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PERCEPTION AND AWARENESS OF CERVICAL CANCER AMONG WOMEN IN OYO STATE, NIGERIA

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ABSTRACT

Cervical cancer remains a significant public health concern, particularly in developing regions such as Oyo State, Nigeria. This study aimed to assess the perception and awareness of women about cervical cancer in Oyo State, identify socio-cultural and economic barriers, and provide recommendations for intervention strategies. A quantitative methodology was employed, utilizing semi-structured questionnaires administered to 960 women aged 20 to 60, healthcare professionals, and community leaders.

Findings revealed a concerning lack of awareness, with only 38% of respondents indicating awareness of cervical cancer. Disparities in awareness were observed across different regions and demographic groups, highlighting the need for targeted educational campaigns. Factors such as low levels of education, limited access to healthcare facilities, and cultural beliefs contribute to this disparity. Additionally, a chi-square analysis demonstrated significant associations between awareness levels and factors such as education level, socioeconomic status, and geographic location. Enhancing access to screening services through mobile units and outreach programs is crucial, particularly in rural and underserved areas. Additionally, fostering multidisciplinary collaboration among stakeholders, including government agencies, healthcare providers, and non-governmental organizations, is essential for implementing sustainable solutions. Addressing these challenges through comprehensive interventions can contribute to reducing the incidence and mortality rates of cervical cancer in Oyo State.

Introduction

Cancer is one of the world's most dreadful disease in recent times (World Health Organisation, WHO, 2017). Cancer is characterized by the unrestrained growth and spread of anomalous cells, which could wreak havoc to the human body. If not properly managed, cancer may degenerate, break down the body systems and culminate into death. Although cervical cancer (CC) is not among the common cancer, it constitutes approximately 12% out of all cancer in women after breast cancer making it the second most common cancer worldwide and the most common in developing countries (WHO, 2019).

Cervical cancer can be defined as a malignant neoplasm of the cervix uteri. In developing countries like the South, Central America, sub-Sahara Africa (SSA), South Asia, CC is a major challenge to a woman's public health and is the most common Type 1 cancer (Parkin, Forman and Bray, 2014). Not less than 50 million Nigerian women are at risk of CC with an annual CC rate of 14, 089, and an annual mortality rate of 8240 (Nigeria HPV and Related Cancer Fact Sheets, 2017). Cervical cancer is usually caused by the Human Papillomavirus (HPV) infection; 23.7% of women harbor this virus worldwide (American Cancer Society, 2016).

Several studies have attributed the ineffectiveness of CC screening to religious beliefs, low community involvement, lack of spousal support, poor health-seeking behaviour and passivity of opinion leaders (Ntekim, 2012; Modibbo, Dareng, Bamisaye, Jedy-Agba, Adewole, Oyenehin, Olaniyan and, 2016; Frank and Ehiemere, 2017).

In most of the developing countries, misperception about the disease, stigmatisation and discrimination may also hinder early diagnosis and discourage the screening of women. Like other health problems requiring specialized care, access (availability, proximity and affordability) to cancer services have enormous socio-economic dynamics (Amzat and Razum, 2014). This is more worrisome in a resource-constrained region like Nigeria. The location of health facilities is urban-based (Jegade, 2010), whereas most women are in rural areas, where the majority are poor, low level of literacy, lack of adequate health information, poor awareness and knowledge (Nwobodo, 20159).

Despite the potential for early detection and treatment, cervical cancer remains a significant health burden, particularly in developing regions like Nigeria, where 86.0% of global cervical cancer cases are found (Olubodun et al., 2022). Nigeria is yet to achieve a strategically organized and routine cervical cancer screening (CCS) program that is accessible and affordable, especially for vulnerable population. The challenges in managing and treating diseases are often rooted in the health beliefs and perceptions of the people, which influence their health-seeking behavior and uptake of CCS.

In Oyo State, a cultural melting pot of the Yoruba people, socio-cultural factors play a crucial role in shaping perceptions and behaviors related to cervical cancer. Patriarchal norms, stereotypes, and women's roles in society can influence perceptions about the disease, its risks, treatment options, and the benefits of seeking CCS. Religious beliefs may also impact the acceptance of certain treatment methods and the uptake of CCS.

While Oyo State has four major screening centers located in tertiary institutions, non-governmental organizations, or private facilities, these are insufficient to serve the population of women at risk for cervical cancer. Furthermore, the available screening centers are urban-based, making it challenging for rural women, who constitute the majority of the vulnerable population, to access them. Economic factors also impinge on the awareness and knowledge of cervical cancer, hindering improved CCS uptake.

Previous studies have focused primarily on perceptions about the causes and treatment of cervical cancer, with limited attention to the multifaceted barriers that prevent the adoption of CCS and the utilization of screening facilities by those affected. This study aims to examine the various factors that influence people's awareness and knowledge of cervical cancer, as well as the socio-cultural constraints to the uptake of CCS (Modibbo et al., 2016; Frank & Ehiemere, 2017).

The aim of this study is to assess the perception and the level of awareness of cervical cancer and cervical cancer screening among women in Oyo State.

Literature review

The uterine cervix connects the uterus to the vagina, which is the uterus's lowest section (womb). Cervical cancer is caused primarily by the Human Papillomavirus (HPV), a sexually transmitted infection (STI). Early sexual intercourse, taking of birth control pills, and having several sexual partners can all increase the risk of contracting Human Papillomavirus (HPV), which increases the risk of cervical cancer (American Cancer Society, 2016). In addition, women who began sexual activity within a year of their menstrual periods or who have been diagnosed with HPV are likely to develop cervical cancer (Panatto et al., 2012).

According to the American Cancer Society (2016), cervical cancer mortality has decreased by 50% in the previous 40 years, compared to 50-60 years before, when American women died in large numbers from the disease. The use of a device known as a pap smear, which detects alterations in the cervix cells in their precancerous state and also diagnoses cervical cancer in its most treatable state, resulted in a lower death rate.

When compared to other types of cancer, cervical cancer can be avoided. The major method of preventing cervical cancer is to eradicate the Human Papillomavirus (HPV), a sexually transmitted infection that causes the disease; this will help to reduce cancer related mortality. HPV infection is more difficult to prevent in the first place than most other sexually transmitted illnesses. Infected women with the human papillomavirus are usually asymptomatic. HPV is easily transferred, and there are no cures for the underlying illness (Akpo et al., 2016).

According to (Jemal et al. 2011), the majority of women (60-75%) who live in rural areas, where there is lack of access to health care are the most affected by this cancer at a time in their lives when their contribution is most needed in the family and community. In Nigeria, a similar study is being conducted since around 50 million women

are at risk of developing cervical cancer. According to (Abiodun et al. 2014), 14,089 women are diagnosed with cervical cancer each year, with 8,240 dying as a result of the disease.

Cervical cancer is the main cause of death among women in poor nations, according to (Ndejjo et al. 2016), with 86 percent of cervical cancer deaths occurring in developing countries each year. In Nigeria, the use of cervical cancer screening for the prevention of the illness is still low. The low figure of women who use screening services, despite its presence in a colposcopy facility of University College Hospital Ibadan's antenatal clinic, is supported by (Arulogun and Maxwell 2012). Cervical cancer is avoidable, according to Ndejjo et al. (2016), and good screening programs can minimize morbidity and mortality.

Several studies have indicated that a lack of understanding regarding CCS is one of the key causes of low adoption (Obeid and Al Nasheet, 2018). According to Poudel and Sumi (2019), a major barrier to early detection and prevention of disease is a non-existence of understanding about risk factors, screening procedures, and vaccination. Liu, Li, Ratcliffe and Chen (2017) seem to agree that women's low educational level and income are highly related to their level of awareness regarding CC. The associated factors, according to Ndejjo et al. (2016) were absence of information about CC as well as absence of eagerness for screening.

According to Ndikom et al. (2014), many women in impoverished countries are unaware of CC. Due to the emptiness of knowledge, screening was underutilized, even though cancer can be prevented or cured if found early. Jassim et al., (2018), cervical cancer screening is the most effective preventive measure for minimizing the burden of the disease. According to Curado (2007), just 15% of women aged 20 to 65 in Nigeria's South West region have heard of the condition; this is corroborated by a study by Akpo et al. (2016), which found that women in university communities have higher awareness than those outside the educational system. These many scholars agree that raising awareness about cervical cancer screening among women is necessary in order to see a large increase in uptake.

Methodology

The approach used in the research to investigate the adoption of cervical cancer screening (CCS) in Oyo State, Nigeria made use of a cross-sectional qualitative methodology, which focused on women in the age range of 20 to 60, healthcare professionals, and leaders in the community and religion. Sample sizes were determined using Leslie Kish's formula, and purposive and random selection strategies were also used in the sampling process. The sample size was 960 women of child bearing age. The study was conducted in Oyo State which is located in the southwest geopolitical zone of Nigeria. Oyo State was purposively selected because it houses one of the six (6) population-based cancer registries namely: Ibadan Cancer Registry (IBCR). Ibadan Cancer Registry was established in 1962.

Quantitative data was collected using semi structured questionnaire. Research assistants used the ODK server to upload data and mobile phones to administer questionnaires as part of their assistance with data collecting. The study's comprehensiveness and reliability were improved by the multistage sampling approach, which guaranteed representation from senatorial districts and local government areas (LGAs). Ethical approval was obtained from the

Social Sciences and Humanities Research Ethics Review Committee (SSHREC) University of Ibadan with reference number UI/SSHEC/2020/0026, as well as the Oyo State Ministry of Health Ethical Review Board with reference number AD13/479/1303, since the study was carried out using public health facilities of the state.

Result

Table 4.1 shows the demographic characteristics of the respondents from the quantitative study. The table reveals that the main age of respondents was 34.67 ± 11.91 years. A very few proportions of the sampled population were 20 years, and below (9.2%), and 60 years, and older (3.2%). The larger percentage falls within 21 to 30, and 31 to 40, and had 33%, and 32% respectively. A greater percentage were married (65.3%) while less than half (34.7%) were single. This suggests that a greater percentage who have heard about CC, and CC screening are married. Christians account for more. Concerning the respondent's status of education, less than twenty percent (16.4%) of the study population are illiterate. 20% had primary education, 35.4% of the respondent have secondary education, and 28.2 had tertiary education. This study location appears to be a fairly educated community.

Table 4.1. Demographic Characteristics of Respondents

Variables	Response categories	Frequency (n=934)	Percentage
Age Group	20 years, and below	86	9.2
	21 - 30 years	308	33.0
	31 - 40 years	299	32.0
	41- 50 years	145	15.5
	51 - 60 years	66	7.1
	Above 60 years	30	3.2
Marital Status	Single	324	34.7
	Married	610	65.3
Religion	Christianity	557	59.6
	Islamic	350	37.5
	ATR*	23	2.5
	Others	4	0.4
Highest level of education	No formal education	153	16.4
	Primary	187	20.0
	Secondary	331	35.4
	Tertiary	263	28.2
Occupation	Unemployed	148	15.8
	Civil servant	125	13.4
	Private sector workers	140	15.0
	Full-time/housewife	27	2.9
	Self employed	478	51.2
	Others	16	1.7
Estimated Income	Below ₦ 15000	196	21.0
	₦15,000 – ₦ 24,999	220	23.6

	#25,000- ₦ 34,999	189	20.2	ATR* African
	#35,000 - ₦ 44,999	196	21.0	
	#45,000, and above	133	14.2	
Ethnicity	Yoruba	818	87.6	
	Igbo	92	9.9	
	Hausa	21	2.2	
	Others	3	0.3	
Exposure to sex	Exposed	754	80.7	
	Not exposed	180	19.3	
Age at sexual debut	Below 15	133	17.6	
	15 – 25	564	74.8	
	Above 25	57	7.6	

Traditional Religion

The majority of respondents (80.7%) reported being sexually active, with 74.8% having their sexual debut between ages 15 to 25. A smaller fraction (19.3%) reported no sexual exposure, while around one-fifth had sexual debut before age 15, posing a risk for Human Papillomavirus (HPV) exposure, a precursor to cervical cancer. In terms of religion, 59.6% of respondents are Muslims, 37.5% practiced Islam, and 2.5% followed traditional religion. The dominant ethnic group is Yoruba (87.6%), mainly from South Western Nigeria, with Igbo and Hausa minorities.

Regarding employment, 51.2% are self-employed, 15% worked in the private sector, and 13.4% are civil servants, indicating economic diversity. Unemployment was noted in 15.8% of respondents, highlighting dependence on others for survival. Income distribution showed roughly equal proportions earning ₦7,500, ₦15,000, ₦25,000, and ₦35,000 monthly (around 20-23%), with 14.2% earning ₦45,000 monthly. The research instrument was administered across six Local Government Areas (LGAs) from three senatorial districts of Oyo state: Oyo West (126), Ogbomoso North (178), Ibarapa North (91), Ibadan South West (267), Oluyole (189), and Irepo (109).

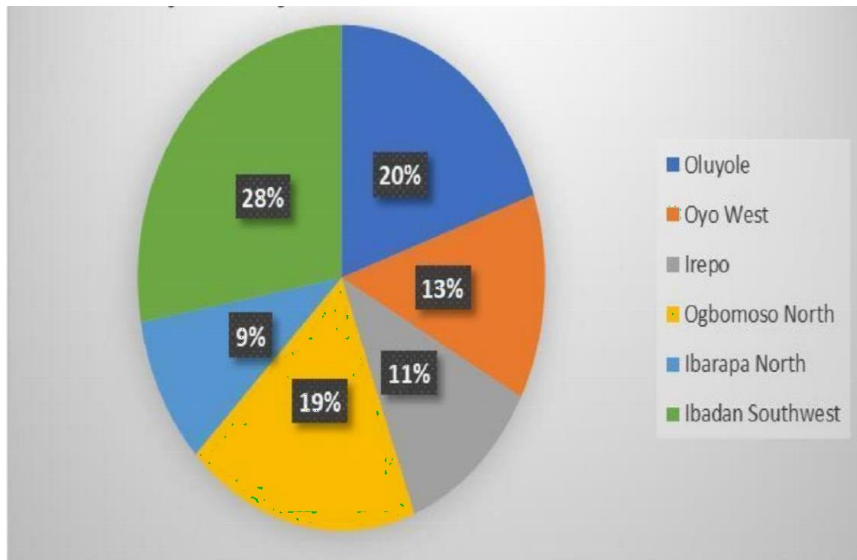


Fig 1: Spatial pattern of administration of questionnaire

Awareness of cervical cancer

Figure 4.2 is the pie chart that shows the level of awareness of CC. Less than half (38.0%) of the respondents are aware of CC. This is considered a little low, but a reflection of why people are unlikely to seek health care for an ailment they were not aware of.

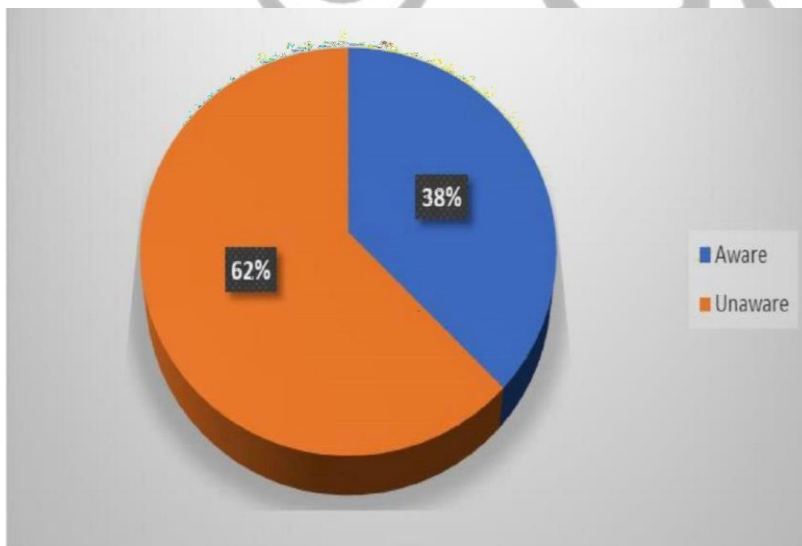


Figure 2: Percentage distribution of awareness of Cervical Cancer

In a similar instance, the result of quantitative revealed the total population of women that are sexually exposed, almost half (47%) of them are aware of cervical cancer, whereas 38% of the total population are aware of CC this is depicted by the pie chart above. (22) which corroborates that a lot of women in developing countries were not aware of cervical cancer. Poor awareness resulted in poor utilization of screening even though if detected early it could be prevented or treated. A similar report of poor awareness of cervical cancer is reported in Ibadan, as the majority of the participants stated that they have never heard about cervical cancer. Conversely, (13) reiterated that there is a high awareness of cervical cancer within the communities of their study area. (24) reported an awareness level of (15.0%) among rural women of Lagos, (25) gave a strongly better report in their study of women from selected government-owned hospitals in Abuja where (93.8%) of women were aware of cervical cancer preventive strategic although only (45.1%) utilized the services,



Table 4.2: Association between Socio-economic characteristics of respondents and awareness of cervical cancer

There's a strong correlation between respondents' employment status and their awareness of cervical cancer (CC), with self-employed individuals showing higher awareness due to easier access to information. Conversely, employment increases interaction but may limit engagement, as noted by Frank and Eheimelle (2017). Income level also strongly correlates with awareness, with higher income enabling better access to information through resources like gadgets, books, and workshops, as supported by Woldetsadik et al. (2020) in Ethiopia.

A chi-square test revealed that socio-cultural and economic characteristics significantly influenced CC screening uptake ($p < 0.05$), except for religion and ethnicity. Marital status showed no association with awareness, consistent with findings by Woldetsadik et al. (2020) in Ethiopia. Religion didn't significantly affect CC uptake, contrary to

Socio-economic variables		Aware	Unaware	Total	X ²	df	P value
Age group	20 years, and below	7(36.8)	12(63.2)	19 (2.5)	15.767 ^a	5	0.008***
	21-30	100(41.8)	139(58.2)	239(31.7)			
	31-40	124(46.6)	142(53.4)	266(35.2)			
	41-50	85(61.5)	53(38.5)	138(18.3)			
	51-60	20(31.7)	43(68.3)	63(8.3)			
	61, and above	16(53)	13(47)	29(3.8)			
Education	No formal education	48(36.4)	84(63.6)	132(17.5)	36.768 ^a	3	0.000***
	Primary Education	63(40.4)	93(59.6)	156(20.7)			
	Secondary education	105(40.4)	155(59.6)	260(34.5)			
	Tertiary education	136(66.1)	70(33.9)	206(27.3)			
Religion	Christianity	213(48.3)	228(51.7)	441(58.5)	5.620 ^a	3	0.132
	Islamic	127(42.9)	169(57.1)	296(39.2)			
	ATRn	11(79)	3(21)	14(1.9)			
	Others	1(33.4)	2(66.6)	3(0.4)			
Ethnicity	Yoruba	324(49.2)	335(50.8)	659(87)	2.048 ^a	3	0.563
	Igbo	22(28.2)	56(71.8)	78(10.3)			
	Hausa	5(36)	9(64)	14(1.8)			
	Others	1(33.4)	2(66.6)	3(0.39)			
Marital Status	Single	42(38)	69(62)	111(14.7)	6.219 ^a	3	0.101*
	Married	285(50)	286(50)	571(75.7)			
	Divorced	16(47,1)	18(52.9)	34(4.5)			
	Widowed	9(23.7)	29(76.3)	38(5)			
Employment	Self employed	157(38)	256(61.9)	413(54.7)	54.869 ^a	5	0.000***
	Public Sector Worker	82(73.8)	29(26)	111(14.7)			
	Private Sector Worker	64(57.6)	47(42)	111(14.7)			
	Not employed	36(41.4)	51(58.6)	87(11.5)			
	House Wife	9(34.6)	17(65)	26(3)			
	Others	4(66.6)	2(33)	6(0.7)			
Income	#7,500	37(28.7)	92(71.3)	129(17)	14.920 ^a	4	0.005***
	#15,000	85(43.5)	110(56)	195(25.8)			
	#25,000	80(49)	83(50)	163(21.6)			
	#35,000	87(53.7)	75(46)	162(21)			

Notes: ***=p<0.01; **=p<0.05; *=p<0.1

barriers highlighted by Jassim et al. (2018). Educational level and income, however, were strongly associated with awareness, supported by various studies (Ndikom et al., 2012, 2014; Liu et al., 2017; Akpo et al., 2016).

In this study, less than half (38%) were aware of CC, aligning with similar studies by Ijezie (2019), Akinola (2018), and Wright et al. (2014). This contrasts with Idowu's (2016) Ilorin study where three-quarters were aware, and Okunowo's (2018) study where the majority (78.5%) were aware.

Awareness of Cervical Screening

Figure 4.5 is the pie chart that shows the level of awareness of respondents about CCS. The awareness of CCS is abysmally low, just 14% of those aware of cervical cancer (352) are aware of cervical cancer screening. Abysmally low awareness of cervical cancer screening level was reported Olubodun et al. (2019) in Idi- Araba, Lagos. Awareness of cervical cancer screening is found to be low as reported similarly by Okunowo et al., 2018, Okunowo, and Smith

–Okono (2020), and Idowu et al. (2016). Cervical cancer screening is mostly opportunistic in developing nations as compared to organized ones in developed nations leading to a drastic reduction in both morbidity, and mortality.

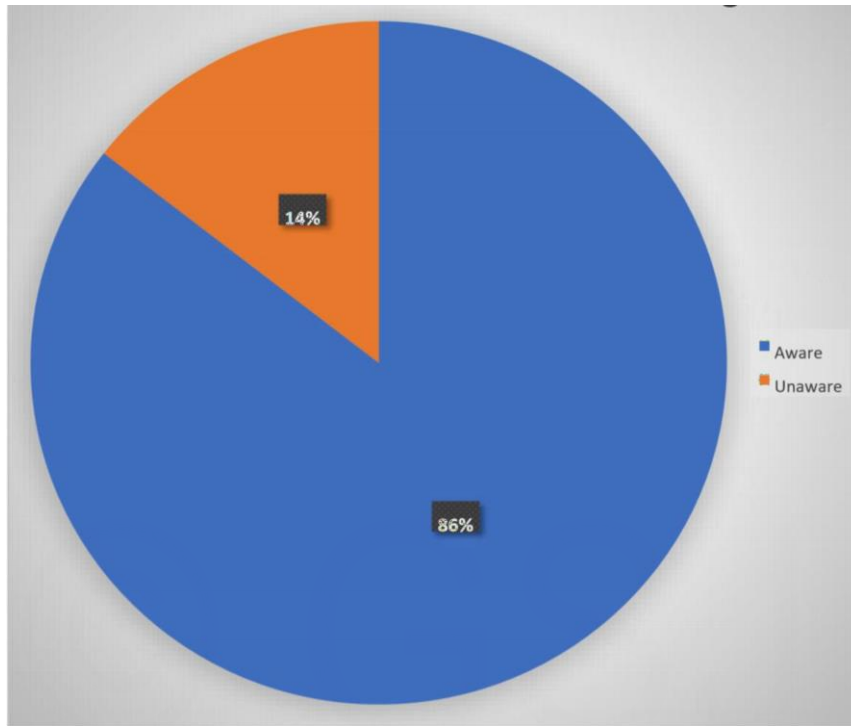


Fig 3: Percentage distribution of awareness of cervical cancer screening

Source: Fieldwork (2020)

Discussion of findings

In more than 10 countries, Mengesha (2020) reported that they have a general belief that people with multiple sexual partners always opine that CC is punishment for their sins from God. The community mere belief that any cancer is a wild health challenge including cervical cancer that is preventable if detected, and treated early, there is a similar report from an unpublished thesis of Oyebola (2020) where respondents consider cancer as a death sentence in her Ibadan study of breast cancer, and spousal relationship in the Ibadan. Furthermore, (78%) of the respondents believe that cervical cancer is preventable as reported by Mengesha (2020) in their Ethiopia study. Shaw et al (2015) reported cervical screening rates among women in Mayama to be 19.1%.

Further findings, according to the results obtained in this study showed that 46.7% of the study population are aware of cervical cancer. This means that majority of the study population, 53.3% to be precise are not aware of CC, and it

is in tandem with Ndikom et al. (2012) where a study was carried out on women of childbearing age in selected health facilities in Ibadan. The study reported that the majority of the women of childbearing age are not aware of cervical cancer. Oluwole et al (2017) carried out a similar study in Lagos, Nigeria, and reported that only 15% of the respondents were aware of cervical cancer. Low awareness about cervical cancer has been identified as a major barrier to cervical cancer screening.

Conversely, Oche et al (2013) reported that over 50% of the respondents were knowledgeable about cervical cancer, and 50% had no knowledge of cervical cancer. In the same vein, Akpo, et al, (2016), a study carried out in Dominica on Cervical Cancer knowledge, screening practices, and vaccines among female medical reported that 70% of the students are aware of cervical cancer. This development could be because the students in Dominica are more increased in public advocacy networks and because they are in their prime. Yahya and Mande (2019) also reported that 66.7% of the participants were aware of cervical cancer.

Recommendations

1. Targeted Educational Interventions: Implement targeted educational interventions aimed at increasing awareness and knowledge about cervical cancer among women in Oyo State. Collaborate with community leaders, healthcare providers, and non-governmental organizations to develop culturally sensitive educational materials and campaigns tailored to the specific needs and beliefs of the population.
2. Enhanced Access to Screening Services: Improve access to cervical cancer screening services by expanding the availability of screening facilities and outreach programs, particularly in rural and underserved areas. Invest in mobile screening units, telemedicine initiatives, and community-based screening camps to reach women who face barriers to accessing healthcare services.
3. Multidisciplinary Collaboration: Foster multidisciplinary collaboration among healthcare professionals, policymakers, researchers, and community stakeholders to address the complex challenges of cervical cancer prevention and control. Develop partnerships to integrate in depth knowledge about cervical cancer into existing healthcare policies.

Implication for Nurses

Nurses are essential in raising awareness about cervical cancer through their efforts based on quality time spent to cater and care for patient's needs. This is as a result of the trust built over time between the Nurses and patients. The Nurses have the power to influence the patients about cervical cancer knowledge further prompting them to take a step ahead to go for cervical cancer screening.

Their role extends to addressing cultural and socioeconomic barriers that hinder women from accessing timely care. By empowering women with knowledge and resources, nurses can contribute to reducing the burden of cervical

cancer. They play a pivotal role in promoting prevention efforts and improving health outcomes for women at risk of or diagnosed with cervical cancer.

Conclusion

The study highlights low awareness of cervical cancer (38%) among women in Oyo State, Nigeria, hindering effective prevention and treatment efforts. Targeted educational campaigns are urgently needed to increase awareness and understanding of cervical cancer and its importance in early detection. Disparities in awareness across regions and demographics emphasize the need for comprehensive and culturally sensitive interventions, particularly in rural and less educated communities. Collaborative efforts between government, healthcare providers, and NGOs are essential to implement sustainable solutions and reduce the burden of cervical cancer. A holistic approach combining education, advocacy, and improved access to screening and treatment services is necessary to address the multifaceted challenges of cervical cancer in Oyo State.

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