International Journal of Medicine and Medical Sciences ISSN: 2167-0404 Vol. 4 (5), pp. 172-177, September, 2014. Available online at www.internationalscholarsjournals.org © International Scholars Journals

Full Length Research Paper

Knowledge of risk factors and utilization of cervical cancer screening services among health care workers in a Teaching Hospital in Southwestern Nigeria

[1]Fasanu A.O, [1]Akindele R.A, [2] Adebimpe W.A, [1] Ala O.O.A, [1] Omopariola S.O, [3] Adisa O.P

[1]Department of Obstetrics & Gynecology, LAUTECH Teaching Hospital, Osogbo, Osun State, Nigeria.
[2]Department of Community Medicine, College of Health Sciences, Osun State University Osogbo, Nigeria.
[3]Department of Nursing, College of Health Sciences, Ladoke Akintola University of Technology(LAUTECH), Osogbo, Osun State, Nigeria.

Accepted 11, June 2014

Cervical cancer constitutes a major public health threat to women in many low resourced countries. Awareness and utilization of screening measures were reportedly low among health care workers. Knowledge of risk factors and utilization of cervical cancer screening services was assessed among health care workers in a teaching hospital in Southwestern Nigeria. Descriptive cross sectional study among 240 female hospital staff was selected using a multi stage sampling method by a self-administered semi structured and pre-tested questionnaires. Data was analyzed using the SPSS software, level of significance was considered at *P* value ≤ 0.05 for inferential statistics. About 64.2% of respondents had poor mean knowledge of risk factors to cancer of the cervix, 22.9% had moderate, while 12.9% had good mean knowledge score. Twenty four (10%) ever had Pap's smear done. Higher educational level is a predictor of doing Pap's smear; early sexual exposure was a predictor of having heard about Pap's smear while multiple sexual partners are predictors of having heard about cancer of the cervix and having done a Pap's smear. This study reveals that good awareness about cervical cancer, poor knowledge of risk factors and poor utilization of cervical cancer screening services characterized health workers.

Key words: Cervical cancer, Pap's smear, screening, knowledge of risk factors, utilization.

INTRODUCTION

Cervical cancer constitutes a major public health threat to women in many low and medium resourced countries in South and Central America, sub-Saharan Africa, South and Southeast Asia where it is still the leading type of cancer among women Akinremi, Nazeer and Totsch (2005); Awodele et al (2011); Castellsague et al (2007). The high burden of cervical cancer in these countries is due both to a high prevalence of Human Papilloma Virus (HPV) infection and the lack of effective cervical cancer screening programs. In cases where effective screening programs are available, poor knowledge and negative health seeking behaviour of the populace have led to poor utilization of such services, Awodele et al (2011).

*Corresponding author. E-mail: drakindele@yahoo.com

It is estimated that over one million women worldwide currently have cervical cancer, most of who have not been diagnosed, or have no access to treatment that could cure them or prolong their lives, Adekanle et al (2011). In the developing countries of the world, a large proportion of cervical cancers are diagnosed in advanced stages, with poor rates of survival Awodele et al (2011); Daramola (2001). In addition, the incidence of cervical cancer begins to rise at age 20-29 years, reaches a peak around 55-64 years, and declines somewhat after 65 years. The age-standardized incidence rates during 1993-97 varied from 20-55 per 100,000 women in most of the regions in developing countries where incidence data were available, Ezem (2007).

Cervical cancer ranks the second most frequent cancer among women in Nigeria after breast cancer and about 24.8% of women in the general population are estimated to harbour cervical HPV infection at a given time, Ferlay

et al (2002). This is a source of concern in a country with a population of 36.6 million women aged 15 years and above who are at risk of developing cervical cancer, Mutyaba et al (2006). Early detection and prompt treatment of cancer and pre-cancerous conditions provide the best possible protection against cancer. Well organized screening has been shown to be effective in the reduction of both mortality and morbidity from cancer of the cervix, NHS UK (2012).

Anecdotal evidence has shown that utilization of cervical cancer screening for the prevention of the disease is poor in Nigeria, even among female health care workers who should be role models and well informed. In a Nigerian study on awareness of nurses on cervical cancer screening services, results showed that 87% were aware of the existence of cervical cancer screening services but only 5.7% had ever been screened for cervical cancer, Oladepo et al (2008). These results raised a lot of concerns since attitude may ultimately translate to practices, and eventually modify disease epidemiology and control.

A need to appraise perception and utilization of cervical cancer screening services led to this study which set out to assess the uptake of cervical cancer screening services among female health workers in Ladoke Akintola University Teaching Hospital, Osogbo, Nigeria.

Methodology

Study Area: The study was carried out in LAUTECH Teaching Hospital (LTH), Osogbo, in Southwest Nigeria. It is a tertiary care level hospital being controlled by two states, with staff number of almost 1000 and bed space of about 450. Basic equipment and facilities for the diagnosis and management of cancer of the cervix exist in the hospital. The hospital serves as referral center for numerous secondary and primary level care facilities within the state

Study design: descriptive cross sectional study among female health workers in LTH Osogbo.

Study population and eligibility criteria: The reference populations consist of all female health care workers in the employment of LTH while those health workers sampled formed the target population. Eligible staff was an employee of LTH, be a permanent staff and female health worker.

Sample Size: The sample size was calculated using the Leslie' Fischer's formular for calculation of sample size for population less than 10,000 and with an awareness prevalence rate of 0.87. To account for cases of attrition, and the possibility of non response or improperly filled questionnaires, the number of questionnaires was increased to 240.

Sampling method: A multistage sampling method was used. In selecting samples for this study, four out of six cadres of health workers were selected using simple random sampling employing simple balloting. This yielded the laboratory scientists and technicians, the ward orderly, the doctors and the nurses. For each cadre of staff, a list of staff in the cadre was obtained from the hospital management. Females were extracted from the list as they appear on the list. Using proportionate allocation technique, questionnaires were divided among the 4 cadres in the ratio of 1:2:1:4 respectively. On a list of health care workers, systematic random sampling was employed to select every third eligible worker on the list until all allocated questionnaires re exhausted. In the event of exhausting a list of a cadre of staff, another category of health care workers were selected, and sampling repeated or continued again

Research instrument: A pretested self-administered semi-structured questionnaire containing questions on knowledge and perception of cancer of the cervix, and uptake of Pap's smear was used for data collection. Sampled respondents were reached wherever they were including those on nights and off duties. Data was collected over a one month period.

Data Management: Information obtained was entered into SPSS version 16 manual sorting out, and ensuring validity of data through double entry and random checks. Frequency tables were generated. Mean knowledge score was calculated for knowledge of risk factors to cancer of the cervix. Measure of association was carried out using chi-square, while strength of association tested using logistic regression. Significant p values was considered at equals or less than 0.05 for all inferential statistics

Ethical Consideration: The Health Ethical Review Committee of LAUTECH Teaching Hospital gave ethical approval to conduct this study. In addition, verbal informed consent was obtained from each respondent.

RESULTS

A total of 250 questionnaires were taken to the field and 240 were returned filled, giving a response rate of 96.0%. Mean age of respondents in this study was 34.53 ($\pm$7.4) years Majority 120(50.0%) of the respondents were nurses by profession, 149 (62.1%) were married and 82.9% were Christians.

Majority 197 (82.1%) of the respondents had heard about cervical cancer at one time or the other. Majority of the respondents knew that multiple sexual partners 97(40.4%), first sexual intercourse at early age 68(28.3%), early age at marriage 64(26.7%) and sexually transmitted diseases majorly the Human Papilloma Virus (25.8%) were risk factors for cervical cancer while 21.2% mentioned smoking as risk factor for cervical cancer.

Other risk factors identified by the respondents included diet 4(1.7%), and hormonal contraceptives 1(0.4%). Sixty-nine (28.8%) of the respondent admitted that cervical cancer is curable, 80.8% agreed that cancer of the

Table 1. Socio-demographic characteristics of respondents.

Variable	Number	Percentage
Age in years	Mean= 34.53 (+7.4)	
20-29	100	41/7
	70	29.2
30-39	63	26.3
	7	2.9
40-49		
50-59		
Marital status		
Single	80	33.3
	149	62.1
Married	11	4.6
Separated/widowed/divorced		
Educational status		
Primary	-	-
	40	16.7
Secondary	200	83.3
Tertiary		
Religion		
Christianity	199	82.9
	41	17.1
Islam	-	-
Others		

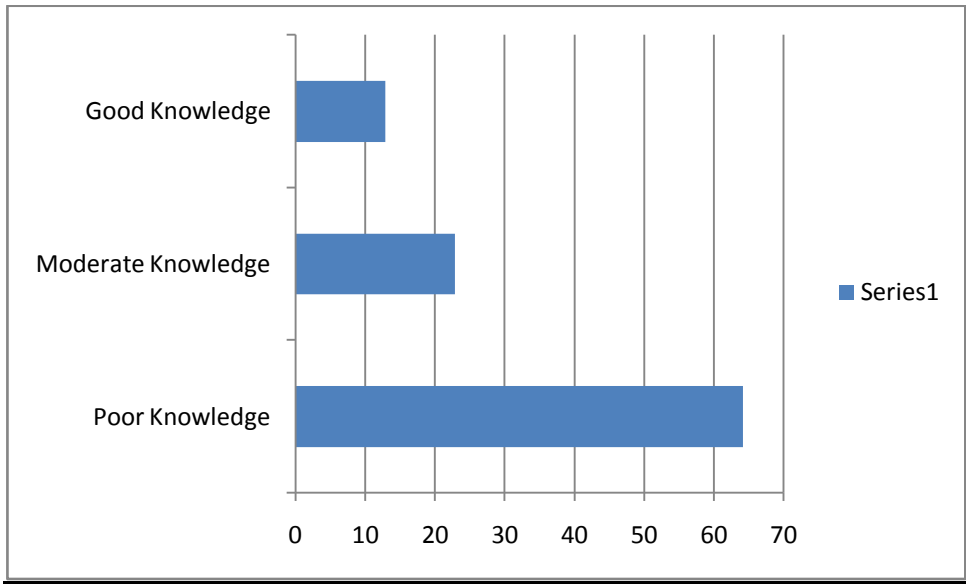
Table 2. Awareness and sources of information about Cancer of cervix and paps smear.

Variable	Frequency	Percentage
Aware of cervical cancer		
Yes	197	82.1
No	43	17.9
Aware of Paps smear		
Yes	150	62.5
No	69	28.8
Don't know	21	8.7
Sources of Information about paps smear		
Family doctor	9	3.8
Gynaecologist	66	27.5
Media/internet	34	14.2
Nurses	25	10.4
School	16	6.7
Family and friends	150	62.5
Had Paps smear done(n=150)		
Yes	24	16.0
No	126	84.0
Indications for doing Paps smear		
No reason	23	9.6
Abnormal vaginal discharge	1	0.4
Abnormal vaginal bleedoing	24	10.0
Post coital bleeding	24	10.0
Abnormal swelling	24	10.0
Age when paps smear was done (n=24)		
<40 years	8	33.3
.40 years	16	66.7

Table 3. Risk factors for cancer of cervix.

Variable	Frequency	Percentage
Duration of marriage in years	Mean= 8.1(±3.4)	
1-10	140	58.3
11-20	91	37.9
21-30	9	3.8
Early age at ,marriage(n=160)		
Yes	27	16.9
No	133	83.1
Early age at first sexual intercourse(n=197)		
Yes	68	34.5
No	197	65.5
Multiple sexual partners(n=197)		
Yes	97	49.2
No	100	50.8
Smoking(n=197)		
]Yes	51	25.9
No	146	74.1
Past history of STIs		
Yes	62	25.8
No	135	56.3
Not sure	43	17.9
Diet(n=197		
Yes	4	2.0
No	193	98.0
Used hormonal contraception(n=197)		
Yes	1	99.5
No	196	0.5

Figure 1. Bar chart showing mean scores for knowledge of risk factors to Cancer of the cervix.



cervix is preventable. When asked if they have heard of cervical cancer screening majority of the respondent who were aware of cervical cancer 150(62.5%) had heard of Pap's smear. About 64.2% of respondents had poor knowledge (mean knowledge score of 0-2 out of 7) of risk factors to cancer of the cervix, 22.9% had mode-

Table 4. Bi-variate and multivariate regression analysis of risk factors, socio-demographic characteristics and major outcome variables.

Socio-demographic variables	Ever heard of cancer of the cervix		Heard about paps smear		Had a paps smear done	
BI-VARIATE(CHI-SQUARED) ANALYSIS						
	Yes (n/%)	X^2 , df, p values	Yes (n/%)	X^2 , df, p values	Yes (n/%)	X^2 , df, p values
Age in years	197(43.0)	60.21, 28, 0.001	150(62.5)	10.43, 6, 0.001	24(16.0)	3.5, 3, 0.065
Marital status	197(82.1)	5.75, 2, 0.056	150(62.5)	6..966, 2, 0.001	24(16.0)	2.346, 2, 0.3098
Educational status	197(82.1)	3.21, 4, 0.001	150(62.5)	4.622, 8, 0.001	24(16.0)	3.114, 4, 0.539
Early age at marriage	197 (100.0)	-	149(75.6)	3.880, 2, 0.001	24(16.1)	0.978, 1 , 0.323
Early age at first sexual intercourse	197 (100.0)	-	149(75.6)	2.610, 2, 0.001	24(16.1)	2.654, 1, 0.103
Multiple sexual partners	197 (100.0)	-	149(75.6)	2.090, 2 ,0.001	24(16.1)	1.823. 1. 0.177
MULTI-VARIATE (LOGISTIC REGRESSION) ANALYSIS						
	Ever heard of cancer of the cervix		Heard about paps smear		Had a paps smear done	
	Odds ratio	CI, P value	Odds ratio	CI, P value	Odds ratio	CI, P value
Educational status(Constant=primary education)	0.9	0.1-0.7 0.001	0.4	0.2-0.9 0.021	2.1	0.6-7.5 0.131
Early age at sexual exposure (Constant=No)	0.5	0.1-8.5 0.345	15.1	3.5-64.9 0.001	0.5	0.2-1.2 0.050
Multiple sexual partners (Constant=No)	1.2	0.1-15.7 0.492	4.6	2.0-10.5 0.001	1.9	0.7-4.9, 0.09

CI= 95% confidence interval X2=Chi squared test df= degree of freedom.

rate (mean of 3 and 4 scores 0 while 12.9% had good knowledge score (5, 6 and 7) of risk factors to cancer of the cervix.

Common sources of information about papanicolaou smear, include the Gynecologist 66(27.5%) followed by newspaper, television and internet which represent 14.2%, and then health care workers which represents 10.4%, About half of the respondent knew Pap's smear is available in LTH 122(50.8%) only a small percentage were not sure(7.9%). Only minority of the respondent 24(10%) has had Pap's smear done and of these 23(9.6%) respondent did as routine without any indication and 1(0.4%) person did it because of abnormal vaginal discharge while none did it because of abdominal swelling, abnormal vaginal bleeding/ post coital bleeding. Of the respondents, 53.3% (128) understood that Pap smear could be used to detect cervical cancer before symptoms appear, while 53.8% (129) respondents felt Pap smear is highly predictive of cervical cancer. However, 1.7% (4) of the respondents erroneously concluded that the positive results of Pap smear indicate cervical cancer, while 146(60.8%) of the respondents felt that early detection has good treatment outcome. Of the respondents, 2.9% would like to repeat Pap smear and wished to recommend Pap smear to others. Several recommendations were made by respondents on how to improve respondent's perception towards doing Paps smear.

Statistically significant association exists between ever heard of cancer of the cervix and age, and educational status ($p<0.05$). It also exists between heard about Pap smear and age, marital status, educational status, early age at first sexual intercourse and having multiple sexual partners.

Having a higher education level is a predictor of practice of doing paps smear, early sexual exposure was a predictor of having heard about Paps smear while multiple sexual partners are predictors of both having heard about cancer of the cervix, having heard about Paps smear and having done a Paps smear.

DISCUSSION

The level of knowledge found in this study was at variance

with previous studies, Parkin et al (2005) where majority of the study participants were aware of cervical cancer. This finding is highly expected considering the nature of the professions of our respondents since such information could have been integrated into their training curriculum, and are expected to be more knowledgeable than women in the community. The findings however affirms Udigwe's (2006) assertions that in any community, trained nurses and midwives constitute a knowledgeable class with regards to medical information and intervention and that nurses are important health personnel that are supposed to educate women on the need for cervical screening. Cervical cancer will remain one of the commonest female genital cancer in Nigeria for decades to come if concerted and sustained efforts are not geared towards preventive measures.

Despite the level of awareness on cervical cancer among the study respondents, gaps in knowledge of risk factors for cervical cancer still exist. This supports finding from another study, Phipps et al (1999). Majority of the respondents were of the opinion that multiple sexual partner on the part of the women (promiscuous women) are at risk of cervical cancer. This is a misconception because not only promiscuous women are at risk of the disease, women who are faithful but whose husbands visit sex workers are equally at risk of being infected with HPV as they might be infected by their husbands [13]. Women whose husbands have also been infected in the past are also at risk of being infected with the Human Papilloma Virus. This notion has to be corrected in intervention programs as it could lead to stigmatization and wrong labeling of those who are suffering from the disease as being promiscuous and could be a big barrier to women accessing screening services.

This study has shown abysmal low uptake of cervical cancer screening despite significant awareness level of the disease, which agreed with study done by Adekanle et al (2011) and Sankaranayanan et al (2001). The finding that respondents' knowledge on prevention and early detection of cervical cancer through Pap smear was low corroborates those of Awodele et al,(2011). Thomas et al (2004) also documented a similar low level of knowledge among nurses studied in another teaching hospital in Nigeria. Poor utilization documented in this study also affirms the findings from the Nnewi study among nurses, Udigwe (2006). Reasons given for non-utilization, such as fear of the results and not being candidate for cervical cancer has been documented in earlier studies in Uganda by Mutyaba, Mmiro and Weiderpass (2006) and Owerri, Nigeria Ezem (2007). These misconceptions need to be addressed in an intervention program targeting this population of health workers. In addition the differentials that occurred among different cadre of health care workers studied in the utilization of screening services are not unexpected. Younger health workers are not likely to use the service because they may perceive themselves as young, not susceptible and therefore not bothered about such issues. Anecdotal evidence has shown that the older a person becomes, the more concerned he or she is about his or her health and older women are therefore more likely to want to take preventive action.

The role of specialists was also reiterated by respondents' indication of doctors especially gynaecologists being significant source of information about the screening and possibly influence the screening behavior. This finding cannot be over-emphasized as looking up to gynecologist for information on gynecological conditions and guidance is a norm in many societies.

Family and friends did not influence respondents screening behaviour in this study and this is contrary to the findings of Ezem (2007) and Daramola, (2001) where friends was documented as an informal but important source of health information in providing health information about cervical cancer.

One of the key implications of this study is the need for cervical cancer screening education programs to be carried out among health professionals at all levels. Despite the high level of awareness among the respondents, utilization remains low. Reproductive health education specialists have a significant role to play in reversing this trend among health workers especially nurses as they constitute one of most authoritative sources of information about health matters for the general populace especially women. The continuing education program such as institution based health workshops and seminars provide an opportunity for doing this, WHO (2006). Nurses need to be trained not only to provide comprehensive health education services routinely to their clients but to also motivate themselves to practice what they teach and lead by example.

CONCLUSION

This study reveals that good awareness about cervical cancer, poor knowledge of risk factors for cancer of the cervix, and poor utilization of cervical cancer screening services characterized health workers in LAUTECH Teaching Hospital (LTH), Osogbo.

Upgrading the knowledge base of nurses and other health workers therefore becomes imperative as they play an important role in the prevention of cervical cancer in the community. To improve level of utilization, awareness of screening programs should be increased, cost should be subsidized and screening with Paps smear may be included as part of the pre-employment requirements. Professional cadre and by extension social class is a variable to consider in improving utilization of screening services. The nurses should be used encouraged to serve as cervical cancer screening motivators for other care workers. This would ultimately dovetail to the community at large.

ACKNOWLEDGEMENT

We want to appreciate the management of LAUTECH Teaching hospital for providing the staff database of the institution from where the list of all the female staff was culled out. We also appreciate the female members of staff of LAUTECH Teaching Hospital for the cooperation with us during the study.

FUNDING

No funding was received from any individual or organization for this study.

REFERENCES

Akinremi TO, Nazeer S, Totsch M (2005). Reduced alcohol use in the staining of Pap smears: a satisfactory low-cost protocol for cervical cancer screening. Acta Cytol. Mar-Apr; 49(2):169-72.

Awodele O, Adeyomoye AA, Awodele DF, Kwassh IO, Awodele IO, Dolapo DC (2011). A study on cervical cancer screening amongst nurses in Lagos University Teaching Hospital, Lagos, Nigeria. J. Cancer Educ. 2011; 26(3): 497-504.

Castellsagué S, de Sanjose T, Aguado KS, Louie L, Bruni J, Muñoz M, Diaz K, Irwin M, Gacic O, Beauvais G, Albero E, Ferrer S, Byrne FX (eds) (2007). HPV and cervical cancer in the report. Vaccine. 2007 Nov 1; 25 Suppl 3:C1-230.

DA Adekanle, AS Adeyemi, AF Afolabi (2011). Knowledge, attitude and cervical cancer screening among female secondary school teachers in Osogbo south west Nigeria. Acad. J. Cancer Res. 4(1): 24-28, 2011.

Daramola A (2001). A study of the awareness of screening procedure for carcinoma of the cervix (Pap smear) amongst health service users. Proceedings of the 25th International Congress of the Medical Women's Association.

Ezem BU (2007). Awareness and Uptake of Cervical Cancer Screening in Owerri, South-Eastern Nigeria. Ann. Afr. Med. Sep; 6(3): 94-8.

Ferlay BF, Bray F, Pisani P, Parkin DM (2002). GLOBOCAN : Cancer Incidence, Mortality and Prevalence Worldwide. IARC Cancer Base No. 5 Version 2 .O. Lyon: IARC Press; 2004. Available at http:www-dep.iarc.fr; accessed February 11, 2012.

Mutyaba T, Mmiro FA, Weiderpass E (2006). Knowledge, attitudes and practices on cervical cancer screening among the medical workers of Mulago Hospital, Uganda. BMC Medical Education. 6: 13.

NHS Cervical Screening Programme, Cervical screening a pocket guide. Available at http://www.cancerscreening.nhs.uk/cervical/publications/cervicalpocket2009.pdf. Accessed September 15, 2012

Oladepo O, Ricketts OA, John-Akinola Y (2008). Knowledge and Utilization of Cervical Cancer Screening Services among Nigerian Students. International Quarterly of Community Health Education. ; 29 (3): 293-304.

Parkin DM, Whelan SL, Ferlay J, Storm H (2005). Cancer Incidence in Five Continents, vols. I-VIII. IARC Cancer Base no. 6. Lyon, France: IARC Press,. Available at http://www-dep.iarc.fr; accessed February 11, 2012.

Phipps E, Cohen MH, Sorn R, Braitman LE (1999). A pilot study of cancer knowledge and screening behaviors of Vietnamese and Cambodian women. Health Care Women Int. 1999; 20(2):195-207.

Sankaranarayanan R, Budukh AM, Rajkumar R (2001). Effective screening programmes for cervical cancer in low- and middle-income developing countries. Bull World Health Organ.; 79(10):954-962.

Sankaranarayanan R, Thara S, Ngoma T, Naud P, Keita N (2010). Cervical Cancer Screening in the Developing World. In: Finkel, M. (eds). Public Health in the 21st Century, 2(12), 231-244.

Thomas JO, Herrero R, Omigbodun AA, Ojemakinde Ajayi IO, Fawole A, Oladepo O, Smith JS, Arslan A, Munoz N, Snijders PJ, Meijer CJ, Franceshi S (2004). Prevalence of Papilloma Infection In Women In Ibadan, Nigeria: A Population Based Study. Br. J. Cancer. 2004; 90(3): 638-645.

Udigwe GO (2006). Knowledge, attitude and practice of cervical cancer screening (pap smear) among female nurses in Nnewi, South Eastern Nigeria. Niger J. Clin. Pract. 2006; 9 (1): 40-43.

World Health Organization (2006). Comprehensive cervical cancer control: A guide to essential practice ; p.284. Available at whqlibdoc.who.int/publications/2006/9241547006_eng.pdf. Accessed February 11, 2012.