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Determinant Factors Influencing the Uptake of Cervical Screening and Vaccination among Female Workers at Two Selected Government Hospitals in Abuja, Nigeria

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Abstract

Cervical cancer is an important public health problem, and a priority concern to WHO program on Cancer Control; though there are various levels of resources to detect cervical cancer, women are still reluctant to go for screening and take the human papilloma virus (HPV) vaccine. This study therefore investigated the factors influencing uptake of cervical screening and vaccination among female workers at two selected government hospitals in Abuja. The study adopted a descriptive cross-sectional study involving 160 workers at the selected government hospitals. Multi-stage sampling procedure was adopted to select study participants. Descriptive and inferential statistics was used to test variables of interest at $p<0.05$. Finding showed that majority of the respondents were married, Christian and with a degree qualification (88.1%, 66.3% and 40.6% respectively). Most (78.1%) of the respondents had good perception about cervical cancer screening services and vaccination, attitude towards uptake of cervical cancer screening services and vaccination was bad/negative (56.7%), while the knowledge of cervical cancer screening services and vaccination was high (79.4%). From the results, it could be deduced that; low cost of cervical cancer screening and vaccines, availability of service, economic wherewithal, level of education, culture and nature of the test can influence uptake of cervical cancer screening services and vaccination. This study has shown that more holistic health education is needed to change the poor attitude of women on cervical cancer screening and vaccination. There is also therefore the need for government to invest more in infrastructural facility in the healthcare system. This will enable each facility to have screening facility and vaccines available for administration whenever any patient presents themselves for screening and vaccination

Keyword: Cervical Cancer, Screening, Factors, Vaccination, Women, Factors

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INTRODUCTION

Cervical cancer is an important public health problem, and a priority concern to WHO program on Cancer Control; though there are various levels of resources to detect cervical cancer, women are still reluctant to go for the screening and take the human papilloma virus (HPV) vaccine (WHO, 2019). Cervical cancer is a type of cancer that can be preventable and treatable through early screening, it is also a public health problem in the world including developing countries. Cervical cancer is the second most commonly diagnosed and leading cause of death among child bearing women in the world, more than 85% of cases and deaths are found in less developed countries (Ujah, 2013). According to Momenimovahed and Salehiniya (2017), every 10 minutes, two women die from cervical cancer worldwide. Two-third (76%) of new cervical cancer cases overall

occur in developing countries and sub-Saharan Africa has the highest burden of mortality associated with cervical cancer in the world (Bray, Ferlay, Soerjomataram, Siegel, Torre & Jemal, 2018).

Cervical Cancer screening is a health intervention used on population of women at risk of developing cervical cancer (WHO, 2020). It is not undertaken to diagnose the disease but to identify individuals with a high probability of having or developing the disease at the precancerous stage. The individual may actually feel perfectly healthy and may see no reason to visit a health facility. Screening helps to prevent the incidence of cancer causing Human papilloma virus infection and significantly reduces the incidence of cervical cancer and the burden of the sickness on women, family and the nation at large (Jassim, Obeid & Al Nasheet, 2018).

Evidence show success of cervical screening initiatives depend on high participation of the target population, which in turn is determined by the women's knowledge and attitude towards uptake of cervical screening. Cervical cancer screening has a benefit to reduce the incidence, the progression of advanced stage of cancer as well as its mortality. Screening reveals abnormal change of cervical cells and this change is detectable 5-20 years prior to cervical cancer.

Even though cervical cancer can be fully treated through screening; the trend of new cases has been increasing year to year and the service is hardly utilized by women. This low cervical screening coverage is a big problem to prevent and control cervical cancer and it seems that the reasons for not up taking a cervical screening were found to be poor knowledge, fear of procedure, fear of negative outcome, low awareness of services among others (Kumar, Biswas & Jose, 2015). Anecdotal evidence has shown that uptake of cervical cancer screening for the prevention of the disease is poor in Nigeria, even among female health care workers who should be role models and well informed. In a Nigerian study on awareness of nurses on cervical cancer screening services, results showed that 87% were aware of the existence of cervical cancer screening services but only 5.7% had ever been screened for cervical cancer (Oyedunni & Opemipo, 2015). These results raised a lot of concerns since attitude may ultimately translate to practices, and eventually modify disease epidemiology and control.

The American Cancer Society recommends that all women should undertake cervical screening at ages 30, 40, and 50 (Agida, et al., 2015). The researchers observed at several visits to the Obstetrics and Gynaecological unit that, most patients with cervical cancer arrived late after receiving different kinds of treatments at home. At this time, only palliative treatment could be rendered to them to prolong their lives before they eventually died. Creating awareness, identifying the barriers to cervical cancer screening and uptake of cervical cancer screening services will encourage women to go for screening which can prevent them from developing the disease. This study was therefore designed to investigate the factors influencing uptake of cervical screening and vaccination among female workers at two government hospitals in Abuja.

METHODOLOGY

This study adopted a descriptive cross-sectional survey using a validated self-administered structured questionnaire. The study was carried out at the federal staff hospital, Abuja and Gwarimpa General Hospital, Abuja. There were 1,835 female workers at two government hospitals in Abuja where screening centres were available. The target population was workers who are within the reproductive age of 25 and 50 years old. The sample for the study was derived by calculating sample from the total population using the Taro Yamane formula (Yamane, 1976)

$$n = \frac{N}{1 + N(e)2}$$

A total of 160 minimum sample size was calculated

The sample was selected through multistage sampling procedure. The stages of selection were three. At stage one, the two selected government hospitals were purposively selected from the three hospitals in Abuja which has cervical cancer screening services. Eight (8) Departments/units were selected from each of the hospitals by simple random sampling technique using balloting without replacement. Proportionate sampling was then used to determine the number of staff to be selected per Department/unit, while simple random sampling was used to select actual participants for the study. This included; female workers who were officially employed by the hospital, female workers that was available on duty during the period of study, female workers within the reproductive age of 25 and 50 years old and female workers who consented and accepted to respond. This includes female workers who did not consent and female workers above the reproductive age of 50 years old. Data collected from study participants were processed using statistical package for Social Sciences (SPSS) version 27.0. The research questions were answered using descriptive statistics such as frequency counts, percentages, mean and standard deviation. The hypotheses were tested using Pearson's Product Moment Correlation and Chi-square at 0.05 level of significance.

RESULTS

Socio-demographic profile of respondents

Overall, a total of 160 consenting health workers participated in this study. Table 1 presents the socio-demographic profile of the respondents

Table 1. Respondents socio-demographic characteristics
N= 160

Socio-demographic characteristics	Frequency	Percentage
Age		
25-30 years	18	11.3
30-35 years	27	16.9
35-40 years	29	18.1
40-45 years	53	33.1
Above 45 years	33	20.6
Total	160	100.0
Marital Status		
Married	141	88.1
Single	19	11.9
Total	160	100
Monthly Income		
Less than #50,000	39	24.4
#50,000 - #100,000	44	27.5
Over #100,000	77	48.1
Total	160	100.0
Ethnicity		
Yoruba	54	33.8
Hausa	43	26.9
Igbo	39	24.4
Others	24	15.0
Total	160	100.0
Religion		
Islamic	54	33.8
Christianity	106	66.3
Total	160	100.0
Educational Qualification		
SSCE	16	10.0
NCE	9	5.6
Diploma	48	30.0
Degree	65	40.6
Others	22	13.8
Total	160	100.0

Perception of cervical cancer screening and vaccination

Table 2 revealed respondents perception on cervical cancer screening and vaccination. Majority, 78.1% of the respondents had good perception, 21.9% had poor perception on cervical cancer screening and vaccination

Table 2. Perception of cervical cancer screening and vaccination
N= 160

S/N	ITEMS	Agree (%)	Undecided (%)	Disagree (%)	Mean
1.	I have heard about cervical screening before	160 (100.0)	0 (0.0)	0 (0.0)	3.00
2.	Cervical cancer is not my portion so I do not need to do cervical cancer screening	17 (10.6)	0 (0.0)	143 (89.4)	1.21
3.	Cervical cancer screening must be painful, I cannot do it	3 (1.9)	8 (5.0)	149 (93.1)	1.09
4.	Cancer does not exist so I don't need any screening against cervical cancer	0 (0.0)	0 (0.0)	160 (100.0)	1.00
5.	Even if cervical cancer screening and vaccination is free, I cannot undergo it	14 (8.8)	2 (1.3)	144 (90.0)	1.19
6.	Cervical cancer screening is for only married women	35 (21.9)	4 (2.5)	121 (75.6)	1.46
7.	Cervical cancer screening is not safe and I don't think it is necessary	0 (0.0)	14 (8.8)	146 (91.3)	1.09
8.	Cervical cancer vaccination is not necessary for me because I don't have family history of it, so,	14 (8.8)	4 (2.5)	142 (88.8)	1.20
9.	I will not advice my family member or my daughter to take cervical cancer screening	2 (1.3)	4 (2.5)	154 (96.3)	1.05
10.	Going for cervical cancer screening will do no good than cause unnecessary fear.	51 (31.9)	0 (0.0)	109 (68.1)	1.64

Knowledge of cervical cancer screening services and vaccination

Table 3 revealed the respondents level of knowledge on cervical screening and vaccination. The results showed that 127(79.4%) had high knowledge while 33(20.6) had moderate knowledge. None of the respondents had low knowledge on cervical screening and vaccination. Of the responses, 135(84.4%) of the respondents reported that cervical cancer can be prevented, 140(87.5%) knew the best way to prevent cervical cancer is by undergoing pap smear and vaccination while 20(12.5%) did not know.

Table 3. Knowledge of cervical cancer screening services and vaccination
N= 160

S/N	ITEMS	Yes (%)	No (%)	Mean
1.	Cervical cancer can be prevented	135 (84.4)	25 (15.6)	0.84
2.	The best way to prevent cervical cancer is by undergoing pap smear and vaccination	140 (87.5)	20 (12.5)	0.88
3.	Cytology is another screening test for cervical cancer	149 (93.1)	11 (6.9)	0.93
4.	The screening is for all women whether sexually active or not	142 (88.8)	18 (11.3)	0.89
5.	Cervical cancer can be treated and cured if detected early	146 (91.3)	14 (8.8)	0.91
6.	Visual inspection with acetic acid or Lugols iodine is another means of cervical cancer screening	147 (91.9)	13 (8.1)	0.92
7.	The cervix may be pierced with a sharp instrument when collecting cervical swab	132 (82.5)	28 (17.5)	0.83
8.	Cancer has different stages as well as cervical cancer	137 (85.6)	23 (14.4)	0.86
9.	If cancer is left untreated, it may spread within the body	149 (93.1)	11 (6.9)	0.93
10.	Cancer is one of the leading cause of high death in Nigeria	145 (90.6)	15 (9.4)	0.91
11.	Cervical cancer screening is a form of treatment for nursing mothers	143 (89.4)	17 (10.6)	0.89
12.	Cervical cancer screening could also detect other types of cancer	144 (90.0)	16 (10.0)	0.90
13.	Cervical cancer screening can help detect cancer early	145 (90.6)	15 (9.4)	0.91
14.	Cervical cancer vaccination can help prevent cancer	150 (93.8)	10 (6.3)	0.94

Attitude of female workers towards uptake of cervical screening services and vaccination

Table 4 presented the attitude of respondents on cervical screening and vaccination. Majority (56.9%) had bad attitude while 43.1% of the respondents had good attitude. While 6(3.8%) of the respondents strongly agreed there is nothing like cervical cancer, 15(9.4%) agreed, 64(40%) disagreed while 75(46.9%) strongly disagreed. 6(3.8%) strongly agreed they like to regularly go for cervical cancer screening, 46(28.7%) agreed, 93(58.1%) disagreed while 15(9.4%) strongly disagreed. 12(7.5%) strongly agreed they like to be vaccinated for cervical cancer, 38(23.8%) agreed, 92(57.5%) disagreed while 18(11.3%) strongly disagreed

Table 4. Attitude of female workers towards uptake of cervical screening services and vaccination
N= 160

S/N	ITEMS	Strongly Agree (%)	Agree (%)	Disagree (%)	Strongly Disagree (%)	Mean
1.	There is nothing like cervical cancer. In fact, it does not exist	6 (3.8)	15 (9.4)	64 (40.0)	75 (46.9)	1.70
2.	I like to regularly go for cervical cancer screening	6 (3.8)	46 (28.7)	93 (58.1)	15 (9.4)	2.27
3.	I like to be vaccinated for cervical cancer	12 (7.5)	38 (23.8)	92 (57.5)	18 (11.3)	2.28
4.	Vaccination could prevent the occurrence of cancer	29 (18.1)	84 (52.5)	42 (26.3)	5 (3.1)	2.86
5.	Cervical cancer is the disease of the rich	0 (0.0)	6 (3.8)	67 (41.9)	87 (54.4)	1.49
6.	If it is free, I will be interested in cervical cancer screening	0 (0.0)	22 (13.8)	99 (61.9)	39 (24.4)	1.89

Factors influencing uptake of cervical cancer screening services and vaccination

Table 5 presents the factors influencing the uptake of cervical cancer screening and vaccination. Most 146(91.3%) reported low cost can make them take HPV vaccine and undergo cervical cancer screening while 14(8.8%) will not. 149(93.1%) said availability of hospital with Cervical screening facility will influence while 11(6.9%) will not be influenced. 151(94.4%) said shortage of staff at hospital is a factor while 9(5.6) did not see it as such. 157(98.1%) said economic status of women could influence their willingness to go for test and accept vaccination while 3(1.9%) did not see it as such.

Table 5. Factors influencing uptake of cervical cancer screening services and vaccination N= 160

S/N	ITEMS	Yes (%)	No (%)	Mean	SD
1.	Low cost can make me uptake HPV vaccine and undergo cervical cancer screening	146 (91.3)	14 (8.8)	1.91	0.28
2.	Availability of hospital with Cervical screening facility	149 (93.1)	11 (6.9)	1.93	0.25
3.	Economic status of women could influence their willingness to go for test and accept vaccination	157 (98.1)	3 (1.9)	1.98	0.14
4.	Educational status of women could influence their willingness to go for test and accept vaccination	132 (82.5)	28 (17.5)	1.83	0.38
5.	The native culture of women could influence their willingness to go for test and accept vaccination	114 (71.3)	46 (28.7)	1.71	0.45
6.	The nature of the test and phobia of result could influence their willingness to go for test and accept vaccination	159 (99.4)	1 (0.6)	1.99	0.08
7.	Cervical cancer screening is not permitted in my religion	39 (24.4)	121 (75.6)	1.24	0.43
8.	My spouse can never approve my going for cervical cancer screening	9 (5.6)	151 (94.4)	1.06	0.23
9.	Fake results of cervical cancer screening are rampant; my friend who did hers eventually had cancer.	21 (13.1)	139 (86.9)	1.13	0.34

Table 6. The socio-demographic correlates of uptake of cervical cancer screening services and vaccination

SN	Variable		N = 160			
			Freq.	%	X^2	Sig
1.	Age	25-30 years	18	11.3		
		30-35 years	27	16.9		
		35-40 years	29	18.1	157.714*	.000
		40-45 years	53	33.1		
		Above 45 years	33	20.6		
2.	Marital Status	Married	141	88.1	8.700*	.013
		Single	19	11.9		
3.	Monthly Income	Less than #50,000	39	24.4		
		#50,000 - #100,000	44	27.5	131.447*	.000
		Over #100,000	77	48.1		
4.	Ethnicity	Yoruba	54	33.8		
		Hausa	43	26.9	126.732*	.000
		Igbo	39	24.4		
		Others	24	15.0		
5	Religion	Islamic	54	33.8	126.732*	.000
		Christianity	106	66.3		
6.	Educational Qualification	SSCE	16	10.0		
		NCE	9	5.6		
		Diploma	48	30.0	116.038*	.000
		Degree	65	40.6		
		Others	22	13.8		

Table 6 shows that the chi-square value obtained for age is (x^2 = 157.714, p = .000); marital status (x^2 = 8.700, p = .013); monthly income (x^2 = 131.447, p = .000); ethnicity (x^2 = 126.732, p = .000); religion (x^2 = 126.732, p = .000); and educational qualification (x^2 = 116.038, p = .000) at the significant level of 0.05. Since these p-values were less than 0.05 values, it could be said that age, marital status, monthly income, ethnicity, religion and educational qualification are related to uptake of cervical cancer screening services and vaccination. Therefore the null hypothesis is rejected. This implies that there was significant association between socio-demographic characteristics and uptake of cervical cancer screening services and vaccination among female workers at two government hospitals in Abuja.

DISCUSSION

Findings of the study have revealed that the respondents have good perception about cervical cancer screening and vaccination. This fact is in line with several studies such as that of Ogunbode and Ayinde (2015), Olusegun and Adepiti (2012), and Oyedunni and Opemipo (2012) among Nigerian women which revealed relatively good perception of cervical cancer screening but low uptake level. This is an indication for more intervention to encourage uptake for both the cervical cancer screening and vaccination. The study also revealed that most of the respondents had high level of knowledge of cervical cancer screening services and vaccination. No respondents had low level of knowledge of cervical cancer screening services and vaccination. In support of this finding, Mutambo and Shangahaidonhi (2017) in their study on knowledge attitude and practice of cervical screening among women attend traditional churches in Zimbabwe revealed that knowledge about factors that caused cervical cancer was relatively high. Ogunbode and Ayinde (2015) found that 40.8% had heard about cervical cancer and of these 19.7% were aware of Pap smear as a screening test and only 5.2% had had Pap smear. Working with female health workers, Olaniyan (2014) found knowledge rate of 72.9% and compliance rate of 9.6%. Also, in a study by Tapera, Manyala, Erick, Maswabi, Tumoyagae, Letsholo, Mbongwe (2017) on Botswana university female students revealed that all respondents were aware of cervical cancer; the awareness came via posters, brochures and other printed materials. Pap smear was the most popular screening test recorded (47.8%). This finding however contracted findings of Olubodun, Odukoya and Balogun (2019), in their study among women residing in urban slums in Lagos, Nigeria submitted only 12.8% out of the 305 respondents have heard of cervical screening and human papilloma virus. The good knowledge reported in this study may be a result of the educational attainment of the study population as majority has a degree.

This study however revealed that attitude towards cervical cancer screening and vaccination was bad as majority had low attitude score. In contrast to this finding is a cross sectional study by Mutambara, et al., (2017) among 125 women who are traditional church members

in Zimbabwe which revealed that 89.7% of the respondents acknowledged that they could be worried and seek medical attention if they have any sign of cancer lesion, however 83.2% of the women have never been screened of cancer. This study however support the finding in Enugu among nurses where 25% of the participants felt they were not likely candidates for cervical cancer, so were not willing to screen (Dim, Ekwe, Madubuko, Dim & Ezegwui, 2016). This study has also revealed that aside from knowledge, attitude and perception, the following factors influence uptake of cervical cancer screening services and vaccination; cost, availability of hospital, educational status, economic status, cultural practice, nature of the test and phobia of result.

The study further revealed that there was significant association between socio-demographic characteristics and uptake of cervical cancer screening services and vaccination among female workers at two government hospitals in Abuja. Age (x^2 = 157.714, p = .000); marital status (x^2 = 8.700, p = .013); monthly income (x^2 = 131.447, p = .000); ethnicity (x^2 = 126.732, p = .000); religion (x^2 = 126.732, p = .000); and educational qualification (x^2 = 116.038, p = .000) were associated with uptake of cervical cancer screening services and vaccination among female workers at two government hospitals in Abuja.

CONCLUSION

Sequel to the findings of this study, it is concluded that most of the female workers have heard about cervical cancer, have good perception and high level of knowledge of cervical cancer screening services and vaccination but the level of uptake was low. In addition, most of the female workers showed negative attitude to cervical cancer screening and vaccination. It is also concluded that the factors influencing uptake of cervical cancer screening services and vaccination are cost, availability of hospital, shortage of staff, educational status, economic status, cultural practice, nature of the test and phobia of result. There is also therefore the need for government to invest more in infrastructural facility in the healthcare system. This will enable each facility to have screening facility and vaccines available for administration whenever any patient presents themselves for screening and vaccination.

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