

## Knowledge of Cervical Cancer and Its Screening among Female Healthcare Workers in Oshimili South Local Government Area of Delta State, Nigeria

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### Abstract

**Background:** Cervical cancer is the second most common cancer among women worldwide. Despite strong evidence that cancer screening saves lives through early detection and treatment, there is lack of empirical studies on it. Cervical cancer is a global health problem and the most common cancer in women living in sub-Saharan Africa. Worldwide, about 500,000 new cases are diagnosed every year with at least 288,000 deaths. About four out of every five new cases and most of the deaths from cervical cancer occur in the developing world. The highest mortality rates have been reported in Western and Southern Africa, Southern and Central America, Caribbean and South-Central Asia. Cervical cancer unlike other gynaecological cancers is a preventable disease because it has a pre-invasive phase that can be detected and treated if women are screened for it. **Objectives:** To assess the knowledge, awareness, perception and behavior of female healthcare workers in Oshimili South LGA of Delta State towards cervical cancer and its screening. **Methods:** A cross-sectional descriptive study done from January to March 2014. Multistage sampling technique was used in the selection of the LGA and study participants. Data was collected using a semi-structured questionnaire and were analyzed using SPSS version 17. **Results:** A total number of four hundred and twenty four (424) female healthcare workers were interviewed. The mean age was 36.5 years and the ages ranged from 21 to 58 years. A total of 389 respondents (92.8%) were aware of cervical cancer. A total of 238 respondents (56.1%) knew about pap smear screening

test. The most common risk factors for cervical cancer were early onset of sexual intercourse (25.7%), followed closely by multiple sexual partners (18.0%). Eighty five point one percent (85.1%) of the respondents are aware that early detection of cervical cancer could help improve prognosis; while 73.3% would like to do pap smear; 24.8% have done pap smear and 64.9% would require their husbands consent to do pap smear. **Conclusion:** This study revealed a high level of awareness of cervical cancer and an average level of awareness of pap smear screening test among this group. A poor knowledge of cervical cancer risk factors was also observed. Marital status was found to significantly influence the level of awareness of cervical cancer and its screening. Educational level and Age did not have significantly influence on the knowledge of cervical cancer and its screening.

**Keywords:** Knowledge; Cervical Cancer; Screening; Health Workers.

### Introduction

Cervical cancer is the second most common cancer among women worldwide.<sup>1</sup> Despite strong evidence that cancer screening saves lives through early detection and treatment, there is lack of empirical studies on it.<sup>2</sup> Cervical cancer is a global health problem and the most common cancer in women living in sub-Saharan Africa. Various methods by which cervical screening have been carried out include cytology based screening. Cervical screening by means of visual inspection with 3% to 5% acetic

acid (VIA) can be implemented in a wide range of settings as no laboratory processing is required [3]. In the developing countries where it is the most common gynecological cancer. Worldwide, about 500,000 new cases are diagnosed every year with at least 288,000 deaths. About four out of every five new cases and most of the deaths from cervical cancer occur in the developing world. The highest mortality rates have been reported in Western and Southern Africa, Southern and Central America, Caribbean and South-Central Asia. Cervical cancer unlike other gynecological cancers is a preventable disease because it has a pre-invasive phase that can be detected and treated if women are screened for it.

Cervical cancer affects women in the premenopausal and postmenopausal years. It is a social problem due to the effects of the deaths of these women on their children and families [4].

A new report by the Cervical Cancer Free Coalition (CCFC) entitled "Crisis Card," said that about 26 Nigerian women die of cervical cancer daily. According to the report, India has the highest number of women dying of the disease worldwide, while Australia, which has one of the highest Human Papilloma virus (HPV) vaccination rates in the world, has the least cases. The report listed countries with the worst indices of the disease as India, Brazil, Bangladesh and Nigeria. These four countries, the report said, account for 50 percent of the total number of cervical cancer deaths in the world [5].

It is the second most common cancer in Nigerian women and the most common female genital cancer constituting a major cause of mortality among Nigerian females in their most productive years [6]. In recent times, statistics available have shown that in Nigeria, cervical cancer accounts for 15 per cent of female cancers as compared to just about 3.6 percent in the developed countries. Shockingly, less than 0.1 per cent of Nigerian women have ever had cervical cancer screening in their lifetime and less than 1 per cent is aware of the existence of this silent killer. Consequently, cervical cancer kills a woman every hour in the country. Although 100 percent preventable, the cancer kills more women aged 24 to 35 years old women in developing countries than any other cancer in other parts of the world [7].

The World Health Organization (WHO) projects a 25 per cent increase over the next decade in the absence of widespread interventions. This is a sharp contrast to what obtains in countries like Britain which has national screening programmes. There, deaths from cervical cancer have reduced by 75 per cent and reducing by further 7 percent annually.

Unfortunately, according to WHO estimates, Nigeria has a population of 40.43 million women aged 15 years and older who are at risk of developing cervical cancer. Current estimates indicate that every year 14,550 women are diagnosed with cervical cancer and 9,659 die from the disease [7].

A study in Iwo Local Government Area of Osun State, Nigeria on the level of specific knowledge, awareness, perception, and screening behavior regarding carcinoma of the cervix among rural women, reported that the level of awareness about cervical cancer among the women in this study was low while their level of perception was just above average and also, screening behavior was very low [8]. A similar study in North Central Nigeria on cervical cancer and pap smear awareness and utilization of pap smear test among federal civil servants reported that cervical cancer and pap smear test awareness was 50.9% and 38.6% respectively, with the media as the major source of information. Also found was that pap smear utilization rate was 10.2% with routine antenatal care (ANC) as the major reason for screening [9]. A study in the University College Hospital (UCH), Ibadan, Nigeria among Nurses on their perception and utilization of cervical cancer screening services revealed that knowledge and utilization of cervical cancer services among the female nurses was generally low [10].

A study on the knowledge, attitude and usage of cancer screening among West African migrant women in Australia, reported that 95% of the participants had no knowledge of cancer screening prior to migration and most had a negative attitude towards screening [2]. A similar study in Ghana on knowledge and believe about cervical cancer screening among men in Kumasi, reported inaccurate knowledge about cervical cancer and stigmatizing beliefs about cervical cancer risk factors. Also identified were cultural taboos regarding women's health care behaviors [11].

A study in South Africa on knowledge of cervical cancer screening and use of cervical screening facilities among women from different socioeconomic background in Durban, Kwazulu Natal reported that the majority of patients from lower socio-economic circumstances with multiple risk factors were not aware of cervical screening or facilities available for this purpose. However, in spite of knowledge of cervical screening and the availability of such services, the majority of women (87%) from higher social and educational backgrounds did not undergo cervical screening. Most patients resided within a 12-kilometer radius of a facility that either provided or could potentially provide screening. Although some

patients (36.7%) had had a screening test performed at some time in the past, only 27.3% of patients reported having had a Pap test. This was due to failure on the part of the healthcare giver to disseminate information to the patient regarding the reason and value of cervical screening [12].

A study in Zimbabwe on knowledge, attitudes and demographic factors influencing cervical cancer screening behavior of Zimbabwean women, reported that 91% had never had cervical screening and 81% had no previous knowledge of cervical screening test. Majority of the respondents expressed positive beliefs about cervical screening test after an educational intervention. Also revealed was that independent women and women in mining villages were more likely to access cervical screening than those in traditional villages [13]. A similar study in on knowledge of and attitude towards cervical cancer among female university students in South Africa, reported that only 42.9% of the participants had heard about cervical cancer and of those who had heard, 22% had heard from community health workers, 19% heard from the media. Among those who have heard, only 0.6% knew a risk factor [14].

A study in Port Harcourt, Nigeria on knowledge, attitude and practice of cervical cancer screening-papanicolaou test (pap smear) among female health care providers, reported that 92.2% of respondents had knowledge of cervical cancer and also of pap smear as a screening tool for cervical cancer. Seventy two point two percent (72.2%) of the respondents recognized early sexual debut as a risk factor. The high knowledge of cervical cancer screening and their positive attitude towards it did not translate to service utilization by female professionals in Port Harcourt [15].

## Methods

The study was carried out in Oshimili-South Local Government Area (LGA) of Delta State, Nigeria; it is a semi-urban area with headquarters in Asaba. It has an area of 603 square kilometers and a population of 149, 603 in the 2006 census [16]. It consists of ten towns or communities namely Asaba, Oko, Cable point, Central core area, Isieke, Ezenei, Umuagu, Umueze, Umuonaje and Zappa [28]. This LGA has good access roads and pipe borne water supply. Located in this LGA is the Federal Medical Center, Asaba, the Delta State University, Anwai Campus, the Federal College of Education (Technical), Asaba. This area is connected to the National grid of the Power Holding Company of Nigeria. The main

religion in this area is Christianity and the language spoken by the people are Igbo, English language and Pidgin English. There are eleven (11) public health facilities in the LGA. Amongst which are nine primary health care centers, one general hospital at Okwe and one tertiary health care facility (Federal Medical Centre, Asaba). The PHCs include PHC Umuagu, Okwe, Awai, Anala, Ogbele, Amakoma, Akwaebune, Umueze and West-End. The study population comprise of female healthcare workers which include medical doctors, pharmacists, nurses, midwives, laboratory scientists and laboratory technicians in public healthcare facilities in Oshimili-South LGA of Delta State.

This was a cross-sectional descriptive study done amongst female healthcare workers in Oshimili-South LGA of Delta State, Nigeria from January to March 2014. Multistage sampling technique was used in the selection of the LGA and the participants in this study. There were nine primary health care centers, one general hospital at Okwe and one tertiary health care facility (Federal Medical Centre, Asaba) in Oshimili-South LGA.

Consent to participate in this study was sought from the respondents after detailed explanations to them about what the study entails, as well as assuring them of confidentiality of information to be given. The questionnaires were them self administered.

The data obtained were analyzed using SPSS version 16. Test of associations were done using chi square statistics at 95% confidence levels.

## Results

A total number of four hundred and twenty four (424) female healthcare workers were included in the study. The mean age of respondents was 36.5 years. The predominant age group was 30-39 years (42.9%). Most (88.4%) have polytechnic/ University education. Majority of the respondents were married (76.4%). Majority (63.0%) of the respondents were of the Igbo ethnicity. The respondents were predominantly Christians (96.9%), with denominations more of Pentecostal (46.2%), followed closely by Catholics (37.7%). Most of the respondents (91.5%) were employed and 89.4% were government employed. The socio-demographic characteristics of respondents are shown on Table 1.

A total of 389 respondents (92.8%) were aware of cervical cancer. The age group 30-39 years was most aware of cervical cancer (41.3%). Age was not found to influence awareness of cervical cancer ( $\chi^2 = 6.277$ ;

df = 3; p > 0.05). Majority of the respondents with polytechnic/University education (83.0%) were aware while only 9.3% of those with secondary education and 0.5% of those with primary education were aware of cervical cancer. Educational level was found to affect awareness of cervical cancer ( $X^2 = 33.080$ ; df = 2; P < 0.05). Most of the married (72.8%) respondents were aware of cervical cancer, while the singles (16.7%), the widowed (2.1%) and the divorced (1.2%) were less aware of cervical cancer. Marital status was found to influence awareness of cervical cancer ( $X^2 = 49.130$ ; df = 3; P < 0.05). The respondent's awareness of cervical cancer is shown above in Table 2.

A total of 238 respondents (56.1%) knew about pap smear. Only (25.2%) of age group 30-39 years knew about pap smear; followed by age group 20-29 and 40-49 with 12.3% awareness of pap smear. Age group 50-59 had the lowest awareness of 6.4%. Age was not found to significantly affect knowledge of pap smear

screening test ( $X^2 = 3.306$ ; df = 2; p > 0.05). Knowledge of pap smear was highest among those with polytechnic/University education (49.5%), followed with those with secondary school education (6.4%). Educational level was not found to affect the knowledge of pap smear screening test significantly ( $X^2 = 4.572$ ; df = 2; p > 0.05). Forty one percent of the married respondents knew about pap smear test. It is followed by the singles (11.1%). Marital status was found to be significantly associated with knowledge of pap smear test ( $X^2 = 8.408$ ; df = 3; p < 0.05). Knowledge of pap smear test was high among the employed (53.3%) than among the unemployed (2.8%).

The most common risk factors for cervical cancer were early onset of sexual intercourse (25.7%), followed closely by multiple sexual partners (18.0%). Eighty five point one percent of the respondents are aware that early detection of cervical cancer could help improve prognosis; while 73.3% would like to do pap smear;

**Table 1:** Socio-demographic Characteristics ( N= 424)

| Variable                      | Frequency | %    |
|-------------------------------|-----------|------|
| <b>Age group</b>              |           |      |
| 20 - 29                       | 100       | 23.6 |
| 30 - 39                       | 182       | 42.9 |
| 40 - 49                       | 84        | 19.8 |
| 50 - 59                       | 58        | 13.7 |
| <b>Educational level</b>      |           |      |
| Primary                       | 6         | 1.4  |
| Secondary                     | 43        | 10.1 |
| Polytechnic/University        | 375       | 88.4 |
| <b>Marital Status</b>         |           |      |
| Single                        | 74        | 17.5 |
| Married                       | 324       | 76.4 |
| Divorced                      | 12        | 2.8  |
| Widowed                       | 14        | 3.3  |
| <b>Ethnicity</b>              |           |      |
| Igbo                          | 207       | 63.0 |
| Hausa                         | 6         | 1.4  |
| Yoruba                        | 28        | 6.6  |
| Urhobo                        | 79        | 18.6 |
| Ijaw                          | 34        | 8.0  |
| Others                        | 10        | 2.4  |
| <b>Religion</b>               |           |      |
| Christians                    | 411       | 96.9 |
| Muslims                       | 13        | 3.1  |
| <b>Christian Denomination</b> |           |      |
| Catholic                      | 155       | 37.7 |
| Anglican                      | 66        | 16.1 |
| Pentecostal                   | 190       | 46.2 |
| <b>Employment Status</b>      |           |      |
| Employed                      | 388       | 91.5 |
| Not employed                  | 36        | 8.5  |
| <b>Employer</b>               |           |      |
| Government employed           | 347       | 89.4 |
| Privately employed            | 30        | 7.7  |
| Self employed                 | 11        | 2.8  |

**Table 2:** Awareness of Cervical Cancer (N=419)

| Variable                 | Yes | %    | No | %   |
|--------------------------|-----|------|----|-----|
| <b>Age group</b>         |     |      |    |     |
| 20 - 29                  | 95  | 22.7 | 5  | 1.2 |
| 30 - 39                  | 173 | 41.3 | 9  | 2.1 |
| 40 - 49                  | 70  | 16.7 | 9  | 2.1 |
| 50 - 59                  | 51  | 12.2 | 7  | 1.8 |
| <b>Educational level</b> |     |      |    |     |
| Primary                  | 2   | 0.5  | 4  | 0.9 |
| Secondary                | 39  | 9.3  | 4  | 0.9 |
| Polytechnic/University   | 348 | 83.0 | 22 | 5.2 |
| <b>Marital Status</b>    |     |      |    |     |
| Single                   | 70  | 16.7 | 4  | 0.9 |
| Married                  | 305 | 72.8 | 19 | 4.5 |
| Divorced                 | 5   | 1.2  | 7  | 1.8 |
| Widowed                  | 9   | 2.1  | 0  | 0   |

**Table 3:** Knowledge of PAP smear (N=424)

| Variable                 | Yes | %    | No  | %    |
|--------------------------|-----|------|-----|------|
| <b>Age group</b>         |     |      |     |      |
| 20 - 29                  | 52  | 12.3 | 48  | 11.3 |
| 30 - 39                  | 107 | 25.2 | 75  | 17.7 |
| 40 - 49                  | 52  | 12.3 | 32  | 7.5  |
| 50 - 59                  | 27  | 6.4  | 31  | 7.3  |
| <b>Educational level</b> |     |      |     |      |
| Primary                  | 1   | 0.3  | 5   | 1.2  |
| Secondary                | 27  | 6.4  | 16  | 3.8  |
| Polytechnic/University   | 210 | 49.5 | 165 | 38.9 |
| <b>Marital status</b>    |     |      |     |      |
| Single                   | 47  | 11.1 | 27  | 6.4  |
| Married                  | 174 | 41.0 | 150 | 35.4 |
| Divorced                 | 5   | 1.2  | 7   | 1.7  |
| Widowed                  | 12  | 2.8  | 2   | 0.5  |
| <b>Employment Status</b> |     |      |     |      |
| Employed                 | 226 | 53.3 | 162 | 38.2 |
| Not employed             | 12  | 2.8  | 24  | 5.6  |

24.8% have done pap smear and 64.9% would require their husbands consent to do pap smear.

### Discussion

Most (92.9%) of the respondents were aware of cervical cancer. This shows a similar level of awareness to the study done in Port Harcourt [15] and a higher level of awareness than the studies in Osun State [8], and that among federal civil servants in North Central Nigeria [9] and also that among Nurses in University College Hospital (UCH), Ibadan that reported lower levels of awareness [10]. This knowledge is high across all age groups. This is not unexpected as the respondents are health workers. Knowledge of cervical cancer was not significantly

higher among respondents with Polytechnic or University education than those with secondary and primary education [P>0.05]. Awareness of cervical cancer was significantly higher among the married respondents (72.8%) as compared to the singles (16.7%). [P<0.05].

Most of the respondents (85.1%) knew that cervical cancer could be prevented. This is expected as these respondents are healthcare workers and most had polytechnic or university education.

In this study, knowledge of risk factors for cervical cancer was found to be low generally. This is in keeping with findings in a study in Ghana [11]. However, as expected knowledge of risk factors was higher among those with polytechnic or university education. Married respondents had relatively better knowledge of these risk factors than singles.

Knowledge of pap smear was generally just above average among the respondents (56.2%). This is surprising as respondents are healthcare workers and most had post secondary school education. This shows a lower level of awareness as compared to the study in Port Harcourt [15] and a higher level of awareness to a study in North Central Nigeria [9].

No significantly difference was found with knowledge of pap smear screening test as ages progressed [ $p > 0.05$ ]. Also, knowledge of pap smear was highest among those with polytechnic/ University education (49.5%). Educational level was not found to affect the knowledge of pap smear screening test significantly [ $p > 0.05$ ]. Married respondents were found to have more knowledge of pap smear (41.0%) than the singles (11.1%). Marital status was found to be significantly associated with knowledge of pap smear test [ $p < 0.05$ ]. Knowledge of pap smear test was also higher among the employed (53.3%) than among the unemployed (2.8%).

Most respondents (73.7%) would like to do pap smear and among these, 64.9% would require the consent of their spouses. Twenty four point eight percent (24.8%) of the respondents have done pap smear in the past.

### Conclusion

This study revealed a high level of awareness of cervical cancer and an average level of awareness of pap smear screening test among this group. A poor knowledge of cervical cancer risk factors was also observed. Marital status was found to significantly influence the level of awareness of cervical cancer and its screening. Educational level and Age did not have significantly influence on the knowledge of cervical cancer and its screening.

More efforts should be put into awareness campaign on cervical cancer and its screening especially by the government and non-governmental organizations. They should provide more screening sites for pap smear test and create avenues for educating people about cervical cancer risk factors.

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