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OBSTACLES AND FACTORS INFLUENCING CERVICAL CANCER AWARENESS AND SCREENING AMONG HEALTH WORKERS IN THE SOUTH-SOUTH, NIGERIA

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ABSTRACT

Background: Individual awareness of a disease condition such as cervical cancer is apparent in the fight against most of these avoidable states. Hence the use of VIA, Pap smear and colposcopy screening is of paramount importance. **Objectives**: To determine the level of awareness; factors associated with the poor utilsation of the methods of cervical cancer screening among the health workers in Bayelsa state, and Rivers State of Nigeria. **Methods**: A cross sectional study using questionnaires on 300 people in Bayelsa and Rivers State in 2013. The age bracket was between 18-65 years of age. Participants were randomly approached, instructed, and interviewed by trained medical staff of NDUTH and students from University of Port Harcourt UPTH. Data analysis was made by descriptive statistics. **Results**: 289 questionnaires were correctly completed, 207(71.60%) respondents had knowledge of cervical cancer, while 170(58.8%) of respondents are aware of cervical cancer screening. Only 81(28.0%) have had cervical screening done at least once. 153(52.9%) of the respondents are of the opinion that all sexually active woman be screened. More than half of the respondents agreed that screening could prevent the disease 174(60.2%), 181(62.6%) would prefer a free screening. Radio and television programs were the main source of information. Conclusively: Irrespective the size this study; we observed some degree of general overview and concepts of the nature of medical information among our people. It also serves as a supports to our experience in this part of the country where, almost all cervical cancer patients presents at late stage of the disease.

KEYWORDS: Awareness, cervical cancer screening, Obstacles, South-South.

INTRODUCTION

This the second most common cancer in women worldwide, the most common cause of death from all gynecologic cancers; over 75-80% of close to 288,000 deaths out of something above 471,000 new cases of cervical cancer globally,annually, while it's related morbidity and mortality occurs more in the developing world, the fifth deadliest cancer in women worldwide about (12%).[1,2]

The annual risk for women between the age of 20-35 is about 16-20 per 100,000 in developed countries, the peak incidence between the age of 45-55.[3,4]

This figure is even much more higher in developing, and underdeveloped countries, usually in countries with less comprehensive, co-ordinated cervical cancer screening and prevention programmes.[5,6] Nigeria; recent government gross estimate shows an average of about 25,000 new cases per year, though in most part of the country there are no proper official figures like/ south-south, north central etc./, as most cases were not reported to the appropriate authorities.[5,12] Although it is predominantly a silent killer, with a high mortality in the developing countries, it is preventable, and also curable in the early stages.[1,7,20] The morbidity, and mortality could be greatly reduced using effective preventive health care system, such as sex education, abolision of early child marriage, polygamous family,safe sexual practice, vaccinations, a routine colposcopic examination during gynaecologic visit, and a regular 1-3 years Pap smear test.[5,7,8] Even though; we are aware of the relationship between cervical cancer and HPV infection mainly (16,18) subtypes, the routine screening for HPV is not common in our enviroment: generally not accepted, due to cost and availability of the technology: hence most of the screening is by (Pap smear, VIA, Colposcopy).[6,9]

The advantages, benefits of the cervical cancer prevention using Pap smear test has been demonstrated by; in the scandinavian countries like Sweden, Finland with national screening programmes, which has resulted to having the lowest incidence and prevalence of cervical cancer and related morbidity, mortality, and subsequence economic burden to the society by Bengt A et tal.[10] Meanwhile the high rate of late presentation of cases, and the subsequences increase in the morbidity, mortality in cervical cancer in the developing world such as Nigeria maybe attributed to lack of proper awareness, poor health polices, or implimentations, traditional belifs and other cultural implications etc. A study carried out in

the middlebelt of Nigeria Jos, reported an estimated annual incidence rate of cervical cancer in 77/1,000 women and mortality. This estimates are much higher than; those of the United States and Europe.[1, 8, 11]

The intervention and high prevalence of HIV in the society, may also contribute immensely to the rapid progress of the disease, where about 9% of the general population is infected with HIV; from literature it is obvious, that HIV infection is associated with the rapid progression of the invasive cervical cancer, since it is an immunosuppressive state.[8, 12, 13] There is strong epidemiologic evidence linking cervical cancer to the Human Papilloma Virus (HPV) sexually transmitted, a strong co-factor for the initiation of the cervical cancer, also manifest better in such milieu. More than 35 types of the HPV are known to infect the genital tract out of which approximately 20 are associated with cervical cancer, with the most common types 16 and 18 and types 6 and 11 are more commonly associated with genital warts.[7,18] Other predisposing factors like, early sexual life, smoking, HPV infection, multiple sexual partners, genetic predisposition, and compromised immunity, long used of oral contraceptives are all associated with the development of cervical cancer.[7, 14] Many studies done in Africa has shown links between HIV-1 and invasive cervical cancer, that is why drastic approach in the reduction of HIV infection, by preventive, educating measures could as well lead to a possible reduction of the incidence of cervical cancer particularly in Nigeria, and Africa in general.[12,13,14,19]

A well planned programme on cervical cancer awareness enlightenment and screening may eradicate pre-invasive disease as shown by studies done in developed countries, whereby those late stage diseases would be reduced to barest minimum. Studies have shown sensitivity and specificity of Pap smear screening to be 50-75% and 98-99% respectively.[3, 8, 15] Other methods such as colposcopy examination, VIA and HPV-DNA testing are also available, though in many of these countries due to socio-economic state of the population, lack of adequate skilled personnel and little governmental efforts the screening are not efficient, nor effective, since only small proportion of the population have access, or means to afford these test.[3,16,17]

WHO has recommended its member countries to develop and integrate cervical cancer screening into their health systems depending on the local social, cultural and economic status? As it will ensure a defined referral system for diagnosis, treatment and follow up,[1, 12] Despite a national health policy in Nigeria; there are no clear screening policy for cervical

cancer; rather priorities are given to infectious diseases: such as malaria, tuberculosis, leprosy, diarrheal diseases, acute respiratory infections and sexually transmitted infections all of which have individual control programs.[5, 13, 15] That is why cervical cancer screening is very low, when compared with other developing countries, even when; close to half the population of these countries now live in urban places. The few skeletal screening observed, are those living in the urban cities, it has also been reported that about two third of the cervical cancer cases in Nigeria presents at stages IIb-III or even later.[5, 13] Reasons behind the low utilization of the screening methods include lack of proper awareness, poverty, socio-cultural behaviors, and adequate female education in some part of the country.

The aim of this study was to determine awareness of cervical cancer and screening practice among the primary health care providers in the region south-south Nigeria The association between knowledge and demographic characteristics and to determine the proportion of the populace who had been screened for cervical cancer, as well as knowing suggestions for improvement of cervical cancer awareness.

MATERIALS AND METHODS

This study was carried out in 2013, the collection of data's were made available to respondents by pre-trained medical personnel, and medical students of the Niger Delta University, Amasoma, Bayelsa State in Nigeria and students from UPTH Port Harcourt, Rivers State Nigeria. After estimating the sample size, women ages 18 to 55 and above in the health sectors were approached to complete a validated questionnaire. Consenting respondents were allowed 1 and ½ hours to complete, and were collected by these personnel. 300 questionnaires were given out, 289 were properly completed, and collected resulting in 96.3% response rate.

This study measured the health workers awareness, preventive knowledge of cervical cancer, and also the sources of information about the condition, and suggestive input for the future. The Continuous variable such as age, profession was considered. To ensure clarity the questionnaire was pretested on medical and none medical students. Those who took part in the pre test were not included in the study. The data from the questionnaire were entered and analyzed using simple descriptive evaluation to analyses using percentage, frequency distribution to describe the characteristics of respondent.

RESULTS

Of the 300 questionnaires circulated in the study a total of 289 respondents were included at last, due improper information, and omissions. The age range of the participating health workers were between 18 -55 years. Majority of the respondents were within the age bracket of 18-25 years, with an average of 22 years 108(37.37%). From the data; 95(33.25%) of the respondents were medical doctors. Paramedical staffs like the nurses account for 132 (46.20%) of the respondents, while other health related staffs accounted for 62 (21.70%). The study analyses do not take references of the age in service, nor department within the healthcare system.

Table 1: Social and Demographic characteristics (n = 289)

Variable	Frequency	Percentage %
Age (years)		
18-25	108	37.4%
25-35	80	27.7%
35-45	47	16.2%
45-55	31	10.7%
55-65	23	8.0%
Categories and Cadre		
Doctors:		
Consultant	19	6.65%
General practitioners	39	13.65%
Resident/House officers	37	12.95%
Nurses:		
CNO/PNO	31	10.85%
Senior staff nurse	45	15.75%
Staff nurse/midwifes	56	19.60%
Laboratory/ Technicians:		
Lab. Scientist/others	25	8.75%
Sexual history (Age)	37	12.95%
Age at first sexual life:		
<20 years	80	27.7%
>20 years	73	23.3%
<30 years	45	15.6%
>30 years	44	15.2%
No respondents	47	16.30%
Lifetime Sex Partners:		
1	72	25.00%
2-3	57	19.7%
>3	52	18.0%
>4	64	22.1%
Never had sex	44	15.2%

Socio-cultural status:		
Marital status:		
Single	80	27.7%
Married	90	31.1%
Divorced	50	17.3%
In relationship	69	23.9%
Religion		
Christianity	144	50.0%
Islam	80	28.0%
Others (not specific)	65	22.0%
Ethnicity		
Ijaw	83	28.7%
Hausa	38	13.0%
Yoruba	55	19.0%
Ibo	56	19.3%
Others	57	20.0%

Approximately 153(51%) of the respondents; had their first sexual experienced within age of 18 and 30 years, while 89(30%) had sexual experiences above the age of 30 years. We observed that; 80(27.7%) were single, 90(31.1%) were married, those that were divorced accounted for 50(17.3%), while those in relationship were 69(23.9%). We also found that; 173(59.7%) of the respondents have had more than one sexual partners and 44(15.4%) of the respondents never had sex before.

Majority were Christians, due the site of the study; 144(50%), 80(28.0%) belong to the Islamic faith, while 65(22.0%) could not identify their religious background. Due to the location of this study in the southern part of the country Ijaws were 83(28.7%), other southern minority groups were 57(20%), Hausa were 38(13.0%), Ibo were 56(19.3%), meanwhile the Yoruba were 55(19.0%) in Table 1.

Shows general knowledge, awareness of cervical cancer, screening and factors affecting the rate of screening and implications involved. The study did not focus on the possible causes, or risk factors leading to the unset of the disease.

Table 2: Knowledge of cervical cancer

Knowledge and preventive awareness of cervical cancer among participants n:289				
	Yes.	**percentage**	**No**	**percentage**
Have had about Cervical cancer.	207	71.6%	82	28.4%
Have had about screening	170	58.8%	119	41.2%
Have you visited a Gynecologist	119	41.2%	170	58.8%
Have been screened	81	28.0%	208	72.0%
Is necessary to screen every sexually active woman	153	52.9%	136	47.1%
Can screening prevent or reduce incidence	174	60.2%	115	39.8%
Should CC screening be made free, and compulsory	181	62.6%	108	37.4%
Should government play more role in sex education, and screening of CC.	179	61.9%	110	38.1%

Among the women who participated in the study 207 (71.6%) have had information about cervical cancer; 82(28.4%) of the respondents said to have no knowledge of the disease. 170(58.8%) have had about the screening, while 119(41.2%) have no information about screening. 119(41.20%) have never visited a gynecologist for any reasons, 81(28.0%) of the respondents have done cervical cancer screening at the time of the study. In contrast 153(52.9%); thought it wise to be screened, while 136(47.1%) feel; it is not necessary. Many respondents agrees that; the screening will reduce the incidence of cervical cancer 174(60.2%), meanwhile 115(39.8%) disagree. Majority, 181(62.6%) want the screening to be free, considering; the socio-economic backwardness of the society, while 108(37.4%) says no. Substantial number of the respondents are of the opinion, government should play more active role in this regard; sex education and general medical screening needs be part of the educational curriculum 179(61.9%), while those opposed to this were 110(38.1%) in Table 2 and 4.

Table 3: Patients knowledge about professionals who performs the screening

Who screens CC. n: 289	No. respondents	Percentage %
Obstetrician/gynecologist	114	39.4%
Surgeons	60	20.8%
Physician	57	19.7%
Rural health workers	58	20.1%

Who should screen cervical cancer was evenly divided; though majority, would prefer a gynecologist 114(39.4%), Surgeons 60(20.8%), Physicians 57(19.7%) and Rural health workers 58(20.1%) in Table 3.

Table 4: Patient relationship with Medicare, and knowledge of screening (n: 289)

Medical practice	Number	Percentage %
No. times visited a Gynecologist		
1x	47	16.3%
2x	50	17.3%
3x	46	15.9%
4x	40	13.8%
>5x	42	14.5%
Never visited a Gynecologist	64	22.1%
Last time visited a Doctor/Gynecologist/		
>1 year ago	79	27.3%
>2 years ago	65	22.4%
>3 years ago	60	20.8%
>4years ago	82	28.4%
Not responded	3	1.1%
No. times screened for CC. n: 81		
1x	36	44.4%
2x	19	23.5%
3x	11	13.6%
>3	7	8.6%
Not responded	8	9.9%

Among the respondents 47(16.3%) visited a gynecologist for just once, while 178(61.5%) have visited the gynecologist more than twice for many reasons: not specified in the survey, as for the last of such visit; the responds was evenly distributed. In relation to previous screening; 36(44.4%) of the 81 respondents ever screened did it once, 19(23.50%) have done twice, while 19(23.46%) have done more than twice, whereas 8(9.9%) who are screened before did not respond to the question in Table 4.

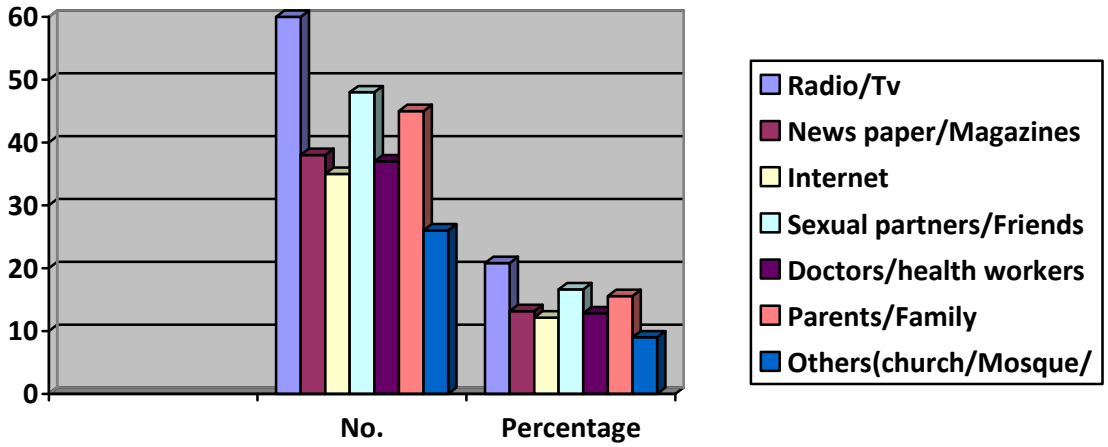

Figure 1: Sources of information about knowledge of cervical cancer and screening

Most respondents received their most recent information about cervical cancer, and it`s screening, through radio and televisions programs, accounting to 60(20.8%), Sexual partners/friends 48(16.6%), Parents/ family members 45(15.6%), News papers/magazines 38(13.1%), Doctors/health workers 37(12.8%), Internet 35(12.1%), and Others (Churches, Mosque etc.) 26(8.9%) in fig.1

Table 5: Knowledge of cervical cancer screening and it`s health benefit in the society

Knowledge of screening (n: 289)	Total No. of respondents and Percentage			
	Yes (Aware)		Not Aware.	
	No.	Percentage %	No.	Percentage %
Screening is to identify impending signs of early stage abnormalities	150	51.9%	139	48.1%
Screening is to prevent the unset of the disease	66	22.8%	223	77.2%
Screening increases self awareness as regards other medical conditions	64	22.1%	225	77.9%

The perceptions of risk of having cervical cancer, and the importance of early screening of the cervical cancer among the participants, was questioned, only 150(51.9%) believed that early screening will improve the detect ability, and possible improve the health state of patients, while 48.1% (n=139) of the respondents were not aware. Some respondents are of the opinion that; screening cannot prevent the unset of the disease 225(77.2%), while 66(22.8%) believe that, it could prevent the disease 22.8% (n=66). In contrast many are of the opinion that screening do not increase the self awareness of other medical conditions 225(77.9%) in Table 5.

Table 6: Cervical cancer screening by category of health workers among respondents/n: 81/

Health workers by category	No. of participants	Percentage of participants
Consultants/ senior medical personnel	27	33.3%
Resident doctors/House officers	18	22.2%
PNO/CNO	10	12.4%
Senior Staff Nurse/ Staff Nurse midwives	15	18.5%
Laboratory Scientist /technicians/ other paramedical. staffs	11	13.6%

Of those who have participated in the survey and have done CCS (81); 45(55.56%) were medical doctors, 28(34.57%) were registered nurses, while other paramedical staffs comprise of 11(13.58%) in Table 6.

DISCUSSION

Regrettably we observed that; small number of health workers including the most highly educated medical doctors 15.6%(45/289), the registered nurses 8.7% (25/289) and the other health related personnel 3.8% (11/289) have had cervical cancer screening before this study.[6,12,15] In contrast knowledge about cervical cancer was high 71.6% (207/289). Still only 58.8% (170/289) of the respondents were aware of the screening, which is low when considered with the educational status. We envisaged; that this selected population might have greater knowledge of the disease, and it's screening possibilities, yet the outcome was not encouraging.[13,15,16,21] It was clear; that most of the respondents were of the opinion that cervical screening is good, and would enable early detection of premalignant state and will positively affect the general health awareness, with regular check-ups and oncologic screening. Knowledge of who should perform the screening was improper and confusing among respondent. It was almost closely distributed among different health care providers; though slightly higher proportion for the gynecologist. Even though, the need for other health workers to provide such services is not a wrong approach, knowing the inadequacy of medical personnel in our rural areas.[5, 6, 12, and 17]

Majority of the respondents had insufficient knowledge of the risks, consequences of cervical cancer, similar to other studies in Nigeria, Tanzania and Uganda.[5,6,25] Whereas in contrast to findings by Tessaro et al in the United States in a study on nurse practitioners who knew most of the risk factors such as multiple sexual partners, history of HPV infection and sexual intercourse at an early age.[16,18,20] During this study specifics were not included, we were only interested about the gross knowledge of the disease, and it screening. As regards information, enlightenment and guidelines for the screening of cervical cancer, time interval for subsequent screening, apart from the WHO's guide in this regard: there has been no clear cut strategies, nor plans generally acceptable and affordable to the masses of the South-South people of Nigeria, or the country.[1,5,19] In Nigerian presently only pockets of screening are done; most particularly during antenatal visit and in few occasion accidentally or on patient request, which is quite minimal. Unfortunately, even the service providers; in some cases fails to recognize the importance of the screening and enlightenment of the patients when necessary. Fortunately; majority of respondents suggest that, cancer screening should be made free to all those who seek for such services and be made compulsory.[17, 20, 21, 23] More so: sex education and information about screen able diseases should be taught, or be part of our educational curriculum. Most respondents were of the view that every sexually active women should be made to understand the need for screenings. In view of this it is obvious that in Nigeria; most of the health workers were not aware of the recommended pap smear screening interval, similarly to a study conducted among hospital workers in Uganda, which reported, that less than half of the participants have adequate knowledge regarding screening interval by Mutyaba et al.[6,24,25] Comparatively a larger proportion of Thai nurses could correctly identify the timing as found by Nganwai ET al.[19, 24] These results found; are a true reflection of the fact that: there is no screening policy set by the federal and states ministries of health. Apparently; most of screening done in our hospitals and other medical centers were opportunistic cervical cancer screening. It is obvious too, that though Pap smear and HPV screening services are available, in most places and test are carried out by doctors.[12, 13] It is quite astonishing that, only few respondents are aware of HPV screening and may have been given the vaccine. In contrast, more than 90% of nurses in a study done among Canadian nurses knew that the vaccine should be given before girls become sexually active.[10, 11,20] This could be explained by the fact that the HPV vaccine is still a new concept in most developing countries and is not yet included in the Nigerian National Program on Immunization. The result could have been better considering the educational status of the respondents, yet due to our educational orientation, governmental priorities on health issues,

individual beliefs, socio-economic, cultural state of the populace and most particularly about the attitude of health care providers in the country the outcome is poor, as compared to a study in Thailand by Nganwai et al; were the majority of the participants had bachelor's degrees and apparently higher proportions of nurses correctly identified causes, transmission, symptoms, treatment and prevention.[19,22] Radio and television was a major source of information for many of the respondents, whereas in a similar study in Nigeria, different health workers, medical doctors and medical literature were the most commonly mentioned sources of information about Pap tests, only a few cited, the media in a study by Gharoro et al[15]. Which shows the inadequacy of the information given; in our medical and nursing schools and that is a reflection on the kind of orientation of our educational system, and also the role and attitude of the doctors who are in a better position of educating the masses. This raises concern about the fact that; seminars, public enlightenment campaigns and continuing education sessions on health issues are not properly coordinated, or are insufficient.[6, 13] If we look closely to all the sources of information, there is no doubt that, the media has played a bigger role in increasing cancer awareness in the country in the past few years. Though various campaigns about cancer had been embarked upon by politicians, women association and even state government, but these campaigns are mainly about breast cancer, less about other forms of medical conditions, and cervical cancer, more so continuity of such programs, adequate monitoring and financial sustainability in Nigeria are short-lived. Another obstacles to these efforts are the poverty level of the general public, which makes it difficult in getting access to this media information, since subsential proportion of the populace lives in rural area, where electricity provisions, access to television, internet, radio services are limited.[5,13] Other aspect of hindrance in the low uptake of cervical cancer screening and other medical screening is the shortage of health workers in most of these health centre and hospital in the rural places. Some not surprising cited parents/family members and friends in other study as their source of information. Only a small proportion of the respondents had their information through medical doctors, health workers during direct interpersonal discussions, attendance of continuing medical education sessions at hospitals or seminars and other forums.[5,6,15] In comparison, 86% of the nurses in the study by Tessaro et al in the United States had attended a cancer education program in the last 5 years prior to the study.[16, 18] Apparently this depicts that cervical cancer has not been given priority when it comes to arranging the CME session, or attendance had been poor, less propaganda, even maybe not all health sector workers are invited to attend the sessions. Sometimes there maybe financial implications, which makes it difficult for more people to participate. We also found slight association of responds to this

questionnaire among age groups, it was observed that younger participants < 30 years of age responded better, and have had higher screening rate than the elderly.[8, 15] The results could be explained by the fact that, those health workers below the age of 30 may have recently come out of the medical school, nursing school, in their postgraduate training with better improved knowledge and possibilities are attainable through several medium and mode of screening, compared to the older ones. We also found difference in responds between cadres of the health workers, with the medical doctors showing higher tendency of compliance as regards the screening.[13, 14, 18, and 21] Every aspect of the study indicate, the need for further education regarding cervical education, and more governmental intervention, as showed by the respondents' dissatisfaction with their knowledge and screening. A slightly higher trend of screening practices was observed by Mutyaba et al among female respondents in a study done in Uganda at a University teaching hospital where only 19% of the female respondents had had a Pap smear test despite the fact that the test was available and free at the hospital and in that study the procedure was free, and a single institute was used, as compared to a randomly selected respondents from different health institution in the two states in our study. In another study in Nigeria done by Gharoro et al, reported that, a minority of Nigerian female health workers had had a Pap test[15]. In contrast, a study done in a University teaching hospital by Nganwai et al in Thailand found that 56.4% of the nurses had had a Pap smear test regularly and 86.5% intended to check regularly in the future.[22] Though in this study only 28.0% of the participants have had a Pap smear, it represent a relatively lower uptake and if this will be applied to the general public, we will expect even a much lower figure, that is why majority are of the opinion that a Pap smear test should be enforced and more support be made available and considered cervical cancer to be of high public health importance.[13, 26] Some of the reasons of poor responds, and participation could be attributed to many socio-cultural and economic reasons, religious and fear of cancer by Aboyeji et tal.,[27] others like ignorance, and illiteracy could be mentioned as well in our society where about 22.1% of sexually active adult women agreed that, they have never visited a Gynecologist for any form of check-up, reasons are like, not feeling at risk of any diseases, lack of symptoms, carelessness, fear of vaginal examination, lack of interest, test being unpleasant and not to be seen by another male, other than the husband.[26,27,28] Our finding shows that,77.2% of the respondent never felt the risk of any medical implications for not screening, about the danger of cervical cancer but ,there was little improvement as compared to a similar study by Gharoro et al,[15] which reported (89.2%) of those who had never had a Pap test did not feel at risk of developing cervical cancer.[13,15] The impressions and the general outcome of results

from these studies done in African countries like Uganda, Tanzania, and most particularly in Nigeria. Has shown the light, that the utilization of screening services is dependent on an individual's awareness of the importance of cervical cancer screening, the more active intergovernmental role, in financing the health sector, reorganization of our health policies, health oriented educational curriculum, as well as the ability of the health sector to make these services available and accessible is highly needed.[5, 12, 28] The respondents show lack of cervical cancer screening importance, and knowledge of cervical cancer; there is also a clear view, that the knowledge and information are uncertain.

Finally our findings are purely based on relatively highly educated class of the society, who are also economically stable, this studies do not go into detail causes, or risk factors involved in the development of cervical cancer, rather focused on the attitude, and readiness of the populace toward self medical awareness in the areas of cancer screening.

CONCLUSION

The information gathered calls for creation of innovative health promotion and disease prevention policies as well as awareness campaigns and screening programs at all levels of the health sector. Integration of cervical cancer screening services into already existing programs, such as family planning and reproductive health services; would likely improve the health index of the society in an already financial human resource challenged health sector and region.

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