

ASSESSING CERVICAL CANCER SCREENING KNOWLEDGE AND UPTAKE OF WOMEN AT AN OUT-PATIENT CLINIC IN SOUTH-SOUTH, NIGERIA.

¹Eguono Marian EBEREGHWA & ²Blaise Ebiringa ANYANWU

¹ & ²Department of Family Medicine, Delta State University,
P.M.B 01. Abraka, Delta State, Nigeria.
emebereghwa@gmail.com. Phone number: +2348023673922

¹Corresponding Author

Doi: <https://doi.org/10.64450/njsh.v4i2.003>

Abstract

Regular screening is a critical component of cervical cancer prevention and management. The uptake of cervical cancer screening in sub-Saharan Africa including Nigeria is suboptimal. The study assessed the knowledge of cervical cancer screening among women and their uptake of papanicolaou smear test. It was a hospital-based cross-sectional study involving 126 females aged 18 to 69 years. An interviewer administered questionnaire was used to obtain data on the sociodemographic characteristics, participants' knowledge of cervical cancer screening and their uptake of papanicolaou smear test. The level of statistical significance was evaluated at $p < 0.05$ at 95% confidence interval. The mean age of the participants was 45.10 ± 8.88 . Participants' knowledge of cervical cancer screening was poor (22.1%). Many (68.8%) had no idea on when and how often the test should be done. Women who had ever done Papanicolaou smear test was 15.1% and 70.1% stated not being aware as a reason for not doing the test. However, 73.0% were willing to undergo the test while the believe of being healthy (35.0%) and can't have the disease (35.0%) were reasons for unwillingness to undergo the test. Higher level of education was a predictor for participants' willingness to undergo the test ($AOR=2.667$; 95% $CI=1.374-5.177$). Participants had poor knowledge of cervical cancer screening with very few having undergone Papanicolaou smear test. There is need to incorporate cervical cancer screening into existing primary care services targeting women of reproductive age to increase participation in screening.

Keywords: Cervical cancer; Nigeria; out-patient clinic; screening; uptake

INTRODUCTION

Nigeria accounts for a substantial portion of the global burden of cervical cancer (Lawson et al., 2023). Current estimates indicate that approximately 300 million women globally have an active Human Papilloma Virus infection (Eberegghwa, 2025). Nigeria records an estimated 12,075 new cases of cervical cancer each year, corresponding to a rate of approximately 18.4 per 100,000 women (Lawson et al., 2023). This makes cervical cancer the second most frequent cause of cancer mortality among women (Lawson et al., 2023). A retrospective study showed that cancer of the cervix accounted for 7.2% of histologically diagnosed cancers in the Delta State University Teaching Hospital, Oghara, Nigeria between 2014 to 2019 (Uchendu, 2020).

Regular screening is a critical component of cervical cancer prevention and management, facilitating the timely detection of precancerous lesions (Eze et al., 2018). An estimated 19% cervical cancer screening coverage rate in low-income countries was reported in a study as opposed to 63% in the high-income countries. Also, 12.87% uptake of cervical cancer screening in sub-Saharan Africa was reported in a systematic review (Yimer et al., 2021). The unequal distribution of cervical cancer is a direct result of unequal access to screening, as countries with robust screening programs have halved their cervical cancer mortality rates (Lawson et al., 2023). The global fight against cervical cancer has been bolstered by the broader availability of early detection techniques (Eze et al., 2018). While established screening programs exist elsewhere leading to reduction in the incidence of new cases, many low- and middle-income countries including Nigeria are yet to implement systems needed to reach all at-risk women (Eze et al., 2018, Jomusu et al., 2024). As comprehensive cancer services are limited and mainly

opportunistic (Adigun et al., 2024). As a result, a large number of women with cervical cancer are still diagnosed at a late stage when curative treatment is no longer possible (Eze et al., 2018). This trend is likely to continue unless screening access and uptake are significantly improved (Jomusu et al., 2024).

Multiple challenges drive Nigeria's high cervical cancer rates, including widespread Human papilloma virus (HPV) infection and lack of effective screening initiatives (Adigun et al., 2024). Other contributing issues are limited public awareness, social stigma, poor health seeking habits and fragmented screening to treatment pathways (Adigun et al., 2024). The lack of awareness particularly among women of reproductive age, is a significant barrier to preventing cervical cancer (Eze et al., 2018). While attitudes towards screening may be positive, actual screening may be low due to factors such as cost, lack of access, fear of results, low-risk perception, fear of procedure, embarrassment, misinformation, cultural or partner-related factors and health service factors (Mafiana et al., 2022, Jomusu et al., 2024, Augie et al., 2024). Healthcare facilities serve as suitable places where health education on awareness of screening for cervical cancer can be provided (Augie et al., 2024). Assessing the knowledge and the practice of cervical cancer prevention among women is essential for identifying gaps and understanding the unspoken attitudes related to cervical cancer. Therefore, the study sought to assess the knowledge of cervical cancer and its screening among women and their uptake of *papanicolaou* smear test, which can inform targeted interventions and strategies to improve screening uptake and reduce the burden of the disease.

LITERATURE REVIEW

Extensive literature from Nigeria reveals a persistent disconnect between general awareness of cervical cancer and comprehensive knowledge of its prevention. Studies show that while a moderate proportion of women have heard of cervical cancer, specific knowledge regarding risk factors, asymptomatic transmission of Human Papilloma Virus and the purpose of regular screening is profoundly lacking (Okunowo et al., 2018; John-Akinola et al., 2021). Low public awareness remains a persistent challenge in cervical cancer prevention across Nigeria. Studies from different geopolitical zones consistently reveal a widespread lack of knowledge regarding screening options. Okunowo et al identified critical knowledge gaps in Adamawa (2018), while Dozie et al documented similar deficits in Imo state (2021). This trend is further supported by John-Akinola et al in Ibadan (2021) and Osaro et al in Rivers State (2024), who both reported low screening literacy in the southwest and south-south regions.

Despite standard clinical guidelines recommending routine screening for women of reproductive age, empirical evidence across Africa indicates that actual uptake rates remain critically low, rarely reaching double digits. In Nigeria, studies reveal an uptake range of just 8% to 22.5% (Idowu et al., 2016; Okunowo et al., 2018). Similarly, community-based research in Ghana and Tanzania documented low participation rates of 7.4% and 7.9% respectively (Moshi et al., 2019, Adzigbli et al., 2025). This stands in sharp contrast to countries like Portugal, where a hospital-based study revealed that 50% of women had undergone screening, underscoring the effectiveness of their national population-based programs (Teixeira et al., 2022).

The wide gap between knowledge and screening uptake stems from a complex mix of sociocultural, economic and institutional factors. Key obstacles include a lack of awareness or detailed information about screening methods and a lack of physician recommendation (Okunowo et al, 2020). Additionally, a systematic review by Mafiana et al identified systemic healthcare limitations, financial constraints, the belief that screening is unnecessary and fear of procedural outcomes as primary barriers to cervical cancer screening among Nigerian women (2022). Conversely, Okunade et al found that an individual's baseline awareness of the Pap smear and their attendance at general outpatient clinics during follow-up were independent predictors of actual screening uptake (2022).

The literature conclusively demonstrates that high morbidity from cervical cancer in Nigeria is tightly linked to low screening rates, which are fueled by systemic barriers, low health literacy regarding HPV and economic constraints (Mafiana et al., 2022). However, much of the existing research focused on either specialized fields such as antenatal or family planning clinics or broad community samples. There remains a critical gap in assessing the readiness, knowledge and uptake of diverse female populations utilizing general outpatient clinic. Investigating this specific sub-population is crucial, as outpatient department represent the primary point of medical contact and offer the highest potential yield for routine, opportunistic screening interventions.

METHODS

Study design: A hospital based cross-sectional study carried out at the Family Medicine Clinic of Delta State University Teaching Hospital (DELSUTH), Oghara, Nigeria from November 2024 to January, 2025.

Setting: The Family Medicine Clinic is the primary care unit of DELSUTH. The hospital is located in Oghara is a suburban town in Ethiope West Local Government Area of Delta State in the South-South region of Nigeria. The clinic is part of a university-affiliated health system and serves as a primary clinical training site for family medicine residents and medical students. The clinic serves diverse patient population from children to the elderly, reflecting the generalist approach of family medicine. The patient demographic includes patients of different socioeconomic status mainly of the low-income status and it sees both patients that are covered by the State Health Insurance scheme and uninsured patients, indicating a commitment to equitable care

Study Population: All female patients (age 18 years and above) attending the Family Medicine Clinic in DELSUTH, Oghara. The study was executed between November 2024 to January, 2025.

Inclusion criteria: Participants included in the study were female patients age 18 years and above willing to participate in the study with the ability to give informed consent.

Exclusion Criteria: Participants excluded from the study were critically ill patients and patients unwilling to participate.

Sample Size Determination and Sampling Method

The sample size was determined using a single population proportion formula, $n = \frac{z^2 pq}{d^2}$ (Araoye, 2004) using z as 95% of confidence level, d as 5% margin of error and p was the estimated proportion of target population who had undergone cervical cancer screening, which was 9.9% obtained from a previous study (Jomusu et al., 2024) and n is the minimum sample size. Therefore, the minimum sample size

was 137. The study participants were recruited using systematic random sampling method.

Data Collection: An interviewer-administered questionnaire adopted from previous studies was used to collect information on participants' sociodemographic characteristics, knowledge of cervical cancer and screening, cervical cancer screening uptake and information on reasons for not undergoing Pap smear test and the uptake of *papanicolaou* smear test (Shrestha et al., 2013, Okunowo et al., 2018). The participants' knowledge of cervical cancer and screening was obtained using 20-item questions, a score of 1 was given for a correct answer while a score of 0 was given for a wrong answer (Shrestha et al., 2013). A sum of scores for each of the 20 questions in the knowledge section was calculated. The knowledge score was the sum of 20 items, with a possible score ranging from 0 to 20. Knowledge was grouped into good and poor knowledge using the median of possible scores.

Participants' uptake was determined with the question, "Have you ever done a *papanicolaou* smear test" While participants' willingness to undergo the test was assessed with the question, "will you be willing to do the *Papanicolaou* smear test". This was recorded as a binary outcome as Yes or No.

Data Analysis: Data was entered and coded using the Statistical Package for the Social Sciences (SPSS) version 27 (IBM, Chicago) for analysis. Frequency distributions of demographic and categorical variables were summarized using frequency tables. Bivariate associations between independent variables and the outcome (cervical cancer screening uptake) were assessed using the chi-square test. Factors demonstrating a statistically significant association (participants' level of education and knowledge of cervical screening) were entered into a multivariable logistic regression model to isolate independent predictors of cervical

cancer screening uptake. The level of statistical significance was evaluated at $p < 0.05$ at the 95% confidence interval.

Ethical Consideration: The study was approved by the Research and Ethics Committee of Delta State University Teaching Hospital, Oghara. Participants provided voluntary, informed consent prior to data collection. All participants were assigned a unique serial number to ensure anonymity and confidentiality. All collected data was treated confidentially and participants could withdraw at any point without prejudice to their future care. The study was funded by authors.

RESULTS

The sociodemographic characteristics of participants is shown in table 1. The majority 56(44.4%) of the participants were between 40 to 49 years of age with a mean age of 45.10 ± 8.88 . Almost 113(89.7%) all the participants were married with over one-third 44(35.0%) having secondary level of education.

Table 1: Sociodemographic characteristics of the participants

Variables		Frequency	Percentage
Age	20 - 29 years	4	3.2
	30 - 39 years	30	24.0
	40 - 49 years	56	44.4
	50 - 59 years	27	21.4
	≥ 60 years	9	7.0
	Mean $\pm$ SD	45.10 $\pm$ 8.88	
Marital status	Single	7	5.6
	Married	113	89.7
	Divorced	1	0.8
	Separated	0	0.0

	Widowed	5	3.9
Education Level	None	1	0.8
	Primary	27	21.4
	Secondary	54	42.8
	Tertiary	44	35.0

More than half 69(55.2%) have heard of cervical cancer. The most frequently identified symptoms of cervical cancer were abnormal vaginal bleeding (28.8%), foul smelling discharge (26.4%) and post-coital bleeding (15.2%). While having multiple sexual partner (27.2%), early age of coitarche (17.6%) and sexually transmitted infection (16.8%) were the common risk factors identified by the participants. Participants aware of cervical cancer screening were less than half 56(44.8%) with only 48(38.4%) aware of *papanicolaou* (Pap) smear test. Majority (68.8%) having no idea on when and how often *papanicolaou* smear should be done. Very few participants knew other methods of cervical cancer screening; visual inspection with acetic acid (4.8%) and HPV DNA testing (6.4%). The overall knowledge of cervical cancer screening among the participants was poor, as only 22.1% had good knowledge. (Table 2)

Table 2: Knowledge on Cervical Cancer and Screening of participants.

Variables	Yes F (%)	No F (%)
Have you heard of cervical cancer?	69 (55.2)	56 (44.8)
Multiple sexual partnership is a risk factor for cervical cancer	34 (27.2)	91 (72.8)
Early age of sexual exposure is a risk factor for cervical cancer	22 (17.6)	103 (82.4)
Having sexually transmitted disease is a risk factor for cervical cancer	21 (16.8)	104 (83.2)
Having many children is a risk factor for cervical cancer	2 (1.6)	123 (98.4)

Early child bearing is a risk factor for cervical	6 (4.8)	119 (95.2)
Lower abdominal pain is a symptom of cervical cancer	15 (12.0)	110 (88.0)
Abnormal vaginal bleeding is a symptom of cervical cancer	36 (28.8)	89 (71.2)
Foul smelling discharge is a symptom of cervical cancer	33 (26.4)	92 (73.6)
Bleeding after sex is a symptom of cervical cancer	19 (15.2)	106 (84.8)
Cervical cancer can be prevented by sexual abstinence	21 (16.8)	104 (83.2)
Cervical cancer can be prevented by vaccination	36 (28.8)	89 (71.2)
Cervical cancer can be prevented by condom use	18 (14.4)	107 (85.6)
Cervical cancer can be prevented by screening	29 (23.2)	96 (76.8)
Have you heard of cervical screening?	56 (44.8)	69 (55.2)
Have you heard about Papanicolaou smear test?	48 (38.4)	77 (61.6)
Visual inspection with acetic acid is a cervical cancer screening method	6 (4.8)	119 (95.2)
HPV DNA testing is a cervical cancer screening method	8 (6.4)	117 (93.6)
How often do you think Pap smear is done?		
3 monthly	1(0.8)	
6 monthly	1 (0.8)	
Once a year	23 (18.4)	
Every 3 years	14 (11.2)	
No idea	86 (68.8)	
Overall knowledge on cervical cancer and screening		
Good	28 (22.1)	
Poor	97 (77.9)	

Table 3 shows that only 15.1% of the study participants had ever done *Papanicolaou* smear. The reasons for not doing a Pap smear test were; not aware of the test (70.1%), not recommended by doctor (10.3%), and the belief of no having the disease (5.6%). However, 73.0% of the participants who had never done Pap smear were now willing to undergo the test. Among participants still unwilling to undergo the screening; I am healthy (35.0%), I believe I can't have the disease (35.0%) and I have to discuss with my husband (20.0%) were the common reasons given for their decision.

Table 3: Uptake of Papanicolaou smear test of participants

Variable		Frequency	Percentage
Ever done Pap smear test	Yes	19	15.1
	No	107	84.9
Source of information (n=48)	Health professionals	33	68.8
	Social Media	2	4.3
	Friends/Relatives	10	20.8
	Mass Media	3	6.1
Reasons Pap smear test has never been done (n=107)	Not aware	75	70.1
	Not recommended	11	10.3
	Screening is expensive	5	4.7
	I feel embarrass/shy	2	1.9
	Fear of being diagnosed of cancer	4	3.7
	I am healthy	4	3.7
	I belief I can't have the disease	6	5.6
Willingness to undergo Pap smear test	Yes	92	73.0
	No	18	14.3
	Undecided	16	12.7
Reasons for unwillingness to undergo Pap smear	I am healthy	7	35.0

test

Screening is expensive	1	5.0
I feel embarrass/shy	1	5.0
I believe I can't have the disease	7	35.0
I have to discuss with my husband	4	20.0

The association between the uptake of cervical cancer screening with the participants' sociodemographic characteristics is shown in table 4. The level of education was the only socio-demographic characteristic that was significantly associated with the uptake of *papanicolaou* smear test among participants ($\chi^2=7.957$; $p=0.047$). Also, having a good knowledge of cervical cancer screening was significantly associated with the uptake of *papanicolaou* smear test among participants.

Table 4. Relationship between uptake of cervical cancer screening by women and sociodemographic characteristics of the participants

Variables		Done cervical cancer screening n (%)	Not Done cervical cancer screening n (%)	χ^2	p-value
Age	20 - 29 years	0 (0)	4 (3.7)	2.967	0.563
	30 - 39 years	4 (21.1)	26 (24.3)		
	40 - 49 years	10 (52.6)	46 (43)		
	50 - 59 years	5 (26.3)	22 (20.6)		
	≥ 60 years	0 (0)	9 (8.4)		

Marital status	Single	0 (0)	7 (6.5)	1.319	0.517
	Married	18 (94.7)	95 (88.8)		
	** Others	1 (5.3)	5 (4.7)		
LOE	None	0 (0)	1 (0.9)	7.957	*0.047
	Primary	2 (10.5)	25 (23.4)		
	Secondary	5 (26.3)	49 (45.8)		
	Tertiary	12 (63.2)	32 (29.9)		
Knowledge of cervical cancer screening		16 (84.2)	28 (26.2)	23.918	*<0.001
	Good Knowledge				
	Poor Knowledge	3(15.8)	79(73.8)		

Logistic regression analysis showed in table 5 revealed that the level of education was the only significant predictor that increased the likelihood of uptake of Pap smear among participants (AOR=2.667;95% CI=1.374-5.177). Participants' with higher level of education were more likely to undergo Papanicolaou smear test than those with lower educational background.

Table 5: Regression analysis showing the predictors for participants uptake to cervical screening

	B	S.E.	AOR	95% C.I. for AOR		P-value
				Lower	Upper	
Level of Education						
Primary	2.526	0.735	12.501	2.961	52.773	*0.001
Secondary	2.282	0.469	9.812	3.905	24.595	*0.001
Tertiary	0.981	0.339	2.667	1.374	5.177	*0.004
Knowledge on Cervical Screening	1.658	1.094	5.247	0.614	44.805	0.130
Have you ever done a PAP smear test as a female?	0.344	0.856	1.411	0.263	7.557	0.688

DISCUSSIONS

Although, more than half of the participants being aware of cervical cancer, only a few had good knowledge of cervical cancer screening. This reveals a significant gap between awareness and knowledge and that being aware does not presuppose genuine knowledge (Okunowo et al., 2018). A low level of knowledge is a recurring observation in studies across various Nigerian states. Hospital-based cross-sectional studies in Adamawa, North eastern and Imo, South-east, Nigeria reported a low level of knowledge of cervical cancer screening among antenatal attendees (Okunowo et al., 2018, Dozie et al., 2021). Same finding was reported in Ibadan, South West Nigeria and Rivers, South-South Nigeria, both community-based studies (John-Akinola et al., 2021, Osaro et al., 2024). Also, knowledge of cervical cancer prevention was reported to be 22.8% among participants in a Ghanaian study (Diallo et al., 2023). This is at odds with the findings from developed countries, like in England where 90% native English women knew about

Pap smear test (Patel et al., 2020). This finding highlights the need for targeted education and community-based accessible cervical cancer screening services for women in order to improve not only their knowledge but uptake of the screening.

Furthermore, the uptake of Pap smear among the study participants was low. The finding is not surprising, given the poor knowledge among the participants regarding cervical cancer and screening. The challenge of inadequate cervical cancer screening uptake including Pap smear test, is significant on our environment, with various studies reporting alarmingly low levels. Idowu et al reported 8% of women had ever screened for cervical cancer in a community-based study in Ilorin, Nigeria (2016) and Josumu et al reported that only 9.9% of women attending antenatal clinic in a tertiary centre in Adamawa, Nigeria had undergone Pap smear test (2024). While an uptake of 22.5% was reported among women attending an Obstetrics and Gynaecological clinic in Lagos, Nigeria by Okunowo et al (2018). A comparable low rate of uptake has been observed across African nations; 7.3% and 7.9% was documented in community-based studies conducted in Ghana and Tanzania respectively (Moshi et al., 2019, Adzigbli et al., 2025).

In contrast, 50% of women were reported to have been over screened for cervical cancer in a hospital-based cross-sectional study in Portugal where population-based cervical cancer screening program have been implemented (Teixeira et al., 2022). The current model for cervical cancer screening in Nigeria is predominantly opportunistic, with service provision concentrated within urban centers where facilities is more readily available (Okunowo & Smith-Okonu., 2020). The low screening rates recorded in this present study and previous hospital-based studies in Nigeria with services available indicate that availability of service alone may not be enough to increase cervical cancer screening rates in our environment (Okunowo

& Smith-Okonu., 2020). Thus, to maximize the reach and efficiency, cervical cancer prevention program when implemented should be integrated with other existing routine health services targeted at women.

Nevertheless, other factors have been identified to play major role in enhancing cervical cancer screening uptake. One of such is the lack of awareness of Pap smear test which was the most common reason for not undergoing the screening in this study. This was in congruent with findings among mothers attending the infant welfare clinics of five hospitals in Osun, Nigeria, where more than half were unaware of cervical cancer screening services (Oduwoye et al., 2025) Awareness of Pap test is a significant predictor of its uptake, as higher awareness is directly linked to a higher likelihood of obtaining screening. Participants' previous awareness of Pap smear was an independent predictor of the uptake of the test in a prospective follow-up study conducted in a tertiary center in Lagos, Nigeria (Okunade et al., 2022). Therefore, providing comprehensive health education, especially by healthcare providers is a key strategy for improving screening rates (Okunade et al., 2022).

Furthermore, cervical cancer screening not recommended by a doctor was another common reason identified to affect uptake in this study. Previous studies indicate that women had cited physician's recommendation as a primary reason for deciding to have a Pap test (Okunowo & Smith-Okonu, 2020; Jomusu et al., 2024) It comes as no surprise as the physicians interact with patients more often than other members of the health team (Okunowo & Smith-Okonu). Moreover, patients take their doctors' advice more seriously, which leads to better follow-through on recommendations (Ebereghwa et al., 2024). Given the lack of a structured, population-wide cervical cancer screening initiative in Nigeria, it is incumbent upon

doctors to raise the low rate of screening practice. Unfortunately, the study revealed that physicians were not the common source of information of cervical cancer screening. This is a wake-up call for physicians, who must consistently counsel female clients on the need for regular cervical cancer screening during any medical consultation. Physicians are a key source of health information, significantly influencing patient cancer screening decisions, through eligibility assessment, discussing options, coordinating tests and follow-up care (Georga et al., 2025). They serve as crucial resources for women navigating cancer screening decisions.

Discussing the potential benefits and shortcomings of screening can empower patients to make informed choices that aligns with their values and preferences (Georga et al., 2025). Moreover, they can influence the screening behaviour by assisting patients to understand the importance of regular screening thereby increasing their confidence in screening. The provision of counselling centered on patients' basic concerns has been shown to be more effective than untailored discussions about behavioural components (Georga et al., 2025).

The belief that I am healthy and I can't have the disease were the most common reasons for participants who were unwilling to carry out Pap smear test. Perceived susceptibility has been identified as an important predictor of Pap smear participation (Yuksel & Ozaydin, 2025). Women who felt less at risk of developing the disease were less likely to undergo screening. This could be due to misconceptions about the disease and screening (Yuksel & Ozaydin, 2025). Perceived susceptibility to cervical cancer is the belief about being at risk of cervical cancer (Nwobodo & Ba-Break, 2015). Unless a woman considers herself at risk of this disease, she may not be interested in cervical cancer screening

(Nwobodo & Ba-Break, 2015). A qualitative survey in Nigeria identified belief in not being at risk as a factor that determined cervical cancer screening among women (Ndikom & Ofi, 2012). Therefore, it is important to identify and address women's misconceptions of cervical cancer screening through the provision of personalized risk assessments and offering health promoting education that highlights the benefits of early detection and treatment.

The study found that women with higher level of education were likely to undergo cervical cancer screening compared to those with no formal education. This is in congruent with previous studies carried out in Ghana, Ethiopia and India (Jisa, 2021, Demas et al., 2024, Adzigbli et al., 2025). Also, a systematic review assessing the impact of educational level on women's participation in cervical cancer screening observed that 84.6% studies showed that women with higher level of education were more likely to engage in cervical cancer screening than women with lower level of education (Rosyda et al., 2018). However, a hospital-based study conducted in Lagos, Nigeria reported that although higher level of education was associated with increased awareness of Pap smear test, it was not a predictor of its uptake (Okunowo et al., 2018). Education have been found to improve health awareness, self-efficacy and access to healthcare services which helps women to better understand the benefits and risks associated with screening. Women who are well-educated may have better access to resources and information resulting in better knowledge about health problems and behaviour to improve their health (Rosyda et al., 2018).

CONCLUSION AND RECOMMENDATION

In this study, more than half of the participants had poor knowledge of cervical cancer screening with very few having undergone *Papanicolaou* smear test. Not

being aware of the screening was the major reason for lack of uptake of the screening while the level of education was the only predictor of cervical cancer screening uptake. The development and delivery of tailored, culturally-responsive community education programs are crucial to improve the awareness and need for cervical cancer screening. Also, there is need to incorporate cervical cancer screening into existing primary care services targeting women of reproductive age to increase participation in screening.

REFERENCES

- Adigun, M.O., Esan, D.T., Oyinloye, B.E., Adeyanju, B.T., Olowoyo, K.S., Olawade, D.B. (2024). Knowledge and practice of health promotive lifestyle toward cervical cancer prevention among women in Africa: a scooping review. *Cancer Treatment and Research Communications*, 43,100877-100888.
- Adzighbli, L.A., Aboagye, R.G., Adeleye, K., Osborne, A., Ahinkorah, B.O. (2025). Cervical cancer screening uptake and its predictors among women aged 30-49 in Ghana: providing evidence to support the World Health Organization's cervical cancer elimination initiative. *BMC Infectious Diseases*, 25, 246-258.
- Araoye, M.O. (2004). *Research methodology with statistics for health and social science* (2nd ed.). Ilorin: Nathadex.
- Augie, U.I., Adamu, A.N., Argungu, L.A., Ghaniyat, O.O. (2024). Awareness and uptake of cervical cancer screening among women in the maternity clinic in a tertiary health institution in Northern Nigeria. *Arab Board Medical Journal*, 25,156-61.
- Demas, T., Biku, T., Getinet, T., Fantahun, B., Bekele, D., Woldehawariat, N et al. (2024). Women's willingness for cervical cancer screening and associated factors among women attending health services in Addis Ababa, Ethiopia. *Ther Adv Reprod Health*,18,1-16.
- Diallo, A.A., Codjoe, N.N., Ken-Amoah, S., Agbeno, E.K. (2023). Cervical cancer prevention methods: awareness and use among urban Ghanaian women in Cape Coast, West Africa. *Ecancer*,17,1626-1641.

- Dozie, U.W., Elebari, B.L., Nwaokoro, C.J., Iwuoha, G.N., Emerole, C.O., Akawi, A.J et al. (2021). Knowledge, attitude and perception on cervical cancer screening among women attending antenatal clinic in Owerri west LGA, South-Eastern Nigeria: a cross sectional study. *Cancer Treatment and Research Communications*, 28,100392 - 100400.
- Ebereghwa, E.M., Orhe, O.G., Anyanwu, E.B. (2024). Patients' perspective on the effect of internet-derived health information on the patient-physician relationship. *Journal of Medicine and Biomedical Research*, 23(2): 46-54.
- Ebereghwa, E.M. (2025). Human Papilloma Virus vaccination knowledge and willingness to vaccinate adolescents among parents attending an out-patient clinic in South-South Nigeria. *Asian Journal of Paediatric Research*, 15(12): 125-136.
- Eze, G.U., Obiebi, I.P., Umuago, I.J. (2018). Perspectives of cervical cancer and screening practices among staff of a teaching hospital in South-South Nigeria. *Journal of Cancer Research and Practice*, 5, 67-73.
- Georga, D., Zartaloudi, A., Saridi, M., Fradelos, E.C., Rouka, E., Sarafis, P et al. (2025). Factors determining women's attitudes and knowledge toward breast cancer screening: a systematic review. *Healthcare*, 13,1605-1623.
- Idowu, A., Olowookere, S.A., Fagbemi, A.T., Ogunlaja, O.A. (2016). Determinants of cervical cancer screening uptake among women in Ilorin, North Central Nigeria: a community-based study. *Journal of Cancer Epidemiology*. <https://dx.doi.org/10.1155/2016/6469240>
- Jisa, G.T. (2021). Factors influencing utilization of cervical cancer screening services among women- a cross-sectional survey. *Clinical Epidemiology and Global Health*, 11,100752-7
- John-Akinola, Y.O., Oluwasanu, M.M., Oladdepo, O. (2021). Urban poor community settings' knowledge and screening practices for cervical cancer in Ibadan, Nigeria. *JCO Global Oncol*, 7,1024-1031.
- Jomusu, C.A., Noel, N.B., Abubakar, U., Bakari, M.A., Ameen, H.A. (2024). Knowledge, perception and uptake of cervical cancer screening among women attending antenatal clinic at a tertiary hospital in north eastern Nigeria. *Int J Reprod Contracept Obstet Gynecol*, 13(3),528-534.

- Lawson, O., Ameyan, L., Tukur, Z., Dunu, S., Kerry, M., Okuyemi, O.O et al. (2023). Cervical cancer screening outcomes in public health facilities in three states in Nigeria. *BMC Public Health*, 23,1688-1697.
- Mafiana, J.J., Dhital, S., Halabia, M., Wang, X. (2022). Barriers to uptake of cervical cancer screening among women in Nigeria: a systematic review. *Afri Health Sci*, 22(2), 295-309.
- Moshi, F.V., Bago, M., Ntwenya, J., Mpondo, B., Kibusi, S.M. (2019). Uptake of cervical cancer screening services and its association with cervical cancer awareness and knowledge among women of reproductive age in Dodoma, Tanzania: a cross-sectional study. *East African Health Research Journal*, 3(2), 105-114.
- Ndikom, C.M., Ofi, B.A. (2012). Awareness, perception and factors affecting utilization of cervical cancer screening services among women in Ibadan, Nigeria: a qualitative study. *Reproductive Health*, 9,11-19.
- Nwobodo, H., Ba-Break, M. (2015). Analysis of the determinants of low cervical cancer screening uptake among Nigerian women. *Journal of Public Health in Africa*, 6, 484-492.
- Oduwoye, A.O., Olabisi, E.O., Ojo, E.F., Dosumu, T.O., Owoeye, M.O., Tijani, A. (2025). Acceptance and barriers to cervical cancer screening among mothers in a state-capital city: a descriptive cross-sectional study. *Ecancer*, 19, 1916. <https://doi.org/10.3332/ecancer.2025.1916>
- Okunade, K.S., John-Olabode, S., Adejimi, A.A., Oshodi, Y.A., Osunwusi, B., Ugwu, A.O et al. (2022). Predictors of Pap smear testing uptake among women in Lagos, Nigeria. *ecancer*,16, 1368-1377.
- Okunowo, A.A., Daramola, E.S., Soibi-Harry, A.P., Ezenwankwo, F.C., Kuku, J.O., Okunade, K.S et al. (2018) Women's knowledge of cervical cancer and uptake of Pap smear testing and the factors influencing it in a Nigerian tertiary hospital. *Journal of Cancer Research and Practice*, 5,105-111.
- Okunowo, A.A., Smith-Okonu, S.T. (2020). Cervical cancer screening among urban women in Lagos, Nigeria: focus on barriers and motivators for screening. *Niger J Gen Pract*,18, 10-6.
- Omowhara, O.B., Ameh, S., Banjo, A.A. (2022). Cervical cancer screening awareness and uptake among under-screened women in rural Nigerian community. *The Nigerian Health Journal*, 22(4), 428-432.

- Osaro, B.O., Ben-Osaro, N.V., Ikewelu, G.O., Abbi, L.S., Agbanyim, M.E, Alale, J.I et al. (2024). Knowledge and acceptability of cervical cancer screening among women of reproductive age in a rural community in Rivers state Nigeria. *Greener Journal of Medical Sciences*,14(1), 24-30.
- Patel, H., Sherman, S.M., Tincello, D., Moss, E.L. (2020). Awareness of and attitudes towards cervical cancer prevention among migrant Eastern European women in England. *J Med Screen*, 27(1),40-47.
- Rosyda, R., Santoso, B., Yunitasari, E. (2018). Is an educational level affect women's participation on cervical cancer screening? A systematic review. *Proceedings of the 9th International Nursing Conference*,1, 482-488. doi: 10.5220/0008327204820488
- Shrestha, S., Saha, R., Tripathi, N. (2013). Knowledge, attitude and practice regarding cervical cancer screening amongst women visiting tertiary canter in Kathmandu, Nepal. *Nepal Journal of Medical Sciences*, 2(2), 85-90.
- Teixeira, C., Antao, C., Anes, E., Gomes, M.J., Versos, A., Tome, C. (2022). Use of Cervical Cancer screening among patients of primary healthcare services: Northeast Portugal. *Port J Public Health*, 40, 60-68. doi: 10.1159/000522666
- Uchendu, O.J. (2020). Cancer incidence in Nigeria: a tertiary hospital experience. *Asian Pacific Journal of Cancer Care*, 5(1), 27-32.
- Yimer, N.B., Mohammed, M.A., Solomon, K., Tadese, M., Grutzmacher, S., Meikena, H.K et al. (2021). Cervical cancer screening uptake in Sub-Saharan Africa: a systematic review and meta-analysis. *Public Health*, 195, 105-111.
- Yuksel, H., Ozaydin, A.N. (2025). Assessment of health beliefs and motivations for cervical cancer screening. *Healthcare*,13,804-817.

