

Original Article

EVALUATION OF KNOWLEDGE AND SCREENING UPTAKE FOR CERVICAL CANCER AMONG FEMALE GENERAL OUTPATIENT ATTENDEES IN A SECONDARY CARE FACILITY IN SOUTH - SOUTH NIGERIA

¹Victory Edet Iyanam, ²Henry Effiong Jombo, ³Eno-Obong Udomobong Bassey, ¹Oluyinka Samuel Akinbami, ¹Alphonsus Udo Idung, ⁴Joel Monday Abu, ¹Sunday Bassey Udoh.

¹Departments of Family Medicine, ²Mental Health, ³Paediatrics, Faculty of Clinical Sciences, University of Uyo; ⁴Department of Family Medicine, University of Abuja Teaching Hospital, Abuja, Nigeria.

****Correspondence to:**

Dr Victory Iyanam - Department of Family Medicine, University of Uyo, Nigeria

Email: vickiyanam@gmail.com || Phone: +234-7032043924

ABSTRACT

BACKGROUND: Knowledge of screening practices, early detection and treatment with resultant good prognosis, render cervical cancer one of the most preventable and treatable malignancies globally. This study aimed at evaluating the knowledge of cervical cancer, awareness of its prevention and uptake of screening, using Papanicolaou (Pap) smear test, among women of child bearing age attending the General Outpatient Clinics of a secondary health facility in South-South Nigeria.

METHODS: This was a cross-sectional descriptive study done among 168 women of child bearing age, 20-49 years, at the general outpatient clinics of General Hospital, Ikot Ekpene, Akwa Ibom State, South-South Nigeria. Structured questionnaire was used to obtain data. CDC EPI INFO Version 3.1 was used for data analysis.

RESULTS: Most of the respondents, 59.52%, have heard of cervical cancer, their source of information was mostly health workers, 72%. Only 42.26% knew about Pap smear test for cervical cancer while only 10.12% had ever done the test. Majority, 64.24% of those who did not do the screening claimed ignorance of the test

CONCLUSION: There is need to increase the awareness of cervical cancer through health education among women of reproductive age. Also the imperative for free and compulsory screening for cervical cancer among large population of women through sponsorship by governments, NGO's, private organizations and individuals to reduce the burden of the disease especially in developing countries is recommended.

KEY WORDS: Cervical cancer, knowledge, screening among women, South-South Nigeria.

Cite this Article: Iyanam, V. Jombo, H. Bassey, E. Akinbami, O. Udo Idung, A. Abu, J. & Udoh, S Evaluation of Knowledge and Screening Uptake for Cervical Cancer among Female General Outpatient Attendees in Secondary care facility in South south, Nigeria. *Global Health Professionals Multidisciplinary Practices Journal*, 2024, Vol.1, p 2-20

INTRODUCTION

Cervical cancer is the commonest malignancy of the female reproductive tract, with high global prevalence thereby constituting serious public health concern especially in the developing countries¹⁻⁴. It is estimated that 604,000 new cases of cervical cancer and over 340,000 deaths were reported in 2020 with 70% of the deaths occurring in developing countries⁵⁻⁸. It is the second most common cancer among women worldwide. Globally, among the 20 countries with the highest incidence of cervical cancer, 16 are from African countries. Out of the total number of cancer deaths among women in Sub-Saharan Africa, 19.3% are attributed to cervical cancer^{9,10}. In Nigeria, cervical cancer is the second commonest cancer among women of reproductive age and the leading gynaecological malignancy with high mortality¹¹. According to Nigeria Human Papillomavirus and related cancers Fact Sheet, 2023, about 12,075 women are diagnosed with cervical cancer yearly with 7,968 of them dying from it and it is the second most frequent cancer among women between 15 and 44 years of age¹²⁻¹³.

It has been severally shown that though cervical cancer is very devastating in its invasive form with resultant morbidity and mortality, it is one of the most preventable malignancies through adequate knowledge, routine screening, timely detection and early treatment intervention^{2,14-17}. The preventable advantage and subsequent plausible outcome is based on the lengthy interval of about 10-15 years between pre-malignant lesion and invasive disease in cervical cancer which could give ample opportunity for screening, detection and treatment^{1,3,7-8}. There are several screening procedures for cervical cancer including the Papanicolaou (Pap) smear, visual inspection with acetic acid (VIA), Human

Papillomavirus DNA (HPV-DNA) test and visual inspection with Lugol's iodine (VIL I)^{3,8,9,18-19}. The Pap smear test has however been popularised as a very rapid, easiest, most affordable and accessible screening test in most parts of the world. According to the recommendations by notable women health provider organisations including ACOG, USPSTF, the CDC, cervical cancer screening should commence from 21 years irrespective of the sexual exposure status of the women^{2,3,20-21}. Despite the simplicity and great benefits accruing from Pap smear screening test, studies have shown that its uptake for early detection of cervical cancer, treatment and good prognosis, is only high in developed countries while it is poor and very poor in some settings in developing countries^{11,16,17,21-22}. The reason for this uptake disparity among women in developed and developing countries is that while screening in the developed countries is sponsored among large number of women in most cases, it is done opportunistically and sporadically among few women who are not even at risk of the disease in developing countries as against the majority of women at risk^{21,22-24}. Moreover, lack of knowledge of cervical cancer, ignorance of screening test and screening location, poverty, fear of diagnostic outcome and cultural inhibition, all contribute to the poor uptake of cervical cancer screening among women in the developing countries^{8,25-26}. This study therefore was done to determine the knowledge level of cervical cancer, awareness of the screening test and uptake of screening using Pap smear test among women of child bearing age at the General Outpatient Clinics of a secondary health facility in South-South Nigeria. It is believed that findings from this study will boost existing literature on cervical cancer and enhance disease prevention practice among the target

population, policy makers and stakeholders in women's health.

MATERIALS AND METHODS

Study Area: This study was done at the General Outpatient Clinics (GOPCs) of General Hospital, Ikot Ekpene, Akwa Ibom State, South-South Nigeria between January and March 2021. The hospital is a secondary healthcare facility owned by Akwa Ibom State Hospital Management Board (SHMB). It has various categories of healthcare personnel in its employ including medical consultants. A structured questionnaire was used to obtain data from the respondents. The data obtained include socio-demographic characteristics of the respondents, knowledge of cervical cancer, awareness of the symptoms and risk factors for cervical cancer and uptake of cervical cancer screening.

Study Design: This was a cross-sectional descriptive study

Sample Size: The study was conducted among 168 women of child bearing age (20-49 years) who attended the GOPCs of the facility during the period of the study.

Sampling Procedure and Data Collection: A non-probability sampling method was used to select the respondents and they were recruited conveniently and consecutively during their visit to the clinic. The inclusion criteria were all consenting women within the age bracket (20-49 years) seen at the GOPCs of the facility during the period of the study. The exclusion criteria include women outside the age range of the study population, women who were diagnosed with invasive carcinoma of the cervix and receiving treatment for it and those who were too ill to

participate in the study. An interviewer administered questionnaire was used to obtain data from the respondents. English language was the medium of communication. Respondents with no formal education were assisted with use of local dialect by research assistants. The data collected from the respondents include socio-demographic characteristics, knowledge of cervical cancer, awareness of symptoms and risk factors for cervical cancer, screening and uptake of the screening using Pap smear test.

Data Analysis: The data obtained from the study were processed and analysed using CDC EPI-INFO statistical package²⁷. The data were summarized using proportion for categorical variables and mean and standard deviation for continuous variables. Associations were determined using chi square. Factors associated with dependent and independent variables were determined using multivariate logistic regression while odd ratio was determined using 95% confidence interval (95% CI). The level of statistical significance was set at $p < 0.05$.

ETHICS: Ethical approval was obtained from the research and ethical committee of Akwa Ibom State Ministry of Health via letter: MH/PRS/99/VOL.V/821. Permission for the study was also officially obtained from the administrative head of the facility and matron in charge of the GOPCs before commencement of data collection. Verbal consent was obtained from the respondents before administration of the questionnaire.

RESULTS:

One hundred and sixty-eight (168) women participated in the study and provided responses to all the questions. The results obtained are shown below:

Table 1: Socio-demographic characteristics of the respondents

Characteristics	Frequency (n = 168)	Percentage (%)
Age (Years):		
20 – 29	64	38.10
30 – 39	86	51.19
40 – 49	18	10.71
Marital Status:		
Yes	121	72.02
No	47	27.98
Educational Status:		
No formal education	4	2.38
Primary	20	11.91
Secondary	64	38.10
Tertiary	80	47.62
Occupation*		
Unemployed	37	22.02
Farming	17	10.12
Trading	47	27.98
Seamstress	27	16.07
Civil servant	40	23.81
Schooling	17	10.17
Income Level (₦):		
< 30,000	91	54.17
30,000 – 49,000	40	23.81
50,000 – 99,000	17	10.12
≥ 100,000	20	11.91
Parity		
0	40	23.81
1	40	23.81
2	37	22.02
3	24	14.29
4	13	7.74
≥ 5	14	8.33

* Some respondents had more than one occupation

Their ages ranged from 20-49 years with mean(SD) of 31.76(6.44) years. More than half 86(51.19%) of the women belonged to middle reproductive age, 30-39 years. Greater percentage, 52.39%, of the respondents were of lower educational status (Secondary education and below) while majority of them, 88.1%, were of lower monthly income status (< N100,000), respectively.

Table 2: Sources of knowledge of cervical cancer among the respondents

Characteristics	Frequency (n = 168)‡	Percentage (%)
Health Workers‡	72	72.00
Friends	63	63.00
Religious Organisations	56	56.00
Family Members	39	39.00
Electronic Media	25	25.00
Social Media	22	22.00

‡Some respondents had multiple sources of knowledge of cancer of the cervix

Majority of the respondents, 72/0% obtained their knowledge of cancer of cervix from health workers while 22% of them had the knowledge from the social media.

Table 3: Knowledge of Cervical cancer among the respondents

Characteristics	Frequency (n = 168)	Percentage (%)
Ever heard of cervical cancer?		
Yes	100	59.52
No	68	40.48
What are the symptoms? (n = 100)†		
Watery vaginal discharge	42	42.00
Abnormal vaginal bleeding	36	36.00
Excessive menstrual bleeding	22	22.00
Pelvic pain	17	17.00
Do not know	15	15.00
Who are at risk? (n=100)††		
Multiple sexual partners	35	35.00
Having sexually transmitted diseases (STD's)	24	24.00
Early sexual exposure	18	18.00
Sex with men with multiple sex partners	16	16.00
Family history of cervical cancer	13	13.00
Do not know	10	10.00
Can Routine Screening enhance early detection and treatment of cervical cancer (n=100)		
Yes	51	51.00
No	49	49.00
Heard of Pap Smear test for cervical cancer screening?		
Yes	71	42.26
No	97	57.79

†Some respondents knew more than one symptom of cervical cancer

††Some respondents knew more than one risk factor of cervical cancer

Greater percentage, 100 (59.52%) of the women knew about cervical cancer and have heard of the disease. On the symptoms of cervical cancer, watery vaginal discharge was the symptom known by most of the respondents, 42%. Multiple sexual partners were the commonest risk factor for cervical cancer known by majority of the respondents, 35%. Only 42.26% of the total studied population have heard of Pap smear as the most available, affordable and accessible screening test for cervical cancer detection.

Table 4: Cervical cancer screening practice using Pap smear

Characteristics	Frequency (n = 168)	Percentage (%)
Ever done Pap Smear test?		
Yes	17	10.12
No	151	89.88
Reasons for not doing (n = 151)		
Not heard of it	97	64.24
Do not know where to do it	24	15.89
Cannot afford it	19	12.58

Afraid of positive result

11

7.29

Only 17(10.12%) of the respondents ever did Pap smear test for cervical cancer screening. Among the respondents who did not do the screening, most of them, 97(64.24%) claimed not to have known about the screening test.

Table 5: Association between socio-demographic variables and practice of Pap smear screening test

Sociodemographic Variables	Practice of Pap smear screening (%)		Odd Ratio (OR)	95% CI	P-value
	Practiced	Not practiced			
Age (Years):					
< 30	4(6.25)	6(93.75)	0.47	0.106 - 1.612	0.292
≥ 30	13(12.5)	91(87.50)			
Educational Status§					
Lower level	1(1.14)	87(98.86)	0.05	0.001 - 0.315	<0.001
Higher level	16(20.00)	64(80.00)			
Income Level (₦):					
< 100,000	5(3.38)	143(96.62)	0.02	0.005 - 0.096	<0.001
≥ 100,000	12(60.0)	8(40.00)			
Parity:					
Para < 5	17(11.04)	137(88.96)	-1	0-Inf	0.365
Para ≥ 5	0(0.00)	14(100.00)			
Marital Status:					
Yes	16(13.22)	105(86.78)	7.01	1.021 - 300.227	0.043
No	1(2.13)	46(97.87)			

§ Lower level of education – Secondary school and below

Higher level of education – Tertiary education

Pap smear screening practice was significantly associated with higher educational level ($p = 0.001$, OR = 0.05, CI = 0.001 – 0.315), higher income level ($p = 0.001$, OR = 0.02, CI = 0.005 – 0.096) and married status ($p = 0.043$, OR = 7.01 and CI = 1.021 – 300.227) respectively.

DISCUSSION

The study has shown that the awareness of cervical cancer, knowledge of its symptoms and risk factors, as well as prevention through screening using Pap Smear, a simple and affordable test, were fair among the respondents. These are similar to findings obtained from several other studies in other locations including Uyo, Yenegoa (South-South Nigeria)^{4,9} Enugu (South-East Nigeria),¹⁸ Lagos, Ibadan (South-West Nigeria),^{17,28} Zaria (North-Western Nigeria),²⁵ Jos (North-Central Nigeria),^{29,30} Nairobi, Kenya¹⁰ and South Africa^{6,23}. This further

confirms the awareness and knowledge deficiency of cervical cancer among women at various settings and the need to create greater awareness using various available avenues on the existence of this easily preventable disease.

It has also been found that information on cervical cancer among the women was obtained mostly from health workers. This is similar to findings from other studies^{4,9,13,16}. The role of health workers in dissemination of essential and critical information, education and counselling on common disease conditions including cervical cancer, using every

available contacts with patients both within health facilities and the community, cannot be over-emphasized.

The practice of uptake of cervical cancer screening using Pap smear test was abysmally poor among the respondents. Also, most of those who did not do the screening reported lack of awareness of the test, ignorance of the location for the test, financial constraint and fear of anticipation of positive result. Again these are similar to findings from other studies done in other settings in South-South and other geopolitical zones of Nigeria, other settings in Sub-Saharan Africa and outside Africa^{4,10,17-19,30-31}. This underscores the need for intense awareness campaign on the importance of regular uptake of the screening practice among women. Moreover, the need to consciously direct the women to the appropriate screening location, making the screening free and compulsory to the target population, working to allay their apprehension of the possible outcome of the result as well as dealing with all cultural inhibitions, should constitute the comprehensive preventive campaign package against the disease.

Association between socio-demographic variables and screening revealed that screening was statistically associated with higher educational status and income levels, and marital status. This agrees with findings from several other studies on cervical cancer^{4,8,9,14,30}. This emphasizes the importance of intentional educational empowerment of women in African and other least and medium income countries (LMICs), which will directly result in their financial empowerment and ability to take care of several aspects of their lives including health care issues such as cervical cancer and other related screenings. Also,

there is need to encourage single women on the importance of Pap smear test

The global strategy for cervical cancer elimination (90-70-90 strategy) adopted by the World Health Assembly (WHA) in 2020 aims to ensure that 90% of girls are vaccinated with Human Papilloma virus vaccine by the age 15 years, 70% of women are screened using high performance test by age 35 years while 90% of women with pre-cancer are treated and 90% of women with invasive cancer are managed appropriately¹⁴. To realise this lofty strategy and win the fight against cervical cancer, a readily preventable disease, there is an urgent need for stakeholders and policy makers in women's health to be committed with more proactive steps, at ensuring that women especially in LMICs are aware of cervical cancer, know its risk factors, preventive measures and regularly practice the screening uptake for possible prompt detection, treatment and good prognosis.

The study has shown fair awareness and knowledge of cervical cancer, its symptoms, risk factors and preventive measures but poor uptake of its screening test practice among the respondents. Moreover, most of those who did the screening test were of higher educational and income status. There is need to embark on more intensive awareness and health education campaign among women especially of child bearing age on the existence of cervical cancer and the need for regular screening test practice for timely detection and possible treatment as components of preventive health care among women of reproductive age. In order to achieve 90-70-90 global strategy, cervical cancer screening should be made free and compulsory among women especially in LMICs.

CONCLUSION

The study has shown fair awareness and knowledge of cervical cancer, its symptoms, risk factors and preventive measures but poor uptake of its screening test practice among the respondents. Moreover, most of those who did the screening test were of higher educational and income status. There is need to intensify awareness and health education campaign among women especially of child bearing age on the existence of cervical cancer and the need for regular screening test practice for timely detection and possible treatment as component of preventive health care practice among women of reproductive age especially in LMICs where facilities and resources for treatment of invasive disease is grossly unavailable.

REFERENCES

1. Maitanmi JO, Fabiyi TE, Eniola O, Sanusi TO, Josaiah BO, Maitanmi B, et al. Knowledge and acceptability of cervical cancer screening among female undergraduates in Babcock University, Ilesha-Remo, Ogun State, Nigeria. *Ecancermedicalscience* 2023; 17:1502.
2. Karjane NW. Pap smear. Medscape. Available @ <https://emedicine.medscape.com>. Accessed on 8/8/2023.
3. Stoppler MC, Davis CP. Pap smear test. *emedicinehealth*. Accessed on 25/4/2023.
4. Ijezie AE, Johnson OE. Knowledge of cervical cancer and the uptake of the Papanicolaou smear test among public secondary school teachers in Akwa Ibom State, Nigeria. *Nig Med J* 2019; 60(5): 245-251.
5. WHO Nigeria: Cervical cancer – Early detection save lives. Available @ <https://www.afro.who.int/new>. Accessed on 12/1/2023.
6. Akokuwebe ME, Idemudia ES, Lekulo AM, Motlogeola OW. Determinant and levels of cervical cancer screening uptake among women of reproductive age in South Africa: Evidence from South Africa Demographic and Health Survey data, 2016. *BMC Public Health* 2021. 2013 (21) <https://doi.org/10.1186/512889-021-12020-2>.
7. Uchendu J, Hewitt – Taylor J, Turner – Wilson A, Nwakasi C. Knowledge, attitude and perceptions about cervical cancer and uptake of cervical cancer screening in Nigeria: an integrative review. *Scientific African* 2021; 14. e01013.
8. Neji OI, David NA, John EE. Knowledge, attitude and practice of cervical cancer screening among female students in tertiary institution in Calabar, South-South Nigeria. *Int J Dev Res* 2019; 9(1):25384 – 25390.
9. Njuguna DW, Mahrouseh N, Onisoyonivosekume D, Varga O. National policies to prevent and manage cervical cancer in East African countries: A policy mapping analysis. *Cancers (Basel)* 2020; 12(6):1520.
10. Gichang P, Estambala B, Bwayo J, Rogo K, Ojwang S, Opyo A, et al. Knowledge and practice about cervical cancer and Pap smear testing among patients at Kenyatta National Hospital, Nairobi, Kenya. *Int J Gynecol Cancer* 2003; 13(6):827-33.
11. Abudu LI, Nwagu EN. Awareness, knowledge and screening for cervical cancer among

- women of a faith-based organisation in Nigeria. *The Pan Afr Med J* 2021; 39:200.
12. Nigeria Human Papillomavirus and related cancers. Fact sheet 2023. Available @: <https://hpvcentre.net>. Accessed on: 12/12/2023.
13. WHO. Cervical Cancer. Available on <https://www.who.int>. Accessed on 16/9/2023.
14. Bassey EA, Ekpo MD, Abasiattai, AM, Ekanem MI. Cervical cancer screening in Uyo, South-South Nigeria. *Trop J Obst Gynaecol* 2008; 25(1):13-16.
15. Ago BU, Efiok EE, Abeng SE. Sociodemographic and gynecological factors that influence uptake of cervical cancer screening. A cross-sectional study in Calabar, Nigeria. *Afr Health Scs* 2022; 22(4): 96-103.
16. Wright KO, Faseru B, Kuyinu YA, Faduyile FA. Awareness and uptake of the Pap Smear among market women in Lagos, Nigeria. *J Pub Health Afr*. 2011; 2(1): e14.
17. Okunowo AA, Daramola ES, Soibi-Harry AP, Ezenwankwo FC, Kuku JO, Okunade KS, et al. Women's knowledge of cervical cancer and uptake of Pap smear testing and the factors influencing it in a Nigeria tertiary hospital. *J Cancer Res Pract* 2018; 5(3):105-111.
18. Dim CC, Nwagha UI, Ezegwi HU. The need to incorporate routine cervical cancer counselling and screening in the management of women at the Outpatient Clinics in Nigeria. *J Obst Gynecol* 2009; 29(8): 754-6.
19. Allagoa DO, Agbo OJ, Egubue OA, Alabrah PW. Knowledge of cervical cancer and its screening amongst students of a tertiary institution in South-South Nigeria. *Europ J Med Health Scs* 2020; 2(6): 1-4.
20. ACOG. Cervical cancer screening. [Acog.org/women health](https://www.acog.org/women/health). Accessed on 21/11/2023.
21. CDC. Cervical cancer. [Cdc.gov/cancer/cervical](https://www.cdc.gov/cancer/cervical). Accessed on: 21/11/2023.
22. Ilevbore OE, Adegoke AA, Adelowo CM. Drivers of cervical cancer screening uptake in Ibadan, Nigeria. *Hdiyou* 2020; 6(3): e03505.
23. Hague M, Hague E, Lader SB. Evaluation of cervical cancer screening programme at a rural community of South Africa. *East Afr J Pub Health* 2008; 5(2):111-6.
24. Ubak C, Nwaneri A, Anarado AW, Ihenacho PN, Odikpo LC. Perceived barriers to cervical cancer uptake among women of an urban community in South-Eastern Nigeria. *Asian Pacific J Cancer Prev* 2022; 23(9): 1959 – 1965.
25. Ahmed SA, Sabitu K. Idris SH, Ahmed R. Knowledge, attitude and practice of cervical cancer screening among market women in Zaria, Nigeria. *Niger Med J* 2013; 54(3):316-319.
26. Okunade KS, John – Oladide V, Adejimi AA, Oshodi YA, Osumoubi B, Ugwu AO, et al. Predictors of Pap smear testing uptake among women in Lagos, Nigeria. *ecancermedicine*. Available @ <https://doi.org/10.3332/ecancer.2022.1368>. Accessed on 13/9/2023.
27. CDC. Epi Info. StatCalc. Available @ <https://www.cdc.gov/statcalc/intro>. Accessed on 12/12/2023.
28. Ajayi IO, Adewole IT. Knowledge and attitude of general Outpatient attendants in Nigeria to cervical cancer. *Cent Afr J Med* 1998; 44(2): 41-43.
29. Envuladu EA, Ohize VA, Agbo HA, Lar LA, Zoakah AI. Awareness and uptake of Papanicolaou smear screening among students of higher institution in Jos, Nigeria. *Jos J Med* 2013; 7(1): 21-25.
30. Hyacinth HI, Adeleye OA, Ibeh JN, Osoba T. Cervical cancer and Pap smear test among federal civil servants in North Central Nigeria. *PLOS ONE* 2012. <https://doi.org/10.1371/journal.pone.0046583>.
31. Zhang M, Zhong Y, Wang L, Boa H, Huang Z, Zhao Z et al. Cervical cancer screening coverage – China, 2018-2019. *China CDC Wkly* 2022; 4(48). 1077-1082.