Comparism of Knowledge, Attitude and Acceptance of Cervical Cancer Screening Between Female Health and Non-Health Personnel in Jos University Teaching Hospital

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ABSTRACT
Cervical carcinoma is a preventable disease yet it remains the leading malignancy among women in sub-Saharan Africa. The study objective was to compare the knowledge, attitude and acceptance of cervical cancer screening among female health Personnel and non-health Personnel in Jos University Teaching Hospital (JUTH). JUTH. This was a across-sectional study conducted in JUTH between 15th June and 31st July, 2008. There was significant difference in knowledge between the health personnel 288(91.4%) and non-health personnel 145(36.2%) p value < 0.01. Most (73.7%) of the health personnel had correct knowledge about pap smear as a screening procedure for cervical cancer. Doctors had the highest correct knowledge of 97.5%. Only 64(16.0%) of the non-health personnel had correct knowledge about pap smear. Teachers and those attending Gynaecological clinics had the highest correct knowledge of 45.0% and 24.0% respectively. There was significant difference in the overall rate of screening between the health personnel 75(23.8%) and the non-health personnel 44(11.0%). Out of the respondents that had knowledge about pap smear 42(29.0%) of the 145 non-health personnel and 75(26.0%) of the 288 health personnel had screened with no significant difference between the two groups. The two groups had similar reasons why those that were yet to screen had not screened. About 81.3 % of the health personnel and 87.1% of non-health personnel who were yet to screen would like to be screened. There is the need to carefully draw up a plan to tackle the poor knowledge, attitude and acceptance of cervical cancer and its prevention among our women.

Keywords: Cervical carcinoma, Screening, Health Personnel.

INTRODUCTION
Cervical carcinoma is a preventable disease yet it remains one of the leading malignancy among women in most developing countries with high morbidities and fatality due to late presentations. Cervical cancer screening is acknowledged as currently the most effective approach for cervical cancer control.1 The recorded decrease in the incidence and mortality...
rates by 70-80% of cervical cancer in Western countries over the years is largely due to widespread screening programmes. In most developing countries especially with high HIV/AIDS prevalence and with poor screening programs, cervical cancer remains one of the commonest female cancers with about 75% or more of affected women presenting in advanced stage with poor prognosis. About 80% of the new cases and deaths occur in developing countries. The incidence of cervical cancer varies greatly worldwide. There is a large difference between developing and developed countries. In developed countries, cervical cancer cases have been significantly reduced since the implementation of effective screening programmes. However, in developing countries, the burden from cervical cancer remains high because of the difficulty in implementing cytology-based screening programs. According to the 2015 world cancer statistics, cervical cancer is the fourth most common cancer in women globally (528000 new cases each year) but the second most common in developing countries (445000 new cases each year). Cervical cancer is also the fourth most lethal cancer in women worldwide (266000 deaths annually) and the third cause of cancer-related death in developing countries (230158 deaths annually), which means that more than 80% of the global burden occurs in developing areas. The incidence of cervical cancer fell by 42% between 1988 and 1997 in the UK and cervical cancer screening program was established in the UK since 1988 and this has been estimated to save 4,500 lives per year. Due to well established screening programs, the incidence and mortality from cervical cancer have fallen by over 70% in the USA. Although reliable statistics about cancer are limited or unavailable in most parts of Africa, cervical cancer still remains one of the commonest female cancer in sub-Saharan Africa due to lack of adequate/accessible screening programmes. In Nigeria, an estimated 10,000 new cases of cervical cancer and 8,000 deaths due to the disease are recorded among women annually with relative incidence of 25/100,000 with more than 70% diagnosed in late stage making cure impossible with low 5-years survival rate.

Human Papilloma Virus (HPV) is central to the development of CIN and cervical cancer with HPV DNA found in 99.7% of women with cervical cancer and high grade CIN. The definite role of sexual behavior and infective agents in the aetiogenesis of cervical cancer qualifies the disease as a sexually transmitted problem hence the strong belief that it could be prevented. The disease has the features of a screenable disease because it is of an important health problem in Nigeria and passes through a well-defined pre-invasive stage with known latent period. The cervix is easily accessible and screening methods with high predictive values are available. Significant advances have been made in the field of cytology since 1928. Papanicolaou smear (Pap smear) cytology is used to detect abnormal exfoliated cells from the cervix. Since its inception as screening program in the US more than 50 years ago, it has reduce the incidence and mortalities from cervical cancers by more than 70%. The sensitivity of manual cervical cytology range from 55-80% with specificity of about 90% and error rate of 5-55%. Advances made to reduce these high error rates and to improve sensitivity and specificity include, automated pap screening, liquid based cytology and papnetsystem. The technical and financial constrain of implementing cytology based screening programmes in developing countries have led to investigations of screening tests based on visual inspection of the cervix. This can be done unaided or aided with 3-5% acetic acid, lugol’s iodine or magnifying lens (VIA or VIAM). The close association between HPV and cervical neoplasia means HPV testing can be used to increase the sensitivity of cervical cytology and VIA. HPV testing is used to increase the predictive value of Squamous intraepithelial lesions/ASCUS and follow-up after treatment of CIN in predicting recurrence. Unlike in developed countries, well organized and effective screening programmes are lacking in developing countries like Nigeria leading to high rate and mortalities from preventable diseases like cervical cancer. Previous reports have shown that the major factors responsible for the high case fatality associated with otherwise preventable tumour are poor knowledge about the disease and its screening as possible preventive measures against it.

**Objectives of the Study**

The main objective of the study was to determine and compare the levels of knowledge, attitude and acceptance of cervical cancer screening among female health and non-health personnel in JUTH. Appropriate recommendations will also be made at the end of the study.

**MATERIALS AND METHODS**

A comparative cross-sectional survey on knowledge, attitude and acceptance of cervical cancer screening (using Pap smear) was carried out among 315 Health personnel and 400 non-Health personnel in JUTH, Jos between 15th June and 31st...
July, 2008. Health personnel here refer to Doctors, Nurses, Medical Laboratory Scientists/Technicians, Pharmacists, Community Health Officers and Final year Medical and Nursing/Midwives students. The non-Health Personnel refers to non-health workers such as Administrative Staff, Clerks and Cleaners working in JUTH and patients and those accompanying them (that are not health personnel) to various clinics.

A structured self-administered questionnaire was designed. Pretesting of the questionnaires was done on 50 respondents in each group after which necessary adjustments were made before the questionnaires were administered. The information sought for included, the socio-demographic characteristics of the respondents, their knowledge, attitude and acceptance of cervical cancer screening by Pap smear. Four hundred and twenty questionnaires were distributed to the non-health personnel out of which 400 (95.2%) were returned completed. Three hundred and thirty questionnaires were distributed to the health personnel out of which 315 (95.5%) were returned completed.

The respondents were randomly selected from each groups making sure no woman was repeated. Questionnaires were randomly distributed to doctors in various departments during departmental meetings and to the Nurses/Pharmacist in the various wards while on duty. The CHO and students were randomly selected from their classes while waiting for lectures. The non-health personnel were randomly selected from the clinics and those who cannot read or write were assisted by an interpreter.

The questionnaires were given to them while waiting to be seen by the Doctors and every even number from queue and their relations were selected.

Respondents who have no knowledge of cervical cancer and screening or are yet to screen were educated and encouraged to screen after they have filled the questionnaires. Were necessary, chi-square was used as test of significant with p-value of <0.05 regarded as significance. The sample sizes were derived from using the formula:

\[ N = \frac{2(Zi-a)^2P(1-P)}{D^2} \]

Where:
N=minimum sample size
P=Current incidence of cervical cancer from the center expressed as a fraction of 100(in this case 25/100000)\(^7\)
Zi-a=a constant at 95% confidence interval (=1.96).
D=Absolute precision 0.05 adopted for this study

### Inclusion Criteria
Adult 18 years of age and above and those that gave consent

### Exclusion Criteria
Children less than 18 years of age, those that were very ill and those who did not give consent

### RESULTS

#### Socio-demographic Characteristics of the Respondents

Most of the health personnel 160(50.8%) were Nurses while the unemployed housewives were the highest 94(23.5%) among the non-health personnel. Only 5(1.5%) of the Health personnel and 10(2.5%) of the non-health personnel were aged \( \geq 60 \) years. Majority, 181 (56.5%) of the Health personnel and 226(56.5%) of the non-health personnel were of low parity (0-2) while 42(13.3%) of the health personnel and 85(21.3%) of the non-health personnel were grand multiparous women. Most of the health personnel 227(72.1%) and the non-health personnel 335(83.7%) were currently or previously married while 88(27.9%) and 65(16.3%) respectively were single. Fifty four (13.5%) of the non-health personnel have no any formal education while 63(15.8%) and 10(2.5%) had primary and Arabic education respectively. One hundred and thirty five (33.8%) of the non-health personnel and 100(31.7%) of the health personnel were of native ethnic groups of Plateau State while 107(26.8%), 49(12.3%) and 42(10.5%) of the non-health personnel and 50(15.9%), 45(14.3%) and 38(12.1%) of the health personnel were of the Hausa, Igbo and Yoruba extractions respectively.

Knowledge of the respondents on cervical cancer and screening

As shown in table 3, 91.4% of the health personnel have heard about cervical cancer screening with 73.7% having correct knowledge of pap smear as a screening procedure for cervical cancer. One hundred and forty-five (36.2%) of the non-health workers have heard about cervical cancer screening with only 64(16.0%) having correct knowledge on pap smear as a screening procedure for cervical cancer. The difference in knowledge between the two groups was significant (p < 0.001).

Among the non-health personnel, teachers and respondents attending gynaecological clinic had the highest correct knowledge about Pap smear of 45.0% and 24.0% respectively while the unemployed/housewives and the respondents attending the general outpatient clinic had the least correct knowledge of 10.6% and 13.8% respectively. Also among the non-health workers the level of knowledge increases with
levels of education. There was significant difference in knowledge about JUTH having a screening center for cervical cancer between health personnel 236(74.9%) and non-health personnel 84(21.0%) with p value < 0.05. About 263 (83.5%) of the health personnel had knowledge about the risk factors for cervical cancer while only 108(27.0%) of non-health personnel had such knowledge with significant differences. Also 300 (95.2%) of health personnel know about the symptoms of cervical cancer while only 63(15.8%) of non-health personnel have such knowledge at significant level. Also 274(87.0%) of health personnel know that cervical cancer is preventable while 103(25.8%) of non-workers have such knowledge. There were significant differences between health personnel and non-health personnel in knowledge about the risk factors, symptoms and prevention of cervical cancer (p < 0.001). Health workers were 14.67 times more likely to have correct knowledge compared to non-health personnel.

**Attitudes and Acceptance/Utilization of Cervical Cancer Screening among Respondents**

From table 4, 163(51.7%) of the health personnel and 186(46.5%) of the non-health personnel believe they are not at risk of the disease. The reasons for their believes are shown in table 4. Three hundred (95.2%) of the health personnel and 346(86.5%) of the non-health personnel want governments, NGO and the community to make cervical screening facilities readily available and 308(97.8%) of the health personnel and 326(81.5%) of the non-health personnel are ready to support any organization that will provide screening facilities. Two hundred and forty eight (78.7%) of health personnel and 261(65.3%) of non-health personnel feel cervical cancer is of serious problem in Nigeria and will want all sexually active women to have routine screening.

Tables 5 and 6 show the distribution of the screening state of the two groups of respondents and the reasons why those yet to screen have not screen. Overall, 75 (23.8%) of the health personnel and 44(11.0%) of the non-health personnel had undergone at least one screening procedure before. There was significant difference between the two groups (P< 0.001). Health workers were 2.53 times more likely to have been screened compared to the non-health workers. But on closer look, the screening rate among those with knowledge showed that 75(26.0%) of the 288 health personnel and 42(29.0%) of the 145 non-health personnel that had heard about cervical cancer screening. There was no significant difference in acceptance rate between the two groups among those that were aware of screening (P>0.05). Also 70(30.1%) of the 232 health personnel and 17(30.9%) of the 55 non-health personnel with tertiary levels of education that had correct knowledge about Pap smear had screened with no significant difference in acceptance rate between the two groups (P>0.05). There was increase in screening rates with increasing age of the respondents among the two groups. The screening rate increases significantly with parity among the health personnel but not so with the non-health personnel. For those that were yet to screen, there reasons are shown in table 6. One hundred and eighty two (75.8%) of the 240 health personnel and 291(81.7%) of the 356 non-health personnel who had not screen would like be screened while 58 (24.2%) of the health personnel and 65 (18.3%) of the non-health personnel would not like to be screened. Their reasons for not wanting to be screened included the belief that the respondents cannot have cervical cancer 50%, fear of being detected 20%, religious belief 30%, etc.

**Table 1: Professional Cadre of Respondents**

| Cadre              | Health personnel | Non Health personnel |
|--------------------|------------------|----------------------|
| Nurses             | 160(50.8)        | Housewives/unemployed 94(23.5) |
| Doctors            | 40 (12.6)        | Students 76 (19.0)    |
| Lab scientist      | 30 (9.5)         | Civil servants 59 (14.7) |
| CHO                | 25 (7.9)         | Traders 59 (14.7)     |
| Pharmacist         | 20 (6.4)         | Self employed 39 (9.8) |
| Medical students   | 20 (6.4)         | NHW (JUTH) 35 (8.8)   |
| Nursing students   | 20 (6.4)         | Teachers 20 (5.0)     |
|                    |                  | Others 18 (4.5)       |
| Total              | 315 (100.0)      | 400 (100.0)           |

**Table 2: Socio-Demographic Characteristics of Respondents**

| Characteristics   | Health personnel | Non health personnel | Test statistic | p value  |
|-------------------|------------------|----------------------|----------------|---------|
| Age (years)       |                  |                      |                |         |
| < 20              | 0 (0.0)          | 11 (2.7)             | χ² = 36.595     | < 0.001*|
| 20 – 29           | 95 (30.2)        | 177 (44.3)           |                |         |
| 30 – 39           | 104 (33.0)       | 126 (31.5)           |                |         |
| 40 – 49           | 85 (27.0)        | 60 (15.0)            |                |         |
| 50 – 59           | 26 (8.3)         | 16 (4.0)             |                |         |
| ≥ 60              | 5 (1.5)          | 10 (2.5)             |                |         |
| Mean age          | 36.3±10.1        | 32.6±10.1            | t = 4.86       | <0.001* |
| Parity            |                  |                      |                |         |
| Nulliparous       | 106 (33.7)       | 90 (22.5)            | χ² = 23.781     | < 0.001*|
| 1 – 2             | 75 (23.8)        | 136 (34.0)           |                |         |
| 3 – 4             | 92 (29.2)        | 89 (22.2)            |                |         |
| ≥ 5               | 42 (13.3)        | 85 (21.3)            |                |         |
| Mean parity       | 2.2±2.2          | 2.9±2.7              | t = 3.73       | <0.001* |
| Marital status    |                  |                      |                |         |
| Married           | 208 (66.0)       | 315 (78.7)           | χ² = 15.510     | 0.001*  |
| Single            | 88 (27.9)        | 65 (16.3)            |                |         |
| Widowed           | 10 (3.2)         | 11 (2.7)             |                |         |
| Divorced/separate| 9 (2.9)          | 9 (2.3)              |                |         |

Significant*
**Table 3: Knowledge about Pap smear as Screening Procedure for Cervical Cancer among Respondents**

| Health personnel cadres | Total | % with correct knowledge | Total | n (%) |
|-------------------------|-------|--------------------------|-------|-------|
| Nurse                   | 160   | 71.9                     | 160   | 71.9  |
| Doctor                  | 40    | 97.5                     | 40    | 97.5  |
| Laboratory scientist    | 30    | 70.0                     | 30    | 70.0  |
| CHOs                    | 20    | 60.0                     | 20    | 60.0  |
| Pharmacists             | 5     | 60.0                     | 5     | 60.0  |
| Nursing students        | 25    | 65.0                     | 25    | 65.0  |
| Medical students        | 20    | 95.0                     | 20    | 95.0  |
| Total                   | 288   | 73.7                     | 288   | 73.7  |

**Table 4: Awareness about Pap smear and the Type of Clinic Visit**

| Clinic visit                | No knowledge n (%) | Aware of pap smear n (%) | Total | n (%) |
|-----------------------------|--------------------|--------------------------|-------|-------|
| Antenatal                   | 73 (69.5)          | 32 (30.5)                | 105   | 14.3  |
| Gynae/family planning       | 57 (57.0)          | 43 (43.0)                | 100   | 24.0  |
| GOPD                        | 55 (68.8)          | 25 (31.3)                | 80    | 13.8  |
| Others                      | 50 (62.5)          | 30 (37.5)                | 80    | 21.3  |
| JUTH staff                  | 20 (57.1)          | 15 (42.9)                | 35    | 14.3  |
| Total                       | 278 (81.6)         | 288 (91.4)               | 315   | 73.7  |

**Table 5: Respondent’s Belief of Being at Risk or Not Being at Risk for Cervical Cancer and their Reasons**

| Response and reasons | Non health personnel n (%) | Health personnel n (%) | Test statistic | p value |
|---------------------|-----------------------------|------------------------|----------------|---------|
| Risk of cervical cancer | 214 (53.5)          | 152 (48.3)            | χ² = 1.938     | 0.164   |
| Reasons             |                            |                        |                |         |
| Because I am a woman| 42 (20.5)          | 61 (19.4)             |                |         |
| I am sexually active | 40 (10.0)          | 81 (25.7)             |                |         |
| Of my age           | 5 (1.3)              | 15 (4.8)              |                |         |
| Because I did not screen | 15 (3.8)       | 20 (6.3)              |                |         |
| Family/others       | 5 (1.3)              | 14 (4.4)              |                |         |
| No reasons          | 15 (3.8)             | 14 (4.4)              |                |         |
| I don’t know        | 40 (10.0)            | 46 (14.6)             |                |         |
| Not at risk of cervical cancer | 186 (46.5)     | 163 (51.7)            |                |         |
| Reasons             |                            |                        |                |         |
| My faith /not my portion | 100 (25.0)      | 86 (27.5)             |                |         |
| Not a problem in family | 46 (11.5)       | 65 (20.6)             |                |         |
| I am not way ward   | 43 (10.8)            | 88 (27.9)             |                |         |
| I am not sexually active | 23 (5.8)        | 45 (14.3)             |                |         |
| I am not married    | 10 (2.5)             | 45 (14.3)             |                |         |
| Other reasons       | 10 (2.5)             | 20 (6.3)              |                |         |
| No reasons          | 20 (5.0)             | 20 (6.3)              |                |         |
| Total               | 400 (100.0)          | 315 (100.0)           |                |         |

**Table 6: Rates of Acceptance of Cervical Cancer Screening among Respondents**

| Health personnel cadre(N) | Number screened n (%) | Non health personnel n (%) | Total n (%) |
|----------------------------|-----------------------|-----------------------------|--------------|
| Nurse (n =160)             | 52 (32.5)             | 160                         | 75 (23.8)    |
| H-W/unemployed (n=94)      | 6 (6.4)               | 94                          | 44 (11.0)    |
| Doctors (n = 40)           | 6 (15.0)              | 20                          |              |
| Students (n=76)            | 3 (3.9)               | 76                          |              |
| Laboratory scientist (n=30)| 4 (13.3)              | 24                          |              |
| Traders (n=59)             | 7 (11.9)              | 59                          |              |
| Com Health Officers (n=25)| 5 (20.0)              | 20                          |              |
| Civil servants (n=59)      | 6 (10.2)              | 59                          |              |
| Pharmacist (n=20)          | 3 (15.0)              | 20                          |              |
| Self-employed (n=39)       | 8 (20.5)              | 39                          |              |
| Medical students (n=20)    | 3 (15.0)              | 20                          |              |
| Teachers (n=20)            | 6 (30.0)              | 20                          |              |
| JUTH workers (n=35)        | 6 (17.1)              | 35                          |              |
| Others (n=18)              | 2 (11.1)              | 18                          |              |
| Total                      | 75 (23.8)             | 288                         | 44 (11.0)    |

**Table 7: Distribution of Respondents by the Reasons why they have not been screened for Cervical Cancer**

| Reasons                          | Non-Health personnel n (%) | Health personnel n (%) |
|----------------------------------|-----------------------------|------------------------|
| Yet to be screened               | 356 (89.0)                  | 240 (76.2)             |
| Reasons                          |                            |                        |
| Not thought of it                | 105 (3.4)                   | 89 (37.1)              |
| Not at risk                      | 111 (3.2)                   | 78 (32.5)              |
| I was not told by my doctor      | 115 (3.1)                   | 26 (10.8)              |
| No time                          | 43 (8.3)                    | 23 (9.6)               |
| Not available                    | 57 (6.2)                    | 21 (8.8)               |
| Not aware                        | 185 (1.9)                   | 9 (3.8)                |
| Fear of being detected           | 15 (2.4)                    | 23 (9.6)               |
| Shame of being exposed           | 21 (16.9)                   | 17 (7.1)               |
| Others                           | 20 (17.8)                   | 10 (4.2)               |
| Not affordable                   | 33 (10.7)                   | 14 (5.8)               |
| No reason                        | 75 (4.7)                    | 25 (10.4)              |

**DISCUSSION**

This study demonstrated high awareness and correct knowledge of Pap smear as screening procedure for cervical cancer among health personnel in JUTH. On the other hand, there were low levels of awareness and correct knowledge among non-health personnel working in or accessing/visiting the hospital with significant difference in the knowledge of cervical cancer and screening between the two groups. This is not surprising because Health Workers are supposed to have better knowledge. The rate of claimed knowledge of 93.8% among the health personnel in this study is comparable to the 92.9% obtained from similar study in the hospital in 2004, but the rate of correct knowledge of 71.9% is higher than the 49.7% from the same study. The high level awareness of cervical screening of 93.8% among health personnel is comparable the 94.0% from Maiduguri but higher than the 85.3% obtained from similar study in Rivers and Bayelsa states, Nigeria. The low level of knowledge about pap smear among non-health personnel of
16.0% is lower than the 67% from a community based study in Ilorin, 67.3% obtained among market women in Zaria but similar to the 15.0% obtained among Rural Women in Lagos.\textsuperscript{11,12,22,23} There was also low level of awareness of cervical cancer of 38.5% among the non-health personnel. The low level of awareness about cancer screening among non-health personnel is in contrast to the high levels of awareness in most developed countries.\textsuperscript{1,8,21,22} The increase in awareness of cervical cancer and screening with age, marital status and levels of education in this study is similar to what was found from studies in Benin City, Ilorin and Australia which showed age, marital status and levels of education as important determined of knowledge of cervical cancer and screening.\textsuperscript{2,11}

The higher level of awareness of cervical cancer and screening among women attending the gynaecological and family planning clinics (43.0%) is a reflection of their interaction with Gynaecologists/Nurses. The high knowledge among Teachers (45.0%) is due their knowledge seeking behavior and can be utilized as a means of transferring the knowledge to their students. The lower levels of knowledge about the risk factors, the symptoms and prevention of cervical cancer among non-health personnel is disturbing. Therefore all health personnel (and not only Gynaecologist) should be involved in health education about cervical cancer and its prevention.

Although there was significant difference in overall acceptance rate of screening between health (23.8%) and non-health (11.0%) personnel, when confounding factors such as knowledge, levels of education, marital status and occupations were considered, there seems to be no significant difference in acceptance rates between the two groups (26.0% for Health Workers and even higher, 29% for Non Health Workers). The practice of pap smear among the aware health personnel of 26.0% is higher than the 23.3.0% and 20.6% obtained in Maiduguri and Abakaliki respectively.\textsuperscript{21,23} The rate of 26.0% is also higher than the 19.0% in an earlier study in JUTH in 2004. This higher screening rate in this study is because of increase in awareness and the establishment of cervical cancer screening center in JUTH in 2006. The overall acceptance rate of 11.0% among the non-health personnel in this study is lower than the 32.7% obtained among market women in Zaria and 27.4% among women attending immunization clinic in Benin City, but lower than the 8.70% among women population in Bayelsa and Rivers states and 8.0% among women in a community based study in Ilorin.\textsuperscript{2,10,11,22} The acceptance rate of 22.0% among Gynaecological clinic attendants in this study is similar to the 22.9% obtained from LUTH Lagos but lower than the 35.1% among women attending cytology units of department of Obstetrics and Gynaecology, UCH, Ibadan.\textsuperscript{25,26} The acceptance rate of 22.0% among patients attending Gynaecological and family planning clinic compare to those attending other clinics in JUTH is due to their higher levels of awareness about pap smear.

The screening rate of 15.0% among Doctors is lower than the rate of 32.5% among Nurses and 20.0% among CHO. This is disturbing because Doctors are supposed to lead by example being the Leader of the health profession. The low rate of 12.5% among Medical and Nursing/Midwives students is because most of them (70.0%) are still single with the pretence that they are not sexually active (hence not at risk) even though 75% of them are over 25 years of age and studies from many centers in Nigeria have reported early sexual debut, high rates of premarital sex, multiple sexual partners and non use of condoms among single ladies.\textsuperscript{22,25,26} This study demonstrated increase rates of screening with age (Plateau at 40-49 years), marital status and parity among both health and non-health professionals. This is similar to studies from Ilorin, Lagos, Rivers/Bayelsa States and Australia.\textsuperscript{11,22,26} Unlike the study from Ibadan which showed no significant difference in the level of utilization of pap smear based on educational levels, this study showed increase in both levels of awareness and utilization of pap smear with increasing levels of education among the non-health personnel.\textsuperscript{25}

Even though 73.0% of health personnel and 84.0 % of non-health personnel are married and hence are sexually active and even large number of the single could be sexually active as stated above, 47.6% of health personnel and 43.0% of non-health personnel feel they are not at risk of cervical cancer. This calls for enlightenment campaign. It is encouraging to note that after counseling and educating the respondents on the importance of cervical cancer screening 81.3% of the health personnel and 87.1% of the non-health personnel that are yet screen indicated their williness to go for screening. Unfortunately, 10.3% of the health personnel and 3.2% of the non-health personnel want to be screened after marriage. For those who do not want to be screened their reasons for not wanting to be screened are similar among the two groups.

**CONCLUSION**

This study has demonstrated good knowledge about cervical cancer screening among health personnel but poor knowledge among non-health personnel. There was poor attitude and
acceptance among the two groups. Considering the magnitude of the morbidity and mortality from cervical cancer in Nigeria, it is imperative that the control of this potentially preventable disease be given topmost priority in order to attain the level of control of the disease as is obtained in the developed countries.

**Limitation**

Information obtained from non-educated informant might have been distorted during the process of interpretations and filling of questionnaires. Some respondents might not have given true response/information. Not all questionnaires were returned.

**Conflict of Interest**

None declared.

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