Determinants of Cervical Cancer Screening Uptake among Women of Reproductive Age in Oto-Awori Local Council Development Area, Lagos State, Nigeria

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Abstract
Background: Cervical cancer is one of the reproductive health conditions that have silently claimed the lives of many women. Attentions have been placed mostly on other diseases in the community. However, the knowledge of cervical cancer and its screening exercise was evidently low, resulting in non-utilization of the screening tests. Therefore, this study assessed the determinants of uptake of cervical cancer screening among women of reproductive age in Oto-Awori LCDA, Lagos, Nigeria.
Methods: The study adopted descriptive research survey design. Sample size for the study was 440 women of reproductive age who were selected using convenience sampling technique at Oto-Awori LCDA, Lagos State. A self developed structured questionnaire was used to collect data. Cronbach's Alpha reliability coefficients for the constructs ranged from 0.60 to 0.90. The data from the survey was coded electronically using Statistical Package for Social Sciences (SPSS) version 23.0 and analyzed using descriptive statistics of frequencies and percentages, presented in tables. Hypotheses were tested using Pearson correlation coefficient test.
Result: The findings from the study showed that majority (80%) of the participants had poor knowledge about cervical cancer, low level of awareness of cervical cancer screening (62.5%), low uptake of cervical cancer screening (87.1%). Hypotheses revealed that there was no significant relationship between knowledge of cervical cancer and awareness of cervical cancer screening (r=0.70, p=0.140), knowledge of cervical cancer and uptake of cervical cancer screening, however (r=0.61, p=0.202) but there was a significant relationship between awareness and uptake of cervical cancer screening (r = .484, p<.000).
Conclusion: Poor knowledge of cervical cancer, low level of awareness and uptake of cervical cancer screening were identified from this study. Therefore, low level of awareness was observed to be main determinant of uptake of cervical cancer screening. The study recommended that Community Health Nurses should continue to create awareness about cervical cancer and the importance of cervical cancer screening to encourage women to uptake the screening.
Keywords: Cervical Cancer Screening, Knowledge, Awareness, Women of Reproductive Age.

I. Introduction

Cervical cancer is one of the reproductive health diseases that have silently claimed the lives of women. Attention have been placed mostly on other diseases in the community such as HIV/AIDS, Corona Virus, breast cancer, malaria, typhoid fever, cholera, gonorrhea among others that are on the priority focus for intervention by health care providers and international health organizations but cervical cancer has made a lot of negative impacts on the lives of women. It is a disease that gradually develops over years without being noticed as it quietly grows deep into its host. Cervical cancer is caused by Human Papilloma Virus (HPV), sexually transmitted infection that results into malignant tumor of the cervix, located at the lowermost part of the uterus that connects to the vagina[1].

However, [2]stated that cervical cancer has impacts on gender equity and maternal health since only women are affected which is one of the focus of MDGs 3 and 5 with indirect impacts on poverty / hunger, education and child mortality of MDGs 1, 2 and 3 still focusing on women. This is also relevant to the current Sustainable Development Goals (SDGs) in which SDGs 3 also focus on Good health and Well - being. In

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Nigeria, about $3.3 million is lost due to cervical cancer disability as invasive cases place burden on health care system[2]. Despite the availability and benefit of cervical cancer screening, many women in developing countries failed to take up the screening. Out of thirteen different studies in Nigeria, nine studies showed cervical screening uptake ($< 5.3\%$) by women within the ages 25 to 33 years compared to 75% uptake of the screening exercise among women in developed countries[2].

According to World Health Organization[3] screening for cervical cancer decreases the number of death from the disease and thus recommended that all adults women should undergo periodic cervical cancer screening to detect precancerous lesions, which if left untreated after being positive, can grow into cervical cancer[3]. Cervical Cancer Screening include Pap tests, or Human Papillomavirus (HPV) which is commonly used for cervical cancer screening and after a positive pap test result, an HPV test may be done with or without pap smear. However, pap test looks for abnormal cells, while HPV test looks for infection with the types of HPV that can be linked to cervical cancer. These tests are recommended for women from age 21 years to 64 years[4] . Pap test alone can be done for women from age 21 to 49 years and HPV for women from age 25 to 49. Both Pap test and HPV can be done every five years, Pap test alone every three years and HPV test alone every five years. Vaccination against HPV does not prevent women from the uptake of cervical screening. Those that are living with Human Immunodeficiency Virus (HIV), those that have weak immune system, history of cervical cancer or exposed to diethlstibestrol are exempted from the screening[4].

Several studies have been conducted on cervical cancer screening and knowledge of women on cervical cancer. However, most of these studies laid less emphasis on the determinant factors influencing the uptake of cervical cancer screening among women of reproductive age[5]. Recently, in the year 2021 from January till date there is an on – going awareness and free cervical cancer screening test in all the Sixty – two (62) Primary Health Care centers and population council in 57 LGAs and LCDAs, Lagos State. The health care system is hoping for adequate turn out and uptake of the cervical cancer screening exercise among reproductive age women[5]. Additionally, cervical cancer is a preventable disease common among women. There are screening tests and vaccines that help in the care and prevention of this deadly virus but there are factors preventing women from having access to these despite the effectiveness of the health care services to curb the menace[6]. These factors include lack of awareness of the screening exercise by the populace, the accessibility of these screening materials or equipment, the availability of the vaccine, the cost of the screening exercise, adequate knowledge of the health care providers about the screening exercise, lack of knowledge of the populace especially women on cervical cancer, screening and prevention, poverty, inadequate health facilities and health system support, religion and sociocultural barriers, parental / family influence, misdiagnosis, late presentation at the appropriate health care facilities, shortage of qualified health care professionals among others[7]. Therefore, the aim of this study was to identify the determinants of cervical cancer screening uptake among reproductive age women.

II. Material and Methods

This study used descriptive research survey design. Convenience sampling technique was used to collect data from women of reproductive age attending infant welfare and family planning clinic at Oto-Awori/Ijanikin Primary Health Centre. Total number of 440 women of reproductive age were selected for the study. ,
Study Design: Descriptive research survey design
Study Location: The study was conducted in Oto-awori/Ijanikin Primary Health Centre, Oto-Awori Local Government Area, Lagos State
Study Duration: December, 2020 to April 2021
Sample size: 440 women of reproductive age.
Sample size calculation: Sample size for this study was obtained through sample size calculation using Cochran Formula at 95% level of confidence (1.96) and 5% margin of error which was calculated as 400 and 10% attrition rate was added to make 440.
Subjects & selection method: Convenience sampling technique was used to select women of reproductive age attending infant welfare and family planning clinics at Oto-awori/Ijanikin Primary Health Centre, Lagos State
Inclusion criteria:
1.	Women of reproductive age attending infant welfare clinic and family planning clinic during the period of data collection and .
2.	Women of reproductive age who are within the age of 21 to 49 years of age, available and willing to participate in the study

Exclusion criteria:
1.	Women of reproductive age not present at the time of collecting data.
2.	Women of reproductive age that are not willing to participate in the study.
3.	Women of reproductive age from age less than 21 years and who are 50 years and above or
4.	women of reproductive age who are sick, at the time of data collection

Procedure methodology

Ethical approval was collected from Babcock University Health Research Ethics Committee with reference number BUHREC 157/21. The researcher had obligation to the subjects by getting their informed consent consistent with the principle of individual autonomy. Their voluntary participation, anonymity, privacy and confidentiality when collecting the data was assured. Their right to participate and not to participate was also respected. Data was collected over a period of 8 weeks.

Statistical analysis:

The data from the survey was checked for completeness. The data was then coded and analyzed electronically using Statistical Package for Social Sciences (SPSS) version 23. The data were analyzed, using descriptive statistics of frequencies, percentages presented in table and hypotheses were tested using Pearson correlation coefficient at 0.05 level of significance.

III. Result

Table no1 shows that majority 241(54.8%) of the respondent were aged 30-39 years, 272(61.8%) were married, 227(51.6%) were had tertiary education and were self-employed (47.5%), 312(70.9%) were Christians and were Yoruba 237(53.9%).

Table 1: Socio-demographic data of the participants n=440

Age (years)	Frequency	Percentages (%)	Valid Percentage
21 – 29 years	135	30.7	30.7
30 - 39 years	241	54.8	54.8
40 – 49 years	64	14.5	14.5
Total	440	100.0	100.0
Marital Status			
Single	118	26.8	26.8
Married	272	61.8	61.8
Seperated	18	4.1	4.1
Divorced	10	2.3	2.3
Total	440	100.0	100.0
Educational Level			
No formal education	19	4.3	4.3
Primary education	76	17.3	17.3
Secondary education	118	26.8	26.8
Tertiary education	227	51.6	51.6
Total	440	100.0	100.0
Religion			
Christianity	312	70.9	70.9
Islam	118	26.8	26.8
Traditional worshippers	6	1.4	1.4
Others	4	0.9	0.9
Total	440	100.0	100.0
Tribe			
Yoruba	237	53.9	53.9
Hausa	40	9.1	9.1
Igbo	127	28.9	28.9
Others	36	8.2	8.2
Total	440	100.0	100.0
Occupation			
Schooling	57	13.0	13.0
Employed	135	30.7	30.7
Self Employed	209	47.5	47.5
Full House Wife	39	8.9	8.9
Total	440	100.0	100.0

Table no 2 shows that majority 352(80.0%) of the respondent had poor knowledge on cervical cancer, while 88(20.0) had poor knowledge about cervical cancer.

Table 2: Knowledge of the respondents on cervical cancer

Knowledge of cervical cancer	Frequency	Percentage
Good	88	20.0
Poor	352	80.0
Total	**440**	**100**

Table no 3 shows that almost two-third 275(62.5%) of the respondents were not aware of cervical cancer screening thus rated as low level of awareness, while one-third 165(37.5%) were aware and were rated as high level of awareness..

Table 3: Awareness of cervical cancer screening (n = 440)

Level of Awareness	Frequency	Percentage
High	165	37.5%
Low	275	62.5%
Total	**440**	**100**

Table 4: Uptake of cervical cancer screening

Cervical cancer screening	Frequency	Percentage
Screened	57	12.9%
Not screened	383	87.1%
Total	**440**	**100**

Table no 4 shows that majority 383(87.1%) of the respondents had not undergone cervical cancer screening while only 57(12.9%) had undergone cervical cancer screening. This result indicates low uptake of cervical cancer screening among women of reproductive age.

Table 5: Relationship between the knowledge and awareness of cervical cancer screening

		Overall knowledge of cervical cancer	Overall awareness of cervical cancer screening
Overall knowledge of cervical cancer	Pearson Correlation	1	.070
	Sig. (2-tailed)		.140
	N	440	440
Overall awareness of cervical cancer screening	Pearson Correlation	.070	1
	Sig. (2-tailed)	.140	
	N	440	440

Table no 5 shows that there is no significant relationship between knowledge and awareness of cervical cancer screening among women of reproductive age (r = .070; p > .05). The respondents' knowledge of cervical cancer is positively related to their awareness of cervical cancer screening with a Pearson correlation coefficient of r = .070 and the significant value is more than .05 that is (p = .140).

Table 6: Relationship between the knowledge and uptake of cervical cancer screening

		Overall knowledge of cervical cancer	Uptake of cervical cancer screening
Overall knowledge of cervical cancer	Pearson Correlation	1	.061
	Sig. (2-tailed)		.202
	N	440	440
Uptake of cervical cancer screening	Pearson Correlation	.061	1
	Sig. (2-tailed)	.202	
	N	440	440

There is no significant relationship between knowledge of cervical cancer and uptake of cervical cancer screening among women of reproductive age (r = .061; p > .05). The respondents' knowledge of cervical cancer is positively related to their uptake of cervical cancer screening with a Pearson correlation coefficient of r = .061 and the significant value is more than .05 that is (p = .202).

Table 8: Relationship between the awareness and uptake of cervical cancer screening

		Overall awareness of cervical cancer screening	Uptake of cervical cancer screening
Overall knowledge of cervical cancer	Pearson Correlation	1	.484
	Sig. (2-tailed)		.000
	N	440	440
Uptake of cervical cancer screening	Pearson Correlation	.484	1
	Sig. (2-tailed)	.000	
	N	440	440

There is significant relationship between the awareness and uptake of cervical cancer screening (r = .484; p < .05). The respondents' knowledge of cervical cancer is positively related to their uptake of cervical cancer screening with a Pearson correlation coefficient of r = .484 and the significant value is less than .05 that is (p = .000).

IV. Discussion
Findings from the study revealed that majority of the respondents 352 (80.0%) had poor level of knowledge on cervical cancer. This result is supported by[8] who also reported poor knowledge of cervical cancer among women of reproductive age. The poor knowledge observed was attributed to poor health behavior and risk of having cervical cancer most especially among the low socioeconomic status women at the grass root[8]. This findings is also in line with the findings of[9] that despite the provision of cervical cancer screening materials and equipment in public hospitals, there was still a poor uptake of the screening exercise by women which was due to lack of women's knowledge on cervical cancer related to limited information about cervical cancer and its screening. Therefore, it could be deduced that poor knowledge of cervical cancer is one of the determinants that prevent women from assessing the benefits of the free cervical cancer screening services provided for women of reproductive age in Lagos State.

Finding from the study also showed that majority of the respondents 275 (62.5%) had poor level of awareness of cervical cancer screening. In conclusion, the respondents have poor awareness about cervical cancer screening. This result is in tandem with the result of[10] in the study carried out among urban women in Lagos State, Nigeria which showed that the major barrier s to the uptake of cervical cancer screening were lack of awareness of screening methods, lack of adequate information on screening methods and non - recommendations by doctors. Therefore, it can be deduced that poor awareness of the screening test can prevent women from accessing its utilization despite the availability of the screening facilities at their proximity.

Furthermore, finding from the study showed that majority 383(87.1%) of the respondent had never been screened for cervical cancer which indicates low uptake of cervical cancer screening among the respondents. This result is in tandem with the report of[11] that uptake of cervical cancer screening services in this study was poor as only 20.6% of the study participants had undergone screening. However,[12] state that low utilization of cervical cancer by young women may be attributed to the fact that they are not susceptible to the development of precancerous/cancerous lesion and are therefore not bothered about such issues and hence not likely to use the service. More so, low uptake of cervical cancer screening was also reported by[13]. Therefore, despite the high awareness and knowledge of cervical cancer among health workers, there is still poor utilization of the screening exercise

Findings from the study also revealed that there is no significant relationship between knowledge and awareness of cervical cancer screening. Also there is no significant relationship between knowledge, awareness and uptake of cervical cancer screening. [2]reported that women of reproductive age have shown good knowledge of cervical cancer screening but the rate of utilizing cervical cancer screening was very low and far from satisfactory in most countries. Moreso, [14]reported that women with low knowledge about cervical cancer and its prevention are less likely to access screening services. [15]reported that women with low level of knowledge and awareness regarding cervical cancer screening are not likely to utilize cervical cancer screening. Lack of awareness and adequate information on cervical cancer and its screening methods were major determinants of cervical cancer screening uptakes among women of reproductive age. Additionally, [15]reported that majority of women who had never undergone cervical cancer screening alluded to the lack of awareness about screening methods as the main barrier to their uptake of cervical cancer.

V. Conclusion

The finding from the study revealed that poor knowledge of cervical cancer, low level of awareness of cervical cancer screening and low uptake of cervical cancer screening among women of reproductive age. The finding also revealed that there is no significant relationship between knowledge of cervical cancer and awareness of cervical cancer screening, moreso, there was no significant relationship between knowledge of cervical cancer and uptake of cervical cancer screening, however, there was a significant relationship between awareness of cervical cancer screening services and uptake of the services. this study thus, concluded that awareness of cervical cancer screening is a major determinant of cervical cancer screening uptake among women of reproductive age.

VI. Recommendations

Based on the result from this study, it is therefore recommend that:

• Government should improve on public awareness of the free cervical cancer screening on social media like television program, radio program with involvement of Local Government Chairman, the Obas and Community Leaders in order to sensitize women of reproductive age the benefits of the screening exercise.

• There should be community mobilization by the community midwives to enlighten the women on cervical cancer and the benefit of cervical cancer screening.

• Community Health Nurses should continue to create awareness about the importance and benefit of cervical cancer screening at the point of visit on appointment at infant welfare clinic or at the family planning clinic services.

Compliance with ethical standard
Conflict of interest: (Nil)
Financial disclosure: (No Financial support)
Funding/support: (No financial support)

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