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Cervical Cancer Screening as Correlates for Tackling Maternal Morbidity and Mortality in Ondo North Senatorial District, Ondo State, Nigeria

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Abstract

In developing nations like Nigeria where the levels of illiteracy ,poverty and poor access to quality health care are high the health problems that were thought to have been conquered are still surfacing alongside with other global health problems like cervical cancer, HIV/AIDS, Lassa fever, Ebola, Severe Acute Respiratory Syndrome (SARS) and tuberculosis. Most of the conditions that cause morbidity and mortality among Nigerian populace are preventable and that is why serious consideration must be placed on regular screening and periodic medical routine examination. Cervical cancer is primarily caused by Human Papilloma-Virus (HPV) and its relationship to cervical cancer has led to new tools for primary prevention with HPV vaccines and new screening strategies that give clinicians options for every resource setting. The ability to substantially reduce the more than one half million women per year that are diagnosed with cervical cancer and more importantly the ability to reduce the quarter of a million women per year that die of the disease particularly in under resourced areas of developing countries like Nigeria and the study area in Ondo state. The researchers generated four formulated four research hypotheses and tested at 0.05 level of significance. The sample for the study were 1800 respondents attending maternal and child clinic in all the government owed health institution in the six local government areas of Ondo North Senatorial district of Ondo State. Cross sectional research survey of descriptive type was used. The instrument for the study was self-structured questionnaire. The face and content validity of the instrument was established and found to be 0.76 while the reliability coefficient of 0.79 was obtained using test retest method. The four null hypotheses were rejected which showed that there is positive correlation between maternal morbidity and mortality and cervical cancer screening, parity and sexually transmitted diseases. The following recommendations were made among other things: there should be regular screening for cervical cancer among women of reproductive age, the number of times a woman should carry pregnancy should be reduced to lowest minimal and family planning services should be promoted, any patient infected with sexually transmitted diseases should be thoroughly treated and investigated to enhance quality reproductive health care services.

Keywords: Cervical Cancer Screening, Correlates, Maternal Mortality, Maternal Morbidity, Ondo North Senatorial District, Tackling

1. Background of the Study

Cervical cancer is a disease that is peculiar to women, and has adverse effect on their sexual and reproductive health as well as their general condition and family life. In Nigeria, current estimates indicate that in early year of 2015, about 9922 women were diagnosed with cervical cancer and 8030 died from the disease[17]. Cervical cancer

ranks the 2nd most frequent cancer in women in Nigeria, and the 2nd most frequent cancer among women between 15 and 45 years of age. About 24.8% of women in the general population are estimated to harbour cervical HPV infection at a given time, and 10.0% of invasive cervical cancers in Nigeria are attributed to HPVs 16 or 18 HPV[5].

Issues relating to women's health were the focus of the International Conference on Population and Development (ICPD) in 1994 which gave rise to the need for strategies to improve reproductive health globally[14,15]. The primary underlying cause for cervical cancer is Human Papilloma Virus (HPV). Early sexual debut, multiple sexual debut, multiple sexual partners, family types especially polygamy, HPV infection, smoking, genetic predisposition and compromised immunity are associated with development of cervical cancer. Cervical cancer contributes to mortality among women especially those in developing countries[12,15,16]. Risk factors for cervical cancer emanate from the risk for contacting Human Papilloma Virus (HPV) such as early onset of sexual activity, multiple lifetime sexual partners (of a woman or her partners), and history of other STIs-generally reflect sexual activity. Therefore, primary prevention efforts have focused on reducing infection by reducing the number of sexual partners and encouraging the use of barrier contraceptives, especially condoms[7,8,11]. Individuals can harbour HPV infection for long durations without knowing they are infected; therefore, even mutually monogamous couples may transmit infection obtained in a previous relationship to a current partner.

Participation in screening programme for disease such as hypertension and cancer is part of the health promotion activities in the Nigeria National Health Policy, to be carried out by individuals and families in Nigeria[5]. To ensure that the purpose of screening is achieved, women should be counseled before and after screening so they can make informed choice. To increase informed uptake, the tailored intervention should include information on the likely harms and risks, as well as the benefits of screening[7]. Providing information on cervical cancer in the community and in Health services is vital to raising awareness and reducing illness and death[10]. The content of information about cervical cancer varies according to client's problem or concern or circumstances. It covers prevention, screening, follow-up, referral, diagnosis, treatment of precancerous conditions and treatment of invasive cancer[2].

In a study conducted by Winnie, *et al.* (2016)[18] on factors associated with uptake of cervical cancer screening among women aged 18-49 years in Njiru sub country, Nairobi, Kenya revealed that those with higher educational degrees uses cervical cancer screening services more than those with primary education while those with intermediate educational background uses cervical cancer screening services less than those with higher degrees. In a similar study conducted by Alfaro, Gage, *et al.* (2015)[8] was consistent with a study conducted by Nisreen-Arif Al-bizrah and Farzana Rizwan Arain (2015)[13] and both of them revealed that the more the respondents were educated the more preventive measures adopted for early detection of cervical cancer among women of child bearing age.

2. Statement of Problem

Cervical cancer is a preventable disease if detected early but if otherwise it kills faster than any other diseases of reproductive health. Within a national cancer control programme, there are four basic components of cervical cancer control: Primary prevention; early detection through increased awareness and organized screening programmes; diagnosis and treatment; and palliative care for advanced disease. Screening involves testing a target group (in this context, women) who are at risk for a given disease (in this context, cervical precancer). The aim of screening is to detect and treat those people identified as having early signs of the disease, usually by means of an inexpensive, accurate, and reliable test that can be applied widely.

Health promotion activities are very important in the prevention various ailments that will have negative impact on the health of women. Cervical cancer is one of the conditions that can be prevented through vaccination and health promotion activities in reproductive health. Health promotion encouraging consumer behaviours most likely optimize health potentials (physical and psychosocial) through health information, preventive programs, and access to medical care. The introduction of screening programme in developing countries has been associated with a decline in incidence of invasive cervical cancer Screening is usually taken to refer to the process of sifting to discriminate objects which have predetermined set of characteristics from those who do not. Screening is the procedure where a test is applied to healthy volunteers from the population in order to identify those individuals

at high risk of developing otherwise unrecognized disease. Screening for cervical cancer is aimed at reducing the incidence of disease, reduce the duration of disease and consequently the risk of transmission, and reduce the effects of infection, including both the physical and psychosocial complications and the financial burden to the immediate family and total lost to the community. Early detection and screening for cervical cancer will promote health, preserve health, to restore health when it is impaired and to minimize suffering and distress. Cervical cancer screening as a correlate in tackling maternal morbidity and mortality helps in early detection, early diagnosis and treatment of cancer of cervix which is preventable.

3. Research Hypotheses

The researcher formulated four research hypotheses and tested at 0.05 level of significance to guide the study:

1. There is no significant correlation between maternal mortality and cervical cancer screening in Ondo North Senatorial District of Ondo State, Nigeria.
2. There is no significant correlation between parity and cervical cancer screening in tackling maternal mortality in Ondo North Senatorial District of Ondo State, Nigeria.
3. There is no significant correlation between sexually transmitted diseases and cervical cancer screening in tackling maternal mortality in Ondo North Senatorial District of Ondo State, Nigeria.
4. There is no significant correlation between educational background and cervical cancer screening in tackling maternal mortality in Ondo North Senatorial District of Ondo State, Nigeria.

4. Significance of the Study

The study could benefit health care providers, students in various places of learning, cervical cancer patients, survivors, health educators in hospitals, State and Federal Government. The findings of the study could provide useful information on the various types of cervical cancer screening that are available for health care providers to enable them to take appropriate action to assist all women for early detection of cervical cancer.

5. Methods

A descriptive research of the survey type was used for this study .Survey design will be considered appropriate and adopted because it will describe psychosocial factors and breast cancer screening among women in Ondo North Senatorial District, Ondo State, Nigeria the population for the study were all women of child bearing age in Ondo North Senatorial District, Ondo State, Nigeria. The sample for the study consisted of 1800 women between 18- 50 years attended antenatal clinics in all health facilities in the entire six Local Government Areas of the study area. Simple random sampling technique was used to select 300 respondents in each of the six local government area of Ondo North Senatorial District, Ondo State, Nigeria. A self-designed questionnaire was used to elicit information from respondents. The questionnaire consists of two sections identified as A and B. Section A contains information on demographic characteristics of the respondents while section B was used to elicit information on how to use screening practices to tackle maternal mortality in the study area while putting into consideration other variables like parity, influence of educational background and sexually transmitted diseases on cervical cancer.

The instrument was subjected to face content and construct validities and confirmed by experts that were fit and good for the study. A correlation coefficient of 0.76 was obtained using Spearman Correlation Formular. Reliability was established using test – retest method. A reliability coefficient of 0.79 was obtained using Pearson Product Moment Correlation Analysis. This result was considered reliable for the study and this is in accordance

Table 1. Showing the correlation between maternal mortality and cervical cancer screening

Variables	N	Mean	SD	r cal	r tab	Remark
Maternal mortality	1800	15.63	2.88	0.492	2.195	Rejected
Cervical cancer screening	1800	60.40	10.86	0.492	2.195	Rejected

* P<0.05

with the documentation of Kothari and Gaurav (2015)[9] who affirmed that any reliability coefficient that is above 0.6 should be considered reliable for the study. Research assistants were trained and saddled with responsible to establish good rapport with the respondents before the administration of the instrument and this enable them to gain their support and willingness to participate in the study. The data generated were analyzed using descriptive and inferential statistics to analyze the four null hypotheses and tested at 0.05 level of significance.

6. Results

6.1 Testing of Hypotheses

6.1.1 Hypothesis 1

There is no significant correlation between maternal mortality and cervical cancer screening in Ondo North Senatorial District of Ondo State, Nigeria.

Table 1, revealed that the mean of maternal mortality is 15.63, SD is 2.88, r cal is 2.195 while the mean of cervical cancer screening is 60.40, SD is 10.46, r cal is 0.492. The r tab value is 2.195 which is greater than the r cal value of 0.492. Therefore, there is enough evidence to reject the null hypothesis. By implication, there is significant correlation between maternal mortality and cervical cancer screening.

6.1.2 Hypothesis 2

There is no significant correlation between parity and cervical cancer screening in tackling maternal mortality in Ondo North Senatorial District of Ondo State, Nigeria.

Table 2, above revealed that the mean of the parity is 13.85, SD=2.79, r cal=0.611 and the r tab value is 2.195, the mean score of maternal mortality is 60.40, SD=10.46, r cal is 0.611 and r tab value is 2.195. The r cal is lesser than the r tab value of 2.195. Therefore, there is enough reason to reject the null hypothesis.

6.1.3 Hypothesis 3

There is no significant correlation between sexually transmitted diseases and cervical cancer screening in tackling maternal mortality in Ondo North Senatorial District of Ondo State, Nigeria.

Table 2. Showing correlation between parity and maternal mortality

Variables	N	Mean	SD	r cal	r tab	Remarks
Parity	1800	13.85	2.79	0.611*	2.195	Rejected
Maternal Mortality	1800	60.40	10.46	0.611*	2.195	Rejected

* P<0.05

Table 3. Showing the correlation between sexually transmitted diseases and cervical cancer

Variables	N	Mean	SD	r cal	r tab	Remarks
Sexually Transmitted Disease	1800	30.48	4.61	0.558	0.195	Rejected
Cervical Cancer Disease	1800	34.25	4.15	0.558	0.195	Rejected

* P<0.05

Table 4. Showing ANOVA of cervical cancer screening and educational background of the respondents

Source	SS	Df	MS	F-cal	F-tab	Remarks
Between groups	804.109	8	100.516	5.939*	1.94	Rejected
Within groups	28959.820	1711	16.926	5.939*	1.94	Rejected
Total	**29763.930**	**1719**				

* P<0.05

Table 3, showed that the mean score of sexually transmitted disease is 30.48; SD=4.61; r cal=0.558; r tab=0.195 while the mean score of cervical cancer disease is 34.25; SD=4.15; r cal=0.558 and r ab=0.195. The null hypothesis is hereby rejected.

6.1.4 Hypothesis 4

There is no significant correlation between educational background and cervical cancer screening in tackling maternal mortality in Ondp North Senatorial District of Ondo State, Nigeria.

Table 4, shows that educational background of women has a significant influence on the women subjecting themselves to cervical cancer screening (F = 5.939, p<0.05). The null hypothesis is rejected. It implies that women with higher educational background subject themselves to cervical screening more than those with little or no educational background.

7. Discussion of Findings

The study investigated cervical cancer screening as a correlates for tackling maternal morbidity and mortality in Ondo, North Senatorial District, Ondo State, Nigeria. The finding of this study is in agreement with the finding of Ayinde and Omigbodun (2003)[4] which affirmed the relationship between cervical cancer screening for early detection to prevent poor prognosis of the said disease. According to FMOH (2005)[5], early diagnosis of cervical cancer and prompt management will have a positive influence in prevention of increase maternal mortality among women of child bearing age. Early detection of cervical cancer through adequate screening is a key factor in Nigeria national health promotion policy as entrenched in the nation national health policy. Alliance for Cancer Prevention (2003)[2] confirmed the relationship between maternal mortality and late detection of cervical cancer which is also in conformity with this present study.

Parity signify the number of times a woman get pregnant and deliver a baby which reduces the elasticity of the uterine muscles with consequent prone and susceptibility to infection. The present study confirmed the correlation between parity and maternal mortality which is in conformity with Ayinde and Omigbodun, 2003[4]; WHO (2001)[15]; WHO (2004)[16] and UNPF (2007)[14]. Therefore, there is need to create more awareness on the need for adequate family planning programme in the study area and nation at large.

The study is in agreement with other studies conducted earlier in other region of the country by scholars like Ayinde and Omigbodun (2003)[4] on knowledge, attitude and practices related to prevention of cancer of the cervix among female health workers in Ibadan. In the same vein the study is in conformity with the study conducted by Mutyaba, Mirembe and Weiderpass (2007)[12] on influence on uptake of reproductive health services on Nsangi Community of Uganda and their implications for cervical cancer screening.

The study conducted by Nisreen-Arif Al-bizrah and Farzana Rizwan Arain (2015)[13] and Winnie Mungai, *et al.* (2016)[18] confirmed that respondents with higher educational background subjected themselves for cervical cancer screening more often than those respondents without basic and formal education. This singular reason can be linked to increase prevalence of late detection of cervical cancer among people living in rural low resource in underdeveloped and developing nations around the world. The findings of this present study are in agreement and conformity with the findings of the researchers mentioned above.

8. Conclusion

Based on the findings of this study, it is concluded that:

- There is significant correlation between maternal mortality and cervical cancer screening in Ondo North Senatorial District of Ondo State, Nigeria.
- There is significant correlation between parity and cervical cancer screening in tackling maternal mortality in Ondo North Senatorial District of Ondo State, Nigeria.
- There is significant correlation between sexually transmitted diseases and cervical cancer screening in tackling maternal mortality in Ondo North Senatorial District of Ondo State, Nigeria.
- There is significant correlation between educational background and cervical cancer screening in tackling maternal mortality in Ondo North Senatorial District of Ondo State, Nigeria.

9. Recommendations

The following recommendations were made among other things:

1. there should be regular screening for cervical cancer among women of reproductive age,
2. the number of times a woman should carry pregnancy should be reduced to lowest minimal and family planning services should be promoted,
3. any patient infected with sexually transmitted diseases should be thoroughly treated and investigated to enhance quality reproductive health care services,
4. The government of Nigeria at all levels should ensure that the entire populace are well informed, educated and made versatile with those information that will promote and sustain their healthful living.

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