

## Original Research Article

# Demographics and knowledge of cervical cancer of female civil servants in Delta State on Nigeria

Uchechukwuka Nnemdi Okwe<sup>1</sup>, Helen Chime<sup>2</sup>, Ezekiel Uba Nwose<sup>2\*</sup>

<sup>1</sup>Delta State secretariat Clinic, Asaba, Nigeria

<sup>2</sup>Department of Public and Community Health, Novena University, Ogume, Nigeria

**Received:** 01 February 2019

**Revised:** 12 March 2019

**Accepted:** 13 March 2019

### \*Correspondence:

Dr. Ezekiel Uba Nwose,

E-mail: [enwose@csu.edu.au](mailto:enwose@csu.edu.au)

**Copyright:** © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

## ABSTRACT

**Background:** Delta state of Nigeria is a typical micro-world of multicultural values and religious beliefs as well as socioeconomic strata that could impact on the uptake of cervical cancer screening and HPV vaccination. Yet, the demographics of women in conjunction with knowledge and perception of cervical cancer screening have not been surveyed. This study aimed to assess the demographics of civil service women servants in Delta State and their knowledge regarding cervical cancer.

**Methods:** The study was a questionnaire-based cross-sectional survey of female civil servants in the states' capital city of Asaba. Structured questionnaire was used to collect data on eight demographic factors (age, educational level, ethnicity, income level, marital status, number of children, religion and workplace); as well as information on knowledge of cervical. Percentage proportions of respondents were assessed for the eight demographic factors. Absolute frequencies of affirmative responses to the questions on knowledge were evaluation. Hypothesis was tested for statistical significance of the demographic variables.

**Results:** Analysis of the respondents (N=285) show that virtually all participants have heard of cervical cancer and knows that sexual promiscuity is a risk of the health condition. Only less than 5% of them attribute healthcare workers as their source of knowledge. Except age and marital status, every demographic variable is significant ( $p < 0.05$ ).

**Conclusions:** Demographics of women are significant in terms of potential factors that could influence the uptake of HPV vaccination and cervical cancer screening.

**Keywords:** Cervical screening, Demographic factors, HPV vaccination

## INTRODUCTION

Cervical cancer remains a threat to women's health despite so many strategies and measures that have been initiated to halt the effect of the disease.<sup>1,2</sup> Several factors have been implicated in literature as contributory to the low uptake of cervical cancer screening services.<sup>2-5</sup> The psychosocial factors include, but are not limited to: ignorance of the existence of cervical cancer services, facility where the service is obtainable; or significance of

the importance of service, fear, religious beliefs including taboo and perception that cervical cancer cannot be prevented.<sup>2,6,7</sup>

Studies on knowledge, attitude and practice abound;<sup>2; 6-8</sup> i.e. regarding cervical cancer. Yet, it is quite interesting that among female nurses, up to 37% do not have reason for not screening, while some believe or assume that they are neither at risk nor likely to suffer cancer of the cervix.<sup>8</sup> That is, ignorance among healthcare workers that being a female is by itself a risk factor. However, these

psychosocial factors have yet to be proven by any methodical investigation or survey in Delta State of Nigeria.

In Nigerian communities, gainfully employed women complain of no time due to exigencies of their job against the background of their culturally imposed duties such as household chores that could hinder them from up taking cervical cancer screening. This has implications for female civil servants in Delta State e.g. in fostering the attitude of procrastinating hospital visits and screening services due to many activities competing for limited time. Hence, this psychosocial factor is necessary to be determined in the state.

### **Statement of the research problem**

Delta can be described as a micro Nigeria with numerous languages, cultural values, religions and beliefs;<sup>9</sup> which could impact on the uptake of cervical cancer screening and HPV vaccination.<sup>4,10,11</sup> Therefore, this study aims to investigate the demographics of women in conjunction with knowledge and perception of cervical cancer screening. Specifically, consideration will be on female civil servants in Delta State ministries; thereby cut across all educational classes, cultural groups and different reproductive age group.

### **Research objective**

This study is to assess demographics of civil service women as psychosocial factors influencing cervical screening and acceptability of human papilloma virus vaccination among female civil servants in Delta State.

### **Hypotheses**

There is no significant association between demographic variables and uptake of cervical cancer screening among female civil servants in Delta State, Asaba.

## **METHODS**

### **Study design and setting**

The study was designed to follow a cross sectional, descriptive survey method. The study setting was the Delta State secretariat located in Asaba the state capital. Study was done, after ethic approval, in the period of April to June 2018.

### **Selection criteria**

The study population was estimated to comprise 20000 female civil servants from eight governmental ministries. Inclusion criteria were being female, civil servant living in Asaba and visiting the secretariat clinic as well as consent to participate. Exclusion criteria were dissent to participate, age below 18 years old and not being employed by the state government. Quantitative

questionnaire survey was used to collect data on eight demographic factors including age, educational level, ethnicity, income level, marital status, number of children, religion and workplace. Besides the demographics in section A, the structured questionnaire consisted of section B, which elicited information on knowledge of cervical cancer; as well as section C used to examine perceived susceptibility to cervical cancer.

### **Statistics**

Percentage proportions of respondents were assessed for the eight demographic factors. Absolute frequencies of affirmative responses to the questions on knowledge were evaluation. Hypothesis was tested by Chi square method at a significance of level of ' $p < 0.05$ '.

## **RESULTS**

A total of 285 questionnaires were analyzed. The age range of the female civil servants were 20 to 64 years. The mode of the age was 45 years. Those that were 49, 51 and 60 years were fewer in number. In this study the reproductive age group of 20 to 50 years were well represented as they constituted  $>88\%$  of the respondents (Table 1).

**Table 1: Frequency (Hz) distribution of respondents by stratified age groups.**

Age (years)	Hz	% Hz	Cumulative %
20-24	27	9.47	9.47
25-29	52	18.25	27.72
30-34	32	11.23	38.95
35-39	39	13.68	52.63
40-44	33	11.58	64.21
45-49	40	14.03	78.24
50-54	29	10.17	88.41
55-59	31	10.87	99.28
60-64	2	0.7	100
<b>Total</b>	<b>285</b>	<b>100</b>	

The respondents comprised 5% with primary (including up to year 12 equivalence) education level. Those possessing ordinary (OND) or higher national diplomas (HND) and bachelor's degree qualification together with post graduate group comprised 95% (Figure 1). Respondents from the ministry of education were highest in (28.4%), followed by health (16.5%); while those from the ministry of lands and survey contributed the least responses (Figure 2).

The married ladies among the civil servants were more in proportion, constituting more than two third majorities. Further, 94.4% of participants were Christians, 10% were Muslims and others were pagans. On ethnicity, the Anioma ethnic group (denoted as Igbo in Figure 3), which includes Asaba where the study was conducted, contributed more than half of the responses. All other

ethnic groups were represented commensurate with their proportions in state's population (Figure 3).

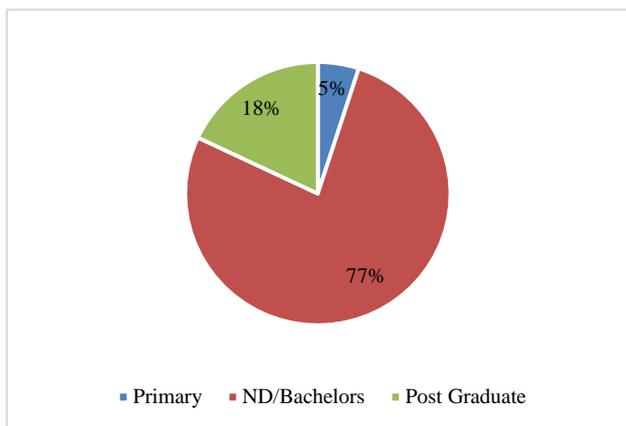


Figure 1: Percentage distribution by educational level.

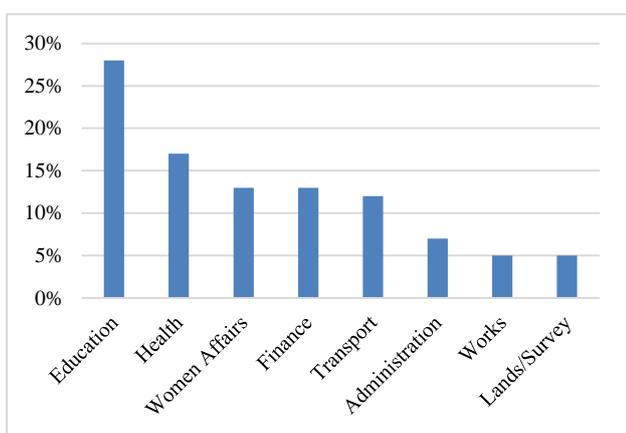


Figure 2: Percentage distribution by civil service ministry.

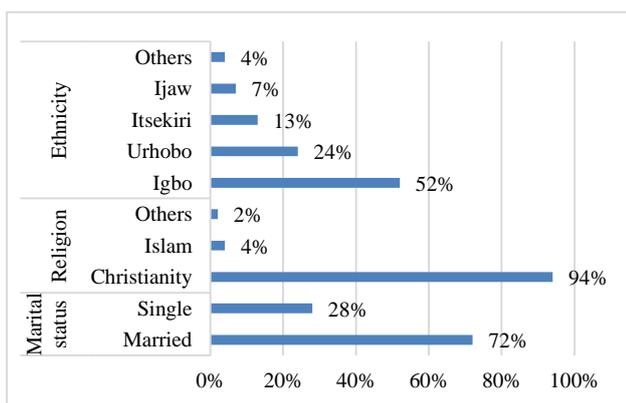


Figure 3: Percentage distribution by ethnicity, marital status and religion.

Most of the women (83.5%) who responded had children ranging from one to six (Table 2). Also, most of the women (54.4%) had monthly income above N60000 (≈US\$160.00) and above, which is deemed good wage

for a fresh graduate; while 11.6% of participants are clearly in the poverty line (Figure 4).

Table 2: Distribution of respondents by number of children.

Number of children	Frequency	%	Cumulative %
0	47	16.5	16.5
1	20	7	23.5
2	43	15.1	38.6
3	69	24.2	62.8
4	87	30.5	93.3
5	18	6.3	99.6
6	1	0.4	100
<b>Total</b>	<b>285</b>	<b>100</b>	

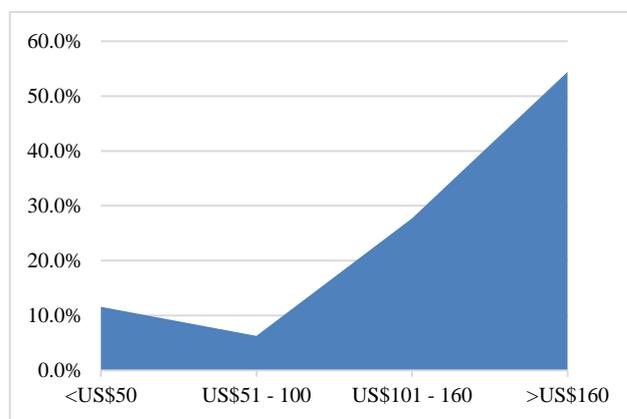


Figure 4: Percentage distribution by income group.

On knowledge of cervical cancer, all participants are aware that having multiple sex partners would increase their level of risk, but less than 10% knows that being a female is by itself a risk factor. Worse still, less than 1% believes that having many children may be risk (Table 3). On their sources of knowledge, a vast majority indicated to have learnt from mass media and <5% attributed to health workers (Figure 5).

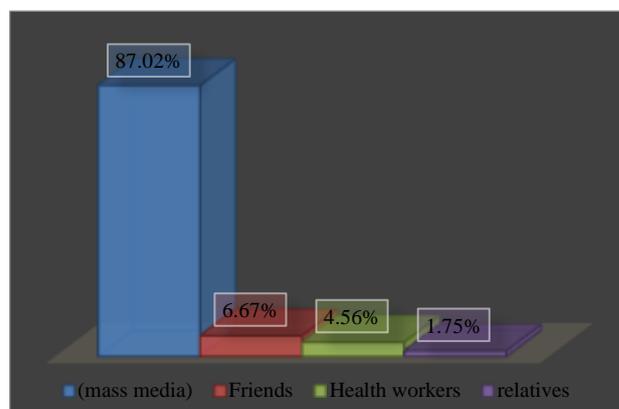


Figure 5: Distribution of respondents according to sources of knowledge.

**Table 3: Absolute frequency of responses on questions regarding knowledge of cervical cancer.**

Questions	YES	%	N0	%
Have you heard of cervical cancer	278	97.5	7	2.5
What is cervical cancer	213	74.7	72	25.3
Signs of cervical cancer	233	81.8	52	18.2
How to detect cervical cancer	214	75.1	71	24.9
Cause of cervical cancer	182	63.9	103	36.1
Prevention of cervical cancer	271	95.1	14	4.9
Ways to prevent cervical cancer	122	42.8	163	57.2
As a female I am susceptible to CC	22	7.7	263	92.3
Susceptibility to HPV causes it	263	92.3	22	7.7
Smoking cigarette increase my chances of CC	284	99.6	1	0.4
Exposure to another's cigarette poses risk to CC	155	54.4	130	45.6
Long term use of contraception is a risk to CC	219	89.0	27	11.0
Infection with sexually transmitted infection is a risk	269	94.4	16	5.6
Having uncircumcised male partner is a risk	88	63.8	50	36.2
Having sex before 18years increases risk	181	64	104	36
Eating less fruits and vegetables increases risk	264	92.6	21	7.4
Not going for regular Pap smears makes early detection difficult	139	48.77	146	51.22
Having many sex partners increases risk	285	100	0	0
Having many children increases the risk	1	0.4	284	99.6
Having weakened immune system increase risk	248	87	37	13
Drinking too much alcohol can cause uterine cervical cancer	284	99.6	1	0.4
Having a close relative who died of cancer increase risk of CC	188	66	97	34
Being overweight increase risk of CC	132	46	153	54
Doing less physical activity increased risk of CC	263	92	22	8
Average		72.0		28.0

Two hundred and fifty five out of the 285 respondents indicated to have yet to go for cervical screening. Among the 30/285 (10.5%) who screened, 28 did it once while two did it twice. Chi square analysis of how demographic variables may be associated with uptake of cervical cancer screening indicates significance associations in (Table 4).

**Table 4: How demographic variables may be associated with uptake of cervical cancer screening.**

Variables	DF	Chi square	P value
Age	40	30.400	0.80
Ministry	7	7.748	0.05
Education	3	122.407	0.000
Marital status	1	1.227	0.2
Religion	2	17.684	0.000
Ethnicity	4	21.189	0.000
No of children	6	21.036	0.02

## DISCUSSION

This study surveyed knowledge and uptake of cervical cancer screening among female civil servants in the state's capital city. There were 89.5% who have not had cervical screening and 84.2% agreed that they will like to be screened. The 10.5% who indicated to have been

screened comprised 9.8% and 0.7% who had it once and twice respectively. While the discourse on uptake of screening shall be separately elaborated with recourse to psychosocial factors, this report is specifically on demographics the respondents and their knowledge of the health condition.

The results show that respondents in this study spread across all age groups of child bearing women and cultural groups of the state, as well as socioeconomic strata of educational attainment, income level and works of life (Figure 1–4; Tables 1 and 2). On knowledge, 97.5% of female civil servants indicated to have heard of cervical cancer, though all (100%) respondents acknowledged awareness that sexual promiscuity is a risk of the health condition. Approximately 92% have heard about it for more than one year; and over 81% indicated to know the signs, though 24.9% stated they did not know how it can be detected. Further, approximately 64% could indicate the actual cause of cervical cancer, but a confounding higher proportion (92%) indicated being a woman does not predispose to risk of cervical cancer. While as much as 95% knew it can be prevented, less than half of them know how it can be prevented. 99.6% strongly agreed that smoking is a risk factor to the development of cervical cancer (Table 3). The sources of knowledge were mostly attributed to the mass media (television, radio, and internet) and least to family members (Figure 5). These

findings indicate that the levels of awareness are relatively high e.g. compared to reports from other communities.<sup>3,7,12</sup> Nevertheless, there is still more public health education to do at least to educate those who do not know.

A review of the results shows that the knowledge on cervical cancer, its causes, screening measures, lifestyle risks was good. On contraception benefits, they claim that health workers especially the nurses advised on contraception use after deliveries for spacing children and this cannot be a cause of cervical cancer were good. They explained if it was harmful or caused cancer they wouldn't be advised to use it. Weakened immunity effects were well known by the female civil servants. Also the intention to screen and encourage friends and daughters to screen was noted. Above all the maintenance of a good lifestyle free from sexually transmitted infections, multiple sex partners, early exposure to sex, and having a sex partner were some of the risks they were strongly against the development of cervical cancer.

A similar study conducted to determine in knowledge, attitude and practice (KAP) among female health workers on another state capital of Nigeria, it was reported that less than 70% of the healthcare professionals knew about pap smear as a cervical cancer screening procedure; and the knowledge came mainly from school resources.<sup>2</sup> Another study on KAP of women in undergraduate natural sciences study reported that up to 67% of the students lacked knowledge about Pap smear and even those who were aware had not undergone the screening test.<sup>6</sup> These studies were limited to professional career base; and may not represent the true awareness level of the community. Our findings compares with studies reported in similar parts of the world where cervical cancer and its causes and risks were reported. For instance a study conducted among Gabonese women revealed that 91.6% of the respondents had heard about cancer of the cervix and its risk factors.<sup>3</sup> Another study in Bangladesh reported that only 12% of respondents had good knowledge of cervical cancer.<sup>12</sup>

Using a 0.05 level of significance and chi square calculation, it was observed that not all demographic variables made the null hypothesis true (Table 4). In particular, age and marital status of the female civil servants did not show statistically significant influence on cervical screening acceptance. All other variables appear to be potentially influential. The implication of this observation lies in the psychosocial factors that influence the uptake of cervical cancer screening and HPV vaccination.<sup>2-5</sup> For instance, the study on market women reported that age and marital status were significant determinants.<sup>5</sup> While this seems to differ with our observation, it must be noted that the market women are different from civil servants in several ways including but not limited to chances of being reached with mass media whilst at work.

It is probably pertinent to emphasize the sources of knowledge about Pap smear (Figure 5). In this study, 87% is attributed to the mass media, and less than 5% to healthcare workers. In addition, approximately 25% of the respondents are unaware that cervical cancer can be detected. These two pieces of observation are somehow in sync with reports of only 67% undergraduate students and 70% female healthcare workers having the knowledge and mainly from school lectures or textbooks.<sup>2,6</sup> That is, it is worth pointing out the implicit correlation between knowledge of female healthcare workers and source of information for women in the community. Further, it had been recommended that a comprehensive cervical cancer screening strategy is needed to improve uptake with a view to enhance early detection or achieve the goal of preventing the public health condition.<sup>6</sup> Also, a recent report has resonated that improvement in knowledge improves acceptance of cervical cancer prevention services.<sup>11</sup> What this paper contributes to the discourse is additional recommendation of need for the knowledge of female healthcare workers about Pap smear to be improved upon in order for them (i.e. health workers) to match the mass media in being source of information about cervical cancer screening.<sup>6</sup>

## CONCLUSION

This study investigated the demographics of female civil servants in Delta State of Nigeria with regards to cervical screening and their knowledge of the cancer. The results show only few are below the poverty line while virtually all of the respondents are knowledgeable about cervical cancer and screening. All demographic variables except age and marital status appear to be significant in terms of potential psychosocial factors that could influence the uptake of HPV vaccination and cervical cancer screening. Importantly, the need for improved knowledge among healthcare workers is highlighted.

## ACKNOWLEDGEMENTS

This is the first of a four-part series of evaluations of the factors that influence the uptake of HPV vaccination and cervical cancer screening.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: The study was approved by the Institutional Ethics Committee*

## REFERENCES

1. Adefuye PO, Broutet NJ, de Sanjose S, Denny LA. Trials and projects on cervical cancer and human papillomavirus prevention in sub-Saharan Africa. *Vaccine*. 2013;31:53-9.
2. Aboyeji PA, Ijaiya MDA, Jimoh AGA. Knowledge, attitude and practice of cervical cancer as screening procedure for cervical cancer in Ilorin, Nigeria. *Trop J Obstet Gynaecol*. 2004;21:114-7.

3. Assoumou SZ, Mabika M, Mualif M. Awareness and knowledge regarding cervical cancer, pap smear screening and human papilloma virus infection in Gabonese women. *BMC Womens Health*. 2015;15:37.
4. Guimond ME, Salman K. Modesty matters: cultural sensitivity and cervical cancer prevention in muslim women in the United States. *Nurs Womens Health*. 2013;17:210-6.
5. Ayinde OA, Ogunbode OO, Adebayo OJ. Determinants of cervical cancer knowledge and its utilization of screening among a Nigerian female population. *Trop J Obstet Gynaecol*. 2005;22:21-4.
6. Akujobi CN, Ikechebelu JI, Onunkwo I, Onyiaorah IV. Knowledge, attitude and practice of screening for cervical cancer among female students of a tertiary institution in South Eastern Nigeria. *Niger J Clin Pract*. 2008;11:216-9.
7. Nnodu O, Erinoshio L, Jamda M, Olaniyi O, Adelaiye R, Lawson L, et al. Knowledge and attitudes towards cervical cancer and human papillomavirus: a Nigerian pilot study. *Afr J Reprod Health*. 2010;14:95-108.
8. Udigwe GO. Knowledge, attitude and practice of cervical cancer screening (Pap smear) among female nurses in Nnewi, South Eastern Nigeria. *Niger J Clin Pract*. 2006;9:40-3.
9. Folami OM. Ethnic-conflict and its manifestations in the politics of recognition in a multi-ethnic Niger delta region. *Cogent Social Sci*. 2017;3:1358526.
10. Guichon JR, Mitchell I, Buffler P, Caplan A. Citizen intervention in a religious ban on in-school HPV vaccine administration in Calgary, Canada. *Prev Med*. 2013;57:409-13.
11. Grandahl M, Paek SC, Grisurapong S, Sherer P, Tyden T, Lundberg P. Parents' knowledge, beliefs, and acceptance of the HPV vaccination in relation to their socio-demographics and religious beliefs: A cross-sectional study in Thailand. *PLoS One*. 2018;13:0193054.
12. Ferdous J, Islam S, Marzen T. Attitudes and practice of cervical cancer screening among the women of Bangladesh. *Mymensingh Med J*. 2014;23:695-702.

**Cite this article as:** Okwe UN, Chime H, Nwose EU. Demographics and knowledge of cervical cancer of female civil servants in Delta State on Nigeria. *Int J Community Med Public Health* 2019;6:1374-9.