



## Awareness and Practice Of Cervical Cancer Screening Among Female Workers In Uwani General Hospital Enugu: In Enugu Education Zone, Enugu State Of Nigeria

Afam Ndu<sup>1</sup>

Ijeoma Judith Ilo<sup>2</sup>

Vera Ogechi Osuagwu<sup>3</sup>

Osuorah Chitoo Stephanie<sup>4</sup>

### Authors' Affiliation

<sup>1</sup>Department of Nursing Sciences  
Faculty of Health Sciences, Tansian  
University Umuaya  
[afamci@yahoo.com](mailto:afamci@yahoo.com)

<sup>2</sup>Department of Nursing Sciences  
Faculty of Health Sciences and  
Technology  
University of Nigeria, Enugu Campus

<sup>3</sup>Department of Nursing Sciences  
College of Nursing Sciences, UNTH  
Enugu

<sup>4</sup>Department of Nursing Sciences  
College of Nursing Sciences UNTH  
Enugu  
[chitooosuorah@gmail.com](mailto:chitooosuorah@gmail.com)

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### ABSTRACT

*This study is investigated the level of awareness and practice of cervical cancer screening among female workers in Uwani general hospital. A sample size of 20 adult was drawn from a total population of 180 female workers using Krejcie & Morgan power analysis. Proportionate sampling technique was used to get the sample size for each department. Data was collected using a researcher-developed questionnaire which was face and content validated and has a Chrombach's Alpha reliability value of 0.85. Data collated were subjected to descriptive statistics of frequency and percentages and inferential statistics of Chi-square to test the association between variables. Major findings revealed that, 98(66.2%) have heard about cervical cancer, practice of cervical cancer screening is poor; only 28(18.9%) have been screened for cervical cancer.*

## Introduction

Cancer is a leading cause of death in women and among the top three causes of premature mortality in almost all countries worldwide. The true burden of cancer in women has gone largely unrecognised and has far-reaching consequences for families and society more broadly. Cervical cancer, caused by persistent infection with the human papillomavirus (HPV), is one of the most preventable cancers. It is the fourth most common cancer among women worldwide, with an estimated 604,000 new cases and 342,000 deaths reported in 2020, the vast majority occurring in low- and middle-income countries (LMICs). Women in LMICs account for nearly 90% of both new cases and deaths due to limited access to preventive services and treatment..

In sub-Saharan Africa, the burden of cervical cancer is particularly high compared with other world regions. Nigeria, Africa's most populous country, bears a disproportionate share of this burden. Based on the most recent Globocan estimates, Nigeria recorded approximately **12,000 new cervical cancer cases and 8,000 deaths in 2020**, making it one of the countries with the highest incidence of cervical cancer in the world. Cervical cancer is the **second most common cancer among Nigerian women**, following breast cancer, and is also a leading cause of cancer-related mortality among women aged 15–44 years.

Nigeria, there were an estimated 13 676 new cases of cervical cancer in 2023, resulting in an age-standardise incidence rate of 26.2 per 100,000 women. In the same year, an estimated 7 093 women died from the disease, resulting in an age-standardise mortality rate of 14.3 per 100,000 women. It is predicted that without any intervention, a total of 1 587 137 women in Nigeria will die from the disease between 2020-2070, rising to 7 127 551 by 2120.

HPV infection is the necessary cause of most cervical cancer cases. Persistent infection with high-risk HPV types, especially HPV-16 and HPV-18, is responsible for a substantial proportion of invasive disease. Vaccination against HPV has been shown to be highly effective in preventing infections with these high-risk types and thereby reducing the future risk of cervical cancer. However, HPV vaccination coverage and uptake in many LMICs, including Nigeria, remain suboptimal, despite recent efforts to integrate the vaccine into national immunization programs. Prophylactic

vaccines against HPV, as well as screening for HPV followed by treatment of pre-cancerous lesions, are both highly effective and cost-effective ways to prevent cervical cancer. In November 2020, the World Health Organization (WHO) launched a Global Strategy to accelerate the elimination of cervical cancer as a public health problem. The strategy recommends that countries achieve the '90-70-90' intervention targets by 2030.

Screening for cervical cancer using tests such as cytology (Pap smear), HPV DNA testing, and visual inspection methods can detect pre-cancerous changes before they progress to invasive cancer, significantly reducing incidence and mortality where screening programs are widely implemented. In high-income countries with organized screening programs, early detection and treatment have prevented a majority of invasive cervical cancer cases. In contrast, low uptake of screening services in Nigeria contributes to a high proportion of women presenting with advanced disease, associated with poor treatment outcomes. Structural and systemic factors such as limited awareness about cervical cancer, inadequate screening infrastructure, cost barriers, lack of trained health workers, and rural–urban disparities further compound the challenge of effective prevention and control in Nigeria. These factors contribute to delayed diagnosis and low utilization of available preventive services.

Although cervical cancer is largely **preventable and treatable**, the continued high incidence and mortality highlight critical gaps in awareness, screening uptake, and access to preventive interventions. This underscores the need for targeted strategies to enhance HPV vaccination coverage, promote regular screening, and strengthen health systems to reduce the burden of cervical cancer in Nigeria.

## Statement of Problem

The ongoing high incidence and mortality rates are partly due to gaps in cervical cancer screening and prevention. HPV infection is the necessary cause of almost all cervical cancers, yet awareness of HPV, its risk factors, and prevention through vaccination or regular screening remains low, especially among women in resource-constraint settings. Factors such as limited knowledge about cervical cancer, lack of organized screening programs, inadequate infrastructure, financial barriers, and rural–urban

disparities further limit screening uptake in Nigeria and other developing regions.

Although cervical cancer is largely preventable through HPV vaccination and early detection via screening modalities such as Pap smear and HPV DNA testing, screening uptake in many settings remains suboptimal. In particular, evidence suggests that awareness does not always translate into screening uptake due to structural, economic, and informational barriers. Within this context, there is a lack of empirical data on the level of cervical cancer awareness and screening practices among female workers at UWANI General Hospital. It is unclear whether knowledge about cervical cancer influences screening behavior and what specific barriers this population faces. This research therefore seeks to address this gap by assessing awareness levels, examining screening uptake, and identifying actionable challenges that hinder cervical cancer prevention among female hospital workers. Addressing these gaps is critical for developing targeted interventions, improving screening coverage, and ultimately reducing the burden of cervical cancer in this setting and similar healthcare environments.

### **Purpose of the Study**

This study is therefore aimed at ascertaining the level of awareness and practice of cervical cancer screening among female workers in Uwani general hospital

### **Objectives of the Study**

1. Ascertain the level of awareness of Cervical Cancer screening among the participants,
2. Assess the practice of Cervical Cancer screening among them
3. Determine factors that hinder practice of cervical cancer screening

### **Research Questions**

4. What is the workers level of awareness of cervical cancer screening do they practice cervical cancer screening?
5. What are the factors that

hinder the practice of cervical cancer screening among female workers in Uwani general hospital?

### **Hypothesis**

There is a significant association between level of education and practice of cervical cancer screening among female workers in Uwani General Hospital, Enugu.

### **Significance of the Study**

This study is significant because it provides hospital-specific evidence on cervical cancer awareness and screening uptake among female workers at UWANI General Hospital. Despite the recognized importance of early detection, there is limited data on knowledge levels, screening behavior, and barriers within this hospital community. By focusing on this population, the study fills a local research gap and generates findings that are directly applicable to institutional health planning. A key objective of the research is to determine whether awareness of cervical cancer translates into actual screening uptake among female hospital workers. Understanding this relationship is critical to identifying whether knowledge alone influences preventive health behavior or if other structural or logistical factors limit participation in screening programs.

The study will also distinguish between awareness, access, and actionable barriers. Beyond assessing knowledge gaps, it will examine practical constraints such as cost, time availability, accessibility of screening services, and organizational support for preventive care. Based on these findings, the study will propose specific, measurable recommendations to improve cervical cancer screening coverage within the hospital community. The findings will be valuable to hospital management, public health authorities, and community health workers. Results can inform targeted interventions, such as health education campaigns, workplace screening initiatives, policy formulation, and efficient allocation of resources to improve service utilization. In addition, the study will contribute to the existing body of knowledge on cervical cancer prevention and serve as a reference for future research in similar healthcare settings.

## Literature

### Review

#### Theoretical Frame Work

The theoretical model used for this study is the health belief model. The Health Belief Model (HBM) is one of the most widely used conceptual frameworks for understanding health behavior. Developed in the early 1950s, the model has been used with great success for almost half a century to promote greater condom use, seat belt use, medical compliance, and health screening use, to name a few behaviors.

The HBM is based on the understanding that a person will take a health-related action (i.e., use condoms) if that person: Feels that a negative health condition (i.e., HIV) can be avoided, Has a positive expectation that by taking a recommended action, he/she will avoid a negative health condition (i.e., using condoms will be effective at preventing HIV), and. Believes that he/she can successfully take a recommended health action (i.e., he/she can use condoms comfortably and with confidence). The Health Belief Model is a framework for motivating people to take positive health actions that uses the desire to avoid a negative health consequence as the prime motivation. For example, HIV is a

negative health consequence, and the desire to avoid HIV can be used to motivate sexually active people into practicing safe sex. Similarly, the perceived threat of a heart attack can be used to motivate a person with high blood pressure into exercising more often.

It's important to note that avoiding a negative health consequence is a key element of the HBM. For example, a person might increase exercise to look good and feel better. That example does not fit the model because the person is not motivated by a negative health outcome — even though the health action of getting more exercise is the same as for the person who wants to avoid a heart attack. The HBM can be an effective framework to use when developing health education strategies. A large research study reviewed 46 studies of HBM-based prevention programs published between 1974 and 1984. The HBM-based programs focused on a variety of health actions. The results of the meta-analysis provided substantial empirical support for the efficacy of the HBM. For more information on this study, consult "The Health Belief Model and Personal Health Behavior" (Becker, 1974).

#### Health Belief Model: Major Concepts

HBM is based on six key concepts. The following table, excerpted with minor modifications from "Theory at a Glance: A Guide for Health Promotion Practice" (1997), presents definitions and applications for each of the six key concepts.

**Table 2**

Concept	Definition	Application
1.Perceived Susceptibility	One's belief of the chances of getting a condition	Define population(s) at risk and their risk levels  Personalize risk based on a person's traits or behaviors  Heighten perceived susceptibility if too low
2.Perceived Severity	One's belief of how serious a condition and its consequences are	Specify and describe consequences of the risk and the condition

3.Perceived Benefits	One's belief in the efficacy of the advised action to reduce risk or seriousness of impact	Define action to take — how, where, when Clarify the positive effects to expected Describe evidence of effectiveness
4.Perceived Barriers	One's belief in the tangible and psychological costs of the advised behaviors	Identify and reduce barriers through reassurance, incentives, and assistance
5.Cues to Action	Strategies to activate "readiness"	Provide how-to information Promote awareness Provide reminders
6.Self-Efficacy	Confidence in one's ability to take action	Provide training, guidance, and positive Reinforcement

### Application of theory to the study

The Health Belief Model (HBM) is a framework for motivating people to take positive health actions that uses the desire to avoid a negative health consequence as the prime motivation. Being aware of cervical screening as a method of early detection and prevention of cervical cancer will improve the health seeking behavior of women especially those classified as population(s) at risk and invariably increase their knowledge of risk levels, personalize risk based on a person's traits or behaviors. Perceived heighten susceptibility of an individual to cervical cancer is a key factor to this. Also, if an individual knows the severity and consequences including the economic burden of this disease both to self, family and society at large, the benefits of early detection through screening exercise, the person will be motivated positively to seek health unlike when she is not aware or well informed. The individual at this point will not be held back by any so-called barrier to embarking on routine screening exercise and will always demonstrate willingness to be screened having the belief that early screening is the key to prevention and proper treatment.

### Health Literacy and Knowledge-Demand Theory

The Health Literacy and Knowledge-Demand Theory explains that an individual's level of knowledge, understanding, and ability to access health information greatly influences health-related behaviors and decision-making. The theory emphasizes that people who possess adequate health literacy are more likely to understand disease conditions, preventive measures, and the importance of early diagnosis and treatment. Consequently, they are more willing to engage in positive health practices such as routine medical screening and vaccination.

In relation to cervical cancer, this theory suggests that women who are knowledgeable about cervical cancer risk factors, symptoms, prevention strategies, and available screening methods such as Pap smear and HPV testing are more likely to participate in screening programs. Awareness and proper understanding of screening guidelines also improve the chances of early detection and timely treatment of cervical abnormalities before they progress to invasive cancer.

The theory further explains that educational level and access to accurate health information play

important roles in shaping health behavior. Women with higher educational attainment and better exposure to health information are expected to have better comprehension of cervical cancer prevention and are therefore more likely to utilize screening services. Conversely, low health literacy, misinformation, fear, and poor access to information may reduce participation in cervical cancer screening practices. This theory is relevant to the present study because it helps explain how awareness, education level, and access to cervical cancer information among female workers in Uwani General Hospital may influence their practice of cervical cancer screening. It supports the investigation of whether increased knowledge and understanding translate into improved screening uptake among the respondents.

### Empirical Review

In a study on Awareness and Practice of Cervical Cancer Screening among Female Undergraduate Students in a Nigerian University by Aniebue, P.U., Aniebue, and U.U. in (2010), a cross-sectional survey of 394 students was done. About 23.1% identified the Pap smear as a screening test. Only 5.2% of respondents had ever been screened and 52.8% reported willingness to be screened. The major reason for unwillingness to get a Pap smear was absence of symptoms (31.7%). There is a critical need to improve cervical cancer screening participation amongst female undergraduate students in Nigeria.

Knowledge, attitude and practice of cervical cancer screening among market women in Zaria, Nigeria a study by Saad A. A., Kabiru S., Suleiman H. I., and Rukaiya A. (2013) This was a cross-sectional study to evaluate the knowledge, attitude and practice of cervical cancer screening among market women. A total of 260 women were administered with questionnaires which were both self and interviewer administered. These were analyzed using SPSS version 11. Respondents exhibited a fair knowledge of cervical cancer and cervical cancer screening (43.5%); however, their knowledge of risk factors was poor. There was generally good attitude to cervical cancer screening (80.4%), but their level of practice was low (15.4%). There was a fair knowledge of cervical cancer and cervical cancer screening among Nigerian market women in this study, their practice of cervical cancer screening was poor.

Knowledge about cervical cancer screening and its practice among female health care workers in southern Ethiopia: a cross-sectional study by Dulla D, Daka D, and Wakgari N.(2015) in Southern Ethiopia.

A simple random sampling technique was used to draw the health centers. After proportional allocations to their respective health facilities, a total of 367 female health workers were selected by simple random sampling technique. A structured and pretested questionnaire was used to collect the data. Data were entered to SPSS version 20.0 for further analysis. Logistic regression analyses were used to see the association of different variables. Out of the total respondents, 319 (86.9%) had a good level of knowledge on cervical cancer. Similarly, a majority of them, 329 (89.6%), 321 (87.5%), and 295 (80.4%), knew about the risk factors, symptoms, and outcomes of cervical cancer, respectively. More than two thirds of the respondents, 283 (77.1%), knew that there is a procedure used to detect premalignant cervical lesions and 138 (37.6%) of them mentioned visual inspection with acetic acid as a screening method. In this study, only 42 (11.4%) of the respondents were screened for cervical cancer, Significant numbers of health care workers were knowledgeable on cervical cancer. Cervical cancer screening among health care workers in southern Ethiopia was found to be low. Being a physician and working in a screening center had lower odds of cervical cancer screening practice. In spite of having adequate knowledge on cervical cancer the reasons for low practice of cervical cancer screening among health care workers needs to be investigated.

Another study by Sujindra E., Praveena R., Sivashankari T.,(2016), Cervical cancer screening Awareness, attitude and practice of Indian women. Cross-sectional survey with pretested questionnaires on 200 women belonging to two categories comprising 100 high school teachers and 100 housewives. Mean age of the teachers was  $38.2 \pm 13.2$  years and of the housewives  $40.38 \pm 12.2$  years. All the teachers had heard about cervical cancer, 98% about the availability of some screening method for cervical cancer, and 79% about Pap smear. Among the housewives, 72% knew about cervical cancer,

70% about the availability of screening methods, and 38% had heard about Pap smear. The practice of cervical cancer screening methods was not adequate among teachers and housewives.

However, their knowledge and attitude were welcoming. Knowledge, attitudes, and practices regarding cervical cancer and screening among women visiting primary health care Centres in Bahrain, a study carried out by Ghufuran J., Alaaeddin O. and Huda A., Al Nasheet (2020), This was a cross-sectional study of 300 women attending primary health care centres in Bahrain. We used a validated tool comprised of 45 items to collect data through face-to-face interviews between December 2015 and February 2016. Descriptive data are presented for demographic data, and frequency distributions with percentages are presented for each item of the knowledge and attitude questionnaire. The mean age  $\pm$  SD of the participants was  $37.24 \pm 11.89$  years, they were mostly married (221; 73.7%), and had a high school or higher education (261; 87%). Over 64% (194 participants) had never heard of a Pap smear procedure and only 3.7% (11 participants) had heard about the human papillomavirus (HPV) vaccine. Nearly 64% (192 participants) believed that a Pap smear was helpful in detecting pre-cancer and cancer of the cervix, and 44.3% (133 participants) believed that they should have a Pap smear at least every 3 years. Regarding the practice, only 40.7% (122 participants) had a Pap smear in their lifetime. The majority of participants felt embarrassed when examined by a male doctor (250, 83.3%) and few underwent a Pap smear screening if they were never married (69, 23.0%). Participants demonstrated a wide range of

knowledge and attitudes towards cervical cancer screening. However, the majority demonstrated a positive attitude towards the HPV vaccine. This study shows the need to establish a sustainable awareness campaign concerning the prevention of cervical cancer, and further emphasizes the importance of a nationwide population-based screening program across primary health care centers.

## Research Methodology Research Design

Descriptive survey design was used for this study. This is a research design that has as its main objective the accurate portrayal of the characteristics of persons, phenomena, situation, population or groups and/ or the frequency with which certain phenomena occur (Alexia, 2019). Since the purpose of descriptive survey is to observe, describe or document aspects of human situation, it is considered appropriate for this study on awareness and practice of cervical cancer screening among female workers in Uwani general hospital.

## Area of Study

This study was conducted in Uwani general hospital. North-coal camp Asata and the main city center. South-Amechi- Awkunanaw, Ugwuaji and Akwuke. East-Achara layout and Maryland. West-ogbete old Road and toward the rail line. The hospital comprises of many departments, wards and runs different clinics on daily basis.

## Target Population

The target population for this study comprised all female workers in Uwani General Hospital, Enugu. The total population of female workers in the selected departments was 1,090 respondents.

## Sample Size and Sampling Technique

The sample size for this study was determined using the Krejcie and Morgan (1970) sample size determination formula.

The formula is stated as:  $[S = \frac{X^2NP(1-P)}{d^2(N-1)+X^2P(1-P)}]$

Where:

(S) = required sample size

( $X^2$ ) = table value of chi-square at 0.05 level of significance = 3.841

(N) = population size = 1090

(P) = population proportion = 0.5

(d) = degree of accuracy = 0.05

Substituting into the formula:

$$S = \frac{3.841 \times 1090 \times 0.5(1-0.5)}{0.05^2(1090-1)+3.841 \times 0.5(1-0.5)}$$

$$S = \frac{3.841 \times 1090 \times 0.25}{0.0025(1089)+0.96025}$$

$$S = \frac{1046.17}{3.68275}$$

$$S \approx 177$$

Therefore, the sample size for the study was 177 respondents, representing approximately 16.24% of the target population. A proportionate sampling technique was used to allocate respondents across the selected departments.

**Table 3**

<b>Departments</b>	<b>No of female workers</b>	<b>Sample size</b>
Nursing services (nurses/orderlies)	300	48.5
Accounts	200	32
Medical records	200	32.5
Administration	150	24
Stores	120	20
Medical laboratory	120	20
<b>Total</b>	<b>1090</b>	<b>177</b>

The instrument for data collection was a researcher's structured questionnaire which consists of both open and closed ended questions. It was constructed based on the objectives of the study. The questions were arranged in a way that there was smooth movement from item to item. Section A will consist of 7 questions which deal with demographic data, section B were information on the awareness and section C assesses the practice of cervical cancer screening among females in.

### **Validation and Reliability of the Instrument**

The questionnaire was submitted to the project supervisor and to another lecturer in the department for face and content validity to evaluate the relevance of the content and clarity of statement. The necessary suggestions from the validators were affected by the researcher in the final refinement of the instrument. A pilot study was conducted for the reliability of the instrument by pre-testing it on 20 female workers at ESUTH Enugu that has similar characteristics with the study area. The data obtained were subjected to split half reliability using Pearson Product Moment Correlation Coefficient to calculate the internal consistency of the instrument. A coefficient of 0.85 was obtained, this being greater than 0.7 indicated that the reliability of the test instrument was very strong.

### **Pilot Study**

A pilot study was conducted among 20 female workers at ESUTH Enugu, who possessed similar characteristics with the study population but were not included in the main study. The purpose of the pilot study was to determine the clarity, reliability, and consistency of the research instrument. Data obtained from the pilot study were analyzed using Pearson Product Moment Correlation Coefficient through split-half reliability method. A reliability coefficient of 0.85 was obtained, indicating that the instrument was reliable for the study.

### **Ethical Consideration**

To obtain ethical consideration, the chief medical direct was met though the deputy director of nursing services in charge of the nurses and unit heads of other department to get permission to carry out the research. The researcher ensured privacy and confidentiality is maintained by not including the names and address of the respondents in the questionnaire. The purpose of the study was explained to the respondents to gain their consent before administering the questionnaire.

### **Method of Data Collection**

The questionnaire developed by the researcher was used to obtain information from participants to determine their level of awareness and practice of cervical cancer screening. Three research assistants preferably nurses were used for data collection and were trained on the purpose of the study, selection

of subjects and the interpretation of the questions in the questionnaire.

### Procedure for Data Collection

The researcher and the assistant used 3 days (Tuesday, Wednesday and Thursdays) every week for data collection for a total of 4 weeks. The questionnaires were issued to the respondents and on the spot, collection done where possible if not, a later day was used for collection. This was continued till a total 322 participants which is the sample size is reached from the six-department selected randomly.

### Data Analysis

Item by item analysis was done to show the response frequency and percentages of various categories of data generated from the research instrument and completed data will be presented on tables and bar charts.

### Presentation and Interpretation of Results

**Table 4: Socio-demographic information n = 320**

S/N	Variables	Frequency	Percentage
	Age		
	22-27 years	28	8.8
	28-33 years		
	34-39 years	50	15.6
	40-45 years	98	30.6
	46-51 years	76	23.8
	52-57 years	44	13.8
	58 years and above	20	6.3
		4	1.3
	Marital status	86	26.9
	Single		
	Married	199	62.2
	Divorced		
	Widowed	8	2.5
	Separated	17	5.3
		10	3.1
	Religion	316	98.8
	Christianity		
	Traditional	4	1.3
	Level of education	16	5.0
	Primary		
	Secondary	67	20.9
	Tertiary	237	74.1
	Department (See appendix)		

No of children			
None	30	9.4	
One	46	14.4	
Two	41	12.8	
Three	70	21.9	
More than three	74	23.1	
No response	59	18.4	

Table 4 contains the socio-demographic information of the respondents. 174(54.4%) of the respondents were within the age range of 34 to 45years. And 50(15.6) were within 28 to 33years of age. 199(62.2%) were married while 86(26.9%) were single. 316(98.8%) were Christians. 237(74.1%) attained tertiary level of education while 67(20.9%) had secondary education. 145(45.0%) of the respondents had three or more children.

**Objective one: Ascertain the level of awareness of Cervical Cancer screening among the participants**

**Table 5: Awareness of cervical cancer screening among female workers at uwani general hospital.**

S/N	Question	Frequency	Percentage
1	Have you ever heard about the Pap smear?	216	67.5
	Yes	104	32.5
	What is Pap smear?	172	53.8
	A test to detect abnormal cells in the cervix	32	10.0
	A test to diagnose cancer of the uterus	18	5.6
	A test to detect any type of cancer cells	91	28.4
	No idea		
	When should one have pap smear done	118	36.9
	Onset of sexual activity		
	Before menarche	2	0.6
	After menopause	12	3.8
	Yearly	63	19.7
	Not sure	119	37.2
	At what interval should women go for Pap Smears	89	27.8
	At least every 3 years	110	34.4
	Once in a year	8	2.5
	Every month		
	Don't know	113	35.3
	Who should do pap smear?		
	Women 16-65years	202	63.1
	Women 10-20years	2	0.6
	Only women 65years and above	9	2.8
	Menopausal women only	23	7.2
	Don't know	84	26.3
	Pap smear is the most helpful way to detect pre-cancer and cancer of the cervix.	213	66.5
	Yes	2	0.6
	No	105	32.8
	Don't know		

What are the advantages of pap smear? For early detection of cancer To reduce incidence of cervical cancer  To reduce mortality (death) from cervical cancer For early initiation of treatment I don't know	178	55.6
	177	55.3
	140	43.8
	158	49.4
	94	29.4
A woman should not have sex 24 h before having Pap smear.  Yes No I don' know	140	43.8
	32	10
	148	46.3
Pap smear should be discontinued after menopause Yes No  I don' know	24	7.8
	157	49.1
	139	43.4
If someone is having a normal Pap smear, she does not		
need Pap smears in the future  Yes No I don' know	44	13.8
	140	43.8
	146	45.6
Have you heard about HPV vaccine? Yes No	187	58.4
	133	41.6
Pap smear is unnecessary if there are no signs and symptoms  Yes No I don' know	52	16.3
	152	47.5
	116	36.2
If yes, would you allow yourself or children to be vaccinated  Yes No No response	183	57.2
	52	16.3
	85	26.6

Table 5 shows the respondents' awareness to cervical cancer screening. 216(67.9%) claimed they have heard of cervical cancer and 172(53.8%) answered that it is a test to detect abnormal

cells in the cervix while 91(28.4%) had no idea what it is. 118(36.9%) of the respondents believe pap smear should be done at the onset of sexual activity while 119(37.2%) had no idea when one should get it done. Only 89(27.8%) correctly answered that pap smear should be done at 3year intervals. As regards who should do pap smear, 202(63.1%) thought women 16-65years should while 84(26.3%) didn't know. 213(66.5%) agreed Pap smear is the most helpful way to detect pre-cancer and cancer of the cervix. The advantages of cervical cancer as agreed by the respondents were: For early detection of cancer 178(55.6%), to reduce incidence of cervical cancer 177(55.3), to reduce mortality (death) from cervical cancer 140(43.8%) and for early initiation of treatment 158(49.4%). 140(43.8%) thought that a woman should not have sex 24 h before having Pap smear while 148(46.3%) didn't know about that. Only 24(7.8%) knew that Pap smear should not be discontinued after menopause. 44(13.8%) thought that If someone is having a normal Pap smear, she does not need Pap smears in the future, while 140(43.8%) didn't think so but 146(45.6%) didn't know. Only 187(58.4%) have heard about HPV vaccine. 152(47.5%) agreed that Pap smear is necessary even if there are no signs and symptoms. Only 183(57.2%) of the respondents would allow themselves to be vaccinated.

**Table 6: Summary of Awareness of cervical cancer screening among female workers at Uwani general hospital.**

Awareness	Frequency	Percentage
Poor	173	54.1
Good	147	45.9

**Decision rule:**

Total score on awareness = 15 Total

Score < 10 – poor awareness Total

score  $\geq$ 10 – high awareness

The Table above shows that, overall, 147(45.9%) were aware of cervical cancer screening.

**Objective two: Assess the practice of Cervical Cancer screening among them**

**Table 7: Practice of cervical cancer screening among female workers in Uwani general hospital.**

Questions	Frequency	Percentage
Have you ever had a Pap smear done?		
Yes	61	19.1
No	259	80.9
If yes, when?		
This year	5	1.6
1-2 years ago	18	5.6
3 years ago	10	3.1
More than 3years	19	5.9
Have you gone for a repeat pap smear?		
Yes	19	5.9

Table 7 provides information on cervical cancer screening. It shows that only 61(19.1%) have been screening for cervical cancer and 5(3.4%) were screening this year, 18(5.6%), 1-2years ago, 10(3.1%) 3years ago, and 19(5.9%) more than 3years ago. Only 8(5.4%) have one for repeat pap smear.

**Objective three: Determine factors that hinder practice of cervical cancer screening**

**Table 8: Factors militating uptake of cervical cancer screening**

S/N	ITEMS	SA(%)	A(%)	D(%)	SD(%)	Mean±SD
1	Having a pap smear is unpleasant and embarrassing	102(31.9)	98(30.6)	81(25.3)	39(12.2)	2.8±1.01
2	It is difficult to take time off to go for pap smear	14(4.4)	128(40.0)	139(43.4)	39(12.2)	2.4±0.75
3	I am afraid that something wrong will be detected if I go for pap smear	116(36.3)	114(35.6)	69(21.6)	19(5.9)	3.0±0.93
4	It is difficult to get to the clinic to get pap smear done	14(4.4)	103(32.2)	149(46.6)	54(16.9)	2.2±0.78
5	Going for pap smear screening is too expensive	43(13.4)	147(45.9)	94(29.4)	36(11.3)	2.6±0.86
6	Being busy is a barrier to having the test done	36(11.3)	129(40.3)	109(34.1)	46(14.4)	2.5±0.87
7	I would be worried if I was found to have early signs of cancer	205(64.1)	76(23.8)	31(9.7)	8(2.5)	3.5±0.77
8	I am uneasy talking about cancer	122(38.1)	116(36.2)	62(19.4)	20(6.3)	3.1±0.91
9	I will travel a far distance to get pap smear done	13(4.1)	59(18.4)	175(54.7)	73(22.8)	2.0±0.76
10	Attitude of health Workers	74(23.1)	70(21.9)	145(45.3)	31(9.7)	2.6±0.95
11	Discouragement from partners	15(4.7)	75(23.4)	186(58.1)	44(13.8)	2.2±0.72
12	It is painful to have a pap smear	43(13.4)	148(46.3)	88(27.5)	41(12.8)	2.6±0.88

**Decision rule:**

Mean values  $\geq$  a strong militating factor otherwise not.

Table 8 shows the factors militating uptake of cervical cancers screening. among the factors identified by the respondent were the fact that the procedure is unpleasant and embarrassing with a mean response of  $2.8 \pm 1.01$ ; people are also afraid that something wrong will be detected they I go for pap smear  $3.0 \pm 0.93$ ; some think pap smear screening is too expensive  $2.6 \pm 0.86$ ; another barrier is being too busy  $2.5 \pm 0.87$ ; they would be worried if they were found to have early signs of cancer  $3.5 \pm 0.77$ ; some feel uneasy talking about cancer  $3.1 \pm 0.91$ , attitude of health workers  $2.6 \pm 0.95$ , and thoughts that pap smear is a is painful procedure  $2.6 \pm 0.88$

**Hypothesis: There will be no significant association between level of education and practice of cervical cancer screening among female workers in Uwani general hospital Enugu. Table 9: Chi-square test of difference in practice of cervical cancer screening with level of education**

Level of education	Practice of cervical cancer screening		Total	P-value
	Yes	No		
Primary	10(62.5)	6(37.5)	16(5.0)	0.001
Secondary	2(3.0)	65(97.0)	67(20.9)	
Tertiary	49(20.7)	188(79.3)	237(74.1)	

Table 9 above shows the result of Chi-square statistics run to examine if practice of cervical cancer screening differed with level of education. The result shows that there was a significant relationship between level of education and practice,  $p = 0.001 (< 0.05)$ . Practice of screening was observed more among respondents who attained tertiary level of education.

**Summary of major findings**

- Although majority, 216(67.9%) have heard about cervical cancer, only 89(27.8%) correctly answered that pap smear should be done at 3year intervals and 119(37.2%) had no idea when one should get it done
- Practice of cervical cancer screening is poor. only 61(19.1%) have been screened for cervical cancer
- The major militating factors were

fact that the procedure is unpleasant and embarrassing  $2.8 \pm 1.01$ ; fear of detecting cancer  $3.0 \pm 0.93$ ; cost  $2.6 \pm 0.86$ ; busy schedule  $2.5 \pm 0.87$ ; uneasy feeling experienced when talking about cancer  $3.0 \pm 0.91$ , attitude of health workers  $2.6 \pm 0.95$ , and thoughts that pap smear is a is painful procedure  $2.6 \pm 0.88$ .

- There was a significant relationship between level of education and practice of cervical cancer screening,  $p = 0.001 (< 0.05)$ .

## Discussion of Findings

### The level of awareness of Cervical Cancer screening among the participants

The result from this study shown on table 5 revealed that majority 216(67.9%) of the respondents claimed that they have heard of cervical cancer and believe that pap smear should be done at the onset of sexual activity. This was in line with the findings by Dulla D, Daka D, and Wakgari N. (2015) in the Knowledge about cervical cancer screening and its practice among female health care workers in southern Ethiopia in which 319 (86.9%) of the participants have good knowledge of cervical cancer screening and knew about the risk factors, symptoms, and outcomes of cervical cancer, respectively. However, finding was not in line with the study conducted by Saad A. et al (2013) on Knowledge, attitude and practice of cervical cancer screening among market women in Zaria, Nigeria where (43.5%) of respondents exhibited a fair knowledge of cervical cancer and cervical cancer screening, however, their knowledge of risk factors was poor. Also in this study, more than two thirds of the respondents knew that there is a procedure used to detect premalignant cervical lesions. Also only a few of them were aware of the interval when Pap smear should be done. The advantages of cervical cancer as agreed by the respondents were: For early detection of cancer, to reduce incidence of cervical cancer, to reduce mortality (death) from cervical cancer and for early initiation of treatment. About 24(7.8%) knew that Pap smear should not be discontinued after menopause while few 44(13.8%) thought that If someone is having a normal Pap smear, she does not need Pap smears in the future, also only few of them have heard about HPV vaccine and would allow themselves to be vaccinated.

### The practice of Cervical Cancer screening among them

It shows from table 6 that only 61(19.1%) have been screening for cervical cancer and 5(3.4%) were screened this year, 18(5.6%), 1-2years ago, 10(3.1%) 3years

ago, and 19(5.9%) more than 3years ago. Only 8(5.4%) have one for repeat Pap smear. This was in line with findings of Sujindra E., Praveena R., Sivashankari T., (2020) in their study of Cervical cancer screening Awareness, attitude and practice of Indian women. The practice of cervical cancer screening was not adequate among teachers and housewives. Also, a study on the Knowledge, attitudes, and practices regarding cervical cancer and screening among women visiting primary health care Centers in Bahrain, carried out by Ghufraan J. et al 2021, Nearly 64% (192 participants) believed that a Pap smear was helpful in detecting pre-cancer and cancer of the cervix, and 44.3% (133 participants) believed that they should have a Pap smear at least every 3 years. Regarding the practice, only 40.7% (122 participants) had a Pap smear in their lifetime. All this implies a low turnout as regards cervical cancer screening despite the awareness. Conventionally, Pap smear, combined with treatment of cervical pre-cancerous lesions and early-stage cancer, has been successful in preventing up to 80% of invasive cervical cancer cases in the developed world. In developing countries, however, high rates of cervical cancer mortality still persist due to lack of effective screening programs and low uptake of Pap smear testing.

### Factors that hinder practice of cervical cancer screening

Findings shown on table 7 identified some of the factors militating against uptake of cervical cancers screening among the respondent to include; the fact that the procedure is unpleasant and embarrassing with a mean response of, people are also afraid that something wrong will be detected if they go for pap smear, some think pap smear screening is too expensive, another barrier is being too busy, they would be worried if they were found to have early signs of cancer, attitude of health workers, and thoughts that pap smear is a painful procedure among others. However, this agrees with the result of the research by Ghufraan J. et

al 2020 on the Knowledge, attitudes, and practices regarding cervical cancer and screening among women visiting primary health care Centers in Bahrain, they found out that majority of the participants identified being embarrassed while a male doctor performs the screening exercise. Meanwhile, perceived heighten susceptibility of an individual to cervical cancer is a key factor to getting screened. Also, if an individual knows the severity and consequences including the economic burden of this disease both to self, family and society at large, the benefits of early detection through screening exercise, the person will be motivated positively to seek health unlike when she is not aware or well informed. The individual at this point will not be held back by any so-called barrier to embarking on routine screening exercise and will always demonstrate willingness to be screened having the belief that early screening is the key to prevention and proper treatment. In view of this, there is need to improve on awareness campaign regarding cervical cancer screening and vaccination among every female.

**Hypothesis: There will be no significant association between level of education and practice of cervical cancer screening among female workers in Uwani general hospital Enugu.**

**Factors that hinder practice of cervical cancer screening**

Hypothesis Testing

Null Hypothesis ( $H_0$ )

There is no significant association between level of education and practice of cervical cancer screening among female workers in Uwani General Hospital, Enugu.

Alternative Hypothesis ( $H_1$ )

There is a significant association between level of education and practice of cervical cancer screening among female workers in Uwani General Hospital, Enugu.

The hypothesis was tested using Chi-square statistical analysis at 0.05 level of significance.

Findings presented in Table 9 showed that the calculated p-value was 0.001, which is less than the level of significance (0.05).

Since  $p = 0.001 < 0.05$ , the null hypothesis ( $H_0$ ) was rejected while the alternative hypothesis ( $H_1$ ) was accepted.

This implies that there is a significant association between level of education and practice of cervical cancer screening among female workers in Uwani General Hospital, Enugu. Respondents with higher educational qualifications were more likely to practice cervical cancer screening than those with lower educational qualifications.

The finding supports the Health Literacy and Knowledge-Demand Theory, which explains that individuals with better knowledge and understanding of health information are more likely to engage in positive health practices such as cervical cancer screening.

### **Implications of the Study for Nursing**

Findings from this study showed adequate awareness of cervical cancer and pap smear screening test among female workers in uwani general hospital but when and how it is done is not known thus, their practice of cancer screening level is very poor despite educational background. Also, there are some barriers identified as a cause to low patronage of the screening centers by participants. Based on this finding, there is need for periodic awareness campaign within the hospital community by health workers and when possible free screening of willing participants followed by referral if need be.

Since distance to the clinic was identified as a barrier to not getting screened, there is need for screening centers to be centrally located and if possibly available in every community so as to be accessible by women and the price for screening be made affordable for every economic class to achieve.

The Human Papilloma Vaccine through government effort should be given free of charge and mandatory for every girl child to receive it as a routine vaccine as this will go a long way preventing cervical cancer and thus reducing the mortality and morbidity rate.

Cervical cancer screening if possible is to be carried out by female health worker to avoid

the women being embarrassed when they are to be screened by a male health worker.

Proper education of women during ante-natal period on the importance of immunizing the girl child with HPV vaccine after delivery will go a long way in creating awareness and making them conscious of it. If an individual knows the severity and consequences including the economic burden of this disease both to self, family and society at large, the benefits of early detection through screening exercise, the person will be motivated positively to seek health unlike when she is not aware or well informed. The individual at this point will not be held back by any so-called barrier to embarking on routine screening exercise.

### **Limitations of the Study**

The limitations encountered in the course of this study include difficulties in gaining the consent of the respondents. Considering the subject of study, some people were very reluctant divulging personal information and health issues while some complained of having filled questionnaire of recent for other researchers. However, they were assured of confidentiality of their response in the study as it is for academic purpose. Finance and time were other limitations encountered which include the cost and time of producing pages/copies of the questionnaire and analyzing them.

### **Suggestion for further study**

A study can be done to assess level of HPV vaccine uptake for the girl child among mothers of child bearing age.

### **Summary of the Study**

The purpose of this study is to ascertain the level of awareness and practice of cervical cancer screening among female workers in Uwani general hospital, Enugu state. The specific objectives were to: ascertain the level of awareness of cervical cancer screening among the participants, assess the practice of cervical cancer screening among them, determine factors that hinder the practice of cervical cancer screening and determine if there is an association between level of education and practice of cervical cancer screening among female workers in Uwani general hospital. Available literatures related to the study were reviewed. A descriptive survey method was adopted for this study. The target

population of 2000 female workers were obtained on estimation from the personnel record. Sample size of 322 respondents were drawn from the target population using Krejcie & Morgan power analysis formula. Multistage random sampling was used to select departments, units and respondents. Uwani general hospital comprises of about 10-12 departments with some units under it e.g Nursing services dept., Administration dept. etc. Six departments will be selected randomly and using convenience sampling, respondents will be selected from the different department to make up the required sample size. Data collected using researcher's developed questionnaire with reliability of 0.85. A total of 322 questionnaires were distributed with 100% return rate. Data collated was coded, entered and analyzed with the aid of Statistical Package for Social Science (SPSS) version 20. Descriptive statistics which include frequency, percentages, means and standard deviation were used to analyze and answer the research questions. Test of association was done using chi-square. P value < 0.001 level of significance was regarded as significant. Results were presented in tables.

Although majority, 216(67.9%) have heard about cervical cancer, only 89(27.8%) correctly answered that pap smear should be done at 3year intervals and 119(37.2%) had no idea when one should get it done

Practice of cervical cancer screening is poor. only 61(19.1%) have been screened for cervical cancer

The major militating factors were fact that the procedure is unpleasant and embarrassing  $2.8 \pm 1.01$ ; fear of detecting cancer  $3.0 \pm 0.93$ ; cost  $2.6 \pm 0.86$ ; busy schedule  $2.5 \pm 0.87$ ; uneasy feeling experienced when talking about cancer  $3.0 \pm 0.91$ , attitude of health workers  $2.6 \pm 0.95$ , and thoughts that pap smear is a is painful procedure  $2.6 \pm 0.88$ .

There was a significant relationship between level of education and practice of cervical cancer screening,  $p = 0.001 (< 0.05)$ .

### **Conclusion**

Based on the findings from this study, it was concluded that;

Majority of the participants are aware of cervical cancer and its screening.

Very few of them knew when, where and how often cervical cancer screening is done; also, few have been screened for the first time though they never went back for follow-up thus screening practice is very poor.

Some of the barriers towards the practice of cervical cancer screening includes; the fact that the procedure is unpleasant and embarrassing, people are also afraid that something wrong will be detected if they go for pap smear, some think pap smear screening is too expensive, another barrier is being too busy, they would be worried if they were found to have early signs of cancer, attitude of health workers, and thoughts that pap smear is a painful procedure.

There was a significant relationship between level of education and practice of cervical cancer screening,  $p = 0.001 (<0.05)$  among them.

### Recommendations

In view of the findings from this study, it was recommended that;

Periodic health fair is conducted in the hospital community and environs to create awareness on the importance cervical cancer screening, when and how it should be done.

Strategic location of screening centers for easy accessibility by women.

Government to intervene through subsidizing the cost of running the screening test so as to make it affordable to all economic class.

Also, HPV vaccines to be included among routine immunization for the girl child, given free of charge and made compulsory for every mother to give them.

Health workers to improve on their attitude towards women coming to the clinic to be screened and giving proper support and care.

Where possible, let the health caregivers at the screening centres be females instead of male doctors to avoid women feeling embarrassed.

### References

- Anorlu RI. What is the significance of the HPV epidemic? *Can J Urol*. 2020; 15(1): 3860-5. [PubMed](#) | [Google Scholar](#). Retrieved on July, 2019.
- Brown DR, Wilson RM, Boothe MA, Harris CE. Cervical cancer screening among ethnically diverse black women: knowledge, attitudes, beliefs and practices. *J Nat Med Assoc*. 2011; 103(8): 719-728. [PubMed](#) | [Google Scholar](#). Retrieved on July, 2019.
- [Cervical Cancer. Estimated GLOBOCAN 2022 database. International Agency for Research on Cancer](#). Accessed June 15, 2020.
- Globocan. Cancer Incidence and Mortality Worldwide: IARC Cancer Base No. 10. International Agency for Research on Cancer [Internet]. 2022.
- Guidelines for cervical cancer screening programme. Government of India-World Health Organization Collaborative Programme (2020-2021). Chandigarh, India: postgraduate Institute of Medical Education and Research. 2006. [Google Scholar](#). Accessed June, 2019
- Nwankwo KC, Aniebue U, Aguwa EN, Anarado AN, Agunwah E. Knowledge attitudes and practices of cervical cancer screening among urban and rural Nigerian women: a call for education and mass screening. *Eur J Cancer Care*. 2011; 20(3): 362-367. [PubMed](#) | [Google Scholar](#). Accessed June 2019
- Reis N, Beji NK, Kilic D. Risk factors for cervical cancer: results from a hospital-based case- control study. *International Journal of Hematology and Oncology*. 2011; 21(3): 153-59.
- World Health Organization. *Comprehensive cancer control: a guide to essential practice*.