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Cervical cancer screening compliance among women of childbearing age in a teaching hospital, South-South, Nigeria

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Abstract
Cervical cancer contributes to the burden of maternal morbidity and mortality apart from breast cancer making it a public health concern. This study aims to assess the compliance of women of childbearing age to cervical cancer screening in Rivers State University Teaching Hospital, Port Harcourt. A descriptive cross-sectional design and structured questionnaires were used to collect data from the registered women of childbearing age at Rivers State University Teaching Hospital, Port Harcourt. A total of 146 women of childbearing age in RSUTH participated in the study. The findings revealed that, a greater percentage (68.5%) of the participants have heard of cervical cancer screening but not all of the participants acknowledged that they know the type of cervical cancer screening. Results showed that only a handful of the participants (35.6%) have presented themselves for cervical cancer screening. In conclusion, the women of childbearing age attending Rivers State University Teaching Hospital have a high level of awareness about cervical cancer screening services, but they have negative perceptions of cervical cancer screening services therefore their utilization of cervical cancer screening services is low. The study recommended that health professionals and educators make use of every chance to talk to women of childbearing age about taking preventative health measures, such as using screening programs to avoid cervical cancer. Emphasis should be placed on the correction of misconceptions regarding cervical cancer screening.

Keywords: Cervical cancer screening, compliance, childbearing age

Introduction

Cervical cancer contributes to the burden of maternal morbidity and mortality apart from breast cancer making it a public health concern. In 2020, an estimated 604,237 women were diagnosed with cervical cancer globally, which represents 6.5% of all female cancers. It is one of the most common cancers among women in 36 low and middle-income countries in sub-Saharan Africa [1].

According to World Health Organization (WHO), 2021 report, cervical cancer is the fourth most common cancer in women, that in 2018, an estimated 570,000 women were diagnosed with cervical cancer worldwide and about 311,000 women died from the disease. Cervical cancer is the most common gynecological cancer among women in sub-Saharan Africa, with an estimated 70,722 new cases of invasive cervical cancer occurring annually in sub-Saharan Africa [2]. In Nigeria, cervical cancer is one of the leading causes of mortality among women, with available records showing that about 14,000 women are diagnosed every year, and about 8,000 deaths [1, 3]

Poor access to effective screening and treatment, low utilization of screening programmes available in the country, lack of awareness of the disease, and inaccessibility to screening and treatment services due to high cost, to mention but few have been some of the major factors of concern that has led to the high burden of the disease [4].

The benefits of early screening for cancer are enormous and one of the preventive measures is the vaccination of pre-adolescents against oncogenic HPV. Cervical cancer screening helps detect signs of cancer early when it is easier to treat. Cancer screening helps find and identify cancer cells before it spreads. Early detection may mean less treatment and less time spent recovering and longevity. The earlier a cancer is detected, the better chance of survival. In recent times cervical cancer has attracted the attention of world leaders, philanthropists and non-governmental organizations as well as donor agencies and emphasis on the relevance of screening [5].

Sensitization was carried out across various media outfits, which involved religious leaders, civil society groups, market leaders, women leaders, youth leaders, traditional rulers and community engagement in all the local government areas in Rivers State, training of healthcare providers on screening and minor treatments and referral where necessary were put in place. Despite the contributions on ground for prevention (immunization), early detection (screening) and treatment on the part of the government, some individuals still refuse to avail themselves of this golden opportunity. The study carried out by [6] reported poor utilization of cervical cancer screening among respondents, with only 20.6% who had undergone cervical screening. Also, another study reported that a large portion of the respondents (44%) were non-compliant, and age, education, and income were the most important correlates with compliance and knowledge [7].

The growing incidence of cervical cancer among young women in Nigeria necessitates the study of their compliance and utilization of preventive services and screening for

prompt diagnosis. The major reason for women's noncompliance with cervical cancer screening are; lack of knowledge, anxiety and hesitance to extend screening from 3 to 5 years based on the historical belief that they should have annual screening.

Material and method

Research design

This study was a descriptive cross-sectional design. A cross sectional study allows data collection from different individuals at a single point in time, which makes it most appropriate for this study.

Area of study

The research was carried out in Rivers State University Teaching Hospital (formally Braithwaite Memorial Specialist Hospital (BMSH). It is a government-owned hospital, named after Eldred Curwen Braithwaite, a British doctor and pioneer of surgery. The facility has 375 licensed beds and 731 medical staff members. It later became a General Hospital and has since gained status as a "Specialist Health Institution' before the institution was renamed Rivers State University Teaching Hospital. Its departments include Medicine, Obstetrics and Gynecology, Anesthesia, Surgery, Pathology, Ophthalmology, Accident Centre and the Surgical/Medical Emergency etc.

Population of study

The population for this study includes 200 registered women at Rivers State University Teaching Hospital (RSUTH) Port Harcourt.

Sample size

The sample size was calculated using the Taro Yamane method of sample size calculation and the sample size is 146.

Sampling technique

A simple random sampling procedure was used for selecting the participants in this study. This technique was chosen to ensure a fairly equal representation of the variables for the study.

Instruments for data collection

A researcher structured questionnaire was used for the data collection. The questionnaire was made up of twenty-three (23) questions divided into four (4) sections A, B, C, D and E

Section "A" is about the socio-demographic data of the respondents. Section "B" is about the level of awareness and knowledge of cervical cancer. Section" C' is about the level of compliance with cervical cancer screening. Section "D" is about the percentage of respondents that has undergone screening. Section "E" is about factors that affect non-compliance to cervical screening.

Validity of instrument

To ascertain the content validity, a pre-test was conducted among registered women in another tertiary health institution, the University of Port Harcourt Teaching Hospital, using 10% of the sample size (13 persons).

Reliability of instrument

The reliability of the instrument was tested using the test-retest method. 13 copies of the instrument were administered to women of childbearing age in Rivers State University Teaching Hospital (RSUTH). The 13 copies of the questionnaire for the pretest were analyzed and a reliability value of 0.8 was obtained, which proved the instrument is reliable**.**

Procedure for data collection

The researcher explained the aim of the study to the study participants. The participants were informed that their participation was voluntary and that they could withdraw their participation at any point during the survey. They were encouraged to provide honest responses to the questions and assured of confidentiality to any information provided on the questionnaire. The copies of the questionnaire were administered directly to the chosen sample for the study. A total of 150 copies of the questionnaire were administered and 146 returned.

Method of data analysis

The data collected from the field was analysed using a descriptive analysis expressing data and results on tables, charts, frequencies, and percentages for dichotomous variables, and as mean with standard deviation (SD) for continuous variables. The percentages were calculated for every outcome. Nonparametric chi-square ($\chi 2$) test was also used to assess differences between groups and correlations between variables and the answers were given on the 5-point Likert scale. The results were grouped in different categories from never to rarely, to- sometimes, too often, and then to always. The Statistical Package for Social Sciences (SPSS version 22.0) was used for all analyses.

Ethical consideration

Permission was sought and obtained from the Rivers State University Teaching Hospital research committee. In addition, the purpose of the research was explained to the prospective respondents and informed consent was obtained after assurance that whatever information they provide will be used strictly for academic purposes and would be kept confidential.

Result

Table 1: Demography of the study population

Variable sex female	Frequency	Percentage (%) 100
	146	
Age		
20-24	19	13.0
25-29	19	13.0
30-34	63	43.2
35-39	29	19.9
40-44	9	6.2

45-49	7	4.8
Marital status		
Single	20	13.7
Married	60	41.1
Divorced	20	13.7
Separated	25	17.1
Widowed	21	14.4
Religion		
Christianity	77	52.7
Muslim	69	47.3
Occupation		
House wife	21	14.4
Private employee	17	11.6
Government employee	11	7.6
Daily laborer	51	34.9
Merchant	31	21.2
Student	15	10.3
Educational background		
None	12	8.2
Primary	0	0
Secondary	95	65.1
Tertiary	39	26.7

Table 1 showed the demography of the respondents interviewed in this study. Based on age of the respondents it was seen that the age ranges of the respondents were 20-24 years (19), 25-29 years (19), 30-34 years (63), 35-39 years (29), 40-44 years (9), and 45-49 years (7) respectively. There were 146 female participants. This represented 100%
Marital status of the participants showed that single women were (20), married women (60), Divorced (20), Separated (25), and Widowed (21) this represented 13.7%, 41.1%, 13.7%, 17.1% and 14.4% respectively.
On religion; 77 participant practiced Christianity and 69 participants practiced Muslim, this represented 52.7% and 47.3% respectively.
On occupation; 21 participants were housewives, 17 participants are private employee, 11 participants are government employees, 51 participants were daily laborers, 31 participants are merchants and 15 participants are students. This represented 14.4%, 11.6%, 7.6%, 34.9%, 21.2% and 10.3% respectively.
On educational background; 12 participants were not educated; 95 participants were in secondary schools and 39 participants were in tertiary institutions. This represented 8.2%, 65.1% and 26.7% respectively.

Table 2: Awareness and knowledge of cervical cancer

S/N	Awareness and knowledge of cervical cancer	YES	NO
1	Heard of cervical cancer screening	100 (68.5%)	46 (31.5%)
2	Know the type of cervical cancer screening	46 (31.5%)	100 (68.5%)
3	Have you ever presented yourself for cervical cancer screening	52 (35.6%)	94 (64.4%)

From the result obtained in Table 2, item (1) showed that 100 participants have heard of cervical cancer screening, 46 participants responded that they have not heard about cervical cancer screening, also in item 2, 46 participants acknowledged that they know the type of cervical cancer screening, while 100 participants have not witnessed nor have the knowledge of the types of cervical cancer screening. In item 3, it showed that 52 participants have presented themselves for cervical cancer screening while 94 participants affirmed that they have not presented themselves for cervical cancer screening.

Table 3: Frequency of cervical cancer screening

S/N	Cervical cancer screening	Frequency	Percentage (%)
1	Once every year	20	13.7
2	Once every three years	51	34.9
3	Once every five years	69	47.3
4	Do not know	6	4.1

From the result obtained in Table 3 shows the study population of cervical cancer screening frequency. It depicts that only 13.7% (20) of the respondents agreed that the screening frequency should be once in every year, 34.9% (51) participants once in every three year, 47.3% (69) participants once in every five years while 4.1% (6) have no clue about screening frequency of cervical cancer.

Table 4: Age of screening

S/N	Age of screening	Frequency	Percentage (%)
1	Women who start sexual intercourse before age 18	20	13.7
2	Women age 18 and above	32	21.9
3	Women age 25 and above	40	27.4
4	Women age 30 and above	13	8.9
5	Elderly women	23	15.8
6	Do not know	18	12.3

From the result obtained in Table 4, it showed that 13.7% (20) of respondents agrees that women who start sexual intercourse before age 18 are eligible for cervical cancer screening, 21.9% (32) respondents affirmed that women, age 18 and above are eligible for cervical cancer screening, 27.4% (40) respondents acknowledge that women, age 25 and above can undergo screening for cervical cancer. While 15.8% (23) respondents indicated that elderly women can undergo the screening exercise for cervical cancer and 12.3% (18) respondents indicated that they have no idea of what age a woman can undergo screening for cervical cancer.

Table 5: How you heard of cervical screening?

S/N	How you heard of cervical screening	Frequency	Percentage (%)
1	School	10	6.8
2	Hospital	71	48.6
3	Peer	15	10.3
4	Social Media	50	34.3

From the result obtained in Table 5, it showed that 6.8% (10) respondents heard about cervical cancer screening in schools, 48.6% (71) which is the highest mentioned that they were enlightened about cervical cancer screening in the hospital, while 10.3% (15) respondents affirmed that the knowledge of cervical cancer screening was imparted to them through their peers and lastly 34.3% (50) of respondents indicated that social media is the means through which they were enlightened about cervical cancer screening.

Table 6: Reasons for non-compliance with cervical cancer screening

S/N	Reason for non-compliance	Agreed	Strongly agree	Disagreed	Strongly Disagreed	Mean ± SD	Decision
1	Lack of information/counselling	29	25	66	26	2.61 ± 0.998	Agree
2	Cervical cancer screening is embarrassing	49	38	31	38	2.26 ± 0.88	Disagree
3	Fear of having a positive result	31	63	25	27	2.33 ± 1.011	Disagree
4	Only women with STIs should go for Cervical cancer screening	30	33	36	47	2.68 ± 1.131	Agree
5	Cervical cancer screening is painful	19	12	49	66	3.11 ± 1.025	Agree
6	Cervical cancer screening is not available in all health facilities	39	59	29	19	2.44 ± 0.978	Disagree
7	Cervical cancer is expensive	31	34	34	47	2.66 ± 1.140	Agree
8	The attitude of health workers discourages women from assessing cervical cancer screening	39	36	39	32	2.44 ± 1.108	Disagree
9	Lack of support from partners and significant others is a barrier	30	28	48	40	2.67 ± 1.090	Agree
10	Lack of convenient clinic time is a barrier	40	23	57	26	2.47 ± 1.078	Disagree
11	Meant for elderly women and not for young women	39	23	38	46	2.47 ± 1.319	Disagree
12	Lack of privacy as the cervix will be visualized for a pap smear	39	41	33	33	2.41 ± 1.112	Disagree

From the results obtained in table 6, it was shown that the respondents agreed that lack of information is the reason for non-compliance with cervical cancer screening with the following mean and standard deviation of 2.61 ± 0.998. On the other hand, it was shown that respondents disagreed that being embarrassed and fear of having positive result are the major reasons for noncompliance with cervical cancer screening with the following mean and standard deviation of 2.26 ± 0.99, 2.33 ± 1.011 respectively. Also, respondents agreed that only women with STIs are the major reasons for non-compliance with the following mean and standard deviation of 2.68 ± 1.131, and respondents agreed that due to the pain associated with cervical cancer screening, that it is the major contributing factor for non-compliance with cervical cancer screening with the following mean and standard deviation of 3.11 ± 1.025.

More also the following respondents disagreed that cervical cancer screening equipment not being made available in health facilities, the attitude of the workers, lack of convenient time, due to the fact that it's meant for elderly women and not for young women and the lack of privacy are the major reasons for non-compliance with following mean and standard deviation of 2.44 ± 0.978, 2.47 ± 1.078, 2.47 ± 1.319, 2.41 ± 1.112 respectively.

However, the following respondents agreed that, lack of support from partners and significant others, and how expensive cervical cancer screening is, are the major barriers for the reason of non-compliance with the following mean and standard deviation of 2.67 ± 1.090, 2.66 ± 1.140 respectively.

Discussion

This was a descriptive cross-sectional study aimed at assessing the compliance of cervical cancer screening among women of childbearing age in Rivers State University Teaching Hospital, Port Harcourt. From the results obtained, it was seen that a greater percentage (68.5%) of the participants have heard of cervical cancer screening but not all of the participants acknowledged that they know the type of cervical cancer screening. In item 3, it showed that only a handful of the participants (35.6%) responded that they have presented themselves for cervical cancer. This finding corroborates the findings of [8], in a study report which found that 67% of the respondents were aware of cervical cancer screening. However, the finding contradicts the findings of [9] and that conducted by [10] among the antenatal women attending antenatal clinics using the University of Abuja Teaching Hospital, which showed that awareness of cervical cancer, was low among antenatal clinic attendees. In another study by [11] to explore the awareness, perception and utilization of cervical cancer screening among women in Ibadan, they also reported that women were not aware of cervical cancer and that they were not utilizing the services.

The sponsorship by the National Institute of Health, United States of America in those selected Hospitals and creation of

awareness by the health personnel of the hospitals may account for the increased awareness of cervical screening services observed in the current study.

The result in this study showed that there was a poor knowledge of when to commence cervical cancer screening. Although the participants had knowledge of cervical cancer, most of the respondents did not know the age risk factor for cervical cancer. These imply a fairly negative perception of cervical screening services among respondents. These findings corroborate the American Cancer Society review [12], which suggests that some women expressed fear of cervical cancer diagnosis and treatment based on misconception, and that such women are much less likely to receive regular Pap tests. Hence, cervical cancers are usually diagnosed at a much later stage, after the cancer has spread to other parts of the body.

According to the results obtained in this present study; it was shown that the respondents agreed that lack of information is the reason for non-compliance with cervical cancer screening, the respondents also agreed that women with STIs, pain associated with cervical cancer screening, lack of support from partners and expensive cervical cancer screening are the major barriers for the reason of non-compliance. The respondents disagreed that cervical cancer screening equipment are not being made available in health facilities, the attitude of the workers, lack of convenient time, due to the fact that it's meant for elderly women and not for young women and the lack of privacy were the factors affecting cervical cancer screen.

The findings from the present study were similar to the observations of [13], who stated that expensive cervical cancer screening was one of the factors influencing utilization of cervical cancer screening services, giving the many responsibilities women assume. Also, most screening programmes rely on Pap smear which is complex and costly to run especially in developing countries where health systems and infrastructures are weak, [15, 16]. also observed other factors influencing cervical cancer screening, such as poor health literacy, people's beliefs and attitudes, language barriers, unhelpful attitudes of healthcare professionals, increase in age, race/ethnicity, low educational level, low income, decreased access to services, insufficient funding, and unfavorable attitudes towards cancer screening.

Similar to this [11], identified factors influencing the use of cervical cancer screening services as lacking awareness of the screening, people believing they are healthy and not caring about preventive services because they have other competing problems, seen generally as not important, poor health seeking behavior, and financial constraints. As a result, a lot of people attend the hospital when their illnesses are at their most advanced stages.

Conclusion

Although women of child bearing age attending Rivers State University Teaching Hospital have high level of awareness about cervical cancer screening services, they have negative perceptions of cervical cancer screening services and their utilization of cervical cancer screening services is low. The negative perceptions of cervical cancer screening services in combination with other factors enumerated in this study (barring age, education, marital status) may account for the low level or poor utilization of cervical cancer screening services among them.

In order to enhance women's screening behaviours, it is necessary to increase women's knowledge of cervical cancer and address the identified impediments.

It is recommended that health professionals and educators make use of every chance to talk to women of childbearing about taking preventative health measures, such as using screening programs to avoid cervical cancer. Emphasis should be placed on the correction of misconceptions enumerated in this study. Cervical cancer screening services should be decentralized to increase access by rural women.

Conflicts of interest

The authors declare that there is no conflict of interest regarding the publication of this article

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References

1. Sung H, Ferlay J, Siegel RL, Laversanne M, Soerjomataram I, Jemal A, *et al*. Global cancer statistics 2020: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. CA Cancer J Clin,2021:71:209–249. doi:10.3322/caac.21660.
2. World Health Organization. Nigeria; cancer country profile. Available at: https://www.who.int/cancer/country-profiles/%20NGA_2020.pdf?ua=1?subject= https://www.who.int/cancer/country-profiles/%20NGA_2020.pdf?ua=1, 2020 (Accessed May 7, 2022).
3. Globocan. Nigeria. (Accessed November 21, 2021), 2020.
4. Joseph J, Demke O, Ameyan L, Bitilinyu Bango J, Bourgoin B, Diop M, *et al*. Human papillomavirus testing using existing nucleic acid testing platforms to screen women for cervical cancer: implementation studies from five sub-Saharan African countries. BMJ open,2023:13(1):e065074. https://doi.org/10.1136/bmjopen-2022-065074
5. Kunckler M, Schumacher F, Kenfack B, Catarino R, Viviano M, Tincho E, *et al*. Cervical cancer screening in a low-resource setting: a pilot study on an HPV-based screen-and-treat approach. Cancer medicine,2017:6(7):1752–1761. https://doi.org/10.1002/cam4.1089
6. Ifemelumma CC, Anikwe CC, Okorochukwu BC, Onu FA, Obuna JA, Ejikeme BN, *et al*. Cervical Cancer Screening: Assessment of Perception and Utilization of Services among Health Workers in Low Resource Setting. International journal of reproductive medicine, 2019, 6505482. https://doi.org/10.1155/2019/6505482
7. Östensson E, Alder S, Elfström KM, Sundström K, Zethraeus N, Arbyn M, *et al*. Barriers to and facilitators of compliance with clinic-based cervical cancer screening: population-based cohort study of women aged 23-60 years. PloS one,2015:*10*(5):e0128270. https://doi.org/10.1371/journal.pone.0128270
8. Ahmed SA, Sabitu K, Idris SH, Ahmed R. Knowledge, attitude and practice of cervical cancer screening among market women in Zaria, Nigeria. Nigerian medical journal: journal of the Nigeria Medical

Association,2013:54(5):316–319. https://doi.org/10.4103/0300-1652.122337
9. Chukwuali LI, Onuigbo WIB, Mgbor NC. Cervical cancer screening in Enugu. Trop J Obstet Gynaecol,2003:20(2):109–112.
10. Agida TE, Akaba GO, Isah AY, Ekele B. Knowledge and perception of human papilloma virus vaccine among the antenatal women in a Nigerian tertiary hospital. Nigerian medical journal : journal of the Nigeria Medical Association,2015:56(1):23–27. https://doi.org/10.4103/0300-1652.149166
11. Ndikom CM, Ofi BA. Awareness, perception and factors affecting utilization of cervical cancer screening services among women in Ibadan, Nigeria: a qualitative study. Reproductive health,2012:9(1):11. https://doi.org/10.1186/1742-4755-9-11
12. Smith RA, Andrews KS, Brooks D, Fedewa SA, Manassaram Baptiste D, Saslow D, *et al*. Cancer screening in the United States, 2019: A review of current American Cancer Society guidelines and current issues in cancer screening. CA: a cancer journal for clinicians,2019:69(3):184–210. https://doi.org/10.3322/caac.21557
13. Leinonen MK, Campbell S, Klungsøyr O, Lönnberg S, Hansen BT, Nygård M. Personal and provider level factors influence participation to cervical cancer screening: A retrospective register-based study of 1.3 million women in Norway. Preventive medicine,2017:94:31–39. https://doi.org/10.1016/j.ypmed.2016.11.018
14. Ashford, Collymore T. Preventing cervical cancer world wide. Washington, DC, United States of America: Population Reference Bureau, 2005. www.prb.org
15. Thomas VN, Saleem T, Abraham R. Barriers to effective uptake of cancer screening among Black and minority ethnic groups. International journal of palliative nursing,2005:11(11):562–571. https://doi.org/10.12968/ijpn.2005.11.11.20096