KNOWLEDGE OF HEALTHY DIET FOR PREVENTION OF BREAST CANCER POSSESSED BY FEMALE SECONDARY SCHOOLS TEACHERS IN ISIUZO LOCAL GOVERNMENT AREA OF ENUGU STATE

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Abstract

Teachers have vital roles to play in the prevention of diseases and health-related conditions in our society. Assessment on knowledge of healthy diet as preventive measure of breast cancer among female secondary school teachers are needed to improve quality of their life. Three specific objectives with corresponding three research questions and two null hypotheses guided the study. The study adopted the descriptive research design. The population for the study consisted of 387 teachers in the public secondary schools in Isiuzo Local Government Area. Sample size for the study consisted of 162 teachers in the public secondary schools in Isiuzo Local Government Area by multi-stage sampling technique were used to select a sample of 162 female secondary school teachers. The instrument for data collection was Knowledge of Healthy diet as preventive measure toward breast cancer among female secondary school teachers (KHDPMBC).The instrument was face validated by three experts from the department of Human Kinetics and Health Education, University of Nigeria Nsukka. The reliability of the instrument was established using the split half method. A reliability coefficient of 0.85 was obtained. Frequencies and percentages were used for answering the research questions while Chi-square statistics was used for testing the null hypotheses. Results among others indicated that secondary school teachers possessed moderate knowledge (44.69%) of healthy diet as preventive measures. Also, at 0.05level of significance, there was significant difference in the Knowledge of healthy diet for prevention of breast cancer among female secondary school teachers based on level of education and religion. Based on the findings, it was recommended among others that minister of health and religious leaders should organize seminars and workshops in school halls and town halls to enlighten the teachers on basic knowledge of healthy diet for prevention of breast cancer.

Keywords: knowledge, preventive measures, Breast Cancer, Healthy Diet

Introduction

Breast cancer (BC) is one of the most common cancers among women throughout the world. Katende, Tukamuhebwa and Nankumbi (2016) stated that breast cancer is the second leading cause of deaths in women and poses global public health concern. Cancer is one of the leading causes of morbidity and mortality worldwide; moreover, it is expected to move higher up the projection ladder by 2030 (Mathers & Loncar, 2015). Breast cancer is the commonest of all forms of cancer and one of the major threats to health especially among women (Lakeshore cancer center, 2014). Report on the incidence of breast cancer reveals that one out of every eight women in the world stand a chance of having the disease in her life time (American cancer society, 2015). According to Nigerian National System of Cancer Registries (NSCR) (2014), the most common cancers in males were prostate and liver cancer while breast and cervical cancer were the commonest cancers in Nigerian women.

Globally, the commonly diagnosed cancers in both men and women were lungs, breast, colorectal, cervical, prostate and liver cancers and more than 60 per cent of the world's new cancer cases occur in Africa (Jemal, Bray & Center, 2011; NSCR, 2014). Although the incidence of breast cancer is increasing all over the world, the rate of increase is higher in developing countries where late detection of disease is common (WHO, 2015). Breast cancer is already a well-known health problem in Nigeria with about 1 death in every 25 reported cases (Olaleye, 2013). A major worry about breast cancer in Nigeria is the continuous rise in the number of cases and deaths. For instance, Lakeshore Cancer Center predicted that breast cancer cases may rise to 42 million by 2020 in both males and females in the Nigeria (Cancer Epidemiology, 2012). The primary reason for this increasing mortality rate is due to lack of early detection and also lack of knowledge on healthy diet as preventive measures of disease (Badar, Faruqui, Ashraf & Uddin, 2007).

The burden of breast cancer is increasing in economically developing countries such as Nigeria, as a result of population, as well as, increasingly, an adoption of cancer-associated lifestyle choices including smoking, physical inactivity, and westernized diets, which includes consumption of calorie-dense food (American Cancer Society, 2011). Unhealthy diet, physical inactivity, excess body weight and associated factors are the most important preventable causes of cancers (WHO/FAO., 2003; WCRF/AICR., 2007). Previous studie by Abolfotouh, Bassiouni , Mounir , et al (2007); Ganasegeran , Al-Dubai , Qureshi , et al. (2012); AI-Naggar, Bobryshev , Mohd Noor, 2013) have revealed that university students have unhealthy eating habits, they eat more fast foods that are usually high in fat, sugar, and salt, and there is a high rate of meal skipping, a low frequency of fruit and vegetable consumption and poor physical activity level. Nigerian undergraduates have been observed to adopt unhealthy practices known to be linked with increased cancer risk, such as low fruit and vegetable consumption, high consumption of energy-dense nutrient, poor foods, foods high in sugars, fats and salt, as well as a low level of physical activity (Olusanya & Omotayo, 2016; Arulogun & Owolabi, 2016; Afolabi, Towobola, Oguntona, et al., 2016).

Contextually, breast cancer risks are those unhealthy diets that make one vulnerable to cancer. A substantial proportion of the worldwide burden of cancer could be prevented through the application of existing cancer control and by implementing preventive measures, such as healthier dietary intake, promoting physical activity as well as vaccination, and early detection and treatment (Folasire, Folasire & Chikezie, 2016). Healthy diets contribute appreciably to the burden of chronic and preventable diseases; such as high consumption of fruits and vegetables and lower fat intake, are associated with reduced risk for obesity, cardiovascular disease, diabetes, and many cancers (Byers, Nestle, McTiernan, et al., 2016). Dietary factors such as obesity and alcohol consumption have been shown to increase the risk of breast cancer and colon cancer (WCRF / AICR., 2007). Obesity increases breast cancer risk in women, especially postmenopausal women, by around 50 per cent (Key, Schatzkin, Willett, et al., 2004). Foods associated with decreased cancer risk include fruits, vegetables, and unprocessed whole grains. Foods associated with an increased cancer risk include red and processed meats, salt, alcohol, foods contaminated with mycotoxins such as aflatoxins, and arsenic- contaminated water (Holman & White, 2016). Leading causes of morbidity and mortality among adolescents have been linked to the behavioural risks among others that include un- healthy dietary habits (Youth Risk Behaviour Surveillance System, 2015). According to the World Health Organization (WHO), dietary recommendations for individuals and populations should provide adequate energy balance for a healthy weight. Such diet should include a limited

intake of fats, while shifting fat consumption away from saturated fats to unsaturated fats and elimination of trans- fatty acids. It should also include increased consumption of fruits and vegetables, legumes, whole-grains and nuts, while limiting the intake of free sugars and salt (Sodium) consumption (WHO, 2012). In this present study, healthy diets are referred to those diets that will not predispose a female secondary school teacher to health challenges especially breast cancer. Implementing preventive measures depend on lifestyle or habit.

Developing countries are going through rapid societal and economic changes, and there is a shift toward western lifestyles with resultant changes in reproductive, dietary, and hormonal risk factors, which contributes to the rising cancer rates (Ojewusi & Arulogun, 2016). Lifestyle behaviors are well-established risk factors for both the development of, and negative outcomes from, breast cancer. There are modifiable and non-modifiable risk factors associated with breast cancer (Ibekwe, 2015). Some non-modifiable risk factors include; family history of breast cancer, reproductive history (such as age that menstrual periods began and age at first pregnancy), increasing age and female gender. Modifiable risk factors which include harmful use of alcohol, obesity, history of radiation exposure, intake of refined food, sugar coated snacks. Hence, knowledge of healthy diet is essential to bringing about the preventive measures to reduce the outbreak and morbidity rate.

Knowledge is the key to health action. Jatau and Dangbin (2013) defined knowledge as the ability to comprehend, apply, analyze and evaluate what arise known facts, concepts, views and propositions about oral health education. According to (Oparah et al., 2019) knowledge is the possession of information, skill and understanding gained through learning and experience. In this study knowledge of healthy diet referred to knowing those healthy foods that when consumed will keep the body strong and effective with reduced occurrence of diseases. Also, knowledge of preventive measures is knowing some breast cancer symptoms like nipple discharge, change in skin appearance, change in breast size, the presence of breast masses, and inflamed axillary lymph nodes and preventive measure the utility of healthy dietary patterns that emphasize whole-grain foods, legumes, vegetables, and fruits, and that limit refined starches, red meat, full-fat dairy products, and foods and beverages high in added sugars. Such diets have been associated with decreased risk of a variety of chronic diseases (Gresses, Steenkamp & Pietersen, 2015). Knowledge of healthy diet for preventing breast cancer may be influenced by many factors such as; age, sex, religion, level of education, parity and many others. This present study emphasized on influence of level of education and religion on knowledge of healthy diet among female secondary teachers for prevention of breast cancer.

Female Secondary Schools Teachers are female teachers in various secondary schools. They are vital in this study because breast cancer occur among female mainly, though in westernized world males also experience breast cancer. Knowledge of teachers on healthy diet as a preventive measure will help in dispensing the knowledge to the student under them and also control food, they display in their various school kitchens and canteen for student's consumption.

Objective of the study
The general objective of the study was to determine knowledge of healthy diet for prevention of breast cancer possessed by female secondary school teachers in Isiuzo Local Government Area of Enugu State. Specifically, the study determined the:

1. Proportion of secondary school teachers that possess knowledge of healthy diet for prevention of breast cancer in Isi uzo Local Government Area, Enugu state.
2. Proportion of secondary school teachers that possess knowledge of healthy diet for prevention of breast cancer in Isi uzo Local Government Area, Enugu state based on level of education.
3. Proportion of secondary school teachers that possess knowledge of healthy diet for prevention of breast cancer in Isi uzo Local Government Area, Enugu state based on religion.

Research Questions
The following research questions guided the study
1. What is the proportion of secondary school teachers that possess knowledge of healthy diet for prevention of breast cancer in Isi uzo Local Government Area, Enugu state?
2. What is the proportion of secondary school teachers that possess knowledge of healthy diet for prevention of breast cancer in Isi uzo Local Government Area, Enugu state based on level of education?
3. What is the proportion of secondary school teachers that possess knowledge of healthy diet for prevention of breast cancer in Isi uzo Local Government Area, Enugu state based on religion?

Hypotheses
Ho$_1$: There is no significant difference in the proportion of female secondary school teachers who possess knowledge of healthy diet for prevention of breast cancer risk in Isi uzo Local Government Area, Enugu state based on level of education.
Ho$_2$: There is no significant difference in the proportion of female secondary school teachers who possess knowledge of healthy diet for prevention of breast cancer risk in Isi uzo Local Government Area, Enugu state based on religion.

Methods
The study adopted descriptive survey research design. The design permits the investigation of the current status of the phenomenon from a population who would supply the required information for generalization of the larger population (Chiila,Chia & Yajir, 2016). The design was appropriate to give current information on knowledge of healthy diet for prevention of breast cancer among female secondary school teachers in Isi-Uzo Local Government Area, Enugu State. Isi uzo is one of the local government area in Enugu state, southeast geopolitical division of Nigeria. Isi uzo LGA is encompassed by the Enugu East, Udeenu, and Nsukka LGAs and parts of Benue and Ebony state. Inhabitants of the vast majority of the area are of the Igbo ethnic group. The Igbo language is widely spoken in the area while Christianity and traditional religions are commonly practiced in the area. There are nine public secondary schools and many private and mission secondary schools. The researcher observed that there is need to emphasis on prevention of breast cancer via healthy diet, knowing that prevention is better than cure and some culture in this area prohibits women from eating certain foods that are good to their health. Also, schools have become a channel were junks, sugar coated drinks and excessive spicy foods are being sold. Assuming, teachers are knowledgeable of the fact that these manners of food will expose them to a deadly disease; the teachers as well as students under their care will not patronize them. We also select girls and mixed secondary school teacher, to ensure that the female teachers who are teaching girls use the

opportunity to gain the knowledge and dispense same. Therefore, this justifies the need to carry out the study in this area. The population for the study consisted of 387 teachers in public secondary schools in Isi-uzo Local Government Area, Enugu state at the time of the study. This is according to the statistics made available from Isiuzo LGA Post Primary Education Board, Enugu State (2021). Multi stage sampling procedures was used to obtain the sample size. First stage involved selection of only public schools, comprising of two boys pubic secondary schools, four mixed pubic secondary schools and three only girls' school, and as a whole there are nine pubic secondary schools in Isiuzo Local Government Area. Second stage involved using simple sampling technique to select four schools from the nine public secondary schools; two Girls Secondary schools and two mixed secondary schools. Third stage involved using purposive sampling to select female teachers from the four secondary schools that were used for the study; . from Girls secondary school, 41 teachers each-82 teachers, while in mixed secondary school, 40 teachers each were selected - 80 teachers. The sample size for the study was 162 female teachers in girls and mixed secondary in Isiuzo LGA. Total of one hundred and sixty-two female teachers in school selected are used for the study. The instrument used for the study was researcher structured questionnaire. The instrument for data collection was Knowledge on Healthy Diet as Preventive Measures toward Breast Cancer (KHDPMBC). The instrument was face validated by three experts from the department of Human Kinetics and Health Education, UNN. The instrument has two sections; Section A, contain questions on socio-demographic variables such as level of education and religion. Section B, is made up of 20 items on knowledge on healthy diet as preventive measure toward breast cancer. The split half method was used to test for reliability of the instrument which yields a reliable index of 0.85. The instrument was therefore deemed reliable for the study. The 162 questionnaire responses were checked to ensure they were properly filled. They were tallied and converted to frequency distribution tables and percentages for the purpose of description and for answering research questions. Okafor (1997) stated that a proportion below 21 percentages is regarded as very low knowledge. The proportion between 21-39 percent is labeled low, while a score of 40-59 percent is considered moderate level. A score between 60-79-high levels while score that is 80 percent and above is considered very high-level knowledge, the criterion guided the decision of the present study. The result was presented in a table and each table was briefly interpreted. Chi-square statistics was used to test the null hypothesis at 0.05 level of significance.

Results

The results of the study were presented in tables below
Socio demographic factors **(n=162)**

Level of education	F (%)
NCE	43 (26.54)
B S.ed	69(42.60)
MSc.	50(30.86)
Religion	F (%)
Christians	94(58.02)
Traditional religion	68(41.98)

Research Question One: What is the proportion of secondary school teachers that possess knowledge of healthy diet for prevention of breast cancer in Isi uzo Local Government Area, Enugu state?

Table 1: Percentage response on the proportion of secondary school teachers that possess knowledge of healthy diet for prevention of breast cancer in Isi uzo Local Government Area, Enugu state (n= 162)

S/N	knowledge on healthy diet as preventive measure toward breast cancer risk	Yes f (%)	No f (%)	decision
1.	Healthy diets are diets that include up to 40% of calories	94 (58.02)	68(41.98)	MK
2.	Maintaining a healthy weight throughout life is protective against cancers ?	73 (45.06)	89(54.94)	MK
3.	Avoiding stale, mouldy foods protects against cancers?	49 (30.25)	113(69.75)	LK
4.	Eating fresh foods is important to protect against cancer development?	53 (32.72)	109(67.28)	LK
5.	Brisk walking for at least 30 minutes daily can reduce the risk of cancers?	63(38.89)	99(61.11)	LK
6.	Healthy diet are food substances that keeps the body effective and reduce disease occurrence.	101(62.35)	61(37.65)	HK
7.	Eating more fibre-rich grains, cereals and tubers is prevention against breast cancer?	86 (53.09)	76(46.91)	MK
8.	Legumes and foods of plant origin are prevention against cancers?	63(38.89)	99(61.11)	LK
9.	Vegetables and fruits should be consumed daily to prevent cancers?	122 (75.30)	40(24.69)	HK
10.	Intake of unsaturated fats prevents breast cancer risk	65 (40.12)	97(59.88)	MK
11.	Limiting the intake of energy-dense foods protects against cancer?	97 (59.88)	65(40.12)	MK
12.	Avoiding of smoking of tobacco or contact with smokers is prevention against breast cancer development?	98 (60.49)	64(39.51)	HK
13.	Avoiding excessive intake of meat and red meat is a protection against cancers?	54 (33.33)	108 (66.67)	LK
14.	By avoiding sugary drinks, one can reduce the chance of cancer developing?	47(29.01)	115 (70.99)	LK
15.	Avoiding of salty foods or lots of salt intake can protect against cancers?	50 (30.86)	83(51.23)	LK
16.	Intake of refined starchy foods (rice, noodles, spaghetti) is important to prevent cancers?	67 (41.36)	95(58.64)	MK
17.	Saturated fat may cause impair cardiovascular health, which lead to breast cancer?	58 (35.80)	104(64.20)	LK
18.	Reducing alcohol intake is protective against cancer development	53 (32.72)	109(67.28)	LK
19.	Fish is better consumed compared with red meat for cancer prevention	67(41.36)	95(58.64)	MK
20.	Exclusive breastfeeding for up to 6 months may prevent mothers against breast cancer?	88 (54.32)	74(45.68)	MK
	Percentage average	**44.69**	**55.31**	

Key: 0-20%=very Low proportion 21-39%=Low proportion; 40-59%=Moderate proportion; 60-79%=High proportion; 80% and above=Very High proportion

Data in table 1 showed that moderate proportion (44.69%) of female secondary school teachers possessed knowledge of healthy diet for prevention of breast cancer. The table indicated that low proportion of teachers possessed the knowledge include; that avoiding stale, mouldy foods protects against cancers (30.25%), Eating fresh foods is important to protect against cancer development (32.72%), Brisk walking for at least 30 minutes daily can reduce the risk of cancers(38.89%), Legumes and foods of plant origin are prevention against cancers (38.89), Avoiding excessive intake of meat and red meat is a protection against cancers (33.33%), By avoiding sugary drinks, one can reduce the chance of cancer developing (29.01%), Avoiding of salty foods or lots of salt intake can protect against cancers(30.86%), Saturated fat may cause impair cardiovascular health, which lead to breast cancer (35.80%), Reducing alcohol intake is protective against cancer development (32.72%) while moderate proportion of teacher possessed the knowledge which include; Healthy diets are diets that include up to 40% of calories(58.02), Eating more fibre-rich grains, cereals and tubers is prevention against breast cancer (53.09%), Intake of unsaturated fats prevents breast cancer risk(40.12), Limiting the intake of energy-dense foods protects against cancer (59.88%), Fish is better consumed compared with red meat for cancer prevention (41.36%). Also, high proportion of teacher possessed the knowledge which include; Healthy diet are food substances that keeps the body effective and reduce disease occurrence (62.35%), Vegetables and fruits should be consumed daily to prevent cancers (75.30%), Avoiding of smoking of tobacco or contact with smokers is prevention against breast cancer development(60.49%).

Research Question two: What is the proportion of secondary school teachers that possess knowledge of healthy diet for prevention of breast cancer in Isi uzo Local Government Area, based on level of education?

Table 2: Percentage response on the proportion of secondary school teachers that possess knowledge of healthy diet for prevention of breast cancer in Isi uzo Local Government Area based on Level of education (n= 162)

| | Level of education | | | |
Knowledge levels	NCE f %	B. ed f %	M. sc f %	Total
Very Low	8(18.60)	6(8.7)	3(6.0)	17(10.5)
Low	15 (34.9)	10 (14.5)	4(8.0)	29(17.9)
Moderate	10(23. 2)	32(46.4)	10(20.0)	52(32.1)
High	4(9.3)	13(18.8)	15(30.0)	32(19.8)
Very High	3(7.0)	8(11.6)	18(36.0)	29(17.9)
Total	**43**	**69**	**50**	**162**

Key: 0-20%=very Low proportion 21-39%=Low proportion; 40-59%=Moderate proportion; 60-79%=High proportion; 80% and above=Very High proportion

Data in table 2 shows that the proportion of teachers with level of education Masters that have very high proportion level of knowledge on knowledge of healthy diet for prevention of breast cancer (36.0%), the proportion of teachers with High proportion level of knowledge of healthy diet for prevention of breast cancer (30.0%). The level of education Bachelor of education, the proportion of teacher with moderate proportion (46.4%) has the highest percentage, while the level of education NCE, the proportion of teachers with low proportion of knowledge (34.9%) has the highest percentage.

Research Question three: What is the proportion of secondary school teachers that possess knowledge of healthy diet for prevention of breast cancer in Isi Uzo Local Government Area, based on Religion?

Table 3: Percentage response on the proportion of secondary school teachers that possess knowledge of healthy diet for prevention of breast cancer in Isi Uzo Local Government Area based on Religion (n= 162)

	Religion		
	Christianity	**Traditionalist**	**Total**
Knowledge levels	**f %**	**f %**	**f %**
Very Low	8(8.2)	18(26.5)	26(16.1)
Low	12(12.8)	28(17.3)	40(24.7)
Moderate	45 (47.9)	12(17.6)	57(35.2)
High	19(11.7)	6(8.8)	25(15.4)
Very High	10(10.6)	4(5.8)	14(8.6)
Total	94	68	162

Key: 0-20%=very Low proportion 21-39%=Low proportion; 40-59%=Moderate proportion; 60-79%=High proportion; 80% and above=Very High proportion

Data in table 3 shows that the proportion of teachers that possess the knowledge level, Very high proportion in the religion, Christianity is (10.6%), high proportion (11.7%) and highest proportion of teachers in Christianity had moderate proportion knowledge level (47.9%) while traditional religion had the highest proportion of teachers that possess the knowledge level, very low proportion (26.5%). Overall result indicated that majority proportion of female secondary school teachers had knowledge level, moderate proportion (35.2%). Also, that the religion Christianity had the majority proportion of teachers with knowledge level; very high, high and moderate proportion of knowledge on healthy diet for prevention of breast cancer.

Hypothesis one
H$_O$ 1: There is no significant difference in the proportion of female secondary school teachers who possess knowledge of healthy diet for prevention of breast cancer risk in Isi-Uzo Local Government Area, Enugu state based on level of education

Table 4: Summary of Chi-square (χ^2) analysis of significant difference in the proportion of female secondary school teachers who possess knowledge of healthy diet for prevention of breast cancer risk in Isi uzo Local Government Area, Enugu State based on level of education

	Level of education						
	NCE	B. ed	M. sc				
Knowledge levels	**O (e)**	**O (e)**	**O (e)**	χ^{2cal}	χ^{2tab}	**df**	**Decision**
Very Low	8(4.5)	6(7.2)	3(5.2)				
Low	15(7.7)	10 (12.3)	4(8.9)	40.13	15.5	8	
Ho_1 Rejected							
Moderate	10(13.8)	32(22.1)	10(16.o)				
High	4(8.5)	13(13.6)	15(9.9)				
Very High	3(7.7)	8(12.3)	18(8.9)				

Table 4 shows the Chi-square (χ^2) difference on the proportion of female teachers who possessed knowledge of healthy diet for prevention of breast cancer in Isi-uzo Local

Government Area, Enugu State based on level of education. The result shows that there was a significant difference in the level of education (χ^2 calculated = 40.13, χ^2 tabulated = 15.5, df = 8). Since Chi-square (χ^2) calculated value is greater than Chi-square (χ^2) tabulated at 0.05 level of significance, the null hypothesis was rejected. This implies there was difference on the proportion of female teachers who possessed knowledge of healthy diet for prevention of breast cancer in Isi- uzo Local Government Area, Enugu State on level of education

Hypothesis two
$H_{O\ 1}$: There is no significant difference in the proportion of female secondary school teachers who possess knowledge of healthy diet for prevention of breast cancer risk in Isi uzo Local Government Area, Enugu state based on Religion.

Table5: Summary of Chi-square (χ^2) analysis of significant difference in the proportion of female secondary school teachers who possess knowledge of healthy diet for prevention of breast cancer risk in Isi uzo Local Government Area, Enugu state based on Religion

| Knowledge levels | Religion | | | | | |
	Christianity O(e)	Traditionalist O(e)	χ^{2cal}	$\chi^{2\ tab}$	df	Decision
Very Low	8(16.8)	18(12.3)				
Low	12(23.2)	28(16.8)				
Moderate	45(33.1)	12(23.9)	**34.6**	**9.5**	**4**	H_{o2} Rejected
High	19(14.5)	6(10.5)				
Very High	10(8.1)	4(5.9)				

Table 5 shows the Chi-square (χ^2) difference on the proportion of female teachers who possessed knowledge of healthy diet for prevention of breast cancer in Isi-uzo Local Government Area, Enugu State based on religion. The result shows that there was a significant difference based on religion (χ^2 calculated = 34.6, χ^2 tabulated = 9.5, df = 4). Since Chi-square (χ^2) calculated value is greater than Chi-square (χ^2) tabulated at 0.05 level of significance, the null hypothesis was rejected. This implies there was difference on the proportion of female teachers who possessed knowledge of healthy diet for prevention of breast cancer in Isi- uzo Local Government Area, Enugu State based on religion.

Discussions
Data in table 1showed that moderate proportion (44.69%) of female secondary school teachers possessed knowledge of healthy diet for prevention of breast cancer. The table indicated that low proportion of teachers possessed the knowledge include; that avoiding stale, mouldy foods protects against cancers (30.25%), Eating fresh foods is important to protect against cancer development (32.72%), Brisk walking for at least 30 minutes daily can reduce the risk of cancers(38.89%), Legumes and foods of plant origin are prevention against cancers (38.89), Avoiding excessive intake of meat and red meat is a protection against cancers (33.33%), By avoiding sugary drinks, one can reduce the chance of cancer developing (29.01%), Avoiding of salty foods or lots of salt intake can protect against cancers(30.86%), Saturated fat may cause impair cardiovascular health, which lead to breast cancer (35.80%), Reducing alcohol intake is protective against cancer development (32.72%) while moderate proportion of teacher possessed the knowledge which include; Healthy diets are diets that include up to 40% of calories(58.02), Eating more fibre-rich

grains, cereals and tubers is prevention against breast cancer (53.09%), Intake of unsaturated fats prevents breast cancer risk(40.12), Limiting the intake of energy-dense foods protects against cancer (59.88%), Fish is better consumed compared with red meat for cancer prevention (41.36%). Also, high proportion of teacher possessed the knowledge which include; Healthy diet are food substances that keeps the body effective and reduce disease occurrence (62.35%), Vegetables and fruits should be consumed daily to prevent cancers (75.30%), Avoiding of smoking of tobacco or contact with smokers is prevention against breast cancer development(60.49%). Similar to study conducted by Oluyemisi, Ayorinde & Samuel, (2016), the respondents also had poor consumption pattern as regards cancer prevention. This current finding is in contrast to a Sudanese study on diet-nutrition-related cancer prevention knowledge and beliefs of Sudanese in Khartoum, where only 8.8% of the respondents thought that consumption of fruits and vegetables is protective against cancers (Bovell-Benjamin & Elmubarak, 2013). In the study, conducted by Holman & White, (2016), dietary behaviours related to cancer prevention among pre-adolescents and adolescents the most frequently consumed foods are processed cereals and grains (such as white rice, noodles, spaghetti, white bread), roots and tubers, meat and fish, while vegetables, fruits and legumes/nuts were less frequently consumed. In agreement with the present study where high proportion of teachers has high knowledge level, that vegetables and fruits should be consumed daily to prevent cancers (75.30%). This may be because they are teachers and must have gotten the knowledge from subject they taught and through life experiences.

Data in table 2 shows above all that respondent with Masters degree had the highest respondent with very high (36%) and high (30%) knowledge of healthy diet for prevention of breast cancer risk, Overall result indicated that majority of female secondary school teachers had moderate Knowledge of healthy diet for prevention of breast cancer risk. Also, Table 4 the result shows that there was a significant difference between level of education and knowledge (χ^2calculated=40.13, χ^2tabulated=15.5, df=8). Since Chi-square (χ^2) calculated value is greater than Chi-square (χ^2) tabulated at 0.05 level of significance, the null hypothesis was rejected. This is similar to study conducted by Lin Loo J, Yee Woo W, Wah Chin M, et al (2016) on Cancer awareness of a sample of Malaysian undergraduate students, the older students in 4th year had good knowledge while the younger students in year one and two had poor knowledge.

Data in table 3 shows above all that majority of female secondary school teachers had moderate knowledge of healthy diet for prevention of breast cancer risk possessed by female secondary school teachers (35.2%). Also table 5, shows that there was a significant difference based on religion (χ^2 calculated = 34.6, χ^2 tabulated = 9.5), knowledge of healthy diet for prevention of breast cancer risk possessed by female secondary school teachers was based on religion. This is in agreement with the studies by Kudzawu, Agbokey, and Ahorlu, (2016); Sayed, et al., (2019) where Most of them had misconceptions about traditional breast massage (10.1%) and extended wearing of bra (13.2%) as risk factor**s.** This may be because there are a lot of misconceptions associated with Breast cancer that it is caused by the wrath of gods upon the wicked, these and many more can hinder some educated and religious group from embarking on any preventive measures.

Conclusion

Findings from the study revealed the proportion of female secondary school teachers that possessed knowledge of healthy diet for prevention of breast cancer in Isi uzo Local Government Area, Enugu state has moderate proportion knowledge level. Based on the

findings of this study, it was concluded that the teachers with Masters level of education had very high proportion of knowledge level and that there was a significant difference between level of education and religion on the knowledge level of the proportion of female secondary school teachers that possessed knowledge of healthy diet for prevention of breast cancer in Isi uzo Local Government Area, Enugu state

Recommendation
Based on the findings, the following recommendations were made:
1. Ministry of education in collaboration ministry of health should conduct seminars and workshop to the female teachers seeing that Knowledge of healthy diet for prevention of breast cancer risk was moderate and reflected by low knowledge of the respondents on some items on knowledge of healthy diet. This is a pointer to the female teachers, emphasizing a need for immediate intervention. To ensure that they have adequate knowledge in order to help in dispensing correct knowledge to the student under their care and society in general.
2. Both governmental and non-governmental should support creation of awareness on breast cancer prevention because from the findings knowledge of healthy diet for prevention of breast cancer was based on level of education. Hence, sufficient knowledge can also help the women to overcome their fear about breast cancer and increase the practice of healthy diet thereby reducing the mortality and morbidity rate of breast cancer.
3. Religious leaders should be involved in campaign on healthy diet as a preventive measure to breast cancer risk and even better prognosis when undergoing treatment.

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