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The Association of Socio-demographics of Female Secondary School Teachers with their Cervical Cancer Health Literacy in Nigeria.

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Abstract:

Objective: The aim of this study was to determine whether there is an associated effect between the socio-demographic characteristics and the cervical cancer health literacy levels of female secondary school teachers in Anambra State.

Design: it is a descriptive survey of 3,031 female secondary school teachers using self – administered questionnaire. Analysis was done with descriptive statistical methods and Chi-square tests.

Results: Six socio-demographic factors were studied using properly filled and returned copies of questionnaire from 2,186 teachers. Cervical cancer health literacy was seen to have associations with age, years of teaching experience, educational qualification and number of children the respondents have. For marital status and family history of cervical cancer, no significant association was indicated.

Conclusion: Certain socio-demographic factors have associations with health literacy, while others do not. This established clearer view will aid health stakeholders in intervention measures for mitigating cervical cancer rising menace in Nigeria.

Originality/value: This paper adds to the extremely scanty literature on the relationship between socio-demographic characteristics of female teachers and their cervical cancer literacy in Nigeria. It is to provide government and other stakeholders with information for appropriate cervical cancer intervention targeting female population.

Paper type: Original empirical research article.

Keywords: health information, health literacy, cervical cancer literacy, female teachers' cervical cancer literacy, socio-demographics and cervical cancer literacy, cervical cancer information.

Introduction

Mayor Clinic (2019) defines cervical cancer as a type of cancer that occurs in the cells of the cervix — the lower part of the uterus that connects to the vagina. It is mostly (99%) caused by certain strain of Human papillomavirus (HPV), a sexually transmitted infection. The 2018 Human Papillomavirus (HPV) fact sheet released by HPV Information Centre (2019), estimates that every year 14,943 Nigerian women are diagnosed with cervical cancer, while 10,403 die from the disease. This makes cervical cancer rank as the second most prevalent cancer among Nigerian women.

Fortunately, the World Health Organisation (WHO), had stated that HPV vaccination, screening for, and treating precancerous lesions will prevent most cervical cancer cases. It further explained that with early detection and effective management, cervical cancer is one of the most successfully treatable forms of cancer. As scaring as the cervical cancer figures from Nigeria are, and as soothing as the WHO statements are, are Nigerian women aware of these? Are these information available to them and are they health literate enough for positive action? Are there also some personal characteristics that affect their cervical cancer literacy levels?

This gives rise to the issue of cervical cancer health literacy among the female population in Nigeria. Cambridge Dictionary (2019) defines literacy as “the ability to read and write; knowledge of a particular subject, or a particular type of knowledge”. Literacy in this study is concerned mostly with the knowledge of cervical cancer.

On the other hand "health literacy represents the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good *health*. It implies the achievement of a level of knowledge, personal skills and confidence to take action to improve personal and community health by changing personal lifestyles and living conditions"(World Health Organisation,1998 p10). The pivotal role of health literacy in health is incontrovertible. Health literacy is needed to effectively access, understand and put health information into use for personal and community healthcare and lifestyle changes. Health literacy is critical for the control of cervical cancer. Low health literacy is a global burden. Literacy levels may however be pegged by demographic characteristics like gender, age, education level, income, ethnicity, year of experience, employment and marital status. These socio-demographics may be predictors of literacy levels and so can make or mar healthcare.

Getting evidence of the association between cervical cancer literacy and demographic characteristics of female population in Nigeria will pave way for informed intervention for the effective control of cervical cancer menace in Nigeria. This is the mission of this study.

Literature Review

The identification of the correlation of specific socio demographic factors and levels of health literacy is critical for checking cervical cancer. A cross sectional study involving women aged between 26 and 64 years was carried out by Durowade et.al, (2013) in Olufadi community, of Kwara State in North-Central Nigeria. The focus was to ascertain the 'Knowledge of Cervical Cancer and Its Socio-demographic Determinants''. The results show that age of respondents, age at marriage and attainment of tertiary education were significant predictors of knowledge of cervical cancer among the respondents.

In Ghana, Ebu, (2018), undertook a research into the "Socio-demographic characteristics influencing cervical cancer screening intention of HIV-positive women in the central region''. Six hundred and sixty women were involved in the descriptive cross- sectional study. The results indicate that women with low levels of education were 2.67 times (95% CI, 1.61–4.42) more likely to have intention to screen than those with no formal education. Those with high levels of education were 3.16 times (95% CI, 1.42–7.02) more likely to have intention to screen than those with no formal education. On the other hand, age, religion, marital status, employment status, and ability to afford the cost of cervical cancer screening were not determinants of intention to screen.

"Cervical Cancer Literacy in Women of Reproductive Age and Its Related Factors" is the title of the study carried out in Iran by Bazaz, et al, 2019. It was a cross-sectional study of 231 women of reproductive age with the aim of evaluating their cervical cancer health literacy and its related factors. The result indicates that 47.2% of the participants had limited health literacy. It found a significant association between income ($p = 0.011$), searching ($p = 0.01$), study time ($p = 0.009$), and young friends' counselling ($p = 0.002$) and cervical cancer literacy scores, but no significant association was observed between age and health literacy. The study concluded that cervical cancer literacy among women of reproductive age was not at good level.

Protheroe, et.al. (2016) carried out a survey of Health literacy, associated lifestyle and demographic factors in adult population of Stoke-on-Trent, England. The research examined the health literacy levels of 1,046 participants in relation to their age, educational qualifications and deprivations. The results identified older age, lower educational level, lower income, perceived poor health and lack of access to the internet with higher rates of limited health literacy.

Another probe into the association of socio demographic characteristics with health literacy levels was carried out by Thongnopakun, et.al. (2018). It was a cross sectional study of 418 participants titled: the association of socio-demographic characteristics and sexual risk behaviours with health literacy toward behaviours for preventing unintended pregnancy among university students". The socio-demographic factors studied were age, grade average point, parents marital status, current residence type, average income per month, had a boyfriend or not, hugging and kissing experience and previous sexual intercourse. The result showed health literacy as the main behavioural factor when it comes to preventing unintended pregnancy. Significant association was established between the university students who had low health literacy and engagement in inappropriate behaviour related to preventing pregnancy.

Methodology

Area of the Study

The area of this study is Anambra State. Anambra State is located in the South East geographical Zone of Nigeria. It is an Igbo State whose citizens are known for their industry and enterprise in all spheres of human endeavour including education. The schools are grouped under six administrative educational zones under the State Ministry of Education. One hundred and seventeen (117) secondary schools in eight local government areas where covered. The local government areas are Aguata, Awka South, Aniocha, Njikoka, Nnewi North, Idemili North, Onitsha and Oyi. The schools are dominated by female teachers, all of whom need health information literacy for healthy living. All the female teachers therefore qualified as respondents for this cervical cancer literacy study.

Population of the Study

All the 3,031 female teachers in the eight local government areas of Anambra State consisted the population of the study. They are the first eight local government areas with the highest concentration of female teachers. The eligibility criteria were that the respondents must be females and teaching in secondary schools in the state. All the ranks of female teachers with their varying responsibilities in the system participated.

Sample and sampling technique

All the 3,031 female teachers in the eight selected local government areas were used for this study. This is because the entire population was relevant to the study and also needed to benefit.

Instrument for Data Collection

Survey design, using questionnaire to elicit pertinent data from the respondents was used. The questionnaire was adapted from the Cervical Cancer Awareness Measure (CAM 2011, version 2.1) Toolkit. The instrument was developed by the Health Behaviour Research Center of the University College, London and Cancer Research UK in collaboration with other partners. The Questionnaire which was slightly modified for this study was in four sections as follows-:

Section I: Socio-demographic Questions (9 items)

Section II: Risk Factors (11 items)

Section III: Signs and Symptoms (10 items)

Section IV: Screening and control (18 items)

This instrument tagged "Cervical Cancer Literacy Assessment Questionnaire" (CECALAQ) had 48 items in all (appendix).

Method of Data Collection

The copies of the questionnaire were personally delivered through the researcher and research assistants (RAs). One research assistant was assigned to each of the eight local government areas of the state, while in areas with more than ten schools 2 research assistants were assigned.

The Research Assistants were properly trained on the content of the questionnaire and skills for getting the respondents fill them our properly. The teachers were required to fill in questionnaire copies immediately they were given to them and collected back.

Method of Data Analysis

The researcher used descriptive statistics to describe the Socio-demographic characteristics of the respondents. The association between socio-demographic characteristics and cervical cancer health literacy was analysed using Chi-Square tests. A p-value ≤ 0.05 was considered to represent statistical significance. Package for Social Sciences (IBM, SPSS statistics 22.0) was used to analyse the data.

Ethical Clearance/Approvals

Approval for this research was sort and obtained from the Anambra State Ministry of Education, Ministry of Health, Post-Primary Schools Service Commission, and offices of the six educational zones of the state.

Results

Visits were carried out from the month of October, through November 2017, to 117 institutions. Two thousand one hundred and eighty-six (2,186) properly filled copies of the questionnaire were analysed. The socio-demographic characteristics studied are: age, marital status, years of experience, educational qualification, family history of cervical cancer, number of children.

The descriptive statistics of the respondents show that the majority (80.8%) are between the ages of 26 and 55years. A little over two- thirds of the teachers are married. In terms of work experience, almost two-thirds of the sample have worked for between four and fourteen years. Slightly over three-quarters of them hold Higher National Diploma or first degree as highest educational qualification. Female teachers who have had cervical cancer, or whose close friends or family members had suffered cervical cancer made up a small proportion (8.8%) of

the entire sample. Finally as in Table 1, more than half of the teachers (61.7%) had given birth to four or more children.

Table 1 Respondents' Socio-demographic Characteristics

Socio-demographic Characteristics	Number (n=2186)	Percentage
Age:		
18-25	254	11.6
26-35	711	32.5
36-45	572	26.2
46-55	483	22.1
Above 55yrs	166	7.6
Marital Status:		
Married	1532	70.1
Single	520	23.8
Divorced	39	1.8
Widowed	95	4.3
Years of Experience:		
0-4yrs	712	32.6
5-9yrs	426	19.5
10-14yrs	330	15.1
15-19yrs	249	11.4
20-24yrs	241	11.0
Above 24yrs	228	10.4
Educational Qualification:		
PhD	60	2.7
Masters	240	11.0
First Degree/HND	1660	75.9
OND/NCE	226	10.3
Family History:		
You	50	2.3
Family Member	66	3.0
Close Friend	76	3.5
None	1994	91.2
No of Children:		
1	189	8.6
2	302	13.8
3	346	15.8
4	401	18.3
Above 4	948	43.4

Analysis using the Chi-Square test (Table 2) reveals that marital status (p=.057) and family history of cervical cancer (p=.162) have no significant association with health literacy levels of the respondents. On the other hand, age (p=.000), years of experience (p.015), educational qualification (p=.006) and number of children (p=.047) indicate significant association with cervical cancer health literacy levels of the female teachers.

Table 2 Association between socio-demographic characteristics and health literacy (Chi-Square test)

Age Range	**Low**	**Moderate**	**High**	**df**	**X^2**	**P-value**
18-25yrs	180 (70.9%)	43 (16.9%)	31 (12.2%)			
26-35yrs	563 (79.2%)	117 (16.5%)	31 (42.9%)			
36-45yrs	435 (76%)	105 (18.4%)	32 (5.6%)	8	31.49	.000
46-55yrs	391 (81%)	66 (13.7%)	26 (5.4%)			
Above 55yrs	138 (83.1%)	16 (9.6%)	12 (7.2%)			
Marital Status	**Low**	**Moderate**	**High**	**df**	**X^2**	**P-value**
Married	1201 (78.4%)	248 (16.2%)	83 (5.4%)			
Single	407 (78.3%)	73 (14%)	40 (7.7%)	6	12.24	.057
Divorced	34 (87.2%)	3 (7.7%)	2 (5.1%)			
Widowed	65 (68.4%)	23 (24.2%)	7 (7.4%)			
Experience	**Low**	**Moderate**	**High**	**df**	**X^2**	**P-value**
0-4yrs	553 (77.7%)	105 (14.7%)	54 (7.6%)			
5-9yrs	320 (75.1%)	83 (19.5%)	23 (5.4%)			

10-14yrs	264 (80%)	45 (13.6%)	21 (6.4%)			
15-19yrs	192 (77.1%)	47 (18.9%)	10 (4%)	10	21.95	.015
20-24yrs	201 (83.4%)	35 (14.5%)	5 (2.1%)			
Above 24yrs	177 (77.6%)	32 (14%)	19 (8.3%)			

Edu. Qualification	**Low**	**Moderate**	**High**	**df**	**X^2**	**P-value**
PhD	52 (86.7%)	8 (13.3%)	0 (0%)			
Masters	172 (71.7%)	52 (21.7%)	16 (6.7%)	6	17.70	.006
First Degree/HND	1291 77.8%)	261 (15.7%)	108 (6.5%)			
OND/NCE	192 (85%)	26 (11.5%)	8 (3.6%)			

Family History	**Low**	**Moderate**	**High**	**df**	**X^2**	**P-value**
You	41 (82%)	5 (10%)	4 (8.0%)			
Fam Member/close friend	106 (74.6%)	31 (21.8%)	5 (3.5%)	4	6.54	.162
None	1560 (78.2%)	311 (15.6%)	123 (6.2%)			

Number of Children	**Low**	**Moderate**	**High**	**df**	**X^2**	**P-value**
1	160 (84.7%)	22 (11.6%)	7 (3.7%)			
2	220 (72.8%)	62 (20.5%)	20 (6.6%)			
3	275 (79.5%)	56 (16.2%)	15 (4.3%)	8	15.68	.047

4	308 (76.8%)	70 (17.5%)	23 (5.7%)
Above 4	744 (78.5%)	137 (14.5%)	67 (7.1%)

The result also shows that of the 2,186 respondents, 1,970 which represents 90.1% have not registered with the National Health Insurance Scheme (NHIS) of the federal government, only 216 (9.9%) had. It also reveals that 1,803 (82.5%) of the respondents have never had a pap smear. This was followed by those who have had it in over 3 years 159 (7.3%). Those who have had it in the last 6 months made up 97 (4.4%) of the respondents, followed by those who have had it 2 years ago 94 (4.3%) and a year ago 33 (1.5%).

Discussion

Greater proportion of the respondents (78.1%) have low level of cervical cancer literacy while only 6% of the respondents have high cervical cancer literacy. This study finds association of age, years of experience, educational qualification and number of children with literacy levels of the respondents. On the other hand, marital status and family history of cervical cancer showed no significant association with their cervical cancer literacy.

Earlier study by Durowade et.al, (2013) also identified age and educational qualification as predictors of respondents' knowledge of cervical cancer. Also in the same vain research by Ebu, (2018), found educational levels as determinant of the respondents' intention to screen for cervical cancer, it however noted no such association with age. Also the study by Bazaz et al. (2019) observed no association between age and health literacy of the women studied. In line with the present study, a survey carried out by Protheroe et al. (2016) identified association of age and educational levels of the respondents with their health literacy levels.

Significant association was established between educational qualification and the respondents' level of cervical cancer literacy. Greater percentage of the respondents (1,660) are either first degree or Higher National Diploma holders. It is assumed that tertiary education should expose one to general literacy which in turn enhances health literacy. For years of experience, teaching is normally expected to enhance ones access to wide variety of literature, health information resources and knowledge. Furthermore, majority studied female teachers have four or more children. Visits to health centres and hospitals through child bearing affords good opportunity for knowledge on female reproductive issues and diseases.

The sensitivity of these revelations arises from the fact that secondary school teachers in Nigerian communities are looked upon as models to their students other less educated women and community members in general. They are many in number and can be used as gauge for assessing certain characteristics of the people or to influence some policies.

It is needful to carry out further investigations on the detailed nature of the association of the selected socio-demographic characteristics with cervical cancer health literacy levels of female secondary school teachers in Anambra State.

Conclusion

With the rising trend of cervical cancer in Nigeria, it is curious to establish the relationship status of six basic socio-demographics of female secondary school teachers with their cervical cancer literacy. It is a prelude to much needed aggressive and effective actions necessary to check cervical cancer erosion of women's health.

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