AWARENESS OF CERVICAL CANCER AND CERVICAL CANCER SCREENING AMONG WOMEN VISITING FEDERAL TEACHING HOSPITAL ABAKALIKI, NIGERIA

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ABSTRACT

Background: Cervical cancer is the most common genital tract malignancy among women in developing countries and accounts for about two hundred and fifty thousand deaths yearly most of which occur in the developing countries. A significant drop in its incidence has been recorded in the developed countries as a result of intensive program of cervical screening. Objective: To assess the awareness of cervical cancer among Igbo women in Abakaliki, Southeastern Nigerian and determine their uptake of cervical screening services. Materials and Methods: A questionnaire-based descriptive cross-sectional study. Structured questionnaires were administered to female attendees of the antenatal and gynecological clinics of Federal Teaching Hospital Abakaliki, Southeast Nigeria over a two-month period (5th October to 5th December 2012). Data analysis was by SPSS. *Results:* Five hundred questionnaires were given out. Four hundred and fifty were correctly filled (9O %) and analyzed. The mean age of respondents was 36.2 years. 82% of respondents were married. 17.1%% had tertiary education and 44.0% were self employed. All respondents were sexually active and the mean age at first sex was 22+ 4.0SD (14-34). About 73.4% of respondents had their sexual debut before 20years and 60% had multiple sexual partners. 0ver 60% had experienced vaginal discharge. 25.6 % of the respondents were aware of cervical screening and only 11.1 % had ever done the test. It also found that most of those who were aware of screening got their information from hospital sources (52.2%), books/posters (20%) and radio/TV (20%). The major reasons for not doing the test cited by those who were aware of it were 'no need for it', lack of knowledge that it could be done locally, and fear and anxiety over a positive result. The most important reasons given for undergoing the tests were the fact that it was part of a general screening programme (39.3%) and doctors request (26.7%). Overall, 62.5% of all the respondents indicated willingness to be screened. Conclusion: The level of awareness of cervical screening is low. The exposure to conditions that predispose women to cervical cancer was high, and the levels of awareness of cervical cancer and cervical screening uptake were low and these can lead to no significant reduction in the incidence of cervical cancer. A national cervical smear screening policy is advocated, greater public education and the greater use of opportunistic screening by physicians should be vigorously pushed. Continued awareness creation, local provision of cheap and affordable services and poverty alleviation are needed to improve cervical screening uptake with the hope of reducing the incidence of cervical cancer in the long term.

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INTRODUCTION

Cervical cancer is the malignant cancer of cervix uteri or cervical area. This happens when normal cells in the cervix change into cancer cells (Arbyn, 2004). Human papillomavirus (HPV) infection is a necessary factor in the development of nearly all cases of cervical cancer. Sexually transmitted human papilloma virus infection leads to the development of cervical intraepithelial neoplasia and cervical cancer (Colgan et al., 2004). HPV is spread through sexual contact and although most women's bodies can fight the infection, sometimes the virus leads to the development of cervical cancer. HPV types 16 and 18 cause 70% of cervical cancer cases, whereas types 6 and 11 cause 90% of genital warts cases. During persistent HPV infection, precancerous changes may be detected in the cervix, that is, readily detectable changes occur in the cells lining the surface of the cervix, therefore early detection and treatment of these changes is an effective strategy for the prevention of cervical cancer and forms the basis of cervical screening programmes (Stephen, 2006). Women with many sexual partners, and those whose partners have had many sexual consorts, or have been previously exposed to the virus, are most at risk of developing the disease (WHO, 2003). In developed countries of Europe and America that have organized national cervical screening programs, early detection and treatment of precancerous cervical lesions have resulted in a dramatic reduction in the incidence of and mortality from cervical cancer (WHO. 2007). Pap smear screening can identify potentially precancerous changes. Treatment of high grade changes can prevent the development of cancer.

Cervical cancer is the major risk in women today. Awareness of screening programme, preventive vaccination and diet are preventive measures that reduce the incidence of cervical cancer. In developed countries, the widespread use of cervical screening programmes has reduced the incidence of invasive cervical cancer by 50% or more (PRB, 2004). Cervical cancer is the most common genital tract malignancy of women living in poor rural communities of developing countries (Ferlay et al., 2002). Such populations lack cervical screening facilities and other basic infrastructural and human resources essential for effective primary healthcare delivery. Symptoms of cervical cancer include; vaginal discharge containing blood, abnormal vaginal bleeding, pelvic pain, blood in urine, bowel symptoms, blood in stool, painful sex, unusual vaginal bleeding, unusual vaginal discharge, contact bleeding, vaginal mass, moderate pain during sexual intercourse, loss of appetite, weight loss, fatigue. Symptoms of advanced cervical cancer may include: loss of appetite, weight loss, fatigue, pelvic pain, back pain, leg pain, swollen leg, heavy bleeding from the vagina and leaking of urine or faeces from the vagina (Duncan,1973).

Cervical cancer is the most common malignancies among females worldwide especially in women of 20–39 years of age. Its contribution to cancer burden is significant across all cultures and economies. Cervical cancer also accounts for over 270,000 deaths worldwide, an overwhelming majority of which occur in the less developed regions (Imam et al., 2008). Globally there are over 500,000 new cases of cervical cancer annually and in excess of 270,000 deaths, accounting for 9% of female cancer deaths. 85% of cases occur in developing countries and in Africa (Campbell et al., 2003). Mortality rates vary seventeen fold

between the different regions of the world. Cervical cancer remained the second leading cause of cancer deaths after breast cancer and the fifth most deadly cancer in women, accounting for approximately 10% of cancer deaths (Okonofua et al., 2002). Cervical cancer contributes over 2.7 million years of life lost among women between the ages of 25 and 64 worldwide, some 2.4 million of which occur in developing areas and only 0.3 million in developed countries (Adefuye, 2006). The developing world has carried a disproportionate share of the burden and 80 % of the 250,000 cervical cancer deaths in 2005 occurred there (WHO, 2007; Uysal and Birsel, 2009). In Turkey, it was found that cervical cancer constituted 3.13% of all newly diagnosed cancer cases among women in 2002 (The Turkish Ministry of Health, 2002). Around the world a women dies of cervical cancer every 2 minutes. In Nigeria the national incidence of cervical cancer is 250/100,000 (Solanke, 2007). Cervical cancer is largely preventable by effective screening programmes (Mahleck et al., 1994; Yaren et al., 2008) and papanicolaou (pap) smear is an effective test for cervical cancer screening. Cervical cancer incidence and mortality rates have declined substantially in Western countries following the introduction of screening programmes. The ideal ages of women for screening are 30– 40 years owing to high risk of precancerous lesions due to being sexually active; and a precancerous lesion is detectable for 10 years or more before a cancer develops (Olamijulo et a ., 1995). Although it has been already proven that the efficiency of regular pap tests reduced the mortality rate of cervical cancer, its application in the developing countries is less compared with the developed countries. The lack of knowledge concerning cervical cancer may be related to this fact (Yaren et al., 2008). In developed countries, the widespread use of cervical screening programmes has reduced the incidence of invasive cervical cancer by 50% or more. Cervical cancer is one of the most preventable of all cancers through primary and secondary prevention, prophylactic Human Papillomavirus (HPV) vaccination and cervical screening (Ezem et al., 2002)

Vaccination against human papilloma virus, where available and affordable, may further reduce the incidence of the disease. The lack of a regular screening programme for cervical cancer and low rate of Pap smear for cervical cancer in Nigeria led to this study. The present study assesses the perception of cancer of the cervix among Igbo women in Abakaliki Ebonyi State, Southeast Nigeria, and evaluates their predisposition and attitude to cervical cancer screening as a means of preventing cervical cancer.

MATERIALS AND METHODS

The investigation was conducted at Federal Teaching Hospital Abakaliki, Ebonyi State, Southeast Nigeria. The hospital has a well-developed Obstetrics and Gynaecology Unit attended to by a specialist and some resident doctors and cervical screening centre that is organized and patients are screened by cytologist. The hospital serves Abakaliki town and the neighboring villages in Ebonyi and other surrounding States of Abia, Akwa Ibom, Cross River, Enugu and Imo. The indeginous and immigrant populations here are mainly small scale farmers, fishermen/women, traders, artisans and civil servants; they are mainly low income earners, with poor representation of the middle- and high-income group. This was a descriptive cross-sectional study. Data was collected prospectively over the two-month period

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from 5th October to 5th 0f December 2012. The subjects, who were mainly of the Igbo tribe, consisted of women of reproductive age group and postmenopausal women, who attended the antenatal and gynecological clinics of the hospital for consultation. Data collection was by a structured "interviewer or self-administered" questionnaire. Subjects were required to give consent (verbal) before inclusion in the study. Five hundred (500) questionnaires were administered. The questionnaires were pretested on twenty respondents who were not included in the study. Each questionnaire was semi structured, contained 50 questions and elicited information on respondent's biodata, education and occupation. It also sought information about knowledge, awareness, uptake of cervical screening, source of information and reasons for doing and not doing cervical cancer. Most of the women completed the questionnaires without assistant. Data obtained was analyzed with SPSS version 15. The frequency of items sought was calculated by simple percentages. Ethical clearance was obtained from the hospital's Ethical Committee.

RESULT
Of the 500 questionnaires, 450 or 90% were analyzed. The socio-demographic features of the respondents are shown in [Table 1].

Table 1: Socio-Demographic characteristics of respondents, *n* = 450

Variable	Frequency	Percentage
Age		
21-30	150	33
31-40	200	44
41-50	80	18
> 50	20	5
TOTAL	450	100
Marital Status		
Married	370	82
Widowed	40	8
Single	20	5
Separated/Divorce	20	5
No response	0	0
TOTAL	450	100
ETHNICITY		
Igbo	420	93

Yoruba	20	5
Hausa	10	2
TOTAL	450	100

Their mean age was 36.2 (+ 11.4) years (SD).Three hundred and seventy(82%) of the subjects had been married, of which 40 (8%) were widowed and 20(5%) divorced. 200{44%} of the respondents were aged 31-50years.majority of the respondents were Igbos.

Table 2: Socio – Economic distribution of respondents

EDUCATIONAL LEVEL	FREQUENCY	PERCENT
Primary	101	22.2
Secondary	183	41.0
Tertiary	77	17.1
No formal education	88	19.5
No response	1	0.2
TOTAL	**450**	**100**
Occupation		
Self employed	200	44.0
Government employed	90	20.0
Employed by private	45	10.0
Trading	55	12.0
Farming	30	7.0
Applicant/unemployed	25	6.0
Retirees	5	1.0
TOTAL	**450**	**100**

44% of the women were self employed (including traders and farmers) or independent and the rest employed in the organized public and private sectors, unemployed or retirees were 6% and 1% respectively. Majority of the respondents had secondary education.

Table 3; Distribution of Respondents by Social Habit

Variable	Frequency	Percent
Ever had sex		
Yes	450	100
No	0	0
TOTAL	450	100
Age at first sex		
8-14	80	17..8
15-19	250	55.6
20-25	100	22.2
26-30	13	2.9
31-34	7	1.5
TOTAL	450	100
Lifetime Sexual Partners		
1	175	38.9
2-5	201	44.7
6-12	70	15.6
No response	4	0.8
TOTAL	**450**	**100**

[Table 3] displays the sexual practices of the respondents. All the respondents were sexually active. The mean age at first sex was 22 +4.0SD {14-34years}. About 73.4% of respondents had their sexual debut before 20 years while 25.1% had their sexual debut between 20-30 years. About 38.9% of the total respondents had one life partners. Also, 60.3% of the respondents had multiple sexual partners.

Table 4: Obstetric and Gynaecologial History of respondents

Variable	Frequency	Percent
Ever had vaginal discharge		
Yes	245	54.5
No	195	43.3
No response	I0	2.2
TOTAL	450	100
Last Treatment Source		
Hospital/Doctor	200	44.4
Self medication	50	11.1

Chemist//Pharmacy	100	22.2
Tradition	93	20.7
No response	7	1.6
TOTAL	450	100
Number of pregnancies		
1	10	2.2
2-5	189	42.0
6-10	250	55.6
No response	I	0.2
TOTAL	450	100
Number of children		
1-4	1O8	24.0
5-8	203	45.1
9-12	139	30.9
TOTAL	450	100

More than half of respondents had experienced vaginal discharge and most sought treatment from hospital and doctors. About 5.65% of respondents had 6-10 numbers of pregnancies and about 45% had 5-8 numbers of children.

Table 5: Distribution of respondents by knowledge of screening tests

Screening tests	Frequency	Percent
Pap smear	165	36.7
HVS	80	17.8
VIA	10	2.2
HPV	5	1.1
Blood test	3	0.7
No knowledge	187	41.5
TOTAL	450	100

Among the screening tests for cervical cancer, Pap smear was mostly known by 36.7% of respondents. Conversely a higher proportion of respondents (41.5%) did not know any screening test for cervical cancer. 17.8% respondents wrongly believed that high vaginal swab was a screening test for cervical cancer; so also did 0.7% respondents believe that blood tests were used to screen for cervical cancer.

Table 6: Distribution of respondents by awareness of cervical Cancer, human papilloma virus (HPV), and cervical screening

Variable	Frequency	Percent
Aware of cervical cancer		
Yes	**169**	**37.5**
No	281	62.5
TOTAL	45O	100
Seen someone afflicted Yes	**62**	**13.7**
No	388	86.3
TOTAL	450	100
Aware it is preventable		
Yes	148	32.9
No	302	67.1
TOTAL	450	100
Heard of cervical screening		
Yes	115	25.6
No	335	74.4
TOTAL	450	100
Know centers that do cervical screening		
Yes	93	20.7
No	357	79.3
TOTAL	450	100
Aware of HPV		
YES	**48**	**1O.7**
NO	402	89.3
TOTAL	450	100

37.5% of respondents have heard of cervical cancer.13.7% 0f respondents had seen someone afflicted, 14.7% were aware its preventable nature, only 25.6% were aware of cervical screening for early detection of cervical cancer also 20.7% knew centers that do cervical screening and 10.75 were aware of HPV.

Table 7: Distribution of respondents by knowledge of risk factors for cervical cancer

Risk factors	Frequency	Percent
Having many sexual partners	80	17.8
Early age at first sex	59	13.1

Prolonged use of IUCD	38	8.4
Partner having other partners	35	7.8
Smoking	22	4.9
Others	8	1.8
No knowledge	208	46.2
TOTAL	**405**	**100**

Less than one quarter{17.8%} of respondents knew that having many sexual partners was a risk factor for cervical cancer while 13.1% knew that early age at first sex was a risk factor. 8.4% of respondent believed that prolonged use of IUCD was a risk factor for cervical cancer. 46.2% of the respondents had no knowledge of any risk factor.

Table 8: Distribution of respondents by knowledge of Symptoms of Cervical Cancer

Symptoms of cervical cancer	**Frequency**	**Percent**
Bleeding after intercourse	83	18.4
Foul-smelling vaginal discharge	68	15.1
Irregular menstrual bleeding	34	7.6
Frequent passage of urine	10	2.2
Others	5	1.1
No knowledge	250	55.6
TOTAL	**450**	**100**

The symptom of cervical cancer most recognized was bleeding after intercourse (18.4%}. 2.2% of respondents wrongly believed that frequent passage of urine was a symptom of cervical cancer. 50.6% of the respondent could not identify any symptom of cervical cancer.

Table 9: Distribution of respondents by knowledge of recommended age at first Pap smear and frequency of Pap smear

Variable	**Frequency**	**Percent**
Recommended age at		
First Pap smear (years)		
22- 30	30	6.7
Others	420	93.3
TOTAL	450	100
Recommended Pap		
smear frequency (years)		
2-3	58	12.9
Others	392	87.1
TOTAL	450	100

6.7% of respondents knew that the recommended age is 22-30 years while 12.9% knew the recommended Pap smear frequency.

Table 10: Distribution of Respondents by Source of information on cervical cancer/Pap smear

Source of information	Frequency	Percent
Books/Posters	90	20.0
Radio/TV	90	20.0
Hospital staff	235	52.2
Friends/Relation	20	4.5
Lecture	10	2.2
Others	5	1.1
TOTAL	**450**	**100**

More than half of respondents (52.2%) who have heard of cervical cancer/Pap smear got their information from Hospital staff. 20% from radio or television and 20% Books/Posters and magazines, 4.5% got their information from friends, relation and colleagues and 2.2% from lectures. Other sources of Information included church, non-governmental organization, and patients with cervical cancer.

Table 11: Distribution of respondents by their attitudes towards cervical cancer and cervical screening

Variable	Frequency	Percent
At risk of cervical		
Cancer		
Yes	50	11.1
No	279	62.0
Don't know	121	26.9
TOTAL	450	100
Would allow cervical		
Screening		
Yes	400	88.9
No	50	11.1
TOTAL	450	100

11.1% of respondents considered themselves at risk of cervical cancer. Most of respondents would allow cervical screening in the absence of symptoms.

Table 12: Distribution of respondents by Pap smear uptake

Variable	Frequency	Percent
Ever had Pap smear		
Yes	50	11.1
No	400	88.9
Total	**450**	**100**
No of Pap smears done		
1	35	7.8
2-3	13	2.9
>3	2	0.4
No response	400	88.9
Total	**450**	**100**
Time of last Pap smear		
<3yrs ago	20	4.4
3-5yrs ago	28	6.2
6-10yrs ago	1	0.2
>10yrs ago	1	0.2
No response	400	88.9
Total	**450**	**100**
Where Pap was done		
Staff clinic	3	0.7
Private hospital	8	1.8
Teaching hospital	28	6.2
General hospital	10	2.2
Others	1	0.2
No response	400	88.9
Total	**450**	**100**
Pap smear result		
Normal	11	4
Don't know	6	8.0
Abnormal	3	0.7
No response	400	88.9
Total	**450**	**100**

 11.1% of respondents had ever done Pap smear and most of them less than three years before the study. Respondents also differed significantly in their choice of where the Pap smear was done with greater occurrence in teaching hospital .88.9% of respondent had no Pap smear. Most of the respondent did not know the results of their last Pap smear tests.

Table 13: Distribution of respondents by reasons for doing Pap smear test and by time of next Pap smear test

Variable	Frequency	Percent
a) Reasons for Pap smear		
It was part of general screening	177	39.3
Doctors request	120	26.7
I believe I should do it	23	5.2
It was free / subsidized	80	17.8
Others	10	2.2
No reason	40	8.8
TOTAL	450	100
b) Time of next Pap smear		
<1year	60	13.3
1-2years	150	33.3
3-4years	120	26.7
≥ 5years	67	17.1
Others	33	9.6
Not decided	20	4.4
TOTAL	450	100

Among respondents who had Pap smear within the last three years, the most important reasons given for undergoing the tests were the fact that it was part of a general screening program (39.3%) and that doctors requested it (26.7%) . A good proportion of respondents who had previous Pap smear, (33.3%} intended to have their next Pap smear within two years after the study.

Table 14: Distribution of respondents by reasons for not doing Pap smear test and by agreement to do Pap smear test

Variable	Frequency	Percent
a) Why no Pap smear done		
Don't know about it	158	35.1
No doctor's request	46	10.2
Don't know where to do it	18	4.0
I can never have cancer	30	6.7
Afraid of a bad result	28	6.2
Can't afford it	30	67
No screening centers locally	80	7.8
No time for the test	10	2.2

No need for the test	46	10.2
Others	5	1.1
TOTAL	450	100
b) Agree to do Pap smear		
Yes	400	88.9
No	50	11.1
TOTAL	450	100

Among respondents who had never done Pap smear test, the most important reasons given for not doing the test were lack of knowledge about Pap smear test, (35.1%}, and no doctor's request (10.2%}, no screening centers locally{17.8%] and no need for the test{10.2%}. Majority of respondent [88.9%} will agree to do Pap smear test if given the opportunity.

DISCUSSION

Pap smear test is one of the most crucial screening tools for the early diagnosis of cervical cancer (Elovainio et al., 1997; WHO, 2007; Kaya, 2009). While the rate of women having Pap testing is equal to or above 80 % in developed countries (Welensek et al., 2002; Carrasquillo & Pati, 2004; Sirovich & Welch, 2004; Coughlin et al., 2006), this rate varies between 46-68% in developing countries. Cervical cancer kills a disproportionate number of women in developing countries, despite the fact that evidence-based secondary prevention methods exist (Adebanowo et al., 2003). Numerous studies have shown that many women do not attend screening programs because they are not aware of their risk of cervical cancer or of the benefits of screening and prevention and early detection (Madong et al., 2003). The extent to which women actually are well informed about cancer and about screening can be judged simply by questioning their knowledge. The major findings of this study are that about 82% of the respondents were married. All the three main ethnic groups in the country were represented, with Igbos expectedly dominating (93%) **Table 1**. Four educational levels were noted of which about 41% attained secondary and 17.1% attained tertiary education [Table 2], indicating a literacy level similar to figures recorded for urban settings and among health professionals. (Jimoh ,2004). Most of the women in the study were self-employed [Table 2] and engaged in various types of trade. Those employed in the organized public and private sectors were mostly low income earners, showing a high level of poverty amongst the women. Poverty is related to the high incidence of cervical cancer found in developing nations (Adewolola et al., 2005). Poverty may contribute by making women unduly dependent on their husbands for financial support and sustenance. Where these are not forthcoming, sexual promiscuity may result, with its attendant short- and long-term cervical cancer-related risks. The roles played by sex in the development of cervical cancer are well established. Most of the women in the rural areas of Southeast Nigeria are highly

predisposed to developing cervical cancer by virtue of their sexual life style. All the women in this study had been sexually active. About 73.4% of respondents had their sexual debut before the age of 20years and 25.1% between 20-30 years. Over 60% of respondents had multiple sexual partners **Table3.** More than half of respondents had experienced vaginal discharge and most sought treatment from hospital/doctors **Table 4**. All the women in this study had been sexually active and exhibited high tendencies to having multiple partners, abnormal discharge and there was high prevalence of pre- and extramarital sex. These findings may contribute to the high prevalence of cervical cancer in rural communities (Lazcano et al., 2003) of Southeastern Nigeria. This contrasts with findings in Aba where 43.5% had their sexual initiation below 19years (Anorlu, 2008).

Among the screening tests for cervical cancer, Pap smear was mostly known by 36% of the respondents **Table 5.** The fact that the Pap smear test was the screening test mostly known by respondents is understandable considering that the Pap smear test has been in existence for over 60 years unlike other cervical cancer screening tests and has been used over decades even in developing countries including Nigeria. Also the significantly better knowledge of Pap smear as a screening test for cervical cancer among the attendees of antenatal and gyneacological clinics of the hospital was expected as Pap smear was the screening method used 1n the cervical screening centre in that hospital. Other screening methods such as liquid-based cytology and HPVDNA which are more recent and used in the developed countries are not yet widely available in this country because of the high financial and technological requirements. The prospect of the cheaper screening methods such as the visual inspection with acetic acid (VIA) and visual inspection with Lugol's iodine (VILI) for mass screening programs in resource poor countries like Nigeria is a new development that is just being experimented by some state (Shafi et al., 2007), government health services and non-governmental organizations (NGOs); hence the low levels of respondents' knowledge of these tests in this study.

As shown in [Table 6], less than 40.0% of the women were aware of cervical cancer; about 32.9% knew that it was preventable; 25.6% were aware of cervical screening; 20.7% had knowledge of screening centers and only 10.7% had knowledge of HPV. . Similar patterns of awareness were recorded in some African studies in Kenya, Owerri, Benin and Ibadan (Ezem et al, 2004).), among refugees in Oru camp (22%), market women in Ibadan (40.8%), general outpatient clinic attendees in Ibadan (15%) and women in Maiduguri (Elovainio et al., 1997; WHO, 2007; Kaya, 2009)**.**These findings differed from results obtained from studies conducted in the cities and among health professionals in some health institutions in Nigeria that reported high levels of awareness of cervical cancer (about 50.0 - 90.0%) and relatively higher levels of cervical screening uptake (about 40 - 90.0%) (Purosimi,1985;Ezem et al., 2004). the results show that the awareness of cervical cancer is variable in Nigeria, with women living in cities and female health and non-health professionals who work in health institutions showing higher levels of awareness than those living in rural areas. The level of awareness found in this work is less than 69.8% from Illorin and 70% in Ibadan (Onah et al., 2001; Thomos et al., 2005). It is much lower than what obtains in developed

countries (Olusegun et al., 2008). The highest levels of awareness are from studies using undergraduates and health care professionals while the lowest levels come from studies using commercial sex workers and clinic attendees. Some studies in Nigeria have also recorded lower levels of Pap smear knowledge than those found in this study (Olusegun et al., 2008). In one of such studies in Ibadan, 19.7% were aware of Pap smear test (Thomos et al., 2005). In Maiduguri, less than 10% were aware of cytological screening and in Orlu, 6% were aware of Pap smear. Other Studies in Nigeria that focused on health care providers however recorded higher levels of Pap smear awareness. For example in Nnewi awareness was 87%, in Sagamu 78.3% in Ilorin 69.8% and in Benin 64% (Brown et al., 2012;olusegun et al., 2008; Anorlu,2008; Jimoh,2005). Awareness of human papilloma virus (HPV) was only 10.7% among respondents. HPV's link to cervical cancer was first discovered in the 1980s and awareness and knowledge of it are not yet widespread even in developed countries (Eze et al., 2010). The low level of knowledge of human papilloma virus (HPV) exhibited by respondents in this study is therefore not surprising and studies in developed countries have recorded similar low levels (Cuttis, 2007). In one of such studies involving women attending a well known women clinic in central London, only 30% reported awareness of HPV, and knowledge was generally poor even among those who had heard of it. They generally knew that HPV was sexually transmitted and could be carried by men, but fewer than half knew that it is the main cause of cervical cancer. This study however contrasts with findings in an Australian study which recorded a high level of HPV awareness with most respondents (89%) having heard of HPV and attributing a number of different clinical symptoms to the infection (PRB, 200). There is a dearth of information on knowledge of HPV among women in Nigeria.

Risk factors most recognized were having many sexual partners 17.8% of respondents, early age at first sex (13.1%], partners having other female partners (7.8%) and smoking (4.9%). 25% of the respondents wrongly believed that prolonged use of IUCD is a risk factor for cervical cancer **Table 7.** Interestingly, misconceptions about cervical cancer have been found in previous studies even in developed countries (Duncan, 2004; WHO, 2004; Madong et al., 2003; Ezem et al., 1982). In one of such studies women believed that, prolonged use of IUCD, frequent sex with the same man and menopause were risk factors for cervical cancer (Madong et al., 2003). In another study women believed the risk of cervical cancer was related to frequent childbirth or bleeding during pregnancy. Others said it was more prevalent among users of certain kinds of contraceptives and associated it with the failure to have regular intra-uterine device (IUD) check-ups or infection of the 'wound left by an IUD'. Dietary factors like eating too many guava or pepper seeds were also blamed (Ferlay et al., 2002). Also in Ghana, a much higher proportion than in this study (36%) thought that vaginal douching and insertion of substances into the vagina increased the risk of cervical cancer (Lazcano et al., 2003). Symptoms most recognized were bleeding after intercourse (18.4%), foul smelling vaginal discharge (15.1%) and irregular menstrual bleeding (7.6%) **Table 8.** Majority of respondents did not know the recommended age at which the first Pap smear should be done is between 22-30 years. They believe that the appropriate age at first Pap smear is above 40 years while 12.9% knew the recommended Pap smear frequency **Table 9.** The main sources of information on cervical cancer and Pap smear respectively

were hospitals (64.9%), radio/television 20%{) and 20% from books/posters and magazines, 4.5% got their information from friends, relation including church, non-govermental organization and patient with cervical cancer **Table 10**. Various studies in Africa have recorded findings similar to this study. In one of such studies in Kenya, health care providers were the principal source of information about Pap testing (82%) (Shafi et al., 2007). Also in Nigeria, the major source of information about cervical smear was hospital/health facility in Owerri (Brown et al ., 2012).This study however contrasts with some other Nigerian studies which found sources such as mass media, public lectures, friends and relations as the most important sources of information (Solanke, 2009). Most of respondents would allow cervical screening in the absence of symptoms **Table 11.**

Only 11.1% had ever been screened in this study **Table 12**. The uptake of cervical screening is however, generally low (Welensek et al., 2002; Carrasquillo & Pati, 2004; Sirovich & Welch, 2004; Coughlin et al., 2006),. This level of uptake of screening is clearly unsatisfactory and worrisome as it will make no significant impact on the prevalence of cervical cancer as screening of highest level and coverage is needed for any meaningful impact on the incidence of cervical cancer. It has been suggested that one way of correcting this, is for health workers to show examples which the populace can copy (Onah et al., 2001). However, it is noteworthy that following counseling in this study, more than 60.0% of the women showed positive attitude toward cervical screening, thus indicating that awareness creation may lead to improved screening uptake. Unfortunately, this positive attitude may wane if not met with accessible, culturally acceptable and affordable service, hence the need for immediate action.

Most respondents who had ever done Pap smear had done it only once in their lifetime suggesting that respondents who had been screened were not screened as frequently as they should. Lower levels of Pap smear uptake than that found among the respondent and inadequate screening among those screened have been obtained in various studies in sub-Saharan Africa including Nigeria (Thomosnet al., 2005). In one of such studies in Kenya, only 22% of all patients had had a Pap smear test in the past (Roblyer et al., 2007). In Germany, most women in the study group had a Pap smear at least once a year and only a few had a Pap smear less frequently than every five years (Stephen, 2006). Also among Chinese American women in the United States, uptake of Pap smear was as high as 84% (Cutiss, 2007). While most studies in developed countries suggest high levels of participation in Pap smear screening, a few others indicate moderate to low levels. (Welensek et al., 2002; Carrasquillo & Pati, 2004; Sirovich & Welch, 2004; Coughlin et al., 2006). More than a quarter of the respondents who had Pap smear in the previous three years and did not know the results of their last Pap smear tests. This is indicative of lack of knowledge and appreciation of the importance of this life-saving screening test by respondents. If women appreciate the importance of this test they are more likely to follow up their results. To achieve this, continuous and sustained health education of the community is mandatory. Respondents differed in their reasons for doing the Pap smear test **Table 13**. The most important reason given by respondents who had had Pap smear was the fact that it was part

of a general screening program (39.3%), This suggests that women are more likely to participate in cervical cancer screening programs if given the opportunity, than take up the initiative of regular screening on their own. This supports the organization of regular mass screening for the public. It also suggests that in the absence of mass screening programs, women are more likely to undergo cervical cancer screening if their doctors recommend it, hence the need for doctors to intensify opportunistic cervical cancer screening for their adult female patients.   16.9% did the Pap test because they believed that they should do it. This suggests that most women in both communities do not see their cervical health as their personal responsibility. The fact that more than a quarter of the respondents intend to do their Pap smear test whenever the Hospital organizes screening program further gives credence to this assertion.

4.4% of the respondents were undecided on the time of their next Pap smear. This differs from what is obtained in the study of women in Nicaragua where nearly one-third of the target population was reluctant to attend screening programs in the future (Campbell et al.,2007). The major reasons for not doing the test cited by those who were aware of it were 'no need for it', lack of knowledge that it could be done locally, no doctors request, no screening centers locally and fear and anxiety over a positive result etc **Table 14.** This reveals a lack of appreciation of the disease, and the failure of the health system to effectively disseminate information. Fear and anxiety associated with a bad result came as a result of the poor understanding of the principle behind cervical screening. Our women would rather live in blissful ignorance than know that they have a disease where adequate treatment is practically non existent, unaffordable and results of treatment poor. This situation could be reversed by better public enlightenment highlighting the fact that a premalignant lesion can be completely cured. This study has shown that Abakaliki women of Southeast Nigeria have low levels of cervical cancer knowledge and cervical screening awareness and very poor cervical screening uptake.

CONCLUSION

Cervical cancer is a major public health concern for Nigeria and other countries of the developing world. Development of an effective, Government-sponsored, National cervical screening program with provision of outlets for screening of women in the rural areas is essential for the prevention and treatment of the disease. Allocation of adequate resources for broad-based advocacy and aggressive public awareness education, establishment of the infrastructure, training of the necessary manpower, research, and organization of elaborate surveillance mechanisms, are essential for success of the program. As cytology-based cervical screening may be technically and financially difficult to decentralize, cheaper alternatives such visual inspection of the cervix after application of 3-5% acetic acid (VIA) or Lugol's iodine (VILI) should, in the interim, be advocated at every stage in life, a woman in the third world risks some serious health problems. These include HIV/AIDS, high maternal mortality rates, and cancer of the cervix later in life. Cancer of the cervix is a preventable disease and a key aspect of its prevention is the detection of the premalignant form by cervical screening.

RECOMMENDATIONS

1. There is an urgent need for intensive health education program on cervical health in antenatal and gynecological   clinics. Such information must be clear, consistent and comprehensive in order that women are fully informed when they participate in cervical screening.

2. For the health education to be effective and meaningful it has to reach members of the community where they are, hence the message should be delivered to the women in their offices through flyers and handbills. In addition workshops and seminars organized for various segments of the community preferably by doctors or nurses would be effective.

3. There is a need for the authorities to incorporate regular cervical cancer screening into the health care. Adoption of alternative screening techniques, such as visual inspection with acetic acid (VIA) may be necessary to widen patients' coverage.

4. Doctors in the antenatal and gyneacological clinics should improve their knowledge of cervical cancer through continuous education and improve on opportunistic screening of all sexually active female patients, particularly the younger age group who may not be immediately covered by the general screening program.

5. The Federal Government needs to put in place a national policy on screening for cervical cancer and other cancers with appropriate screening guidelines.

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