ORIGINAL ARTICLE

August Meeting as a Veritable Tool for Cervical Cancer Education for Women in South East Nigeria

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Abstract

The study is on August Meeting as a veritable tool for Cervical Cancer Education for Women in South East Nigeria. It was designed to examine how the August meeting period could be of help in educating women about cervical cancer. It was a survey study and was guided by four basic research objectives. Consequently, four research questions were raised for the study. A sample of 150 women was conveniently drawn from the five states that make up the south east. A researcher-made structured questionnaire was used for data collection. The questionnaire was validated by three experts drawn from Odumegwu Ojukwu University in Anambra State with a Cronbach-Alpha reliability index of 0.87. Data obtained were analyzed via the percentage using 50% as yardstick for acceptance. Results indicate that women in the south east are poor in awareness about the causes, risk factors and symptoms of cervical cancer. Also it was gathered that the period of August meeting will give the women the opportunity to educate themselves about cervical cancer using female medical experts among others. It was recommended among other things that the government through the federal and state Ministries of Health (MOH) should carry out intensive cervical cancer sensitization campaigns in the study area to enlighten women on the disease, its symptoms and risk factors. The study concluded that the period of August meeting is ideal for educating women in the South east about cervical cancer.

Key Words: Cervical cancer, education, risk factors, sensitization, South East, and symptoms

INTRODUCTION

World over, cervical cancer has remained one of the prevalent diseases. It is estimated that in a life time one out of 26 women suffer and die of cervical cancer (Mqoqi, Kellett, Sitas &, Jula, 2004). According to Institute of Catalagio Ontology Information Centre (2021), cervical cancer ranks second as the most frequent cancer among women in Nigeria and the 2nd most frequent cancer among women between 15 and 44 years of age; and about 3.5% of women in the general population are estimated to harbor it. In the same vein, Idowu, Olowookere, Fagbemi and Ogunlaja (2015) note that cancer of the cervix is the leading cause of cancer deaths among women in developing countries.

By way of definition, cervical cancer is a malignant tumour of the cervix (the lowermost part of the uterus). It is caused by various strains of the human papilloma virus (HPV), which is a sexually transmitted infection. The cervix is a hollow cylinder that connects the lower part of a woman's uterus to her vagina. Most cervical cancers begin in cells on the surface of the cervix. Cervical cancer is caused by sexually-acquired infection with Human papilloma virus (HPV). Most people are infected with HPV shortly after onset of sexual activity. The World Health Organization (WHO) (2013) stated that every year more than 270 000 women die from cervical cancer, while more than 85% of these deaths are in low and middle income countries.

In the submission of Anyasi and Foss (2021) cervical cancer is a disease of great public health interest because it is easily preventable and primarily affects women aged 15-44 years. This is the age group within which women make great social and economic contributions. The main cause of cervical cancer is persistent infection with HPV, which is sexually transmitted; precancerous lesions develop over 5-10 years, from which invasive cervical cancer can develop decades later. Continuing Anyasi and Foss (2021) aver that in Nigeria, 70 327 deaths in women were attributed to cancer, with cervical cancer causing 14.8% of those deaths in 2018, making it the second most common cancer after breast cancer. These startling statistics show the extent to which cervical cancer is rampant among women especially in developing countries.

It is true that there is high rate of cervical cancer infection in Nigeria yet a lot of women seem not to be aware of its causes, risk factors and symptoms. There seems to be poor knowledge or awareness on the part of women about cervical cancer as a disease even though it is prevalent. Despite the availability of some preventive strategies of cervical cancer, many women die of same. This preventable death could only be attributed to ignorance or poor awareness on the part of the women. A lot of women especially in the rural areas seem to be ignorant about the prevalence of cervical cancer and this may be one the contributory factors to its high death toll. There is need for adequate education of women about the causes, signs, risk factors and prevention of cervical cancer. In the south east, the story is not different. Many women suffer from cervical cancer as in all other places. However, the worrisome part of it is that this disease is preventable if adequate knowledge, screening tests and precautions are taken early enough. Women need to be enlightened along this direction.

In the south east (comprising Abia, Anambra, Ebonyi, Enugu, and Imo states), the August meeting is a time when virtually all women of south east origin are mandated to come home for a general compulsory meeting called August Meeting. The August meeting is held once every year and in the month of August. It is a convention or gathering of women from all walks of life in their home town to deliberate on issues of importance that affect their community or states. Such issues include family life, welfare, education, health, community development, youth empowerment among others. Every woman is expected to be home except on some serious cogent reasons where permission may be granted. Defaulters pay fine for not attending such an all-important meeting. It is a gathering of both women at home and those outside the home. It serves as an avenue for idea sharing and deliberations. A lot of ideas and information are being passed across to women during such occasions. In some communities some resource persons are invited and paid to educate women on important issues that pertain to womanhood and how to live meaningful lives as women to be able to contribute to nation building. Many women have testified to the benefits they have derived from August meeting. The argument here is that if it is true that the annual August meeting has been of help to some women in some aspects of life, then it may equally be a good time to educate women about cervical cancer in a bid to reduce the death toll of women due to cervical cancer. It is against this background that the present study is being carried out to examine how effective August meeting will be if used also as a forum for cervical cancer enlightenment.

STATEMENT OF THE PROBLEM

Cervical cancer is one of the commonest killer diseases in the world. The rate of its infection is very high. Though it is preventable if early intervention is given, yet a lot of women die of cervical cancer. It is estimated that one out of every 26 women suffer and die of cervical cancer. The question is why so much death even when it could be prevented. The only plausible answer to this pertinent question is poor awareness of the disease among many women. A lot of women seem not to have informed knowledge about the disease hence they suffer and die in ignorance. According to Anyasi and Foss (2021), it seems there is poor level of awareness about the disease among many women, hence their poor attitude towards its diagnosis and treatment options. This calls for awareness creation. Women need to be educated en masse about the disease as a way of helping them not to die in ignorance. In the south east, the August Meeting is a special time of great gathering of women from all walks of life in their hometown. Everyone is expected to return home at that time for deliberations on issues that bother their communities and national development. Now the problem of this study is to ascertain how August meeting will help in educating women about cervical cancer in south east states.

OBJECTIVES OF THE STUDY

The study is designed to achieve the following objectives: to

1. find out the level of knowledge of women about the causes of cervical cancer infection in the

south east.
2. ascertain the extent of awareness of risk factors of cervical cancer by women in the south east.
3. determine women's level of knowledge about the symptoms of cervical cancer infection in the study area.
4. Examine how the August meeting could help to enlighten women about cervical cancer.

RESEARCH QUESTIONS

1. What is the level of awareness about the causes of cervical cancer by women in the south east?
2. To what extent are women aware of the risk factors of cervical cancer in the south east?
3. How knowledgeable are women about the symptoms of cervical cancer infection in the study area?
4. How can the August meeting help in enlightening women about cervical cancer in the south east states?

SIGNIFICANCE OF THE STUDY

The study is significant for the following reasons:

i. It will enlighten the readers about the causes, risk factors and prevention of cervical cancers.
ii. Women will be educated on the methods to go about the diagnosis of the disease to prevent deaths.
iii. It will help women leaders to include cervical cancer education as part of the discussions during August meeting.
iv. Some women who may have already been infected with cervical cancer will be enlightened on how to go about the treatment to safe guard their lives.

LITERATURE REVIEW

Conceptual Clarification Cervical Cancer at a Glance

Cervical cancer is a disease of the cervix caused by infection with human Papilloma virus (HPV). It is one of the leading causes of death of women globally. Cervical cancer is the second most common cancer in women worldwide. Yet, because of poor access to screening and treatment services, the vast majority of deaths occur in women living in low- and middle-income countries (WHO, 2013). According to Aral and Holmes (2008), human papilloma virus (HPV) is the most common sexually transmitted virus and it is estimated that about 75% of sexually active women and men will acquire a genital HPV infection at some time. HPV is known to affect adult and children alike and over 100 types of the HPV has been identified over the past few decades (Syrjänen & Puranen, 2000). The disease is very rampant. According to Onyemaechi, Chikani and Nduagubam (2018) in 2007, 36.59 million women aged more than 15 years in Nigeria are at risk of developing cervical cancer. There are 9922 cases diagnosed annually with 8030 deaths. HPV prevalence is 24.8%. Incidence of cervical cancer in Nigeria is 250/100,000 women (Pisani, Parkin, Bray & Ferley, 1999). WHO (2013) posited that almost all sexually active individuals will be infected with HPV at some point in their lives and some may be repeatedly infected. The peak time for infection is shortly after becoming sexual active. The majority of HPV infections resolves spontaneously and do not cause symptoms or diseases. However, persistent infection with specific types of HPV may lead to precancerous lesions. If untreated, these lesions may progress to cervical cancer. Most cervical cancers begin in cells on the surface of the cervix.

Causes of Cervical Cancer

The widely known cause of cervical cancer is infection with HPV. It happens when cells in the cervix (neck of the womb) become abnormal and change slowly over time to cancer. Abnormal cells are sometimes called pre-cancerous cells. According to Mayo Foundation for Medical Education and Research (MFMER) (2002) many women with cervical cancer don't realize they have the disease early on because it usually doesn't cause symptoms until the late stages. When symptoms do appear, they're easily mistaken for common conditions like menstrual periods and urinary tract infections (UTIs). There are about 100 different strains of HPV. Only certain types cause cervical cancer. The two types that most commonly cause cancer are HPV-16 and HPV-18 (MFMER, 2002).

Risk Factors of Cervical Cancer

It is true that cervical cancer is caused by HPV, however there are risk factors that may increase the chances of one being infected. These risk factors if controlled or checked early enough will drastically reduce the chances of occurrence of cervical cancer. Writing on the risk factors of cervical cancer, The American Cancer Society (TACS) (2020) documented that there are two types of risk factors: changeable and unchangeable risk factors. The changeable risk factors are the ones an individual can through careful living and mindful actions can reduce their occurrence and the chances of being infected with cervical cancer while the unchangeable risk factors are those that the person cannot do anything about.

Writing on risk factors, TASC (2020) explains that a risk factor is anything that affects one's chance of getting a disease. Such places one on a greater chance of contacting a disease. Though it is not possible for one to prevent the occurrence of cancer yet there are things one can do to reduce the likelihood of its occurrence. Risk factors refer to those things one can avoid in order to reduce minimally the chances of contracting a disease. With respect to cervical cancer, some of the risk factors as identified by TACS (2020) include HPV infection, sexual history, smoking, Chlamydia infection, weak immune system and long use of oral contraceptives among others. Other risk factors according to Mayo Clinic Family Health Book (nd) include having many sexual partners, early sexual activity, presence of other sexually transmitted infections (STIs) and exposure to miscarriage prevention drug. Some of the symptoms of cervical cancer include abnormal bleeding, loss of bladder control, unexplained weight loss, leg pains or swelling and constant tiredness (WHO, 2013).

Prevention and Treatment of Cervical Cancer

New technological developments offer the potential to tackle cervical cancer in a more comprehensive way and build a healthier future for girls and women. Knowledge of and willingness to receive a cervical cancer screening are important determinants of prevention of cervical cancer. WHO (2013) observed that the increasing availability of an alternative screening technology and new vaccines against the HPV may help prevent cervical cancer further. However a general problem observed is that a lot of persons do not go for screening tests. Mayo Foundation for Medical Education and Research (MFMER) (2002) stated that in order to reduce the risk of cervical cancer, one should do the following regularly:

i. **Ask the doctor about the HPV vaccine.** Receiving a vaccination to prevent HPV infection may reduce your risk of cervical cancer and other HPV-related cancers. Ask your doctor whether an HPV vaccine is appropriate for you.
ii. **Have routine Pap tests.** Pap tests can detect precancerous conditions of the cervix, so they can be monitored or treated in order to prevent cervical cancer. Most medical organizations suggest beginning routine Pap tests at age 21 and repeating them every few years.
iii. **Practice safe sex.** Reduce your risk of cervical cancer by taking measures to prevent sexually transmitted infections, such as using a condom every time you have sex and limiting the number of sexual partners you have.
iv. **Avoid smoking: women that smoke have greater chances of contracting cervical cancer than non-smokers.** The treatment of cervical cancer is basically of four types. The four main treatments are through surgery, radiation therapy, chemotherapy and targeted therapy. Sometimes for better results, a combination of two or more of these procedure is used.

Empirical Review

Women's knowledge of and attitudes toward cervical cancer and cervical cancer screening in Zanzibar, Tanzania: a cross-sectional study was conducted by Qiao, Jiang, Haji, Nondo and Zhou (2020). The study aimed to describe women's awareness of cervical cancer and to explore the attitudes toward, acceptability of and barriers to cervical cancer screening (CCS) in Zanzibar. It was a cross-sectional study involving 1483 women from 10 districts in Zanzibar who responded to

questionnaires concerning their general demographic characteristics, screening willingness and awareness of cervical cancer. Chi-square tests, analysis of variance (ANOVA) and stepwise multiple regression were conducted using STATA 15.1 software. The findings showed that knowledge of cervical cancer was poor. Educational level, family income and awareness of previous disease history were significant influencing factors of screening uptake. The authors suggested that specific awareness programs to increase knowledge of cervical cancer and screening willingness should be designed and implemented in the public without delay, especially for younger and elderly women.

Anyasi and Foss (2020) made a comparative analysis of cervical cancer prevention between Nigeria and Nordic countries that have experienced a decline in cervical cancer incidence. A modeling analysis carried out in 2014 suggested that, without cervical cancer screening programmes, the incidence of cervical cancer in Denmark, Finland, Norway and Sweden would have been as high as that in some low- and middle-income countries. The authors compared programme strategies between Nigeria and other Nordic countries and develop translatable recommendations. A literature review using a systematic approach through Medline, Popline, Global Health, CINAHL PLUS, Cochrane Library, EMBASE, Google Scholar, Africa Wide and WHO databases was conducted. Fifteen journal articles and two grey literature reports met our criteria. Six descriptive studies from Nigeria noted that services in Nigeria were mainly provided in urban secondary/tertiary facilities and that uptake was low even where screening was free. Trials in Nigeria and Sweden noted that subsidies and free programmes alone did not improve uptake; a Danish trial demonstrated that reminders and invitations issued by general practitioners improved participation. It was discovered that free screening programmes are important but should also consider incentivisation of treatment when needed and demand creation among health workers.

Additionally, effective monitoring and evaluation of programme data are key to improving and maintaining quality. More broadly, the study suggests that Nigeria can build success through stakeholder-led implementation of well-defined policies with national consensus to ensure coordination and sustainability.

Reducing incidence of cervical cancer: knowledge and attitudes of caregivers in Nigerian city to human papilloma virus (HPV) vaccination was done by Onyemaechi, Chikani and Nduagubam (2020). The aim of this study was to find out the awareness and attitudes of caregivers to HPV infections and the factors that determine acceptance of an HPV vaccine for their pre-adolescent girls. The study was a cross-sectional descriptive study of 508 caregivers of female children in Enugu Nigeria. A semi-structured questionnaire was used to collect information on knowledge of HPV, cervical cancer as well HPV vaccine and its acceptance for pre-adolescent female children. The data was analysed using descriptive statistics. Results showed that less than half, 221, (43.5%) of them knew about HPV, among these, 163 knew how HPV is transmitted. Only 12 (2.4%) of the caregivers know that an HPV infection is a major risk factor for cervical cancer. Among the 221 participants who knew the meaning of HPV, 132 (59.7%) were aware of an HPV vaccine. Only 26 (19.7%) of those aware of a vaccine agreed it can effectively prevent cervical cancer. Lack of awareness about the vaccine and accessibility were the major reasons given by parents on why the vaccine has not been received by their female children. The study concluded that despite high levels of education, awareness of HPV, HPV vaccine and the risks for cervical cancer remains low among caregivers in Enugu, south-east, Nigeria. Awareness and accessibility were the major determinants of HPV vaccine uptake among the caregivers. The authors recommended that there is a need for massive and sustained awareness creation to increase HPV vaccination uptake in Nigeria.

METHODOLOGY

The study adopted the survey design. The population is all women of south east origin. The sample was 150 women who were randomly selected from the five states that make up the south

east. Thirty (30) women were selected from each of the five states. Due to the nature of the study, the convenience sampling technique was used for selecting the respondents on the basis of those who were willing to participate in the study and who were also conveniently available as at the time of the study. The author collected data from the respondents via a self-structured questionnaire tagged August meeting and Cervical Cancer Awareness Questionnaire (AMACCAQ). The questionnaire was validated by three senior lecturers drawn from Odumegwu Ojukwu University in Anambra State. The Cronbach-Alpha reliability index of the questionnaire is 0.87 indicative of high reliability. The face-to-face method was adopted in the collection of data. Data collection lasted for 10 days due to the fact that five states were involved. The percentage was used for data analysis with 50% as the yard stick for decision. Items with percentage responses above 50% were regarded as very influential while those below 50% were discarded and treated as non-influential.

RESULTS

Research Question One: What is the level of awareness about the causes of cervical cancer by women in the South East states?

Table 1: Level of Awareness of the Causes of Cervical Cancer by Women in the South East States

S/NO	Statement	Agreed		Disagreed	
		Freq	%	Freq	%
1.	I know about the causes of cervical cancer	45	30.0	105	70.0
2.	Nobody has ever told me there is a disease like that.	96	64.0	54	36.0
3.	I have seen someone suffering from cervical cancer	42	28.0	108	72.0
4.	My doctor educates me on how cervical cancer is contracted	36	24.0	114	76.0
5.	I have been to a health seminar about cervical cancer	67	44.7	83	55.3
6.	This is my first time of hearing about a disease called cervical cancer.	110	73.3	40	26.7

Data in Table 1 show that the level of awareness of women in the south east about the cause of cervical cancer is very low. This is typified by the low (below average) percentage responses for items 1, 3,4 and 5 which are 30.0%, 28.0%, 24.0% and 44.7% respectively. This means that a majority of the women in the south east are not aware of the causes of cervical cancer.

Research Question Two: To what extent are women aware of the risk factors of cervical cancer in the South East?

Table 2: Extent of Awareness of the Risk Factors of Cervical Cancer by Women in the South East

S/NO	Statement	Agreed		Disagreed	
		Freq	%	Freq	%
1.	People that smoke are likely to suffer cervical cancer	23	15.3	127	84.7
2.	Having more than one sex partner will increase the risk of getting cervical cancer	98	65.3	52	34.7
3.	Chlamydia infection can lead to cervical cancer	31	20.7	118	79.3
4.	Weak immune system is a risk factor	48	32.0	102	68.0
5.	Long use of oral contraceptives may cause cervical cancer	34	22.7	116	77.3
6.	HPV infection is a precursor of cervical cancer.	40	26.7	110	73.3

Evidences in Table 2 reveal that many women in the study area have little or no knowledge about the risk factors of cervical cancer. This is because only item 2 has an affirmative response of 65.3% which is above the 50% bench mark. The rest of the items have percentage responses below the yard stick. This is an indication that there is poor awareness among the women in the south east about the risk factors of cervical cancer.

Research Question Three: How knowledgeable are women about the symptoms of cervical cancer infection in the study area?

Table 3: Level of Knowledge about the Symptoms of Cervical Cancer Infection by Women in the South East

S/NO	Statement	Agreed		Disagreed	
		Freq	%	Freq	%
1.	Cervical cancer may show up as in abnormal bleeding	50	33.3	100	66.7
2.	Weight loss can be a sign of cervical cancer	60	40.0	90	60.0
3.	Poor bladder control could be attributed to cervical cancer infestation	67	44.7	83	55.3
4.	Leg pains	70	46.7	80	53.3
5.	Excessive tiredness can be caused by cervical cancer	43	28.7	107	71.3
6.	Leg swellings may be a sign	24	16.0	126	84.0

Data in Table 3 depict the knowledge level of women about the symptoms of cervical cancer. From the data in Table 3, all the items have affirmative responses below the 50% bench mark. This simply means that a great percentage of the women in the south east lack knowledge of the symptoms of cervical cancer.

Research Question Four: How can the August meeting help in enlightening women about cervical cancer in the South East states?

Table 4: Role of August Meeting in Educating Women about Cervical Cancer in South East States

S/NO	Statement	Agreed		Disagreed	
		Freq	%	Freq	%
1.	Women can be enlightened during August meeting about the causes of cervical cancer.	146	91.3	04	8.7
2.	Medical experts can utilize the August meeting period to educate the women about the risk factors of cervical cancer	120	80.0	30	20.0
3.	Medical doctors can be brought during August meeting to carry out free screening tests for cervical cancer for women	105	70.0	45	30.0
4.	The August meeting will serve as a good forum for discussion on the treatment and prevention of cervical cancer by women	135	90.0	15	10.0
5.	Women will be free to ask questions freely about cervical cancer during August meetings	125	83.3	25	16.7
6.	Women can advocate for the provision of screening centres using money realized from August meeting	110	73.3	40	26.7

Evidences in Table 4 show that August meeting could be a veritable tool or opportunity to educate women about cervical cancer. For example, according to Table 4, 91.3% of the women agreed that they can be enlightened about the causes of cervical cancer, while 90% believ that during august meeting the women could be taught about the prevention and treatment of cervical cancer and 80% agreed that medical experts can use the august meeting period to educate women about the risk factors of cervical cancer among others.

DISCUSSION

The study examined the role of August meeting in educating women about cervical cancer. The study was deemed necessary due to the high prevalence of the disease among women. The author raised four basic research questions. It was gathered from research question one that the level of awareness of the women about the causes of cervical cancer is very low. A lot of women do not have any idea about the causes of the disease despite its prevalence. This finding is supported by the assertion of Mayo Foundation for Medical Education and Research (MFMER) (2002) that states that many women with cervical cancer don't realize they have the disease early because it usually doesn't cause symptoms until the late stages. The poor awareness may be the reason for the high rate of deaths among women. Awareness is necessary to spur people to take relevant actions to forestall danger; however when a person is ignorant about a thing, the person may suffer terribly due to ignorance. This ignorance may be the cause of the sufferings some women in the south east go through when infected with cervical cancer.

The analysis of research questions two and three revealed that majority of the women studied are ignorant of the risk factors and symptoms of cervical cancer. This ignorance emanated from their low level of awareness of the disease. Since a lot of the women studied are not aware of the disease, its natural they will not know more about its symptoms and risk factors as well. Knowledge is powerful. When a person is knowledgeable about a thing, he or she will be better disposed to take the necessary precautionary measures to enhance safety. Since majority of the women studied are ignorant of the disease it is expected that they won't know much issue related to same. That is why Qiao, Jiang, Haji, Nondo and Zhou (2020) suggested in their study that there is need for an enlightenment campaign about the disease to create the necessary awareness to women about cervical cancer and to educate them about the ways of preventing same.

The study found that August meeting period will be a good time to be used to educate the women about cervical cancer. This is because it is a time when women gather en masse; it's a time where many women meet to deliberate on issues of common importance. It was discovered from the study that female medical experts could be brought in at such times to educate women about the disease. The August meeting time will be ideal because women will feel at home and relaxed being attended to by female medical personnel. Most women have reservations seeing a male doctor hence such women may not feel free to discuss such kind of disease with a male doctor. Burt with a female doctor on ground, such women will feel free to open up and thereby receive the needed medical assistance early enough before the disease gets out of hand.

CONCLUSION

The study was designed to examine how the August meeting will help to educate women about cervical cancer. The study was necessitated by the prevalence of the disease even as some women are ignorant of it as a killer disease. It was discovered that a lot of women have poor awareness about the causes of cervical cancer. Consequently their knowledge level about its risk factors and symptoms is equally poor. The study discovered that August meeting time will help women to bring in female medical experts to educate and offer treatment /screening to affected women. The study concludes therefore that the August meeting is a veritable tool for educating women about cervical cancer in the South East states of Nigeria.

RECOMMENDATIONS

Sequel to the findings from the study the following are recommended:

1. Women's level of awareness about the causes of cervical cancer was found to be very low, hence there is need to create awareness about the causes of cervical cancer to women to forestall its infestation.
2. It was gathered that a lot of women do not know about the risk factors of cervical cancer; hence, it is necessary that medical experts carry out grass root enlightenment campaign especially in the rural areas to help teach women.

3. Many women studied showed poor knowledge of the symptoms of cervical cancer; therefore, there is need to educate the women (about the symptoms) so they can do early screening tests in order to prevent the disease from spreading.
4. August meeting was found to be a good time for educating women about cervical cancer; hence women leaders are advised to utilize the period of their August meeting judiciously to enlighten women about the disease and other related important issues.

REFERENCES

Anyasi, H. I. & Foss, A., M.(2021). A comparative analysis of cervical cancer prevention between Nigeria and Nordic countries that have experienced a decline in cervical cancer incidence. *International Health*, 13(4), 307-317. https://doi.org/10.1093/inthealth

Aral, S.O, & Holmes, K. K. (2008). The epidemiology of STIs and their social and behavioural determinants: Industrialized and developing countries. *Sexually transmitted diseases*. (3rd ed). New York: McGraw-Hill;

Idowu, A. Olowookere, A.,S. Fagbemi, A.T & Ogunlaja, O.A. (2015). Women in Ilorin, North Central Nigeria: A community-based study. *Journal of Cancer Epidemology, 2016.* https://doi.org/10.1155/2016/6469240

Institute of Catalagio Ontology Information Centre (2021). The prevalence of cervical cancer among women of reproductive age in India. Retrieved from http://www.cervical cancer.org. Retrieved 15th April 2022.

Mayo Foundation for Medical Education and Research (MFMER) (2002). Everything you need to know about cervical cancer. Retrieved from www.mayofoundationclinic.org. Retrieved 15th April 2022.

Mqoqi, N., Kellett, P., Sitas, F,, & Jula, M. (2004). *Incidence of histologically diagnosed cancer in South Africa.* Johannesburg: National Cancer Registry of South Africa & National Health Laboratory Service.

Onyemaechi, A.I.B, Ugo N. Chikani, U.N & Nduagubam O. (2020). Reducing incidence of cervical cancer: knowledge and attitudes of caregivers in Nigerian city to human papilloma virus (HPV) vaccination. doi: 10.1186/s13027-018-0202-9 PMCID: PMC6098589. PMID: 30140306

Pisani, P., Parkin, D. M., Bray, F., & Ferley J. (1999). Estimates of the worldwide mortality from 25 cancers in 1990. *International Journal of Cancer; 83*:870–873. doi: 10.1002/(SICI)1097-0215 (19991210)83:6<870::AID-IJC35>3.0.CO;2-9.

Qiao ,W., Jiang, J., Haji, F.,M. Nondo, L,.M. & Zhou, H. (2020). Women's knowledge of and attitudes toward cervical cancer and cervical cancer screening in Zanzibar, Tanzania: a cross-sectional study. *BMC Cancer*; 20**(**63), 1127-1122.

Syrjänen S, & Puranen M. (2000). Human papilloma virus infections in children: The potential role of maternal transmission. *Critical Review of Oral Biology Med, 11*(2), 259-274. doi: 10.1177/ 10454411000110020801.

The American Cancer Society (TACS) (2020). Cervical cancer: Causes, risk factors, and prevention. Retrieved from http://www.cancer.org.

The World Health Organization (WHO)(2013). Comprehensive cervical cancer prevention and control: a healthier future for girls and women. www.who.int. Retrieved April 15th 2022.