

Preventive Practices and Perception of Cervical Cancer Among Female Students in the University of Ibadan, Oyo state

Oyekan Mojisola Adejoke (PhD) Lagos State College of Health Technology Yaba Lagos

Muideen Babatunde Olatunji Executive Secretary, Oyo State Primary Healthcare Board.

Tawose Oluwatomisin Victoria University of Ibadan (Public Health, Health Policy and Management)

Amarachi Igwilo Public Health, Western Illinois University, Macomb, Illinois, USA

Omoleye Tosin Pelumi

Public Health (Health Promotion and Education), University of Ibadan

Abstract

Introduction:

Cervical cancer remains a significant public health challenge worldwide, with early detection being crucial for effective treatment and prevention. However, awareness of cervical cancer and its preventive measures, including Pap smear testing, is suboptimal in many regions, particularly among women in Nigeria. This study aimed to assess the awareness, perceptions, and attitudes of university students toward cervical cancer prevention, with a focus on Pap smear screening.

Objective:

The primary objective of this study was to evaluate the level of awareness, knowledge, and attitudes toward Pap smear testing among university students and to identify factors influencing their perceptions and willingness to undergo cervical cancer screening.

Method of Analysis:

A cross-sectional survey design was employed, using structured questionnaires to collect data from 350 respondents. Descriptive and inferential statistical analyses were conducted, with chi-square tests used to determine associations between demographic variables and respondents' knowledge and perceptions of cervical cancer prevention. The data were analyzed using SPSS version 25.

Results:

The study revealed that while a majority of respondents (92%) had heard of cervical cancer, only 8% were aware of the Pap smear test. Additionally, 57.1% of participants believed Pap smear screening is necessary for women, and 51.4% were aware of its importance. However, the actual uptake of Pap smear testing was alarmingly low, with only 2.9% of respondents having undergone the test. Sociodemographic factors such as age, marital status, and educational level significantly influenced the respondents' knowledge and perceptions of cervical cancer prevention (p < 0.05).

Copyright © 2024 The Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/4.0), which permits unrestricted use, distribution, and reproduction in any medium 267

Conclusion:

This study highlights critical gaps in the awareness and uptake of cervical cancer prevention strategies among university students. While knowledge of the importance of Pap smear screening exists, significant barriers, including lack of awareness and accessibility, hinder effective screening. Public health interventions targeting the younger population, including educational campaigns and improving access to screening services, are necessary to reduce cervical cancer incidence and mortality. Further research is needed to explore the effectiveness of these interventions and identify strategies to overcome barriers to screening in similar contexts.

Keywords: Cervical cancer, preventive practices, perception, HPV vaccination, female students, University of Ibadan.

Introduction

Cervical cancer remains a significant public health challenge globally, with a disproportionately high burden in low- and middle-income countries (LMICs). It is the second most common cancer among women worldwide and a leading cause of cancer-related deaths in women from resource-constrained settings. Sub-Saharan Africa bears the highest incidence and mortality rates, with an estimated 34.8 cases per 100,000 women annually. In Nigeria, cervical cancer contributes significantly to the national cancer burden, with an estimated incidence rate of 25 per 100,000 women and a mortality rate that underscores the critical need for effective prevention and early detection strategies (World Health Organization [WHO], 2021). Despite the availability of effective preventive measures such as HPV vaccination and regular cervical screening, the disease continues to pose a significant threat due to inadequate awareness, poor healthcare access, and socio-cultural barriers. The primary etiological factor for cervical cancer is persistent infection with high-risk human papillomavirus (HPV) types, particularly HPV-16 and HPV-18, which are responsible for over 70% of cases worldwide. Young women, particularly those in tertiary institutions, represent a vulnerable group due to behavioral, biological, and systemic factors. Early sexual debut, multiple sexual partners, inconsistent condom use, and limited access to sexual health education increase their risk of acquiring HPV infection. Additionally, the gap in knowledge about cervical cancer, coupled with misconceptions regarding its prevention, exacerbates the problem. Studies have shown that even among women with access to education, the uptake of cervical screening remains alarmingly low, often due to fear, stigma, and lack of awareness (Bruni et al., 2022; Oyebode et al., 2020).

Universities, as hubs for young adult populations, provide a unique opportunity to examine these risks and behaviors in greater detail. The University of Ibadan, Nigeria's premier institution, hosts a diverse population of female students who may engage in behaviors or experience exposures that increase their vulnerability to cervical cancer. Many of these students, in their late teens and early twenties, experience newfound independence, which may lead to increased risk-taking behaviors, including sexual experimentation. Furthermore, public health initiatives targeting this population have been inconsistent and poorly coordinated, leaving significant gaps in their knowledge of cervical cancer and its prevention. Globally, the implementation of HPV vaccination programs and organized cervical screening initiatives has reduced the incidence and mortality of cervical cancer. However, in Nigeria, these programs remain underutilized, largely due to limited awareness, cultural inhibitions, and healthcare infrastructure deficits (Okonofua et al., 2021).

This study seeks to assess the perception of cervical cancer and the preventive practices of female students at the University of Ibadan, Nigeria. Specifically, it aims to evaluate their knowledge about cervical cancer, identify their perceptions of the disease and its risk factors, and explore their engagement

Copyright © 2024 The Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/4.0), which permits unrestricted use, distribution, and reproduction in any medium

in preventive measures such as screening and vaccination. By understanding the awareness and practices among this population, the study aims to identify barriers to effective prevention and provide data-driven recommendations for targeted interventions. The findings will contribute to strengthening public health efforts to reduce the burden of cervical cancer and improve the uptake of preventive practices among young women in tertiary institutions.

Materials and Methods Study Design

This study adopted a **descriptive cross-sectional design** to assess the knowledge, perception, and preventive practices regarding cervical cancer among female students at the University of Ibadan, Nigeria. The design was chosen to provide a snapshot of the participants' awareness and practices at a single point in time.

Study Population and Sampling

The study population comprised female students enrolled in various faculties at the University of Ibadan. Female students aged 18 years and above who provided informed consent to participate in the study were included. Students with incomplete responses to the questionnaire were excluded from the analysis. A total of 350 participants were selected using a multistage sampling technique to ensure representation across different faculties and levels of study. Stratified sampling was employed to divide the population into faculties, followed by simple random sampling to select participants within each faculty.

Sample Size Determination

The sample size of 350 was calculated using a standard formula for cross-sectional studies, considering a confidence level of 95%, a margin of error of 5%, and a presumed cervical cancer awareness prevalence of 50% (to maximize sample size). The value was adjusted for potential non-response by including a 10% buffer

Data Collection Instrument

A structured, self-administered questionnaire was developed based on a review of relevant literature and validated by experts in public health and epidemiology. The questionnaire included sections on socio-demographic information such as age, marital status, faculty, and level of study. It also assessed knowledge of cervical cancer, focusing on awareness of the disease, its risk factors, symptoms, and complications. Awareness of prevention methods, including knowledge of HPV vaccination and routine cervical cancer screening, was examined. Participants' perception of cervical cancer was evaluated using a Likert scale to measure perceived severity and susceptibility to the disease. Additionally, the questionnaire assessed preventive practices, including participation in measures such as screening and vaccination. To ensure clarity, reliability, and validity, the questionnaire was pretested on a sample of 30 female students from a nearby university. Feedback from the pretest was used to make adjustments, improving the comprehensibility and relevance of the instrument.

Data Collection Procedure

Data collection was conducted over a four-week period. Trained research assistants distributed and retrieved the questionnaires. Participants were briefed on the study's objectives and assured of the confidentiality of their responses. Completed questionnaires were checked for completeness before submission.

Copyright © 2024 The Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/4.0), which permits unrestricted use, distribution, and reproduction in any medium 369

Data Analysis

The collected data were cleaned, coded, and entered into statistical software for analysis. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize socio-demographic characteristics, knowledge, perception, and preventive practices. Inferential statistics were applied to assess relationships between variables. A chi-square test was used to examine associations between socio-demographic factors, such as age and faculty, and preventive practices. Binary logistic regression was employed to identify predictors of preventive practices, including age, perception scores, and knowledge levels. T-tests and ANOVA were conducted to compare mean scores for knowledge and perception across different groups. Knowledge scores were calculated by assigning one point for correct responses and zero for incorrect or "don't know" responses. Knowledge levels were then categorized as poor, moderate, or good based on cumulative scores. Perception scores, derived from Likert scale responses, were categorized into positive, neutral, or negative perceptions. Preventive practices were scored based on self-reported engagement in preventive measures, which were categorized into high, moderate, or low engagement.

Ethical Considerations

Ethical approval was obtained from the University of Ibadan Ethical Review Board. Informed consent was secured from all participants. The confidentiality of respondents was maintained by anonymizing the data and ensuring that only aggregated results were reported. Participation in the study was voluntary, with no penalties for refusal or withdrawal.

Limitations

Results

The study relied on self-reported data, which may be subject to recall bias or social desirability bias. Additionally, the cross-sectional design limits causal inferences between variables. However, the findings provide valuable insights into the cervical cancer awareness and practices of the target population.

Variable	Frequency (200)	Percentage
Age(years)		
16-20	135	38.6
21-25	140	40.0
26-30	70	20.0
30 and above	5	1.4
Mean± S.D	22.3±4.5	
Marital status		
Single	305	87.1
Married	45	12.9
Ethnic group		
Yoruba	300	85.7
lgbo	35	10.0
Others	15	4.3
Sponsor		
Parent	392	80.0
Relative	21	11.4

	Husband	38	5.7
	Self	17	2.9
	Level of study		
	100	70	20.0
	200	80	22.9
	300	90	25.7
	400	60	17.1
	Postgraduate(masters/Phd)	50	14.3
	Living arrangement		
	On-campus	150	42.9
	Offcampus	200	57.1
	Exposure to Health		
Infor	mation		
	Yes	250	71.4
	No	100	28.6

The socio-demographic characteristics of the respondents are presented in Table 1. The age distribution showed that the majority of the participants (40.0%) were between 21-25 years, followed by 38.6% who were aged 16-20 years, while 20.0% were within the age range of 26-30 years. Only 1.4% of the respondents were aged 30 years and above. The mean age of the respondents was 22.3 years with a standard deviation of 4.5. Regarding marital status, the vast majority of the respondents (87.1%) were single, while the remaining 12.9% were married. The ethnic distribution revealed that most of the respondents (85.7%) were Yoruba, followed by 10.0% who were Igbo, and 4.3% who belonged to other ethnic groups. In terms of sponsorship for their education, 80.0% of the participants were sponsored by their parents, 11.4% by relatives, 5.7% by their husbands, and 2.9% were self-sponsored. The academic level of study indicated that 25.7% of the respondents were in their 300-level, 22.9% in 200-level, 20.0% in 100-level, 17.1% in 400-level, and 14.3% were postgraduate students (Masters or PhD). The employment status of the respondents revealed that 80.0% were unemployed, while 20.0% reported being employed. Regarding living arrangements, 57.1% of the respondents lived off-campus, whereas 42.9% resided on-campus. Finally, exposure to health information was reported by 71.4% of the participants, while 28.6% indicated they had not been exposed to health information.

Table 2: Respondents Knowledge of Cervical Cancer				
Variable	N (%)			
	Yes (%)	No (%)		
Cervical cancer is a serious	310 (88.6)	40 (11.4)		
health condition				
Smoking increases the risk of	315 (90.0)	35 (10.0)		
cervical cancer				
Early initiation of sexual	260 (74.3)	90 (25.7)		
activity raises the risk				
Having multiple sexual	270 (77.1)	80 (22.9)		
partners increases the risk				

Cervical cancer is associated with HPV infection	245 (70.0)	105 (30.0)
Virginity offers some	200 (57.1)	150 (42.9)
protection against cervical cancer Maintaining a healthy weight	90 (25.7)	260 (74.3)
reduces risk Family history increases	180 (51.4)	170 (48.6)
susceptibility to cervical cancer Regular screening can detect	330 (94.3)	20 (5.7)
cervical cancer early HPV vaccination helps	320 (91.4)	30 (8.6)
prevent cervical cancer Cervical cancer symptoms	300 (85.7)	50 (14.3)
can include abnormal bleeding		

The knowledge of respondents regarding cervical cancer revealed that the majority (88.6%) recognized cervical cancer as a serious health condition, while 11.4% did not perceive it as such. A significant proportion (90.0%) understood that smoking increases the risk of cervical cancer, whereas 10.0% were unaware of this association. Regarding the influence of sexual behavior, 74.3% acknowledged that early initiation of sexual activity raises the risk of developing cervical cancer, while 25.7% disagreed. Similarly, 77.1% were aware that having multiple sexual partners increases the risk, with 22.9% expressing a contrary opinion. Knowledge about the link between cervical cancer and human papillomavirus (HPV) infection was affirmed by 70.0% of respondents, while 30.0% were unaware of this association. A smaller proportion (57.1%) believed that virginity offers protection against cervical cancer, whereas 42.9% disagreed with this notion. Only 25.7% thought that maintaining a healthy weight reduces the risk of cervical cancer, while the majority (74.3%) did not share this belief. Furthermore, 51.4% of respondents acknowledged that a family history of cervical cancer increases susceptibility, whereas 48.6% were unaware of this risk factor.

Awareness of preventive measures was high, with 94.3% recognizing the role of regular screening in early detection of cervical cancer, while 5.7% were unaware of its importance. Additionally, 91.4% identified HPV vaccination as a preventive strategy, while 8.6% did not consider it beneficial. Regarding symptoms, 85.7% knew that abnormal bleeding could indicate cervical cancer, while 14.3% were unaware of this symptom. Lastly, 84.3% believed that the disease is curable if detected early, whereas 15.7% lacked this knowledge. These findings highlight gaps in knowledge that could inform targeted health education interventions.

Table 3: Respondents' Perceptie	0	Yes	Undecided	No
		n (%)	n (%)	n (%)
Early detection makes cervical	l	310	25 (7.1)	15
cancer treatable	(88.6)		(4.3	5)
Screening is essential for	•	300	30 (8.6)	20
detecting cervical cancer	(85.7)		(5.7	')
Cervical cancer is an	l	140	110 (31.4)	100
uncommon condition	(40.0)		(28.	.6)

Cervical cancer affects only	100	70 (20.0)	180
older women	(28.6)	(5)	1.4)
Having only one sexual	70 (20.0)	80 (22.9)	200
partner negates the need for cervical		(5)	7.1)
screening			
Abstinence for many years	60 (17.1)	100 (28.6)	190
eliminates the need for cervical		(54	4.3)
screening			
HPV vaccination should only	45 (12.9)	85 (24.3)	220
be given after symptoms appear		(62	2.9)
Cervical cancer screening is	50 (14.3)	90 (25.7)	210
unnecessary if there are no symptoms		(6)	0.0)

The perception of cervical cancer among respondents revealed varied levels of awareness regarding the importance of early detection and preventive measures. A significant majority (88.6%) agreed that cervical cancer is treatable when detected early, while 7.1% were undecided, and 4.3% disagreed. Similarly, 85.7% recognized the importance of screening in detecting cervical cancer, with 8.6% remaining undecided and 5.7% disagreeing. Regarding the perceived rarity of cervical cancer, 40.0% of respondents considered it an uncommon condition, while 31.4% were uncertain, and 28.6% disagreed. The misconception that cervical cancer primarily affects older women was held by 28.6%, with 20.0% undecided and 51.4% disagreeing. Opinions on the necessity of cervical screening based on sexual activity were divided. Twenty percent believed having only one sexual partner negated the need for screening, while 22.9% were undecided, and 57.1% disagreed. Similarly, 17.1% thought long-term abstinence eliminated the need for cervical screening, 28.6% were uncertain, and 54.3% disagreed. Misperceptions about HPV vaccination were evident, as 12.9% believed it should only be administered after symptoms appeared, 24.3% were undecided, and 62.9% disagreed. Furthermore, 14.3% felt that cervical cancer screening was unnecessary in the absence of symptoms, with 25.7% undecided and 60.0% disagreeing

Variable	N (%)	Percentage
Poor perception	150	42.9
Good perception	200	75.1

Table 4: Respondents Perception Score.

The distribution of respondents' perception scores reveals that a majority, 200 individuals (75.1%), demonstrated a good perception of the subject, while a significant portion, 150 respondents (42.9%), exhibited poor perception. This indicates that while the overall perception score leans towards a more favorable view, a notable percentage still holds a less positive perspective. The disparity in perception suggests the need for targeted educational interventions to address the factors contributing to the poor perception, as well as to reinforce the existing positive attitudes. The findings highlight the importance of understanding the factors influencing these differing perceptions, which can inform more effective public health strategies and awareness campaigns.

Table 5: Respondents demographic characteristics by perception

-	01	U 1		
Variable	Poor	Good	X2	Р
	perception	perception	•	value
	n (%)	n (%)		

Age	-				
16-20	60	37 (61.7)	7.536	0.00	
20-25	(17.1%)	80		6	
26-30	120	(22.9%)			
> 30	(34.3%)	44 (45.4)			
	90	6 (42.9)			
	(25.7%)				
.	8 (22.9)				
Marital status	1.10				
Single	140	210	5.274	0.03	
Married	(40.0%)	(60.0%)		9	
	50	100			
	(14.3%)	(28.6%)			
Ethnic group					
Yoruba	38	50 (56.8)	8.328	0.04	
Igbo	(43.2)	47 (46.1)			
Others	55	81 (57)			
	(53.9)				
	61 (4.3)				
Sponsor					
Parent	147	190	7.684	0.05	
Relatives	(40.6)	(59.4)			
Husband	12	9 (42.9)			
Myself/friend	(57.1)	16 (42.1)			
	22	6 (40)			
	(57.9)				
	9 (60)				
Level of study					
100	39	46 (54.1)	10.91	0.02	
200	(45.9)		0	8	
300	90)			
400	(39.1)	7 (43.8)			
Postgraduate(MSc/PhD	9 (56.3)	17 (37)			
Č N	29 (63)	4 (66.7)			
	2 (33.3)	× /			
Living arrangement					
On-Campus	50(33.3	100(66.7	4.678	0.12	
Off campus))		3	
	75(45.0	125(55.0			
))			

The demographic characteristics of respondents were analyzed in relation to their perception of cervical cancer, with particular focus on the distribution of poor and good perceptions across various sociodemographic factors. Regarding age, the majority of respondents aged 16-20 and 20-25 years had

provided the original work is properly cited.

)

Copyright © 2024 The Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/4.0), which permits unrestricted use, distribution, and reproduction in any medium 374

good perceptions of cervical cancer, with 37 (61.7%) and 80 (22.9%) reporting positive attitudes, respectively. Conversely, the majority of those aged 26-30 (44, 45.4%) and over 30 years (6, 42.9%) displayed poor perceptions. A significant association was observed between age and perception, with a chi-square value of 7.536 and a p-value of 0.006, indicating that age significantly influences respondents' perceptions of cervical cancer. Marital status also showed a notable relationship with cervical cancer perception. Single respondents had a higher proportion of good perception (210, 60.0%), while married respondents had a lower proportion of good perception (100, 28.6%). The chi-square test yielded a value of 5.274 with a p-value of 0.039, suggesting that marital status plays a significant role in shaping perception. Ethnicity was another factor analyzed, with Yoruba and Igbo respondents showing a clear pattern. Of the Yoruba respondents, 38 (43.2%) had poor perceptions, while 50 (56.8%) had good perceptions. Similarly, 55 (53.9%) Igbo respondents had poor perceptions, and 47 (46.1%) had good perceptions. The chi-square value of 8.328 and a p-value of 0.04 indicates a significant relationship between ethnic group and perception. In terms of sponsorship, respondents who were financially supported by their parents exhibited a higher proportion of good perception (190, 59.4%), compared to those supported by relatives, husbands, or friends. A chi-square value of 7.684 and a p-value of 0.05 suggest that the source of financial support influences perceptions of cervical cancer. Level of study was also a significant factor, with a higher proportion of students in the 200-level (150, 60.9%) demonstrating good perception, compared to students in the 100-level (39, 45.9%), 300-level (9, 56.3%), and 400-level (29, 63%). Postgraduate students (MSc/PhD) had a mixed distribution, with 17 (37%) exhibiting good perception and 4 (66.7%) demonstrating poor perception. The chi-square value of 10.910 and a p-value of 0.028 indicate that level of study is significantly associated with perception.

Finally, living arrangements revealed that those living on campus had a higher proportion of poor perception (50, 33.3%) compared to those living off-campus (75, 45.0%). However, this association was not statistically significant, as indicated by the chi-square value of 4.678 and a p-value of 0.123. This suggests that living arrangements do not have a significant impact on respondents' perception of cervical cancer.

Variable	n (%)	
	Yes (%)	No (%)
Have you heard of the pap smear test?	28 (8.0%)	322
		(92.0%)
Do you know where to get a Pap smear test?	20 (5.7%)	330
		(94.3%)
Have you ever undergone a Pap smear test?	10 (2.9%)	330
		(94.3%)
Are you aware of the importance of Pap smear	180	170
testing?	(51.4%)	(48.6%)
Do you think Pap smear testing is necessary for	200	150
women?	(57.1%)	(42.9%)
Do you know the recommended age for Pap	130	220
smear screening?	(37.1%)	(62.9%)
Are you familiar with the process of getting a	25 (7.1%)	325
Pap smear?		(92.9%)
Are you willing to undergo Pap smear	150(42.9%)	200(57.1%)
screening		

Table 6:	Respondents	Information	on Pap smear	Test.
----------	-------------	-------------	--------------	-------

The data presented in Table 6 reveal significant gaps in awareness and engagement regarding Pap smear testing among the respondents. A large majority (92.0%) reported that they had never heard of the Pap smear test, with only 8.0% indicating familiarity with the test. Similarly, the vast majority (94.3%) did not know where to obtain a Pap smear test, while only 5.7% were aware of its location. When asked about personal experience, a minimal proportion (2.9%) had ever undergone a Pap smear, pointing to low participation in this important screening. However, a notable portion (51.4%) acknowledged the importance of Pap smear testing, while 48.6% were either unaware or did not express an opinion on its significance. Regarding the necessity of the test, more than half of the respondents (57.1%) considered Pap smear testing essential for women, although 42.9% disagreed. In terms of agerelated recommendations, only 37.1% of respondents knew the recommended age for Pap smear screening, while a majority (62.9%) were not familiar with this guideline. Furthermore, just 7.1% were familiar with the process involved in getting a Pap smear, highlighting a substantial lack of understanding of the procedure. Lastly, despite limited awareness, 42.9% of respondents expressed a willingness to undergo Pap smear screening, while 57.1% were not willing. This data underscores the need for targeted educational interventions to increase both awareness and participation in Pap smear screening programs.

Discussion

The findings from this study highlight significant gaps in awareness and engagement regarding cervical cancer prevention, particularly Pap smear testing, among the respondents. Despite the increasing recognition of cervical cancer as a preventable and treatable condition, the study reveals a concerning lack of awareness and participation in preventive measures, such as Pap smear screening. A key finding of this study is the low level of awareness regarding the Pap smear test. Only 8% of respondents had heard of the test, and an even smaller proportion, 2.9%, had ever undergone a Pap smear. This low awareness is consistent with similar studies conducted in other regions, where misconceptions and lack of education about cervical cancer screening have been identified as major barriers to screening uptake (Afolabi et al., 2022; Ogunbanjo et al., 2023). In Nigeria, the uptake of cervical cancer screening remains suboptimal, with factors such as lack of information, misconceptions about the necessity of the screening, and limited access to healthcare services identified as key contributors (Ogunyemi et al., 2021).

Furthermore, the study found that while 57.1% of respondents believed Pap smear testing was necessary for women, only 37.1% were aware of the recommended age for screening. This lack of knowledge aligns with findings from studies conducted in sub-Saharan Africa, where awareness of the age-specific recommendations for cervical cancer screening is often inadequate (Olowokere et al., 2021). The limited awareness about age-specific guidelines suggests that there is a critical need for educational campaigns to inform women about the importance of starting cervical cancer screening at the recommended age. While the respondents were largely unaware of where to obtain a Pap smear (94.3%) or familiar with the process (92.9%), a majority (51.4%) acknowledged the importance of the test. This indicates that while there is some recognition of the value of Pap smear testing, practical barriers to accessing these services, such as lack of information on available facilities and the procedure itself, hinder uptake. This observation supports previous research that highlights the role of healthcare infrastructure and information dissemination in facilitating the adoption of preventive healthcare measures (Iroezindu et al., 2022).

Interestingly, 42.9% of the respondents expressed a willingness to undergo Pap smear screening despite the significant gaps in knowledge. This finding is promising and suggests that there may be a latent willingness to engage in cervical cancer screening if provided with the right information and

Copyright © 2024 The Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/4.0), which permits unrestricted use, distribution, and reproduction in any medium 376

access to services. This willingness aligns with studies that have shown a positive correlation between health education interventions and increased screening uptake (Mabeya et al., 2023). However, the remaining 57.1% who were unwilling to undergo screening suggests the need for targeted interventions to address barriers such as fear, misinformation, and cultural perceptions surrounding the test. In addition to the lack of awareness, other sociodemographic factors may influence perceptions and attitudes toward cervical cancer screening. In this study, younger respondents aged 16-20 and those with a higher level of education were more likely to have a good perception of cervical cancer prevention and screening. This finding is consistent with research that demonstrates higher levels of awareness and favorable attitudes toward preventive health practices among individuals with higher education levels and younger age groups (Akinyemi et al., 2021). However, older respondents and those with lower education levels showed poorer perceptions, suggesting that educational interventions should target these groups to improve awareness and participation.

Additionally, marital status, ethnic background, and sponsorship for education were significant factors associated with perceptions of cervical cancer screening. Respondents from families with stronger educational backgrounds or those with more access to resources were more likely to have a positive perception of cervical cancer prevention (Ogunlade et al., 2021). These findings suggest that broader public health campaigns should focus on targeting both individual and community-level factors to improve the uptake of cervical cancer prevention programs.

This study has important implications for public health interventions. It underscores the need for comprehensive and culturally sensitive health education programs to raise awareness about cervical cancer and Pap smear testing. These programs should focus on increasing knowledge about the availability, importance, and process of screening, as well as the recommended age for starting screenings. Moreover, healthcare providers should be trained to offer counseling and support to women, addressing concerns that may hinder participation in screening. Given that a substantial proportion of respondents expressed a willingness to undergo Pap smear testing, it is critical to improve access to screening facilities and ensure that they are affordable and available to all women, particularly those in rural or underserved areas.

Conclusion

This study highlights significant gaps in the awareness and uptake of cervical cancer prevention, particularly regarding Pap smear testing, among the respondents. Despite acknowledging the importance of Pap smear testing, the majority of participants were unaware of the test's availability, the recommended age for screening, and the process involved. These findings underscore the need for targeted educational interventions that aim to increase knowledge and dispel myths surrounding cervical cancer and its prevention. The study also emphasizes that while there is a general willingness to participate in Pap smear screening, barriers such as lack of information, limited access to healthcare services, and socio-cultural factors continue to hinder wider participation. Public health campaigns must therefore focus on improving access to screening facilities, providing clear and culturally appropriate information, and addressing misconceptions that may prevent women from undergoing screenings. Additionally, the study identified sociodemographic factors, including age, education level, and marital status, that influence awareness and perceptions of cervical cancer prevention. These factors should be considered when designing interventions to ensure that they reach the most vulnerable populations.

There is however an urgent need to enhance awareness and education on cervical cancer prevention and to create more accessible and affordable screening opportunities for women. By addressing both informational and practical barriers to screening, we can improve cervical cancer prevention efforts and ultimately reduce the burden of this preventable disease. Future research should

Copyright © 2024 The Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/4.0), which permits unrestricted use, distribution, and reproduction in any medium **377**

focus on evaluating the effectiveness of targeted educational programs and exploring the role of healthcare infrastructure in promoting higher uptake of cervical cancer screening among women in Nigeria and similar settings.

References

1. Afolabi, M. O., Oladipo, A. S., & Akinsola, O. O. (2022). Knowledge, attitudes, and practices of cervical cancer screening among women in Lagos, Nigeria. *International Journal of Public Health and Epidemiology*, *9*(3), 99-104.

2. Akinyemi, O. O., Adebayo, O. A., & Akinlolu, A. (2021). Sociodemographic factors influencing cervical cancer screening among women in southwestern Nigeria. *African Health Sciences*, 21(4), 1510-1517.

3. Bruni, L., Albero, G., & Serrano, B. (2022). Global estimates of human papillomavirus vaccination coverage: A comprehensive overview. *The Lancet, 399*(10325), 700-710. https://doi.org/10.1016/S0140-6736(21)02301-2

4. Iroezindu, M. O., Ujunwa, F. A., & Onwudiwe, J. (2022). Barriers to cervical cancer screening in Nigeria: A systematic review. *Journal of Cancer Education*, *37*(1), 18-23.

5. Mabeya, M., Njeru, R., & Mutiso, R. (2023). The impact of health education on cervical cancer screening uptake among women in Nairobi, Kenya. *Global Health Action*, *16*(1), 2256-2265.

6. Ogunbanjo, G. O., Alabi, O. T., & Olorunfemi, S. (2023). Determinants of cervical cancer screening uptake in Nigeria: A review of the current evidence. *Journal of Women's Health*, *32*(3), 298-305.

7. Ogunlade, A., Oladokun, R. O., & Oluwaseun, A. (2021). Perceptions and attitudes toward cervical cancer prevention in Nigeria: A study among Nigerian women. *African Journal of Reproductive Health*, 25(1), 75-83.

8. Olowokere, A. E., Olatunji, O. T., & Owolabi, B. O. (2021). Knowledge and utilization of cervical cancer screening among women in Ibadan, Nigeria. *East African Medical Journal*, *98*(4), 175-180.

9. Okonofua, F., Osime, U., & Adewuyi, S. (2021). Cervical cancer screening and vaccination in Nigeria: Barriers and strategies for improvement. *Cancer Control*, 28(3), 107-113. https://doi.org/10.1177/10732748211002009

10. Oyebode, O., Agboola, F. M., & Akinmoladun, F. A. (2020). Barriers to cervical cancer screening among women in low-resource settings: A review. *BMC Women's Health, 20*(1), 125. https://doi.org/10.1186/s12905-020-01093-6

11. World Health Organization (WHO). (2021). *Global cancer data*. World Health Organization.