Psycho-social factors influencing cervical cancer screening among female Civil Servants in Delta State, Nigeria

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Abstract
This study assessed the psycho-social barriers to cervical cancer screening services utilization as well as uptake of Human Papilloma Virus (HPV) vaccination among Delta State's female civil servants. The study design is descriptive while the sampling method employed was that of multi-stage. Four hundred and thirty five (435) willing women were selected as study participants. A validated self-administered structured questionnaire of 0.7 reliability coefficient (Cronbach alpha) was used for data gathering. A total of 435 out of 437 questionnaires administered to the participants were properly completed. Thus, the response rate was 99.5%. Data analysis was performed with descriptively using frequency/percent counts and findings are presented in tables and chart. The findings indicate that, 55.4% were aware of carcinoma of cervix; 93.6% had not participated in cervical cancer screening as at the time of data collection. As much as 54.5% of the participants viewed costs of the screening test as a psychosocial factor that impedes cervical screening services use, while 58.2% reported inaccessibility. However, 73.6% indicated willingness to attempt cervical cancer screening. Cervical cancer screening is a strategy directed towards ensuring barest minimum incidence reduction in cervical cancer. Embarking on cervical cancer awareness campaign could help to increase knowledge in cervical cancer preventive measures. Besides, subsidizing cost of cancer screening is capable of lessening the financial burden, as well as improving utilization of cervical cancer screening services. Subsequently, global cervical cancer burden will be reduced, with a consequent reduction in mortality.

Keywords: Psycho-social, factors, utilization, cervical cancer, Screening

Word Counts: 226 words.

Introduction:
Cervical cancer still threatens women's health despite so many strategies and modalities that have been initiated and implemented to break its chain of effects worldwide. The disease has led to loss of so many lives among the young and the old. Across the globe, cervical carcinoma has been known to be the fourth most common carcinoma affecting women. It is most prominent in the developing countries with low and middle income earnings (International Agency for Research on Cancer (IARC), 2013). The reproductive disease affects all races, gender, age, culture and ethnic groups. An estimated 528000 new cervical cancer cases are diagnosed annually across the globe; 266,000 deaths were reported in 2012 (IARC, 2013). In Nigeria, newly diagnosed cervical cancer affects 14,943 women, while 10,403 die from the disease yearly. Also, the uptake of cervical cancer screening has been very low (Jedy-Agba, Curado, Ogunbiyi, Oga, Fabowale, Igbinoba, & Osinubi, 2012). For example, nine out of thirteen studies show less than 5.3% cervical

cancer screening uptake (Ndikom & Ofi, 2012). Psycho-social factors such as anxiety, fear of being diagnosed, fear of death from the disease, inappropriate health seeking behaviour, cost of screening service, lack of social support, cultural beliefs/practices, busy work schedules, economic recession, stigmatization, poor reproductive health knowledge, service accessibility have been identified in countries like Nigeria and Malawi (Makwe, & Anorlu, 2011; Teng, Mitchell, Sekikubo, Biryabarema, Byamugisha, Steinberg, & Ogilvie, (2014); Ajah, Iyoke, Ezeonu, Ugwu, Onoh, & Ibo, 2015). However, these psychosocial factors identified by some scholars in different social settings, communities, states and countries have not been proven empirically in Delta Sate (Anecdotal evidence). This forms the basis for this current study which sought to assess the psycho-social factors that impedes the utilization of HPV vaccination among female civil servants in Delta State.

Screening for cervical cancer and uptake of HPV vaccination programme is grossly inadequate in Nigeria particularly Delta State, (anecdotal evidence). Most of the women in less developed countries like Nigeria are ignorant of public health burden of cervical cancer, modalities of screening and HPV vaccination.
Women of reproductive age lost to this deadly disease. Consequently, the death of a woman is significant loss to the nation, and to the children who will suffer lack of maternal tender loving care and input throughout their life time, the immediate family equally suffers, the extended families, friends and love ones. The country equally bears the aftermath effect of this disease despite the availability of cervical cancer screening services and HPV vaccines in Nigeria (Anecdotal evidence).

Over the years, awareness, knowledge, and uptake of cervical cancer screening and HPV vaccination have been known to be poor in Nigeria. There is paucity of data on psychosocial issues (fear of being diagnose, fear of death, anxiety, stigmatization, cultural practices, religion, cost, lack of time, economic status, misconception etc.) identified by other researchers on cervical cancer screening and HPV vaccination in Delta State. In fact there was no known study found in Delta State to evaluate the psychosocial factors influencing HPV vaccination and cervical cancer screening. This research intends to address that gap in knowledge and hopes to identify these factors in Delta State in order to make room for interventional study.

Objectives of Study
The objectives of this study were to:

1. describe the socio-demographic characteristics of the participants
2. assess knowledge and awareness of cervical cancer among female civil servants in Delta State.
3. examine uptake of cervical cancer screening among female civil servants in Delta State
4. identify psychosocial factors influencing acceptability of screening service for cervical cancer among female civil servants in Delta state.

Research Questions

1 What are the socio-demographic characteristics of the participants?
2 What is the level of knowledge and awareness of the cervical cancer among female civil servants in Delta State?
3 What is the uptake of cervical cancer screening like among female civil servants in Delta State?
4 What are the psychosocial factors influencing acceptability of screening service for cervical cancer among female civil servants in Delta State?

Methodology

Research Design
The study is a cross-sectional, descriptive design, which utilized self-administered structured questionnaire to examine psychosocial factors influencing cervical cancer screening.

Target Population
The target population were 14,953 female civil servants working in Delta State secretariat. Delta State secretariat was purposively selected based on the fact that there is concentration of

civil servants and ministries in the secretariat thereby giving the researcher access to the different social classes (low, middle and high social class) which is the focus of the research topic.

Sampling Technique and Sample

The sampling technique used in selecting participants for the study was multi-stage. First, the Delta State secretariat was selected purposively, Secondly, simple random sampling was used to select four (4) ministries (Ministry of Health, Ministry of Education, Ministry of Finance and Ministry of Works). A total of 435 *willing women were purposively selected* across the four ministries using the formula for calculating sample proportion:

$$n = \frac{z^2 pq}{d^2}$$

Where z = Taken as 1.96 which is the standard normal deviate. This corresponds to the 95% confidence levels. p = 0.57; the prevalence proportion, (Stoker, (1985), q =1 – p. Thirdly, the participants were selected using systematic random sampling technique to ensure equal chance of being selected. Thus, the sampling frame containing the names of the women was obtained from the employment record in computer files of each selected ministry. The class interval and the selection starting point from the sample frames were determined randomly using the formula (K = N/n.). Where 'K' is the class interval, 'N' is the total population in the four selected ministries and 'n' is the sample size.

Instrumentation

A four-sectioned structured questionnaire designed based on the objectives of the study was used for data collection. Section A containing 8 items elicited the socio-demographic variables from the participants, while section B was designed to test knowledge of cervical cancer. Section C assessed their uptake of cervical cancer screening, while section D was structured to identify possible psychosocial factors that may influence screening for cervical cancer.

The content validity measure was ensured through the use of relevant literatures. The researcher developed questionnaire (using the study objectives and literature search as guide), which was given to experts in the field of Nursing, and supervisory team (research supervisor, statisticians and senior researchers in related field) for thorough scrutiny. The instrument's reliability was determined by a test-retest approach using ten percent of the sample size administered in a ministry (Ministry of land and Survey) different from the ones chosen for the study. The internal consistency reliability was determined using Cronbach's alpha. The reliability coefficient was 0.7.

Data Collection and Analysis

Questionnaires administered to the female civil servants in the Ministries were retrieved, checked for proper completion on collection from participants by researcher and trained assistants. The collected data were coded and kept confidential. Collected data were analysed using descriptive statistics (frequency/percent counts). The findings were presented in tables and chart.

Ethical Consideration

The proposal was processed through the ethical Review Board of the Ministry of Health, Asaba, Delta State with approval number HM/596/T/143. All participants gave informed consent prior to data collection and necessary permission was taken from the ministries. Respondents were informed that their information will be kept confidential; the researcher ensured that research instrument was kept anonymous.

Research Questions1. What are the socio-demographic characteristics of the participants?
2. What is the level of knowledge and awareness of the cervical cancer among female civil servants in Delta State?

3. What is the uptake of cervical cancer screening like among female civil servants in Delta State?

4. What are the psychosocial factors influencing acceptability of screening service for cervical cancer among female civil servants in Delta State?

RESULTS

Research Question 1: What are the socio-demographic characteristics of the participants?

Table 1: Socio-demographic information of participants (N = 435)

Socio-demographic information	Frequency	Percent	Mean
Age categories (Years)			
Teenagers	6	1.4	
Young women	320	73.6	32 years ± 7.0
Elderly women	109	25.1	
Highest level of education			
Primary	38	8.7	
Secondary	112	25.7	
OND	73	16.8	
HND/BSc	197	45.3	
Postgraduate	15	3.4	
Ministries			
Education	203	46.7	
Health	96	22.1	
Finance	70	16.1	
Works	66	15.2	
Marital status			
Single	57	13.1	
Married	370	85.1	
Divorced	4	0.9	
Separate	4	0.9	
Religion			
Islam	47	10.8	
Christianity	370	85.1	
Traditional	3	0.7	
No specific religion	15	3.4	
Parity of women			
Nulliparous women	151	34.7	
Primiparous women	113	26	
Multiparous women	159	36.6	
Grand multiparous women	12	2.8	
Estimated monthly income			
Below 18000	118	27.1	
18000 – 37000	196	45.1	
38000 – 57000	48	11	
Above 57000	64	14.7	
Income not specified	9	2.1	

Table 1 presents the participants' socio-demographic information. A total of 437 questionnaires were administered but 435 were retrieved and were considered suitable for data analysis. Thus, the response rate was 99.5%. The response rate was therefore considered as adequate. Out of the 435 female civil servants that were studied, 320 (73.6%) of the respondents were young women, 73 (16.8%) and 197 (45.3%) were both OND and HND/B.Sc. holders.. Also, 38 (8.7%) and 112 (25.7%) had primary and secondary school education, while 15 (3.4%) had postgraduate degrees. The participants were recruited from four state government ministries, namely: Ministries of Education - 579, Health - 253, Finance – 180, and Work - 197. In addition, 370 (85.1%) were married, 57 (13.1%) were single women, while the divorced and those separated from their spouses were 4 (0.9%). Christians among them were 370 (85.1%), while 47 (10.8%) were Muslims. Besides, 159 (36.6%) were multiparous women while 12 (2.8%) were grand multiparous women by the time of the data collection. Out of the 435 women studied across the selected ministries, 196 (45.1%) were earning #18,000 – #37,000 monthly, while 118 (27.1%) were earning below #18, 000. However, 9 (2.1%) did not disclose their monthly earnings.

Research Question 2: What is the level of knowledge and awareness of the cervical cancer among female civil servants in Delta State?

Cervical Cancer Screening Information	Frequency	Percentage
Level of Awareness		
Aware	**241**	**55.4**
Not aware	**194**	**45.6**
Sources of information		
Family member	**15**	**3.4**
Health workers	**101**	**23.2**
Mass media	**102**	**23.4**
Friends/ co workers	**23**	**5.3**
No information from any source	**194**	**44.6**

Table 2 shows that 241 (55.4%) had heard of cervical cancer prior to data collection, while the remaining had never heard of the disease. Participants who got no cervical cancer screening information from any source topped the list 194 (44.6%) followed by those who got the information through mass media 102 (23.4%), and health workers 101 (23.2%). The least source of information was from family members 15 (34%).

Table 3: Knowledge of Cervical Cancer among Respondents

Knowledge of Cervical Cancer	Frequency	Percent
Meaning given to cervical cancer		
Abnormal malignant growth of the cervix	191	43.9
Abnormal malignant growth of the womb	93	21.4
Small growth in the anus	13	3.0
Meaning of cervical cancer not known	138	31.7
Modalities for cervical cancer detection		
Pap test	82	18.9
Visual Inspection with Lugol Iodine (VILI)	12	2.8
Visual Inspection with Acetic Acid (VIA)	7	1.6
HPV test	57	13.1
All of the above	31	7.1
No known modality	246	56.6

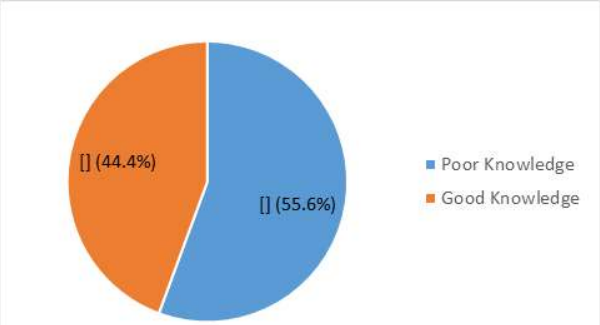

Figure 1. Respondents' Levels of knowledge of cervical cancer

The participants' responses to the test items on knowledge of cervical cancer are presented in Table 3. Besides, the scores of the participants were computed for reporting. A total of 191 (43.9%) were able to give correct meaning of cervical cancer as "*Abnormal malignant growth of the cervix*". Table 3 gives detail information on screening measures of cervical cancer that were identified by the participants. A total of 82 (18.9%), 12 (2.8%), and 7 (1.6%) of the women identified pap smear, visual inspection with Lugol Iodine (VILI), and visual inspection with acetic acid (VIA) as cervical cancer screening measures respectively. In Figure 1, a total of 193 (44.4%) had good knowledge of cervical cancer and its screening measures.

Research Question 3: What is the uptake of cervical cancer screening like among female civil servants in Delta State?

Table 4: Uptake of Cervical Cancer Screening among Participants

Number of Times Screened for Cervical Cancer	Frequency	Percent
Once	16	3.7
Twice	7	1.6
Thrice	5	1.1
Never screened	407	93.6
Total	435	100.0

A total of 16 (3.7%), 7 (1.6%), and 5 (1.1%) of the participants had been screened once, twice and thrice, respectively, while 407 (93.7%) of the participants had not been screened for cervical cancer prior to the time of data collection.

Table 5: Participants' Willingness and Acceptability of Cervical Cancer Screening

	Yes		No		Not sure	
Acceptability/Uptake Decision of Screening	N	(%)	N	(%)	N	(%)
Willingness to go for cancer screening in future	320	(73.6)	67	(15.4)	48	(11.0)
Willingness to encourage anyone to go for cancer screening	381	(87.6)	40	(9.2)	14	(3.2)
Willingness to accept screening in respect to age and its side effects	311	(71.5)	58	(13.3)	66	(15.2)

Table 5 reveals that 320 (73.6%) were willing to go for cancer screening in future, while 381 (87.6%) were willing to encourage anyone to go for cancer screening and 311 (71.5%) were willing to accept screening in respect to age and its side effects.

Research Question 4: What are the psycho-social factors influencing acceptability of screening service for cervical cancer among female civil servants in Delta state?

Table 5: Psychosocial factors influencing uptake of cervical cancer screening

	Yes		No	
Psychosocial factors	N	(%)	N	(%)
Unaffordable cost of the screening test	243	(55.9)	192	(44.1)
Fear of discomfort or pain or unsafe procedure	217	(49.9)	219	(50.1)
Fear of adverse effect(s) of pap smear	195	(44.8)	240	(55.2)
Inaccessibility to the cervical screening service	252	(57.9)	183	(42.1)
Inaccessibility to the cervical screening facilities	253	(58.2)	182	(41.8)
Fear of lack of privacy/ confidentiality	179	(41.1)	256	(58.9)
Lack of support from spouse (husband)	153	(35.2)	282	(64.8)
Lack of support from mother-in-law or husband relatives	108	(24.8)	327	(75.2)
Discouragement from friends or colleagues	95	(21.8)	339	(77.9)
Screening forbidden by religion	56	(12.9)	379	(87.1)
Family/community taboo	52	(12.0)	383	(88.0)
Nature/schedule of work	79	(18.2)	356	(81.8)
Discouraging attitude of health workers	113	(26.0)	322	(74.0)
Lack of belief in cervical screening as a means of prevention	101	(23.2)	334	(76.8)
Fear of being labelled or stigmatized as cancer patient.	126	(29.0)	309	(71.0)

Table 5 presents the psychological factors that influence uptake of cervical cancer screening among the participants. Inaccessibility to facilities 253 (58.2%) topped the list of factors that influence the uptake of cervical cancer screening followed by inaccessibility to cervical cancer screening services and the least was family/community taboo 52 (12.0%).

Discussion

A large proportion of the participants were young women. This means the population falls into the category of people most at risk of cervical cancer. Majority of the respondents were multiparous. This is important as multiparity has been implicated as a risk factor for development of cervical lesions and thus, the need to advice women to utilize screening and vaccination services that are available.

A good proportion of the participants did not know what cervical cancer is; and had not heard any information about cervical cancer from any source; more than half did not know any screening modality and most of them hadn't been screened for cervical cancer. This finding supports previous studies **which had reported** poor knowledge of cervical cancer among pregnant women (Eze, Umeora, Obuna, Egwuatu & Ejikeme, 2012; Ndikom & Ofi, 2012; Assoumou, Mabika, Mbiguino, Mouallif, Khattabi & Ennaji, (2015); **Ingwu, 2016).** Therefore, it was concluded that. A good proportion of the participants did not know what cervical cancer is; and had not heard any information about cervical cancer from any source, more than half did not know any screening modalities and most of them hadn't been screened for cervical cancer.

As a way forward, there was critical need to expand the knowledge base and improve the attitude of Nigerian women to boost cervical cancer screening uptake (Idowu, Olowookere, Fagbemi, & Ogunlaja, 2016).

In addition, a large proportion 93.7% of the participants had not been screened for cervical cancer prior to the time of data collection. The observed low uptake of cervical cancer screening recorded in the current study was attributable to factors such as low socioeconomic status of participants. Majority of the respondents claimed that unaffordable cost of screening was a barrier to utilization of screening services. The factors affecting uptake were identified in a previous study. These factors include cost of the screening as most of the respondents were willing to uptake the screening if it were NGN2, 000 or less (Damiani, Federico, Basso, Ronconi, Bianchi, Anzellotti, & Ricciardi, 2012). Fee charged on screening for cervical cancer could be a rate limiting factor. In a persistent poverty-striking region, where there are many other pressing issues competing for the scarce resource abound, paying out-of-pocket for non-emergency services like screening for cervical cancer could be a serious obstacle to women (Ndikom & Ofi, 2012).

A proportion of the participants believe that there is an associated stigma with screening for cervical cancer. A good number of the participants believed that the health care workers' negative attitude can discourage them from utilizing cervical cancer screening methods and from being vaccinated against cervical cancer. This finding supports a previous work which showed that the gender of the service provider could be an hindrance to cervical cancer screening (White, Mulambia, Sinkala, Mwanahamuntu, Parham, Moneyham, & Chamot, 2012). Another hindrance included having to undress for the procedure. This appears to be a sign of unhealthy attitude capable of limiting uptake of the cervical cancer screening services.

A good percentage of the participants believe that lack of support from their spouse can make it impossible for them to utilize screening services. In most African communities, patriarchy is practiced; therefore, spousal support was a substantial obstacle to cervical cancer screening uptake. The man is viewed as the head of the home and family; therefore, important decisions are made by him. It was reported in a previous study that spouses suspected that women desiring cervical cancer screening might be unfaithful or wanting to expose her body to another man. Such lack of spousal support may hinder cervical cancer screening (Mutyaba, Faxelid, Mirembe, & Weiderpass, 2007).

Conclusion

This study has been able to identify certain psycho-social factors that have profound effects on uptake of screening services. Such factors include but are not limited to lack of support from their spouses, shame and cost of the screening. All these factors go a long way to affect screening of participants and uptake of cervical cancer vaccination, hence, a great need to properly understand these factors and help the participants overcome such hindrances. It has also been discovered that the use of cervical screening services was very low among the participants, hence, a great need to make provisions for early detection and prompt management in advanced cases, to prevent exacerbation.

Recommendations

Nurses as well as other health care workers at all levels of care have a responsibility of ensuring that all patients that come to them are properly treated, examined and correctly diagnosed. They must therefore ensure that patients' fears about procedures are allayed, and that patients are treated with the utmost respect and dignity they deserve. This will foster increased uptake of the available screening services.

Health care Services, particularly cancer screening services should be made available to women at the grassroots in all primary health care centres. The cost of screening services should be subsidized by the government to ensure that cost does not impede uptake of the screening services.

Information about cervical cancer and its screening services should be provided to ensure that female workers have a good knowledge of cervical cancer, its causes and possible vaccination

Implication for Nursing

Nurses are the largest population of health care workers in the health care sector, and as such can be found in diverse units. This confers them with the task of disseminating information about certain things to patients. Nurses must therefore, try as much as possible to sensitize patients about available cervical cancer prevention services.

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