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Original article

EFFECT OF NURSING HEALTH EDUCATION INTERVENTION ON WOMEN'S KNOWLEDGE ABOUT CERVICAL CANCER IN EKITI STATE: A QUASI-EXPERIMENTAL STUDY

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Abstract

Introduction:

Cervical cancer remains one of the leading causes of cancer contributing to high mortality and morbidity. Early diagnosis with screening has been linked with good prognosis but it remains a problem when the women are not aware of this screening process. Hence, the need to create awareness about cervical cancer and the screening process among women of reproductive age in Ekiti state Nigeria.

Methods:

One group pre-test post-test quasi-experimental research design was adopted in assessing the level of women with cervical cancer in Ekiti State. A purposive sampling technique was used in recruiting participants for the study. The same self-structured questionnaire was used to collect data at the pre and post phase. Data were analyzed using SPSS version 23. Results were presented on tables and figures showing the knowledge level before and after the nursing health education intervention.

Results:

The majority (38.7%) of the participants were between 41-50 years, were Christians (85.6%), Yorubas (80.8%), and were married (72.5%). Almost all (98.5%) of the participants have heard about Pap smear before but the pre-intervention knowledge about cervical cancer was low (4.86+1.70) while there was an improvement in the post-intervention phase (8.53+2.40).

Conclusion:

The study concluded that nursing intervention (educational package) had a positive effect on the knowledge of women of reproductive age in Ekiti state about cervical cancer screening.

Recommendation:

Sustained health education by health workers (nurses and others) about cervical cancer screening is strongly recommended by the researchers.

Keywords: Ekiti state, Cervical cancer, Knowledge, Nursing health education, Women of reproductive age, Submitted: 2023-04-02 Accepted: 2023-04-09

1. Introduction

Cancer is a major public health concern globally. It is a chronic disease affecting both genders though the prevalence differs based on sev-

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eral factors like the type, the cells affected, and the stage at which it is diagnosed. The early diagnosis which is a secondary preventive measure is effective in all forms of cancer as metastasis has been implicated to worsen the prognosis when an individual is later diagnosed at a later stage. The burdens of these different forms of cancers do not only affect developing countries but also developed ones.

Cervical intraepithelial neoplasia and cervical cancer are brought on by sexually transmitted human Papillomavirus infection. Women who have had several sexual partners, people whose partners have had numerous sexual partners, or people whose partners have already been exposed to the virus are most at risk of contracting the illness. Early diagnosis and treatment of precancerous cervical lesions have significantly decreased the incidence of and mortality from cervical cancer in industrialized countries in Europe and America that have established national cervical screening programs (Chan et al., 2019). This can only be achieved when the individual is knowledgeable about the condition.

Ndejjo et al. (2016) opined that barriers to cervical cancer screening were negative individual perceptions 553 (64.5%), health facility-related challenges 142 (16.6%), and lack of awareness of the screening service 416 (48.5%). Shrestha, Sapkota, and Sapkota (2019) recommended that education can play a crucial role in the screening of cervical cancer and further suggested that health care providers should provide information education and communication (IEC) at all levels of delivery towards cervical cancer screening to the patients and families. Silvera, Kaplan, and Laforet (2023) recommended the need to include information on the connection between HPV and cervical cancer which must be provided in culturally and linguistically appropriate ways. Hence, this study addressed the knowledge gap about cervical cancer by assessing the baseline level of knowledge, giving nursing education, and then assessing the post-intervention knowledge level about cervical cancer.

The objective of the study

The main objective of this study is to determine the effect of nursing health education on women's knowledge about cervical cancer in Ekiti state Nigeria.

The specific objectives are to:

1. assess the baseline level of knowledge about cervical cancer among women of reproductive age in Ekiti State
2. give nursing health education intervention about cervical cancer to women of reproductive age in Ekiti state
3. find out the effect of the nursing health education intervention on women's knowledge about cervical cancer in Ekiti State

2. Methodology

This study employed a one pre-test post-test research design to gather data from women of reproductive age in Ekiti state. Ekiti state is located in the southwestern part of Nigeria.Ekiti indigens are homogeneous culturally and very intellectual agriculturalist Yoruba-speaking individuals that make up a sub-group of the other Yoruba ethnic group in Nigeria. The participants for this study were recruited from the Ijero Local Government Council Secretariat, Ijero Ekiti. A purposive sampling technique was used to recruit women of reproductive age. The study was conducted over four (4) months; between November 2022 and March 2023. The sample size used for the study was derived from the computation using a level of significance of 95%. The prevalence rate of cervical cancer in Nigeria is 6.9% (Deo, Sharma, & Kumar, 2022). Thus, the sample size was determined using; N = Z2Pq/(D)2. A sample size of 202 was derived and an attrition of 10% was added making 222 but only 203 copies of the instrument were successfully reterieved and analyzed during the post-intervention phase. The same self-structured instrument was used for gathering data at the pre and post-intervention phases.

The study's inclusion criteria include; Women who had started sexual intercourse for at least 3years, and the willingness to consent and participate in the study while the exclusion criteria include; Women below and/or above the reproductive age, women with cervical cancer, women

with any other form of cancer because of metastasis to the cervix and women with a history of total hysterectomy.

Bias: To eliminate bias, two versions (English and Yoruba languages) of the instrument were made available so that the participants can choose freely from either. There was a back translation of the instrument by an expert in the language.

Ethical approvals were sought and obtained from Babcock University Health Research and Ethical Committee (BUHREC) with reference number BUHREC671/22 on November 7, 2022, and Ekiti State Ministry of Health and Human Services with approval number MOH/EKHREC/EA/P/44 on November 9, 2022. Informed consents were also sought in writing and verbally form the respondents. Anonymity, confidentiality, voluntary participation, and withdrawal were ensured.

3. RESULTS

Table 1 reveals that 38.7% of the participants were between the ages of 41 and 50 years, 85.6% were Christians, 80.8% are from Yoruba ethnic group, 93.5% had tertiary education, 74.2% were married and 34.5% earned monthly income between #101,000 and #150,000, 98.5% of the participants have heard about pap smear and 90.1% reported to have the radio as their source information.

Table 2 reveals that the post-intervention, 97.0% of the participants correctly responded that cervical cancer is a disease that affects the opening of the womb (cervix) while in pre-intervention, 36.9% could correctly understand cervical cancer to be so. At the post-intervention, 92.1% of the participants correctly identified that cervical cancer is caused by the human papillomavirus (HPV). At post-intervention, 89.7% of the participants responded correctly that the purpose of the pap smear is to detect abnormal cells in the cervix while at pre-intervention, 40.6% of them responded correctly. 89.7% of the women responded positively to the statement that the purpose of the pap smear is to detect abnormal cells in the cervix post-intervention while 40.6% of them did during the pre-intervention. At post-intervention,57.6% of the participants answered negatively to the statement that a pap smear is not successful in reducing the incidence and mortality of cervical cancer, while at pre-intervention only 37.8% did so. 63.1% of the women responded in the positive that pap smear is able to detect all types of female genital cancer at post-intervention whereas 40.6% of them did so at pre-intervention. At the post-intervention, 68.5% of the women answered in the negative that pap smears should be discontinued after menopause while 41.9% of them did so during pre-intervention. At post-intervention, 54.7% of the women responded in the positive to there is no need to have a pap smear if it is not administered by the health personnel while at pre-intervention 30.9% of them did so.

Figure 1 reveals that pre intervention knowledge score was 4.86±1.70 while post intervention knowledge score was 8.53±2.40 which shows that the nursing intervention was effective and had a positive effect on the participants.

eveals the categorization of the knowledge score for the pre and post intervention phase. Majority (67.3%) had below average knowledge at the pre intervention phase while majority (67.5%) had above average knowledge at the post intervention phase.

4. Discussion of Findings

The religious background of the majority in the setting may be associated with the fact that most Yorubas are Christians and reside in the Southwestern part of Nigeria. The majority of the participants had tertiary education which may be connected with the fact that Ekiti indigens are often known to be a well-read set of people. Though the majority of the participants have heard about Pap smears the awareness did not translate to a good knowledge level about cervical cancer. This suggests that even when people are aware of a particular concept, it does not mean that the set people have a good level of knowledge about the subject matter.

The pre-intervention knowledge level of the participants was found to be mostly below average

Table 1: **Demographic Characteristics of the Participants**

Variable	**Frequency (n)**	**Percentage (%)**
Age	5	2.3
Less than 20	56	25.8
21-30	40	18.4
31-40	84	38.7
41-50	32	14.8
Above 50		
Religion	184	85.6
Christianity	31	14.4
Islam		
Ethnicity	172	80.8
Yoruba	25	11.7
Igbo	16	7.5
Others		
Highest Education	4	1.8
No formal education	1	0.5
Primary	9	4.1
Secondary	203	93.5
Tertiary		
Marital Status	158	74.2
Married	50	23.5
Single	5	2.3
Widow		
Monthly Income (#'000)	36	17.7
Less than 50	36	17.7
51- 100	70	34.5
101 - 150	28	13.8
151 - 200	33	16.3
Over 200		
Awareness	203	98.5
Yes	3	1.5
No		
Source of information	13	6.4
Friends	4	2.0
Newspaper	1	0.5
Hospital	183	90.1
Radio	2	1.0
Television		

Table 2: **Respondent's Knowledge about Cervical Cancer**

	Pre-intervention Frequency (%)		Post intervention Frequency (%)	
Statement	**Yes**	**No**	**Yes**	**No**
Cervical cancer is a disease that affects the opening of the womb (cervix)	80(36.9)	137(63.1)	197(97.0)	6(3.0)
Cervical cancer is caused by human papilloma virus (HPV)	89(41.0)	128(59.0)	187(92.1)	16(7.9)
Pap smears is most helpful way to detect pre-cancer and cancer of cervix	81(37.3)	136(62.7)	181(89.2)	22(10.8)
Women should have Pap smears at least every three years	78(35.9)	139(64.1)	169(83.3)	34(16.7)
Pap smear is not able to detect pre-cancerous cells before manifestation of its symptoms	145(66.8)	72(33.2)	72(35.5)	131(64.5)
The purpose of the Pap smear is to detect abnormal cells in the cervix	88(40.6)	129(59.4)	182(89.7)	21(10.3)
Pap smear is not successful in reducing incidence and mortality of cervical cancer	135(62.2)	82(37.8)	86(42.4)	117(57.6)
Pap smear is able to detect all types of female genital cancer	88(40.6)	129(59.4)	128(63.1)	75(36.9)
Pap smear is a non-invasive and relatively inexpensive method	88(40.6)	129(59.4)	140(69.0)	63(31.0)
Women should have Pap smear since the onset of sexual activity	146(67.3)	71(32.7)	48(23.6)	155(76.4)
Pap smears should be discontinued after menopause	126(58.1)	91(41.9)	64(31.5)	139(68.5)
If someone is having a normal Pap smear, she does not need Pap smears in the future	135(62.2)	82(37.8)	57(28.1)	146(71.9)
There is no need to have a Pap smear if it is not administered by the health personnel	67(30.9)	150(69.1)	111(54.7)	92(45.3)

Table 3: **Categorization of the level of knowledge about cervical cancer**

		Frequency (%)	
Category	**Score**	**Pre-intervention**	**Post-intervention**
Excellent	11 – 13	0(0.0)	39(19.2)
Above average	7 – 10	29(13.4)	137(67.5)
Below average	4 – 6	146(67.3)	23(11.3)
Poor	0 – 3	42 (19.4)	4(2.0)

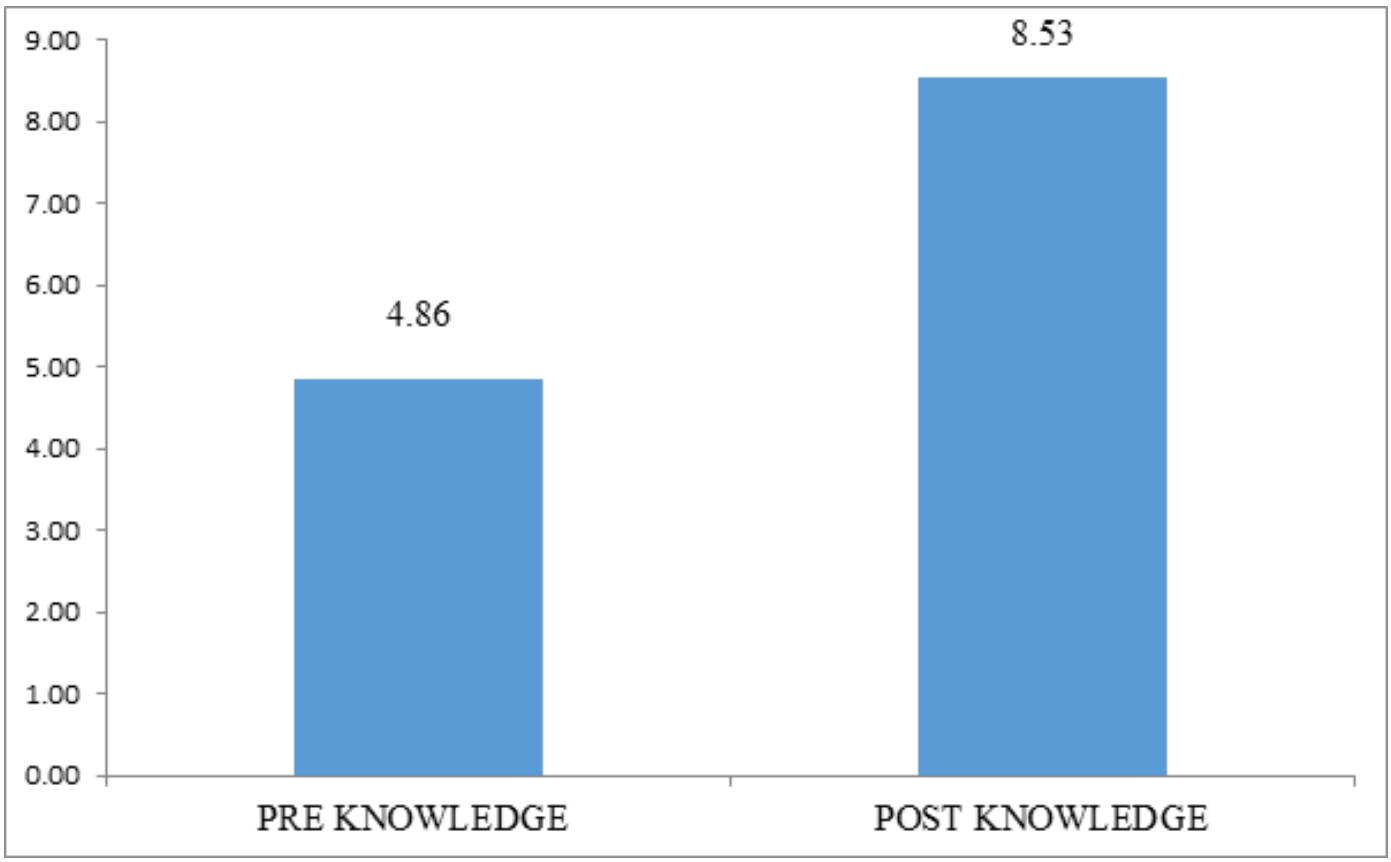

Figure 1: Pre andPost Knowledge Mean Score.

which is in tandem with the finding of Tekle et al. (2020) who found that less than half (43.1%) of the respondents had good knowledge about cervical cancer. The low level of knowledge among these participants suggests that the study population still needs to be well-enlightened about cervical cancer and the screening process.

On the other hand, the majority (58.1%) of the respondents in a study on knowledge and acceptability of cervical cancer screening among adult women visiting gynecological OPD by Shrestha, Sapkota, and Sapkota (2019) had good knowledge about cervical cancer screening. Also, findings from the study by Sani (2023) on knowledge and awareness of cervical cancer among women of reproductive age in the Kaga local government area of Borno State Nigeria revealed that the general level of awareness of cervical cancer is low among the study group. Also, the same study revealed that the level of knowledge of preventive measures and risk factors was low. A study by Rabiu and Yahuza (2023) also showed a low level of knowledge (35.5%) among the respondents about cervical cancer and a study by Maitanmi et al. (2021) also reported barely half of the respondents had a good level of knowledge

Various studies in different settings have shown the prevalence of low levels of knowledge among the study participants about cervical cancer, this suggests that the onus lies on the healthcare workers to be more proactive about health education as recommended by Okondu et al. (2021).

Though a study by Maitanmi et al (2023) reported a higher level of knowledge among the majority (68.4%) of the female undergraduates of Babcock University concerning cervical cancer screening which may be connected to the level of exposure to such a set of respondents. Also, a study by Anikwe et al (2023) shows that the majority (74.8%) of the respondents were aware of cervical cancer and how it could be prevented (70.8%). This may also be connected to the exposure of the respondents.

The post-intervention knowledge score shows

the efficacy of the nursing health education intervention as the knowledge score rose from 4.86±1.70 to 8.53±2.40. This finding is in tune with the findings from the study of Shrestha et al. (2022) who did a cluster randomized controlled trial on the effect of a female community health volunteer-delivered intervention to increase cervical cancer screening uptake in Nepal and found out that their was a change in median knowledge score among women that increased from 2 to 6 in the intervention group when educated about cervical cancer. A study by Aminu, Okafor, and Maitanmi (2022) recommended that using different fora to desiminate health education would be effective.

Findings from this study and the relationship established with other empirical reviews, it was deduced that his increase in knowledge score could be linked to the knowledge gap filled with the nursing health education intervention on women of reproductive health age who were the participants in this study.

5. Conclusion

The researchers concludes that there is a need for community sensitization about the dreaded cervical cancer so that women can know more about it and be able to take prompt action by engaging in cervical cancer screening which will help in early diagnosis of the condition so that treatment can be sought immediately if the result is suggestive of cervical cancer.

6. Limitation

The study was conducted only in Ekiti state of Nigeria but further studies can explore a larger setting like the whole of southwestern Nigeria or even the whole of Nigeria.

7. Recommendation

Sustained health education by health workers (nurses and others) about cervical cancer screening is strongly recommended by the researchers and this health education can be carried out in different areas (hospital setting or the community setting) using different approaches.

8. Acknowledgement

The researchers acknowledged all the participants in this study and appreciate their efforts in making this study a reality.

9. List of Abbreviations

CC: Cervical cancer
WRA: Women of reproductive age

10. Conflict of Interest

The authors declared no conflict of interest.

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13. References:

1. Aminu, S. O., Okafor, N. A., & Maitanmi, J. O. (2022). Factors Associated with Uptake of Covid-19 Vaccination Among Adults in Ifo Local Government Area of Ogun State. International Journal of Ebola, AIDS, HIV and Infectious Diseases and Immunity, 7(1), 1-19.
2. Anikwe, C. C., Osuagwu, P. C., Ikeoha, C. C., Ikechukwu Dimejesi, O. B., & Okorochukwu, B. C. (2023). Cervical Cancer: Assessment of Its Knowledge, Utilization of Services and Its Determinant Among Female Undergraduate Students in a Low Resource Setting. Community Health Equity Research & Policy, 43(3), 231-238
3. Chan, C. K., Aimagambetova, G., Ukybassova, T., Kongrtay, K., & Azizan, A. (2019). Human papillomavirus infection and cervical cancer: epidemiology, screening, and vaccination—review of current perspectives. Journal of oncology, 2019
4. Deo, S. V. S., Sharma, J., & Kumar, S. (2022). GLOBOCAN 2020 report on global cancer burden: challenges and opportunities for surgical oncologists. Annals of Surgical Oncology, 29(11), 6497-6500
5. Rabiu, I., & Yahuza, Z. (2023). Knowledge and Attitude towards Human Papilloma Virus Infection, Vaccines, and Cervical Cancer Prevention among School Students in Kano, Nigeria. Advances in Virology, 2023
6. Sani, A. S. (2023). Assessment of Knowledge and Awareness of Cervical Cancer Among Women of Reproductive Age in Kaga Local Government Area, Borno State, Nigeria. International Journal of Health Sciences, 6(2), 1–8.
7. Shrestha, B. K., Sapkota, D. K., & Sapkota, M. (2019). Knowledge and Acceptability of Cervical Cancer Screening among Adult Women Visiting in Gynecological OPD.
8. Shrestha, A. D., Gyawali, B., Shrestha, A., Shrestha, S., Neupane, D., Ghimire, S., ... & Kallestrup, P. (2022). Effect of a female community health volunteer-delivered intervention to increase cervical cancer screening uptake in Nepal: a cluster randomized controlled trial. Preventive Medicine Reports, 29, 101948.
9. Silvera, S. A. N., Kaplan, A. M., & Laforet, P. (2023). Knowledge of human papillomavirus and cervical cancer among low-income women in New Jersey. Public Health Reports, 138(2), 302-308
10. Tekle, T., Wolka, E., Nega, B., Kumma, W. P., & Koyira, M. M. (2020). Knowledge, attitude and practice towards cervical cancer screening among women and associated factors in hospitals of Wolaita Zone, Southern Ethiopia. Cancer management and research, 12, 993
11. Maitanmi, B. T., Awojobi, Z., Adesuyi, E. O., Maitanmi, J. O., Chukwuere, P. C., & Akingbade, O. (2020). knowledge and perceived effect of sexual abuse among adolescents in selected secondary schools in mushin local government, lagos. Midwifery, 4(4), 14-30.
12. Maitanmi, J. O., Fabiyi, T. E., Eniola, O., Sansi, T. O., Blessing, J. O., Maitanmi, B., Ojewale, M. O., Dairo, A. A., Adebiyi, D. A., & Akingbade, O. (2023). Knowledge and acceptability of cervical cancer screening among female undergraduates in Babcock University Ilishan-Remo, Ogun State, Nigeria. Ecancermedicalscience, 17, 1502. https://doi.org/10.3332/ecancer.2023.1502
13. Ndejjo, R., Mukama, T., Musabyimana, A., & Musoke, D. (2016). Uptake of cervical cancer screening and associated factors among women in rural Uganda: a cross sectional study. PloS one, 11(2), e0149696
14. Okondu, O. E., Maitanmi, J. O., Akinola, M., Akingbade, O., Abubakar, K., Faleti, D. D., ... & Maitanmi, B. T. (2021). Dietary Knowledge and Practices among Non-Medical Staff at Babcock University in Ogun State, Nigeria. Babcock University Medical Journal, 4(2), 112-119.

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