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Research Article

Awareness, Knowledge and Uptake of Cervical Cancer Screening Among Women of Reproductive Age in Selected Wards in Ede South Local Government Area, Osun State

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Abstract: ***Background:*** Cervical cancer is the second most frequent cancer among women between 15 and 44 years of age and most frequent cancer among women in Nigeria. It is the most preventable cancer known to man. The objectives of the study were to assess the level of awareness, knowledge and determine factors influencing the uptake of cervical cancer screening among women of reproductive age in selected wards of Ede South LGA. ***Methods:*** The study was a descriptive cross-sectional study carried out among women of reproductive age in selected wards in Ede South Local Government Area of Ede town, Osun State, Nigeria. Multistage sampling was used as the sampling technique for the study. Data was collected by using a semi structured, self-administered and interviewer guided questionnaire. ***Results:*** The mean knowledge score was 16.81+5.12 with 72.8% of the respondents having good knowledge and 26.8% poor knowledge. Though the level of knowledge was high only 11.6% of the respondents had ever had cervical cancer screening done before and 84.5% had never had cervical screening done before. Reported reasons for not screening were no symptoms (33.5%) and no reason (32.9%). 71% were however willing to partake in cervical cancer screening. There were statistically significant associations between practice of cervical cancer screening and age at marriage (p=0.05), religion (p=0.02) respectively. ***Conclusions:*** The study revealed a high level of awareness as well as knowledge but a very low level of uptake of cervical cancer screening among women of reproductive age in selected wards of Ede South LGA.

Keywords: Knowledge, Awareness, Practice, and Cervical Cancer.

BACKGROUND

Cervical cancer is one of the most common and the easiest female cancer to prevent with regular screening, tests and follow-ups as precancerous lesions are detectable for 10 years or more before cancer develops (CDC. 2012). Cervical cancer poses a major public health threat to women in many low and medium resourced countries. With about 500,000 new cases and 257,000 deaths each year worldwide and 80% of these cases occurring in developing and undeveloped countries. It is second most common cancer among women (World Health Organization. 2006) and with incidence in sub-saharan countries ranging from 30 to 67 per 100,000 women (Kahesa, C. *et al.*, 2008).

Developed nations have shown more than 70% reduction in the incidence rate of cervical cancer in the past 50 years. Nevertheless, in developing nations, the incidence of cervical cancer is on the increase. Studies have shown that Human Papillomavirus (HPV) infection is responsible for more than 90% of the cases of invasive cervical cancer worldwide, and it is related to 80% of pre-cancerous changes in the cervix. Cervical cancer can be prevented by identifying pre-cancerous lesions early using repeated Pap smear screening and treating these lesions before they progress to cancer. Prevention, early diagnosis and treatment have been shown to reduce mortality due to cervical cancer.

Many countries have significantly reduced their cancer morbidity and mortality through cervical cancer screening and early treatment. There are many factors related to the development of cervical cancer. These include; infection with high risk human papilloma virus (HPV), early sexual debut, high parity, multiple sexual partners and co-infection with human immunodeficiency virus (HIV).

The American Cancer Society recommends that all women should begin cervical screening at age 21 years; a 3 year interval can be considered in the age group of 21 to 29 years while women who have had the

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HPV vaccine should follow the screening recommendations for their age group.

Previous studies done among female health workers have shown good knowledge of cervical cancer; however, cervical screening attendance rates are still far from satisfactory in most countries (Anya, S.E. *et al.,* 2005; Mutyaba, T. *et al.,* 2006; & Udigwe, G.O. 2006) as women with low levels of knowledge about cervical cancer and its prevention are unlikely to access screening services (Abotchie, P.N., & Shokar N.K. 2009).

The World Health Organization (World Health Organization. 2016), reports that cervical cancer is the fourth most frequent cancer in women worldwide with an estimated 530,000 new cases in 2012 representing 7.5% of all female cancer deaths, more than 85% of these occur in less developed regions.

In Africa, cervical cancer accounts for 22% of all female cancers. Thirty four (34) out of every 100,000 women are diagnosed with cervical cancer and 23 out of every 100,000 women die from cervical cancer every year (World Health Organization. 2015).

Statistics in Nigeria have shown that cervical cancer accounts for 15% of all female cancers as compared to just about 3.6% in developed countries with over twenty-six Nigerian women losing their lives to cervical cancer every day and a further 14,000 women diagnosed each year and a total of 9,657 deaths recorded each year (Ahmed, S.A. *et al.,* 2013).

In sub-saharan Africa, approximately 35 new cases of cervical cancer are diagnosed per women annually, and 23 per 100,000 women die from the disease. These compare to about 7 and 3 per 100,000 women respectively, in North America (International Agency for research on cancer. 2013).

The drastic differences can be explained by lack of awareness and knowledge of cervical cancer screening as well as a great lack in the practice of the screening. There is dearth of information on cervical cancer screening among women of reproductive age in Ede, Nigeria. The result of this study (which is aimed at assessing the awareness, knowledge and practice of cervical cancer screening among women in selected wards in Ede south) will provide baseline information, add to body of knowledge and be helpful in planning future intervention as results will be disseminated.

METHODS

Study setting

Ede South is a Local Government Area in Osun State, its headquarters in the town of Ede. It has an area of 219km2and area postal code of 232. Ede south is divided into wards and has a total of ten (10) wards. They are; Jagunjagun, Alajue, Babasanya, Oloki, Akoda, Logun, Sekona, Kuye, Babanla and Olodan wards.

Study design

The study was a descriptive cross sectional study

Target Population

The target population was women aged 15 – 49 years in Ede South LGA

Inclusion Criteria: Women ages 15 – 49 in selected wards in Ede South and were willing to partake in the survey

Exclusion Criteria: Women below age 15 and women above age 15 who were unwilling to partake in the study

Sampling Technique

Multistage sampling technique was used in the study
Stage 1: Ede South Local Government has a total of ten wards; four wards were selected using simple random sampling by balloting
Stage 2: four communities were selected from each ward respectively using convenient sampling
Stage 3: Units of enquiry were selected from the communities using simple random sampling and women who met the inclusion criteria were included in the study.

Sampling size

Using Leslie Kish formula a total sample size of 271 was derived for the study

Instrument for Data Collection

A semi-structures self-administered and interviewer guided questionnaire was used for data collection, the questionnaire consist of 4 sections;
Section A – Socio-demographic information
Section B – Awareness of cervical screening
Section C – Knowledge of cervical cancer screening
Section D – Practice of cervical cancer screening

Validity and Reliability of Questionnaire

A pretest was carried out among 20 women that were not included in the main study. Reliability test for level of awareness variables was conducted using Chronbach's alpha with intra-class coefficient value of 0.895.

Reliability test for level of knowledge variables was conducted using Chronbach's alpha value with inter-class coefficient value of 0.664.

Data Collection

Data was analysed using SPSS (Statistical Package for social Sciences) version 21.0 and was summarized in tables, charts, frequencies and percentages. To assess the level of knowledge, knowledge questions were scored and categorized such

that 0 – 13 was coded as poor knowledge and 14 – 26 as good knowledge. Chi square was used to establish significant relationship and association between practice and certain factors (like religion, age at marriage).

Ethical Approval and Considerations

Approval for the study was obtained from the Research ethics committee of Adeleke University, Ede, Osun State.

Verbal informed consent was obtained from each respondent

RESULT

Table 1: Socio-demographic information of respondents

Variables	Frequency	Percentage (%)
Age (years)		
15 – 20	89	34.6
21 – 29	106	41.2
30 – 49	58	22.6
50 – 55	4	1.6
Mean age (years)	25.74±8.29	
Religion		
Christianity	185	72.0
Islam	70	27.2
Traditional	2	0.8
Marital Status		
Single	177	68.9
Married	78	30.4
Separated	1	0.4
Divorced	1	0.4
Level of Education		
No formal education	2	0.8
Primary	6	2.3
Secondary	45	17.5
Tertiary	194	75.5
Others	10	3.9
Ethnicity		
Yorba	201	78.2
Igbo	27	10.5
Hausa	7	2.7
Others	22	8.6
Age at marriage (years)		
18 – 21	13	5.1
22 – 25	29	11.3
26 – 29	28	10.9
30 – 33	9	3.5
34 – 37	1	0.4
Not married	177	68.9

Table 1 shows the socio demographic characteristics of the respondents. It indicates that respondents between the ages 21 – 29 constituted 41.2% of the respondents, the mean age of the respondents was 25.74+8.29. Larger percentage (68.9%) of the respondents were single and 30.4% were married. Majority (75.5%) of the respondents had tertiary education and only 2 (0.8%) had no formal education.

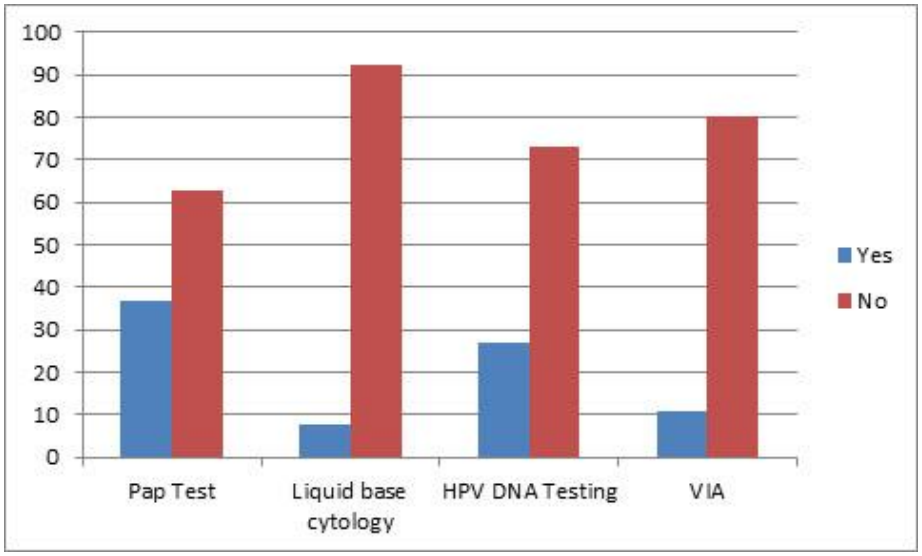

Fig. 1: Awareness of cervical cancer screening methods

Fig. 1 shows the awareness of cervical cancer screening methods, figure 1 shows 37.0% of the respondents were aware of the pap test, 7.8%, 26.8% and 10.9% of the respondents were aware of liquid base cytology, HPV DNA testing and VIA respectively as screening methods.

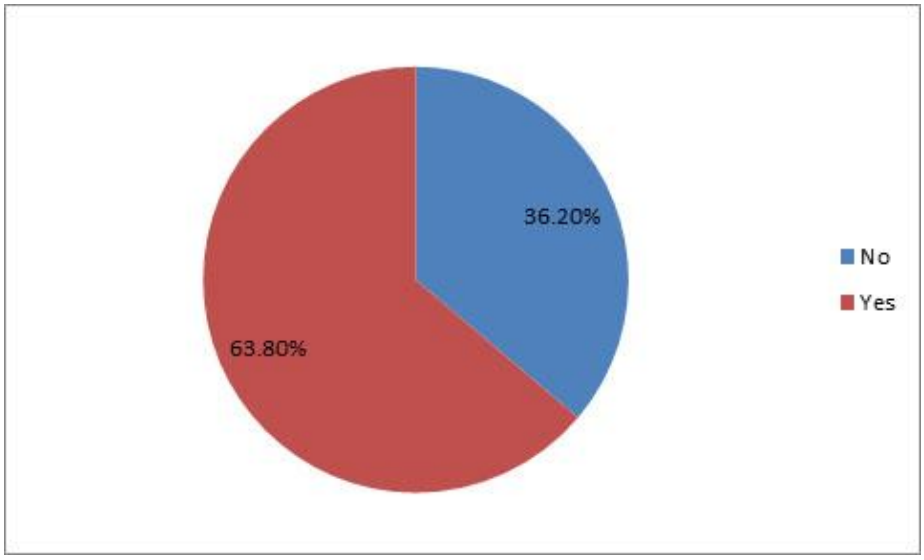

Fig. 2: Awareness of the benefits of cervical cancer screening

Fig. 2 shows that 63.8% of the respondents were aware of the benefits of cervical cancer screening, 36.2% were not aware of the benefits of screening.

Table 2: Knowledge of Respondents on Cervical Cancer Screening

Variables	Frequency	Percentage (%)
Heard of Cervical Cancer		
Yes	199	77.4
No	52	20.2
No Response	6	2.3
Can it be prevented		
Yes	164	63.8
No	6	2.3
Don't know	84	32.7
No Response	3	1.2
How can it be prevented		

Through vaccination	122	47.5
Abstinence/safe sex	82	31.9
Regular Screening	150	58.4
Purpose of cervical screening		
Treatment of STIs	60	23.3
Detection of pre-cancerous cells	142	55.3
Prevention of cervical cancer	161	62.6

Table 2, 77.4% reported to have heard of cervical cancer, 63.8% knew it can be prevented; 47.5% stated that it can be prevented by vaccination while 31.9% and 58.4% of the respondents stated that it can be prevented through abstinence/safe sex and regular screening respectively. Furthermore, 62.6%, 55.3% and 23.3% of the respondents declared that the purpose of cervical cancer screening is for prevention of cervical cancer, detection of pre-cancerous cells and treatment of STIs respectively. The mean knowledge score was 16.81+5.12.

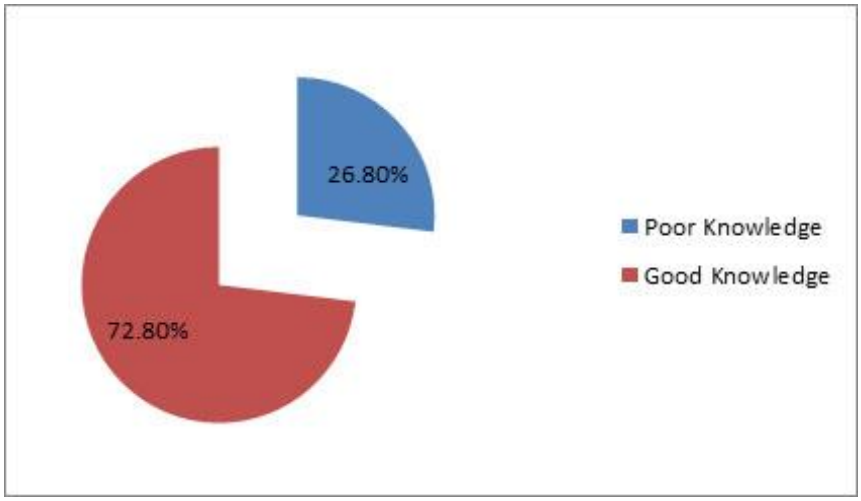

Fig. 3: Knowledge of respondents on cervical cancer screening

Figure 3 shows the knowledge score of the respondents, 72.8% had good knowledge and 26.8% had poor knowledge of cervical cancer screening.

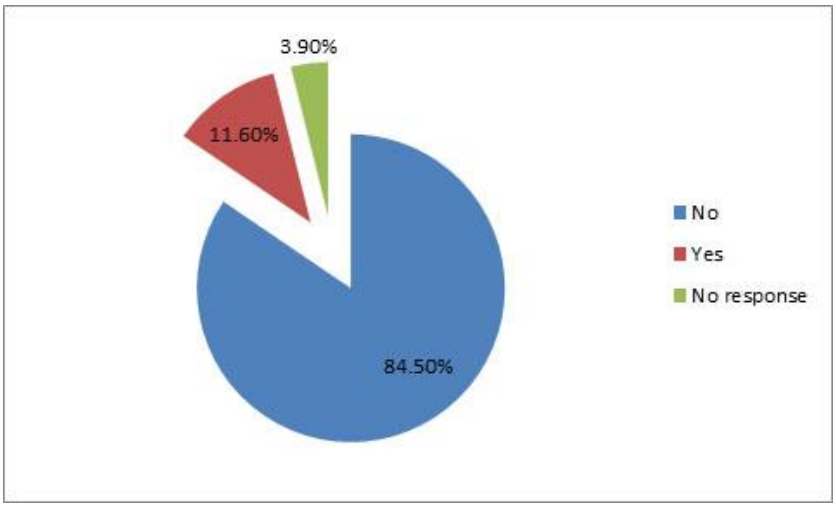

Fig. 4: Uptake of cervical cancer screening

Fig 4 shows that 84.5% of the respondents had never done cervical cancer screening and 11.6% of the respondents had done cervical cancer screening.

Table 3: Barriers to uptake of cervical cancer screening

Barriers	Frequency	Percentage (%)
No Knowledge	37	23.9
Financial status	13	8.4
Embarrassment	5	3.2
No symptoms	52	33.5
No reason	51	32.9
No time	19	12.3
Fear of result/outcome	7	4.5
Perceived insusceptibility	11	7.1
Religion	2	1.3

*Multiple responses apply

Table 3 shows the most reported barrier to uptake of cervical cancer screening is no symptoms (33.5%) and lowest reported barrier is religion (1.3%).

Table 4: Relationship between selected factors and uptake of cervical cancer screening

Variable Factors	Ever had cervical No Response	Cancer Yes	Screening done No	X^2 value	P value
Age at Marriage					
18 – 21	2	1	9		
22 – 25	2	5	21	17.995[a]	0.05*
26 – 29	0	6	22		
30 – 33	1	2	6		
34 – 37	0	0	1		
Not married	1	4	71		
Religion					
Christianity	3	10	95	17.355[a]	0.02*
Islam	3	6	36		
Traditional	3	2	0		
Knowledge of cervical cancer screening	0	1	0	11.178[a]	0.025*
Good Knowledge					
Poor Knowledge	3	7	84		
	3	0	47		

*Significant relationship at value less than 0.05

Table 4 shows there was significant association between practice of cervical cancer screening and age at marriage (p= 0.05), religion (p = 0.02), and knowledge of cervical cancer screening (p = 0.025).

DISCUSSION

More than half (63.8%) of the respondents were aware of the benefits of cervical cancer screening. This is similar to a study conducted by Idowu *et al.*, (2016) among women in Ilorin, Kwara State which revealed that 66.9% of them were aware of the benefits of screening Owoeye, I.O.G., & Ibrahim, I. A. (2013). Also showed in a study among female students and staff of a tertiary institution in the Niger Delta region of the country that 70% (students) and 80% (staff) of respondents were aware of cervical cancer and its screening. However, this is in contrast with the qualitative study carried out by Ndikom, & Ofi. (2012) among women in Ibadan which revealed that majority of respondents interviewed were not aware of cervical screening.

Wong in his study in Malaysia revealed that women were poorly aware of the benefits of cervical cancer screening as they were of the opinion that asymptomatic women do not need to do the test Wong, L.P. *et al.*, (2008). A lower level of awareness (15%) was also reported among women in rural area in Lagos, Nigeria (Oluwole, E.O. *et al.*, 2017).

The study revealed that respondents were more aware of Pap test (37.0%) as a method of cervical cancer screening than other methods, this finding is buttressed by the study of Owoeye, I.O.G., & Ibrahim, I. A. (2013), where Pap test/smear was the most reported method of screening. A study conducted in India among nurses also revealed that 105 (52.5%) of the respondents were aware of Pap smear test and was the most identified method of cervical cancer screening among the respondents. However, in a study conducted

in Ruvuma only 14% of respondents were aware of at least one method of cervical cancer screening and declared VIA (11%) was the most familiar method of cervical cancer screening.

The result of this study revealed that most of the respondents interviewed have good knowledge (72.8%) of cervical cancer and cervical cancer screening and this was in contrast to a study conducted by Yahya & Mande. (2019) in Zaria, North-Western Nigeria, which indicated that 13.7% of respondents had knowledge of cervical cancer screening.

The study showed that the uptake of Pap smear among participants was low. This reflects the general low uptake of cervical cancer screening in many developing nations (Sawadogo, B. *et al.*, 2014; Assoumou, S. Z. *et al.*, 2015; & Oluwole, E.O. *et al.*, 2017). The high level awareness and knowledge of cervical cancer and Pap smear (cervical cancer screening) demonstrated by the respondents in this study did not translate to proper utilization of the screening procedure. The study revealed that majority (84.5%) of the respondents had never been screened for cervical cancer and only 11.6% had ever been screened, indicating a very low level of practice of cervical cancer screening among the respondents.

This finding is in keeping with what literatures had reported in different parts of the world. Shivanthan *et al.*, (2014) reported that only 18.1% of the respondents in Sri Lanka had ever had a Pap smear test. Similarly, Karadag *et al.*, (2014) in a study among Turkish women reported that 73% of the respondents had never been screened for cancer of the cervix before. In Nigeria, Wright *et al.*,. reported that only 5.1% of women in Lagos had ever undergone Pap smear testing (Wright, K. O. *et al.*, 2014).

A study among female nurses University College hospital, Ibadan revealed that 67.4% of respondents had never been screened and 32.4% had ever been screened (Arulogun, O. S., & Maxwell, O. O. 2012). The low level of uptake/practice even among health workers poses a huge challenge in the practice of cervical cancer screening among women as health workers who have been revealed to be a major medium to educating people and promoting healthier lifestyles and who are to encourage uptake of cervical cancer screening are not practicing too.

Reasons documented in this study for lack of uptake/practice of cervical cancer screening were no symptoms (33.5%), no reason (32.9%), no knowledge (23.9%), no time (12.3%), financial status (8.4%) and perceived insusceptibility (7.1%). No symptoms as the major reason for lack of practice is in agreement with Shrestha *et al.*, (2013), Aniebue, P. N., & Aniebue, U. U. (2010) which revealed absence of symptoms as the major reason for lack of practice.

These findings were slightly different from the study in Nnewi, Nigeria, where majority gave no reason for not testing; and of those that had reasons, the commonest were the fear of the result and not being susceptible to cervical cancer (Udigwe, G.O. 2006).

This study further revealed that there is a significant association between some sociodemographic factors like the age at marriage, religion and knowledge of cervical cancer screening with uptake of cervical cancer screening among the respondents.

CONCLUSIONS

The study revealed a high level of awareness as well as knowledge but a very low level of practice of cervical cancer among women of reproductive age in selected wards of Ede South LGA. There is need to sensitize women on the importance and purpose cervical cancer screening and the need for women to take control of their health. Also, education and training of health workers and medical personnel to increase promotion of cervical cancer screening while improving accessibility is paramount.

Abbreviations

LGA: Local government area; HPV: Human Papillomavirus; HIV: Human immunodeficiency virus; DNA: Deoxyribonucleic acid.

Declarations

Ethical approval and consent to participate

This study was conducted according to the guidelines laid down in the Declaration of Helsinki and all procedures involving human subjects were approved by the Ethic Review Board of Institute of Public Health, Adeleke University. Written informed consent was obtained directly from all participants above 16 years old. Written informed consent was also obtained from the parent or guardian of participants under 16 years old.

Consent for publication

Not Applicable.

Competing Interests

The authors of this manuscript declare no conflict of interest.

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Authors' Contribution

O.O. intellectualized the knowledge, prepared the data, done data analysis and wrote the draft of the manuscript. QK, EK, and UO go through the theoretical basis, corrected and reviewed the results, and contributing to writing and editing of the final version of the manuscript.

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