

Perception and Uptake of Cervical Cancer Screening Among Female Healthcare Professionals in Federal Medical Centre (FMC), Asaba, Delta State, Nigeria

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Abstract: Background: Cancer of the cervix, though the only vaccine-preventable human cancer, remains the second most common cause of cancer mortality among women in low-resource countries. **Objective:** The objective of this study was to assess the perception and uptake of cervical cancer screening among female healthcare professionals in Federal Medical Centre (FMC), Asaba, Delta State. **Methods:** This is a cross-sectional study involving self-administered questionnaire involving 244 participants sampled through stratified proportionate sampling method. Data were analyzed using SPSS version 22 and intergroup comparisons were done using chi-square test. A $p < 0.05$ level of significance was considered adequate. **Result:** Most of the participants were nurses 135(55.3%), followed by doctors 63(25.8%), pharmacists 18(7.4%), laboratory scientists 13(5.3%), radiographers 11(4.5), and physiotherapists 4(1.6%). The mean/SD age of the participants was 30 ± 8 years. 242 (99.2) were aware of CC while 240(98.4) were aware of CCS. 137(56.1%) while 169 (69.3%) had positive perception about CCS. Only 48 (19.7%) of the respondents had ever undergone CCS. The most common screening method used was Pap smear 40 (16.4%). **Conclusion:** the female healthcare professionals demonstrated a high level of awareness and positive perception but negative disposition towards cervical cancer screening.

Keywords: cervical cancer, perception, uptake

Introduction

Cancer of the cervix is the fourth commonest gynaecological cancer globally after breast, colorectal, and lung cancers and the seventh (4%) overall (Global Burden of Cancer Study [GLOBOCAN], 2012). It is the second, ranked next to breast cancer in Nigeria (Jedy-Agba *et al.*, 2012). The Human Papillomavirus (HPV), the major viral infection of the human reproductive system is responsible for every incidence of the disease [National Institutes of Health (NIH), 2013]. It is highly preventable cancer due to its slow pathogenesis, cytologically known causative factors, and efficient managements following early detection (Balogun, Odukoya, Oyediran & Ujomu, 2012).

Globally, it is estimated that cervical cancer causes over 270,000 deaths annually, while 500,000 new cases are reported worldwide. Most (about 85%) of the global burden occurs in the developing countries, giving rise to almost 12% of all female cancers (GLOBOCAN, 2012). At the moment, over 1 million women are presently harboring the disease, with majority of them having no means to healthcare (Worldatlas, 2016). It has also been proposed that by 2030, the mortality from the disease will be about five hundred and all except 2% of these burdens may take place in the developing countries (CCGCC, 2013).

In Africa, for every one hundred thousand women as many as thirty-four are diagnosed with the disease and about 68% of them die from cervical cancer every year with Zambia recording the highest mortality rate (WHO, 2015). Statistics are limited regarding the incidences of the disease in Nigeria principally due to poor documentation or incomprehensive reportage. This is not exclusive to Nigeria alone, but pertains to most developing countries (Abdulkareem, 2009). However, a study has shown that out of 14,550 incidences of the disease diagnosed among women of reproductive age in Nigeria, about 67% of them die annually. 47.7 million Nigerian women aged ≥ 15 are vulnerable to cervical cancer and the estimated daily mortality from the disease in Nigeria is twenty-six (CCGCC, 2013).

In a 7-year survey carried out at Central Hospital, Warri, Delta state, between (January 2005-December 2011), 176 cases of cervical lesions were diagnosed (Nwachokor & Forae, 2013). Yet the awareness level and screening uptake regarding the disease is said to be low among women in Delta State (Eriwo & Abedi, 2011). Several other studies have equally reported a low level of awareness among female health workers (Huseyin *et al.*, 2014; Sneha, Ramesh, & Shilpa, 2014; Audu, Bukar, Ibrahim, & Swende, 2014). However, there is dearth in knowledge regarding perception and uptake of cervical cancer screening among female

healthcare professionals in the state. Therefore this study was conducted to evaluate the perception and uptake of cervical cancer screening among female healthcare professionals in Federal Medical Centre (FMC), Asaba, Delta State.

Methods

Study Design

The study is a descriptive cross-sectional aimed to determine the perception and uptake of cervical cancer screening among female healthcare professionals in Federal Medical Centre (Fmc), Asaba, Delta State

Study Setting

This study was done at the Federal Medical Centre (FMC) which is located in Central Hospital Premises, 4, Anwai Road, Oshimili LGA, Asaba, the capital of Delta State, South-South, Nigeria. It was established in 1998 and it is a referral center. Service departments are grouped into clinical and non-clinical departments. This setting was chosen because Delta State is one of the states in Nigeria without national cancer registry, and been a tertiary health institution the study will help to sensitize the health personnel regarding the burden of cervical cancer in the State and Nigeria at large by improving the level of awareness or consolidating on the existing awareness.

Sample Size

The study was conducted among 244 healthcare professionals sampled from a population of 564 healthcare professionals in the FMC, Asaba, using Taro Yamane equation.

Sampling Technique

Stratified proportionate sampling method was used to select appropriate numbers of healthcare professionals which include (63 Doctors, 135 Nurses, 18 Pharmacists, 11 Radiographers, 4 Physiotherapists, and 13) while convenience sampling was adopted to recruit the participants. The study involved the use of self-administered structured questionnaire with Cranach's alpha reliability coefficient $r = 0.860$.

Statistical analysis:

Data were analyzed using Statistical Package for Social Sciences (SPSS) software program version 22.0.

Results

The mean age of the women who involved in the study was 30 ± 8 years. More than half 144 (59%) of them were in the 28–37-year age range. The dominant ethnic group represented was Ibo 132(54.1%) the principal religion was Christianity 228 (93.4%). Nurses were more 135(55.3%), followed by doctors 63 (25.8%), pharmacists 18(7.4%), laboratory scientists 13(5.3%), radiographers 11(4.5), and physiotherapists 4(1.6%). Most 135(55.3%) were first-degree holders and 77(31.6%) with a maximum working experience range of 1-10years. Majority 117(48.0%) were married with 51 (20.9%) having at least a children, but those who are yet to have children were more 142 (58.2%) (**Table 1**). Almost all the respondents 242(99.2%) had heard of cervical cancer screening and the major source of information was through healthcare professionals 175. Majority also stated that their profession has helped them to be aware of cervical cancer 235 (96.3) (**Table 2**). Most of the respondents 169(69.3%) had positive perception about cervical cancer screening while 75(30.7%) had a negative perception (**Table 3**).

Only 48 (19.7%) of the respondents had ever undergone screening for the disease, 18 (7.4%) of which claimed that they had been practicing the screening regularly as recommended. A better uptake was found among the physiotherapists while better regular uptake was noticed among the Pharmacists and the Laboratory scientists. However none of these was statistically significant ($\chi^2 = 1.488$; OR = 0.245; P-value = 0.876) and ($\chi^2 = 0.247$; OR = 0.600; P-value = 0.384) respectively (**Table 4**). There was significant relationship between perception and uptake of cervical cancer screening. Respondents with positive perception have a better uptake of cervical cancer screening (21.3%) compare with those with negative perception (16.0%). This observation was found to be statistically significant ($\chi^2 = 6.396$, P = .011) (**Table 5**)

Table 1: demographic distribution of the respondents

Variables	Tenets	Frequency	Percent
Age	18-27years	76	31.1
	28-37 years	129	52.9
	38-47 years	29	11.9
	48-57 years	10	4.1
Ethnicity	Igbo	132	54.1
	Hausa	8	3.3
	Yoruba	16	6.6

	Others	88	36.0
Religion	Christianity	228	93.4
	Islam	16	6.6
Profession	Doctors	63	25.8
	Nurses	135	55.3
	Pharmacists	18	7.4
	Radiographers	11	4.5
	Medical Lab Sc	13	5.3
	Physiotherapists	4	1.6
Academic Qualification	HND(RN/RM)	92	37.7
	First Degree	135	55.3
	Master Degree	13	5.3
	PhD	4	1.6
Years of Experience	1-10years	117	48.0
	11-20years	62	25.4
	21-30years	47	19.2
	>30years	18	7.4
Marital Status	Single	113	46.3
	Married	130	53.3
	Divorced	1	0.4
Number of children	None	142	58.2
	1-3	51	20.9
	4-6	51	20.9

Table 2: level of awareness of cervical cancer screening (CCS) among the respondents

Variable	Tenets	Frequency	Percent
Awareness of CCS	Yes	242	99.2
	No	2	0.8

Table 3: level of perception towards cervical cancer screening among the respondents

Variable	Tenets	Frequency	Percent
Perception	Positive	169	69.3
	Negative	75	30.7%

Table 4: Logistic regression analysis of pattern of cervical cancer screening uptake among the respondents

Professions	Tenets		Total	χ^2	df	OR	P-value	95% CI
	Uptake	Non-uptake						
Physiotherapists	1(25%)	3(75%)	4(100%)	1.488	5	0.245	0.876	2.90-3.16
Doctors	15(23.8%)	48(76.2%)	63(100%)					
Nurses	26(19.5%)	107(80.5%)	133(100%)					
Radiographers	1(9.1%)	10(90.9%)	11(100%)					
Pharmacists	3(16.7%)	15(83.3%)	18(100%)					
Lab scientists	2(15.4%)	11(84.6%)	13(100%)					
Total	48	196	244(100%)					
Regular Uptake as Recommended								

	Yes	No					
Physiotherapists	0(0%)	1(100%)	1(100%)				
Doctors	8(53.3%)	7(46.7%)	15(100%)				
Nurses	7(26.9%)	19(73.1%)	26(100%)	0.247	5	0.600	0.384
Radiographers	0(0%)	1(100%)	1(100%)				
Pharmacists	2(66.7%)	1(33.3%)	3(100)				
Lab scientists	1(50%)	1(50%)	2(100%)				
Total	18	30	48(100%)				22.9 - 50.0

Table 5: relationship between perception and uptake of cervical cancer screening

Level of Perception		Level of uptake		Total	df	χ^2	P-value
		Yes(%)	No(%)				
Level of Perception	Positive	36(21.3)	133(78.7)	169(100)	1	6.396	.011
	Negative	12(16.0)	63(84.0)	75(100)			
Total		48	196	244(100)			

Discussion

This study was done in a Federal Medical Centre unlike other previous similar studies. For example, the study done by Huseyin *et al.* (2014) and Cosku *et al.* (2013) were in primary health care centre (PHC) in South Turkey respectively; Oche *et al.* (2013), Arulogun and Maxwell (2012), Ehiemere *et al.* (2015), and Sneha *et al.* (2014) were in University Teaching Hospitals. However, the study conducted by Dulla *et al.* (2017) and Gebreegziabher *et al.* (2016) were in secondary health institution. This means the subject CCS among female healthcare professional is widely studied across all level of healthcare system. While majority of the studies done at the tertiary healthcare level in Nigeria focused on University Teaching Hospitals, this study focused on Federal Medical Centre.

The population in the study was two hundred and forty-four as compared to the 602 participants in the study by Audu *et al.* (2014) in three of the six geo-political zones of Nigeria. There were 240 participants in Oche *et al.* (2013), 224 participants in the India study by Thippeveranna *et al.* (2013), five hundred and three (503) participants in Ibadan study by Arulogun and Maxwell (2012), 200 participants in the South India study by Sneha *et al.* (2014), 200 participants in Lagos State University Teaching Hospital study by Awodele *et al.* (2011), 261 participants in Turkey study by Coskun *et al.* (2013), 34 participants in India study by Pegu *et al.* (2017), 401 participants in Cameroon study by McCarey *et al.* (2011), 367 participants in southern Ethiopia study by Dulla *et al.* (2017), and 352 participants in the Port Harcourt study by Ehiemere *et al.* (2015). This shows that the sample size of this study was relatively within the range of previous similar studies.

The mean age of the women who participated in this study was 30 ± 8 years (age range 18-57 years). More than half 144 (59%) of them were in the 28–37-year age range which is lower than that of the participants in the study by McCarey *et al.* (2011) in which the mean age of respondents was 38 years (range 20-71 years). Moreover, the age range of all the participants 18-57 years is within the age bracket (≥ 15 years) of Nigeria women said to be at risk of cervical cancer (CCGCC, 2013). This means the study was done among the at-risk population of the society.

The burden imposed by cervical cancer remains high in developing nations of the world. Although the disease is preventable, ignorance, poor perception and a low level of awareness are some identified factors which contribute to perpetuating the problem. Therefore, a good perception of cervical cancer and practice of cervical screening is crucial in any effort to reduce the disease burden. Most of the respondents in this study were generally aware of cervical cancer and the available screening measures. The reported level of awareness in our study is comparable to findings from other institution-based studies in Bayelsa by Ekine *et al.* (2015) study in which 71.60% were aware of cervical cancer. However, contrary to the submission of Erivwo and Abedi (2011) regarding the level of awareness of CC among women in Delta State, the awareness level among the study participants was found to be high. This may be due to the differences in the group of women involved this study. While Erivwo and Abedi's study involved women in the general society, this study focused on women who are healthcare professionals who were disposed to be more aware of the condition. Also, owing to the level of education and the years of working experience such level of awareness was not unexpected.

The respondents' general perception on cervical cancer in this study can be described as good (69.2%) and irrespective of the profession, all the respondents perceived cervical cancer almost alike. Similar finding has also been documented from the Ibadan study by Arulogun and Maxwell (2012).

The current study revealed that only 19.7% [physiotherapists (0.4%), doctors (6.2%), nurses (10.7%), radiographers (0.4%), pharmacists (1.2%), laboratory scientists (0.8%)] of the respondents had ever done cervical cancer screening test before. Out of the 48 (19.7%) who had utilized the screening, only 18(7.4%) has been practicing the screening regularly as recommended. Most common screening method used was Pap smear 43 (17.6%). Other methods of screening utilized include VIA (1.4%), and Pap smear & HPV (co-testing) (0.4%). Logistic regression analysis of the relationship between respondents' profession and uptake of cervical screening did not show Profession to be significantly associated with utilization of CCS (χ^2 1.488, OR: 0.245, P: 0.876, CI 2.90-3.16). This is in agreement with Ehiemere *et al.* (2015). This upheld the principle of the optimism bias theory. According to the 'optimism bias', people act as if the chances of disease is greater for other people than for themselves (Ackerson & Preston, 2009). Thus with high level of awareness of the disease as reported among the respondents in this study (some of which has cared for or treated cancer patients) screening uptake was still poor among them in respective of profession. This finding brings to bear what literature had reported in different parts of the world. For instance, a study by Rahman and Kar (2015) to assess baseline knowledge of cervix cancer, screening, and practice of Pap smear screening among Sikkimese staff nurses in India, only 16.6% nurses had undergone screening and low-risk perception was the main reason for low uptake. Moreover, Dulla *et al.* (2017) reported only 42 (11.4%) among female healthcare workers in southern Ethiopia. Similarly, Huseyin *et al.* (2014) reported 33.0% uptake of CCS among respondents. In Nigeria, Oche *et al.* (2013) reported that only 10% uptake of Pap smear testing among female health workers at Usman Danfodiyo University Teaching Hospital, Sokoto.

5. Conclusion

The finding revealed that female healthcare professionals involved in the study demonstrated a high level of awareness and positive perception but negative disposition towards cervical cancer screening. The general knowledge of cervical cancer, its screening and uptake was poor while knowledge of current screening technique was grossly lacking among the respondents.

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