

# Knowledge of Cervical Cancer and its Screening Amongst Female Workers In Nnewi, Nigeria

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## ABSTRACT

**Background:** Cervical cancer is an important women's reproductive health problem, especially in developing countries. Efforts towards its prevention worldwide have focused on screening women at risk of disease using Pap smears and treating pre-cancerous lesions. A good knowledge and understanding of the level of awareness of cervical cancer and its screening among female workers in Nnewi will help in creating population-specific health programs.

**Objectives:** This is to determine the awareness of cervical cancer screening among female workers in Nnewi as well as ascertain the influence of age, educational status and marital status on the awareness of cervical cancer screening among this group.

**Methods:** A cross-sectional descriptive study carried out among female workers in Nnewi who were selected using multi-stage approach between December, 2007 and January, 2008.

**Results:** A total of 172 females responded. The mean age was  $29.7 \pm 8.8$  years and the ages ranged from 15 to 65 years. A total of 146 respondents (84.9%) were aware of cervical cancer. One hundred and twenty-three respondents (71.5%) knew about the Pap smear screening test. Educational level was found to significantly affect the awareness of cervical cancer and Pap smear screening test. Age and marital status were found not to affect awareness of cervical cancer and Pap smear screening test.

**Conclusion:** There is relatively high level of awareness of cervical cancer and Pap smear test among this group. Educational status was found to significantly influence the level of awareness of cervical cancer and its screening.

**Key words:** cervical cancer, knowledge, screening.

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## INTRODUCTION

The maintenance of good health is a very important task for every individual. Life expectancy is a proxy for the

general state of health, but it also possesses an intrinsic value. Life expectancy and prosperity have risen in both developed and developing countries over the past 50 years and are expected to continue to rise. This would be enabled by improvement on practice of periodic health check up<sup>1</sup>.

Regular check ups are necessary to detect problems like heart diseases, cancers, diabetes and others<sup>2</sup>.

Cervical cancer is an important women's reproductive health problem, especially in developing countries where an estimated 190,000 women die from the disease each year<sup>3</sup>. It is the third most common cancer worldwide and the leading cause of death from cancer among women in developing countries<sup>3, 4</sup>. At least 466,000 new cases are identified each year; roughly 80% are in developing countries. Rates are highest in Central America, sub-Saharan Africa and Melanisia<sup>3</sup>. There are approximately 1500 deaths in England and Wales yearly from cancer of the cervix<sup>5</sup>. Cervical cancer is the leading cause of cancer-related death in the Socialist Republic of Vietnam and the leading cause of mortality in women over 35 in Chile<sup>6</sup>. It is the most common cancer among women in Thailand and in India, with approximately 71,600 new cases occurring each year in India<sup>6</sup>. Among Filipino women, the incidence is 9.6 per 100,000<sup>8</sup>. In South Africa, cervical cancer is the most common cancer among women and accounts for about 25% of cancer deaths among black South African women<sup>6</sup>. Hospital based registries in Kenya indicate that cervical cancer accounts for 8 - 20% of all cancer cases from 1981 to 1990<sup>6</sup>. It is the commonest malignancy of women in Uganda<sup>8</sup>.

A study done at Ibadan, Nigeria<sup>4</sup>, aimed at finding out the level of awareness of female health workers about cervical cancer and the level of utilization of preventive measures showed that Knowledge about the condition was high among doctors, inadequate among nurses and poor among hospital maids. It also showed 93.2% of respondents have never had Pap smears performed. The poor utilization of the cervical screening test was independent of respondent's profession, marital status or hospital.

Cervical cancer is one type of cancer that can be prevented and, if detected early enough, cured<sup>3,9</sup>. It is known that pre-cancerous lesions are detectable for 10 years or more before cancer develops<sup>8</sup>. Cervical cancer prevention efforts worldwide have focused on screening women at risk of disease using pap smears and treating pre-cancerous lesions<sup>3</sup>. Pap smear test is considered the best approach to

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reduce cervical cancer incidence worldwide<sup>10</sup>. In the United States, the number of cervical cancer deaths decreased from 70% between 1950 and 1970 and by more than 40% between 1970 and 1999<sup>9</sup>. This is largely attributable to Papanicolaou (Pap) smear test for cervical cancer screening<sup>9</sup>. Most developing countries including Nigeria have been unable to implement comprehensive Pap smear screening-based programs<sup>3</sup>. However, in countries where screening quality and coverage have been high, these have reduced invasive cervical cancer by as much as 90%<sup>3</sup>.

An important reason for the sharply higher cervical cancer incidence in developing countries is lack of effective screening programs aimed at detecting pre-cancerous conditions and treating them before they progress<sup>3</sup>. It is estimated that only about 5% of women in developing countries have been screened for cervical dysplasia in the past 5 years, compared with some 40 - 50% in developed countries<sup>3</sup>. Screening programs such as those for cervical cancer are paradigmatic of the regulatory impulse represented by systematic and periodic check ups. The ideal age for screening should be 30 - 40 years, which is the age when women are at highest risk, and also in the younger women especially the sexually active ones<sup>8</sup>.

The Human Papilloma virus (HPV) has been implicated to be the probable cause of almost all cervical cancers worldwide, as recent study estimates HPV prevalence in cervical cancers at 99.7%<sup>3</sup>. Primary prevention of HPV infection would greatly reduce cervical cancer mortality<sup>3</sup>. Visual Inspection with Acetic acid (VIA) is also in use as a measure for early detection of cervical cancers<sup>11</sup>.

Nnewi North Local Government Area is a developing commercial town and as such has created job opportunities for a large number of people and provides a major source of revenue for the government. The women constitute a significant economically active population in this area and majority is of age at risk of cervical cancer. This makes their preventive health behavior a very important issue of public health concern.

Studies have not been carried out to ascertain the level of awareness of cervical cancer screening among these female workers in Nnewi. It is however most important to carry out this study at this time as it will give an insight into the health-seeking behavior of the group as well as help in creating population-specific health programs.

This study aims at determining the awareness of cervical cancer screening among female workers in Nnewi and to

make recommendations based on the findings.

## METHODS

The study area is Nnewi North Local Government Area, a commercial town in Anambra State. It is bordered at the North by Idemili North and South Local Government Areas, at the south by Ekwusigo and Nnewi South Local Government Areas, at the West by Ekwusigo Local Government Area and at the East by Nnewi South Local Government Area, all in Anambra State. It is about twenty kilometers away from Onitsha, and about forty kilometers away from Awka, the state capital. The inhabitants are mainly corporate business men and traders, with some public servants and professionals.

This is a cross-sectional descriptive study done among female workers in Nnewi North Local Government Area of Anambra State, Nigeria between December, 2007 and January, 2008. Multi-stage approach was used to select female workers in Nnewi North Local Government Area. Nnamdi Azikiwe University Teaching Hospital, the local government secretariat and the secondary schools were used to represent the public sector while the banks were used to represent the private sector. A total of one hundred and seventy-two people responded and were included in the study.

Consent to participate in the study was sought from the individuals, after due explanations to them, as well as assuring them of the confidentiality in answering the questionnaires. The questionnaires were then self-administered.

The data obtained from the study were analyzed using SPSS version 15. Tests of association were done using chi square test at 95% confidence intervals.

## RESULTS

A total of 172 females responded and were included in the study. The mean age of the respondents was  $29.7 \pm 8.8$  years. The predominant age group was 26-35 years (40.1%). Majority of them were married (56.4%). Most of the respondents (93.0%) have post secondary school education. Majority of them were health workers (42.4%), then teachers (27.9%). The respondents were predominantly Catholics (42.4%), then Anglicans (34.9%). The socio-demographic characteristics of the respondents are shown on table I.

A total of 146 respondents (84.9%) were aware of cervical cancer and all the respondents above 45 years of age were aware of it. The age group with the lowest level of awareness was 36-45 years (77.4%). Age was not found to

influence awareness of cervical cancer ( $X^2=0.6671$ ;  $df=1$ ;  $P>0.05$ ). Most health workers (92.8%) were aware of cervical cancer. The company workers had the least awareness (66.7%). Majority of the respondents with post-secondary level of education (87.5%) were aware while only 50.0% of those with secondary level of education were aware of cervical cancer. Educational level was found to affect awareness of cervical cancer ( $x^2=12.2775$ ;  $df=1$ ;  $P<0.05$ ). Most single (85.6%) and married respondents (84.0%) were aware of cervical cancer. Marital status was not found to influence awareness of cervical cancer ( $X^2=0.0802$ ;  $df=1$ ;  $P>0.05$ ) The respondents' awareness of cervical cancer is shown in Table II

The most commonly known risk factor for cervical cancer was multiple sexual partners (44.5%), followed by sexually transmitted infections (39.0%), then early coitarche (30.8%). Only few respondents knew low socio-economic class and cigarette smoking as risk factors. Multiple sexual partners was the best known risk factor for age group =25 years (59.7%) and 26-35 years (29.0%). The best known for respondents 36-45 years was age (22.6%), followed by sexually transmitted infections (19.4%). Sexually transmitted infections was known as risk factor for all respondents of age between 46-55 years. The most known risk factor for cervical cancer among health workers was multiple sexual partners (71.9%), followed by sexually transmitted infections (48.4%), then early coitarche (46.9%). Amongst other workers, the most known risk factor was sexually transmitted infections (31.7%), then multiple sexual partners (23.1%). Among respondents with secondary level of education, the best known risk factor for cervical cancer was sexually transmitted infections (50.0%). None of them knew low socio-economic class and multiple sexual partners as risk factors. Of the patients with post-secondary school level of education, the most known risk factor was multiple sexual partners

(46.4%), followed by sexually transmitted infections (38.6%), then early coitarche (31.4%). Among married respondents, the most known risk factor for cervical cancer was sexually transmitted infections (39.7%), followed by multiple sexual partners (22.2%), while among single respondents, the most known risk factor was multiple sexual partners (61.4%), followed by early coitarche (39.8%), then sexually transmitted infections (38.6%).

A total of 123 respondents (71.5%) knew about Pap smear. All respondents in age group 46-55 years knew about it. The age group that had the least knowledge is 26-35 years (62.3%). Age was found not to significantly affect knowledge of Pap smear screening test ( $X^2=0.0116$ ;  $df=1$ ;  $P>0.05$ ). Knowledge of Pap smear was highest among health workers (81.2%) followed by teachers (75.0%) then civil servants (61.3%). Majority of respondents with post secondary school education knew about Pap smear (74.4%) while only 33.3% of respondents with secondary level of education knew about it. Educational level was found to affect the knowledge of pap smear screening test significantly ( $P<0.05$ ). Majority of both married (66.7%) and unmarried (75.3%) respondents knew about pap smear. This was not significant ( $P>0.05$ ). The knowledge of Pap Smear by the respondents is shown in Table III.

The commonest source of knowledge about Pap smear was hospital (45.5%) followed by school (25.2%) then friends (21.1%) [Table IV].

All the respondents who are aware of cervical cancer feel that screening for cervical cancer is important. Of the respondents who are aware of Pap smear, 82 (66.7%) knew it helps in early detection of cervical cancer while 26 (21.1%) knew it improves health conditions and helps in prevention of cervical cancer.

**TABLE I: SOCIO-DEMOGRAPHIC CHARACTERISTICS [N=172]**

VARIABLE	NUMBER	%
<b>AGE</b>		
≤ 25 years	67	39.0
26-35 years	69	40.1
36-45 years	31	18.0
46-55 years	2	1.2
≥ 56 years	3	1.7
<b>MARITAL STATUS</b>		
Single	97	56.4
Married	75	43.6
<b>EDUCATIONAL LEVEL</b>		
Secondary	12	7.0
Post Secondary	160	93.0
<b>OCCUPATION</b>		
Health Worker	69	40.1
Civil Servant	31	18.0
Teacher	48	27.9
Banker	18	10.5
Company Worker	6	3.5
<b>RELIGION</b>		
Catholic	73	42.4
Anglican	60	34.9
Methodist	1	0.6
Pentecostal	37	21.5
Muslim	1	0.6

**TABLE II: AWARENESS OF CERVICAL CANCER**

VARIABLE	YES	%	NO	%
<b>AGE DISTRIBUTION</b>				
≤25 years	58	86.6	9	13.4
26-35 years	59	85.5	10	14.5
36-45 years	24	77.4	7	22.6
46-55 years	2	100	0	0
≥56 years	3	100	0	0
<b>OCCUPATION</b>				
Health Worker	64	92.8	5	7.2
Civil Servant	23	74.2	8	25.8
Teacher	40	83.3	8	16.7
Banker	15	83.3	3	16.7
Company Worker	4	66.7	2	33.3
<b>EDUCATIONAL LEVEL</b>				
Secondary	6	50.0	6	50.0
Post-Secondary	140	87.5	20	12.5
<b>MARITAL STATUS</b>				
Single	83	85.6	14	14.4
Married	63	84.0	12	16.0

**TABLE III: KNOWLEDGE OF PAP SMEAR**

VARIABLE	YES		NO	
	NO.	%	NO.	%
<b>AGE</b>				
≤25 yrs [n=67]	54	80.6	13	19.4
26 -35 yrs [n=69]	43	62.3	26	37.7
36 – 45 yrs [n=31]	22	71.0	9	29.0
46 – 55 yrs [n=2]	2	100.0	0	0.0
≥56 yrs [n=3]	2	66.7	1	33.3
<b>OCCUPATION</b>				
Health worker [n=69]	56	81.2	13	18.8
Civil servant [n=31]	19	61.3	12	38.7
Teacher [n=48]	36	75.0	12	25.0
Banker [n=18]	9	50.0	9	50.0
Company worker [n=6]	3	50.0	3	50.0
<b>EDUCATIONAL LEVEL</b>				
Secondary [n=12]	4	33.3	8	66.7
post – secondary [n=160]	119	74.4	41	25.6
<b>MARITAL STATUS</b>				
Single [n=97]	73	75.3	24	24.7
Married [n=75]	50	66.7	25	33.3
<b>TOTAL [N=172]</b>	123	71.5	49	18.5

**TABLE IV: SOURCES OF KNOWLEDGE ABOUT PAP SMEAR**  
[N=123]

SOURCES	NUMBER	%
Friends	26	21.1
Co-workers	22	17.9
Hospital	56	45.5
School	31	25.2
Mass media	17	13.8
Church	2	1.6
Books	20	16.3
Internet	2	1.6

**DISCUSSION**

Most (84.9%) of the respondents were aware of cervical cancer. This shows a higher level of awareness than that of a study done in Benin, Nigeria<sup>10</sup>. This knowledge is high across all age groups and all respondents above 35 years old were aware. This is not unexpected as these age groups are at higher risk of cervical cancer than the younger ones. Knowledge of cervical cancer was as expected, highest among health workers (92.8%). This finding is similar to that found in a study done in Uganda<sup>8</sup>. It was also generally high across different occupations. As expected also, knowledge of cervical cancer was significantly higher among respondents with post secondary school level of education (87.5%) than those with secondary school education (50.0%) [ $p < 0.05$ ]. No significant difference in awareness of cervical cancer was found among single (85.6%) and married (84.0%) respondents [ $p > 0.05$ ]. Knowledge of cervical cancer was high in both groups. This is in keeping with results of a study done in Uganda<sup>8</sup> but shows a higher level of awareness than that found in a study done in Benin, Nigeria<sup>10</sup>.

Most of the respondents (89.7%) knew that cervical cancer can be prevented. This is expected as most of the respondents have post secondary levels of education.

Knowledge of the risk factors for cervical cancer was found to be low generally. This is in keeping with findings in a study done in Uganda.<sup>8</sup> However, as expected knowledge of risk factors was higher among the health workers than others. As expected also, the knowledge of the various risk factors was higher among those with post secondary school levels of education. Married respondents had relatively less knowledge of these risk factors than the singles.

Knowledge of Pap smear was generally high among the respondents (71.5%). This is not surprising as most respondents had post secondary levels of education. This

is in keeping with findings of a study done in Benin, Nigeria<sup>10</sup> and among Filipinowomen<sup>8</sup>.

No significant difference was found with knowledge of Pap smear as the ages progressed [ $p > 0.05$ ]. As expected, health workers had the highest level of knowledge about Pap smear (81.2%). This may be due to their exposure to patients, other medical personnel and medical publications. Not surprisingly, respondents with secondary level of education had less knowledge (33.3%) than those with post secondary school level (74.4%). Educational level was found to significantly influence knowledge of Pap smear [ $p < 0.05$ ]. Unmarried respondents were found to have more knowledge of Pap smear (75.3%) than the married ones (66.7%). This difference was not found to be statistically significant [ $p > 0.05$ ].

All respondents felt that cervical cancer screening is important. This is expected as the respondents have a higher level of education. Majority of the respondents who were aware of Pap smear knew it helps in early detection of cervical cancer.

## CONCLUSION

The study shows a high level of awareness of cervical cancer and Pap smear test among this group. A poor knowledge of the various risk factors for cervical cancer was also noted. Educational status was found to significantly influence the level of awareness of cervical cancer and its screening. Age and marital status did not have significant influence on the knowledge of cervical cancer and its screening.

Effort should be made by the government and other health agencies to educate female workers on the various risk factors for cervical cancer. Health information dissemination as regards medical check up and cervical cancer screening should be improved by appropriate authorities to further enhance the knowledge and thereafter, practice of cervical cancer screening as well as preventive health behaviour in general.

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