists and others recorded 24(7.45%) while Moslems recorded 0 (0%) (Table 3). On the level of education (Table 4), B.Sc. nurses have the highest frequency (46.3%) followed by HND nurses 149(45.7%) and M.Sc. nurses 26(8.0%). P.HD nurses recorded (0%). The rank category (Table 5) shows that the majority of the participants are mainly nurses at the NO1 cadre 82(25.2%) followed by PNOs 68(20.9). SNOs recorded 55(16.9%), NO11s 45(13.5%), CNOs 36(11.0%) and ADs recorded the least 12 (3.7%). The years in service of the respondents (Table 6) ranges from 1 to above 30 years, with 1-10 years having the highest frequency 233 (71.5%) followed by 21-30 years 44 (31.5%). 11-20years recorded 41(12.65) while >30 years recorded the least 8(2.5%). On the level of awareness of cervical cancer screening among the nurses (Table 7), majority of the respondents expectedly have heard of cervical cancer screening 315 (96.6%) while only 11(3.4%) claim not to have heard of it. 161(51.1%) nurses indicated that they got their information from formal lecture and seminar followed by work experience (40.8%). Print and electronic sources recorded 12(3.7%) while 9(2.8%) said they got to know about cervical cancer.

**Table 3: Showing Religious Affiliation**

Variable	Category	Frequency	Percentage
----------	----------	-----------	------------

Religious Affiliation	Catholic	164	(50.3%)
	Anglican	83	(25.5%)
	Pentecostal	55	(16.9%)
	Moslem	0	0%
	Others	24	(7.45)
<b>Total</b>		<b>326</b>	<b>100%</b>

**Table 4: Showing Level of Education**

Variable	Category	Frequency	Percentage
Level of Education	HND (Basic Nursing)	149	(45.7%)
	BSC/BNSC	151	(46.3%)
	MSC	26	(8.0%)
Total	PHD	0	0
		<b>326</b>	<b>100%</b>

**Table 5: Showing Rank of Nurses**

Category	Frequency	Percentage
ADNS	12	(3.7%)
CNO	36	(11.0%)
ACNO	28	(8.6%)
PNO	68	(20.9%)
SNO	55	(16.9%)
NOI	82	(25.2%)
NOII	45	(13.5%)

**Table 6: Showing Years of Service**

Variable	Category	Frequency	Percentage
Years in Service	1 -10	233	(71.5%)

	11-20	41	(12.6%)
	21-30	44	(13.5%)
Total	>30	8	(2.5%)
		<b>326</b>	<b>100%</b>

**Table 7: Assessment of Sources of Information**

Variable	Responses	Frequency	Percentage
<b>Heard of cervical cancer screening</b>	Yes	315	(96.6%)
	No	11	(3.4%)
<b>Sources of information</b>	Formal	161	(51.1%)
	Lecture/Seminar		
	Work experience	133	(40.8%)
	Print/electronic	12	(3.7%)
	Friends	9	(2.8%)
<b>Total</b>		<b>315</b>	<b>100%</b>

**Table 8: Assessment of the Level of Knowledge of Cervical Cancer**

Variable	Responses	Frequency	Percentage	Remark
<b>Most common cancer of the female reproductive tract</b>	Cancer of the ovary	3	(0.92%)	Low
	Cancer of the body uterus	3	(0.92%)	Low
	Cancer of the cervix	320	(98.2%)	High
	Cancer of the Vagina	0	(0%)	
<b>Primary cause and greatest Risk Factor</b>	HIV	5	(1.5%)	Low
	Multiple sexual partners	114	(35%)	Low
	History of HPV	178	(54.6%)	Moderate
	Sex of early age	29	(8.9%)	Low
<b>Most Common Symptoms</b>	Waist and leg pain	12	(3.7%)	Low
	Scanty and painful menses			

	Dyspareunia and Post coital bleeding	0	(0%)	
	Loss of appetite	297	(91.1%)	High
		17	(5.2%)	Low
<b>Preventive Measure</b>	Not having sex having regularly	10	(3.1%)	Low
	Use of IUCD	12	(3.7%)	Low
	Screening and Vaccination	304	(93.3%)	High
	Having Multiple sexual partners	0	(0%)	
	Urine analysis and culture	0	(0%)	
<b>Common method of screening</b>	Ultrasound screening and MRI	10	(3.9%)	Low
	Pap test	316	(96.9%)	High
	Chest X-ray and CAT	0	(0%)	

The table 8 above shows that cancer of the cervix was chosen as the predominant cancer of the female reproductive system 320 (98.2%), 3(0.9%) indicated cancer of the ovary while another 3(0.9%) indicated cancer of the body of the uterus. Cancer of the vagina recorded 0(0%). History of HPV was chosen as the predominant risk factor and primary cause of cervical cancer (54.6%). A good number 114(35%) indicated multiple sexual partner. Sex at early age recorded 29(8.9%) while HIV recorded 5(1.5%). Majority of the respondents 297(91.1%) indicated Dyspareunia and Post coital bleeding as the most common symptoms seen. 17 (5.2%) indicated loss of appetite while scanty and painful menses recorded 0(0%). Majority of the respondents (93.3%) chose vaccination as the best preventive measure, use of IUCD 12(3.7%), not having sex regularly 10(3.1%) while Having multiple sexual partners recorded 0(0%). Pap test/ VIA was indicated as the most common method of screening 316 (96.9%) Ultrasound screening recorded 10(3.9%) while Urine analysis and culture, Chest X-ray and CAT recorded 0(0%) respectively (Table 8). Grand total of knowledge scale 1415, Average Knowledge level recorded 282(86.8%).

**Table 9: Level of Availability of Cervical Cancer Screening Services**

Variable	Responses	Frequency	Percentage
----------	-----------	-----------	------------

<b>Any cervical cancer screening facility in your hospital</b>	Yes	309	(94.8%)
	No	5	(1.5%)
	Don't Know	12	(3.7%)

**If No, why**

Management did not provide the facility	3	17.7%
---	---	-------

Staff are not trained to provide the service	2	11.8%
--	---	-------

The facility is not well equipped	0	0%
-----------------------------------	---	----

Don't know		
------------	--	--

	12	70.5%
--	----	-------

Table 9 shows the level of availability of cervical cancer screening service, 309(94.8%) of the respondents indicated that there is a cervical screening facility in their area while 5(1.5%) reported that there is no cervical screening facility in their area. 12(3.7%) said they don't know. Out of the number of respondents that indicated No, 3(17.7%) indicated that the management did not provide the facility, 2(11.8%) indicated that staff are not trained to provide the service, 12(70.5) said they don't know while facility is not well equipped recorded 0(0%).

**Table 10: Pattern of Utilization of Cervical Cancer Screening Services**

Question	Responses	Frequency	Percentage	Remarks
<b>Have you undergone any cervical screening</b>	Yes	94	(28.8%)	Lowly utilized
	No	232	(71.2%)	
<b>If yes, No of times screened</b>	Once	73	(22.5%)	Lowly utilized
	Every three years	21	(6.4%)	

	Every five years	0	(0%)	
<b>Vaccination against HPV</b>	Yes	7	(26.8%)	Lowly utilized
	No	87	(2.0%)	

Table 10 shows that 94(28.8%) approximately 29% of the respondents have undergone cervical cancer screening while 232(71.2%) have not. 73(77.7%) indicated that they have been screened once; every three years recorded 21(22.3%) while every five years recorded 0 (0%). Of the 94(28.8%) that claimed to have undergone screening, 7(7.4%) did not receive vaccination while 87(92.6%) indicated that they have not been vaccinated against HPV.

**Table 11: Factors Affecting Utilization of Cancer Screening Service**

Variable	Responses	Frequency	Percent
<b>Reason for not Undergoing cervical screening</b>	Lack of time	60	(25.9%)
	High cost of test	30	(12.9%)
	Fear of result	90	(38.8%)
	Procedure cumbersomeness	18	(7.7%)
	Not aware of the test	19	(8.2%)
	Lack of testing facility	0	(0%)
	Healthy and does not require test	15	(6.5%)
	My religion does not allow the test	0	(0%)

Table 11 shows that majority of the respondents indicated fear of result 90(38.8%) as the reason for not undergoing cervical screening followed by lack of time 60 (25.9%). High cost of test recorded 30(12.95), Not aware of test recorded 19(8.2%), Procedure cumbersomeness 18(7.7%), healthy and does not require test 15(6.5%) while lack of testing facility and my religion does not allow it recorded 0(0%) respectively.

**3.1. Testing Of Statistical Association Of Relevant Factors**

**Table 12: Association between Age and utilization of Cervical Cancer screening services (N = 94)**

Age in years	N	Number of Nurses Screened (n)	X <sup>2</sup>	df	P-value
21-30	29	4(4.0%)	5.4	3	0.145
31-40	169	24(25.5%)			
41-50	78	50(53.8%)			
>50	50	16(17%)			
Total	326	94(100%)			

Table 12 shows number of nurses screened according to the age distribution. Nurses between the ages of 21-30 years were 4(4.0%). 31-40 years recorded 24(25.5%),41-50years

were 50(53.8%) while > 50 recorded 16(17%). There is no significant association ( $p > 0.05$ ) between age and utilization of Cervical Cancer screening services among the nurses. Chi-Square ( $X^2$ ) 5.4, Degree of freedom (df) 3, P-value 0.145.

**Table 13: Association between Marital Status and Utilization of Cervical Cancer screening services**

Marital Status	N	Number of Nurses Screened	$X^2$	df	P-value
Single	12	4(4.3%)	94.00	1	0.000
Married	314	90(95.7%)			
<b>Total</b>	<b>326</b>	<b>94(100%)</b>			

Table 13 indicates that 4 of the screened nurses were single while majority 90(95.7) are married. The study shows that there is a significant association ( $p < 0.05$ ) between marital status and utilization of Cervical Cancer screening services among the nurses. Chi-Square ( $X^2$ ) 94.00, Degree of freedom (df) 1, P- Value 0.000.

**Table 14: Association between Level of Education and the utilization of Cervical Cancer screening services**

Education	N	Number of Nurses Screened	$X^2$	df	p-value
HND	149	35(37.2%)	5.46	3	0.065
BSC	151	51(54.3%)			
MSC	26	8(8.5%)			
PHD	0	0(0%)			
<b>Total</b>	<b>326</b>	<b>94(100%)</b>			

Table 14 shows that Nurses with HND/ Basic Nursing were screened. 35(37.2%) were BSc Nurses, 51(54.3%) are with M.Sc. Nursing while PhD holders recorded 0(0%). There was no significant association ( $p > 0.05$ ) between level of education and utilization of Cervical Cancer screening services. Chi-Square ( $X^2$ ) 5.46, Degree of freedom (df) 3, P- Value 0.065.

**Table 15. Association between Religious Affiliation and the utilization of Cervical Cancer screening services**

Education	N	no of nurses screened	$X^2$	df	p-value
Catholic	164	50(53.2%)	6.15	4	0.105
Anglican	83	30(31.9%)			
Pentecostal	55	8(8.5%)			
Moslem	0	0(0%)			
TOT7udxcv	24	6(6.4%)			

Table 15 shows that 50(53.2%) of the nurses screened were Catholics while 30(31.9%) were Anglicans. Pentecostal recorded 55, Moslem 0(0%) while other Religious affiliations were 6(6.4%). There was no significant association ( $p > 0.05$ ) between religious affiliation and utilization

of Cervical Cancer screening services. Chi-Square ( $X^2$ ) 6.15, Degree of freedom (df) 4, P- Value 0.105.

**Table 16: Association between Rank (Cadre) and the utilization of Cervical Cancer screening services**

RANK	N	Number of Nurses Screened	$X^2$	df	P-value
ADNS	12	9(9.6%)	15.95	6	0.014
CNO	36	7 (7.4%)			
ACNO	28	8 (8.5%)			
PNO	68	20 (21.3%)			
SNO	55	30 (31.9%)			
NOI	82	9 (9.6%)			
NOII	4	11 (11.7%)			
Total	<b>326</b>	<b>94(100%)</b>			

Table 16 shows that 9(9.6%) of the nurses screened were ADNS, CNOs recorded 7(7.4%). ACNOs were 8(8.5%), PNOs 20(21.3%), SNOs 30(31.9%), NOIs 9(9.6%) while NOII were 11(11.7%). There is a significant association ( $p < 0.05$ ) between cadre and the number of nurses screened. Chi-Square ( $X^2$ ) 15.95, Degree of freedom (df) 6, P- Value 0.014.

**Table 17: Association between Years in Service and the utilization of Cervical Cancer screening services**

Years in service	N	Number of Nurses Screened	$X^2$	df	P-value
1 -10	233	70(74.5%)	282	3	0.000
11-20	41	10(10.6%)			
21-30	44	10(10.6%)			
>30	8	4(4.3%)			

Table 17 shows that 70(74.5%) of the nurses screened has worked for 1-10 years, 11-20 years recorded 10(10.6%), 21-30 years were 10(10.6%) while >30 were 4(4.3%). There is a significant association ( $p < 0.05$ ) between years in service and number of nurses screened. Chi-Square ( $X^2$ ) 282, Degree of freedom (df) 3, P- Value 0.000.

**Table 18: Association between Knowledge of most common cancer of the reproductive tract and the number of Nurses Screened**

Level of Knowledge (Most common cancer of the female reproductive tract)	N	Number of Nurses Screened	$X^2$	df	P-value
Cancer of the ovary	3	1(1.1%)	294.00	3	0.000
Cancer of the body uterus	3	2(2.1%)			
Cancer of the cervix	320	90(95.7%)			
Cancer of the Vagina	0	1(1.1%)			



Table 18 shows that 1(1.1%) of nurses screened indicated cancer of the ovary, 2(2.1%) indicated cancer of the body of uterus while majority 90(95.7%) indicated cancer of the cervix. There was a significant association ( $p < 0.05$ ) between level of knowledge and number of nurses screened. Chi-Square ( $X^2$ ) 294, Degree of freedom (df)3, P- Value 0.000.

**Table 19: Association between Knowledge of primary cause/ greatest risk factor and the utilization of Cervical Cancer screening services**

Level of Knowledge (Primary cause and greatest risk Factor)	N	Number of Nurses Screened	$X^2$	df	P-value
HIV	5	2(2.1%)	282.00	3	0.000
Multiple sexual partners	114	6(6.4%)			
History of HPV	178	84(89.4%)			
Sex of early age	29	2(2.1%)			

Table 19 shows that majority of the nurses indicated history of HPV as the primary cause and greatest risk factor for cervical cancer while those who chose Multiple sexual partners recorded 6(6.4%). There was a significant association ( $p < 0.05$ ) between level of knowledge and number of nurses screened. Chi-Square ( $X^2$ ) 282, Degree of freedom (df)3, P- Value 0.000.

**Table 20: Association between Knowledge of most common symptoms and the utilization of Cervical Cancer screening services**

Level of Knowledge (Most Common Symptoms)	N	Number of Nurses Screened	$X^2$	df	P-value
Waist and leg pain	12	1(1.1%)	294.00	3	0.000
Scanty and painful menses	0	0(0%)			
Dyspareunia and Post coital bleeding	297	92(97.8%)			
Loss of appetite	17	1(1.1%)			

Table 20 shows that majority of the nurses screened 92(97.8%) indicated dyspareunia and post coital as the most common symptom of cervical cancer. There is a significant association ( $p < 0.05$ ) between level of knowledge and number of nurses screened. P-value 0.000 Chi-Square ( $X^2$ ) 294, Degree of freedom (df)3, P- Value 0.000.

**Table 21: Association between Knowledge of preventive measures and the utilization of Cervical Cancer screening services**

Level of Knowledge (Preventive measures)	N	Number of Nurses Screened	$X^2$	df	P-value
Not having sex regularly	10	2(2.1%)	294.00	3	0.000
Use of IUCD	12	0(0%)			

Screening and Vaccination	304	92(97.9%)
Having Multiple sexual partners	0	0(0%)

Table 21 shows that majority of the nurses screened indicated screening and vaccination as the preventive measures against cervical cancer, There is a significant association ( $p < 0.05$ ) between level of knowledge and number of nurses screened. P-value 0.000 Chi-Square ( $X^2$ ) 294, Degree of freedom (df)3, P- Value 0.000.

**Table 22: Association between Knowledge of Common method of screening and the utilization of Cervical Cancer screening services**

Level of Knowledge (Common method of screening)	N	Number of Nurses Screened	$X^2$	df	P-value
Urine analysis and culture	0	0(0%)	294.00	3	0.000
Ultrasound screening and MRI	10	2(2.1%)			
Pap test/VIA	316	92(97.9%)			
Chest X-ray and CAT	0	0 (0%)			

Table 22 shows that Majority of nurses screened identified Pap test /VIA as the most common method of screening for cervical cancer While the remaining 2(2.1%) indicated ultrasound screening and MRI. There was a significant association ( $p < 0.05$ ) between level of knowledge and number of nurses screened. Chi-Square ( $X^2$ ) 294, Degree of freedom (df)3, P- Value 0.000.

Table 23 shows that 91(96.8%) of nurses that were screened knows there is a screening facility in the centre while 1(1.1%) said No. There was a significant association ( $p < 0.05$ ) between knowledge of existence of a screening facility and number of nurses screened. P-value 0.000 Chi-Square ( $X^2$ ) 188, Degree of freedom (df)2, P- Value 0.000.

**Table 23: Association between Availability of Cervical Cancer Screening Services and the utilization of Cervical Cancer screening services**

Level of Knowledge (Any cervical cancer screening facility in your hospital)	N	Number of Nurses Screened	$X^2$	df	P-value
Yes	309	91(96.8%)	188.00	2	0.000
No	5	1(1.1%)			

---

Don't Know	12	2(2.1%)
------------	----	---------

---

### Discussion

The age of participants ranges from 21 years and above 50 with the age group 31-40 years 169(51.8%) having the highest percentage of distribution while the age group 21-30 years has the least frequency 29 (8.9%). 41-50years recorded 78(23.9%) while > 50years recorded 50(15.3%). The current study reveals that there was no significant association( $p= 0.145$ ) between age and the number of nurses screened, but the age group 41-50 years (53.8%) were more screened followed by the age group 31-40 years (25.5%). Therefore the null hypothesis which states that there is no statistical relationship between Age of the nurses and utilization of cervical cancer screening among the nurses is accepted. The age range of women mostly screened for cervical cancer as reported by respondents in this study is in line with the findings of Hafizur and Sumit, (2015) where old staff nurses are aware of risk factors associated with cervical cancer and are therefore mostly screened.

Majority of the nurses are married (96.3%) while only 12(3.7%) are single. The current study also revealed a significant association ( $p<0.05$ ) between marital status and the number of nurses screened. The study shows that majority of the nurses that are married have been screened of cervical cancer when compared to the single nurses. The result of this study is also in line with the study by Hafizur and Sumit, (2015).

On the level of education, B.Sc. nurses have the highest frequency (46.3%) followed by HND nurse 149(45.7%) and M.Sc. nurses 26(8.0%). P.HD nurses have the least frequency (0%). Education had a significant positive effect on the awareness levels. Nurses who had attained a tertiary level education (B.Sc. and M.Sc.) had adequate knowledge and are more likely to be screened. This is supported by a study done in by Utoo *et al.*, (2015) which reported that women with a higher level of education tends to be well informed on cervical cancer and cervical cancer screening<sup>20</sup>. The study shows that there was no significant association ( $p=0.065$ ) between level of education and number of nurses screened. Therefore the null hypothesis which states that there is no significant statistical relationship between socio-demographic characteristic; Level of education and utilization of cervical cancer screening among the nurses is accepted.

Half of the participants were Catholics 164(50.3%) followed by Anglicans 83(25.5%). Pentecostals 55(16.9%), Religious affiliations like Jehovah witnesses, Adventists and others recorded 24(7.45%) while Moslems recorded 0(0%). The result revealed that there was no significant association (0.1050) between religious affiliation and number of nurses screened, but catholic members have the highest frequency of screened nurses 164(50.3%) followed by Anglican 83(25.5%). The reason might be as a result of the number of nurses that attends catholic and Anglican churches, but there is no study to support the validity of this result. The null hypothesis which states that there is no significant statistical relationship between socio-demographic characteristic. Religious affiliation and utilization of cervical cancer screening among the nurses is therefore accepted.

The rank category shows that the majority of the participants are mainly nurses at the NO1 cadre 82(25.2%) followed by PNOs 68(20.9). SNOs recorded 55(16.9%), NO11s 45(13.5%), CNOs 36(11.0%) and ADs recorded the least 12 (3.7%). The study also shows that there is a significant association ( $p < 0.05$ ) between rank and the number of nurses screened with ADNS nurses having the highest frequency (58.3%). Nurses at NO1 level are the least screened (21.9%).

The years in service of the respondents ranges from 1 to above 30 years, with 1-10 years having the highest frequency 233 (71.5%) followed by 21-30 years 44 (31.5%). 11-20 years recorded 41(12.65) while >30 years recorded the least 8(2.5%). The study also reveals a significant association ( $p < 0.05$ ) between years of service and the number of nurses screened of cervical cancer. Years of experience plays an important role in ascertaining the level of awareness. Nurses who have spent years in the practice of nursing have increased level of awareness than their younger colleagues and are more likely to be screened. This result is in agreement with the study carried out by Seyoum *et al.*, (2017), who in their study reported that years in the practice of nursing have a significant effect<sup>9</sup>.

#### **4.1. Awareness of cervical cancer screening**

The findings on the level of awareness of cervical cancer screening showed that majority 315 (96.6%) of the nurses have heard of cervical cancer screening. There was a significant association ( $p < 0.05$ ) between the level of awareness and the number of nurses screened. This is in line with the result reported by Hafizur and Sumit, (2015) where (90.4%) of the nurses who responded are aware of the cancer of the cervix screening. Majority of the respondents 161(51.1%) indicated that they got their information from formal lecture and seminar followed by work experience 133(40.8%). This result is also in agreement with the result reported by Moss *et al.*, (2016)<sup>21</sup>.

#### **4.2. Knowledge of Cervical Cancer**

The study shows that cancer of the cervix was chosen as the predominant cancer of the female reproductive system 320 (98.2%), History of HPV was chosen as the predominant risk factor and primary cause of cervical cancer by only (54.6%) while good number 114(35%) indicated multiple sexual partner. Majority of the respondents 297(91.1%) indicated Dyspareunia and Post coital bleeding as the most common symptoms seen. Majority of the respondents (93.3%) chose vaccination as the best preventive measure. Pap test/ VIA was also indicated as the most common method of screening 316 (96.9%). The findings from this study showed that female nurses have adequate knowledge on cervical cancer (86.6% on the average). The findings from this study is in agreement with the study reported by Dulla *et al.*, (2017), who affirmed that 86.9% of the total respondents had a good knowledge on cervical cancer, risk factors, symptoms and outcomes of cervical cancer. This is also in line with Oluwafunmilola *et al.*, (2019) who reported a similar level of knowledge among nurses studied in Obafemi Awolowo University teaching hospital, Ile-ife, Osun State in Nigeria. The findings of this study are in contrast with a study conducted in India by Vishwakarma *et al.*, (2018) where knowledge of cervical cancer among nurses was very poor.

Despite the high level of knowledge on cervical cancer among the study respondents, gaps in knowledge still exist about the primary cause and greatest risk factor for cervical cancer. Many of the respondents 114 (35%) were of the opinion that having multiple sexual partners is the primary cause and greatest risk of cervical cancer. Women who are faithful but whose husbands are promiscuous are equally at risk of being infected with HPV as they might be infected by their husbands<sup>22</sup>. Women whose husbands have also been infected in the past are also at risk of being infected with the Human Papilloma Virus. This has to be pointed out in intervention programs as it could lead to stigmatization and wrong labeling of those who are suffering from the disease as being promiscuous and could be a big barrier to women accessing screening services. Statistically, there was a significant association ( $p=0.000$ ) between the level of knowledge and the number of nurses screened. Therefore the null hypothesis which states that there is no significant statistical relationship between knowledge of cervical cancer and utilization of cervical cancer screening among the nurses is rejected.

#### **4.3. Availability of Cervical Cancer Screening Services**

In determining the level of availability of cervical cancer screening services, 309(94.8%) of the nurses screened responded that there is cervical cancer screening facility in the hospital, 5(1.5%) responded there is no cervical screening facility in their hospital while 12(3.7%) do not know if there is a facility or not. Out of the nurses that responded that there is no cervical screening facility, 17(17.7%) reported that management did not provide the facility, while 2(11.8%) responded that staff are not trained to provide the service. This shows there is a great need for sensitization to capture this group who are out of touch with their environment. The result of this study is similar to findings of Hafizur and Sumit (2015), who reported that 91.4% of the nurses recruited in their study, responded that there is a screening facility in their hospital, 2.5% responded that there was no screening facility in their hospital, while 6.1% didn't give any response. The study revealed a significant association ( $p=0.000$ ) between the level of availability of cervical screening services and number of nurses screened. Therefore the null hypothesis which states that there is no significant statistical relationship between availability of cervical cancer screening services and utilization of cervical cancer screening among the nurses is rejected.

#### **4.4. Rate of Utilization of Cervical Cancer Screening Services**

The findings of this study revealed low utilization of cervical cancer screening services among female nurses in federal Medical Centre Owerri. Out of 326 respondents, only 94 (29%) nurses have undergone screening while 232(71%) have never been screened. The study also shows that 73(77.7%) screened only once. This is against standard recommendation which says that women aged 21-65years should be screened every three years (Smith, 2019). 87(92.6%) indicated that they have not been vaccinated against HPV as only 7(7.4%) claimed to have been vaccinated. This is a call for action. The poor utilization of cervical screening and vaccination

documented in this study affirms the findings from other studies among nurses (*Khanna et al.*,2019;*Dulla et al.*,2017)<sup>10</sup>.

#### **4.5. Factors Militating Against Utilization of Cervical of Cervical Cancer Screening Services.**

Out of the 322 participants who has never been screened, 90(38.8%) indicated fear of result as the reason for not undergoing cervical screening followed by lack of time 60 (25.9%). High cost of test recorded 30(12.9%), Not aware of test recorded 19(8.2%), Procedure cumbersomeness 18(7.7%), healthy and does not require test 15(6.5%). The shows that majority of the respondents indicated fear of result 90(38.8%) as the reason for not undergoing cervical screening. Other reasons given for non-utilization such as fear of the results and not being candidate for cervical cancer have also been documented in other studies. These misconceptions need to be addressed in an intervention program targeting this category of health workers. Other important factors militating against effective utilization of cervical cancer screening services among female nurses are lack of time, high cost of the test, cumbersomeness of the procedure and not being aware of the test. This is line with the study conducted by Ifemelumma *et al* (2019)<sup>10</sup>.

#### **4.6 Implications of the Study**

One of the key implications of this study is the need for cervical cancer screening education programs to be carried out among health professionals at all levels especially among nurses. Despite the high level of awareness among the respondents, utilization remains low. Reproductive health education specialists have a significant role to play in reversing this trend among nurses as they constitute one of most authoritative sources of information about health matters for the general populace especially women. The continuing education program such as institution based health workshops and seminars provide an opportunity for doing this. Nurses need to be trained not only to provide comprehensive health education services routinely to their clients but to also motivate themselves to practice what they teach and lead by example.

#### **4.7 Summary**

This research is an assessment of the knowledge of cervical cancer and utilization of cervical cancer screening services among female nurses in Federal Medical center Owerri, Imo State. It was intended to determine the knowledge of cervical cancer and utilization of cervical cancer screening from November –December 2020.

Various literatures on cervical cancer was reviewed, a cross-sectional survey was used for the study. Variables like knowledge and socio demographic characteristics were used for the hypotheses. The target population consisted of the female nurses in Federal medical Centre Owerri but the accessible population of the study comprised of the 326 female nurses randomly selected with equal representation for the study. The main instrument used for the study is a structured questionnaire which was approved by a consultant in gynaecological oncology and the supervisor. Data collected was analyzed using descriptive statistics of frequency percentages, charts and inferential statistics of Pearson chi-square using SPSS version 21.0( $p= 0.05$ ).

The level of knowledge of cervical cancer was relatively high but the rate of utilization of cervical cancer screening services was low 94(29%). Implication of the study and recommendations were also stated.

#### **4. CONCLUSION**

Despite the improved level of awareness of cervical cancer screening, adequate knowledge of cervical cancer and availability of cervical cancer screening services at the centre, the utilization of cervical cancer screening services among the female nurses remains low. This contributes to the morbidities and loss of lives from this scourge. It is also an overt call to action to all stake holders to address the foremost hindrance to uptake of screening services which is fear of result as well as others.

#### **Recommendations**

1. Upgrading the knowledge base of nurses should be imperative as they play an important role in the prevention of cervical cancer in the community.
2. To improve level of utilization, screening programs should be organized by health workers to promote early detection and rule out the fear of cervical cancer among female individuals most especially nurses.
3. Professional cadre and by extension social class is a variable to consider in improving utilization of screening services. The older nurses should be used and encouraged to serve as cervical cancer screening motivators for their junior colleagues. This would ultimately dovetail to the community at large.
4. Nurses should be screened for cervical cancer during recruitment to avail them screening opportunity.
5. Awareness should be created in the schools and colleges of nursing not just as a course but students should be encouraged to undergo screening and be vaccinated. It can also be made as part of the medical certificate of fitness at this level in other to capture them young.
6. Hospital managements in partnership with Ministry of health should sponsor the organization of a National Cervical Cancer Day in all the hospitals in the country.
7. Vaccines should be made available at little or no cost by the government.

#### **REFERENCES**

1. Torre, L. A., Islami, F., Siegel, R. L., Ward, E. M. & Jemal, A. Global cancer in women: burden and trends. *Cancer Epidemiol. Prev. Biomarkers* **26**, 444–457 (2017).
2. WHO. Human PapillomaVirus (HPV) and cervical cancer. [www.who.int](http://www.who.int) (2019).
3. Cordeiro, C. N. & Gemignani, M. L. Gynecologic Malignancies in Pregnancy: Balancing Fetal Risks With Oncologic Safety. *Obstet. Gynecol. Surv.* **72**, 184–193 (2017).
4. Dugue, P.-A., Rebolj, M., Garred, P. & Lynge, E. Immunosuppression and risk of cervical

- cancer. *Expert Rev. Anticancer Ther.* **13**, 29–42 (2013).
5. WHO. Human papillomavirus (HPV) and cervical cancer. <https://www.who.int/mediacentre/factsheets/fs380/en/> (2016).
  6. Sawaya, G. F., Kulasingam, S., Denberg, T. D. & Qaseem, A. Cervical cancer screening in average-risk women: best practice advice from the Clinical Guidelines Committee of the American College of Physicians. *Ann. Intern. Med.* **162**, 851–859 (2015).
  7. Chirenje, M. The Global Impact of Cervical Cancer University of Zimbabwe. (2014).
  8. Mensah, D. A. Awareness of Cervical Cancer Screening among Nurses in the Korle Bu Teaching Hospital. (2016).
  9. Seyoum, T., Yesuf, A., Kejela, G. & Gebremeskel, F. Utilization of cervical cancer screening and associated factors among female health Workers in Governmental Health Institution of Arba Minch town and Zuria District, Gamo Gofa zone, Arba Minch, Ethiopia, 2016. *Arch Cancer Res* **5**, 165 (2017).
  10. Ifemelumma, C. C. *et al.* Cervical cancer screening: assessment of perception and utilization of services among health workers in low resource setting. *Int. J. Reprod. Med.* **2019**, (2019).
  11. Center, N.-H. I. Human Papillomavirus and related cancers fact sheet 2018.
  12. UK, C. R. Cervical cancer statistics. <https://www.cancerresearchuk.org/health-professional/cancer-statistics/statistics-by-cancer-type/cervical-cancer> (2019).
  13. Society, A. C. Key Statistics for Cervical Cancer.
  14. Ameber, P. Countries with the highest incidence of cervical cancer in the World. <https://www.cancer.org/cancer/cervical-cancer/about/key-statistics.html>.
  15. Oluwole, E. O., Mohammed, A. S., Akinyinka, M. R. & Salako, O. Cervical cancer awareness and screening uptake among rural women in Lagos, Nigeria. *J. Community Med. Prim. Heal. Care* **29**, 81–88 (2017).
  16. WHO. WHO Fact Sheet on HPV & Cervical Cancer. [https://www.who.int/en/news/factsheets/detail/human-papillomavirus-\(hpv\)-and-clinical-cervical-cancer](https://www.who.int/en/news/factsheets/detail/human-papillomavirus-(hpv)-and-clinical-cervical-cancer) (2018).
  17. Chinweuba, A., Iheanacho, P. & Agbapuonwu, N. Research and Statistics in Nursing and Related Professions: Beginners Guide. *Enugu, Niger. El 'Demak Pubs* (2014).
  18. Ikehi, M. E. *et al.* Survey on Sample Sizes of Postgraduate Theses in Agricultural Education and Extension in Universities of Nigeria. *J. Ext. Educ.* **31**, (2019).
  19. Kokuro, M. Factors affecting Utilization of cervical cancer screening among women attending health services in Kumasi Metropolis. (2017).
  20. Utoo, B. T., Ngwan, S. D. & Anzaku, A. S. Utilization of screening services for cancer of the cervix in Makurdi, Nigeria. *J. Reprod. Biol. Heal.* **1**, 1 (2013).
  21. Moss, S. M. *et al.* Comparison of the performance of HPV tests in women with abnormal cytology: results of a study within the NHS cervical screening programme. *Cytopathology* **26**, 373–380 (2015).



22. Thomas, J. O. *et al.* Prevalence of papillomavirus infection in women in Ibadan, Nigeria: a population-based study. *Br. J. Cancer* **90**, 638–645 (2004).