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No Derivative Works 2.5 India License**Original Article:****Awareness and Utilization of Cervical Cancer Screening among Women in an Urban Area in Southwestern Nigeria****Authors:****Deborah Tolulope Esan**, Senior Lecturer, Department of Nursing, College of Medicine and Health Sciences, Afe Babalola University Ado-Ekiti, Nigeria,**Ayodeji Akinwande Fasoro**, Lecturer, Department of Public Health, College of Medicine and Health Sciences, Afe Babalola University Ado-Ekiti, Nigeria,**Fayokemi Mary Olaiya**, Undergraduate student, Department of Nursing, College of Medicine and Health Sciences, Afe Babalola University Ado-Ekiti, Nigeria,**Cecilia Bukola Bello**, Lecturer, Department of Nursing, College of Medicine and Health Sciences, Afe Babalola University Ado-Ekiti, Nigeria.**Address for Correspondence****Ayodeji Akinwande Fasoro**,Department of Public Health,
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Abstract: Introduction: Cancer of the cervix is the commonest cause of cancer death in women worldwide. This study assessed the awareness level and pattern of utilization of cervical cancer screening test among women of different professions in Ado-Ekiti, Nigeria. Methods: A descriptive cross-sectional design was used and respondents were selected from four different professions. Results: About 40% of respondents had heard of cervical cancer prior to the survey and only 40.5% were aware of cervical screening tests. Among those who were aware of the screening tests, 16% had ever utilized cervical cancer screening tests. Conclusion: This study established low cervical cancer awareness level and low utilization rate of cervical cancer screening among respondents. Therefore, there is need for sustained and concerted community health awareness most importantly at the grassroots in order to increase awareness and utilization rate of cervical cancer screening among the sampled populace.

Key Words: Cervical cancer, Awareness, Utilization, Screening

Introduction:

Cancer of cervix is the second most common cancer affecting women globally and also the most common cancer in developing countries (1). These cancerous lesions begin in the epithelia lining of the cervix. Most of the time, these cells do not transform suddenly into cancer cell but first of all appear as precancerous lesions which are detectable by screening. These lesions are detectable by Pap smear and sometimes by visual acetic staining (2).

Cervical cancer incidence has remained steady in developing countries with more and more cases seen as years rolled by, whereas in developed countries, cancer of cervix has declined significantly over the last two decades. A review showed that

an average of 19% of women in developing countries have been screened for cervical cancer as against 63% of women in the developed countries (3). The question is why are reproductive age women not going for screening in developing countries? Could this be attributed to misconceptions, misused idea and negative beliefs about cervical cancer or rather as a result of ignorance about existing/available screening services? Reports from previous study have revealed that women who are not screened are at a higher likelihood of having cervical cancer (4). This has made it paramount to continue to investigate reasons for low utilization rate of cervical cancer screening in Nigeria. Up-till date cervical screening face serious challenge in the developing countries, as lack of resources and lack of awareness limits its coverage (5). Women's knowledge is also implicated in screening uptake and this is necessary in order to facilitate uptake. Studies have revealed that low awareness level of cancer of cervix and its prevention is likely to limit uptake of screening (6,7,8). In a study conducted by among health professionals in Nigeria; the study revealed low uptake of cervical cancer screening. It is noteworthy that, in spite of adequate knowledge of this group of professionals on the importance of cervical cancer screening test, uptake was still low (9).

The problem posed by cervical cancer in Nigeria cannot be ignored, as any of the affected women report to hospital late when cancer prognosis is poor as a result of the cancer cells leaving their primary tumor site to infiltrate surrounding tissues and also distant organs in the body. This has reduced the survival rate of cancer related deaths in Nigeria. Moreover, there is high risk of developing cancer of the cervix among women of reproductive age and among sexually active teenagers, yet awareness of the disease is low. Uptake of

screening services for cervical cancer is done by only few who know about cervical cancer screening and its importance (10). It has been reported that women in Nigeria are not adequately informed about the disease, the predisposing factors, and are uncertain about the importance of the screening tests. Women also hold negative belief and perception about screening tests (11). This present work therefore assessed the awareness level and utilization pattern of cervical cancer screening among women in Ado-Ekiti, Ekiti State, Nigeria.

Materials and Methods

The study employed a descriptive cross-sectional design. The study was conducted among women belonging to three different professions in the city of Ado-Ekiti. The participants included in this study were teachers, bankers and artisans. Teachers were recruited from Afe Babalola International Schools Ado-Ekiti and the Federal Polytechnic Staff School Ado-Ekiti. Afe Babalola International Schools comprise the primary and secondary schools. The Federal Polytechnic Staff School Ado-Ekiti has only a primary school. Female bankers from selected banks in Ado-Ekiti were recruited for the study. Female artisans (traders, tailors and hairdressers) were recruited for the study within Afe Babalola University community. The sampling technique used was purposive sampling technique. Sample size was computed using the Cochran equation in Fischer's formula,

$$n = [Z^2 \cdot p \cdot (1-p)] / d^2$$

Where, n is the desired sample size required, Z is the standard normal deviate corresponding to 95% confidence interval, P is the proportion of attribute (16%) obtained from a study conducted in South-Eastern part of Nigeria (12) and d is the margin of error of 5%. The estimated sample size required (n) was 206 participants.

The research instrument was an adapted semi-structured questionnaire. The questionnaire was self-administered to the participants to assess their awareness level and utilization of screening tests of cervical cancer. Relevant questions about the study were constructed in such a way that would provide relevant information about the study. The questionnaire was self-administered to 206 participants. The questionnaire contained three sections: section A contained the demographic profile of participants and it includes age, educational level, marital status, occupation, religion and ethnicity; section B contained questions on awareness level of respondents on cancer of cervix and its screening tests. Items included in this section assessed the respondents' awareness of the predisposing factors of cancer of the cervix, probable cause of cervical cancer, signs and symptoms of the disease, prevention and screening tests; and section C contained questions on utilization level/uptake of screening tests by respondents. After obtaining both written and verbal consent from the participants, the self-administered questionnaires were distributed to the participants at Afe Babalola University, Afe Babalola International Schools, Federal Polytechnic Staff School, and selected banks in Ado-Ekiti. The period of data collection lasted for three months (December 2017 – February 2018). Data were analyzed with SPSS version 20 using descriptive statistics.

Results

Socio-demographic demographic profile of respondents is presented in Table 1. The mean age of the respondents was 29.7±5.8 years. Majority were between ages 21 – 30 years (54.9%), had tertiary education (71.8%), married (58.7%), Christians (84.0%), and belong to the Yoruba ethnic group (79.6%).

| Table 1: Demographic Profile of respondents | | |
|---|-------------------|----------------|
| Item | Frequency (n=206) | Percentage (%) |
| Age | | |
| Less than 21 | 8 | 3.9 |
| 21-30 | 113 | 54.9 |
| 31-40 | 77 | 37.3 |
| 41 and above | 6 | 2.9 |
| Missing data | 2 | 1.0 |
| Mean age ± Standard deviation | 29.7±5.8 | |
| Level of education | | |
| Primary | 4 | 1.9 |
| Secondary | 51 | 24.8 |
| Tertiary | 148 | 71.8 |
| Missing data | 3 | 1.5 |
| Marital status | | |
| Single | 58 | 28.2 |
| Married | 121 | 58.7 |
| Divorced | 5 | 2.4 |
| Separated | 12 | 5.8 |
| Missing data | 10 | 4.9 |
| Religion | | |
| Christianity | 173 | 84.0 |
| Islam | 30 | 14.5 |
| Others | 1 | 0.5 |
| Missing Data | 2 | 1.0 |
| Ethnicity | | |
| Yoruba | 164 | 79.6 |
| Hausa | 14 | 6.8 |
| Igbo | 22 | 10.7 |
| Others | 6 | 2.9 |
| Occupation | | |
| Teaching | 60 | 29.1 |
| Banking | 32 | 15.5 |
| Hairdressing | 40 | 19.4 |
| Tailoring | 50 | 24.3 |
| Business/Trading | 24 | 11.7 |

Approximately 40% of the women have heard of cancer of the cervix as shown in Table 2. Human papilloma virus (HPV) and having multiple sexual partners were the two most important risk factors identified by those who have ever heard of cervical cancer. Only 30.5% knew that there exists a vaccine which can help prevent cervical cancer.

| Table 2: Awareness of Respondents on Cancer of cervix and cervical cancer screening test | | | | | | |
|--|-----|------|-----|------|------------|------|
| Item | Yes | | No | | Don't Know | |
| | N | % | n | % | n | % |
| Heard of cancer of the cervix before? (n=206) | 82 | 39.8 | 124 | 60.2 | 0 | 0.0 |
| Cancer of the cervix is a common cancer (n=82) | 31 | 37.8 | 22 | 26.8 | 29 | 35.4 |
| Risk factors for cervical cancer include (n=82) | | | | | | |
| Having a relative that had the disease | 31 | 37.8 | 24 | 29.3 | 27 | 32.9 |
| Having HIV/AIDS | 13 | 15.9 | 45 | 54.9 | 24 | 29.2 |
| Having multiple sexual partner | 41 | 50.0 | 18 | 22.0 | 23 | 28.0 |
| Early marriage | 22 | 26.8 | 29 | 35.4 | 31 | 37.8 |
| Early initiation of sex | 30 | 36.6 | 20 | 24.4 | 32 | 39.0 |
| Human papilloma virus | 48 | 58.5 | 11 | 13.4 | 23 | 28.1 |
| Poverty | 11 | 13.4 | 35 | 42.7 | 36 | 43.9 |
| The cause of cervical cancer (n=82) | | | | | | |
| Infection with HIV/AIDS | 10 | 12.2 | 40 | 48.8 | 32 | 39.0 |
| Infection with Human papilloma virus | 53 | 64.6 | 7 | 8.6 | 22 | 26.8 |
| Lack of personal hygiene | 34 | 41.4 | 18 | 22.0 | 30 | 36.6 |
| Clinical manifestation of cervical cancer (n=82) | | | | | | |
| Abnormal vaginal bleeding | 62 | 75.6 | 5 | 6.1 | 15 | 18.3 |
| Bleeding after intercourse | 30 | 36.6 | 24 | 29.3 | 28 | 34.1 |
| Smelling vaginal discharge | 45 | 54.9 | 14 | 17.1 | 23 | 28.0 |
| Pain while urinating | 28 | 34.2 | 26 | 31.7 | 28 | 34.1 |
| Abdominal pain | 27 | 32.9 | 23 | 28.1 | 32 | 39.0 |
| Prevention of cervical cancer (n=82) | | | | | | |
| Antibiotic use | 19 | 23.2 | 28 | 34.1 | 35 | 42.7 |
| Cervical screening | 59 | 72.0 | 3 | 3.7 | 20 | 24.3 |
| Immunization | 25 | 30.5 | 18 | 22.0 | 39 | 47.5 |
| Heard of cervical cancer screening before (n=206) | 83 | 40.5 | 123 | 59.5 | 0 | 0.0 |
| Procedures done in cervical cancer screening (n=83) | | | | | | |
| Blood test | 42 | 50.6 | 21 | 25.3 | 20 | 24.1 |
| Urine test | 20 | 24.1 | 36 | 43.4 | 27 | 32.5 |
| X-ray | 16 | 19.3 | 38 | 45.8 | 29 | 34.9 |
| Ultrasound | 23 | 27.7 | 30 | 36.2 | 30 | 36.1 |
| Operation | 16 | 19.3 | 38 | 45.8 | 29 | 34.9 |
| Taking a sample from the cervix for examination/test | 52 | 62.7 | 4 | 4.8 | 27 | 32.5 |
| Visualizing after staining the cervix with acetic acid | 40 | 48.2 | 4 | 4.8 | 39 | 47.0 |

Table 3 shows that only 16% have ever had cervical cancer screening and 54.6% of them voluntarily went for the screening. Most of them (54.5%) had the screening done in a government hospital.

| Table 3: Utilization of cervical cancer screening test | | |
|--|-----|------|
| Item | n | % |
| Ever gone for cervical cancer screening test | | |
| Yes | 33 | 16.0 |
| No | 170 | 82.5 |
| Missing data | 3 | 1.5 |
| Reason(s) for cervical cancer screening | | |
| It was prescribed | 8 | 24.2 |
| It was voluntary | 18 | 54.6 |
| Suggested to me by my friend | 7 | 21.2 |
| Where cervical cancer screening was done | | |
| Government hospital | 18 | 54.5 |
| Private hospital | 15 | 45.5 |
| How many times cervical cancer screening had been done before | | |
| Once | 16 | 7.8 |
| Twice | 11 | 5.3 |
| Thrice | 4 | 1.9 |
| Four times | 1 | 0.5 |
| More than four times | 1 | 0.5 |
| Never | 142 | 68.9 |
| Missing data | 31 | 15.1 |
| Previous date of cervical cancer screening test | | |
| This year | 4 | 1.9 |
| Last year | 20 | 9.7 |
| 2 years ago | 3 | 1.5 |
| 3-4 years ago | 3 | 1.5 |
| Never | 143 | 69.4 |
| Missing data | 33 | 16.0 |
| Would you like to have regular screening for cervical cancer | | |
| Yes | 49 | 23.8 |
| No | 134 | 65.0 |
| Missing data | 23 | 11.2 |
| Reason for not going for cervical cancer screening (n=104) | | |
| I may not keep to appointments | 58 | 55.8 |
| I don't like it, the procedure is discomforting | 29 | 27.9 |
| I don't like male staff attending to me | 12 | 11.5 |
| Others | 5 | 4.8 |
| Ever advised someone to go for cervical cancer screening | | |
| Yes | 65 | 31.6 |
| No | 138 | 67.0 |
| Missing data | 3 | 1.4 |
| Will you encourage your friends and relatives to go for screening | | |
| Yes | 89 | 43.2 |
| No | 110 | 53.4 |
| Missing data | 7 | 3.4 |

Discussion

Respondents mean age was 29.7±5.8 years and the ages ranged from 19 – 48years. This is contrary to the results obtained in a study conducted by Arulogun and Maxwell (13) in Ibadan, Oyo State Nigeria, where the mean age was 33.9 years. The tribal distribution showed that 79.6%, 10.7% and 6.8% were Yoruba, Hausa and Igbo respectively. This is in contrast with a study in Sokoto, Nigeria which reported the tribal distribution of 35.9% Hausa, 21.8% Yoruba and 21.8% Igbo

(14). The reason for this disparity is because their research was conducted in the north western part of Nigeria where majority of the population are Hausas, and this present research was conducted in Ekiti State, Southwest, Nigeria where majority are Yorubas. The age distribution, marital status, and educational level of women in this study is similar to the reports of other studies carried out in Nigeria (15-17).

Cervical cancer screening awareness among women of different profession

About 40% of respondents had heard of cervical cancer prior to the survey. This is contrary to the result reported by Oche and colleagues (14) where almost all (98.6%) the respondents had heard of cancer of the cervix. The reason for this contrast is because; their study was conducted among female health workers whereas this present research was conducted among women of different professions, which included artisans (tailors, hairdressers and business owners), teachers and bankers. About 58.5% identified HPV and 50% multiple sex partners as predisposing factors for cancer of the cervix. Higher percentage was obtained from a research conducted by Oche and colleagues (14) where 85.5% and 87.7% were aware that cancer of the cervix has a link with HPV and multiple sexual partners respectively.

More than half (59.5%) of the respondents were not aware of cervical cancer screening test, while a lesser percentage (40.5%) who have heard of the screening. These findings are a bit different from what was obtained in a study conducted by Ogunbode and Ayinde (15) where only 19.7% of market women in Ibadan knew about screening test for cervical cancer. The difference in awareness level may be due to the fact that their study was conducted amidst market women whereas this present study was conducted among women of different professions. However, the findings of our study are similar to what was obtained in a study conducted among rural women in Osun state where awareness level was 39.2% (18). This study finding was also in contrast to the findings by Ahmed and colleagues (17) among market women in Zaria where 68.9% had knowledge of the screening services. Aboyeji and colleagues (19) conducted a study in Ilorin, Nigeria where awareness about cervical cancer screening was 69.8% and 87% in another study among female health professionals (14). These findings however cannot be compared because the studies were conducted among different study populations with different academic backgrounds and qualifications.

Utilization of screening test of cervical cancer among respondents

The findings from this study showed that only few (16%) of the respondents' ever utilized cancer of the cervix screening tests. This finding is however lower to what was obtained in another study (17), where about one third (32.7%) of the women utilized cervical cancer screening services. The report obtained in this study is however higher than what was obtained in a study conducted in Enugu, South-Eastern, Nigeria (20) where only about 2.8% of the women had ever utilized cervical cancer screening services. Furthermore, a study conducted in Owerri also reported lower usage (7.1%) of the screening (21). Our study reveals that 7.8% of the respondents had gone for cervical screening once and only 0.5% had gone more than four times. Similar to this, as noticed by previous works, utilization of cervical cancer screening was similarly poor.

This study has a few limitations worth mentioning. The participants recruited for this study were selected through a non-random sampling procedure. Hence, there could have been selection bias and the result of this study cannot be generalized to the entire women population in the town, state or country. The cross-sectional study design employed cannot establish a cause-effect relationship. Also, it is a

questionnaire-based study; so, reporting bias cannot be ignored.

Conclusion

There was a low awareness level of cervical cancer screening test among respondents in the study population and utilization pattern of these services was also poor. Only a few of the women are knowledgeable about cervical cancer with only a few also aware of the screening services. A lot still has to be done in the area of awareness creation and initiating cultural, acceptable, feasible and cost effective screening programs. We suggest that these screening services should be made available free of charge at all primary health care centers in the State, if the fight against the disease is to be won.

Conflict of Interest: All authors declare no conflict of interest.

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