

## **Awareness and Utilization of Cervical Cancer Screening Among Primary Health Care Workers in Ilesa, Osun State**

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**ABSTRACT:** *Cervical cancer is a type of cancer that starts in the cervix which is a cylinder that connects the lower part of a woman's uterus to her vagina. The study investigated the awareness and utilization of cervical cancer screening services among primary health care workers in Ilesa, Osun state. The study adopted the descriptive cross-sectional research design. The sample size was determined by Taro Yamane, which was 192. Proportionate random sampling technique was used to select female primary healthcare workers. The instrument for data collection was a self-structured questionnaire which was divided into three sections. The instrument was subjected to face and content validity. Cronbach's Alpha reliability coefficient for the constructs ranged from 0.72 to 0.85. The descriptive statistics was employed to answer the research questions, while Pearson correlation and chi-square analysis were employed to test the hypotheses at 0.05 level of significance. Findings showed that level of awareness and utilisation of cervical cancer screening services was moderate. There was significant relationship between the level of awareness and utilization of cervical screening services among primary health workers ( $r = .272, p = .000 < 0.05$ ). Only age ( $x^2 = 25.533, p = .003 < 0.05$ ) and ethnicity ( $x^2 = 18.520, p = .005 < 0.05$ ) were related to level of awareness of cervical screening services while age ( $x^2 = 28.549, p = .000 < 0.05$ ), marital status ( $x^2 = 9.077, p = .011 < 0.05$ ), monthly income ( $x^2 = 19.347, p = .000 < 0.05$ ) and educational qualifications ( $x^2 = 51.004, p = .000 < 0.05$ ) were related to level of utilisation of cervical screening services among primary health workers. It was recommended among others that there is need to establish cervical cancer screening education programmes among health care professionals at all levels, especially among nurses.*

**KEYWORDS:** cervical cancer, screening, awareness, utilization, health care workers

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## INTRODUCTION

In most developing societies of the world, women are seen as a vulnerable gender for various reasons. However, problems like cervical cancer make them more vulnerable. Cervical cancer in Nigeria has been on the increase in recent times. It has become a menace that plagues the lives of females in this country. Women's health is one of the major health issues in Nigeria. The world is losing women every single day due to cervical cancer. Cervical cancer remains a major cause of morbidity and mortality particularly among women in Nigeria and the world in general. Cervical cancer affects women yearly with an estimated 570,000 new cases in the year 2018 representing 6.6% of all female cancers. This calls for concern, and is the most common in the developing countries especially in Sub-Saharan Africa (WHO, 2018).

Cervical cancer was reported by Ralaidovy, et al. (2018) to have accounted for about 20 percent of the overall cancer deaths reported among women in Sub-Saharan Africa (SSA). New cervical cancer amounting to over 60% cases occur in Africa, Asia and Central, South America and these account for 70% of the world's cancer deaths (World Health Organization, 2016). This cancer is one of the most common female cancers threatening the lives of women aged 30 years and above (World Health Organization, 2016; Torre, et al., 2015). Over 80,000 women are diagnosed with cervical cancer with 75% (60000) of mortality annually (Finocchiaro-Kessler, et al., 2016).

The incidence of cervical cancer in Sub-Saharan Africa is relatively high with an incidence rate of 50 per 100 000 and average age standardized rate (ASR) of 31 per 100 000 women across the whole region (Friedman-Rudovsky, et al., 2015). Cervical cancer is mostly diagnosed in women between the ages of 35 and 44 (American Cancer Society (ACS), 2016). Adewale, et al. (2016) opined that every ten minutes, two women die from cervical cancer. International Agency for Cancer Research and Control (IARC, 2017) reported that cervical cancer is of high prevalence among Nigerian women while Allan (2015) stated that cervical cancer accounted for 65.7% of female-related cancers in Northern Nigeria with Maiduguri recording an incidence of 72.6%. The age-specific incidence of cervical cancer in Calabar, Nigeria, has been recorded as 20 per 100,000 with an average annual increase in incidence rate of 12.1% (Ebughe, et al., 2016).

Human papillomavirus (HPV) infection has been implicated as responsible for more than 90% of invasive cervical cancer worldwide, with studies reporting types 16 and 18 responsible for about 70% and is related to 80% of pre-cancerous changes in the cervix (Modibbo, et al., 2017; World Health Organization, 2016). In most countries, risk factors associated with HPV infection and cervical cancer included having multiple partners, a sexual partner with a history of penile or prostate cancer, multiple births, early age of first sexual intercourse, smoking tobacco, low socio-economic status, untreated chronic cervicitis, Sexually Transmitted Diseases (STDs) and Contraceptive pills (World HPV Information Center, 2017). Cervical cancer is a rare outcome of a sexually transmitted infection and it is associated with a limited number of viral strains of the HPV family (National Cancer Institute, 2015).

The prevention, control and treatment of cervical cancer are a public health priority. Cervical cancer is a killer disease and is incurable, if it is at an advanced stage. Early screening is a proven, cost-effective, cervical cancer control strategy; and thus, early screening of cervical cancer is an important preventative strategy (Vhuromu, et al., 2018). Cervical cancer is among the preventable human cancers as it has slow progression, possesses precursors that are identifiable, and effectively treatable if detected early. It is rather unfortunate that the screening activities in the low-income countries failed to reach the vulnerable women (Adepiti, et al., 2017). Cervical cancer screening utilization (CCSU) is low particularly in sub-Saharan Africa, leading to high morbidity and mortality in the region (Belay, et al., 2020). Despite the Federal Ministry of Health (FMOH) of Nigeria's establishment of Cervical cancer screening (CCS) and human papilloma virus (HBV) preventive centers for the uptake of primary preventive measures in girls of 9–15 years, the level of execution and uptake of this plan is still questionable.

The World Health Organization, (2018) affirms that the high mortality rate from cervical cancer globally could be reduced through a comprehensive approach that includes effective screening for prevention, early diagnosis, and treatment programmes. AbdAllah, et al. (2016) study on awareness of cervical cancer screening amongst female students in university settings revealed poor knowledge and screening behaviors among female university undergraduates and graduates. Awodele, et al., (2011) study in Lagos University Teaching Hospital, Nigeria revealed that 91% of nurses were knowledgeable of cervical cancer screening methods especially Pap smear. Socio-demographic factors such as age, marital status, education, employment status and income level have been studied by many researchers being associated with the cervical cancer screening uptake (Al-amro, et al., 2020; Ebu, 2018).

A study in Ethiopia showed that very few women receive screening services in Ethiopia (Tekle, et al., 2020). A study conducted in Nigeria by Oluwole, et al. (2016) revealed that knowledge of cervical cancer screening among women was poor. However, studies revealed that female health workers have shown good knowledge of cervical cancer, although, their attendance rates in cervical cancer screening utilization are still far from satisfactory in most countries (Bisi-Onyemaechi, et al., 2018; Abiodun, et al, 2017). The researchers observed that the women with this disease who presented in her facility were those who usually receive health care at the primary health centers within Ilesa in Osun state. Few researchers have worked in this area, but it appears that the challenge keeps increasing and this calls for more knowledge in this domain in order to reduce the increasing number of patients. Therefore, the research was aimed at assessing the awareness and utilization of cervical cancer screening among primary health care workers in Ilesa, Osun state.

Specifically, the study:

1. assessed the level of awareness of cervical cancer screening services among primary health care workers; and
2. determined the level of utilization of cervical screening services among primary health care workers.

### **Research Hypotheses**

**Ho1:** There is no significant relationship between the level of awareness and utilization of cervical screening services among primary health workers.

**Ho2:** There is no significant association between socio-demographic variables and level of awareness of cervical screening services among primary health workers.

**Ho3:** There is no significant association between socio-demographic variables and utilization of cervical screening services among primary health workers.

### **METHODOLOGY**

This study utilized a descriptive cross-sectional research design to assess utilization of cervical cancer screening services. The target population for this study was female primary healthcare workers at the primary health centers in Ilesa, Osun State, Nigeria. There are three hundred and ten (310) female primary healthcare workers at the primary health centers in Ilesa, Osun State, Nigeria. The sample size of the study (192 female health workers) was determined using Taro Yamane formula. A proportional simple random sampling was adopted for this study.

A structured, self-developed questionnaire was used to gather data about awareness and utilization of cervical cancer screening among primary healthcare workers at the primary health centers in Ilesa, Osun State, Nigeria from one hundred and ninety-two (192) female health workers. The questionnaires were divided into sections A, B, C, containing information about the demographic data of the respondents, awareness of respondents on cervical cancer screening and level of utilization of cervical cancer screening. The questionnaire was adopted from the study conducted by Mbaluka Jane in Kitui County, Kenya on utilization of cervical cancer screening services among women aged 30-49 years (Mbaluka, 2020).

The self-constructed structured questionnaire was presented to experts in the field of Nursing who made necessary modifications to give face and content validity, and to make sure that it was related to the aim, specific objectives and the hypotheses formulated for the study. The self-structured questionnaire was subjected to pilot study using health workers at a comprehensive healthcare center outside the sampled location. The data collected was used to determine the reliability of the instrument using Cronbach Alpha (R) which yielded reliability value of 0.719.

The researchers went to the study settings personally to administer the questionnaire. The instruments were given to the respondents to fill on the site and retrieved back after completely filled. The respondents were properly guided on how to fill the questionnaire. Data that was collected was kept in a secured place for proper data management and analysis. Descriptive statistics of mean, frequencies and percentages was used to describe the study population in relation to relevant variables. Inferential statistical tools of Pearson Product Moment Correlation and Chi square analysis were used to test the hypotheses at 0.05 level of significance.

**RESULTS****Socio-demographic Characteristics of Respondents****Table 1: Distribution of respondents by socio-demographic characteristics N= 192**

<b>Socio-demographic characteristics</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Age</b>		
25-29 years	65	33.9
30-34 years	16	8.3
35-39 years	23	12.0
40-44 years	47	24.5
45 and above	41	21.4
Total	192	100.0
<b>Marital Status</b>		
Married	137	71.4
Single	55	28.6
Total	192	100
<b>Monthly Income</b>		
Less than #50,000	86	44.8
#50,000- #100,000	90	46.9
Over #100000	16	8.3
Total	192	100.0
<b>Ethnicity</b>		
Yoruba	171	89.1
Hausa	6	3.1
Igbo	14	7.3
Others	1	0.5
Total	192	100.0
<b>Religion</b>		
Christianity	149	77.6
Islam	30	15.6
Traditionalist	13	6.8
Total	192	100.0
<b>Educational Qualifications</b>		
SSCE	28	14.6
Diploma	26	13.5
NCE	24	12.5
Degree	57	29.7
Others	57	29.7
Total	192	100.0

Table 4.1 revealed 65(33.9%) were between 25-29 years, 16(8.3%) were between 30-34 years, 23(12.0%) were within 35-39 years, 47(24.5%) were within 40-44 years, while 45 years and above were 41(21.4%). On marital status, 137(71.4%) were married, while 55(28.6%) were single. Only 86(44.8%) had less than #50,000 as monthly income, 90(46.9%) had between #50,000 -#100,000, 16(8.3%) had over #100,000 while 66(24.4%) had above #100,000. On ethnicity, 171(89.1%) were Yoruba, 6(3.1%) were Hausa, 14(7.3%) were Igbo while others were 1(0.5%). On religion,

149(77.6%) were Christians, 30(15.6%) were Muslims, while 13(6.8%) were traditionalists. On highest educational qualification, 28(14.6%) had SSCE education, 26(13.5%) had diploma education, 24(12.5%) had NCE, 57(29.7%) had degree while others were 57(29.7%).

**Table 2: Awareness of Cervical Cancer Screening Services N= 192**

S/N	ITEMS	Agree (%)	Undecided (%)	Disagree (%)	Mean	SD
1.	I have heard about cervical screening before	166 (86.5)	4(2.1)	22 (11.5)	2.75	0.65
2.	The best way to prevent cervical cancer is by undergoing pap smear	94(49.0)	40 (20.8)	58 (30.2)	2.19	0.87
3.	Cancer does not exist so I don't need any screening against cervical cancer	51 (26.6)	21 (10.9)	120 (62.5)	1.64	0.88
4.	Cervical cancer screening is for only married women	70 (36.5)	26 (13.5)	96 (50.0)	1.86	0.92
5.	Cytology is another screening test for cervical cancer	92(47.9)	63(32.8)	37(19.3)	2.29	0.77
6.	The screening is for all women whether sexually active or not	116(60.4)	28(14.6)	48(25.0)	2.35	0.86
7.	Cervical cancer can be treated and cured if detected early	144(75.0)	21 (10.9)	27(14.1)	2.61	0.72
8.	Visual inspection with acetic acid or Lugol's iodine is another means of cervical cancer screening	94 (49.0)	64 (33.3)	34(17.7)	2.31	0.76
9.	Cervical cancer screening is a form of treatment for nursing mothers	0 (0.0)	45(23.4)	74(38.5)	1.99	0.88
10.	Cervical cancer screening could also detect other types of cancer	96 (50.0)	43 (22.4)	53 (27.6)	2.22	0.85
11.	Cervical screening can help detect cancer early	139(72.4%)	19(9.9%)	34(17.7%)	2.55	0.78
12.	Cancer is one of the leading causes of high death rate in Nigeria	145(75.5%)	20(10.4%)	27(14.1%)	2.61	0.72

To summarize the level of awareness of cervical cancer screening services in the primary health centers, the following method was used

$$\text{Mean} = 27.39$$

$$\text{SD} = 3.45$$

$$\text{Min} = 12$$

$$\text{Max} = 34$$

$$\bar{X} - \text{SD} = 27.39 - 3.45 = 23.94$$

$$\bar{X} + \text{SD} = 27.39 + 3.45 = 30.84$$

Range

Scores from 12 - 23 Low

24 – 30 Moderate

31 – 34 High

**Table 3: Summary of level of awareness of cervical cancer screening services**

Level	Frequency	Percent
Low	21	10.9
Moderate	146	76.1
High	25	13.0
<b>Total</b>	<b>192</b>	<b>100.0</b>

Table 3 summarizes the level of awareness of cervical cancer screening services in the primary health centers. From the table, 21 respondents representing 10.9 percent had low level of awareness of cervical cancer screening services, 146 respondents representing 76.1 percent had moderate level of awareness of cervical cancer screening services while 25 respondents representing 16.2 percent had high level of awareness of cervical cancer screening services. It could be concluded that the level of awareness of cervical cancer screening services was moderate.

**Table 4: Utilization of Cervical Cancer Screening Services N= 192**

S/N	ITEMS	Yes (%)	No (%)	Mean	SD
1.	I like to regularly go for cervical cancer screening	136 (70.8)	56 (29.2)	1.71	0.46
2.	I like to be vaccinated for cervical cancer	142 (74.0)	50 (26.0)	1.74	0.44
3.	I understood what I stand to gain in cervical screening and vaccination so I went for it	106 (55.2)	86 (44.8)	1.55	0.50
4.	Information from friends said the procedure is painful but I still went for it	106 (55.2)	86(44.8)	1.55	0.50
5.	I understood what cervical screening and vaccination means, the reason why I went for it	97(50.5)	95 (49.5)	1.51	0.50
6.	I am a childbearing mother; I need cervical screening and vaccination so I went for it	98 (51.0)	94 (49.0)	1.51	0.50

To summarize the level of utilization of cervical cancer screening services in the primary health centers, the following method was used

Mean = 9.57

SD = 1.85

Min = 6

Max = 12

$\bar{X} - SD = 9.57 - 1.85 = 7.72$

$\bar{X} + SD = 9.57 + 1.85 = 11.42$

Range

Scores from 6 - 7 Low

8 – 11 Moderate

12 - High

**Table 5: Summary of level of utilization of cervical cancer screening services**

Level	Frequency	Percent
Low	41	21.4
Moderate	120	62.5
High	31	16.1
<b>Total</b>	<b>192</b>	<b>100.0</b>

Table 5 summarizes the level of utilization of cervical cancer screening services in the primary health centers. From the table, 41 respondents representing 21.4 percent had low level of utilization of cervical cancer screening services, 120 respondents representing 62.5 percent had moderate level of utilization of cervical cancer screening services while 31 respondents representing 16.1 percent had high level of utilization of cervical cancer screening services. It could be concluded that the level of utilization of cervical cancer screening services was moderate.

### *Test of Hypotheses*

**H<sub>01</sub>:** There is no significant relationship between the level of awareness and utilization of cervical screening services among primary health workers.

**Table 6: Pearson Correlation between the level of awareness and utilization of cervical screening services among primary health workers**

		Awareness	Utilization
Awareness	Pearson Correlation	1	.272**
	Sig. (2-tailed)		.000
	N	192	192
Utilization	Pearson Correlation	.272**	1
	Sig. (2-tailed)	.000	
	N	192	192

The results in Table 6 revealed that there was significant relationship between the level of awareness and utilization of cervical screening services among primary health workers ( $r = .272$ ,  $p = .000 < 0.05$ ). This implies that the level of awareness and utilization of cervical screening services are related. Therefore, the hypothesis stating no significant relationship between the level of awareness and utilization of cervical screening services among primary health workers is hereby rejected.

**H<sub>02</sub>:** There is no significant association between socio-demographic variables and awareness of cervical screening services among primary health workers



**Table 7: Chi-Square showing the association between socio-demographic variables and level of awareness of cervical screening services among primary health workers N = 192**

SN	Variable	Level of awareness of cervical screening services						
		Low (%)	Moderate (%)	High (%)	X <sup>2</sup>	df	P	
1	Age	25-29 years	7 (3.6)	49 (25.5)	9(4.7)	23.533*	8	.003
		30-34 years	6 (3.1)	9 (4.7)	1 (0.5)			
		35-39 years	5 (2.6)	18 (9.4)	0 (0.0)			
		40-44 years	2(1.0)	36(18.8)	9(4.7)			
		45 and above	1(0.5)	34 (17.7)	6 (3.1)			
2	Marital Status	Married	16 (8.3)	103 (53.6)	18 (9.4)	0.292	2	.864
		Single	5 (2.6)	43 (22.4)	7 (3.6)			
3	Monthly Income	Less than #50,000	11 (5.7)	67(34.9)	8(4.2)	10.865	6	.093
		#50,000-#100,000	8 (4.2)	69 (35.9)	13 (6.8)			
		Over #100000	2 (1.0)	10(5.2)	4(2.1)			
4	Ethnicity	Yoruba	16 (8.3)	135 (70.3)	20 (10.4)	18.520*	6	.005
		Hausa	3(1.6)	2 (1.0)	1 (0.5)			
		Igbo	2 (1.0)	9 (4.7)	3 (1.6)			
		Others	0 (0.0)	0 (0.0)	1(0.5)			
5.	Religion	Christianity	15 (7.8)	113 (58.9)	21 (10.9)	9.109	6	0.168
		Islam	5 (2.6)	23 (12.0)	2 (1.0)			
		Traditionalist	1 (0.5)	10 (5.2)	1 (0.5)			
6.	Educational Qualifications	SSCE	4 (2.1)	23 (12.0)	1 (0.5)	3.558	6	0.475
		Diploma	11 (4.1)	48 (17.7)	3(1.6)			
		NCE	7(3.6)	17(8.9)	0(0)			
		Degree	6 (3.1)	42(21.9)	9(4.7)			
		Others	0(0.0)	45 (23.4)	25 (13.0)			

\*p&lt;0.05

Table 7 shows that the chi-square value obtained for age is ( $x^2 = 25.533, p = .003 < 0.05$ ); marital status ( $x^2 = 0.292, p = .864 > 0.05$ ); monthly income ( $x^2 = 10.865, p = .093 > 0.05$ ); ethnicity ( $x^2 = 18.520, p = .005 < 0.05$ ); religion ( $x^2 = 9.109, p = .168 > 0.05$ ); and educational qualifications ( $x^2 = 3.558, p = .475 > 0.05$ ). From the table above, only age and ethnicity were related to level of awareness of cervical screening services among primary health workers because their p-values were less than 0.05 level of significance while other socio-demographic variables were not related. Therefore, the null hypothesis is not rejected and be retained. Hence, there was no significant association between socio-demographic variables and level of awareness of cervical screening services among primary health workers.

**H<sub>03</sub>:** There is no significant association between socio-demographic variables and utilization of cervical screening services among primary health workers

**Table 8: Chi-Square showing the association between socio-demographic variables and utilization of cervical screening services among primary health workers N = 192**

SN	Variable	Level of utilization of cervical screening services						
		Low (%)	Moderate (%)	High (%)	X <sup>2</sup>	df	P	
1	Age	25-29 years	23 (12.0)	29 (15.1)	13(6.8)	28.549*	8	.000
		30-34 years	4(2.1)	7 (3.6)	5 (2.6)			
		35-39 years	6 (3.1)	12 (6.3)	5 (2.6)			
		40-44 years	6(3.1)	35(18.2)	6(3.1)			
		45 and above	2(1.0)	36(18.8)	3 (1.6)			
2	Marital Status	Married	22 (11.5)	93 (48.4)	22 (11.5)	9.077*	2	.011
		Single	19 (9.9)	26(13.5)	10 (5.2)			
3	Monthly Income	Less than #50,000	29 (15.1)	42(21.9)	15(7.8)	19.347*	4	.000
		#50,000-#100,000	12 (6.3)	66 (34.4)	12 (6.3)			
		Over #100000	0 (0.0)	11(5.7)	5(2.6)			
4	Ethnicity	Yoruba	37 (19.3)	105 (54.7)	29 (15.1)	2.384	6	.881
		Hausa	1(0.5)	5 (2.6)	0 (0.0)			
		Igbo	3 (1.6)	8 (4.2)	3 (1.6)			
		Others	0 (0.0)	1(0.5)	0(0.0)			
5.	Religion	Christianity	31 (16.1)	92 (47.9)	26 (13.5)	4.655	6	0.589
		Islam	8 (4.2)	16 (8.3)	6 (3.1)			
		Traditionalist	2 (1.0)	10 (5.2)	0 (0.5)			
6.	Educational Qualifications	SSCE	11(5.7)	16 (8.3)	1 (0.5)	51.004*	8	0.000
		Diploma	10 (5.2)	12 (6.3)	4(2.1)			
		NCE	7(3.6)	12(6.3)	5(2.6)			
		Degree	9 (4.7)	27(14.1)	21(10.9)			
		Others	4(2.1)	52 (27.1)	1 (0.5)			

Table 8 shows that the chi-square value obtained for age is ( $x^2 = 28.549$ ,  $p = .000 < 0.05$ ); marital status ( $x^2 = 9.077$ ,  $p = .011 < 0.05$ ); monthly income ( $x^2 = 19.347$ ,  $p = .000 < 0.05$ ); ethnicity ( $x^2 = 2.384$ ,  $p = .881 > 0.05$ ); religion ( $x^2 = 4.655$ ,  $p = .589 > 0.05$ ); and educational qualifications ( $x^2 = 51.004$ ,  $p = .000 < 0.05$ ). From the table above, age, marital status, monthly income and educational qualifications were related to level of utilization of cervical screening services among primary health workers because their p-values were less than 0.05 level of significance while only ethnicity and religion were not related. Therefore, the null hypothesis is not rejected and be retained. Hence, there was no significant association between socio-demographic variables and level of utilization of cervical screening services among primary health workers.

## DISCUSSION OF FINDINGS

The findings of the study revealed that the level of awareness of cervical cancer screening services was moderate. In line with the findings of this study, Jagun, et al (2016) revealed that Majority (60%) of health workers were aware of the cervical cancer screening services while few of them (39.8%) never had the screening. Awoyesuku, et al (2019) reported 89.4% level of awareness to cervical cancer screening. Ifemelumma, et al (2019) revealed that all the 408 nurses who participated in the study had high awareness. A study by Tapera, et al (2019) on Botswana university female students revealed all the respondents were within 18-24 years of age. All of them 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%), HPV test (31.6%).

This finding however contracted findings of Olubodun, et al (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. 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%.

The findings of the study revealed that the level of utilization of cervical cancer screening services was moderate Ifemelumma, et al (2019) however noted that the uptake of cancer of the cervix screening services was poor with only 20.6% having been screened. Okolie, et al (2021) revealed that CCS uptake was poor with common barriers being the cost of screening, fear of positive results, lack of test awareness, reluctance to screen, low-risk perception, and lack of time.

The findings of the study revealed that there was significant relationship between the level of awareness and utilization of cervical screening services among primary health workers ( $r = .272$ ,  $p = .000 < 0.05$ ). Dulla, et al (2017) found significant numbers of health care workers to be knowledgeable on cervical cancer but the utilization of cervical cancer screening among them was found to be low. They found a low relationship between the level of awareness and utilization of cervical screening services.

A study by Hyacinth, et al., (2012) on cervical cancer and Pap smear awareness and utilization among 388 Federal Civil Servants in Jos established that, cervical cancer and Pap smear test awareness were 50.9% and 38.6% respectively. Similarly, a study by Oche, et al., (2013) among 240 female health workers at Usmanu Danfodiyo University Teaching Hospital Sokoto revealed that, despite good knowledge of respondents about cervical cancer screening, only 10% had ever done the screening.

The findings of the study revealed that age and ethnicity were related to level of awareness of cervical screening services among primary health workers while other socio-demographic variables were not related. It was also revealed that age, marital status, monthly income and

educational qualifications were related to level of utilization of cervical screening services among primary health workers while only ethnicity and religion were not related. In line with this finding, Dulla, et al (2017) found a significant association of marital status, age, profession, experience, level of education and utilization of cervical cancer outcome.

## CONCLUSION

Sequel to the findings of this study, it is concluded that most of the health workers had moderate level of awareness and utilisation of cervical cancer screening services while level of awareness was related to utilization of cervical screening services. It is further concluded that age and ethnicity were related to level of awareness of cervical screening services while age, marital status, monthly income and educational qualifications were related to level of utilisation of cervical screening services among primary health workers

## Recommendations

Based on the findings of this study, the following recommendations were made;

1. There is need to establish cervical cancer screening education programmes among health care professionals at all levels, especially among nurses.
2. The adoption of cervical cancer screening as a pre-employment test for health workers may also be considered in an attempt to reduce cervical cancer drastically.
3. There is a need for the nurses to be actively involved in the cancer screening units/departments

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