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Assessment of Cervical Cancer Health Literacy among Female Secondary School Teachers in Anambra State. Nigeria

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Abstract

Background: cervical cancer health information equips women with basic knowledge that enables them to take informed decisions to prevent and control infection. Cervical cancer awareness will help curtail the raising trend of cervical cancer disease among Nigerian women.

Purpose: the research was carried out to assess the cervical cancer literacy level of female secondary school teachers in Anambra State, Nigeria.

Design: it is a descriptive survey of 3,031 female secondary school teachers.

Findings: the research outcome shows that the respondent's cervical cancer health literacy level is low. This is in terms of their knowledge and awareness of the risk factors, signs and symptoms, and preventive and control measures of cervical cancer.

Originality/value: this is the first survey of secondary school female teachers' cervical cancer health literacy in Anambra State. The results may inform appropriate intervention based on reliable data.

Keywords: cervical cancer literacy, cervical cancer, health literacy, health information, female teachers, cervical cancer information

Paper Type: original research article.

Introduction

Cervical cancer is the second most common type of cancer for women worldwide. It is the cancer that starts in the cervix (National Cervical Cancer Coalition (NCCC), 2019). According to the National Cancer Institute (2018), cervix is the lower, narrow end of the uterus; the hollow, pear-shaped organ where a fetus grows), that leads from the uterus to the vagina (birth canal).

World Health Organisation facts sheet (2018) indicates that cancer of the cervix is mainly caused by a group of viruses identified as Human Papillomavirus (HPV), which are sexually acquired. Out of the over 100 types of HPV in existence, type 16 and 18 cause 70% of cervical cancers and precancerous cervical lesions. Human Papillomavirus which is extremely common worldwide is also the most common viral infection of the reproductive tract. Majority of the infections do not cause cervical cancer but are cleared within small space of time. Only persistent infection with mostly types 16 and 18 may lead to precancerous lesions and if untreated may progress to cervical cancer. This progression may take between 15 to 20 years in women with normal immune system and 5 to 10 years in women with weakened immune systems.

Though every women from the onset of sexual activity is at risk, women who are more vulnerable for HPV persistence and eventual development of cervical cancer are those that:-

1. use tobacco
2. have multiple sexual partners
3. have early first sexual intercourse
4. have immune suppression. (World Health Organisation, 2018).

Signs and symptoms of cervical cancer which tend to manifest only after the cancer had reached an advanced stage may include:

- a. irregular, inter-menstrual (between periods) or abnormal vaginal bleeding after intercourse.
- b. back, leg or pelvic pain.
- c. fatigue, weight loss, loss of appetite.
- d. vaginal discomfort or odorous discharge
- e. a single swollen leg.

Other more severe symptoms may also appear at more advanced stage, (World Health Organisation, 2018).

Cervical cancer is one of the most preventable types of cancers today (NCCC, 2019). For prevention and control measures World Health Organization (2018) recommends a comprehensive approach with five components which are:

1. community education
2. social mobilization
3. vaccination
4. screening
5. treatment and
6. palliative care.

Primary prevention begins with HPV vaccination of girls aged 9-13 years, before they become sexually active. Screening for abnormal cervical cells and precancerous lesions should involve sexually active women starting from 30 years of age.

Community education and social mobilization should target interventions like

- i. education about safe sex practices, including delayed start of sexual activity.
- ii. Promotion and provision of condoms for those already sexually active.
- iii. Warning about tobacco use.
- iv. Male circumcision (World Health Organisation, 2018).

Applying these preventive measures will be cost effective for the reduction of high mortality rate (52%) globally for cervical cancer especially in developing countries like Nigeria.

“Health literacy represents the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health” (World Health Organisation, 1998). It implies the achievement of a level of knowledge, personal skills and confidence to take action to improve personal and community health by changing personal lifestyles and living conditions. Poor health literacy can affect people’s health directly by limiting their personal, social and cultural development. Basically, health literacy involves accessing, understanding and ability to judge, sift and use information provided in the context of one’s own life (Nutbeam, 2000). It involves personal

skills and characteristics which translate positively or negatively to the larger society. The empowering of individuals with health literacy skills involves the processes of health education, health promotion and health communication.

Cervical cancer health information equips women with basic knowledge of the risk factors and so enables them to take informed decisions to prevent infection. It equips them with the skills of recognizing the early signs and symptoms and thereby empowering them to reap the benefits of its early detection. Cervical cancer literacy enables women to embrace timely vaccination and screening for control. The heavy burden of cervical cancer on families, nations and humanity can be reduced by raising its literacy level among the population especially women.

The teaching profession in post primary schools in Anambra State is dominated by women. Women by nature are role models. These female teachers have great influence on the students they teach, their colleagues, their own immediate families and the community. Their health literacy levels will directly and indirectly impact on the health of all these people around them.

Two major factors that help in the control of cervical cancer are vaccination and delayed onset of sexual activities among the young girls. The World Health Organization (2018), recommends vaccination for girls aged 9-13 years as the most cost effective public health measure against cervical cancer. This is because starting to have sex at a young age (before 17 years) increase infection rate as most people are infected with HPV shortly after the onset of sexual activities. At these age bracket girls are normally in secondary school and under the great influence of their teachers. So if teachers have adequate information on cervical cancer, translating same to the students for their action becomes expected.

Cervical cancer literacy is key to cervical cancer prevention, therefore raising the cervical cancer literacy of female teachers in Anambra State through this research will go a long way in saving the teachers themselves, the girl-child and the society at large.

Problem Statement/Justification

In 2012, about 270,000 women died from cervical cancer worldwide (World Health Organisation, 2018). Also every year approximately 528,000 women are diagnosed with cervical cancer (Kyounghae & Hae-Ra-Han, 2015). Cervical cancer predominately affects

women in countries with limited resources. About 85% of the global burden of cervical cancer and 87% cervical cancer-related deaths occur in developing countries including Nigeria (Wang, Carreon, Gomez, & Devesa, 2010).

Nigeria along with India, China, Brazil and Bangladesh represent 50% of the global burden of cervical cancer deaths. A further breakdown reveals that the mortality rate of cervical cancer in Nigeria is 22.9%. Of the 14,550 cases diagnosed in Nigeria, about 9,659 of them die (Cervical Cancer-free America, 2013). This means that out of every 100 women diagnosed of cervical cancer in Nigeria around 64 die. Worse still, it has been projected that by 2030, almost half a million will die of cervical cancer, with over 98% of these deaths expected to occur in low and middle income countries (Cervical Cancer-free America, 2013).

Cervical cancer scourge should therefore be treated as a health emergency in Nigeria. It is one cancer that experts had proven to be entirely preventable. These preventive measures include safe and efficacious vaccines that protect women against the viruses that cause cervical cancer. Then also screening tests are available. Other recommended preventive intervention had to do with lifestyle.

Are female teachers in Anambra State aware of these varieties of preventive measures against cancer of the cervix? Do they get enough cervical cancer health information to protect them, their families, students and community? Do they have enough of information to motivate them into preventive actions? What precisely do they know and what more do they need to know? What data are available to support intervention on cervical cancer health literacy knowledge building of female teachers in Anambra State? Are there available cervical cancer literature in their school libraries to boost their literacy? These and other related questions need be answered for a positive way forward.

It then becomes imperative at this time to assess the levels of knowledge of cervical cancer among female teachers in Anambra State. This is to inform appropriate plans and actions based on data by the State Ministry of Health, Federal Ministry of Health, World Health Organisation and all other stake holders and related health agencies. It will very importantly raise the cervical cancer awareness among the teachers in the state, and so invariably induce some preventive actions such as screening, and good sexual behavior among the teachers.

All of these will help in the curbing of the rising trend of cancer of the cervix in the State and country as a whole.

Objectives of the study

To help curb the burden of cervical cancer on the Nigerian nation, this study investigated the cervical cancer literacy level of female secondary school teachers in Anambra State for informed future interventions. To achieve this, the study was specifically designed to:

- a. Assess what the teachers know about the risk factors of cervical cancer.
- b. Find out what the teachers know about the signs and symptoms of the cancer of the cervix.
- c. Ascertain their knowledge of cervical cancer preventive and control measures.

Literature Review

Cervical cancer is the commonest genital tract malignancy in Nigeria (Feyi-Waboso, Kamanu, & Aluka, Chris, 2005). In a study they carried out on 200 Nigerian women attending the Gynecological out-patients department, they found out that:- the women's overall knowledge of cervical cancer was low and that only 32 women (16%) had any knowledge of pap smear services. They further found out that only 16 of these women had a pap smear performed on them, and that there was poor appreciation of personal risk of cervical cancer and safer sex practices.

According to Ayinde, Ogunbode, & Adebayo (2005), cervical cancer remains a leading cause of death among females in the developing world, with poor prognosis attributed to lack of awareness about the disease and its prevention. The result of their investigation into the determinants of cervical cancer knowledge and the utilization of screening among selected market woman in Western Nigeria, shows that: only 40.8% were aware of cervical cancer; 19.7% were aware of screening with Pap smear, while only 5.2% had previous Pap smear. In concluding their report, they identified the need for more intensive awareness campaign among market women and the general public, especially among the identified categories of the women who are less likely to have knowledge of cervical cancer and screening.

From July 2007, Eze, et al. (2016), carried out a research on cervical cancer awareness and cervical cancer uptake at the Mater Misericordiae Hospital, Afikpo, South East, Nigeria. Their objective was to assess the awareness of cervical cancer among Igbo women in a rural

population and determine their uptake of cervical cancer screening services. It was a questionnaire – based descriptive cross- sectional study. The result indicated low levels of awareness of cervical cancer (37.5%) and screening uptake (0.6%), while exposure to conditions that predispose women to cervical cancer was high.

In another study Nwozor & Oragudosi (2013) probed the awareness and uptake of cervical cancer screening among women in Onitsha, Anambra State, Nigeria. They collected data using close- ended structured questionnaire. The result showed that awareness was very low (35.56%), while uptake was poor (1.78%).

Balogun, et.al (2012) conducted a study on the awareness of cervical cancer, attitude towards the disease and screening practices of women residing in two urban slums in Lagos, Nigeria. They used multistage sampling to select 240 women who were interviewed with a structured questionnaire. The investigation found out that only 10 (4.2%) women in the study were aware of cervical cancer, while none of them believed they were at risk of developing the disease.

Association between Knowledge of Cervical Cancer/Screening and Attitude of Teachers to Immunization of Adolescent Girls with Human Papilloma Virus Vaccine in Abakaliki, Nigeria, is the title of a study conducted by Ajah et al (2015). It was a cross-sectional questionnaire based study involving a total of 412 secondary school teachers. The aim was to describe the knowledge of secondary school teachers in Abakaliki of HPV vaccination, and determine if the attitude of teachers supports a possible role for teachers in promoting the uptake of the vaccine. The result shows that a good majority of the respondents (78%) were aware of cervical cancer and approximately 70% of these people who were aware were willing to recommend the HPV vaccination to children under their care.

Njelita et al. (2016) carried out a research titled: How Effective is Health Education on the knowledge of Cervical Cancer Risk and Practice of its Preventive Measures Among Female Primary School Teachers in Urban Anambra State, Nigeria. The objective of the study was to determine the effect of health education on knowledge of cervical cancer and practices of its preventive measures among female primary school teachers. It was carried out in Awka South and Nnewi North Local Government Areas of Anambra State. They used self- administered

questionnaire to collect data from the respondent (both intervention and control groups). The study provided evidence that such targeted health education programme on cervical cancer and screening benefits would not only adequately increase the knowledge and awareness among women, but also has the capacity to improve the uptake of cervical screening test.

The reviewed literature exposed the following gaps:

- a. comprehensive cervical cancer literacy assessment study on women in Anambra State is scanty. Most studies focused on screening tests.
- b. female secondary school teachers in Anambra State did not form the focus of the studies as most of them were conducted in other states of the federation.
- c. majority of the local government areas of the state are excluded from the studies.

It is these gaps that the present study titled “cervical cancer health literacy among female secondary school teachers in Anambra State” intended to fill.

Methodology

Area of the Study

The area of this study is Anambra State. Anambra State is located in the South East geographical Zone of Nigeria. It is an Igbo State whose citizens are known for their industry and enterprise in all spheres of human endeavour including education. The schools are grouped under six administrative educational zones under the State Ministry of Education. One hundred and seventeen (117) secondary schools in eight local government areas were covered. The local government areas are Aguata, Awka South, Aniocha, Njikoka, Nnewi North, Idemili North, Onitsha and Oyi. The schools are dominated by female teachers, all of whom need health information literacy for healthy living. All the female teachers therefore qualified as respondents for this cervical cancer literacy study.

Population of the Study

All the 3,031 female teachers in the eight local government areas of Anambra State consisted the population of the study. They are the first eight local government areas with the highest concentration of female teachers. The eligibility criteria were that the respondents must be females and teaching in secondary schools in the state. All the ranks of female teachers with their varying responsibilities in the system participated.

Sample and sampling technique

All the 3,031 female teachers in the eight selected local government areas were used for this study. This is because the entire population was relevant to the study and also needed to benefit.

Instrument for Data Collection

Survey design, using questionnaire to elicit pertinent data from the respondents was used. The questionnaire was adapted from the Cervical Cancer Awareness Measure (CAM 2011, version 2.1) Toolkit. The instrument was developed by the Health Behaviour Research Center of the University College, London and Cancer Research UK in collaboration with other partners.

The Questionnaire which was slightly modified for this study was in four sections as follows-:

Section I: Socio-demographic Questions (9 items)

Section II: Risk Factors (11 items)

Section III: Signs and Symptoms (10 items)

Section IV: Screening and control (18 items)

This instrument tagged “Cervical Cancer Literacy Assessment Questionnaire” (CECALAQ) had 48 items in all (appendix).

Method of Data Collection

The copies of the questionnaire were personally delivered through the researcher and research assistants (RAs). One research assistant was assigned to each of the eight local government areas of the state, while in areas with more than ten schools 2 research assistants were assigned. The Research Assistants were properly trained on the content of the questionnaire and skills for getting the respondents fill them out properly. The teachers were required to fill in questionnaire copies immediately they were given to them and collected back.

Method of Data Analysis

The researcher used both descriptive and inferential statistical methods to analyze the data collected. Frequency counts, mean ratings and percentages were used in answering all the

questions in the four sections of the questionnaire. Statistical Package for Social Sciences (IBM, SPSS statistics 22.0) was used to analyse the data.

Decision rule for dimensions of cervical cancer literacy:

Cervical Cancer Risk factors (11 items)

>5.50 = Low awareness

5.50 -7.60 = moderate awareness

Above 7.60 = High awareness

Cervical Cancer Signs and Symptoms (10 Items)

> 5.00 = Low awareness

5.00 - 6.90 = moderate awareness

Above 6.90 = High awareness

Cervical Cancer control measures (14 Items)

> 7.00 = Low awareness

7.00 - 9.50= moderate awareness

Above 9.50 High awareness

Overall Cervical Cancer Literacy (35 Items)

Below 17.50 = Low literacy

17.50 - 24.00 = moderate awareness

Above 24.00 = High awareness

Clearance/Approvals

Approval for this research was sort and obtained from the Anambra Sate Ministry of Education, Ministry of Health, Post-Primary Schools Service Commission, and offices of the six educational zones of the state.

Results:

Visits were carried out from the month of October, through November 2017, to 117 institutions. Two thousand one hundred and eighty-six properly filled copies of the questionnaire were studied.

Table 1: Mean score on awareness of Risk Factors

	N	Range of Scores	Mean	SD	Remark
Cervical Cancer Risk Factors	2186	0 – 11	3.69	3.24	Low

As shown in table 1, the mean score of 3.69 shows that the respondents' awareness of the risk factors associated with cervical cancers is low.

Table 2: Mean score on awareness of signs and symptoms

	N	Range of Scores	Mean	SD	Remark
Cervical Cancer Signs and Symptoms	2186	0 - 10	3.05	3.15	Low

The mean score of 3.05 in table 2, shows that respondents' awareness of signs and symptoms associated with cervical cancers is low.

Table 3: Mean score on awareness of Screening and Control measures

	N	Range of Scores	Mean	SD	Remark
Cervical Cancer Screening and control	2186	0 - 14	3.81	3.34	Low

Table 3 shows the mean score of 3.81 which is an indication respondents' awareness of the screening and control measures associated with cervical cancers is low.

Table 4: Mean score on cervical cancer literacy

	N	Range of Scores	Mean	SD	Remark
Cervical cancer Literacy	2186	0 - 35	10.56	8.20	Low

As displayed in table 4, the mean score of 9.91 shows that the respondents' cervical cancer literacy is low.

Table 5: Percentage Distribution of Respondents' based on their Cervical Cancer Literacy Level

	Frequency	Percent
Low	1707	78.1
Moderate	347	15.9
High	132	6.0
Total	2186	100.0

Table 5 shows that greater proportion of the respondents (78.1%) have low level of cervical cancer literacy while only 6% of the respondents have high cervical cancer literacy.

Table 6: Respondents rating of their Library's collection on cervical cancer?

	Frequency	Percent
Rich	106	5.4
Fair	366	18.8
Poor	370	19.0
Very Poor	485	24.9
None Existent	619	31.8
Total	1946	100.0

Table 6 shows that greater proportion of the respondents (31.8%) who have school libraries indicated that cervical cancer materials are in their libraries. 24.9% of the respondents rated their library collection on cervical cancer as very poor while, 19.0% rated theirs as poor. 18.8%

and 5.4% of the respondents rated their library collection on cervical cancer as fair and rich respectively.

Discussion

Chances of women developing cervical cancer increases with certain practices and lifestyles. Smoking; long term use of contraceptives; having many children; having many sexual partners; starting to have sex before age 17 and having a sexual partner who is not circumcised are among the practices. These risk factors are not known by most of the female secondary school teachers in Anambra State as revealed by this study. This is in line with the findings of the research by Feyi- Waboso, Kamanu and Aluka (2005), in which the women studied had very poor appreciation of personal risks of cervical cancer and safer sex practices. This low level of awareness is a dangerous trend that requires urgent stakeholders' intervention.

Early detection and avoidance of morbidity and mortality stems from the knowledge of the signs and symptoms of cervical cancer. Again this study recorded respondent's low awareness of these signs and symptoms including-: vaginal bleeding between periods or during and after sex; persistent pelvic or lower back pain; blood in the stool or urine; vaginal bleeding after menopause; discomfort or pain during sex and persistent vaginal discharge that smells unpleasant. This implies that whenever these teachers or their family members experience any of these signs they may mistake them for something else or treat them with levity and so may not seek the required urgent medical attention.

The fact that there is vaccination for the prevention of cervical cancers and Pap smear tests for its control were unknown to most respondents. Vaccination and screening services are also offered in some health facilities in the state. It is appalling that teachers who are supposed to be among the enlightened class are mostly unaware of these cervical cancer screening and control facilities available in the state. This explains why as much as 1,803 (82.5%) of the teachers had never had a Pap smear. This was followed by those who have had it in over 3 years (7.3%). Those who have had it in the last 6 months made up 4.4% of the respondents, followed by those who have had it 2 years ago (4.3%) and a year ago (1.5%). In the same way, Ayinde, & Adebayo (2005) and Eze et al. (2016) from their studies recorded low screening uptake of 5.2% and 0.6% by their respondents respectively.

Overall, cervical cancer literacy level of the respondents is low. This rating is based on the means of 3.69 for their awareness of the risk factors; 3.69 for their awareness of the signs and symptoms and 3.81 for their awareness of the screening and control measures. This low cervical cancer health literacy recorded among female teachers in Anambra State collaborates the findings of three earlier studies in Nigeria-: Nwozor &Oragudosi (2013); Balogun et al (2012) and Eze et al (2016). In contrast, the study by Ajah et al (2015) of secondary school teachers in Abakaliki indicates that majority of the respondents (71%) are cervical cancer literate.

Future research on cervical cancer health literacy in Anambra state needs focus on existing sources of cervical cancer health information dissemination, the stakeholders involved and the possibilities of stepping up campaign for effective awareness. Limitations of the findings include the respondents' unfamiliarity with the subject and its terminologies which may have hindered clarity and understanding.

Recommendations

Rising trend of cervical cancer in Nigeria should be controlled through systematic activities by ministries of health at national, state and local government levels. Intensive awareness campaign is cost effective and should be embraced at all levels. These should be planned and sustained by domesticating World Health Organisations's guidance note on cervical cancer. Considering the burden of cervical cancer and the knowledge gap revealed by this study school and public libraries should be stocked with its literature appropriate for teachers and students.

Conclusion

Reliable data has been generated by this comprehensive cervical cancer literacy assessment study on women in Anambra State. The study has established low cervical cancer literacy status among female secondary school teachers in the state. This was assessed from their low knowledge of cervical cancer risk factors, signs and symptoms and control measures. Effective cervical health information dissemination is therefore the key to its control. Results from the study provides an informed bases for intervention by local, state, national and international health agencies for rapid impact.

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