

Knowledge and Utilization of Cervical Screening among Female Health Workers in Jos University Teaching Hospital and the role of the Gynaecologist in screening

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Abstract

Background: Cervical carcinoma is a preventable women killer disease and the knowledge and utilization of cervical screening is very important in its prevention.

Aims: The aim is to determine the knowledge, attitude and practice of JUTH female health workers to cervical screening, as well as the role of the gynaecologist in referral for screening tests.

Study design and Methods: A cross-sectional study of the female health workers in JUTH was carried out using a stratified sampling technique and the same proportion of the various cadres were sampled using a structured questionnaire, and the results were analysed.

Results: A total of 200 women were recruited, and 93.5% said they knew about Pap smear but only 56.5% knew what it was actually meant for and 19% of the study had done Pap smear in the past. There was no reason given in 59% of the subjects for not carrying out a Pap smear, while 19.5% gave non physician referral as reason. Among the 38 women who had had a Pap smear, 36.8% had done it more than 2 years previously. A total of 104 women visited gynaecologists at various times, but only 15.4% were asked to have a Pap smear.

Conclusion: The knowledge and utilization of Pap smear is poor and the gynaecologists have many missed opportunities for Opportunistic Pap smear.

Keywords: Female health worker, gynaecologist, Pap smear, cervical screening.

1.Introduction

Globally, cervical cancer remains an important cause of mortality among young women, being the second commonest female cancer worldwide.[1-3] It is the commonest gynaecological cancer, and a leading cause of death in the tropics, even though it is a very preventable disease.[3-8]The peak age incidence of the disease in Nigeria is about 15 years earlier than in many countries[3] and many of the women present in the late stages[6,9] with mortality of over 300,000 globally every year.[10] Many of the women also die as young mothers[11]; and it is known that more than 80% of cervical cancer cases occurring in developing countries, which collectively have only 5% of global cancer resources.[12]

Cervical cancer is probably the only reproductive malignancy that may be detected in its preinvasive stage by regular cytological screening[1,3,7,14,15] since it has recognized premalignant lesions, which may persist for years before the invasive cancer develops[3,9,12,13]. The accessibility of the cervix has also made investigation for intraepithelial lesions very feasible in developed countries [1,5] and studies have shown that three out of four women who developed cervical cancer each year have never had a pap smear or did not have it as recommended.[8]

One of the simplest techniques for screening for pre-invasive lesions of the cervix over 50 years has been the Papanicolaou (Pap) smear, but this is often beyond the reach of the poor in Africa [17].

However information, acceptance and uptake of screening services has a part to play, as some who has access to screening do not utilize it [6,7,11]. This therefore indicates that there are other barriers to access. Other screening methods available for detection of pre-invasive stages of the disease including Human Papilloma Virus DNA testing, visual inspection of the cervix and application of 5% acetic acid [2], as well as cervicography, speculoscopy and polarprobe.[18] The Pap smear however remains the most cost effective approach to cervical screening worldwide and is also appropriate for low resource settings like ours.

The foundation for prevention of invasive cervical carcinoma was founded by George Nicholas Papanicolau (1883-1963), when in 1941 he described a cytological method for the detection of pre-invasive lesions[4], treatment of which will prevent progression to invasive cervical, cancer[1,2,3,7]. Historical data introduction of pap smear in countries that have introduced routine cytology showed that the incidence of cervical cancer and mortality from disease have dropped remarkably after implementation of pap smear screening programmes[2,8,13]. Negligent non-disclosure however still contributes to incidence in some countries that have screening programmes [19].

The American college of obstetricians recommends that annual Pap test screening should begin when women become sexually active or reach the age of 18 years.[14] This is because incidence of cervical cancer in women less than 30 years is increasing.[20]

The advent of Human Immunodeficiency Virus has increased this and Cervical cancer is now known to be a sexually transmitted cancer and an AIDS defining condition (WHO Stage 4 Disease). However, the overall consensus on the screening interval is 2-5 years depending on the organization and economy of the health care system [20], but screening every 10 years or once in a lifetime has a significant impact [20]. Many women in this environment do not do this, and in Nigeria as a country there is no national cervical screening program.

A study of 166 Nigerian female health professionals in hospitals in Abuja showed that 72.9% were aware of cervical screening; only 9.6% had ever had a cervical smear. The most frequent reason given by the women was non-physician referral[7]. A study among Nigerian gynaecologists also revealed that although Pap smear was available in 85% of centers, only 15% of the gynaecology patients were screened and this was based on specific indications [6].

A previous study among nurses in Jos revealed that 94% had heard of Pap smear, but only 20% of them had Pap smear done, out of which 55.2% it had done more than 3 years previously [21]. Awareness has also been found to be higher among medical students in another study of university students, but the utilization of Pap smear was found to be low, with only 8.3% found to have had a pap smear [22]. In another study, the knowledge of Pap smear was found to be high among doctors but inadequate among nurses. However, 93.2% had never had a pap smear before. The poor utilization was independent of profession, marital status or hospital of employment [23]. Awareness is naturally expected to be high among female health workers, but whether or not it translates to utilization is what this study set out to determine. The role of the gynaecologists in non-utilization of screening will also be evaluated. The overall aim is that of identifying specific areas that need to be addressed so that an effective screening programme can be established.

The United States Preventive Services Task Force (USPSTF) and the American Cancer Society (ACS) recommend testing every three years for women ages 21-65; routine cervical cancer screening for women under 21 and over 65 is no longer recommended. The two groups also introduced the option of a lengthened, five-year screening interval for women ages 30-65 when screened with a combination of Pap testing and human papilloma virus (HPV) testing. [25] Although it is known that false negative and false positive tests can occur that can lead to unnecessary follow-up tests and treatment, it is still cost effective and beneficial to have a cervical screening test.[26]

1.2 Aims and Objectives

- 1)To determine knowledge about prevention of cervical cancer.
- 2)To assess the understanding of Pap smear as a form of cervical screening.
- 3)To determine utilization of cervical screening in view of levels of awareness.
- 4)To evaluate the impact of contact with gynecologists on referral for cervical screening.

2. Materials and Methods

A cross sectional study of the female health workers in Jos University Teaching Hospital was carried out. The female health workers according to WHO are the personnel who has undergone a specified training to offer healthcare services. They include the doctors, nurses, pharmacists, physiotherapists and laboratory scientists. The hospital non-professional staff likes the cleaners, clerks and dieticians were not included in the study.

The female workers of the various wards, clinics, theatres, laboratories and pharmacies were all sampled and offered recruitment into the study. Few women declined being part of the study and were excluded. A total of 204 women were sampled using a structured, self-administered questionnaire after recruiting them with stratified sampling technique. The various questions sought to determine the socio demographic characteristics of the respondents, and as well examine their knowledge, views and utilization of the pap smear, which is an investigation that is available in the hospital. Questions were asked to examine the determinants of procuring a smear among those who had screened before, as well as to determine the percentage of women who despite the fact that they had seen a gynaecologist in the past, had never been asked to have a pap smear.

The results were analyzed using the EPI-Info statistical software of the World Health Organization. On completion of the questionnaires, the respondents were counseled about seeing a gynaecologist for more information on cervical screening.

3. Results

Of the 204 questionnaires administered, 200 were correctly filled and returned giving a 98%

response rate. All the questionnaires were analyzed and the results obtained are shown in the various tables below.

Table 1: Questionnaires responded

Cadre	Number	Percentage (%)
Nurse	157	88.5
Doctor	28	14
Pharmacist	8	4
Technology	7	3.5
Physiotherapist	0	0
Total	200	100

*Physiotherapy - The hospital had no female physiotherapist.

The nurses constituted the largest proportion of the study, contributing 88.5% to the study population. This was due to the fact that they constituted the highest cadre of female health workers.

Table 2: Questionnaires responded

Age (Years)	Number	Percentage (%)
<21	0	0
21-30	29	14.5%
31-40	103	51.5%
41-50	54	27%
51-60	14	7%
> 60	0	0
Total	200	100

Most of the respondents (51.5%) were between 31-40 years of age.

Table 3: Those who had pap smear according to marital status

Marital status	Total N Respondent	Percentage Population	No. who had it	Percentage cost
Single	31	15.5%	1	3.2%
Married	154	77%	33	21.4%
Separated	0	0	0	0
Divorced	1	0.5%	0	0
Widow	14	7%	4	28.6%
Total	200	100	38	19%

Of the study population of 200, only 38 women (19%) had done Pap smear before. The utilization of Pap smear was found to have been higher among widows and married women than the singles.

Table 4: Distribution of the knowledge of pap smear

Cadre	No. of who knowledge smear	Total No. in	Percentage cost	percentage population
Nurse	146	157	92.9	73
Doctor	28	28	100	14
Pharmacist	6	8	75	3
Technology	7	7	100	3.5
Total	187	200	93.5	93.5

187 (93.5%) of the respondent claimed to have knowledge of Pap smear P value = 0.98679. This was asked as a closed ended question.

Table 5: Responses to the definition pap smear

Cadre	It is preventable	It's not preventable	Don't Know	Total	Percentage of who knew it was preventable
Nurses	119	34	4	157	75.8
Doctors	27	1	0	28	96.4
Pharmacist	3	3	2	8	37.5
Technology	5	1	1	7	71.5
Total	154	39	7	200	77

Although 187 respondent (93.5%) had claimed of the Pap smear verification showed that actually only 113 (56.5%) of the respondents knew exactly what Pap smear was used for. These constituted 60.4% of those who claimed knowledge. Those who were ignorant were present among the various cadres of staff.

Table 6: Response to whether cervical carcinoma is preventable

Cadre	It is preventable	It's not preventable	Don't Know	total	Percentage of who was preventable
Nurses	119	34	4	157	75.8
Doctors	27	1	0	28	96.4
Pharmacist	3	3	2	8	37.5
Technology	5	1	1	7	71.5
Total	154	39	7	200	77

It was 77% of the study population who knew cancer of the cervix is a preventable disease. The highest awareness was among Doctors, with 96.4% of them knowing it was preventable.

Table 7: Reasons for performance of pap smear among those who had it.

Reason	Number	Percentage of T had pap smear	Percentage of population
On Request	22	57.9	11
As a routine	9	23.7	4.5
There was a problem necessitating it	7	18.4	3.5
Total	38	100	19

Only 19% of the study population had a Pap smear, and 11% had it on request while only 4.5% had it as a routine while 3.5% had it because of a problem that made them visit the health facility. This is very low compared to the 93.5% who claimed awareness and 56.5% who actually knew what Pap smear was.

Table 8: Reasons given for not performing pap smear

Reason	Number	Percentage of T had pap smear	Percentage of Population
No doctor request	39	24.6	19.5
Unaware of what pap smear	2	1.2	1
It will not help	1	0.6	0.5
Need husbands	0	0	0
No reason	118	72.8	59
Others	2	1.2	1
Total	162	100	81

*One woman was afraid of what the result would be, while one other woman has a friend who had a smear and never got the result.

165 women (18%) did not have Pap smear. Most of them had no reasons, but 39 women, (24.6%) did not have it because no doctor requested.

Table 9: Distribution of women who had done pap smear before and the number of times

Cadre	Never smear	Once	2-4 times	<5 time	Total	Total smear	Percentage
Doctors	25	3	0	0	28	3	10.7
Nurses	126	24	7	0	157	31	19.7
Pharmacist	6	2	0	0	8	2	25
Technology	5	1	1	0	7	2	28
Total	162	30	8	0	200	38	19

The percentage of those who had done Pap smear was very low, and the utilization of Pap smear was lowest among doctors, where only 10.7% of doctors had done Pap smear.

Table 10: Time when pap smear was done or done last

Time	Nurse	Doctor	Pharmacy	Technology	Total	Percentage
Within months	21	1	1	1	24	63.2
2-5years	5	1	0	1	7	18.4
>5years	5	1	1	0	7	18.4
Total	31	3	2	2	38	100

Table 11: Distribution of subjects' last visit to a gynaecologist in Juth

Time	Nurse	Doctor	Pharmacist	Technology	Total
Within months	27	6	3	3	39
2-5years age	27	4	0	0	31
>5years age	32	2	0	0	34
Never	71	16	5	4	96

A total of 104 women (52%) of the study population had seen a gynaecologist at different times in the past, 19.5% had seen one within the past 24 months.

However, only 38 women (19%) had a Pap smear, and of this percentage only 9 had done it on request. Thus only 16 of the 104 women (15.4%) who had visited gynaecologists had been asked to have a cervical smear.

Several of the respondents asked questions about Pap smear after completing the questionnaires; some of them indicated interest in having Pap smears as soon as possible.

4. Discussion

The knowledge of Pap smear female health workers is expected to be high, since this group of people work in the hospital, see these ailments and are expected to be aware. In this study 187 respondents (93.5%) were aware of Pap smear, however, only 113 (56.5%) of the study group knew it was a test to diagnose premalignant conditions. Olaniyan and Coworkers in Abuja found that 86.1% had heard about Pap smear while 72.9% actually knew what it were [7]. Anorlu and Coworkers found a very poor awareness rate of 4.2% [11].

The compliance rate of cervical screening was found to be very low among those who were of Pap smear, being 38 (19%) of the study group. Thus is a better rate than that obtained by Babarinsa and Adewole where compliance was 7.6% of 97 respondents [24]. Olaniyan and coworkers found a compliance rate of 13.2% of 166 respondents [7]. Ayinde and coworkers found compliance rate of 13.2% of 166 respondents [7], 8.3% among University students [22], and 6.8 among female health workers in Ibadan [23]. Sagay and coworkers found compliance of 20% [21]. These signify that other factors are at play in the non-utilization of cervical cytology apart from mere awareness of it.

The married women and widows had a larger percentage of those who screened compared to the singles. This contrasts with Olaniyan's study where there was no significant difference. Most of the respondents who did not have a Pap smear had no reason (72.8%), while 24.6% said it was because no doctor requested for it. This compares with Olaniyan's study where the commonest reason. Given was lack of physician referral (54.3%) of cases. In Sagay's study 78% did not screen because of ignorance [21]. This demonstrates that there is a need for counseling services to encourage staff to have screening [7]. Among the 38 women who had a Pap smear, 36.8% were found to have done it more than 2 years previously. In the study by Sagay and coworkers in Jos, 55.2% had done the smear more than 3 years previously [21].

In this study the doctors had 100% knowledge of Pap smear and what kind of test it was and 96.4% knew it carcinoma of the cervix was a preventable disease, however, the lowest utilization rate of 10.7% was found among them. One woman felt Pap smear would not help her and this was why she didn't carry it out. She was unaware of the implication of the Pap smear, and probably felt she was not at risk of cervical carcinoma. This therefore, calls for education and counseling so that women can accept susceptibility to disease [7]. The women need to be told about risk factors as well as the fact that

any woman who is sexually active is at risk of cervical cancer [8]. They should also be made to know that age is not a factor, as young teenagers have been known to develop cervical intraepithelial neoplasia especially with the advent of early sexual debut, multiple sexual partners and HIV. A total of 104 women (52%) had been seen by gynaecologists at different times previously, but worthy of note is the fact that of the 38 women (19%) who had a Pap smear done, only 15.4% were referred to have Pap smear by the gynecologist. This is compatible with what was obtained by Onah and coworkers when they surveyed the practice among Nigerian gynaecologist⁶. The gynecologists in centers with cervical screening were found to screen only 15% of their patients with 34.9% of the centres having specific screening programs. Just one gynaecologist reported he screened all his Gynaecology Outpatient clinic patients [6]. This also suggests that gynaecologists have their contribution to non-utilization of cervical screening.

In a country like Nigeria, where there is no structured national screening programme, gynaecologists ought to be more proactive with opportunistic cervical screening of patients they care for. This also affirms that poor Physician referral is one of the major reasons why many more women do not have cervical smears. Since Pap smear is available in this center as well as other screening facilities like colposcopy and direct visual inspection, there is no convincing reason, except perhaps lack of interest, why women seen in the Clinics should not be screened as a policy.

6. Conclusion

The study has revealed some gaps in the utilization of cervical screening among all cadres of female health workers in JUTH which would suggest that this would be worse among the general populace. The role of the physician by non-referral of patients for Pap smear was also observed in this study. Thus, much of the responsibility for change lies with the health provider, the gynaecologist and to some extent the public health physicians in this case. Health education and counseling will help to improve utilization of cervical screening, as Pap smear appears to be unpopular among these health workers.

Recommendations

- 1) Provision of health education, counseling and occupational health lectures to hospital staff at given intervals will help the uptake of cervical screening.
- 2) Cervical screening could be included in pre-employment medical examination and employed staff mandated to screen at given intervals.

- 3) Opportunistic screening should be carried out by offering cervical screening to all females at risk who access care for other reasons as a departmental policy.
- 4) Cervical screening should be integrated into pre-existing health services in tertiary institutions, to encourage awareness and practice as students.
- 5) Government should institute a national cervical screening program.

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