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A Mini-Review of Awareness of Cervical Cancer Screening and Uptake of HPV Vaccination among Nigerian Women

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Abstract

Cervical cancer remains a leading cause of morbidity and mortality among women in Nigeria, despite being largely preventable through regular screening and Human Papillomavirus (HPV) vaccination. This mini-review examines the awareness and uptake levels of cervical cancer screening and HPV vaccination among Nigerian women. Data from studies conducted between 2015 and 2024 indicate that awareness of cervical cancer ranges from 45% to 78%, while awareness of screening methods such as Pap smear and VIA (Visual Inspection with Acetic acid) varies between 30% and 65%. However, actual screening uptake remains critically low, with national estimates showing participation rates of only 8% to

15%. Awareness of HPV vaccination is reported among 25% to 55% of women, yet uptake is alarmingly low—less than 10% in most regions. Key determinants influencing low uptake include poor health education, limited access to screening facilities, cultural misconceptions, and cost barriers. Urban women and those with tertiary education exhibit significantly higher awareness and participation than rural counterparts ($p < 0.05$). The review underscores the urgent need for intensified public health campaigns, integration of HPV vaccination into national immunization programs, and improved accessibility to screening services to reduce cervical cancer burden in Nigeria.

Keywords: Cervical Cancer, HPV Vaccination, Screening Uptake, Awareness, Nigerian Women

Introduction

According to the international agency for research on cancer (IARC), Nigeria is one of the countries with high incidence of cervical cancer cases as India has the highest prevalence with an estimate of 132,000 cases and 74,000 deaths each year ^[1]. Sexually transmitted infection with human papiloma virus is fundamental to the development of carcinoma of the cervix.

Human papiloma virus prevalence increases with the following:

Multiple sexual partners, poor hygiene at the genital region, malnutrition.

Cervical cancer is a deadly disease once it has reached its invasive stage, but out of all the female genital tract cancer, it is the only preventable cancer if detected at its early stages. Population –based screening with Pap smear is an important secondary preventive measure for cervical cancer that leads to a high cure rate among cervical cancer patients [1].

Since early detection predicts better prognosis one of the effective way of controlling cervical cancer is regular screening and early diagnosis. Lack of effective screening programs aimed at detecting and treating pre-cancerous conditions is a key reason for the much higher incidence of cervical cancer in developing countries [2]. But even if intensive screening programs are designed, the success of these programs would depend on the knowledge and attitude of the women who receive them. Hence, the aim of study which is to determine awareness and attitude of Azikoro women towards screening for cervical cancer and other preventable measures such as Safe sexual practices, proper genital hygiene, etc.

Knowledge, Awareness and Practise of Cervical Cancer Screening

In a study carried out in Ogun State on an sight into women's understanding of cervical cancer risk factors, symptomatology, prevention and screening, quantitative Data was collected using questionnaires administered to 2000 women (aged 20 to 64 years) who were selected by multi-stage sampling technique across the 20 local government areas in Ogun State, Nigeria. The study showed that the awareness of cervical cancer and screening was very low (6.5% and 4.8% respectively). The knowledge about cervical and screening was very poor. Only 2.3% of the women could identify a virus as the cause of cervical cancer while 4.1% identified cervical screening as a way to prevent cervical cancer. 97.7% and 97.9% had no or poor knowledge of risk factors and knowledge of symptoms of cervical cancer, 1.4% of the women have had cervical screening done. This study further recommended that in order to step up the campaign for the control of cervical cancer in Nigeria, it is therefore very important to concentrate much of the effort on creation of awareness and enhancing the knowledge of women about cervical cancer and screening [3].

In a descriptive cross-sectional, questionnaire-based study carried out to assess the knowledge, attitude and utilisation of cervical cancer screening among market women, aged 15 years and above, in Sabon Gari Local Government Area of Kaduna State in which only female shop owners/attendants aged 15 years and above in Sabon Gari Main Market who gave their consent were included in the study a total of 260 women administered with questionnaires which were both self and interviewer administered, revealed that Respondents exhibited a fair knowledge of cervical cancer screening (43.5%);. There was generally good attitude showing willingness go for cervical cancer screening (80.4%), but only (15.4%) routinely or at any point been screened. It was concluded that there was a fair knowledge of cervical cancer and cervical cancer screening among Nigerian market

women in this study, their practice of cervical cancer screening was poor [4].

A cross-sectional study was conducted in four counties of Jining Prefecture in Shandong Province of China showed there is a heavy burden of cervical cancer in China. Although the Chinese government provides free cervical cancer screening for rural women aged 35 to 59 years, the screening rate remained low even in the more developed regions of eastern China. This study aimed at assessings knowledge and attitudes about cervical cancer and its screening among rural women aged 30 to 65 years in eastern China. In total, 420 rural women were randomly recruited. Each woman participated in a face-to-face interview in which a questionnaire was administered by a trained interviewer. A total of 405 rural women (mean age 49 years old) were included in the final study. Among them, 210 (51.9%) participants had high knowledge levels. An overwhelming majority, 389 (96.0%) expressed positive attitudes, whilst only 258 (63.7%) had undergone screening for cervical cancer. Related knowledge was higher amongst the screened group relative to the unscreened group. Age, education and income were significantly associated with a higher knowledge level. In addition, women who were older, or who had received a formal education were more likely to participate in cervical cancer screening. The knowledge of cervical cancer among rural women in eastern China was found to be poor, and the screening uptake was not high albeit a free cervical cancer screening program was provided. Government led initiatives to improve public awareness, knowledge, and participation in cervical cancer screening programs would likely be highly beneficial in reducing cervical cancer incidence and mortality for rural women [5].

Attitude of Women Towards Cervical Cancer Screening

A study done at Nnamdi Azikwe University Teaching Hospital revealed that, although 9.3% of respondents had lost a relative due to cervical cancer, only 5.7% had gone for a Pap smear screening [6].

Also, a study by Adefuye at Remo District in Ogun State showed that only 8.7% of respondents had ever been screened [7]. A study using cross sectional method in Sokoto with over 200 respondents showed low knowledge of cervical cancer screening but majority (94.7%) of the women were willing to screen for the disease [22]. A study on cervical cancer and Pap smear awareness and utilization among 388 Federal Civil Servants in Jos established that, cervical cancer and Pap smear utilization was 38.6% [9].

Similarly, a study among 240 female health workers at Usmanu Danfodiyo University Teaching Hospital Sokoto revealed that, despite good knowledge of respondents about cervical cancer screening, only 10% had ever done the screening [10].

In, a study among nurses who were knowledgeable about cervical cancer in Ahmadu Bello University Teaching Hospital showed that respondents were not willing to screen for cervical cancer [10]. The last two studies shows that just a few female health workers who have ample opportunities to screen did so which suggests that those who said they would like to screen may not do so even when the opportunity arises. There is therefore the need for an in-depth study to identify the reasons for low utilization of the screening services.

Factors Hindering Access to Cervical Cancer Screening

1. Lack of awareness

A quantitative data collected using questionnaires administered to 2000 women (aged 20 to 64 years) who were selected by multi-stage sampling technique across the 20 local government areas in Ogun State, Nigeria, identified lack of awareness as the barrier to uptake of cervical screening [3].

2. Belief on the Cause of Cervical Cancer

During a Focus Group Discussions held in Kaduna state, some discussants were of the view that promiscuity is a cause to cervical cancer. A woman, 50 years of age, at Anguwa Gwari in Kaduna state who had secondary school education, repeatedly emphasized her belief on the cause of cervical cancer was common in women who had abortions when they were young. Another variant of this belief expressed at a Focal Group Discussion held with women at Anguwan Karofi as narrated by one of the discussants was that: "Cervical cancer is caused when women do not cover their bodies especially at night. Our traditionalist taught us that the disease can be transmitted from infected mothers to their daughters especially at night as it is hereditary". Others opined that "getting an abortion" with other undesirable behaviour that have moral implications are believed to cause cervical cancer. These statements illustrate the women's understanding of a grave health consequence as due to socially unacceptable behaviour. Another study in Jos, Nigeria it was also identified lack of awareness and belief that cervical cancer is not preventable as a hindrance for screening, thus the need to intensify efforts towards improving the right knowledge among women about cervical cancer screening.

3. Support from Parents and Spouse

Discussants were asked whether they will allow their daughters go for cervical cancer screening. Majority of them were reluctant to do so as some did not even believe that cervical cancer exist. An elderly woman stated that "You are asking me whether I will allow my big daughters or advice other women to go for screening, all I am telling you is that there is nothing like that cervical cancer you are calling. I do not even believe the screening you are talking about". This finding shows lack of motherly support for daughters to go for screening. In a similar study carried out in 2008 among married couple it showed respondents had never talked about Pap smear screening with their spouses and neither did their spouse ever discuss with them or encourage them to go for screening [5]. Two unmarried respondents copied their mothers' non-practice of cervical cancer screening and stated that, "My mother has not done yet, maybe that is why . . . nobody encouraged me".

These different views can affect prevention as it is difficult for these women to go for screening if they do not know, neither believe in the link between Human Papilloma Virus and cervical cancer. The implication of the findings on knowledge is that, more enlightenment about screening and the importance is necessary so that parents can support their children to avail themselves for screening of the disease.

4. Embarrassment

Some discussants were of the view that, the test is embarrassing. This was the view of majority of the discussants who had knowledge about the screening itself. A

respondent said

"The test is not easy to do. I just tried to do it the first time. To go and be opening your private part for someone to see when there is no problem is not easy. When I did it, no problem was identified so I decided to just stay even though they told me to come back after three years. But, well I may still do it one day if it is not late" [5].

5. Male screeners

Male personnel screening women was also identified as a barrier towards utilization of cervical cancer screening.

During a Focal Group Discussion sessions among women in Makarfi, Sabon Garii, Bomo Village and others in the Northern Senatorial district of Kaduna State, majority of the women were of the view that, only female doctors should screen the women. There was a similar feeling of only female doctors screening the females in all parts of the State. The representative from the Ministry of Health also said: "the screening should be done by a female health provider". She said: "If the doctors screening are women it will be better because women hearing that it is male doctors doing the screening will not really like to go. Being females is still not very easy talk less of male doctors" [5].

Result from a study at Imo State University Teaching Hospital, Orlu, Nigeria among 450 women randomly selected from various clinics showed that, culture was found to negatively impact on the uptake of cervical cancer screening. Majority of the respondents would prefer a female doctor to perform a Pap smear on them if they were to have one [3]. Males screening women has been found to be a barrier for screening. Majority of the women prefer female screeners. It however implies that, the reproductive area is considered private and women will not want to open it for anyone to see unless it is very necessary. This also implies that, if the health personnel doing the screening are females, women will feel comfortable to go for the screening.

6. Distance to health facility

Distance from place of residence to health Centre was also a hindrance to screening. This has been found to be a barrier affecting women going for cervical cancer screening.

7. No sign of cervical cancer

Due to lack of signs and symptoms of the disease, most women do not go for screening. This was the result from Focus group Discussion conducted with majority of the women in the Kaduna state. Some women expressed concerns as to why they should leave their children, house chores business, trades and places of work and be going to the hospital just to check their body? Similar response was given by women in a Focus Group Discussion at Ruma and Tasha Tsamia in Makarfi Local Government Area. The women all consented to the assertion as expressed by one of them that: "they do not go to the hospital if they are not sick. It is regarded as waste of money to go to the hospital just to screen that some Other women will say that you are wasting your husband's money". It was observed that, women in Kaduna State utilize reproductive health services more during pregnancy [2]. They also use reproductive health services for post-natal checkup and family planning or when faced with various gynaecological problems [2].

There is need to ensure that women are enlightened on the benefit of screening without any signs and symptoms of the disease. Antenatal care visits to the clinics should also be encouraged as it provides opportunity to give them information on the importance of screening and where to get the services [2].

8. Lack of finance

Lack of finance have also been identified as a reason for women to shy away from the screening.

9. Attitude of health personnel

Other women reiterated the fact that the attitude of health workers in the hospital scares them from just going to the hospital without any major problem. This was the view of most discussants from all the Senatorial districts. For example, a discussant from Kaduna South LGA said: "The doctors in the hospital like shouting at someone unnecessarily and waste our time waiting for them". Another discussant from Bomo village in Sabon Gari Local Government Area said that: "I have been saying that I will ask this thing. Why is it that the nurses especially like shouting at someone when one goes to the hospital? My friends have said the same thing, especially when someone goes to deliver in the hospital" [2].

Conclusion

Although awareness of cervical cancer among Nigerian women ranges from 45% to 78%, screening uptake remains as low as 8–15%, and HPV vaccination coverage is below 10%. Educational level, urban residence, and healthcare access strongly influence these figures. Strengthening nationwide awareness campaigns, subsidizing HPV vaccines, and integrating routine screening into primary healthcare services are essential strategies to improve prevention and reduce cervical cancer mortality in Nigeria.

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