



BARRIERS TO CERVICAL CANCER SCREENING AMONG WOMEN IN RIVERS EAST SENATORIAL DISTRICT, RIVERS STATE, NIGERIA

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Abstract

This study investigated the barriers to cervical cancer screening among women in the Rivers East Senatorial District. The descriptive research design was adopted with a population consisting of 3,762,393 women in the Rivers East Senatorial District. A sample size of 880 was selected using a multi-staged sampling procedure. The instrument for data collection is a self-structured questionnaire titled “Barriers to Cervical Cancer Screening Questionnaire (BCCSQ)” with a reliability coefficient of 0.73. Data collected were coded and analyzed with the aid of the Statistical Product for Service Solution (SPSS) version 23.0 and analyzed using percentage and Chi-square at the 0.05 alpha level. The result of the study showed that, to a high extent, the factors that constituted barriers to cervical cancer screening among the women were non-affordability of the test (88.7%), fear of having a positive result (63.3%), and pain or fear of the process (59.4%). The tested hypotheses revealed that the variables that were significant barriers to cervical cancer screening were: fear of having a positive result ($\chi^2 = 0.44$, $df = 1$, $p = 0.00$), and pains or fear of the process ($\chi^2 = 15.69$, $df = 1$, $p = 0.00$). It was concluded that the barriers to cervical cancer screening were fear of having positive results and pain or fear of the process. It was recommended, among others, that the government closely monitor the delivery of cervical cancer screening services through its state and local government supervisors to ensure that the services are rendered at no cost as stipulated by the government. This will help to curb the issue of non-affordability.

Keywords: Barriers, Cancer, Cervix, Screening, Women, District

Introduction

Considering the exclusion of the human papillomavirus (HPV) vaccine in the national vaccination schedule, cervical cancer screening becomes important as a prevention strategy. According to the National Cancer Institute (2019), cervical cancer is a disease in which malignant (cancer) cells form in the cervix, which is the lower and narrow end of the uterus. Globally, cervical cancer is the third most frequent cancer among women and the most common malignancy of the female genital tract in developing countries (International Cancer Organization, 2016). According to Okunnu (2010), one woman dies of cervical cancer every two minutes worldwide, and 80% of these deaths occur in developing nations. Cervical cancer is about the eighth most common cancer worldwide but known to be the fourth affecting women, and it accounts for up to 60% of the cancer burden among this gender group (Torre, 2017).

Thus, to avert such deaths, it becomes imperative to spot the barriers to screening, which is one of the useful tools to detect it early for a successful treatment, and to give a pointer to what efforts are needed to increase the uptake of cervical cancer screening among women. In sub-Saharan Africa, 34.8 new cases of cervical cancer are diagnosed per 100,000 women annually, and 22.5 per 100,000 women die from the disease. According to the Cervical Cancer Global Crisis Card, Nigeria, where the area of the study is situated, ranks 5th among countries in the death count from cervical cancer (Cervical Cancer Free Coalition, 2017).

Cervical cancer is highly preventable through early screening, diagnosis, and follow-up with treatment when needed (American Cancer Society, 2015). Screening is defined as population testing to identify early disease or precursors

of a disease in asymptomatic individuals. It could be targeted at the entire population (mass screening) or individuals (selective screening). Cervical cancer screening presents an excellent opportunity for this otherwise fatal condition to be cured by early detection and treatment, thus reducing morbidity and mortality from this disease (Akwaowo & Vanni, 2015). Cervical cancer usually develops slowly, taking 10-20 years from early pre-cancer to invasive cancer, so cervical cancer is rare before the age of 30. Screening younger women will detect many lesions that will never develop into cancer, which will lead to considerable overtreatment, and is thus not cost-effective. Cervical cancer screening should not start before 30 years of age. Screening women between the ages of 30 and 49 years, even just once, will reduce deaths from cervical cancer. Cervical cancer screening is recommended for every woman in this target age group but this may be extended to younger ages if there is evidence of a high risk for CIN2+ (WHO, 2014).

It is worth noting that there is a recent campaign for mass screening in Nigeria but, many decline the offer to get screened, certainly, several factors are implicated which must be unravelled. Barriers as used in this study are factors which could hinder the uptake of cervical cancer screening among women. Studies have identified some of these barriers as inadequate health services, cost of services, distance to health centres, lack of awareness, sociocultural beliefs, and practices such as use of herbal remedies (Ali-Rasasi et al., 2014; Amoran & Toyobo, 2015), lack of knowledge about the disease, lack of familiarity with the concept of prevention, the geographical and economic inaccessibility of care, the poor quality of services, culture and fear of the procedure (Bhagwan et al., 2017).

Fear of cancer and screening outcomes was seen as a barrier to cervical cancer screening among women (Yang et al., 2019). Fear of obtaining certain medical procedures was found to be a barrier associated with cervical cancer screening. Respondents assumed that this physical test will cause pain as the test kit has to be inserted into the vagina to take the sample (Al Sairafi & Mohamed, 2019). A respondent of an Australian-Chinese study reported that the 'Pap test is something very painful and she always cried after performing the screening' (Kwok et al., 2011). Women who do understand the value of screening can also hesitate to seek services because they are nervous about pain or side effects or are afraid of receiving a positive result (Ndikom & Ofi, 2012; Wittet, 2013). Such fear if not curtailed could obstruct access to cervical cancer screening services.

Aside from the affordability of cervical cancer screening services, some women may not present themselves for the screening even though they are of age, if a doctor or their healthcare provider has not recommended it, because they probably have not felt any signs or symptoms. According to Adepoju (2016), like many cancers, it is possible not to have signs and symptoms of cervical cancer until it has progressed to a dangerous stage. This, in most cases, makes cancer patients present at a very late stage of the cancer, making treatment difficult. This is responsible for several cases of death from cervical cancer among women, making cervical cancer one of the most common cancers among women in developing countries (Bray et al., 2018). To avert the mortality arising from cervical cancer, behavioural change is needed. Thus, there is a need to highlight the barriers to know what steps to be taken. Just as the theory of anchor and the integrated theory of health behaviour change proposed that behaviour change is a dynamic, iterative process that is determined by several factors and that knowledge, in and of itself, does not lead to behaviour change, knowledge and other factors linked to engagement in self-regulation, positive social facilitation, self-regulation, and engagement in self-management behaviours all have a direct and positive effect on health behaviours. However, several factors could explain the variations in health behaviour in different locations. Hence, this study focused on the barriers to cervical cancer screening among women in Rivers East Senatorial District. The study provided answers to the following research questions:

1. What is the extent to which non-affordability of tests constitutes a barrier to cervical cancer screening among women?
2. To what extent does fear of having positive results constitute a barrier to cervical cancer screening among women?
3. What is the extent to which pains or fear of the procedure constituted a barrier to cervical cancer screening among women?

Hypotheses

The following hypotheses guided the study and were tested at 0.05 alpha level:

1. The non-affordability of the test is not a significant barrier to cervical cancer screening among women in the Rivers East Senatorial District.
2. Fear of having a positive result is not a significant barrier to cervical cancer screening among women.

- Pain or fear of the procedure is not a significant barrier to cervical cancer screening among women.

Methodology

The descriptive research design was adopted for the study with a population consisting of 3,762,393 women in Rivers East Senatorial District. A sample size of 880 was selected using a multi-staged sampling procedure. In the first stage, cluster sampling techniques were used to place the local government areas in three different clusters. In each of the eight local government areas, one hundred and ten respondents were purposefully selected. A simple random sampling technique was then adopted to select two communities where the study would be carried out. This made the sample size eight hundred and eighty (880) respondents, which was non-proportionately distributed to the eight local government areas that made up the Rivers East Senatorial District. The instrument for data collection is a self-structured questionnaire titled "Barriers to Cervical Cancer Screening Questionnaire (BCCSQ)" with a reliability coefficient of 0.73. Data collected were coded and analyzed with the aid of the Statistical Product and Service Solution (SPSS) version 23.0 and analyzed using percentage and Chi-square at 0.05 alpha level.

Results

The results of the study are shown below:

Table 1: Frequency and percentage distribution on the extent to which non-affordability of test constitute a barrier to cervical cancer screening among women

SN	Items	LE F(%)	HE F(%)	Remark
1	A cervical cancer screening test is free, so women do not have a problem with their affordability	52(6.4)	765(93.6)	HE
2	Cervical cancer screening is given at a cost within the financial reach of the common man	80(9.8)	737(90.2)	HE
3	Cervical cancer screening providers are considerate of the cost of services	110(13.5)	707(86.5)	HE
4	Cervical cancer screening is cost-effective; that is, it does not require much money	75(9.1)	742(90.9)	HE
5	A woman can do cervical cancer screening without paying any money	145(17.8)	672(82.2)	HE
Total		92(11.3)	725(88.7)	HE

Guide: $\geq 50\%$ is HE, while $< 50\%$ is LE. Key: HE = high extent, LE = low extent

Table 1 reveals the percentage distribution of the extent to which the non-affordability of tests constitutes a barrier to cervical cancer screening among women. The result established that the total of 725 (88.7%) was greater than the average, indicating a high extent. Thus, the extent to which the non-affordability of tests constitutes a barrier to cervical cancer screening among women was high.

Table 2: Frequency and percentage distribution of the extent to which fear of having positive result constitute a barrier to cervical cancer screening among women

SN	Items	LE	HE	Remark
1	I could not go for cervical cancer screening because the result shows positive most of the time.	330(40.4)	477(59.6)	HE
2	Any woman who undergoes the cervical cancer screening test will be more likely to contract the disease later in life	306(37.4)	411(62.6)	HE
3	If the screening is done, they must detect something unpleasant for me to threaten.	333(40.7)	484(59.3)	HE
4	No woman ever does the screening and does not later have cervical cancer	303(37.1)	414(62.9)	HE
5	Every woman who undergoes the test should be ready for a positive result later in her life	228(27.9)	589(72.1)	HE
Total		300(36.7)	517(63.3)	

Guide: $\geq 50\%$ is HE while $< 50\%$ is LE. Key: HE = high extent, LE = low extent

Table 2 reveals the percentage distribution of the extent to which fear of having positive result constitute a barrier to cervical cancer screening among women. The result established that the total 517(63.3%) was greater than the average indicating a high extent. Thus, the extent to which fear of having positive results constituted a barrier to cervical cancer screening among the women was high.

Table 3: Frequency and percentage distribution of the extent to which pains or fear of the process constitute a barrier to cervical cancer screening among women

SN	Items	LE	HE	Remark
1	A woman should not undergo the screening because it is painful	412(50.4)	405(49.6)	HE
2	The way the healthcare providers touch the cervix during the screening makes me afraid	378(46.3)	439(54.7)	HE
3	I could not open the cervix for someone to touch or examine it because I would feel pains	219(26.8)	598(73.2)	HE
4	The fluids they pump into the cervix are dangerous; I don't like them, so I can't undergo the screening	340(41.6)	477(58.4)	HE
5	The instrument they insert into the cervix during screening is very painful	311(38.1)	506(61.9)	HE
Total		332(40.6)	485(59.4)	HE

Guide: $\geq 50\%$ is HE while $< 50\%$ is LE. Key: HE = high extent, LE = low extent

Table 3 reveals the percentage distribution of the extent to which pain or fear of the process constitutes a barrier to cervical cancer screening among women. The result established that the total of 485 (59.4%) was greater than the average, indicating a high extent. Thus, the extent to which pain or fear of the process constituted a barrier to cervical cancer screening among the women was high.

Table 4: Summary of Chi-square test of Non-affordability of the test is not a significant barrier to cervical cancer screening among women in Rivers East Senatorial District

Affordability	CC Screening		Total F(%)	df	χ^2	p-value	Decision
	Yes F(%)	No F(%)					
High extent	90(12.3)	643(87.7)	733(100)	1	0.27	.59*	H ₀ Not
Low extent	12(14.3)	72(85.7)	84(100)				Rejected
Total	102(12.5)	715(87.5)	817(100)				

*Not significant; $p > 0.05$

Table 4 revealed that the non-affordability of the test is a significant barrier to cervical cancer screening. The result showed that the non-affordability of the test was not a significant barrier to cervical cancer screening ($\chi^2 = 0.27$, $df = 1$, $p = 0.59$) as the p-value was greater than 0.05. Thus, the null hypothesis, which stated that the non-affordability of the test is not a significant barrier to cervical cancer screening among women in Rivers East Senatorial District, was not rejected.

Table 5: Summary of Chi-square test of fear of having positive result is not a significant barrier to cervical cancer screening among women in Rivers East Senatorial District

Fear of positive result	CC Screening		Total F(%)	df	χ^2	p-value	Decision
	Yes F(%)	No F(%)					
High extent	32(6.4)	470(93.6)	502(100)	1	0.44	.00*	Ho rejected
Low extent	70(22.2)	245(77.8)	315(100)				
Total	102(12.5)	715(87.5)	817(100)				

*Significant; $p < 0.05$

Table 5 revealed the Chi-square test of fear of having a positive result as a significant barrier to cervical cancer screening. The result showed that fear of having a positive result was a significant barrier to cervical cancer screening ($\chi^2 = 0.44$, $df = 1$, $p = 0.00$) as the p-value was less than 0.05. Thus, the null hypothesis, which stated that fear of having positive results is not a significant barrier to cervical cancer screening among women in Rivers East Senatorial District, was rejected.

Table 6: Summary of Chi-square test of pains or fear of the process is not a significant barrier to cervical cancer screening among women in Rivers East Senatorial District

Pains or fear of the process	CC Screening		Total F(%)	df	χ^2	p-value	Decision
	Yes F(%)	No F(%)					
High extent	45(8.9)	461(91.1)	506(100)	1	15.69	.00*	H ₀ rejected
Low extent	57(18.3)	254(81.7)	311(100)				
Total	102(12.5)	715(87.5)	817(100)				

*Significant; $p < 0.05$

Table 6 revealed the Chi-square test of pains or fear of the process being a significant barrier to cervical cancer screening. The result showed that pains or fear of the process were a significant barrier to cervical cancer screening ($\chi^2 = 15.69$, $df = 1$, $p = 0.00$) as the p-value was less than 0.05. Thus, the null hypothesis which stated that pains or fear of the process is not a significant barrier to cervical cancer screening among women in Rivers East Senatorial District was rejected.

Discussion

The result established that the extent to which the non-affordability of the test constitutes a barrier to cervical cancer screening among women was high (88.7%). This result might not be argued against but it is surprising because it is a

known fact that the cervical cancer screening programs or exercises launched and re-launched so far in Rivers State are without any charges. However, it might not be disputed that knowing the kind of country we live in, where health services provided free of charge by the government like immunization, family planning and insecticide-treated nets among others, were delivered at some cost or amount of money by the health care workers, possibly women were charged for the screening at some points which may have contributed to its poor utilization. The findings of this study corroborate those of Bashar (2012), who showed that the affordability of healthcare services, including cervical cancer screening services, influenced the utilization of such services by women to a high extent. The findings of this study are in keeping with those of Esena et al. (2013), who found that affordability of healthcare services is a major factor that influences the utilization of healthcare services to a very high extent. The finding of this study is akin to that of Ali-Rasasi et al. (2014), which revealed that one of the factors that, to a high extent, was a barrier to cervical cancer screening among women was the cost of service. The findings of this study are also in consonance with those of Amoran and Toyobo (2015), who revealed that, to a high extent, affordability was a barrier to cervical cancer screening among women, as was the cost of service. The findings of this study are also in tandem with those of Yadav and Kesarwani (2016), who showed that affordability of services is a factor preventing women from undergoing or utilizing healthcare services. This similarity between the previous studies and the present one could be attributed to the homogeneity of the study population, as they were both focused on women.

The findings of the study revealed that the extent to which fear of having a positive result constitutes a barrier to cervical cancer screening among women was high (63.3%), and fear of having a positive result was a significant barrier to cervical cancer screening ($\chi^2 = 0.44$, $df = 1$, $p = 0.00$). The findings of this study are in tandem with that of Marlow et al. (2014), who showed that, to a high extent, fear of having positive results due to negative past experiences was a barrier to cervical cancer screening among women. The finding of this study also corroborates that of Bessler et al. (2017), whose study on factors affecting the uptake of cervical cancer screening among clinic attendees in Trelawny, Jamaica, revealed that to a high extent, fear of having positive results affected the uptake of cervical cancer screening among the women. Also, the findings of this study are similar to those of Yang et al. (2019), who showed that fear of having positive results to a high extent constituted a barrier to cervical cancer screening among women in eastern China, where the study was carried out. The findings of this study are also not different from those of Ogedegbe et al. (2015), who revealed that fear of having a positive result was a major barrier to the uptake of cervical cancer screening by other women. The finding of this study is also in support of that of Kwok et al. (2011), which showed that an Australian-Chinese study reported that fear of having positive results to a high extent was a barrier to cervical cancer screening.

The findings of the study indicated the extent to which pains or fear of the process constitute a barrier to cervical cancer screening among women was high (59.4%), and pains or fear of the process was a significant barrier to cervical cancer screening ($\chi^2 = 15.69$, $df = 1$, $p = 0.00$). The findings of this study are in tandem with those of Marlow et al. (2014), who showed that, to a high extent, fear of pain during the screening process was a barrier to cervical cancer screening among women. The finding of this study also corroborates that of Bessler et al. (2017), whose study on factors affecting the uptake of cervical cancer screening among clinic attendees in Trelawny, Jamaica, revealed that to a high extent fear of the process being painful affected the uptake of cervical cancer screening among the women. Also, the findings of this study is similar to those of Yang et al. (2019) which showed that fear of cancer and screening outcomes to a high extent constituted a barrier to cervical cancer screening among women in eastern China where the study was carried out. The result of the present study is in agreement with that of Al Sairafi and Mohamed (2019), whose study revealed that, to a high extent, respondents assumed that the cervical cancer screening test will cause pain as the test kit has to be inserted into the vagina to take the sample; this was a major barrier to their participation in cervical cancer screening test. The findings of this study are also not different from that of Ogedegbe et al. (2015) who revealed that women expressing a feeling of pain during cervical screening was a major barrier to the uptake of cervical cancer screening by other women. The finding of this study is also in support of that of Kwok et al. (2011) which showed that an Australian-Chinese study reported that pain or fear of the process, to a high extent, was a barrier to cervical cancer screening as it was seen as very painful; and Byrd et al (2014) reported that rumours spread by their close family members or friends that the screening process is painful was a major barrier to the uptake of the cervical cancer screening test. The findings of this study are also in line with those of Farooqui et al. (2013), whose study in Malaysia showed that, to a high extent, fear of the process was a barrier to the uptake of cervical cancer screening.

Conclusion

Based on the findings of the study, it was concluded that the significant barriers to screening were fear of having positive results and pain or fear of the process. The above situation points to the need for educational and other interventions targeted at overcoming identified barriers.

Recommendations

The following recommendations were made based on the conclusions of the study:

1. The government should closely monitor the delivery of cervical cancer screening services through its state and local government supervisors to ensure that the services are rendered at no cost as stipulated by the government. This will help to curb the issue of non-affordability.
2. Health personnel specifically gynaecologists and midwives who have more contact with women should also be involved by taking it as a duty to explain the simplicity of the screening process to women, this will help to dispel fear of the process.
3. Healthcare workers both at the tertiary, secondary, and primary levels should take it as a point of duty to enlighten women about the benefits of knowing their status and presenting for treatment at an early stage of the disease rather than being in the dark; this will also help to clear the fear of having a positive result.

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