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Knowledge and Practice of Cervical Cancer Screening amongst Nurses in Ahmadu Bello University Teaching Hospital Zaria

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Abstract
Cervical cancer is both preventable and curable, yet morbidity and mortality from the disease remain high especially in developing countries. Request for cervical cancer screening by Pap smear and cytology or any other screening methods have been found to be exceedingly low even among health workers. This study was conducted to examine the knowledge, attitude and practice of cervical screening among female nurses in Ahmadu Bello University Teaching Hospital Zaria, with a view to identifying defining variables of attitude and practice of cervical screening. Data was collected from a convenience sample of 117 nurses through a self-administered questionnaire. Those who were not aware of cervical cancer screening (n=3) were excluded. A descriptive analysis of the data collected from 114 of the nurses who were aware of the screening revealed that awareness and knowledge of the cervical cancer screening was very high but they exhibited indifference and negative attitude, and low personal screening practices. Several reasons were put forward for this low level of practice among which were fears of test being positive and non consent from husbands. This finding among nurses being agents of such health education calls for concern. It is therefore recommended that concerted efforts should be made to dispel the fears of outcome of test and to incorporate husbands into future health education of married female nurses. This will increase the number of nurses who will go for voluntary cervical cancer screening.
Keywords: Cervical cancer screening, Pap smear, Cancer prevention, Knowledge, Practice

INTRODUCTION

Annually more than 300,000 deaths occur due to cervical cancer worldwide and 500,000 new cases every year; most of the deaths occur among young mothers (Parkins and Moss, 1999; Anorlu *et al*., 2000; National Cancer Institute, 2007). Cervical cancer is the second most common cancer in women, with 273,000 estimated deaths in 2002. Most cases (83%) occur in developing countries where they account for 15% of female cancers, compared to 3.6% in developed regions (Gakidou *et al*., 2008). Nigeria ranks the highest in advanced cases of cervical cancer in the sub-Saharan Africa (Okeke and Akpala, 1999; Duncan, 2004). The survival rate for cancer of the cervix diagnosed and treated early is very high. There has also been a significant decline in the incidence of clinically evident invasive cancer of the cervix. These are attributed to early detection of precancerous or early cancer lesion by extensive and repeated screening (mainly by the use of the Pap smear). Cervical cancer is probably the only reproductive malignancy that may be detected in its pre-invasive stage by regular cytological screening (Olatunbosun, Okonofua & Ayangbade, 1991; Chou 1999). It is also reported to be commonest reproductive malignancy in Nigeria (Onah, 2001). Despite other screening methods, the Papanicoloau smear (Pap smear) remains the most cost-effective approach to cervical cancer screening worldwide. Women within their reproductive ages require cervical cancer screening at regular intervals (Edafuye, 2006). There is no universal consensus on the age at which such screening should commence neither is there any agreement on the frequency of screening nor when to stop (American Cancer Society, 2006).

It has also been reported that cervical cancer occurs most commonly in women between the ages of 30 and 45 years but can even occur as early as 18 years (Smeltzer and Bare, 2007). According to them, the most acceptable routine screening for cervical cancer should be carried out at least once every three years. However, the American Cancer Society (2006) opines that some may choose to be screened every year while some others may go for the screening at five years intervals. It recommended that a woman who has been screened three consecutive times within ten years can stop screening otherwise screening can stop at 70 years of age(National

Cancer Institute, 2007). Many countries such as the US have established cervical cancer screening programmes (Gonge, 2003) but in Nigeria, there is no such organised cervical cancer screening programmes (Onah, 2001). The World Health Organisation (WHO, 2001) recommended that in low income countries, every woman should be screened at least once in her life time especially between age 35 and 40 years.

Many risk factors have been implicated in the causation of cervical cancer. These include multiple sex partners, early onset of sexual intercourse, early child bearing and exposure to human papilloma virus, Types 16 & 18 (Lewis *et al*., 1990:121; Jeronimo *et al*., 2003; Onajole, 2004). Others include sexually transmitted diseases, contraceptive use and smoking. Studies on the knowledge and practice of cervical cancer screening among female health professionals demonstrate that knowledge and awareness are high but the rate of practice or utilisation is low. For example, in a study of the perception, attitude and practice of cervical cancer screening amongst female doctors and nurses in Enugu, Nigeria, it was found that 98.1% were aware of it and 87.2% had correct knowledge of the screening. Regular screening was considered essential by 64.1% of respondents but only 12.8% had ever been screened; 3.2% had done the screening in the previous year (Aniebue *et al.,* 2001). Factors such as professional training, marital status, advancing and long services in teaching hospital significantly improve the utilization of cancer screening services. In another study in Ilorin, Nigeria, among health workers, 69% of them knew about cervical cancer screening but only 0.3% of those who had the knowledge had had a Pap smear test at least once previously (Aboyeyi *et al.*, 2004). Adewo *et al*. (2008) stated that only 10% of female doctors in Nigeria had had cervical cancer screening done themselves. Many reasons were given for low practice. In Remo, Ogun state Nigeria 5.3% had no reason to do Pap smear while 6.4% considered themselves too young for the test (Adewo *et al*., 2008).

Murray and Millan (1993) reported that most women believed they were too young to do Pap smear while others blamed inadequate facilities including shortage of trained personnel to do the screening and screening centres. However, available evidences show that where such cancer screening facilities are available in Nigeria, the services are grossly under- utilised (Ohaeri *et al.,* 1996). The reasons adduced for these include ignorance, fear of outcome of screening, unwillingness to expose very private parts of the body for examination and lack of cytologist. Benner *et al*. (2001) reported that using female nurses to administer Pap smear was more acceptable and comfortable; 97% of women prefer female doctors to administer Pap test especially among Muslims.

Barriers to cervical screening such as gender and or religious considerations have been shown to exist in many cultures (Benner *et al.,* 2001). However, Umar-Sulyman and Randawa (2006) stressed the cooperation of husbands as a means to overcome such obstacles. But contrary to Benner *et al.,* (2001) assertion, they reported that religion (Islam) did not seem to be a hindering factor as 91.9% of husbands surveyed said it was allowed in their religion to go for such screening.

Detection of cervical cancer in its earliest stage is life saving as it reduces cervical cancer rates by 60 - 90% within three years of implementation (American Cancer Society, 2006). The Society reported that for the past several decades, the number of women diagnosed each year with cervical cancer is falling in developed countries and this is believed to be due to success of the screening.

Request for cervical cancer screening by Pap smear and cytology or any other screening methods have been found to be exceedingly low in the general population and health workers are no exceptions. Many factors have been implicated in this low level of screening in Nigeria.

Objective of the Study

This study was conducted to examine the knowledge and practice of cervical cancer screening among nurses working in Ahmadu Bello University Teaching Hospital, Zaria, Kaduna State, Nigeria.

Significance of the Study

The findings would be used to form basis for cancer screening campaigns for female nurses in particular and female health workers in general who should themselves serve as health informants and models to the general population. Hospitals can also use the results to publicise and update their cancer screening services/facilities in the fight against cancers particularly cancer of the cervix.

METHODS AND MATERIALS

The descriptive, cross-sectional study was conducted in Ahmadu Bello University Teaching Hospital (ABUTH), Zaria, a federal health institution with about 500 nurses, two-third of whom are females. The female nurses formed the target population for this study. A self-constructed-administered-20-item questionnaire, validated by three senior consultants, was used to collect data from a convenience sample of one hundred and seventeen (117) nurses. The instrument was pre-tested in a Mission Hospital among 8 nurses. The slightly adjusted instrument was used to collect data in July and August 2008. The data was edited and analysed descriptively, using frequency tables, relative measures and measures of central tendency. Only data from the 114 nurses who

reported being aware of cervical cancer screening was included for analysis.

RESULTS

Table 1 indicates that most (42.7%, n=50) of the nurses were within age range 36 – 45 years, married (60.7%, n=71), Christians (86.3%, n=101) and most (38.4%, n=45) had served as nurses for 11 – 20 years.

Table 2 shows that 114 (97.4%) were aware of the cervical cancer screening; only 3 (2.6%) were not (these were excluded). Many of them (34.2%, n=40) believed that cancer of the cervix is the commonest disease among women. Majority (91.5%, n=107) said the cervical cancer is preventable. All 114 respondents aware of cervical cancer screening believed that Pap smear is the method of prevention. Of these, 94.0% (n=107) believed the screening is important; 75 (65.8%) of them considered age as a major factor in cervical cancer screening; 48.0% of them recommended age 35 years and above to begin cervical screening, 22.9% 25 – 30 years and 29.1% considered age 18 – 24 years as when to start cervical cancer screening. Majority (92.1%, n=105) would like it done routinely for all women. They did not state when to stop screening.

Out of the 114 respondents aware of cervical cancer screening, only 16 (14.0%) were aware of the availability of cervical cancer screening services in their hospital (Ahmadu Bello University Teaching Hospital, Zaria).

Despite the high awareness level, 97 (85.0%) had never been screened for cancer of the cervix before; only 15.0% (17) reported ever being screened (Figure 1). Of these, 7 (41.3%) had it done once while 58.7% (10) had been screened for more than once in their lifetime, at various intervals: yearly (40.0%, n=4), three yearly (40.0%, n=4) and at random (20.0%, n=2) (Tables 3 & 4).

Among those who had never been screened (N=97), 70.1% (68) of them would want to be screened. They stated various factors that stopped them from being screened. They include fear of being stigmatized (86.0%), exposure of private parts to male doctors (44.7%), fear of injury from poor equipment/experts (20.1%), lack of awareness of the services in their hospital, and the need for husbands' approval (23.7%) (see Table 6).

Majority (80.0%, n=91) of the 114 respondents had at least educated some women on cervical cancer screening at one time or another; many (45.0%) having encouraged between 1 and 5 women (Fig. 2, Table 7). Among those who never talked any other women about cervical cancer screening (N=23), most (82.6%, n=19) did not because they had not been screened themselves, others (60.8%, n=14) were not comfortable with the resources being used for screening while the rest (47.8%, n=11) were just not interested in sharing the screening information.

Respondents made some recommendations: health education through mass media and other means (80.7%, n=92) to create awareness, routine/periodic test for employment (18.4%, n=21), free/voluntary screening (4.3%, n=5), government to provide facilities, and hospital management to support female nurses to do free screening and provide free treatment if detected (9.6%, n=11) to motivate women to go for the screening, and to involve husbands (89.7%, n=105) to ensure support.

DISCUSSION

Findings show high level of awareness and high attitudinal predisposition to cervical cancer screening but low screening practices among the nurses. In this study, only 14% of the respondents were aware of services in their own hospital. This differs significantly from reported 52.5% of men in Zaria metropolis who knew about cervical cancer screening services in Zaria and most of the husbands got their information from health workers (Umar-Sulyman and Randawa 2006).

In a study in Enugu among female health workers, similar results of high awareness level (98.1%) and knowledge (87.2%) but low (12.8%) screening practices with 3.2% having done the screening in the previous year were reported (Aniebue *et al*., 2001; Edafuye, 2006). This scenario must have been due to lack of awareness of available services in respondents' locality as reported by Ohaeri *et al*. (2001).The awareness by the public then becomes a cause for concern.

Ninety-four percent (107) of nurses considered regular screening important for women, and it is seen as the preventive option for cervical cancer. Such high premium on cervical cancer screening was also found (64.1%) in the study by Aniebue *et al*. (2001). Similarly, the American Cancer Society, (2006) reported that cervical cancer is falling (by 60 - 90%) in developed countries and this is believed to be due to success of the screening, being detected in its earliest stage as a life saving measure.

Many factors discouraging respondents from utilizing cervical cancer screening services were identified. The fear of stigma reported by some of the respondents raises the need for effective education on the disease itself and the possible treatment options including preventive measures. The lack of confidence in available facilities by health workers who are themselves part of the whole hospital system also call for system over-haul in terms of education and confidence building. In Nigeria, such grossly under-utilised services have been found (Ohaeri *et al.*, 1996).

The need for approval by husbands of even female nurses in health decisions points to the strategic role

of husbands. This has been emphasized by Umar-Sulyman and Randawa (2006). Exposure of 'private' parts to male practitioners for screening was also an inhibiting factor found in this study. Benner et al (2001) had reported such barriers to cervical screening such as gender and or religion of the administering professional. Many other reasons were given for low practice (Murray 1993), such as inadequate facilities including shortage of trained personnel to do the screening and screening centres, ignorance, fear of outcome of screening, unwillingness to expose very private parts of the body for examination, and lack of qualified personnel such as the cytologist to conduct the tests (Ohaeri *et al*., 1996).

Majority (65.8%) of respondents in this study considered age an important determinant in screening. Many of them (48.0%) recommended age 35 years and above to begin cervical screening. However, according to American Cancer Society (2006), there is disagreement on the age at which such screening should either start or when to stop; neither is there any agreement on the frequency of screening. However, it has been reported that cervical cancer can occur as early as 18 years but most commonly occurs in women between the ages of 30 and 45 years. Hence, cervical cancer can commence as early as 18 to 20 years.

A low level of nurses' willingness to educate other women on need for the screening found in this study needs further exploration. Such attitudes and misconception among health care providers need urgent attention, because as Awodele *et al.* (2011) put it: nurses as part of the health care team with accessibility to client should serve role models, educators and counsellors and whatever behaviours they exhibit touch the lives of many in the general population.

CONCLUSION

The knowledge of nurses on cervical cancer screening is high but the practice is low. Many factors are implicated in this. However, many of them desired to be screened. There is also low willingness among nurses to health educate other women on cervical screening. These findings should form basis for relevant authorities and organisations to intensify cancer screening campaigns, for all female health workers and female nurses in particular, who should themselves serve as health informants/models to the general population. Hospitals should adequately keep their staff abreast with all services they provide including the cancer screening services/facilities. Free cervical cancer screening for the country (Nigeria) has also been suggested (Diagbare 2008). The situation in the general population must therefore require urgent attention. This also calls for more widespread studies.

Table 1: Socio-demographic Characteristics of Respondents

Variable	Frequency	Percentage %
Age in years:		
26-35	27	23.1
36-45	50	42.7
46-55	28	24.0
56-65	12	10.2
Total	117	100
Marital status:		
Single	29	24.8
Married	71	60.7
Divorced	5	4.2
Widowed	12	10.3
Total	117	100
Religion:		
Christianity	101	86.3
Islam	16	14.7
Total	117	100
Tribe:		
Hausa	5	4.3
Yoruba	30	25.6
Igbo	28	24.0
Others	54	46.1
Total	117	100
Highest Educational Qualification:		
ADPA/DNAM	35	30.0
Post-basic Nursing (other than Midwifery)	14	12.0
Basic Nursing/Midwifery	68	58.0
Total	117	100
Rank:		
SNM	28	23.9
NO	20	17.1
SNO	23	19.7
PNO	26	22.2
ACNO	11	9.4
CNO	9	7.7
Total	117	100
Years of Experience:		
1-10	23	19.6
11-20	45	38.4
21-30	21	18.0
>30	28	24.0
Total	117	100

Table 2: Respondents' Knowledge and Awareness of Cervical Cancer screening

Variables	Yes	No	Total
Are you aware cervical cancer screening?	114(97.4)	3 (2.6)	117 (100%)
Cervical cancer is the commonest disease in women.	40(34.2)	77(65.8)	117 (100%)
Is cervical cancer preventable?	107(91.5)	10(8.5)	117 (100%)
Pap smear is the method used for the prevention.	114(100)	0	0
Age is a major factor considered in cervical cancer screening?	75(65.8)	59(34.2)	114 (100%)
Is cervical cancer screening important for all women?	107(94.0)	7(6.0%)	114 (100%)
Cervical cancer screening be done routinely for all women?	105(92.1)	9(7.9)	114 (100%)
Are you aware cervical cancer screening in ABUTH?	16(14.0)	98(86.)	114 (100%)

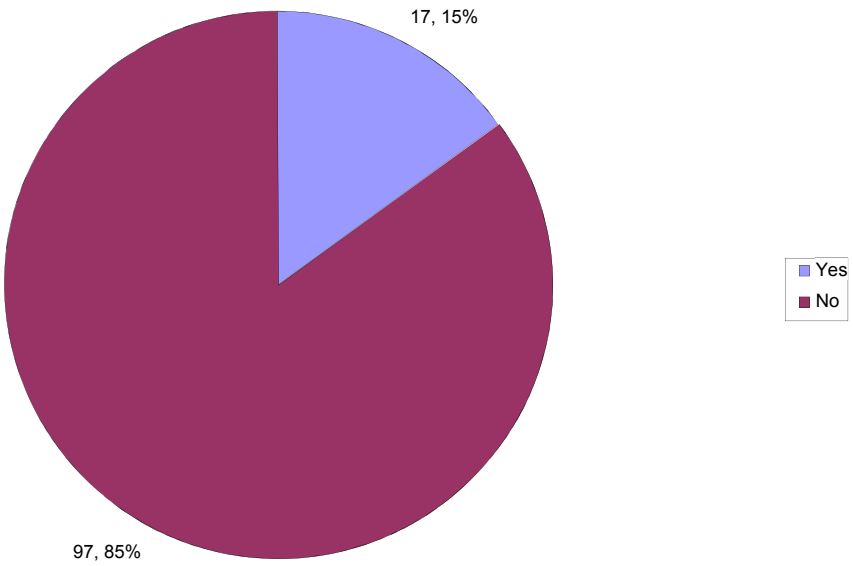

Fig. 1: Have you ever been screened for cervical cancer?

Table 3: Frequency of cervical cancer screening among nurses

No. of times screened	Frequency	Percentage
Once	7	41.3
Twice	4	23.5
Three times	4	23.5
> three times	2	11.7
Total	17	100

Table 4: Interval of Screening by Respondents

Interval	Frequency	Percentage
Yearly	4	40.0
Once in 3 years	4	40.0
Random	2	20.0
Total	10	100.0

Table 5: Would want to do a Pap smear/cervical cancer screening?

Responses	Frequency	Percentage
Yes	68	70.1
No	29	29.9
Total	97	100.0

Table 6: Factors responsible for non-utilisation of cancer screening services

Factor	Frequency (N=97) *	Percentage
Husband's consent	27	23.7
Fear of outcome (stigma)	98	86.0
Exposure of private parts	51	44.7
Fear of harm poor equipment/experts	23	20.1
Exposure to other diseases	36	31.6
Lack of awareness of services	23	20.1

** Multiple responses*

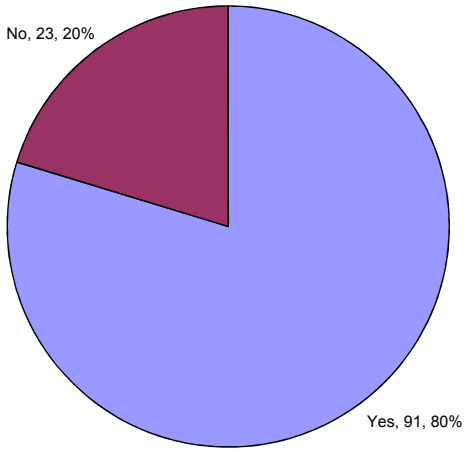

Fig. 2: Educating other women on screening?

Table 7: Number of other women educated by Respondents

Number	Frequency	Percentage
1 – 5	41	45.0
6 – 10	26	28.6
11 – 15	11	12.1
> 15	13	14.3
Total	91	100.0

Table 8: Reasons for not encouraging other women on screening

Reason (N = 23)	Frequency*	Percentage
Have not done (self)	19	82.6
Not interested	11	47.8
Likely use of unsterile instruments	7	30.4
Not sure of the quality of screening experts	7	30.4

** Multiple responses*

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