

Awareness and perception of risk for cervical cancer among women in Ogbomoso, Nigeria

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ABSTRACT

Background: Cervical cancer, though preventable, remains the leading cause of cancer death among women in developing countries after breast. Lack of awareness and access to preventive methods remains a key factor contributing to high levels of cervical cancer in these populations.

Objectives: The study aimed to assess the level of awareness of, and perception of risk for, cervical cancer among women attending Bowen University Teaching Hospital (BUTH) general outpatient clinic.

Methodology: This was a cross-sectional study conducted at the BUTH, Ogbomoso. Data were obtained from 318 consenting women using systematic random sampling method. An interviewer-administered questionnaire was used to gather information about their sociodemographic characteristics, marital and reproductive history, and awareness and perception of risk for cervical cancer. Data were analyzed using Statistical Package for the Social Sciences version 23.0. The level of statistical significance was set at $P < 0.05$.

Results: Awareness for cervical cancer and its screening tests were 22.6% and 17.9%, respectively, with major sources of information being from health talks and hospital staffs. About 5.7% believed that they may be at risk whereas only 1.6% had ever been screened. Perception of risk is significantly associated with age ($\chi^2 = 20.05$, $P = 0.005$) and early coitarche ($\chi^2 = 10.46$, $P = 0.015$). Overall, respondents' attitude was positive to cervical cancer screening.

Conclusion: The level of awareness of cervical cancer and screening was low among the respondents. Increased media campaign about its risks and preventive measures is urgently needed.

Key words: Awareness; cervical cancer; Ogbomoso; risk; screening.

Introduction

Cervical cancer is a preventable disease of significant public health concern, especially in developing countries where it is associated with a high mortality rate.^[1-3] It is estimated to account for up to 80% of all gynecological cancer-related admissions in several African countries.^[2,4] Implementation of organized screening programs, early detection, accessibility


to treatment, reduction in parity, and control of other risk factors have significantly contributed to reduction in its incidence and death rates in most developed countries.^[5]

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Cervical cancer exposes the vulnerability of poor, uneducated women often living in underserved areas reflective of poor access to health care as well as gender inequality, and who may be put at risk by their spouses' high sex risk, a situation common in patriarchal societies like Nigeria.^[2] In Nigeria, cervical cancer burden accounts for 63% of genital cancers.^[6]

Cervical cancer awareness is generally low worldwide but worse in developing countries despite the increased prevalence of the disease in these countries.^[1,7-11] A previous population-based study conducted in Southwest Nigeria revealed that only 4.1% of women identified cervical screening as a way to prevent cervical cancer and over 97% had poor or no knowledge of its risk factors and/or symptoms.^[1] The main thrust of this study was to assess the level of awareness of cervical cancer among the respondents and also assess their personal perception of risk for the disease.

Methodology

This study was conducted at the General Outpatient Department of the Bowen University Teaching Hospital (BUTH) – a 232-bedded teaching hospital with facilities for primary, secondary, and tertiary health-care services – located in Ogbomoso, Nigeria. This was a descriptive cross-sectional study conducted between January 1 and March 31, 2014, among consenting, sexually active, women aged 20–65 years who attended the general outpatient clinic of BUTH.

Sampling method

One of the first four eligible patients attending the clinic was chosen randomly, and every subsequent fourth patient from this initial respondent was selected and interviewed. The research instrument was a semi-structured interviewer-administered questionnaire which was used to obtain information on the respondents' sociodemographic characteristics, education, marital and reproductive history, awareness of cervical screening modalities, and perception of risk for cervical cancer.

Ethical clearance was obtained from the Institution's Ethics Committee before commencing the study. The aims and scope of the study were properly explained to the patients and the fact that they will receive the best level of care in the hospital irrespective of their choice in taking part in the study.

Data management

The questionnaires were manually sorted out, cleaned, and coded. Data were entered into a computer and analyzed using Statistical Package for the Social Sciences version 23.0 for Windows. Frequency tables were generated for the different variables, and Chi-square statistics test was used to compare

rates and proportions for possible associations. The level of significance was set at $P < 0.05$.

Results

We analyzed the interview outcome of 318 participants whose mean age was 42.1 ± 8.8 years. Majority of the respondents (138, 43.4%) were between age 40 and 49 years, 293 (92.1%) were still married with 251 (78.9%) being in a monogamous setting. Most of them (283, 89%) belong to the Christian faith and more than half (162, 50.9%) had tertiary education. Only two (0.6%) of the respondents are current smokers [Table 1]. By age 19, 58 (18.2%) of them have become sexually active although the mean age of sexual debut was 23.5 ± 4.5 years. More than two-fifths of the respondents (43.1%) have multiple sexual partners whereas one-fifth is grand multiparous [Table 2].

History of foul smelling vaginal discharge and treatment options by respondents is as shown in Table 3. Among all

Table 1: Sociodemographic characteristics of the respondents

Characteristics	Frequency (%)
Age groups (years)	
20-24	9 (2.8)
25-29	17 (5.3)
30-34	40 (12.6)
35-39	49 (15.4)
40-44	69 (21.7)
44-49	69 (21.7)
50-54	39 (12.3)
55-59	8 (2.5)
≥60	18 (5.7)
Marital status	
Married	293 (92.1)
Separated/divorced	8 (2.5)
Widowed	17 (5.4)
Type of marriage	
Monogamy	251 (78.9)
Polygamy	58 (18.2)
Serial monogamy	9 (2.9)
Religion	
Islam	33 (10.4)
Christianity	283 (89)
Traditional	2 (0.6)
Tribe	
Yoruba	304 (95.6)
Ibo	7 (2.2)
Hausa	4 (1.3)
Other tribes	3 (0.9)
Educational level	
No formal education	14 (4.4)
Primary	53 (16.7)
Secondary	89 (28.0)
Tertiary	162 (50.9)

Table 2: Sexual and reproductive history

Variables	Frequency (%)
Age at first sexual intercourse	
15-19	58 (18.2)
20-24	120 (37.8)
25-29	102 (32.1)
30 and above	38 (11.9)
Number of sex partner (s)	
1	181 (56.9)
>1	137 (43.1)
Number of children ever had	
0-4	255 (80.2)
≥5	63 (19.8)

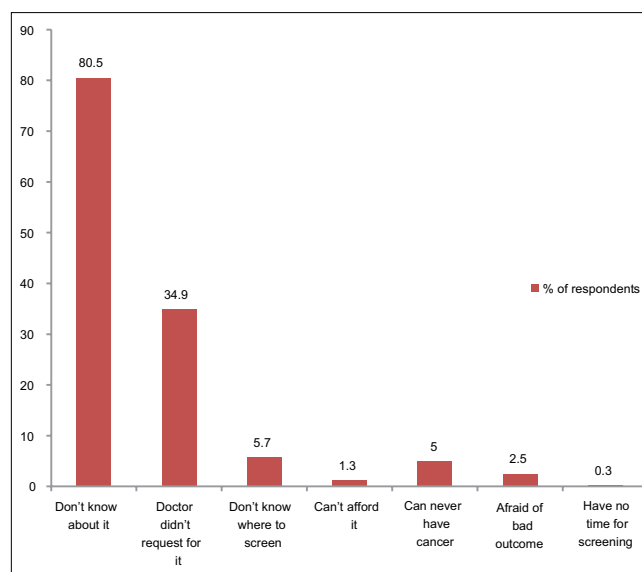
Table 3: History of foul smelling vaginal discharge and treatment

Variables	Frequency (%)
Ever had foul-smelling vaginal discharge	
Yes	131 (41.2)
No	187 (58.8)
How it was treated (n=131)	
Self-medication	26 (19.9)
Hospital/doctor	89 (67.9)
Chemist/pharmacy	16 (12.2)

the respondents, only 72 (22.6%) were ever aware of cervical cancer and the most common sources of information were through health talks and hospital staffs. Less than half of this group of respondents was aware that cervical cancer was common in Nigeria. The knowledge of the associated risk factors was equally poor among the respondents. However, having multiple sexual partners was clearly identified as a risk factor while postcoital bleeding was regarded as a symptom [Table 4].

Awareness of respondents about cervical cancer screening is as shown in Table 5. Only 57 (79.2%) of those aware of cervical cancer, less than one-fifth of the study population, were also aware of availability of screening program. Pap smear screening was the most common method identified (49, 68.1%) although ten (13.9%) were aware of visual inspection of the cervix with acetic acid. On perception of risk, 94.3% believed that they are not at risk of having cervical cancer although all the respondents agreed to be examined and screened for cervical cancer if given the opportunity. Only five (1.6%) of the study population had ever been screened, and all these were through the Pap smear method. Figure 1 illustrates the reasons why the remaining respondents were never screened.

Overall, respondents' attitude was positive to cervical cancer screening. Perception of risk is significantly associated with age ($\chi^2 = 20.05, P = 0.005$) and early coitarche ($\chi^2 = 10.46, P = 0.015$) [Table 6].

**Figure 1: Reasons why screening was never done**

Discussion

Our study aimed to determine the awareness and perception of risk for cervical cancer among women in the semi-urban area of Ogbomosho, Nigeria and found very low levels – 22.6% and 5.7%, respectively, which is similar to previous reports.^[1,5,8-13] The mean age of the women's sexual debut was similar to previously reported studies but higher than the report from Zaria, Northern Nigeria, where sexual activities and childbearing occurred at much younger age than the general population.^[12-14] In studies conducted recently among adolescents, Adeomi *et al.* and Olugbenga-Bello *et al.* found a mean age of sexual debut of 12.7 ± 2.7 years and 15.2 ± 1.62 years, respectively^[13,14] – a clear reflection of decline in age at coitarche, thereby suggesting a potential higher risk of exposure to human papillomavirus and by implication to cervical cancer. These studies also showed that adolescents who begin sexual activity early are likely to have sex with more partners and therefore being at greater risk of exposure to sexually transmitted infections.^[13,14]

The level of awareness is comparable to the levels of awareness found in the general female population in some other parts of Nigeria.^[15-17] Omotara *et al.* had reported an awareness level of 28.4% in Maiduguri, Northeast Nigeria^[15] but low levels of awareness were also found in Gwagwalada, Abuja, and Aba, Southeast Nigeria.^[15-17] This implied that the impact of current efforts at increasing awareness about cervical cancer is yet to have a positive effects on the populace, thus instigating an urgent need for a review of these approaches, identifying the challenges associated with the low awareness, and fashioning ways of overcoming them.

Table 4: Awareness of risk factors for cervical cancer

Variables	Frequency (%)
Perceived risk factors for cervical cancer*	
Early age at first intercourse	27 (37.5)
Having many sexual partners	41 (56.9)
Prolonged use of IUCD	6 (8.3)
Having partner who has other partners	25 (35.7)
Smoking	14 (19.4)
Perceived symptoms/signs of cervical cancer*	
Bleeding after intercourse	37 (51.4)
Foul smelling vaginal discharge	29 (40.3)
Irregular menstrual bleeding	19 (26.4)
Frequent passage of urine	5 (6.9)
Treatment options for cervical cancer*	
Chemotherapy	31 (43.7)
Radiotherapy	12 (16.9)
Surgery	28 (39.4)

*Multiple responses. IUCD - Intrauterine Contraceptive Device

Table 5: Awareness of cervical cancer and screening services

Variables	Frequency (%)
Awareness of cervical cancer	
Yes	72 (22.6)
No	246 (77.4)
Source of information*	
Hospital staff	31 (43.1)
Friends/relatives	8 (11.1)
Books/poster/magazine	24 (33.3)
Lectures	36 (50.0)
Radio/television	15 (20.8)
Others (church/internet)	6 (8.3)
Awareness about screening services for cervical cancer	
Yes	57 (79.2)
No	15 (20.8)
Cervical cancer is common among Nigerian women	
Yes	36 (50.0)
No	14 (19.4)
Don't know	22 (30.6)
Do you think you are at risk of cervical cancer?	
Yes	18 (5.7)
No	300 (94.3)
Ever had cervical cancer screening done?	
Yes	5 (1.6)
No	313 (98.4)
Reasons why screening was never done (313)	
Don't know about it	256 (81.8)
Doctor didn't request for it	111 (35.5)
Don't know where to screen	18 (5.8)
Can't afford it	4 (1.3)
Can never have cancer	16 (5.1)
Afraid of bad outcome	8 (2.6)
Have no time for screening	1 (0.3)

*Multiple responses

Similar to observations of wide disparity between the level of awareness of cervical cancer, awareness of screening

programs, and uptake of screening services from previous studies,^[1,11,16,18] this study found out that, although a little above one-fifth and just about one-sixth of the respondents were aware of cervical cancer and screening services, respectively, <2% had ever been screened for premalignant cervical lesion. This is a reflection of the paucity of available information on cervical cancer prevention, detection, and treatment which would have greatly influenced the desire for a reduction in the incidence and prevalence rates over time. On the contrary, the uptake of cervical cancer screening was generally high in most developed countries with organized screening programs.^[19,20]

According to Abiodun *et al.*, the most important barrier to reduction of cervical cancer burden is lack of awareness about the disease and its preventive measures.^[1] Studies from other parts of Nigeria and also from Zimbabwe and South Africa showed that most women were not aware of cervical cancer screening.^[16,21,22] This was corroborated in this study where >80% of those who are yet to be screened claimed they were never aware of cervical screening. However, some studies have suggested that awareness and knowledge of cervical cancer and screening do not necessarily translate to the uptake of cervical screening services because of confounders such as indifferent attitude of the individual and lack of access to screening.^[16,23] This may explain the other reasons given in this study by those who had never had cervical screening done, which includes not knowing where to do the screening, being afraid of a negative result or believing that they could not have the disease.

Successful implementation of screening depends on awareness and willingness on the part of women at risk.^[16,23] The fact that most of the women in this study had a positive attitude toward having vaginal examinations performed on them even when they had no symptoms and were willing to undergo screening is considered important. These findings underscore the importance of increasing the level of awareness and health education on cervical cancer and making screening services available, accessible, and affordable, thus positively influencing the uptake of cervical cancer screening among the women.

The most common source of information about cervical cancer and screening in this study was through the health workers with fewer efforts from the media which is in consonance with previous studies.^[1,24-26] It is of grave concern that the media play an insignificant role in disseminating information about cervical cancer information about cervical cancer which implies that intensifying efforts to increase the level of awareness of women and the entire populace may continue to achieve little impact until the mass and social

Table 6: Association between selected variables and respondents' perception of being at risk for cervical cancer

Variable	Perceived risk		χ^2	P
	Yes	No		
Age group				
20-24	3	6	20.051	0.005
25-29	2	15		
30-34	4	36		
35-39	1	48		
40-44	3	66		
44-49	1	68		
50-54	4	35		
55-59	0	8		
≥60	0	18		
Coitarche				
15-19	8	50	10.458	0.015
20-24	7	113		
25-29	2	100		
≥30	1	37		
Number of sexual partners				
1	7	174	2.529	0.112
≥1	11	126		
Number of children				
0-4	12	212	0.119	0.730
≥5	6	57		
History of foul-smelling discharge				
Yes	9	122	0.611	0.435
No	9	178		

media are thoroughly involved.^[27,28] The National Health Service has had to involve prominent public figures such as movie stars or music artists in disseminating information on cancer screening programs and recorded a significant increase in uptake of cancer screening.^[29] Thus, a well-funded media campaign could change the current picture in Nigeria.

It is, therefore, recommended that intense public health campaigns are conducted on a sustained basis in the provision of cervical cancer education with emphasis on its etiology, risk factors, and methods of prevention, especially the need for screening and vaccination as appropriate. A national screening guideline that encourages doctors to recommend screening services to eligible patients should be instituted. However, being a hospital-based study, complementary community-based studies may give a better picture of awareness and perception of risk for cervical cancer among women in the community.

Conclusion

The level of awareness of cervical cancer and screening is low among women attending the General Outpatient Clinic of BUTH, Ogbomoso. Women in this study population are at considerable risk of developing cancer of the cervix but are

poorly informed about the disease and its prevention, just like most women in the developing countries.

The knowledge of risk factors, symptoms, and prevention was also very poor. Consequently, the uptake of cervical cancer screening services was very low. The major barrier to the uptake of cervical cancer screening among the respondents was lack of awareness and knowledge about cervical cancer and its preventive measures. However, there was a positive attitude to screening as all the respondents agreed to vaginal examination by a health practitioner even when they did not have symptoms and also agreed to screening when given the opportunity. It is, therefore, very important to concentrate more effort on increasing awareness and enhancing the knowledge of women about cervical cancer and screening to step up the campaign for the control of cervical cancer in Nigeria.

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Conflicts of interest

There are no conflicts of interest.

References

1. Abiodun OA, Fatungase OK, Olu-Abiodun OO, Idowu-Ajiboye BA, Awosile JO. An assessment of women's awareness and knowledge about cervical cancer and screening and the barriers to cervical screening in Ogun State, Nigeria. *J Dent Med Sci* 2013;10:52-8.
2. Adewole IF, Benedet JL, Crain BT, Follen M. Evolving a strategic approach to cervical cancer control in Africa. *Gynecol Oncol* 2005;99:S209-12.
3. Ferlay J, Shin HR, Bray F, Forman D, Mathers C, Parkin DM, et al. Estimates of worldwide burden of cancer in 2008: GLOBOCAN 2008. *Int J Cancer* 2010;127:2893-917.
4. Denny L. Cervical cancer in South Africa: An over- view of current status and prevention strategies. *Contin Med Educ* 2010;28:70-3.
5. Albert S, Oguntayo O, Samaila M. Comparative study of visual inspection of the cervix using acetic acid (VIA) and papanicolaou (Pap) smears for cervical cancer screening. *Ecancermedalscience* 2012;6:262.
6. WHO/ICO Information Centre on HPV and Cervical Cancer (HPV Information Centre). Human Papilloma Virus and Related Cancers in Nigeria. Summary Report 2010. Geneva; 2010.
7. Olowookere SA, Abioye-Kuteyi EA, Airewele EP, Fasure HA, Fayose O, Onakpoma F, et al. Awareness and uptake of human papilloma virus vaccination and cervical cancer screening among female undergraduate students in Tertiary Institution in Nigeria. *Niger J Fam Pract* 2012;3:27-32.
8. Anorlu RI. Cervical cancer: The sub-saharan african perspective. *Reprod Health Matters* 2008;16:41-9.
9. Ogunbode OO, Ayinde OA. Awareness of cervical cancer and screening in a Nigerian female market population. *Ann Afr Med* 2005;4:160-3.
10. Chigbu CO, Onyebuchi AK, Ajah LO, Onwudiwe EN. Motivations and preferences of rural Nigerian women undergoing cervical cancer screening via visual inspection with acetic acid. *Int J Gynaecol Obstet* 2013;120:262-5.
11. Awodele O, Adeyomoye AA, Awodele DF, Kwashi V, Awodele IO, Dolapo DC, et al. A study on cervical cancer screening amongst nurses

- in Lagos University Teaching Hospital, Lagos, Nigeria. *J Cancer Educ* 2011;26:497-504.
12. Sule ST, Shehu MS. Cervical cancer management in Zaria, Nigeria. *Afr J Health Sci* 2007;14:149-53.
 13. Adeomi AA, Adeoye OA, Adewole A, Israel O, Temitayo-Oboh A. Sexual risk behaviours among adolescents attending secondary schools in a Southwestern State in Nigeria. *J Behav Health* 2014;3:176-80.
 14. Olugbenga-Bello AI, Adebimpe WO, Abodunrin OL. Sexual risk behaviour among in-school adolescents in public secondary schools in a Southwestern City in Nigeria. *Int J Health Res* 2009;2:243-51.
 15. Omotara BA, Yahya SJ, Amodu MO, Bimba JS. Assessment of the knowledge, attitude and practice of rural women of northeast Nigeria on risk factors associated with cancer of the Cervix. *Health* 2013;5:1367-71.
 16. Nnodu O, Erinsho L, Jamda M, Olaniyi O, Adelaiye R, Lawson L, *et al.* Knowledge and attitudes towards cervical cancer and human papillomavirus: A Nigerian pilot study. *Afr J Reprod Health* 2010;14:95-108.
 17. Feyi-Waboso PA, Kamanu C, Aluka C. Awareness and risk factors for cervical cancer among women in Aba, South-Eastern Nigeria. *Trop J Obstet Gynaecol* 2005;22:25-6.
 18. Balogun MR, Odukoya OO, Oyediran MA, Ujomu PI. Cervical cancer awareness and preventive practices: A challenge for female urban slum dwellers in Lagos, Nigeria. *Afr J Reprod Health* 2012;16:75-82.
 19. Lee-Lin F, Pett M, Menon U, Lee S, Nail L, Mooney K, *et al.* Cervical cancer beliefs and pap test screening practices among Chinese American immigrants. *Oncol Nurs Forum* 2007;34:1203-9.
 20. Klug SJ, Hetzer M, Blettner M. Screening for breast and cervical cancer in a large German city: Participation, motivation and knowledge of risk factors. *Eur J Public Health* 2005;15:70-7.
 21. Chirwa S, Mwanahamuntu M, Kapambwe S, Mkumba G, Stringer J, Sahasrabudde V, *et al.* Myths and misconceptions about cervical cancer among Zambian women: Rapid assessment by peer educators. *Glob Health Promot* 2010;17:47-50.
 22. Francis SA, Nelson J, Liverpool J, Soogun S, Mofammere N, Thorpe RJ Jr., *et al.* Examining attitudes and knowledge about HPV and cervical cancer risk among female clinic attendees in Johannesburg, South Africa. *Vaccine* 2010;28:8026-32.
 23. Ayinde OA, Omigbodun AO, Ilesanmi AO. Awareness of cervical cancer, papanicolaou's smear and its utilisation among female undergraduates in Ibadan. *Afr J Reprod Health* 2004;8:68-80.
 24. Owoeye IO, Ibrahim IA. Knowledge and attitude towards cervical cancer screening among female students and staff in a tertiary institution in the Niger Delta. *Int J Med Biomed Res* 2013;2:48-56.
 25. Ezem BU. Awareness and uptake of cervical cancer screening in Owerri, South-Eastern Nigeria. *Ann Afr Med* 2007;6:94-8.
 26. Were E, Nyaberi Z, Buziba N. Perceptions of risk and barriers to cervical cancer screening at moi teaching and referral hospital (MTRH), Eldoret, Kenya. *Afr Health Sci* 2011;11:58-64.
 27. World Health Organization (WHO). Prevention of Cervical Cancer Through Screening Using Visual Inspection with Acetic Acid (VIA) and Treatment with Cryotherapy. Nigeria: WHO; 2012. p. 1-33.
 28. Tackling Cervical Cancer: Improving Access to Cervical Cancer Services for women in Southern Africa; October, 2012. p. 1-84. Southern Africa Litigation Centre Report. Available from: <http://www.southernafricalitigationcentre.org>. [Last accessed on 2016 Nov 26].
 29. National Health Service (NHS). NHS Cancer Screening Programmes: Annual Review; 2009. p. 1-24. Available from: <http://www.cancerscreening.nhs.uk/topic/population-screening-programmes/cervical>. [Last accessed on 2016 Nov 29].