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Awareness, Perceptions and Utilization of Cervical Screening Services among Women of Child – Bearing Age in Abuja, Nigeria

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Abstract

Introduction: Cervical cancer is a significant cause of morbidity/mortality and continues to top the rank as an important public health issue affecting women of child-bearing age (especially women in low resource countries). Therefore, this study was aimed at describing the awareness, perceptions and utilization of cervical screening services among women of child-bearing age In the Federal Capital Territory (FCT) - Nigeria.

Methods: A cross sectional survey was administered to 360 women of child-bearing age attending antenatal clinics in six selected hospitals in the FCT. They were selected using a proportionate non – random sampling technique.

Results: Giving the response rate of 80.3%, n= 289, α=0.05, CI = 95%, findings revealed that about 55% of respondents were aware of cervical screening services. Over 50% had negative perceptions about cervical screening services and a great majority (63.4%) had not utilized any cervical screening service. Several factors were identified as influencing the utilization of cervical screening services. There was no significant relationship between levels of education, age, marital status and the utilization of cervical screening services at α=0.05, CI = 95%, as indicated by P – values of 0.681, 0.631 and 0.535 respectively.

Conclusion: Awareness of cervical screening services is good, but perceptions about the services are negative and utilization of services is very poor among women of child-bearing age in the Federal Capital Territory of Nigeria.

Keywords: *Awareness, perceptions, utilization, cervical cancer, screening.*

Introduction

Cervical cancer is a disease in which the cells of the cervix become abnormal and starts to grow uncontrollably, forming tumors that have the ability to invade or spread to other parts of the body (Holland & Sheldon, 2012; National Cancer Institute, 2014). Almost all cases of cervical cancer are cause by certain types of Human Papilloma Virus (HPV)**.** There are over 100 types of HPV, and around 40 of these can be sexually transmitted**,** including those that cause genital warts. Of these, approximately 15 are thought to be cancer-causing viruses, with two types - HPV-16 and HPV-18 - being responsible for around 70% of cervical cancer cases globally (National Institute of Health, 2016).

Cervical cancer remains a major public health concern among women, especially in women in Low and Medium Income Countries (LMIC) of South and Central America, Sub- Saharan Africa, South and Southeast Asia, where cervical cancer continue to top the rank as the leading type of cancer among women (Ferlay, Bray, Pisani, Parkin & Lyon, 2014).

Globally, cervical cancer accounts for the second most common type of cancer among women, with an estimated 529,409 new cases and 274,883 deaths in 2008, about 86% of the cases occur in developing countries, representing 13% of female cancers (WHO, 2012; Spayne, Ackerman, Milosevic & Seindefield, 2008). Cervical cancer affects women of child bearing age disproportionately, suggesting that the disease is responsible for

greater loss of life and social cost (Ndikan & Ofi, 2015). The incidence of the disease begins to rise at age 20-29 years, reaches a peak around 55-64 years, and declines somewhat after 65 year (Parkin, Whelan, Ferlay & Storm, 2012).

In sub Saharan Africa, cervical cancer account for an important cause of mortality and morbidity in terms of amount of Years of Life Lost (YLL) and Years Lived with Disability (YLD) among women of child bearing age, making it the largest contributor to Disability Adjusted Life Years (DALY's) in this region (Neema, Denna, Nyasule & Candida, 2011). In Nigeria, 48 million women are at risk of developing cervical cancer, 17,550 are diagnosed yearly, 9,659 women die annually and 26 women die on a daily basis due to cervical cancer, (Okoye, 2015).

Although there are evidences of decline in incidence of cervical cancer in countries like the United States where there are established screening protocols (Kim, Brisson, Edmunds & Goldie, 2008*)*, the prevalence of the disease in LMIC remains high due to high prevalence of Human Papiloma virus and lack of effective cervical screening programmes for early detection of risk (Parkin, Whelan, Ferlay & Storm, 2012). Even when cervical screening programmes are available, poor knowledge and awareness, negative perceptions and health seeking behaviour continue to shape the poor utilization of such services (Sankaranarayanan, Thara, Ngoma, Naud & Keita, 2010).

Available literature shows that, in Nigeria and other developing nations awareness and utilization of screening services is poor (Chukwuali, 2013; Agida, Akaba, Isah, & Ekele 2015), cervical screening services are sporadic and opportunistic (Ndikom & Ofi 2015). Utilization of available cervical screening services is also reported to be poor among female health workers who are supposed to have expert knowledge of the condition (Udigwe, 2006).

Many studies have focused on awareness of cervical screening services in different locations, but only few studies have explored the utilization of cervical screening services. Hence the aim of the current study is to describe the awareness, perception and utilization of cervical screening services among women of childbearing age in the Federal Capital Territory (FCT).The researchers have attempted to answer the following research questions (1) What proportion of women of childbearing age in the FCT are aware of the availability of cervical cancer screening services? (2) How do women of childbearing age in the FCT perceive cervical cancer screening services? (3) What is the extent of utilization of cervical cancer screening services among women of childbearing age in the FCT? (4) What are the factors influencing the utilization of cervical cancer screening services among women of childbearing age in the FCT? Findings from this study will inform critical intervention to reduce the prevalence of cervical cancer among women of childbearing age in the FCT.

Methodology

Research design: A cross sectional survey was used to assess awareness, perceptions and the utilization of cervical cancer screening services among women of childbearing age attending gynecology clinics in the five government hospitals offering cervical cancer screening services in the FCT Abuja (as indicated by the US National Institute of Health, 2014). This includes, University of Abuja Teaching Hospital, Asokoro, Kubwa, Maitama and Wuse General Hospitals.

Study Sites

The Federal Capital Territory (FCT) is located just north to the confluence of rivers Niger and Benue. It is bordered by Niger State to the West and North, Kaduna State to the Northeast, Nasarawa State to the East and South, and Kogi State to the Southwest. FCT is currently made up of six Area Councils namely Abaji, Bwari, Gwagwalada, Kuje, Kwali and Municipal.

Sample and Sampling Techniques

Taro Yamen formula n = $\frac{N}{1+N\,(e)2}$ = was used to determine the sample size for this study

(C.I=95%, e = 0.05), and using proportionate quota sampling technique, a sample of 360 respondents was selected from the five available public secondary and tertiary health facilities offering cervical screening services in the FCT.

Inclusion Criteria

Women of childbearing age (18 – 50 years), attending obstetrics and gynecology clinics in selected facilities for various gynecological problems between March and May, 2017 and were willing to participate in the study.

Procedures

The proportion of respondents from the selected facilities was determined by dividing the number of women of childbearing age attending gynecological clinic in each facility, by the total population women attending the respective gynecological clinics, then multiplied by the sample size of 360.This gave a 103 participants in University of Abuja Teaching Hospital, 86 in Asokoro General Hospital, 51 in Kubwa General Hospital, 69 in Maitama General Hospital and 51 in Wuse General Hospital respectively.

All women attended the obstetrics and gynecology clinics during the study period, and who met the inclusion criteria were recruited until sample proportion was reached for each selected facility.

Method of data analysis

The collected data were analyzed using Statistical Package for Social Sciences (SPSS) version 22.00. The results were presented in Tables, Figures, Frequency and Percentages were used to analyze the demographic data. Mean score and Percentages were adopted to answer the research questions. Pearson Product moment correlation coefficient and Chi- square were used to test the hypotheses, at level of significance - 0.01. For the four (4) point scale the acceptable mean was from 2.00- 4.00, and for the Yes and No options scores below 50% where considered low scores, while scores of 50% above were considered high scores.

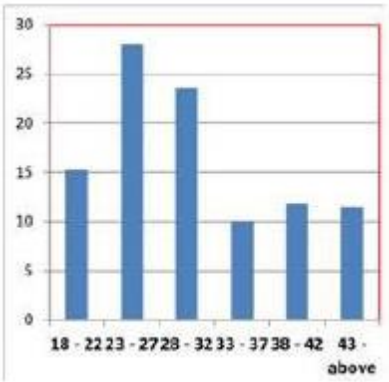
Ethical consideration

Ethical Approval was obtained from the Health Research Ethics Committees of the Federal Capital Territory Administration to cover the General Hospitals. Another approval was obtained from the Health Research Ethics Committees of the University of Abuja Teaching Hospital for the Teaching Hospital to carry out the research study. In addition, informed consent was obtained from each respondent before administering the questionnaire. All the respondents were informed that participation is voluntary, and that they could withdraw at any time. Respondents were assured that confidentiality of their responses will be maintained during and after data collection. Numbers were assigned to each copy of the questionnaire as identifier rather than names, to protect confidentiality of participants. The numbers facilitated data entry for analysis and no one can link the identity of the participants with the registration numbers.

Results

The results are presented in line with the objectives of the study/ research questions and hypotheses. 289 out of 360 questionnaires where accurately completed (i.e. response rate of 80.3%).

Socio-demographic characteristics of respondents (n=289)



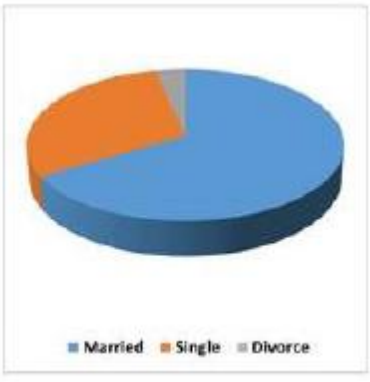


Figure. 1a. Age Group, **Figure. 1b**: Marital Status

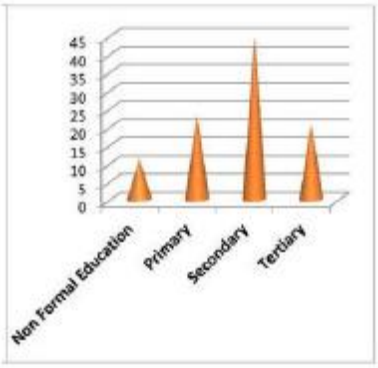


Figure. 1c. Occupation, **Figure. 1d**: Education

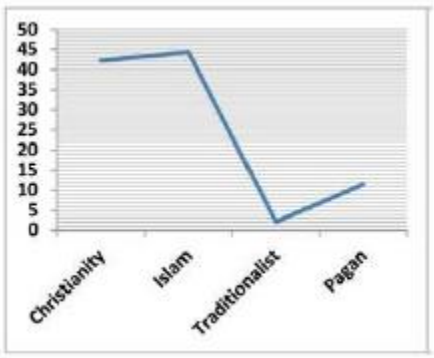


Figure. 1e: Religion, **Figure. 1f: Ethnicity**

The mean age of the respondents was 30.5 years, with most respondents (28.02%) being between the ages of 23 – 27 years, majority (66%) were married while significantly (62%) were business women and (34.3%) had secondary school education.

Research Question 1: To what extent are the women of childbearing age aware of the availability of cervical cancer screening services in FCT Abuja?

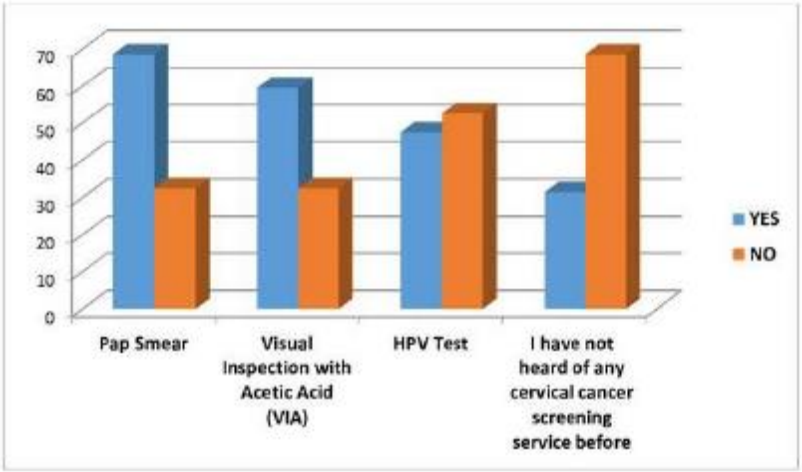


Figure. 2. Awareness of availability of cervical screening services.

Figure. 2 shows that majority of the respondents (68.5%) were aware of Pap-Smear, (59.5%) were aware of visual inspection with acetic acid (VIA), less than half (47.4%) indicated that they were aware of Human Papilloma Virus test, and about 33% had not heard of any of the cervical cancer screening services. The average percentage for awareness of cervical cancer screening services was 51.8%, indicating that that there is fairly good

awareness of cervical cancer screening services among women of child bearing age in the Federal Capital Territory – Abuja.

Research Question 2: How do women of childbearing age perceive cervical cancer screening services in the FCT?

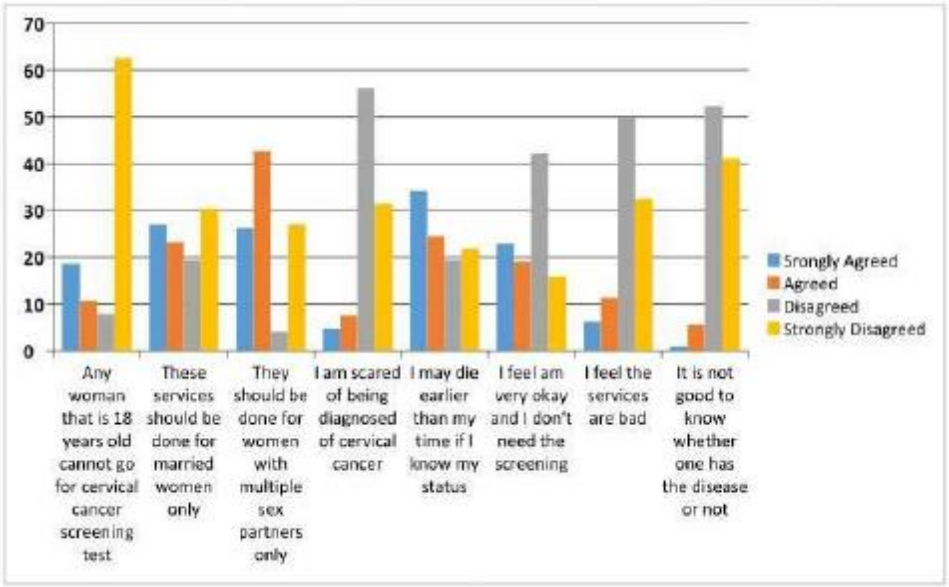


Figure. 3. Perception about Cervical Cancer Screening Services (n = 289)

Figure. 3 indicates the perceptions of cervical cancer screening services among women of child bearing age in the selected hospitals in Abuja. .More than half of respondents believed that (1) they are okay and do not need cervical screening (2) they may die earlier than their time if they know their cervical screening status (3) cervical screening should be done for only married women (4) cervical screening should be done for only women who have multiple sexual partners.

Research Question 3: what is the extent of utilization of cervical cancer screening services by women of childbearing age in FCT, Abuja?

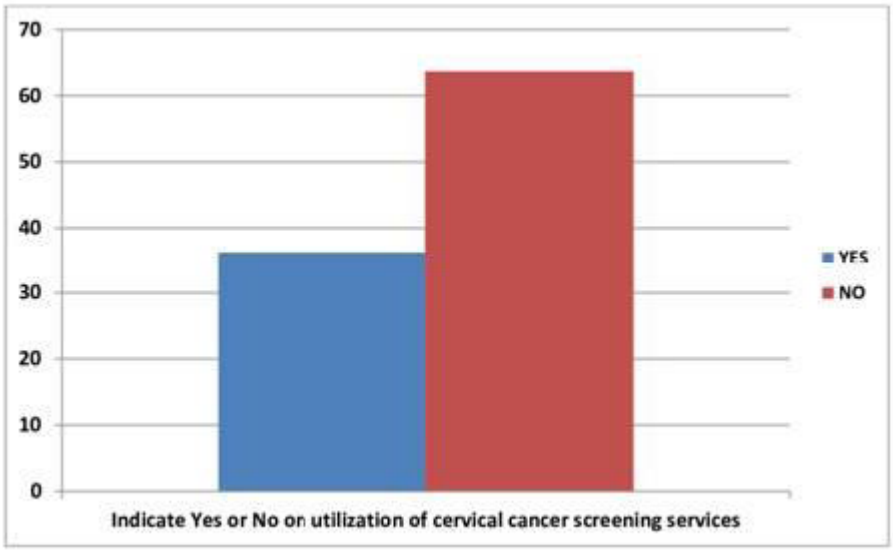


Figure. 4. Utilization of cervical cancer screening services n = 289

Figure. 4 Above indicates the extent of utilization of cervical cancer screening services among women of child bearing age in the selected hospitals in Abuja. The table shows that majority 184 (63.67%) have not used cervical cancer screening services before.

Research Question 4: What factors influence the utilization of cervical cancer screening services by women of child bearing age in the FCT, Abuja?

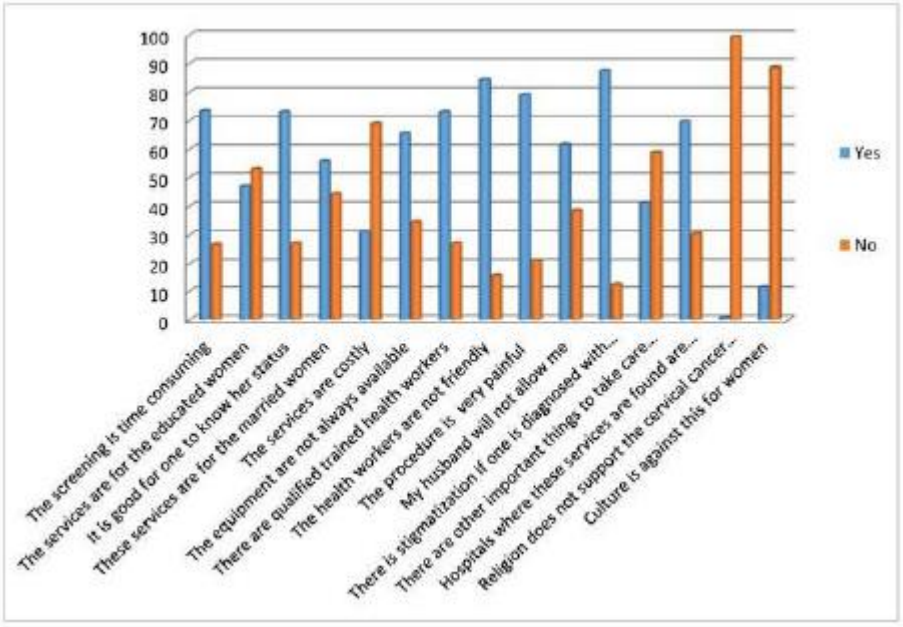


Figure. 5. Factors influencing the utilization of cervical cancer screening service n= 289

Figure. 5 shows that, majority (73%) of respondents affirmed that it was good to know one's status. However, the factors that influence utilization of cervical cancer screening services as indicated by majority of respondents includes (1) distance away from facilities where cervical screening services are available (2) cervical screening is time consuming (3) lack of equipment (4) lack of qualified trained health workers (5) The procedure is painful (6) stigmatization (7) unfriendly attitude of health workers (8) not allowed by husbands to go for cervical screening.

Hypothesis 1 There is no significant relationship between the level of education and utilization of cervical cancer screening services among women of childbearing age in FCT, Abuja.

Table 3. Level of Education of women of childbearing age and Utilization of Cervical Cancer Screening Services (n= 289)

Variables	**Yes**	**No**	**X^2**	**Df**	**P-value**	**Remark**
Level of Education Non-formal	13	20				
Primary	28	39				Correlation is not significant.
Secondary	44	85	1.406	3	0.681	
Tertiary	20	40				
Total	**105**	**184**				

The above **Table 3** indicate the correlation between level of education and utilization of cervical cancer screening services, at α =0.05. With a calculated chi-square value of 1.46 and p – value of 0.681, the null hypothesis is accepted; implying that there is no significant relationship between level of education and utilization of cervical cancer screening services.

Hypothesis 2: There is no significant relationship between age and the utilization of

cervical cancer screening services among women of childbearing age in FCT, Abuja

Table 4. Age of Childbearing Mothers and Utilization of Cervical Cancer Screening Services

Variables	Yes	No	X^2	Df	P-Value	Remarks
Age						
18-22years	13	31				
23-27years	27	54				
28-32years	26	42				
33-37years	11	18	3.452	5	0.631	Correlation is not significant.
38-42years	12	22				
43 above	16	17				
Total	**105**	**184**				

Table 4 above shows the relationship between age of mothers of childbearing age and the utilization of cervical cancer screening services, a chi-square value of 3.452 and p – value of 0.631 was obtained at α=0.05. The null hypothesis is accepted; implying that there is no significant relationship between age of mothers of child bearing age and utilization of cervical cancer screening services.

Hypothesis 3 There is no significant relationship between marital status and utilization of cervical cancer screening services among women of childbearing age in FCT, Abuja.

Table 5. Relationship between marital status and utilization of cervical cancer screening services among women of childbearing age (n = 289)

Variables	Yes	No	X^2	Df	P-Value	Remarks
Marital status						
Married	70	122				
Single	33	54	1.251	2	0.535	
Divorce	2	8				
Total	**105**	**184**				

The result in Table 5 shows the relationship between marital status and utilization of cervical cancer screening services among women of childbearing age. At α=0.05, X^2 is 1.251 and a p-value is 0.535. The null hypothesis is therefore accepted; implying that there is no significant relationship between marital status and utilization of cervical cancer screening services among women of child bearing age.

Discussion

The results are discussed in order of the research objectives.

Awareness of cervical screening services among women of child bearing age

Figure. 2 shows that more than half (51.8%) of the respondents were aware of the availability of varying cervical cancer screening services in the FCT: 68.5% of respondents were aware of Pap-Smear, 59.5% were aware of visual inspection with acetic acid (VIA), less than half 47.4% indicated that they were aware of Human Papilloma Virus test. This finding corroborates the findings of Bernard, Stephen and Ajen (2012) in a study conducted to determine the awareness and utilization of screening services for cancer of the cervix amongst women in Makurdi, they found that 51% of the respondents were aware of cervical cancer screening.

However, our finding contradicts the findings of Chukwuali (2013) and those from a study conducted by Agida, Akaba, Isah, and Ekele (2015) among the antenatal women attending antenatal clinics using the University of Abuja Teaching Hospital, which showed that awareness of cervical cancer, was low among antenatal clinic attendees. In another study by Ndikom and Ofi (2015) to explore the awareness, perception and utilization of cervical cancer screening among women in Ibadan, they also reported that women were not aware of cervical cancer and that they were not utilizing the services. Similarly, Nancy, Sylvia, Mate and Carolyn (2016) studied knowledge, practice, and

barriers toward cervical cancer screening in Elmina, southern Ghana, and their result showed that 97.7% of the respondents had not heard of Pap smear. The sponsorship by the National Institute of Health, United States of America in to those selected Hospital and creation of awareness by the health personnel of the hospitals may account for the increased awareness of cervical screening services observed in the current study.

Perceptions of cervical cancer screening services among women of childbearing age in Federal Capital Territory

Figure. 3 shows that more than half of respondents have believed that (1) they are okay and do not need cervical screening (2) they may die earlier than their time if they know their cervical screening status (3) cervical screening should be done for only married women (4) cervical screening should be done for only women who have multiple sexual partners. These imply a fairly negative perception of cervical screening services among respondents. Those findings corroborate the American Cancer Society (2015), which suggests that some women expressed fear of cervical cancer diagnosis and treatment based on misconception, and that such women are much less likely to receive regular Pap tests. Hence, cervical cancers are usually diagnosed at a much later stage, after the cancer has spread to other parts of the body.

According to Neema, Denna, Nyasule and Candida, (2011), cervical cancer is an important cause of mortality and morbidity in terms of numbers of years of life lost (YLL) and years lived with disability (YLD) among women of child bearing age in sub Saharan Africa. Hence there is great need for increased awareness about cervical cancer screening.

Utilization of cervical cancer screening services by women of childbearing age in Federal Capital Territory

Figure. 4 indicates a poor utilization of cervical screening services among participants, with only 105 (36.33%) of participants affirming to have used the cervical cancer screening services. This finding is similar to that of Ahmed, Sabitu, Idris and Ahmed (2013), in a study to assess the utilization of cervical cancer screening among market women in Sabon Gari Zaria, which showed that their level of practice of cervical cancer screening was low (15.4%).

Factors influencing utilization of cervical cancer screening services by women of childbearing age in Federal Capital Territory

Although **Figure. 5** above shows that Majority (73%) of respondents affirmed that it was good to know one's status, **Figure. 4** shows that Majority (63.67%) of respondents have not used cervical cancer screening services. Factors that influence utilization of cervical cancer screening services as indicated by majority of respondents in **Figure. 5** includes (1) distance away from facilities where cervical screening services are available (2) cervical screening is time consuming (3) lack of equipment (4) lack of qualified trained health workers (5) The procedure is painful (6) stigmatization (7) unfriendly attitude of health workers (8) not allowed by husbands to go for cervical screening. These findings were similar to the observations of Nygrd, Nygard, Skare and Thoresam *(*2012) who stated that time consumption is one of the factors influencing utilization of cervical cancer screening services, giving the many responsibilities women assume. Also, most screening programmes rely on Pap smear which is complex and costly to run especially in developing countries where health systems and infrastructures are weak, (Ashford & Collymore, 2015). Saleem and Abraham, (2015) also observed other factors influencing cervical cancer screening to include Poor knowledge of health, people's beliefs, attitudes, language barrier, unhelpful attitudes of health professionals, increase in age, race/ethnicity, low educational level, low income, decreased access to the services, insufficient funding, and unfavorable attitudes towards cancer screening. Similarly, the factors that influence lack of utilization as identified by Mutyaba (2007) in Uganda were ignorance about cervical cancer, cultural constraints/beliefs about illness, economic factors, domestic gender power relations, alternative authoritative sources of reproductive health knowledge and unfriendly health care services. WHO (2012) also stated that lack of cervical cancer control programme could be a factor influencing lack of utilization of cervical cancer screening services. Similarly, Ndikom and Ofi (2015) identified factors affecting utilization of cervical cancer screening

services as lack of awareness about the screening, people feel they are healthy they don't bother about preventive services as they have other contending problems, seen generally as not important, poor health seeking behaviour and financial constraint. This leads to many visiting the Hospital at the terminal stages of their disease conditions.

Relationship between level of education and the utilization of cervical cancer screening services among women of childbearing age in FCT, Abuja

Table 3 shows that there is no significant relationship between level of education and utilization of cervical cancer screening services (X^2 = 1.406, p value = 0.681, α=0.05). This finding contradicts the findings of Hinsermu, Yibrah, Amlaku and Amare (2015) who observed that level of education is one of the important predictors of cervical cancer screening service uptake. In another study by Mbamara, Ikpeze, Okonkwo, Onyiaorah, and Ukah (2007) to determine the practice and utilization of cervical cancer screening among women attending obstetrics and gynecology clinic in a tertiary level medical care Centre in South Eastern Nigeria, which was conducted at Nnamdi Azikiwe University Teaching Hospital, the result showed that there was a significant association between the educational status of the women attending the obstetrics and gynecological clinic and their practice of the cervical Pap smear test with X^2 = 10.14, p value = 0.001. Although many literatures affirm the positive influence that educational levels hold on health beliefs and behaviors, our sample size may be too small to detect a statistically significant difference between the tested variables.

Relationship between age and the utilization of cervical cancer screening services among women of childbearing age in FCT, Abuja

Table 4 shows that there is no significant relationship between age and the utilization of cervical cancer screening services among women of child bearing age in the FCT (X^2=3.452, p= 0.631, α=0.05). This finding corroborates the findings of Neema, Denna, Nyasule and Candida (2015) who observed that there was no association between self-reported utilization of cancer screening services with age (p = 0.166). Younger and older persons of reproductive age who are well informed about the risks of cervical cancer will likely access screening services irrespective of their age all thing being equal.

Relationship between marital status and the utilization of cervical cancer screening services among women of child bearing age in the FCT, Abuja

Table 5 indicated that there is no significant relationship between marital status and the utilization of cervical cancer screening services among women of child bearing age in the FCT (X^2 = 1.251, P= 0.535, α=0.05). This result contradicts the findings of Neema, Denna, Nyasule and Candida (2015) whose result showed among other factors, that spouse or partners support was an important factor in utilization of cervical cancer screening services. Again, our sample size may not be adequate to detect a statistically significant relationship.

Conclusion

The level of awareness of availability of cervical cancer screening services among women of child bearing age in the FCT is high. Pap smear and Visual Inspection with Acetic acid (VIA) are the commonest procedures known to them. Most women are not aware of Human Papilloma Virus test.

Although women of child bearing age in the FCT have high level of awareness about cervical cancer screening services, they have negative perceptions of cervical cancer screening services and their utilization of cervical cancer screening services is low. The negative perceptions of cervical cancer screening services in combination with other factors enumerated in this study (barring age, education, marital status) may account for the low level or poor utilization of cervical cancer screening services among the women of child bearing age in the FCT.

Limitations of the Study

In this study, because the researchers only used the five Government Hospitals that are offering the cervical cancer screening services as they were being selected and sponsored by the National Institute of Health, United State of America to carry on cervical cancer screening services free of charge, other hospitals not inclusive. These findings may not be

generalised. Also, the sample size may not be adequate to detect statistically significant relationships.

Another limitation was that the five Hospitals used for the assessment and utilization of cervical cancer screening services as selected by the National Institute of Health, USA were all located in the urban setting while the rural areas were undermined.

The study was carried out in the obstetrics and gynecological clinic where a number of women within the target group could be accessed for information. Though it provides access to the target women, it did not cover information from women using other Maternal and child health services.

Recommendations

We recommend that health personnel should intensify efforts in educating women on cervical cancer, and utilization of cervical cancer screening services. Particular emphasis should be placed on correction of misconceptions enumerated in this study. Cervical cancer screening services should be decentralized to increase access by rural women.

Finally, we recommend a similar study using a larger sample size and a probability sampling technique for more valid and generalizable results,

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