



Cervical Cancer Knowledge and Prevention Practices among Female Civil Servants in Awka South Local Government Area, Anambra State

Georgy O. Obiechina^{1*} and Muo Chiamaka Euphemia¹

¹University of Port Harcourt, Nigeria.

Authors' contributions

This work was carried out in collaboration between both authors. Author GOO designed the study, performed the statistical analysis, wrote the protocol and draft the manuscript. Author MCE managed the analysis of the study and the literature searches. Both authors read and approved the final manuscript.

Article Information

DOI: 10.9734/AJARR/2021/v15i130356

Editor(s):

(1) Dr. Juan Manuel Vargas-Canales, University of Guanajuato, Mexico.

Reviewers:

(1) Rafael Alberto González Cortes, Universidad Latina de Costa Rica, Costa Rica.

(2) Jessica Mayra Ferreira, University of Campinas, Brazil.

Complete Peer review History: <http://www.sdiarticle4.com/review-history/64642>

Received 05 November 2020

Accepted 11 January 2021

Published 29 January 2021

Original Research Article

ABSTRACT

Background: Cervical cancer is a potentially preventable disease if appropriate screening and prophylactic strategies are employed. However, the lack of knowledge and prevention practices can result in the underutilization of preventive strategies.

Objective: The objectives of this study were to determine the cervical cancer knowledge and prevention practices among female civil servants in Awka South Local Government Area.

Materials and Methods: A cross-sectional research survey design was used to accomplish the purpose of the study. A self-structured and validated questionnaire was used to collect data from the sample of 335 female civil servants, while 313 returned rate of female civil servants was used to analyze the data. Percentage, mean and standard deviation were used to analyze the research questions, while Chi-Square and ANOVA were used to test the hypotheses at 0.05 alpha level.

Results: Findings revealed that 194 (61.98%) of the respondents had no knowledge of cervical cancer while 119 (38.02%) had knowledge of cervical cancer, however, an average weighted

*Corresponding author: Email: georgyobiechina@yahoo.com;

mean score of \bar{X} 2.63 and \pm 0.95 had a positive response that using pap smear as a procedure to test for cervical cancer is the best screening method while most of the respondents revealed that it is advisable to go for treatment once there is a sign of STDs. Chi-Square value of difference in mean knowledge of cervical cancer among female civil servants in Awka South Local Government Area revealed that the calculated χ^2 -value yielded 257, with significant value of 0.000 is less than P-value ($P < 0.05$).

Conclusion: It was concluded that when knowledge about cervical cancer and its prevention is consistently communicated through difference media, relatively high number of females may be aware. Based on the conclusion, it was recommended, among others, the need for more sensitization campaigns to bridge the identified knowledge gaps and scale up cervical cancer screening services to all women to increase service uptake.

Keywords: Cervical cancer; knowledge; prevention practices; female civil servants Nigeria.

1. INTRODUCTION

Cervical cancer is a preventable non-communicable disease of public health importance. It is the fourth most common malignancy in women worldwide and most common in Africa, thus, one of the leading causes of cancer deaths in women in sub-Saharan Africa including Nigeria with a six year survival rate [1]. Cancer of cervix is a disease where cells of the cervix grow abnormally and, if left untreated, they become malignant or cancerous (Centers for Disease Control and Prevention (CDC) [2]. Cervical cancer is a type of cancer that occurs in the cells of the cervix-the lower part of the uterus that connects to the vagina [3]. It remains the commonest genital tract cancer, yet it is largely preventable by effective screening programs. A considerable reduction in cervical cancer incidence and deaths has been achieved in developed nations with systematic cytological smear screening programs [4].

Cervical cancer is the fourth most frequent cancer in women with an estimated 570,000 new cases in 2018 representing 6.6% of all female cancers with a mortality rate of 7.5% [5]. According to American Cancer Society (ACS) [6] estimates that doctors may see 13,170 new diagnoses of cervical cancer by the end of 2019 in the United States. More than 4,250 women in U.S will die of cervical cancer this year tend to occur in midlife and are most frequently diagnosed in women between the ages of 35 and 44. It rarely develops in women younger than 20. Many older women do not realize that the risk of developing cervical cancer is still present as they age. More than 15% of cases of cervical cancer are found in women over 65 years. Each year, more than 300,000 women die of cervical

cancer. More than half a million women are diagnosed.

Cervical cancer is a preventable disease that affects far too many women in the African Region. Yet, it is the most common cause of cancer in the African Region where it accounts for 22% of all female cancers. In Africa, 34 out of every 100,000 women are diagnosed with cervical cancer and 23 out of every 100,000 women die of cervical cancer every year [7]. In many parts of Africa, cervical cancer is not identified or treated until an advanced stage.

Cervical cancer can be successfully treated if detected early. Screening for cervical cancer is, therefore, one of the basic preventive measures for the disease, however, access to screening services has been a major problem for this Civil Servants in Awka South Local Government Area, especially those in the rural areas. Hence, most women with the disease present late to hospitals, at the invasive stage of the disease, when therapy will only result in partial cure or no cure at all [8]. The current situation is frightening and deserves urgent intervention. Grim statistics show that more than 60 Anambra women die of cancer and related complications every year. Unfortunately, Nigeria lacks a well-articulated extensively circulated nationwide cervical cancer policy and a nation-wide cancer screening program [9].

In Nigeria, cervical cancer is the commonest gynecological cancer and a leading cause of cancer deaths among women [10]; Thomas, Ojemakinde & Izebraye, 2002). In 2017, the World Health Organization (WHO) reported that the number of Nigerian women with cervical cancer annually totaled 14,089, making it the second leading cause of cancer deaths [11].

Cervical cancer is mostly as a result of Human Papilloma Virus (HPV) which is transmitted through sexual intercourse, in most cases the male is the carrier of the papilloma virus that infects and generates in females. Despite the risks of the HPV virus both males and females are hardly aware of the virus and risk it carries [12]. Most cervical cancer is caused by Human Papilloma Virus. HPV is mainly transmitted through sexual contact and most people are infected with HPV shortly after the onset of sexual activity.

Early stage of cervical cancer produces no signs and symptoms. As a result, women should have regular cervical smear test or pap test. Advanced signs and symptoms may include bleeding in postmenopausal women, discomfort during sexual intercourse, vaginal discharge with strong odour, vaginal discharge tinge with blood and pelvic pain (Nordquist, 2019). Sexually active men and women will become infected by HPV during their lifetime. HPV can cause other types of cancers, such as valvar cancer, vaginal cancer, penile cancer, rectal cancer, throat cancer and others.

In 2014, a non-governmental organization held a health summit for women in Awka South Local Government Area, where they conducted free cervical and breast screening and discovered that approximately 50 women were diagnosed with cervical and breast cancer. Despite all preventive measures, sensitization and awareness programs adopted for the control of mortality caused by cervical cancer, it seem like the impact is not being felt especially in Awka South Local Government Area. Cervical cancer still claim lives, which implies that there is a gap in knowledge of the disease. Therefore, this study seeks to determine cervical cancer knowledge and prevention practices among female civil servants in Awka South Local Government Area.

This study reviews two related theories, the Health Belief Model (HBM) and Theory of reasoned action (TRA) to understand the cervical cancer screening and preventive practices among women in Awka South Local Government Area. The HBM was first developed in the 1950s by social psychologists Hochbaum, Rosenstock and Kegels [13] working in the U.S. Public Health Services. The basic Assumptions and statements that HBM is based on the understanding that a person will take health-related actions that is go for cancer screening center if that person; feels that a negative health condition like cancer or

HPV can be avoided with a positive expectation by immunizing both boys and girls between the ages of 9 to 14 years old with doses of the vaccine.

The recommended action, she may avoid a negative health condition by cancer screening could be effective in preventing cancer, and believes that she can successfully take recommended health action that is, she can go for cancer screening centre comfortably and with confidence.

The HBM was spelled out in terms of four constructs representing the perceived threat and net benefits: perceived susceptibility, perceived severity, perceived benefits, and perceived barriers. These concepts were proposed as accounting for people's "readiness to act." An added concept, cues to action, would activate that readiness and stimulate overt behavior. A recent addition to the HBM is the concept of self-efficacy, or one's confidence in the ability to successfully perform action.

Perceived susceptibility is an individual's appraisal of the risk of developing a health problem [14]. The model assumes that a person who perceives the likelihood of being at risk of developing a disease will engage in behaviors to decrease risk. Hence, the screening and prevention practices of female civil servants in Awka South Local Government Area toward cervical cancer could most probably depend on their perception of susceptibility to cervical cancer.

The second construct is perceived severity, which describes an individual's assessment of the seriousness of developing a health problem suggests that individuals are likely to take on behaviors that can prevent health problem or reduce its severity if they perceive a particular health problem as serious. The construct includes beliefs about whether the disease poses a threat to life or could result in disability or cause pain. For example, believing that infection with HPV can lead to cervical cancer, give pain or even cause death is likely to make the female civil servants in Awka South Local Government Area take actions to prevent cervical cancer and reduce its severity.

The third construct is perceived benefit, which explains the assessment individuals make regarding the value of getting involved in healthy behaviour to reduce the risk or severity of the disease. It defines action to take, how where, when, clarify the positive effects to be expected.

It involves a proper understanding of the effect and effectiveness of the information or health education in averting the threat. For instance, in the prevention of cervical cancer, going for pap smear screening for early detection and treatment of infections, abstaining from unprotected sexual intercourse and avoidance of multiple sexual partners.

A fourth construct of the HBM that is of significance to this study is modifying variables. Modifying variables are variables that affect health-related behaviors; indirectly by affecting perceived susceptibility, seriousness, benefits, and barriers. Such variables include demographic (gender), structural (knowledge educated and enlightened), cue to action (internal and external). Internal cue: (treating or caring for a patient with cervical cancer or thought of neighbor suffering from such diseases. External cue: (seminars and workshops on cervical screening by professional bodies).

Hence, accurate and sufficient knowledge about cervical cancer, positive belief and attitude towards the disease would contribute to the uptake of cervical cancer screening and prevention practices. Alternatively, the negative effect of these variables could hinder the uptake of preventive measures.

Since knowledge about a disease play significant roles in predicting if the individual would adopt positive health behaviour towards the prevention of the disease, the researchers considered it pertinent determining the knowledge and prevention practices among female Civil Servants on about cervical cancer. It was considered equally important to establish the prevailing practices of these female with regard to cervical cancer screening and prevention practices. However, as established by the HBM, this study believes that demographic variables can affect cervical cancer screening and prevention behaviour directly and indirectly by affecting knowledge and about cervical cancer. This study examined the level of knowledge of cervical cancer among female civil servants in Awka South Local Government Area and to determine cervical cancer prevention practices among female civil servants in Awka South Local Government Area.

2. MATERIALS AND METHODS

This was across-sectional survey design. The design was successfully utilized by Kendra [15], to study knowledge, and prevention practices of

cervical cancer among female Civil Servants attending a tertiary hospital in Anambra State. The population consisted of 335 female civil servants, were all used for the study. A self-structured questionnaire titled Cervical Cancer Knowledge and Prevention Practices (CCKPP) and validated questionnaire with reliability index of 0.75 was used to collect information from 335 female civil servants. The consent form was attached to copies of the questionnaire which were distributed to the respondents. Out of the 335 copies of the questionnaire distributed, 313 copies were completely filled and returned. The data collected were analyzed using the Statistical Package for Social Sciences – SPSS version 21. Percentage was used to answer the research questions on knowledge of cervical cancer screening, while the mean and standard deviation was used to answer the research question on prevention practices about cervical cancer. Chi-square was used to test hypotheses of no significant difference in knowledge and prevention practices of cervical cancer screening at 0.05 alpha level. A criterion mean of 2.5 was used to decide whether the prevention practices were positive or negative. A mean of 2.5 and above was regarded as positive prevention practices while a mean of 2.5 was regarded as negative prevention practices.

3. RESULTS

3.1 Research Question One

Table 1: revealed that 194 (61.98%) respondents have no knowledge of cervical cancer while 119 (38.02%) has knowledge of cervical cancer. Only 88 (28.12%) out of 313 respondents heard about it through posters, books and newspaper however, 225 (71.88%). Specifically, 42.4% Know that there is a disease called cervical cancer while 57.51 never know. 37.06% said cancer is caused by HPV, on the contrary 62.94% of respondents have no knowledge. Again, only 49.52% knows that cervical cancer is not infectious while 50.48% of the respondents did not know. This implies that the knowledge about cervical cancer among female civil servants in Awka South Local Government Area of Anambra State is low.

3.2 Research Question Two

Table 2 shows that items 1, 3, and 4 had a negative response of \bar{X} 2.47, \pm 1.06, \bar{X} 2.42, \pm

1.02, and $\bar{X}2.41 \pm 1.01$, while the rest items had a positive response. However, item 9 and 10 had the highest score of $\bar{x}2.88, \pm 0.91$, and $\bar{X}2.98, \pm 0.94$. Finally, the overall average mean score were positive $\bar{X} 2.63$ and ± 0.95 . The respondents had a positive responses that the best prevention practice to cervical cancer is going for treatment once there are any signs and symptoms of STI, while using HPV vaccination to prevent cervical cancer was least considered.

3.3 Summary of Chi-square Analysis on Cervical Cancer Prevention Practices among Female Civil Servants with Regards to Demographic Variables

Table 3 reveals the chi-square analysis of difference in cervical cancer prevention practices among female civil servants with regard to demographic variables. The calculated value of 12.417 is greater than the critical value of 0.385

Table 1. Percentage responses on the level of knowledge of cervical cancer among female civil servants n=313

S/No	Knowledge of Cervical Cancer	YES (%)	NO (%)
1	I know that there is a disease called cervical cancer	133 (42.49%)	180 (57.51%)
2	Cervical cancer is caused by a virus HPV	116 (37.06%)	197 (62.94%)
3	Cervical cancer can be prevented	122 (38.98%)	191 (61.02%)
4	Cervical cancer does not have symptoms at an early stage	102 (32.59%)	211 (67.41%)
5	I have heard about cervical cancer through social media	141 (45.05%)	172 (54.95%)
6	I have heard about cervical cancer through mass media	99 (31.63%)	214 (68.37%)
7	I have heard about cervical cancer through hospital	107 (34.19%)	206 (65.81%)
8	I have heard about cervical cancer through posters, books, newspaper	88 (28.12%)	225 (71.88%)
9	I have heard about cervical cancer through friends, school, colleagues	126 (40.26%)	187 (59.74%)
10	Cervical cancer is not infectious	155 (49.52%)	158 (50.48%)
Average		119(38.02%)	194 (61.98%)

Table 2. Mean \bar{X} and standard deviation (\pm) on the cervical cancer prevention practices among female civil servants

S/No	Cervical cancer prevention practice	\bar{X}	\pm
1	I go for routine pap test as recommended	2.47	1.06
2	Women should have a pap test at least once every three years	2.58	0.86
3	There is a necessity of follow-up on abnormal Pap smear results.	2.42	1.01
4	I have done HPV vaccination	2.41	1.02
5	I limit the number of my sexual partners to one	2.63	1.04
6	I avoid smoking because smoking exposes one to cervical cancer	2.75	0.87
7	I practice safer sex by using a condom because it limits the chances of contacting HPV	2.53	1.02
8	I do not keep multiple sexual partners	2.61	0.75
9	I examine my vagina for any abnormalities	2.88	0.91
10	I go for treatment once I notice any sign of STI	2.98	0.94
Average		2.63	0.95

Table 3. How demographic variables may be associated with the uptake of cervical cancer screening

Variables	Value	df	P-value	Decision
Pearson chi-square	12.417	1	0.385	Accepted
Education	3.267	1	0.254	Accepted
Year of service	12.356	1	0.234	Accepted
Age range	3.231	1	0.143	Accepted
Marital status	4.345	1	0.207	Accepted
Religion	5.11	2	0.390	Accepted
N of valid cases	4.483	1	0.378	Accepted

with df of (1) at .05 alpha level hence, the null hypothesis, which states that there is no significant difference in cervical cancer prevention practices among female civil servants with regards to educational status, year of service, age range, religion and marital status was accepted.

4. DISCUSSION

The findings of this study showed that the knowledge about cervical cancer among female civil servants in Awka South Local Government Area of Anambra State is bleak. In other words, not many females are aware of cervical cancer and its consequences. This is really surprising considering the facts that the respondents are civil servants. In a study by Mukama, Ndejjo, Musabyimana, Abdullah and Musoke (2017) on Women's knowledge and attitudes towards cervical cancer prevention in Mayuge districts in Eastern Uganda; a cross sectional study with a sample size of 900 women, revealed that most women (88.2%) of the respondents had heard about cervical cancer, most women (62.4%) knew at least one preventive measure and (82.6%) knew at best one symptom or sign of the disease while (76.0%) of the respondents perceived themselves to be at risk of cervical cancer. This is contrary to this study where knowledge is deficient. The reason for few women having knowledge of cervical cancer in this study, may be attributed to the amount of information they receive about health issues within their study, may be attributed to the amount of information they receive about health issues within their locality. This study conforms to Ugwu, Obi, Ezechukwu, Okafor II, Ugwu, [16], on knowledge and screening practices of cervical cancer among pregnant women attending antenatal clinic in tertiary hospitals. The result shows that there was poor knowledge of cervical cancer among pregnant women as only (8.1%) knew that cervical cancer was caused by human

papillomavirus. This implies that when knowledge about cervical cancer and its prevention is consistently communicated through difference mediums, relatively high number of females may be aware. Hence, adequate knowledge is an important determinant of positive attitudes and perception on the causes and preventive measures of cancer.

The findings revealed that the best prevention practice to cervical cancer was going for treatment once there are any signs and symptoms of STDs, while using HPV vaccination to prevent cervical cancer was least considered. This is contrary to expectations compared with the level of knowledge displayed earlier. Organized screening programs for detecting cervical dysplasia to prevent cervical cancer both reduce the number of new cancer cases and enhance cancer survival [17]. This study agrees with the present findings. A study was carried out by Balogun, Odukoya, Oyediran and Ujomu [18], on cervical cancer awareness and preventive practices: A challenge for female Urban slum Dwellers in Lagos, Nigeria. The study showed that only (4.2%) women in the study were aware of cervical cancer and none of them believed that they were at risk of developing the disease. Most of them (73.3%) were willing to undergo cervical cancer screening. This implies that proper sensitization and education on symptoms & signs of cervical cancer could encourage women to always undergo cancer screening test. Furthermore, prevention practices should be constantly preached.

The findings showed that chi-square analysis of difference in cervical cancer prevention practices among female civil servants with regard to demographic variables. All demographic variables played significant roles in shaping knowledge and prevention practices. This is surprising since oftentimes some areas are not

adequately covered with government programs mainly due to barriers such as poor social infrastructures like electricity, access to roads, and lack of proper dissemination of health information among others. This means that they have knowledge of cervical cancer and prevention practices. Religion in most African culture is a strong determinant of behaviour, yet it did not pose any barrier. Years of service and age played a significant role in knowledge of cervical cancer and prevention practices. This assumption is consistent with a study that accurate and sufficient knowledge about cervical cancer, positive belief and attitude towards the disease would contribute to the uptake of cervical cancer screening and prevention practices [19].

5. CONCLUSION

The study concluded that when knowledge about cervical cancer and its prevention is consistently communicated through difference mediums, relatively high number of females will be knowledgeable of cervical cancer. This will inform their attitudes and perception on the causes and preventive measures. These findings imply that if these female civil servants, irrespective of their job, receive education to increase their functional knowledge, understanding, and acceptance of routine cervical cancer screening, which could promote behaviour change to themselves. This shows that there should be a need for intervention program, on radio, TV, Informatics, advocacy and other means.

CONSENT

As per international standard or university standard written participant consent has been collected and preserved by the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Okunnu J. No women need to die of cervical cancer; Cynis and Jenny limited 1st floor, Oaklancentre, 48 Aguiyilronsi Street Maitama District Abuja; 2010.
2. Centers for Disease Control and Prevention (CDC). Basic Information on gynecologic cancers. U.S. Department of Health and Human Services; 2013.
3. The mayo foundation for medical education and research (MFMER). Mayo clinic cervical cancer care at mayo clinic; 2017.
4. Babatunde S, Ikimalo J. Uptake of cervical cancer screening: awareness, willingness and practice among antenatal clinic attendees in Port Harcourt, Nigeria. Port Harcourt Medical Journal. 2010;4:149–154.
5. World Health Organization (WHO) Comprehensive Cervical Cancer Control: A Guide to essential practice; 2019.
6. American Cancer Society (ACS). An educational companion for Cancer Statistics 2019. A scientific paper published in the American Cancer Society Journal. CA: A Cancer Journal for Clinicians; 2019.
7. World Health Organization (WHO) Regional Committee for Africa. Cancer of the cervix in the African region: Current situation and way forward; 2017. Available:<https://apps.who.int/iris/handle/10665/1684>
8. Oguntayo OA, Zayyan M, Kolawole AOD, Ismail H, Koledade K. Cancer of the cervix in Zaria, Northern Nigeria. Ecancer Med Sci. 2015;5:219.
9. WHO. Prevention of cervical cancer through screening using visual inspection with acetic acid (via) and treatment with cryotherapy: A Demonstration Project in six African Countries: (Malawi, Madagascar, Nigeria, Uganda, the United Republic of Tanzania, and Zambia). Geneva: WHO Document Production Services; 2012.
10. Sule AA, Ochicha OA. Histopathologic review of cervical cancer in Kano, Nigeria. Sahel Medical Journal; 2017;20: 16-20.
11. Agbo N. cervical cancer: The cancer killing Nigerian Women. The Guardian newspaper; 2018.
12. Roland J, Shelley AF, Nelson J, Joan L, Soji S, Mofammere N, Thorpe J. Examining attitudes and knowledge about HPV and cervical cancer risk among female clinic attendees in Johannesburg, South Africa; 2010.
13. Rosenstock I. Historical origins of the health belief model. Health Educ Behav. 1974;2:328–35.
14. Glanz K, Barbara KR, Viswanath K. Health behavior and health education:

- Theory research and practice. (4th ed.). San Francisco, CA: Jossey-Bass. 2008; 45–51.
15. Kendra C. Cross-sectional research method: Defining characteristics, advantages and challenges. Elseviersaunders. 11830 Westline Industrial Drive St. Louis, Missouri. 63146; 2019.
 16. Ugwu EO, Obi SN, Ezechukwu PC, Okafor II, Ugwu AO. Acceptability of human papilloma virus vaccine and cervical cancer screening among female health-care workers in Enugu, Southeast Nigeria. Nigeria Journal of Clinical Practices. 2016; (2):249–52. PubMed | Google Scholar
 17. Arbyn M, Castellsague X, de Sanjosé S et al. Worldwide burden of cervical cancer in 2008. Ann Oncol. 2011;22(12):2675–2686.
 18. Balogun MR, Odukoya OO, Oyediran MA, Ujomi PU. Cervical cancer awareness and preventive practices: a challenge for female urban slum dwellers in Lagos, Nigeria. African Journal Reproductive Health. 2012;16(1):75–82. Pub Med | Google Scholar.
 19. Ekenedo GO, Rimande-loel RN. Knowledge, belief and practices of cervical cancer screening and prevention among women in Taraba, North-East Nigeria. Asian Pacific Journal of Cancer Prevention. 2019;20(11):3291–3298.

© 2021 Obiechina and Euphemia; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:

*The peer review history for this paper can be accessed here:
<http://www.sdiarticle4.com/review-history/64642>*