Effect of A Nursing Intervention On Knowledge of Cervical Cancer Screening Among Women in Selected Primary Health Centres in Ibadan

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Abstract:

Cervical Cancer is a serious but preventable public health problem among women worldwide. Women of childbearing age who are sexually active are at risk of developing cervical cancer. Majority of the women have never screened for this disease, this may be attributed to poor knowledge of cervical cancer. This study was conducted to determine the effect of a nursing intervention on knowledge of cervical cancer screening services among women in selected primary health centres in Ibadan. This study adopted two group quasi-experimental research design conducted in two selected primary health centres in Ibadan. The centres are Agbongbon (intervention group) and Bashorun (control group) primary health centres between March and April 2018. Multistage sampling technique was used to select 194 women between the ages of 15-49 years resident in Ibadan according to the eligibility for the study. Data were collected from the participants using validated structured questionnaire with Cronbach's Alpha coefficient of 0.75. The data collected was subjected to descriptive and inferential statistics. The findings of the study revealed poor knowledge of cervical cancer prior intervention. The effect of nursing intervention on women of childbearing age was apparent in knowledge change

among the intervention group as compared to the control group. It was recommended among others that there should be health education programme on cervical health among women of childbearing age should be intensified in Primary Health Centres. Such information must be clear, consistent and comprehensive in order that women are fully informed on cervical cancer and cervical cancer screening.

Keywords: Cervical Cancer, Knowledge, Screening, Women,

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Introduction

Cancer has become a major source of morbidity and mortality globally, and is gradually becoming the disease of the century. Mortality and morbidity arising from non-communicable diseases like cancer have continued to pose as threat to all. Cervical cancer is one of the common cancers and is responsible for the death of many women. Cervical cancer is the second most common cancer among women worldwide (Ndikom & Ofi, 2012). It is still a leading cause of cancer death among women in areas where organized screening is not available (Dim, 2012). It is a chronic disease which degenerates to cause extreme distress and anxiety for patients; it poses challenging clinical problems to all the health care providers and the family of a woman suffering from cervical cancer also shares in the burden of the disease. The economic impact of treatment of this disease on family finances is huge, because the money that is meant to take care of family needs will be diverted to pay for the treatment of the woman suffering from cancer of the cervix (Ohaeri & Ingwu, 2016).

Although cervical cancer is preventable, and knowledge of the condition and early screening might decrease the mortality associated with it, most women report to the hospital with an advanced form of the disease due to lack of awareness and community level interventions to encourage screening. In many developing countries, women knowledge of cervical cancer is very limited. It has been demonstrated that the vast majority of women in some African countries had not heard of cervical cancer and even know nothing about cervical screening. A study by Ingwu (2016) revealed poor knowledge of cervical cancer among pregnant women as only 8.1% know that cervical cancer is caused by Human Papilloma Virus and 39.5% identified Pap smear as screening test for early detection. The study also revealed poor uptake cervical cancer screening as only 2.8% had carried out screening test.

Women's health emphasizes the overall experience of women; physical, psychological well-being and child bearing functions because the totality of their wellbeing depends on various factors and conditions that affect their health. Therefore, every woman needs to have good knowledge about the cause and progression of cervical cancer disease. A well-organized teaching on causes and progression of cancer of the cervix as well as cervical screening is one of the methods to raise awareness that will lead to increased knowledge and utilization of cervical cancer screening services (Mbachu, Dim, & Ezeoke, 2017). Nursing intervention is concerned with providing specific information on the cause and prevention of cancer of the cervix through early detection by cervical screening test, and to enlighten women on underlying social, economic and environmental condition impacts of cervical cancer on woman's health.

The impact of education given to groups of women on immunization, nutrition, family planning and illness prevention has shown a great improvement on the uptake of these services. According to Abiodun, Olu-Abiodun, Sotunsa and Oluwole (2014), who studied the impact of health education intervention on knowledge and perception of cervical cancer and cervical cancer screening uptake among adult women in rural area community in Nigeria, suggest that multiple media health education based on movies is effective in creating awareness for and improving the knowledge and perception of adult women about cervical cancer and screening. It also improves the uptake of cervical cancer screening. Thus, creation

of awareness that will improve women's knowledge is very crucial to the success of a cervical cancer prevention programme.

In view of the above, the objective of the study is to determine the effect of a nursing intervention on knowledge of cervical screening among women in selected primary health centres in Ibadan. This study specifically examined:

1. assess the pre intervention knowledge of women of childbearing age on cervical cancer and cervical cancer screening;
2. implement nursing intervention on cervical cancer screening; and
3. assess the effect of the training on knowledge of cervical cancer screening among women of childbearing age.

Research Questions

The following research questions were raised for this study:

1. What is the pre and post-intervention knowledge of women of childbearing age on cervical cancer and cervical cancer screening among the intervention group?
2. What is the pre and post-intervention knowledge of women of childbearing age on cervical cancer and cervical cancer screening among the control group?

Research Hypothesis

This research hypothesis was formulated for this study:

1. There is a significant difference between pre and post intervention mean scores of knowledge of women of childbearing age on cervical cancer screening services between intervention and control groups.

Methodology

Two group pre-test and post-test quasi-experimental design was adapted to determine the effect of a nursing intervention on knowledge of cervical cancer screening among women in selected primary health centre in Ibadan. This study was conducted in two purposively selected Primary Health Centers in Ibadan (i.e Agbongbon Primary Health Center, Ibadan South-East Local Government and Bashorun Primary Health Centre, Ibadan North Local Government). The two selected study settings are located in Ibadan, Oyo State, Nigeria. The study population included 450 women of childbearing age attending Agbongbon and Bashorun Primary Health Care Centres in Ibadan per month. The population was obtained from daily out-patient records in the two health centres.

Corlien M. method for interventional study was used to determine the sample size for this study because it is a comparative study.

$$N = \frac{(Z\infty + Z\beta)^2 (P1(1-P1) + P2(1-P2)}{(P1-P2)^2}$$

Where

N = Minimum sample size

Z∞ = Two-sided level of significance @ 5% = 1.96

Zβ = Power of study 80% = 0.84

P1 = Proportion of awareness in previous study is 11% = 0.11

P2 = Proportion of utilization in previous study is 22%= 0.22

P1 – P2 = 0.11 – 0.22 = -0.11

$(1.96 + 0.84)^2 (0.11(1 - 0.11) + 0.22(1 - 0.22)$

$(0.11 - 0.22)^2$

7.84 (0.098 + 0.172)

   0.012

$= \dfrac{7.84 * 0.27}{0.012} = \dfrac{2.1128}{0.012}$ =176.4

Approximately = 176

Given a response rate or attrition rate of 10% = 18

The sample will then increase to194. This will be divided into two based on the target population of each centre.

Agbongbon =250 $\dfrac{250}{450} * 194 = 107.7$ Approximately = 108

Bashorun = 200 $\dfrac{200}{450} * 194 = 86.2$ Approximately = 86

A total number of 108 and 86 participants were requited from Agbongbon (intervention group) and Bashorun (control group) Primary Health Centres respectively. Multi-stage sampling procedure was used in selecting the study participants.

The instrument for data collection was self-administered questionnaire. The questionnaire was made up of 14 items. The questionnaire was divided into two sections namely section A and B. Section A sought for the demographic data of the respondents while Section B consisted of 14 items on knowledge of cervical cancer and cervical cancer screening.

The questionnaire was subjected to face and content validity and it was given to experts in the field of health and statistics for scrutiny. Their suggestions and correction were effected. The reliability of the instrument was established by a pilot test as it was administered on 20 women of childbearing age attending Oniyanrin Primary Health Centre, Ibadan, Ibadan North-West Local Government which is not in the same location with the sample for the study. The internal consistency of the test was computed using Cronbach alpha test and was found to be 0.75 for knowledge of cervical cancer.

Statistical Package for Social Sciences (SPSS) version 20.0 was used to analyze the data generated from the study. The study used descriptive statistical technique (such as percentage, mean and standard deviation) to answer the research questions while inferential statistics of t-test was used to test the difference and results were presented in tables.

Results

Question 1: What is the pre and post-intervention knowledge of women of childbearing age on cervical cancer and cervical cancer screening among the intervention group?

Table 1: Descriptive statistics of Pre and Post-intervention Knowledge of Cervical cancer and cervical screening among the intervention group

	Intervention	
Knowledge of women of childbearing age on cervical cancer screening	Pre N (%)	Post N (%)
Poor	53(49.1)	3(2.8)
Fair	23(21.3)	6(5.6)
Good	32(29.6)	99(91.6)

Total	108(100)	108(100)
Mean score	5.58	11.47
Mean gain	**5.89**	

The findings from Table 1 reveal that only 32 (29.6%) participants of the intervention group had good knowledge of cervical cancer and cervical screening at pre-intervention. However, the percentage of those who had good knowledge of the concept of cervical cancer and cervical cancer screening had greatly increased to 99(91.6%) in intervention group at post-intervention. The Table also reveals the pre and post intervention mean gain to be 5.89 in intervention group.

Question 2: What is the pre and post-intervention knowledge of women of childbearing age on cervical cancer and cervical cancer screening among the control group?

Table 2: Descriptive statistics of Pre and Post-intervention Knowledge of Cervical cancer and cervical screening among the control group

	Control	
Knowledge of women of childbearing age on cervical cancer screening	Pre N (%)	Post N (%)
Poor	44(51.2)	37(43.0)
Fair	17(19.8)	14(16.3)
Good	25(29.0)	35(40.7)
Total	86(100)	86(100)
Mean score	5.53	6.64
Mean gain	**1.11**	

The findings from Table 2 reveal that only 25(29.0%) of control group had good knowledge of cervical cancer and cervical screening at pre-intervention. However, the percentage of those who had good knowledge of the concept of cervical cancer and cervical cancer screening was not significant as only 35(40.7%) participants in control group had good knowledge at post intervention level. The Table also reveals the pre and post intervention mean gain to be 1.11 in control group.

Hypothesis Testing
Hypothesis 1: There is no significant difference between pre and post intervention mean scores of knowledge of women of childbearing age on cervical cancer screening services between intervention and control groups.

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Table 3: Independent sample t-test to compare Knowledge at pre and post-intervention between the intervention and control group

	Intervention n=108	Control n=86	df	Mean Difference	t	p
	Mean ± SD	Mean ± SD				
Pre intervention knowledge score	5.58±4.37	5.53± 4.24				
Post intervention knowledge score	11.47± 2.49	6.64± 4.49	192	4.83	9.51	0.000

Table 3 reveals an independent sample t-test that was conducted to compare knowledge at post-intervention between the intervention and control group. There was significant difference at the post-intervention between the intervention group (M=11.47, SD=2.49) and control group (M=6.64, SD=4.49); t (9.51), MD = 4.83, p = 0.000. This implies that the intervention given to the intervention group had a significant effect in increasing their knowledge at post- intervention. Thus, the null research hypothesis was rejected. Hence, there was significant difference between pre and post intervention mean scores of knowledge of women of childbearing age on cervical cancer screening services between intervention and control groups

Discussion

The findings of the study shows that during the pre-intervention, 53(49.1%) women had poor knowledge of cervical cancer screening 23(21.3%) had fair knowledge and only 632(29.6%) had good knowledge in the intervention. All the same in the control group 44(51.2%) had poor knowledge, 17(19.8%) had fair knowledge and only 25(29.0%) had good knowledge in the control group. However, during the post intervention, only 3(2.8%) had poor knowledge, 6(5.6%) had fair knowledge, while majority 99(91.6%) of women in the intervention group had good knowledge. On the other hand, in the control group, greater percentage 37 (43.0%) had poor knowledge 14 (16.3%) had fair knowledge while 35(40.7%) had good knowledge at post intervention. Therefore, the findings establish that the pre-intervention knowledge of women of childbearing age on cervical cancer and cervical screening was low. These findings established that no health education has been given on cervical cancer diagnosis and screening in that primary health centre before the study was carried out and this account for low knowledge at pre-intervention. This is further corroborated by the report of Elmaged, Yousif, and Abdrahman (2007) that an educational programme improves patient's knowledge and attitude regarding cervical screening and its early detection of cervical cancer. This result also supports the report of Ghadeer *et.al*, (2017) that health education has greatly improved the knowledge of the Saudi female health students on cancer of the cervix and its recognition as a preventable disease that can be detected early through cervical screening.

The findings of the study revealed that there was a significant difference between pre and post-intervention means scores of knowledge of cervical cancer and cervical screening between intervention group (M=11.47, SD=2.49) and control group (M=6.64, SD=2.49); t (192), MD = 4.83, p = 0.000. The difference is attributed to the positive influence of a nursing

intervention programme which has improved the participant's knowledge from what it was during the pre-test in the intervention group. The finding is similar to the result of study by Mo, Choi & Kim (2013) on effect of cervical cancer prevention education programme on Korean female college students' knowledge, attitude, self-efficacy, and intention. It was discovered that, there was an appreciably increase in knowledge attitude, self-efficacy and extent of level of practice of cervical cancer prevention behaviour among the intervention group compared to the control group.

Conclusion

The result of this study revealed poor knowledge of cervical cancer prior intervention. The effect of nursing intervention on women of childbearing age was apparent in knowledge change among the intervention group as compared to the control group. This study proves that nursing educational intervention plays an important role, towards improving women knowledge of cervical cancer. The study shows the need for intensive women education. On the basis of the findings, the researcher concludes that, there is a significant effect of health education on the knowledge and utilization of cervical cancer screening among women of childbearing age. This connotes that health education therefore should be continued and intensified towards achieving, maintaining and promoting women's reproductive health.

Recommendations

Cervical cancer is an important but preventable public health problem among women worldwide. Taking into consideration the findings of this study, the following recommendations are made:

1. Health education programme on cervical health among women of childbearing age should be intensified in Primary Health Centres. Such information must be clear, consistent and comprehensive in order that women are fully informed on cervical cancer and cervical cancer screening.
2. There should be frequent intensive health education programme for young girls and women, focusing on lifestyles that predispose to cervical cancer and other diseases, for example, early exposure to intercourse and having multiple sexual partners.
3. Faith based organizations and women associations can also be involved in the fight against cervical cancer. Churches and Mosques for example, can be used to disseminate information to their members on the need for women to undergo cervical cancer screening.
4. In addition, workshops and seminars should be organized for various segments of the primary health care workers especially doctors and nurses, this would help to enhance their knowledge of cervical cancer and cervical screening.

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