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KNOWLEDGE, ATTITUDE, PRACTICE AND ACCEPTABILITY OF CERVICAL CANCER SCREENING AMONG WOMEN IN IN SELECTED HEALTH FACILITIES IN ABUJA, NIGERIA

Authors:

OKOROIWU, G.I.A[1], UBOSI, N.I[2], OBEAGU, E.I[3], SAMBO, N.Y. [4]

Author Affiliations:

[1,2&4]Department of Public Health Science, Faculty of Health Sciences, National Open University of Nigeria, Jabi, Abuja, Nigeria.

[3] Faculty of Health Sciences, University of Zimbabwe, South Africa.

Corresponding Author:

Dr Gideon .I.A.Okoroiwu

E-mail Address: gokoroiwu@noun.edu.ng;

ORCID ID: https://orcid.org/0000-0002-7206-6397.

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ABSTRACT

Background: Cervical cancer is the second most common cause of death from cancer among women in Nigeria. Most studies indicate that the level of knowledge of cervical cancer and its preventive measures are low among the women population.

Aim: To assess the level of Knowledge, Attitude, Practice and Acceptability of cervical cancer screening among women in FCT, Abuja.

Materials and methods: A cross-sectional descriptive study design was used and data were collected from respondents using self-administered structured questionnaire. Data were collected from three hundred and fifty-seven (357) respondents whose ages ranged from 20 to 60^{+} years. Data was presented using descriptive statistics of frequency distribution tables and charts, while chi-square was used to determine associations at the <0.05 level of significance **Results:** The result showed that the women had a good knowledge (90.0%) and a positive attitude (90.0%) with a poor practice (44.0%) of cervical cancer screening. The acceptability among the women was reasonably good (60.0%) and the most preventive measure against cervical cancer infection was Human Papilloma Virus vaccination before sexual debut (98.0%, p=0.001), followed by regular PAP smear test (92.0, p=0.003). Fear of diagnosis (p=0.032), embarrassment (p=0.021), financial constraints (p=0.001), stigma (p=0.001) and staff attitude (p=0.036) were the barriers to cervical cancer screening among the study population.

Conclusion: The study revealed that the women had a good knowledge of cervical cancer screening, and positive attitude towards cervical cancer screening. However, a poor practice of cervical cancer screening was observed among the women, therefore, there is need for enlightenment campaign towards increasing the involvement of more women in participating in the cervical cancer screening programmes that will enable and encourage them to participate more in the screening exercises.

Keywords: Cervical cancer, HPV, Attitude, Knowledge, Screening, Women.

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INTRODUCTION

Cancer is a disease characterized by the uncontrolled growth of abnormal cells in the body and these can invade and destroy surrounding healthy tissues, including organs. Moreso, some of the cancers cause visible growths called tumors, while others do not[1]. They can as well spread throughout the body, a process known as metastasis[1]. Genital (gynecologic) cancer is formed when malignant (cancerous) cells develop in the tissue of the reproductive organ. Examples of genital (gynecologic) cancers are cervical, ovarian, uterine, vaginal and vulva. Of all these, only cervical cancer, which is as a result of Human Papilloma Virus (HPV) infection in

99.8% cases, has screening tests that can detect it early when treatment can be effective[9]. It is, however, worthy to note that cancers rarely begin in the vagina. Most often, cancers that begin in other parts of the body spread to the vagina, those that spread to the vagina most commonly begin in the cervix (cervical cancer) or the lining of the uterus (uterine cancer) and this usually develops slowly over time[2] and occurs, when normal cells in the cervix change into cancer cells[3].

Human Papilloma Virus (HPV) infection, which is the most causative agent of cervical cancer is a necessary factor in the development of nearly all cases of cervical cancer and the infection leads to the development of cervical intraepithelial neoplasia and cervical cancer, this spreads through sexual contact. Although most women's bodies can fight the infection, most times the virus leads to the development of cervical cancer[4]. The major risk factor for the development of pre-invasive or invasive cervical carcinoma is infection with the HPV, which is sexually transmitted[5], and can be detected in 99.7% of cervical cancers[6]. Moreover, over 50.0% of sexually active women acquires the virus from 50 years of age[6]. It is the most common malignancies among females worldwide, especially in women of 20–39 years of age. 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 and 85% of the cases occur in developing countries and in Africa[7] and remained the second leading cause of cancer deaths after breast cancer and the fifth deadliest cancer in women, accounting for approximately 10% of cancer deaths[8]. During persistent HPV infection, precancerous changes may be detected in 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 cancer screening programmes[9]. The World Health Organization in 2019 reported that women with many sexual partners, and those whose partners have had many sexual consorts, or have been previously exposed to the virus, are mostly at the risk of developing the disease[10].

In developed countries like 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[10]. Pap smear screening can identify potentially precancerous changes. This is a major risk in women today especially those within the age of 20years and above. Awareness of screening programme, vaccination and diet are preventive measures that reduce the incidence of cervical cancer[11].

The prevalence and mortality rates resulting from cervical have declined substantially in Western countries following the introduction of screening programmes. The ideal age of women for screening is 30– 40 years, owing to high risk of precancerous lesions due to high sexual activity[1]. Lack of knowledge concerning cervical cancer screening may be one of the reasons why the incidence has not decreased in developing countries,

despite the fact that the disease, is one of the most preventable of all cancers through primary and secondary prevention using prophylactic Human Papilloma virus (HPV) vaccination and cervical screening [12]. Possible reasons for a low participation in cervical cancer screening include; ignorance of the existence of such test, ignorance of importance of screening, absence of symptoms and lack of awareness of centers where such services are obtainable[13].

According to Rositch et al.[14], health literacy is the ability to read, comprehend medical terminology, understand and act on health information such as medication instructions, appointment slips, and complete health-related forms. Thus, to a large extent, knowledge is correlated with health literacy. The more literate a person is, the more knowledgeable the person will be and the more likely he or she is to gain access to socially privileged positions and thereby gain the capacity and the information to influence thoughts, plans and behaviours[14], although lack of knowledge about cervical cancer is one of the barriers to cervical cancer screening[15]. A study conducted in Indian urban women showed that 16.4% of women were aware of cervical cancer screening[16]. Similar study done in the southern part of the same country revealed that majority of the women (81.9%) have poor knowledge about cervical cancer[17]. Another study in Nigeria on HIV-positive women showed that 56.2% and 34.5% respondents were aware of cervical cancer disease and screening/test[14]. In the southeastern part of the same country, less than 37.5% of the women were aware of cervical cancer; as 30% of them knew that it was preventable; 25% were aware of cervical cancer screening, nevertheless, 20% knew the screening center[18]. While among Gabonese women, only 27.9% had heard about cervical cancer screening[19].

Furthermore, regarding knowledge about cervical cancer screening and perception of risks among women attending outpatient clinic in rural Kenya, out of 419 participants, 327 (78.0%) had heard of cervical cancer screening, 288 (68.7%) women felt at risk for cervical cancer, and 333 (79.5%) stated that they would undergo screening if offered[20], and facility-based study in Ethiopia, Addis Ababa, among women living with HIV indicated that 97 (88.2%) participants believed that the disease is preventable, and 31.4% knew the availability of the screening procedures for the disease[20]. In the same Addis Ababa, a study among reproductive health service clients, said that 478 (91.9%) and 222 (42.7%) women heard about cervical cancer and cervical cancer screening, respectively[19]. In a similar study conducted in Ethiopia, about 71% of participants had ever heard of cervical cancer. Among women who had ever heard of cervical cancer, 49% did not know the cause, while 74% were able to identify at least one risk factor for cervical cancer[21]. In another hospital-based study in Nigeria, report showed that 62.5% of respondents have the willingness to be screened for cervical cancer[18]. Moreso, in Nigeria, among HIV-positive women, 79.8% respondents accepted to take cervical cancer screening[14]. While a study in

Uganda indicated that 63.0% of women reported intention to screen for cervical cancer[21]. A study in Burkina Faso, showed that 96.67% of the women would accept to be screened, and 11.07% were screened for cervical cancer[21] and a study in Addis Ababa from reproductive clients reported that 132 (37.9%) of participants strongly agreed that cervical cancer screening prevents cervical cancer, while 158 (45.4%) were willing to undergo cervical cancer screening[19]; a facility-based study in the same city of Addis Ababa among women living with HIV showed that 62.7% of the study population were willing to screen for cervical cancer, while a quarter (24.8%) of them decided to be screened in the near future[22]. In addition, a study among HIV-positive Nigerian women showed that cost of the test and religious denial were the most common reasons given for refusal to take the test[14]. A number of factors may affect a woman's ability and desire to participate in cervical cancer prevention programmes, and the impact of a woman's decision-making process cannot be ignored [23].

MATERIALS AND METHODS

Research Design

The study adopted a cross-sectional descriptive design; it was adopted for effective data collection and descriptive approach to examine the level of knowledge, attitude, practice and acceptability of cervical cancer screening among women of the Federal Capital Territory, Abuja.

Study Area and Population

Gwagwalada is a Local Government Area in the Federal Capital Territory in Nigeria. It has an area of 1,043km2 and a population of 153,770 at the 2006 census. It is projected to have a 6.26% growth between 2020 and 2025, which is the largest increase on the African continent.

The study population included all women from ages 20 to 60 years and above, because they are at risk of developing cervical cancer since the risk of invasive cervical cancer increases with age. A study of women attending Gynecological Clinic in University of Abuja Teaching Hospital, Primary Health Center Dobi and Town Clinic Gwagwalada, FCT-Abuja.

Inclusion Criteria

The following individuals were included in the study;

- Women aged 20 to 60years and above.
- Female individuals, receiving follow-up medical care for uncomplicated cervical cancer screening at the University of Abuja Teaching hospital's outpatient medical clinics and others
- Individuals who had consented to study participation.

Ethical Clearance

Ethical approval for this study was obtained from the University of Abuja Teaching Hospital Research Ethics Committee via the hospital clinic patron **(UATH/HERC/PR/380).** Permission for Data Collection was sought and granted

from hospital via the Matron and Medical Officer in-charge. Participation in the study was voluntary. Eligible participants were provided with a Participant Information Sheet describing the research, its nature, purpose, and objectives before giving informed consent. Confidentiality was assured throughout the study.

Informed Consent

The purpose of the study was described to the respondents. Both verbal and written consents were obtained from the respondents prior to the interview. The respondents were ensured of the confi-dentiality of information provided.

Sample Size Determination

A suitable sample size of 384 women (from age 20 to 60 years and above) attending the Gynecological clinics in Gwagwalada Area Council was calculated and chosen using $n=Z^2P(1-P)/d^2$ according to [24].

Where: n = the minimum sample size;

Z= statistical standard (1.96);
p = 50% (estimated previous population (0.5) was chosen since no study of this nature has been conducted in that area).;
d= the degree of accuracy or margin of error of 5%(0.05).

Therefore: $n = 1.96^2 \times 0.5 \times 0.5 / 0.05^2$;
n = 384.2 = 384.

Sampling Technique

Simple random sampling technique was used in selection of the participants. The number selected served as a representative of the entire population because each respondent was selected randomly. This enabled us to collect data which was a true representation of the study population in order to generalize the result.

Research Instrument And Administration

The questionnaire was used as the instrument for data collection. The questionnaire consisted of 31 questions with few open-ended questions and a majority of close-ended questions. The questions were constructed in simple English to ensure clarity, unambiguity, neutrality and unimpeded responses as Research assistants helped in interpreting it in Gbagyi, Yoruba, Igbo and Hausa to some persons who could not understand English Language.

Method of Data Collection

The survey was carried out during the day on women attending the Gynecological Clinic in University Teaching Hospital, Gwagwalada, FCT-Abuja, Primary Health Care Dobi and Town Clinic Gwagwalada. The questionnaire was divided into five (5) sections: socio-demographics characteristics, level of awareness, attitude towards cervical cancer screening, practices of cervical cancer screening, and prevention/ barriers to cervical cancer screening.

Data Analysis

Data was presented using descriptive statistics of frequency distribution tables and charts, while chi-square was used to determine associations at the <0.05 level of significance.

Results

Rsesults showed that those within 40-44 years were 144 (40%) and 40 (11%) were between the age-group of 35-39 years. Among the marital status, married women took the highest the highest share of participants of 180 representing 50.0%, while, the least was those in separate group with 4.0%. In the educational status, secondary school participants were the highest with 32.0%, while, those without any educational qualification participated least (Table1). Table 2 showed that 323(90.5%) have the knowledge of cervical cancer, 328(92.0%) have heard about it. 191(53.5%) of the study do not know the predisposing factors of cervical cancer, while, 190(53.2%) do not know the signs and symptoms.

Table 3 showed that there was a positive attitude towards cervical cancer screening among female groups by majority of the respondents, as most of the participants(90.0%) indicated that women should go for screening. Also, Table 4 showed that out of 357 participants, 157 representing 44.0% have practiced or done the screening, while, 200 of them representing 56.0% have not. Table 5 revealed that HPV vaccination before sexual debut (98.0%; p=0.001) is the most effective preventive measure against Cervical cancer.

From Figure 1, it can be deduced that more than half of the respondents 214 (60%) accepted but had never been screened for cervical cancer, while, 143 (40%) never accepted and has never been screened, whereas Figure 2 showed that cervical cancer screening is mostly at child bearing age group

From Table 6 it can be seen that fear of diagnosis (p=0.032); Embarrassment (p=0.021); Financial constraints (p=0.011); Limited availability (p=0.042); Stigma (p=0.001); Staff attitude (p=0.036); and Location (p=0.042) were found to be the significant barriers to cancer screening among the study population.

Table 1: Socio-demographic characteristics of respondents in Gwagwalada Area Council.

Variables	Frequency	Percentage %
Age in Years		
20−24	20	6
25−30	36	10
31−34	53	15
35−39	40	11
40−44	144	40
45−50	18	5
51−54	15	4
55− 59	20	6
60 and above	9	3
Marital Status		
Single	46	13
Co-habiting	18	5
Married	180	50
Divorced	61	17
Separated	15	4
Widowed	37	11
Highest Level of Education		
None	30	8
Primary	57	16
Secondary	115	32
Tertiary	155	44
Employment Status		
Employed	196	55
Unemployed	82	23
Pensioner	61	17
Employee	18	5
Occupation		
Civil/Public Servant	143	40
Business	47	13
Artisan	78	22
Students	28	8
Others	61	17
Working Experience		
None	52	15
≤ 2 years	30	8
3 – 5 years	60	17
6 – 10 years	110	31
11 – 15 years	90	25
16 years and above	15	4
Religion		
Christianity	196	55
Islam	104	29

Others	57	16

Table 2: level of knowledge among women in FCT, Abuja attending Gynecological Clinic in Gwagwalada Area Council **about cervical cancer screening**.

Questions	Yes (%)	No(%)
Knowledge of Cervical cancer?	323(90.5)	34(9.5)
Heard of cervical cancer?	328(92.0)	29(8.0)
Know of the Predisposing factors like?	166(46.5)	191(53.5)
Knowledge of Cervical Cancer signs and symptoms?	167(46.8)	190(53.2)

Table 3: **Level of Attitude of the Women**

Questions	Yes(%)	No(%)
Do you think women should be screened for cervical cancer?	321(90.0)	36(10.0)
Do you think all women across the ages should be screened?	154(43.0)	203(57.0)

Table 4 **Level of Practice of cervical cancer screening among women in FCT, Abuja, attending Gynecological Clinic in UATH, PHC Dobi and Town clinic in Gwagwalada Area Council**

Questions	Yes(%)	No(%)
Have you done the screening before?	157(44.0)	200(56.0)

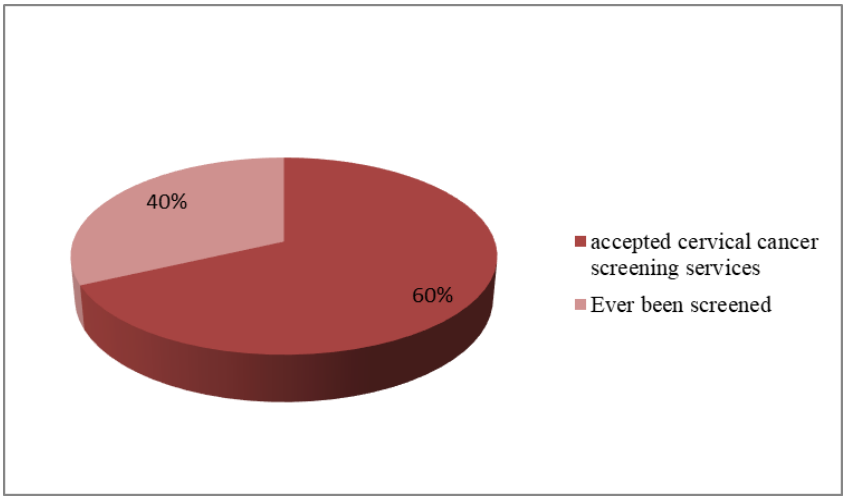

Figure 1 level of acceptability of cervical cancer screening among the study population

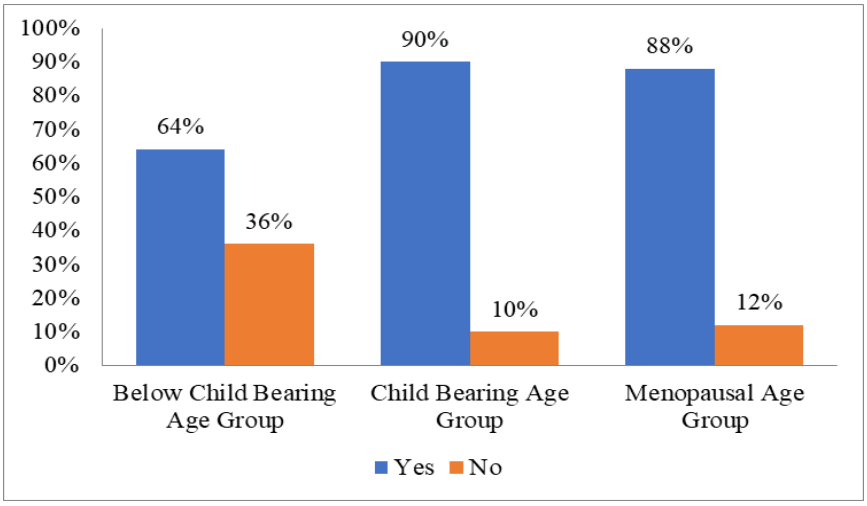

Figure 2. The age at which screening of cervical cancer is most among women attending Gynecological Clinic in Gwagwalada Area Council

Table 5: Preventive Measures Of Cervical Cancer

Questions	Yes(%)	No(%)	X^2	P=value
Is abstinence a preventive measure?	**278(78.0)**	**79(22.0)**	**68.2**	**0.002**
Is condom use a preventive measure?	**271(76.0)**	**86(24.0)**	**71.8**	**0.004**
Is single sexual partner a preventive measure?	**314(88.0)**	**43(12.0)**	**70.5**	**0.018**
Is regular PAP smear test a preventive measure?	**328(92.0)**	**28(8.0)**	**69.3**	**0.003**
Is HPV vaccination before sexual debut a preventive measure?	**350(98.0)**	**7(2.0)**	**66.7**	**0.001**

Table 6: Barriers to Cervical Cancer Screening

Barriers to Cervical Cancer Screening	Yes(%)	No(%)	X^2	P_value
Fear of the Diagnosis	189(53.0)	168(47.0)	43.2	0.032*
Lack of awareness	157(44.0)	200(56.0)	39.0	0.854
Embarrassment	198(55.5)	159(44.5)	52.9	0.021*
Financial constraints	230(64.4)	127(35.6)	44.2	0.011*
Limited availability	185(51.8)	172(48.2)	51.7	0.042*
Stigma	298(83.5)	59(16.5)	64.0	0.001*
Time constraints	148(41.5)	209(58.5)	55.8	0.682
Staff attitude	200(56.0)	157(44.0)	56.7	0.036*
Location	195(54.6)	162(45.4)	51.9	0.042*

DISCUSSION

Cancer of the cervix is a serious burden on the reproductive health of women worldwide, despite the fact that it is preventable. It is the most second common cause of cancer-related deaths among adult women globally. In this survey, the findings revealed that the women under study had good knowledge (90.0%) about cervical cancer[14]. From the study assessment, it was revealed that health literacy enhanced their ability to read and comprehend medical terminology, understand and act on health information such as medication instructions, appointment slips, and complete health-related forms. They noted that higher education is associated with health literacy. Thus, to a large extent, knowledge is correlated with health literacy. The more literate a person is, the more knowledgeable the person will be and the more likely he or she is to gain access to socially privileged positions and thereby gain the capacity and the information to influence thoughts, plans and behaviours. Moreso, some authors have reported that low health literacy correlated with less knowledge about cervical cancer screening[15]. Thus that lack of knowledge about cervical cancer is one of barriers to cervical cancer screening. The participants in this study, when compared with results from other studies on knowledge and awareness, appear to have better knowledge and awareness. For instance, a study in India showed that 16.4% of women were aware of Cervical cancer[16], while a similar study in southern part of the same country revealed that majority of the women (81.9%) had poor knowledge of Cervical cancer[17]. Among Gabonese women, only 27.9% had heard about screening[19]. Several pilot projects in India found that 99.0% of respondents have never been screened despite the massive efforts to implement cytological screening[25]. Many women in Nigeria, remain unaware of cervical cancer screening and have no access to cervical cancer screening services[15] and this is alarming and requires urgent attention.

On the attitude of the women towards cervical cancer screening, the study found out that participants have a positive attitude (90.0%), however, there was poor practice (44.0%) of cervical cancer screening among the women. The acceptability of cervical cancer screening among the women was good (60.0%), though, compared with previous works on knowledge, attitude and practice of cervical cancer screening, it is low. For instance, a hospital-based study in Nigeria showed that 62.5% of respondents had the willingness to be screened for cervical cancer[18] and a similar study conducted in different parts of southern Nigeria, among HIV-positive, 79.8% of the participants accepted to take cervical cancer screening[14], while a study in Uganda indicated that 63.0% of women had the intention to be screened for cervical cancer screening [21]. In Burkina Faso, 96.6% of the women would accept to be screened and 11.07% were screened for cervical cancer [21].

Furthermore, on the age at which acceptability of cervical cancer screening is

most, the result of the study, most of the participants in this study agreed that cervical cancer screening should be mostly at child-bearing age group (90.0%), while some accept that is should be in menopausal age group (88.0%) and below child-bearing age-group (64.0). This finding agrees with the age range of 20-45 years according postulated by earlier authors[11], [1], who posited that the ideal ages of women for screening are 30-40 years owing to high risk of precancerous lesions due to being sexually active. At this stage, a precancerous lesion is detectable for 10 years or more before cancer develops. Most likely, cervical cancer develops when the women are 60 years of age[9]. This buttressed the statement that cervical cancer is not a disease of old age, the majority of its victims are women who are at the peak of their biological and economically productive stages of life[26]. It is well known that Human Papilloma Virus (HPV) infection is a necessary factor in development of nearly all cases of Cervical cancer. A sexually transmitted HPV infection leads to the development of cervical intraepithelial neoplasia and cervical cancer, and HPV is spread through sexual contact, although, most women's bodies can fight the infection, sometimes the virus leads to the development of cervical cancer [4].

On the barriers to effective cervical cancer screening, the study revealed fear of diagnosis, Embarrassment, Financial constraints, Limited availability, Stigma, Staff attitude and Location as the barriers to cancer screening among the study population. This is in accordance with the results of similar previous study[27] which reported that the barriers, for example, high cost, anxiety borne by women, fear, as well as, the work of Malagon et al.,[28] who posited that disadvantaged ethnic minorities and women living in poverty in affluent countries and the poorest women in poor countries are also challenges to cervical cancer screening. Other possible reasons for a low participation in cervical cancer screening according to[13] are ignorance of the existence of such test, ignorance of the importance of screening or lack of risk awareness and the risk factors to the development of cervical cancer, absence of symptoms and lack of awareness of centers where such services are obtained, in addition to lack of motivations. Moreover, other challenges to the cervical cancer screening and treatment are similar to those for other health interventions and competing health needs, lack of political will, access to services, under developed healthcare structures, equipment and human resources, long ques and waiting times[15]. These barriers could be lifted if health service delivery will be improved, for instance, through quality improvement of techniques that are available at low cost. Women's anxiety over test results still needs to be further assessed to work out risk communication strategies that take into account broader educational frameworks[29]. It is also to be noted that such strategies should infuse the way health services are provided for cervical cancer prevention regardless of the specific test used. Bingham and colleagues concluded that a key step to achieving optimal coverage is to gain broad community support. Developing Communication strategies for raising

knowledge about services and encouraging participation can have a positive influence on acceptability[29].

The study established that the most preventive measure to cervical cancer infection was Human Papilloma Virus vaccination before sexual debut, followed by regular PAP smear test. This revelation supports the suggestion that during persistent HPV infection, precancerous changes may be detected in the cervix, that those changes are readily detectable and 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 form the bases of cervical cancer screening programmes[9]. PAP smear screening can identify potentially precancerous changes[11]. Also, women with many sexual partners and those whose partners have had many sexual consorts, or have previously been exposed to the virus were most at risk of developing the disease[10].

Limitations

The study targeted only women of 20 years and above which was difficult to capture as some women who were going to the clinic were younger than 20 years.The study targeted only women attending Gynecological Clinic in UATH, Gwagwalada, the PHC Dobi and Town Clinic Gwagwalada, all in Gwagwalada Area Council, FCT, Abuja but the health workers point of view was not considered. Moreover, the study sample was small, therefore findings may not be generalizeable to the larger population of Nigeria.

CONCLUSION

In conclusion, the study has revealed that the study population has good knowledge of cervical cancer screening, and positive attitude towards cervical cancer screening. The study, however, observed a poor practice of cervical cancer screening among the women. There was a reasonable acceptability of cervical cancer screening services. Also, the most accepted preventive measure against cervical cancer was HPV vaccination before sexual debut. Fear of diagnosis, embarrassment, financial constraints, stigma, and staff attitude were the barriers to effective cervical cancer screening.

Declaration of conflict of interest

No conflict of interest among the authors

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